



CIMA Management Case Study

Study Text Part 2

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CIMA Management Case Study

Section A - E2

Chapter 1

Business Ecosystems

1. Business Ecosystems

In 2019 it was reported, in the UK's *Guardian* newspaper, that 40% of all insect species were in decline, whilst a third were endangered. Now, this isn't just bad news for insects, it's also bad for birds and small mammals! Why? Because they eat insects! So this means that without a food source, their numbers are also in decline. What this example teaches us is that when one member of an environmental ecosystem is affected, the rest of the ecosystem is too.

And that's similar to a business ecosystem, which is in basic terms **a network of companies, competitors, products and stakeholders, such as suppliers and customers**. Just like in an environmental ecosystem, all these separate parts **work together in a way that makes them greater than their individual elements**; if one element was to disappear, it could have an effect on the business environment.

Here's a more formal definition of business ecosystems from Marshall, Harmer and Davidson:

"An ecosystem is a complex web of interdependent enterprises and relationships aimed to create and allocate business value. Ecosystems are broad by nature, spanning multiple geographies and industries, including public and private institutions and consumers."

But hold on! Doesn't that sound like a definition of a traditional market? Yes, it does! Markets are also broad, they can span many different geographical locations and industries, public and private! And they're not the only similarities! Traditional markets, just like ecosystems, are made up of:

- **Participants** - The organisations, or individuals, within the environment
- **Interactions** - The services, or products, that are exchanged amongst the participants in the environment

So, what makes the business ecosystem different?

There are three main elements that separate an ecosystem from a traditional market: **mutuality, orchestration and value creation**.

Value creation

Firstly, let's imagine value creation in a traditional market. Participants provide other participants with a service, or product, and are paid for it (we talk about how the participants add value in another chapter).

These transactions can occur across different markets: a company mining a commodity which they sell to a manufacturer represents a market; a manufacturer

making a product which they sell to a retailer represents a separate market and a retailer selling a range of products to consumers represents a third market.

Each market involves several **parties operating out of self-interest**.

Let's look at a simple example to illustrate this: say hello to Bob! Bob notices that his town centre is really busy at lunchtime. It's full of shoppers and workers, but there is nowhere to get a good takeaway sandwich! Bob decides to rent a shop, calls it 'Bob's Lunchbox', orders ingredients from some local suppliers and turns those ingredients into sandwiches to sell to all those hungry people. Bob is making a small profit, well done, Bob!

OK, so that's value creation in a traditional market, **but how do ecosystems differ?**

Another business has started operating in Bob's town! FoodFast is a wholly online business that employs a fleet of cyclists to deliver food in big towns and cities. FoodFast offers restaurants and takeaway outlets, including Bob's, the opportunity to sell their products to customers far beyond their usual geographic location - in Bob's case, the town centre. The customer can order food via FoodFast's app, or website and a cyclist from FoodFast will collect the order and take it to them.

FoodFast benefits, as without the restaurants they don't have a business, Bob benefits, as he doesn't have to incur all the costs of expansion to reach a wider audience and the customer benefits as they can have a choice of food delivered to their door.

We can see that in this example, a participant, FoodFast, **has created value by providing a new service and collaborating with another participant; Bob. This, in turn, has created something mutually beneficial for that other participant.**

Creation of a new service isn't the only way that value can be created in an ecosystem, there are a number of other ways, including improving the customer experience, or further developing a product.

Capturing Value

Of course, it isn't enough for a company to create value, it also has to capture some of the value it creates! There are three ways that a company can do this:

- **Directly** - This means that value is captured through transactions directly, e.g. Bob's customers receive a sandwich from the shop in return for immediate payment.
- **Indirectly** - **An entity would be allocated payments by a third party, an orchestrator** (see below) after it had been paid by consumers. E.g. In our example, if a meal was ordered from Bob over the FoodFast app, Bob would be paid for the meal he had provided by FoodFast not the consumer. The consumer would have paid FoodFast and FoodFast would subtract its commission before paying Bob.

- **Mix** - This is simply a **combination of the two different methods**. Perhaps a gym-goer may pay a monthly subscription to an online company that allows access to a variety of different companies' gyms, but also pays each gym directly for a class that isn't covered in their subscription.

Orchestration

Returning to the distinctive features of ecosystems we have **orchestration**. We saw in the example above that FoodFast was the orchestrator; it **coordinated the mutual relationships in the ecosystem**. **Orchestration relates to the extent of the orchestrator's influence over the others** within the ecosystem.

For Bob and FoodFast, the orchestration has been enabled through the growth of technology. For example, customers can use the FoodFast app from their homes and order whatever food they want from a number of different outlets. We will look at other ways that these complex relationships can be managed through the growth of technology in a later chapter.

Mutuality

The characteristic of mutuality links to a couple of points that we've already touched upon when talking about value creation. We saw that FoodFast created a service that mutually benefited both themselves and Bob, as well as others in the ecosystem. The characteristic of mutuality links to this idea of increased levels of coordination, which in turn underpins a major benefit of a business ecosystem, **that by working together the participants of an ecosystem can deliver greater value than if they worked alone**.

Example of an ecosystem

So before we move on, let's think about who may make up Bob's ecosystem.

Participants	Relevance in Bob's ecosystem
Suppliers	The number of suppliers Bob uses will depend on whether he buys from one wholesaler, or independently sources his ingredients from independent producers.
Customers	The individuals who come into Bob's shop to purchase sandwiches or buy food through the app.
Legislators	There is tight regulation about the environment in which Bob prepares his food, plus more legislation regarding tax returns.

Participants	Relevance in Bob's ecosystem
Competitors	Not only the competitors in Bob's town but all the different companies and different styles of food on the FoodFast app.
Landlords	We know that Bob rents his shop, so the landlord will be another participant in his ecosystem.
Software developers	OK, so Bob himself doesn't employ any software developers, but what about FoodFast? Because customers can access Bob's products through its apps, the software developers are, therefore, part of Bob's ecosystem.

This is by no means an exhaustive list of the participants that make up Bob's ecosystem (there wouldn't be enough space to include them all) and his is a relatively simple business! Imagine how much the ecosystem will grow if a company operates in many different geographic locations or manufacturers many different complex products from a large variety of raw materials!

2. Benefits of an effective ecosystem

So, to recap, in an ecosystem, capital, ideas and talent flow between the participants. **If an ecosystem is performing well, then this flow of capital, ideas, and talent will move quickly and efficiently throughout the ecosystem.** This is because the participants will have developed ways of working together that streamline these processes.

These processes help to create value, think about how the flow of ideas between Bob and FoodFast helps to create value for both participants. FoodFast can offer its customers Bob's sandwiches, and Bob can reach a new market.

It's also much **harder for a competitor to replace a businesses that have been strengthened from a collaborative position within an ecosystem because the competitor can't compete without finding a similar set of partnerships.** Increasing the difficulty for a competitor to enter a new market is also known as raising the barriers to entry and is something we will look at in more detail in this chapter when we look at Porter's Five Forces.

But the advantages don't stop there! Through participants innovatively sharing expertise, skills and knowledge, and working together, they **should be reducing**

the costs of production and, as we have seen with Bob and FoodFast, enabling each other **to reach new consumers**.

In summary, the main benefits of being part of an ecosystem include:

- Creating more value for customers
- Raising barriers to entry for potential new competitors
- Reducing production costs
- Reaching new customers

3. The creation and characteristics of the ecosystem environment

If ecosystems are so beneficial to all of its participants, why did they only start being talked about at the end of the 1990s? Well, a significant reason is that the technology that is needed to create the conditions for ecosystems to thrive didn't previously exist. It is the **invention and development of digital technology**, for example, the internet, networked systems, social media, big data and the internet of things that **have allowed ecosystems to flourish**. According to IBM's report '*The New Age of Ecosystems*' there are three characteristics of organisations in ecosystems:

- **Connected and open** - Because of the developments of PCs, laptops, tablets and mobile technology, more people than ever have access to the internet and so participants of an ecosystem can find it far easier to communicate and collaborate.

For example, before the widespread use of this technology it would have been impossible for Bob's Sandwiches to receive orders from customers of FoodFast!

- **Simple and intelligent** - Developments in technology mean that not only is technology getting simpler to use organisations can utilise it to simply and easily collect and analyse data with which they can use to make informed and intelligent decisions.

For example, FoodFast would be able to collect real time data to show which restaurants were popular in a particular location and use that information to partner with similar restaurants in different locations.

- **Fast and scalable** - Using technology, the number of transactions an organisation can undertake has increased, as well as the speed in which they can undertake them. Being 'scalable' means that the size of the system can be quickly increased. So, for example, a company using cloud-based storage can simply sign-up to an enhanced package with their provider as and when

their storage needs increase; they do not need to buy new servers or hard-drives and connect those into its system.

Just imagine that 100 customers suddenly wanted a sandwich from Bob, there would be quite a queue out of his restaurant! But 100 customers could easily place an order for Bob through FoodFast's website because technology enables transactions to be undertaken far quicker.

Drivers of the digital world

OK, we've just seen three characteristics of ecosystem organisations and we've seen how have been enabled by technology, and, just as we saw with the number of transactions FoodFast can handle compared with Bob, these characteristics allow them to flourish in digital world. But what are the drivers behind the digital world?

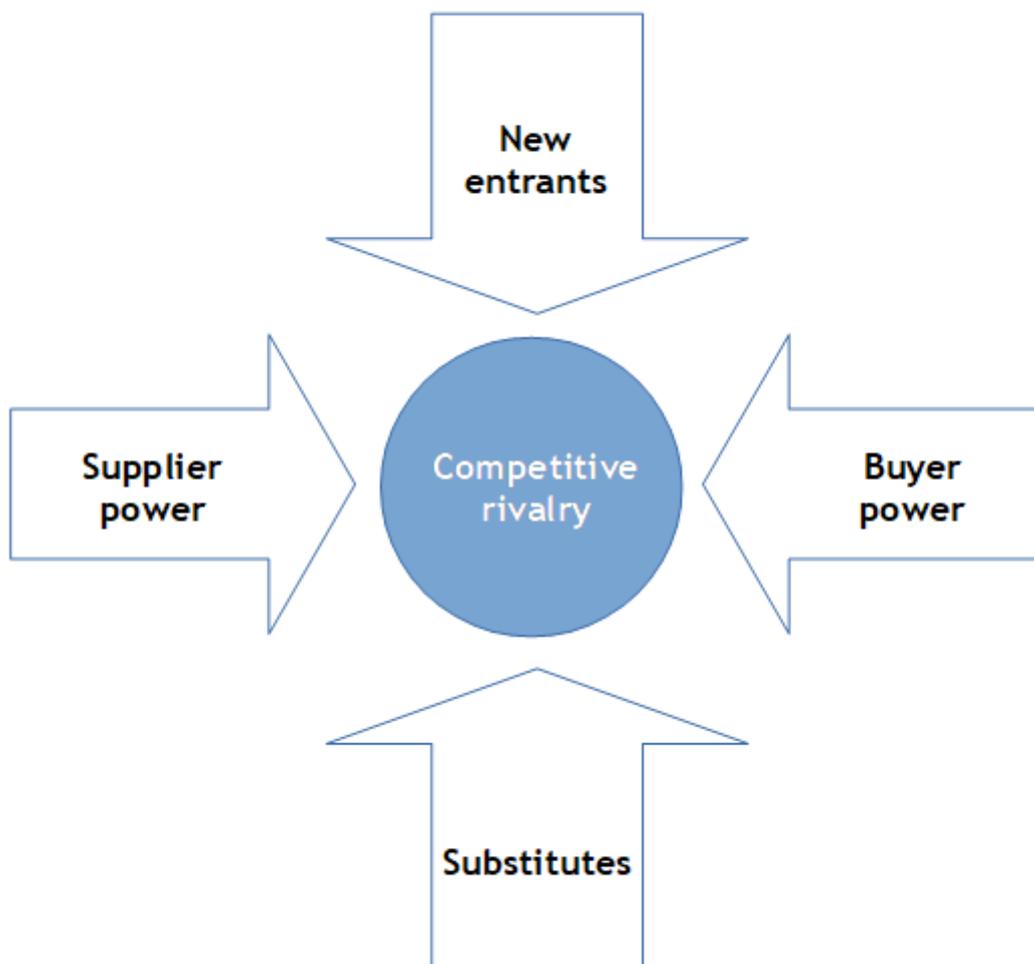
- **More people now use the internet** and that number is expected to grow! One reason for this expected growth is that many people from emerging markets (partly driven by rising standards of living) are expected to subscribe to smartphone contracts.
- The **number of connections is also increasing**. In 2009 there were 2.5 billion devices that could connect to the internet, by 2020 that number is expected to have risen to 30 billion devices. This enables far more data to be collected, which **will aid real-time customisation for consumers**.
- **Data analytics is the science of analysing raw data**. Because of the growth of things such as e-commerce platforms and social media platforms, data analytics will also evolve to keep pace with all this new data. This links back to the characteristic of 'simple and intelligent' we've just looked at, more and more data is being collected in many different areas of a business' operations which allow mean that decision making in all these areas can be informed by data.
- **People will also be able interact with machines** in new ways so that tasks will be able to be carried out more quickly and efficiently. For example, some Amazon staff work alongside robots at fulfilment centres bring the shelves and products to the human employees rather than the employees having to search for the products physically. This means that Amazon can function with a smaller staff whilst operating more efficiently.
- The middle class is growing all over the world, which means people will be **able to afford digital technology and to get connected**. This in turn means that more people will be spending online. Not just good news for companies like FoodFast but also Bob, as he can now also sell in the digital world through the collaboration with FoodFast.

- **Globally more people are living in urban areas.** This means that new innovative distribution and delivery systems can be used. For example, in some city-based locations the internet retailer Amazon offers same-day delivery, this is currently impossible in less populated areas. This means that online companies that have no physical space such as a shop are able to easily deliver to customers.

4. Porter's Five Forces

Before we move on, let's explore how three major participants; competitors, suppliers and customers can impact on a market. To analyse their impact we will use **Porter's five forces model, which can be used:**

- **To understand how profitable an industry is**, which can be used to decide whether to enter or exit the market.
- By firms operating in that industry to **understand the forces impacting industry profitability** and change how they operate to become more profitable themselves.



Each of the forces is analysed to find the size of the force. **If on balance the forces are high, then the industry profitability is low** and the market would not be a good one to enter. **If the forces on balance are low, it is a profitable industry** and a good one to enter.

Let's take a closer look at each of the five forces in turn:

Competitive rivalry

This force will be high and the industry less profitable when:

- There are **a lot of competitors**. For example, in consumer electronics, there are literally hundreds of competing companies who are making the same kind of product (such as a calculator). This means that prices will be low (because everyone is trying to undercut one another!) thus low profitability.
- There is **little difference between the products**. Fruit for example - one market stall may find it difficult to price higher than the one next door for this reason.
- **Competitors are strong**. For example, if they are big, have financial support, and economies of scale, then they have the resources to dominate the market. If there are several competitors this size then it will be difficult to make any money in that market.
- **There are exit barriers to the market**. This means high cost of leaving a market, which keeps competitors in a market they might otherwise leave. More competitors means more competition and less chance of being profitable!

Threat of new entrants

This relates to **new companies entering the market** that are not currently there. The **force will be high and the industry less profitable when:**

- **New companies can easily enter the market**. For example, the information technology industry has new entrants all the time, with a new 'tech start-up' being born every five minutes (or so it would seem!).
- **New companies are likely to or intend to enter the market**. Again, with the information technology industry, the potential returns on a successful start-up make it a very tempting industry. For example, car sharing app Uber was founded in 2009 and had an estimated value of \$62.5 billion in 2015 and transformed the market for taxi cabs driving down profits for traditional firms having to deal with this new competitor.

It is **harder to enter the market when there are significant barriers to entry** (factors which prevent new companies entering the market). These can include:

- **High costs of entry** (e.g. production facilities, IT). A classic example of this would be a shipping company or an oil company. Such industries require billions in assets and so no company could simply walk in and set up a competitor.
- **Patents**. If a company creates a drug that cures a certain disease (disease X) the company can have that drug patented. This acts as a barrier to entry as no one else can use the company's formula. Therefore, unless there is another way disease X can be cured, the company will have a monopoly on the disease X treatment market. No one else will try to get involved.
- **Customer contracts in place**. For example, home streaming services like Amazon prime and Netflix. They are the market leaders and many people have one or the other. As a result it will be hard for competitors to enter the market, as many potential customers will have a long standing account with an established competitor. Something they are unlikely to just turn their back on.
- **Cost advantages** of existing competitors are significant (e.g. due to scale of operation).
- **Strong brands** amongst competitors. It is always difficult to draw loyal customers away from an established brand and try something new. It is human nature to 'trust what you know.' For example, you trust a friend more than you would a stranger, wouldn't you? Doesn't mean the stranger is bad, you just don't know them. The same principle applies when comparing a new brand to an established one.

Buyer power

This is **the power that the customers have over the competitors in the industry**. The force is high and industry less profitable when:

- **Customers are large and provide a large proportion of company profits**. For example, if Buyer A makes up 70% of your sales you will be completely dependent on them. If they turn around and say "we want a 20% discount or we'll stop buying from you" you may have to accept it. This may damage profits.
- **Customers can switch between competitors easily**. Bread for example is a basic commodity without too many differences between different brand making it easy a customer to simply put one brand back on the shelf and take a competitor's instead if they think it's too expensive.

Supplier power

Supplier power is **the power of the suppliers in the industry**. It is high and the industry less profitable when:

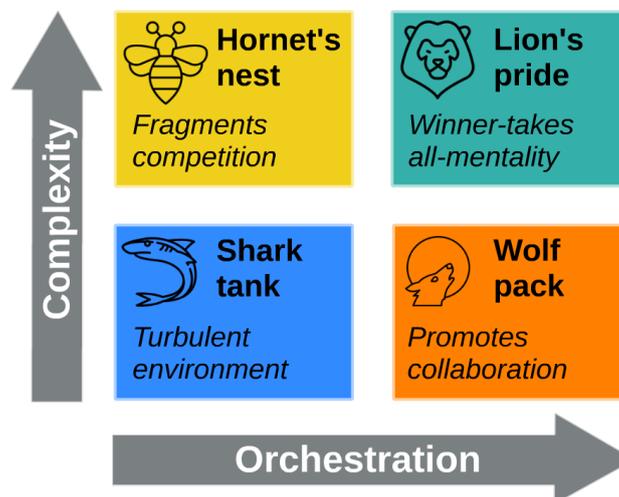
- **There are few alternative suppliers.** For example, your company makes chemical Y, a key additive to any soft drink in production. You are the only supplier of chemical Y and all beverage producers have to buy from you. You have significant supplier power in this instance as the beverage producers have no choice but to buy from you if they wish to remain in business, as such, you can change whatever you want.
- **Cost of changing suppliers is high.** For example, a mobile phone provider. Often when you get a new mobile phone you are tied into a 24-48 month contract. If you wish to switch you are often required to pay off the amount outstanding, this makes switching expensive and difficult.

Substitutes

What if your product can easily be replaced with something else? **Substitutes are products to which a customer can easily switch and still have their needs met.** For example, a substitute for cinema might be Netflix, DVDs, the theatre, sport or other forms of entertainment.

Where customers can have their needs met from many different types of product, it becomes easy for them to switch if prices rise, for instance. **This makes profitability in the industry low.**

5. Different types of ecosystems



As you can see in the diagram there are four different types of ecosystems. These four types are created by two factors: complexity and orchestration.

Complexity

As the name suggests, this involves looking at the complexity of the ecosystem. **Complexity is defined by the number of participants in an ecosystem, the range of their roles and how they relate with each other.** The levels of complexity can be broken down into two categories:

- **High complexity** - A highly complex environment could be defined by a number of factors, for example; an ecosystem containing a vast range of participants which require a sophisticated central orchestrator, participants undertaking sophisticated activities such as deep sea drilling, businesses that require high start up costs or other obstacles that restrict entry into the environment, such as drug manufacturing in which there is a high level of regulatory framework to consider which delays the process of manufacturing and can prove to be very expensive.

If we think back to what we have just learnt with Porter's Five Forces, **highly complex ecosystems would have high barriers to entry.**

These high barriers to entry act as an advantage for a participants in a complex ecosystem because their **position in that would be seen to be relatively secure** as it would be very difficult for a new entrant to replace the existing participant because of the complexity factors. For example, perhaps the relationship between supplier and organisation is particularly strong or even that the start-up costs or a new participant could be prohibitively high.

- **Low complexity** - As you may have guessed, this would be the opposite of a high complexity ecosystem! Barriers to entry would be much lower as there wouldn't be such a large range of participants undergoing sophisticated activities that need orchestrating.

However, because of this, **the participant would be vulnerable** because their role could be replaced by another relatively easily and new entrants would find it easier to enter the market.

An example of a low complex industry could be street food. Say hello to Faisal. Faisal is a passionate cook and all his friends agree that he is pretty talented. Faisal decides to resign from his job and buy a food truck selling simple dishes from wherever he parks up. Now the cost of a food truck and the cooking equipment are relatively cheap, so that's no barrier for Faisal to begin. Faisal doesn't have any special relationships with suppliers, but again, that's no problem as he can buy all his ingredients from any supermarket. There are only a few food regulations that he has to abide by and in no time at all he can sell his delicious food directly to the public with practically no advertising costs!

Good news for Faisal, but also good news for anyone else that has the same dream because they too can open up a food truck and easily compete with

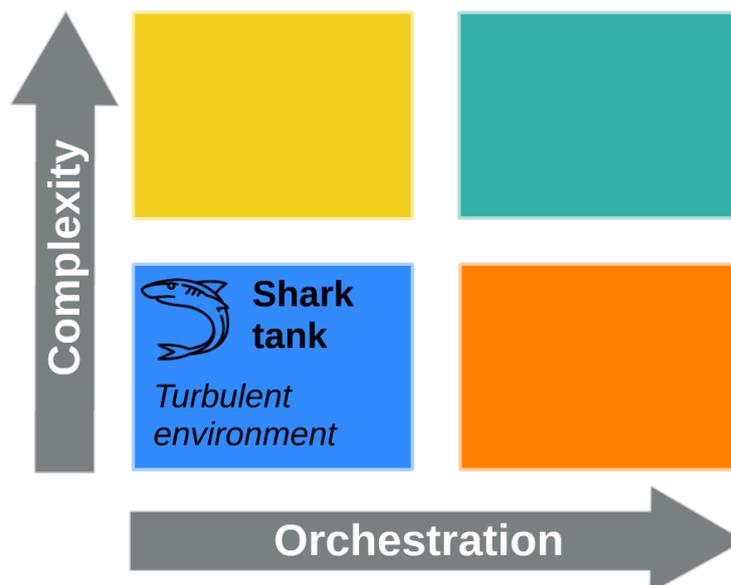
Faisal. Because of the low complexity of the ecosystem Faisal is vulnerable to other participants, competitors, that want to take his business!

Orchestration

In the opening section of this chapter we learnt that the term **orchestration** relates to the extent of the orchestrator's influence over the other participants within the ecosystem. We also learnt that orchestrators can sometimes capture value for the participants. When using this matrix the factor of orchestration is broken up into two types:

- **Tight orchestration** - In a tight orchestration ecosystem, the **orchestrator would be able to influence the behaviour and actions of participants across the entire ecosystem**. An example would be the financial services industry which is tightly regulated, and any transactions between participants are governed by strict rules. A tight orchestration environment may also mean that the orchestrator is able to capture value for the other participants as we saw with Food Fast and Bob's sandwiches, Food Fast would take payment for Bob's sandwiches ordered by the customer over its website and then distribute the payment to Bob.
- **Loose orchestration** - In this scenario, **there would be no central coordinator**. This means that participants would be acting more independently of each other and would have to capture all the value themselves as there is no orchestrator to do it for them.

Shark Tank



The shark tank is a type of ecosystem with low complexity and low orchestration. As there is no strong orchestrator to orchestrate the individual

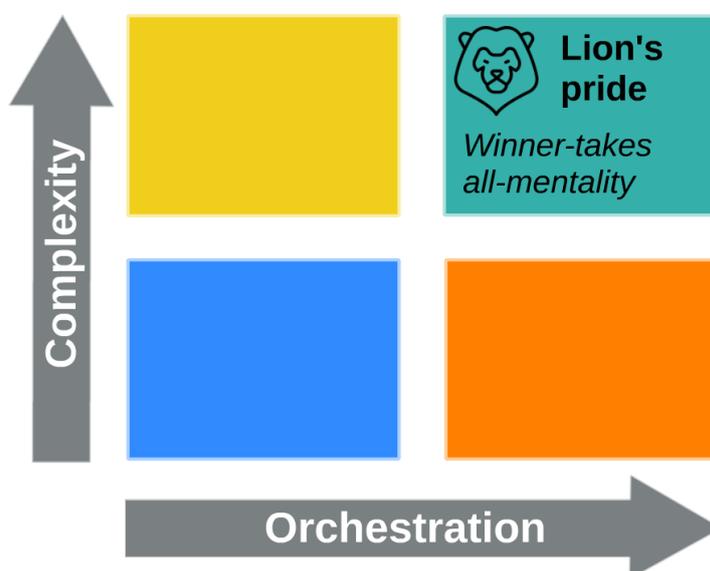
organisations within the ecosystems, the **participants have to create value themselves through innovation** and **must capture value directly** with other participants.

An example of this could be £1 retail stores. The premise of them is simple; everything in the store is £1 or less! All the shops sell a wide variety of often branded products. A bargain for the customer!

For the companies though, it is a slightly different matter. Competition is fierce as it is relatively easy for different companies to purchase low priced goods from a huge range of suppliers around the globe, open up a high street store and become a competitor, **meaning there is low complexity in their ecosystem.**

There is also no central coordinator, no one that can affect the actions of the other members of the ecosystem, they have no orchestrator generating custom or payment for them, the £1 stores have to rely solely on innovation. **Innovation can be anything which separates organisations from the competition.** For the £1 shops it could be a number of things; how popular the products the buyers of the retailers choose through to innovations in the supply line. These are actions that would have to be undertaken by the organisation to give them a competitive edge.

Lion's Pride

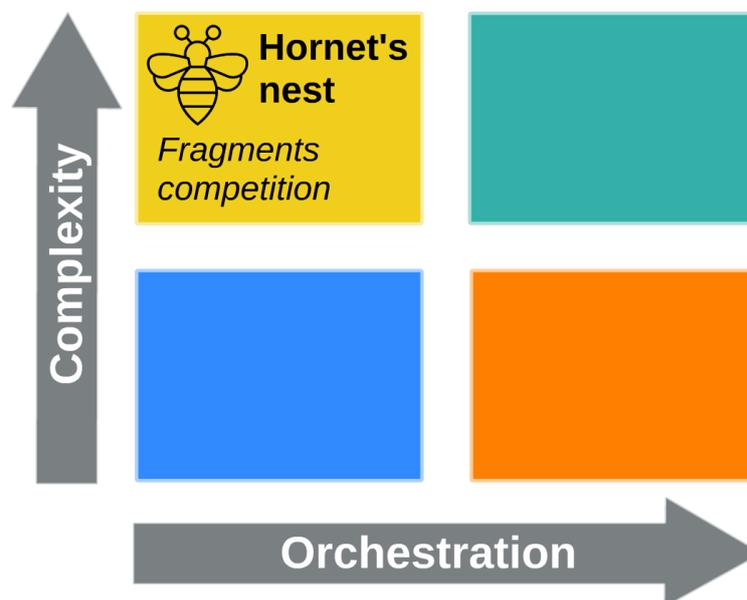


In the lion's pride, there is high complexity and high orchestration. As we know, in more complex ecosystems participants are seen to be more secure than in low complex environments as the complexity acts as a barrier to entry. And **the high levels of orchestration mean that the orchestrator will facilitate, monitor and remunerate participants' actions within the ecosystem.**

An example of a Lion's Pride ecosystem could be a private healthcare ecosystem. In this ecosystem, specialised organisations such as private health insurance providers would act as the powerful orchestrator ensuring that the intersection between all the different participants, the medical staff, facilities and patients are carefully integrated.

Because of the relationships that would have to be built up between all participants it would be difficult for other insurance companies to replace them, for example, the customers would pay a monthly fee and be locked into a contract meaning they couldn't easily move between providers.

Hornet's Nest



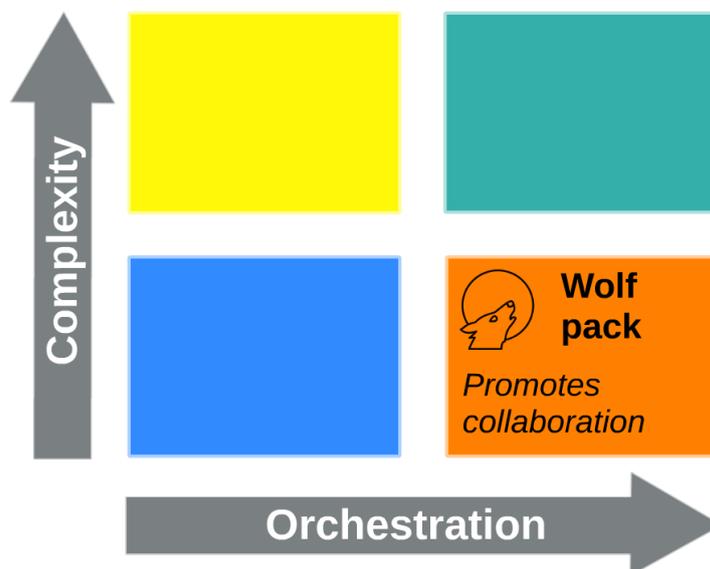
Here, complexity is high, but orchestration is low. Because complexity is high **new entrants will find it difficult to enter the ecosystem**, but as there is little orchestration, **participants will need to find their own way to capture value** within the ecosystem, similar to the participants in the shark tank.

An example of a hornet's nest ecosystem is the video streaming industry. It is a highly complex ecosystem because creating new content or purchasing old content is incredibly expensive and requires technical expertise which creates barriers for entry for new participants.

However, global companies, such as Disney, are entering the video streaming ecosystem. This competition means it is unlikely that there will be able to be one orchestrator offering the consumers what they want, which is to watch whatever they want, whenever they want. This is because companies like Disney, who have a huge back catalogue of popular films and television programmes, won't allow them to be shown on a competitors site, such as Netflix. This is because they want

consumers to pay them to watch its material on its service. As such, it will prove impossible for consumers to get all of their content from just one central orchestrator and will probably have to pay for many different services.

Wolf Pack



The wolf pack ecosystem is characterised by low complexity coupled with high levels of orchestration. Low complexity means this would be an ecosystem that new entrants could easily enter, but the high levels of orchestration suggest that **the ecosystem itself is complicated**.

An example of a wolf pack ecosystem could be the energy and utilities sector. Perhaps in the future homes may not only consume energy but produce it, through solar panels or wind turbines. At some points of the day, a home may produce enough excess power to sell back the grid for others to consume. The orchestrator would be in charge of making sure that energy flows are measured, excess energy stored and that the networks are maintained.

6. Participants

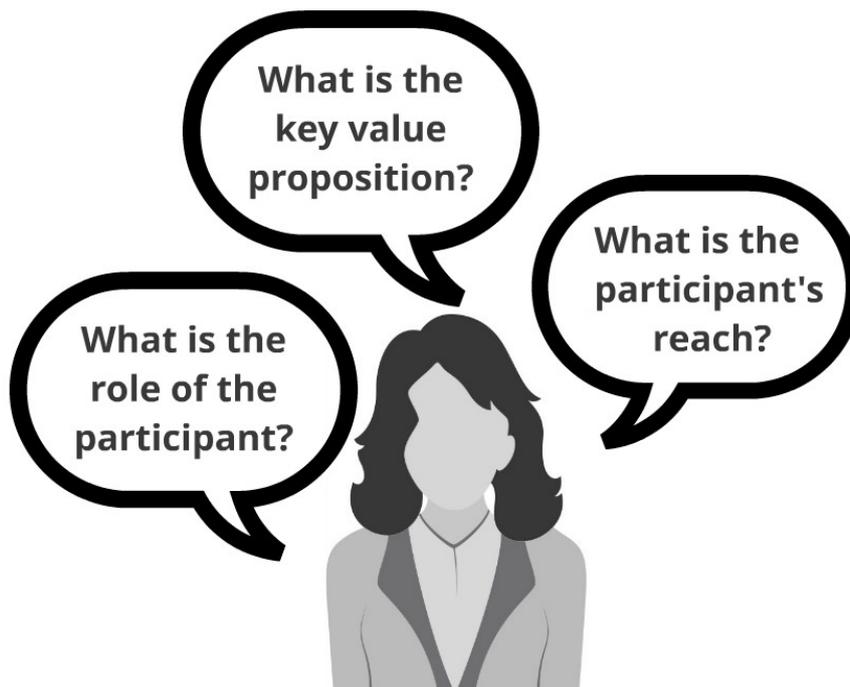
We have already noted that the participants in the ecosystems are the interacting organisations and individuals which include, customers, suppliers and competitors. In a traditional market participants would have been known as stakeholders.

Stakeholders are any parties that can affect or be affected by an organisation's strategy and policies. The term participant is slightly broader in meaning as participants are anyone connected to an ecosystem. The concept of stakeholders

and how important they are to an organisation's strategy will be explored in a later chapter on business models.

Collaboration between these participants is not a new concept, but the difference between participants in an ecosystem and in a traditional market is **the increased significance of the relationships**.

There are three key questions that an organisation should ask with regards to all of the participants that make up the ecosystem



What is the role of the participant?

So, if participants are the organisations and individuals that together form an ecosystem, by asking what each of participant's roles are, a business owner/leader can establish the **exact role the participant is carrying out in the ecosystem with regards to their own business**.

FoodFast contracts self-employed delivery cyclists. Quite simply the cyclist's role is collection and delivery of sandwiches, and by working together, customers quickly receive their food in busy urban areas, in return the cyclists are paid. There are, of course, many participants in FoodFast's ecosystem, from software developers to full time staff, the leader has to be aware of all of their specific roles.

What is the capability of the participants?

In the first question, the leader simply understands the role of the participant, this question takes the next step by asking the **value that the participant provides**.

So, what does that mean for our FoodFast participants? Well, the delivery cyclists provide quite a lot of value! If FoodFast didn't employ them, they wouldn't be able to deliver the food to customers. They are especially effective in busy, urban areas where delivery by car would take far longer, customers food would get cold and they may not use FoodFast's app again!

What is each participant's reach?

This question is asking whether the participant is able **to scale up their operations**. For example, would the participant be able to move from serving a local market to a national market?

FoodFast's self-employed cyclists would really have no scope to be able to scale up the operations, after all they are just individual people! So what would this mean for FoodFast? Well, it would have to be aware that it would have to employ local cyclists for every urban area it operated in as participants can only cover a small area. Also, what would it mean when FoodFast wants to expand into rural areas? Probably that they would have to look at another delivery system, perhaps local taxi drivers.

Drivers of customer demands

Now let's turn our attention to the drivers behind a particular group of participants, the consumers:

Contextualised interactions

Digital consumers expect a **personalised interaction**, such as when Amazon recommends you a book you may like based on your purchase history, or **personalised products**, such as a consumer being able to design and order trainers on the Nike store.

Connected digital systems

Digital consumers are now used to being able to buy something, pay for it easily and have it delivered either the same day or next day. As such organisations have to be aware that they need to connect their digital systems in order to attract and keep hold of customers.

Real-time

Digital consumers expect to be able to access product information or services 24 hours a day over the internet.

Service

Digital consumers are willing to switch providers due to poor service, in fact, two thirds of consumers have already done so.

Not only do consumers expect good service, but they are prepared to **self-serve**. This attitude towards self-serving can be reflected in consumers being prepared to personalise their products right through to being provided with information to resolve technical issues.

Transparency

Transparency is linked to digital consumers expecting to access product or service information easily before they make a process. It is also linked to information that companies provide about how they are going to use the consumers data.

Peer reviews

Peer reviews are more valued by digital consumers than professional reviews of products in the media or those provided by the companies themselves. Companies should be warned that poor peer reviews carry twice as much influence as positive reviews, and so companies should be quick to respond to any negative feedback online.

How can companies improve the customer experience?

Design thinking

Design thinking encourages organisations to look at the individual they are creating the product or service for, asking the questions; what do they want? What is technologically possible? And what is economically viable? This is radically different from the traditional approach, which involved designing one particular product or service for the many, rather than for one.

Experiential pilots

Experiential pilots analyse the behaviour of consumers and how they interact with an organisations product or service. A number of questions should be asked to gauge the consumer's engagement: How are they interacting with the product or service. How are the customers interacting with each other and how are they influencing each other? And are any new behaviours being created because of the consumer experience. Once a product or service has been introduced to market it is important that these reactions are monitored.

Prototyping

OK, this isn't a new term! But in the digital era, prototyping is making sure that a product or service gets to market fast! This may mean that the product may not be totally finished, but what it does allow for is the company to be able to monitor how consumers interact with it, and then be able to make any changes if necessary.

Brand atomization

By thinking about how its products can be designed brands could allow some areas of its products to be more widely distributed. For example, the music streaming service Spotify allows its brand and service to be shared among a wide variety of elements, from Smart TVs to car manufacturers.

7. Regulation

Regulators exist to ensure fair but competitive marketplaces, both for organisations and the customers. However, dynamic, rapidly changing **ecosystems are causing regulators problems**. Let's see why:

Ecosystems cause problems for regulation in several ways:

- **Ecosystems change quickly.** Just think, Uber, the global ride-sharing business, was only founded in 2009 and now it operates all over the world and has totally disrupted the transport industry creating a new ecosystem. That's how quickly things can change! Because of the speed in which ecosystems change or are created it can be difficult for regulators to keep pace with the change. It wasn't until 2017 that the European Court of Justice actually ruled over what type of company it was, a full five years after it had launched in the EU!
- Ecosystems, by their definition, are difficult to regulate. They contain a multitude of diverse participants interacting and operating in different ways, complicating a regulator's job. In a traditional market environment, it is the regulator's job to make the competitive field as fair as possible. **It will be far harder to set the regulations for diverse, non-comparable entities.**
- The complications don't end there, ecosystems are driving **new products and services to be created.**

Let's return to Uber. Although it's similar to a taxi company, it's not actually classed as one. Using apps and personal cars it has redefined transportation and is actually classed as part of the ride-sharing industry, an industry that Uber itself created. As it's a relatively new industry, existing regulators have to ask themselves the question, whose job is it to regulate? A regulator has to keep up with this innovation, and thanks to the digital revolution, make a judgement between digital and non-digital services and products that span different industries.

- Lastly, the complication for regulators doesn't end there! **Even when they are able to regulate industries, participants will try to find ways to bypass regulations.**

For example, transport regulators in New York have capped the number of new drivers ride-sharing companies are allowed to employ, in a bid to

protect the existing yellow cab taxi service. However, Uber sued the city in a bid to get the cap lifted, saying that this decision was uncompetitive.



CIMA Management Case Study

Chapter 2

The Elements of Business Models

1. The business model

Let's start with a question: what do all businesses want? Well, that's an easy one, they all want success! However, 'How can a business achieve that success?' is a much harder question to answer. CIMA claims that one route to success is for **'businesses to meet the needs of customers, satisfy all the other stakeholders and deliver benefits for society at large!'**

Easy, right? Well, perhaps not!

Actually, the route to success can be taken one step at a time, and one of the very first steps to achieving success is for an organisation is to have a framework by which all aspects can be considered. That's where business models come in.

But what exactly is a business model?

At its simplest, a business model is **an organisation's plan for achieving its objectives**. Now, the objectives of an organisation will depend on the type of organisation it is; for a business, its objective may be to earn a profit or increase revenue, whilst for a charity it may be to expand its services to maximise the benefits it provides to society.

Let's look at the low-cost airline Ryanair. What could its main objective be? Well, the CEO, Michael O'Leary, is eligible for annual multi-million-pound bonuses if Ryanair's profits hit a certain level. So it seems safe to say that achieving a sizeable profit ranks highly on the list of the company's objectives! Not only for Michael, but other shareholders too.

But, the business model doesn't stop there, remember, it's a plan to achieve objectives, so what is Ryanair's plan? It's based on cutting costs throughout every part of the business, and then being able to charge lower prices for flights than competitors. It then provides a lot of flights, so while profit margins are low, the volume ensures the company as a whole is very profitable. It also earns extra revenues charging for 'luxuries' such as being able to sit next to friends and family or putting large bags in the hold.

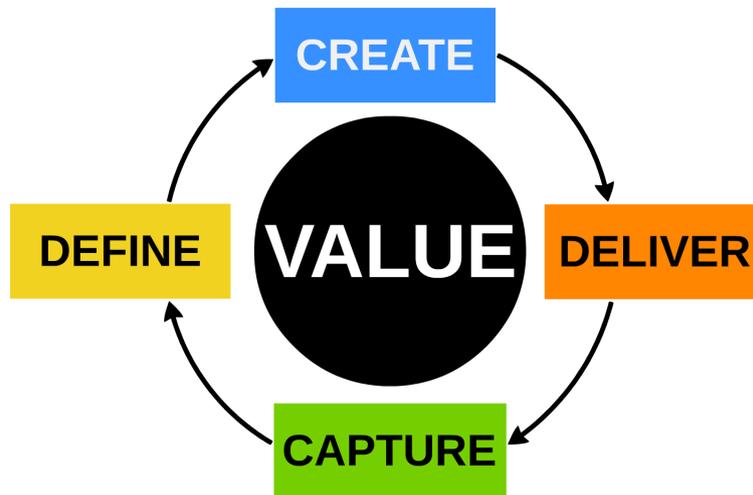
So, they have a business model based on low costs, low prices and high volumes. But that's just one successful business model.

Let's contrast that with Apple. Its aim is also primarily to achieve profit. However its business model is very different. It focuses on high quality, superb design and leading-edge innovation as a way to charge high prices. It's a very different model from Ryanair's, but it's very successful, too.

So, that's the crux of a business model. It answers the question "What's the over-riding approach the organisation is taking to make it successful?"

CIMA's approach to business models

CIMA have developed a framework to explain business models in more depth. Firstly, let's have a look at a diagram of CIMA's business model approach:



As you can see **value is at the centre of the model** and, around the outside are **four stages of the approach, starting with define and moving around the circle clockwise.**

Returning to Ryanair. Its **central value represents its over-riding purpose**, which we might say is hitting profits targets. Each of the four stages represents a step that the company needs to consider to achieve that value.

Let's look at a brief introduction to those terms and consider what they might be for Ryanair:

- **Define value** - In this first stage, the organisation looks at **what they are creating (the goods or services for example) and who they are creating them for.**

If we return to our Ryanair example, we've already seen that it is trying to create value for their shareholders in terms of profit and share price. But is that all? Well no, there will be a number of different groups it has to create value for, and the main one in their business model is customers. Ryanair has to ensure that it is offering competitively priced flights to destinations its customers want to travel to. There are other stakeholders too, such as suppliers, employees and governments, and the needs of those stakeholders also need to be considered and prioritised.

- **Create value** - Having defined the groups that value is being created for and what the value is, at this stage of the business model the organisation looks

at how it will deliver that value to those groups, what resources will need to be sourced and used, and how those inputs will be turned into the outputs required.

A key aspect of Ryanair's services from the customer's perspective is that they have the opportunity to purchase cheap tickets to destinations that they want to travel to. At this stage of the business model, Ryanair will look to see how it can make operational savings which can be used to keep the price of its services low. Amongst other things this could include: keeping staff numbers low, using online booking only, automated check-in and buying planes and fuel in bulk to obtain discounts.

- **Deliver value** - In this stage, **the created goods, services or experience now have to be delivered to the group they were created for** - those that were identified in the define value stage.

This is the operational stage, which, for Ryanair, would involve having the processes ready so that the customers would be able to purchase, board and travel on the aeroplanes, reaching their destination safely and hopefully with all their luggage! This would be provided in an economical, but efficient way.

- **Capture value** - After delivery, and once revenue has been received from the customer, it is time for the **surplus value (the value, financial and otherwise, that remains once costs have been subtracted)** to be shared between the organisation, the shareholders and the other stakeholders.

So, let's imagine that Ryanair hit the profit levels it set for its CEO to get his bonus, it would be at this stage that the value created (in this case the surplus profits) would be shared with him (in the form of his bonus) and to other shareholders in the form of dividends. Strong long-term profits are also likely to increase the share price, which also adds value to shareholders.

We will explore each of these stages in greater detail throughout this chapter. But before we do, we have to look in more detail at the central focus of the model, 'value'.

2. Value

In business, the value of something is often reflected in its monetary value, for example, Ryanair offers tickets to customers at a low price which we might say is 'good value'. So, it may be a surprise to learn that, **in business terms, the concept of value isn't just about the price, or even costs and cash flow**. These are important ways of measuring value, of course, but not all things of value are paid for. For example, farmers value good weather so they can grow their crops, but they don't pay for it!

There are other ways a company can generate value:

Utility

Utility refers to **the satisfaction that customers get from their consumption of goods or services produced by the organisation.**

Ultimately the customer of Ryanair is getting satisfaction from arriving at their destination, and doing so quickly and cheaply.

Now, satisfaction might be higher if the seats were more spacious and comfortable, the food of gourmet quality and there were a selection of the latest cinema releases available on a large screen to watch during the flight. However, in Ryanair's case the extra costs of providing that is not worth the extra price that would have to be paid for their customer group. In fact, as Ryanair is a low budget airline, its customers' satisfaction will most likely increase as ticket prices decrease!

By focusing on the utility the customer gets, the organisation is trying to **create value in the form of delivering satisfaction by providing a product, service or experience for an identified stakeholder at an acceptable price.**

Shared value

The concept of value doesn't stop there; it also includes the idea of **shared value, which is the belief that a business can deliver both long-term shareholder value as well as providing a benefit to society.**

Let's look at Nestlé, the multinational food and drink processing conglomerate, as an example here as it is a shared value pioneer.

Nestlé has separated its shared value into two sections: priority and organisational. One of its priority areas is making sure its products are nutritious and deliver health benefits to the consumer. For a confectionery manufacturer it's, perhaps, a surprise, that Nestlé is aiming for health benefits for consumers. By doing so, though, it will drive important decisions about future products, and how to make them taste great whilst maximising health.

Its operationalising shared value areas focus on meeting societal needs with regard to its operations, so include making sure that its resources are used more efficiently, meaning there's no wastage which helps sustainability. Nestlé also ensure that conditions are improved its producers and farmers for local economic and social development.

With these policies, Nestlé is aiming to produce value for the business, consumers, employees and suppliers, as well as connected families and communities.

Value drivers

The concept of value also applies to value drivers. **A value driver is an activity that adds value to an organisation's goods or services.** Value drivers can be either tangible or intangible.

Tangible value drivers refer to a physical reason or quality for the added value. For example, Nike's trainers are made from tough, durable rubber, produced to high specifications to make a quality training shoe. They are the physical assets which give the product its value.

Intangible value drivers are non-physical. For example, Nike is a famous international brand; its logo is added to all of its products. While this doesn't improve the products physically, as we saw with tangible value drivers, it does add value in the eyes of the consumers who are willing to pay more to own a pair of Nike trainers, rather than an exactly comparable trainer minus Nike's logo.

Time period

The concept of value also changes depending on the time period: past, present and the future. Past value is often used for financial reporting such as on balance sheets. Present value is often used for day-to-day operational management such as on budgets and future value is used for investment appraisals.

Long term and short term

Value covers both the short- and long-term prospects of the organisation. It is, of course, important that the organisation has to survive in the short term if the organisation is to have a 'long term', but it is important not just to focus on short-term value and risk undermining any long-term value.

In 2019 when Thomas Cook, the tour operator went into liquidation, it was operating a business model that had been extremely successful 20 years earlier, with a group of travel agents, hotels and aircraft which combined to provide package tour holidays. Firms such as Ryanair and AirBnb, combined with people researching and booking their own holidays online at lower cost, changed the industry though. Thomas Cook did not adapt to the change, and while in the short-term it continued to be profitable, in the long-term it needed a new business model to survive.

The importance of business models

So, why are business models important?

Reporting

Firstly, **some regulators require some organisations to present their business models when reporting to shareholders.** The UK Companies Act, for instance,

requires organisations to include a strategic report as part of their annual report, and the business model should be at the centre of that report.

Better performance

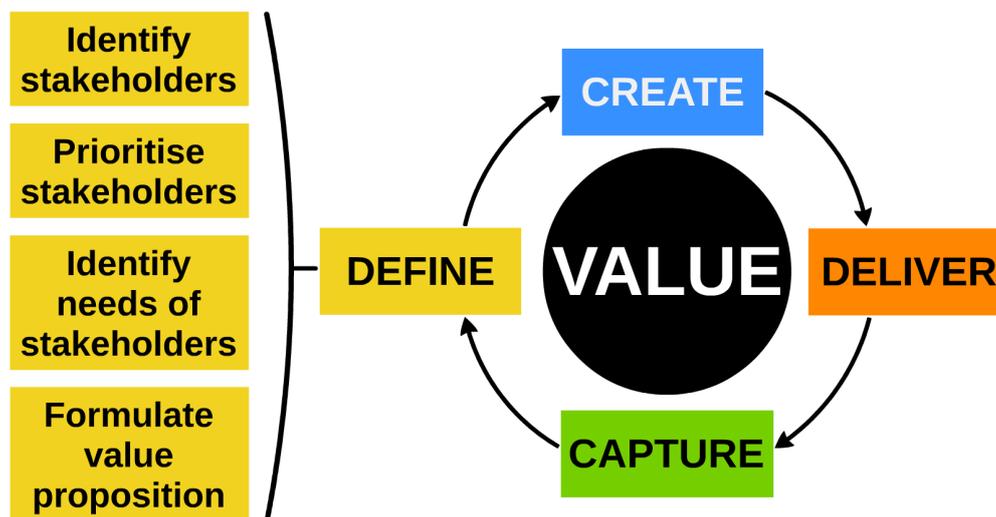
Secondly, even for organisations that aren't required to include business models in their reports to shareholders **CIMA suggests that organisations with business models perform better over the long term**, as “business models are the means by which the organisations create long-term value and sustained success.”

Responding to industry disruption

And thirdly, just as with Thomas Cook, industries and businesses can change quickly. This is called ‘disruption’. It often results from a new technological innovation which alters a traditional business model. Uber disrupting the taxi industry through the use of apps and driver-owned vehicles, is another example.

Organisations must ensure their business model continues to be appropriate by adapting it to the changing environment to ensure it continues to drive the company's success in the long term. Perhaps Thomas Cook would have survived had they changed their business model earlier!

3. Define value



Let's begin to explore the concept of business models in more detail. Before organisations can get to the process of creating value **they first have to define value**. In this stage of the business model the organisation defines value by asking three questions:

- **Who they are creating value for?**
- **Who they are creating value with?**
- **Why are they creating value?**

So who are the people mentioned in these questions? Well, they are the stakeholders.

But what exactly are stakeholders?

Stakeholders are **any parties that can affect, or be affected by, an organisation's strategy and policies**.

Let's imagine a publicly funded school, who would the stakeholders be? Well, we would probably quickly come up with a list that included:

- Teachers
- Pupils
- The pupils' parents and families
- The administrative staff
- The local education authority

All these groups can clearly affect or be affected by the school's strategy and policies. So would this be it? No! It would also include:

- Teachers' unions - Who could organise a strike if they didn't agree with the school's policies
- Local businesses - Who may offer work experience or internships to pupils
- The wider community - House prices may be affected by a school with a great reputation, or a bad one!
- The local council - Who will run other services for pupils that will require collaboration with the school
- Other local schools - Who may be competitors, trying to achieve better results to attract more pupils

- Local media - Who will report, favourably or unfavourably on incidents at the school
- Exam boards - schools must hold exams based on the rules of the exam boards they choose to use
- The government - Who decide how much of the national budget goes towards education

So there we go, a list of lots more stakeholders that you may not have immediately first thought of. However, this is still not an exhaustive list and the brief examples of how they may affect/be affected by the school are also not the only ways it could happen!

Exercise

Now let's turn our attention to the stakeholders of a business, rather than a not-for-profit. Spend some time examining who you think the stakeholders for a low-cost airline such as Ryanair would be.

As you do so, consider what those stakeholder's interest are.

Once you've finished, take a look through our list and see if there are any you missed.

Solution

Ryanair's stakeholders would include:

Stakeholder	Explanation
CEO	As of 2019 Michael O'Leary was the chief executive officer of Ryanair and also had a significant amount of shares, as a result O'Leary could both affect and be affected by Ryanair's strategy and policies.
Funders (e.g. Irish Air)	Irish Air provided a loan and equity to Ryanair in return for shares. As shareholders they would be interested in the performance of the company, which can be affected by the organisation's strategy and policies. Also, as shareholders, it will have voting rights which could shape the strategy and policies of Ryanair.

Stakeholder	Explanation
Trade Unions	Some of Ryanair's employees in certain countries, such as England and Italy, are eligible to join a union if they wish. Trade unions are able to affect the policies and strategy of Ryanair by taking strike action if they feel the strategy and policies of Ryanair are not fairly affecting their members.
Employees	Employees of any business can obviously be affected by an organisation's strategy and policies. Of course, depending on the position of the organisation they occupy, they can also affect the organisation itself.
Airports	How are airports stakeholders? Well they are really interested in the strategy and policies of Ryanair, because if Ryanair flies to them it will bring lots of revenue to the airports, both from Ryanair directly, and from their passengers.
Suppliers	Ryanair will have a multitude of different suppliers; from on-board food suppliers to the manufacturers or lessors of planes. All of them will be affected by Ryanair's strategy and policies, after all, what if Ryanair decided to use a competitor or double the number of planes they own?
Competitors	Competitors too will be affected by Ryanair's strategy and policy choices, for example, if Ryanair changed its pricing structure its low-cost competitors would have to respond and vice versa.
Customers	<p>And lets not forget Ryanair's customers! If they chose not to use Ryanair any more they would dramatically affect Ryanair's strategies and policies! Let's imagine that Ryanair, a low cost airline, decided to change its policy to become a more expensive airline, offering its customers more extras, that may mean it would lose its existing customer base but possibly gain a new one.</p> <p>This is an extreme example but it demonstrates what an important group of stakeholders customers are!</p>

Stakeholder	Explanation
Environmental groups	Organisations can face opposition by external pressure groups. In the case of Ryanair many environmental groups are unhappy with flights as it is a high polluting form of transport.
Charity partners	Ryanair has a number of charity organisations that it supports financially.

This is not an exhaustive list of all of Ryanair's stakeholders but hopefully it demonstrates the wide array of different individuals and groups that have to be considered when setting a strategy.

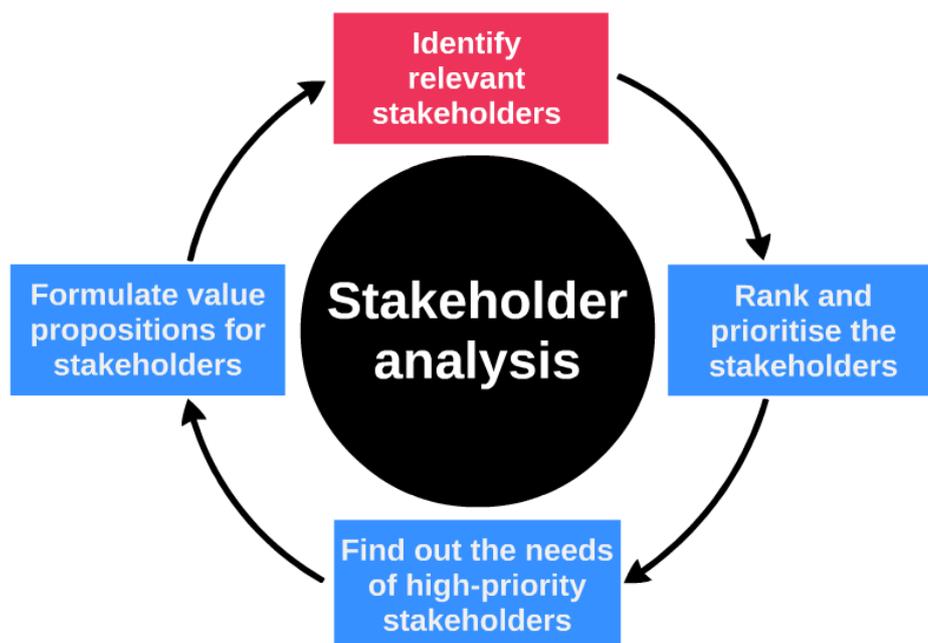
OK, so now we know what stakeholders are we can begin to answer the three questions we asked at the beginning of this section and start to define the concept of value.

The concept of value and stakeholder analysis

The define value stage involves the organisation understanding who they are creating value for, who they are doing it with and why they are doing it.

To help define value, an organisation could follow these four steps to analyse a company's stakeholders:

Step 1. Identify relevant stakeholders

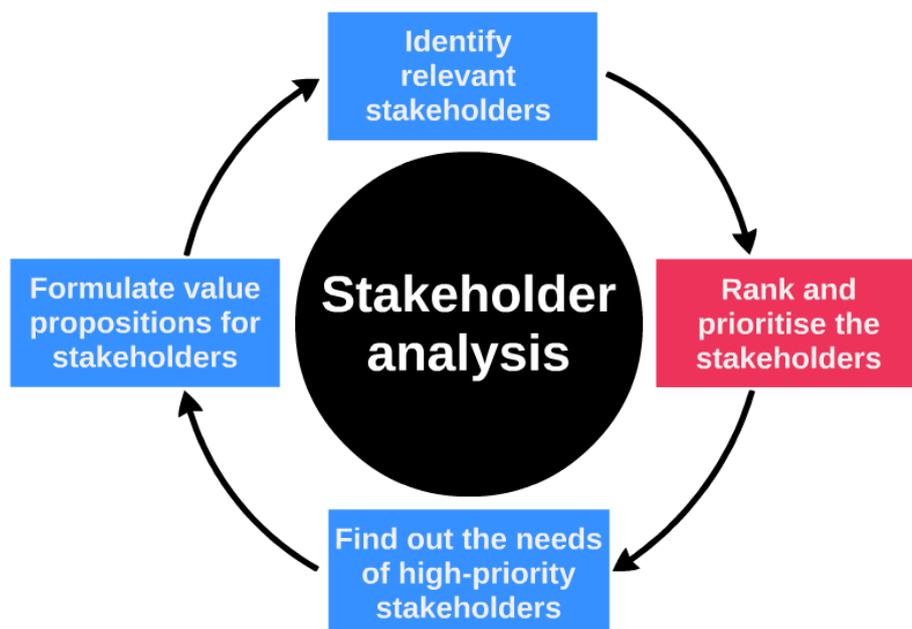


In step one, the organisation identifies the stakeholders who it will create value for and who it will create value with. These stakeholders will mainly be **customers and shareholders (for whom value is being created) and employees and suppliers (with whom value is being created)**, but as we've already seen, there are many different types of stakeholders to think about.

Let's think about our school example of which we've already identified a wide range of stakeholders, which stakeholders would the school be creating value for and with whom would they be creating it?

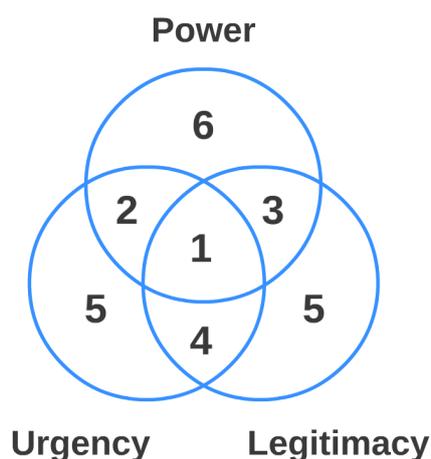
Value for:	Value with:
Pupils	Teachers
Parents and families	Local businesses
Teachers (salaries)	Board of governors
	Various suppliers
	Administrative staff

Step 2. Rank and prioritise the stakeholders



In this stage of the analysis, **the stakeholders of an organisation are ranked and prioritised in terms of the level of their power, urgency and legitimacy.**

A simple way to rank and view an organisation's stakeholders is to plot them on a Venn diagram, as in the illustration below. This is often referred to as the Power, Urgency, Legitimacy Model or Salience Model.



The stakeholder ranked as number 1, which here could be the regular customers of a profit-focused organisation, occupies the position at which all three circles overlap. Whereas the stakeholder ranked as number 5 in the urgency circle has no power or legitimacy, such as a recruitment agency that needs to send applications to the organisation by a certain date.

So we've discussed that stakeholders can be ranked using three factors: **power, legitimacy and urgency**, let's take a look at each of them in more detail, and see where the stakeholders from our school would feature.

Power

If stakeholders are characterised as having **power it means they are able to influence and affect the organisation.**

You may have noticed that this definition of power makes up one half of our overall definition of stakeholders, **any parties that can affect, or be affected by, an organisation's strategy and policies**, but the focus here is only on those that can affect an organisation.

So who would have the power at a school? Well the teachers in senior positions have the ability to affect the policies of the school due to their position, as do the board of governors who would decide the strategic direction of the school.

A stakeholder who wouldn't have much power would be a dinner lady. This is because dinner ladies only work for the school on a part-time basis and their limited role means they would be unable to affect any policy or strategy changes.

An example of a business stakeholder with high power would be a repeat customer that placed large orders. This is because the business would try and retain the custom and would listen to requests made by these customers.

Legitimacy

The level of legitimacy a stakeholder has is defined by how important, appropriate and aligned the stakeholder is to the organisation.

Let's return to our school and imagine two companies are offering to supply the food for the school's lunch room. One is offering balanced healthy meals with fresh vegetables and fruit, the other food that they say pupils love; pizza, chips and desserts. Which supplier would be the most legitimate choice? Well, that would be the one most aligned with what the organisation is aiming to do. And as the school has a duty not just to try and get the best grades for their pupils but also to take care of them, that would be the supplier offering a healthy menu.

Urgency

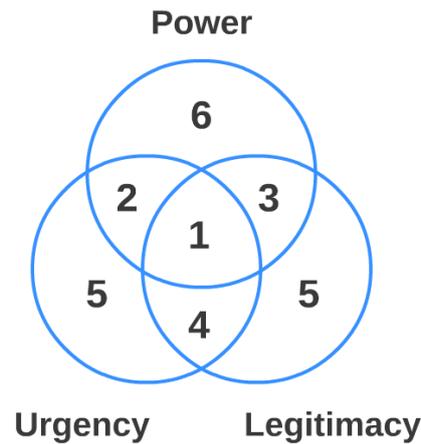
Urgency is defined as the level to which the stakeholder can call for immediate attention. This could be because the stakeholder's **requirements are time-sensitive** and have to be addressed instantly, for example, a tax authority demanding payment by a certain date. Or perhaps an organisation has such a **critical relationship** with a stakeholder that they have to address the issue, for example, if a pupil suddenly starts acting strangely and misses a lot of school, then the school would act quickly to find out the cause of this unusual behaviour. This is because of the duty the school have to each of their pupils.

The more of each of the three factors (power, legitimacy and urgency) a stakeholder has in regards to the project or organisation, the higher their ranking. An organisation would typically prioritise stakeholders that have all three criteria.

Exercise

Before we move on, look back to the stakeholders that were identified for Ryanair and aim to find one example of a stakeholder for each position in the salience model.

Try it yourself before looking through our solution. Go on, we know you're tempted to just read through the solution, but you'll learn a lot more if you try yourself first!



Solution

Position 1 - Michael O'Leary would be a good example of a number 1 position in the salience model. He has the power to affect the company's policies and strategies, so satisfies the power criteria. His concerns are aligned with the company, so he also fulfils the legitimacy criteria. Also, because of the role O'Leary has, he could call for immediate attention, so he would also fulfil the urgency criteria.

Position 2 - Trade Unions' interests are not aligned with the company but their members, so they don't have legitimacy. However, if their members become dissatisfied they could affect the policies of Ryanair (Power) and any issues they raised would have to be responded to quickly by Ryanair, so as to ensure the situation didn't escalate.

Position 3 - In this position, the stakeholder has no urgency. For Ryanair, this could be the owner of buildings Ryanair lease from them - they have power due to their ownership of important buildings and legitimacy because both companies are likely to want the relationship to continue long-term.

Position 4 - Stakeholders occupying this role have no real power but urgent and legitimate concerns, so for Ryanair, this could mean a non-unionised member of staff who has legitimate safety concerns which the organisation should consider.

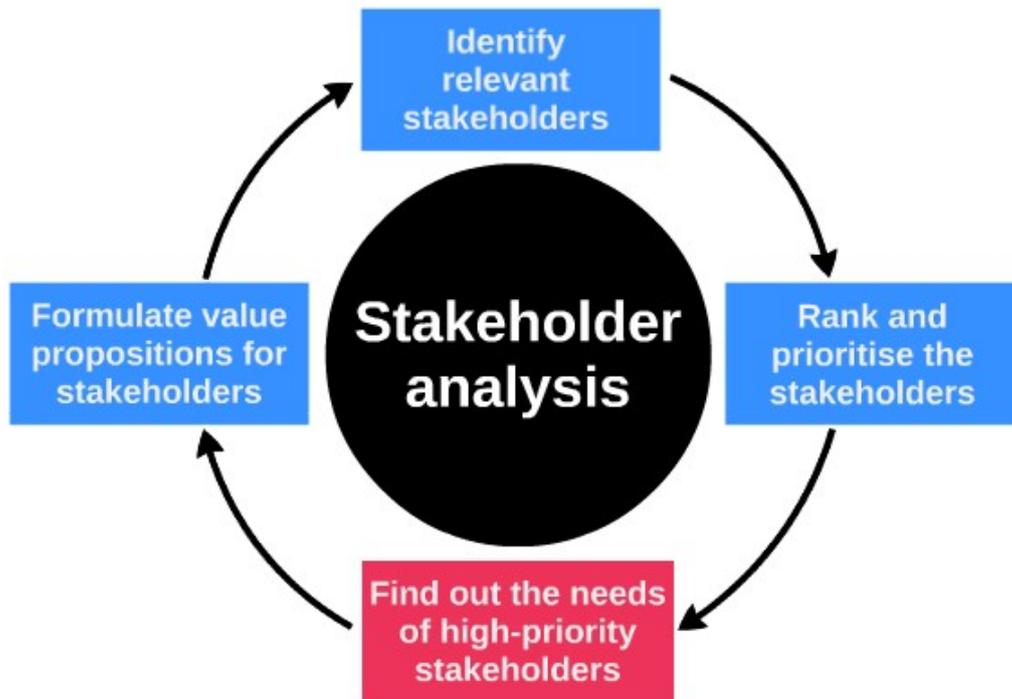
Position 5 - Legitimacy - An example of this could be the charity partners of Ryanair, whose interests are aligned but have no power or urgency to their claims.

Position 5- Urgency - An example of this could be a non-unionised staff member asking for a raise outside of the normal policies. They don't have any power and legitimacy, but they are being demanding and vocal.

Position 6 - These stakeholders have power but that is all. One example of this may be a government authority that has the power to impact Ryanair policies but has no current issues with Ryanair.

So here's a small example of positioning on the salience model. In the real world there would be far more stakeholders for each position!

Step 3. Find out the needs of the high-priority stakeholders



Once the stakeholders have been ranked and prioritised, an organisation can identify the needs of those stakeholders in a bid to make sure they are satisfied.

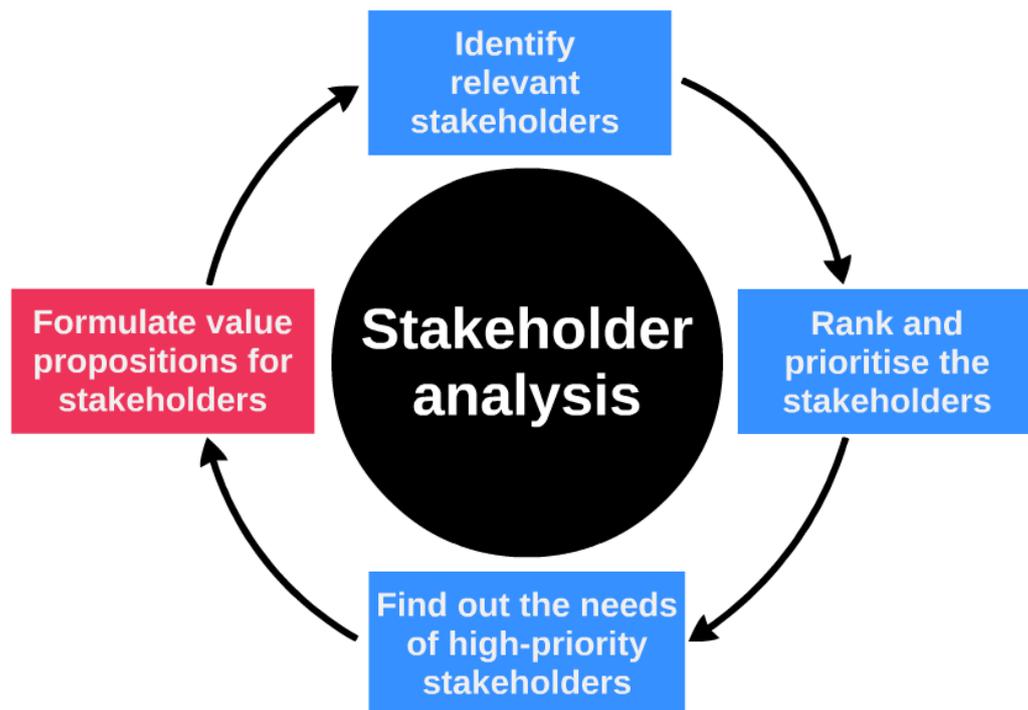
But what do we mean when we talk about needs? Well, for the pupils of our school it would be an education that would prepare them for their exams or their working life.

The table below gives a general guide to what certain groups of stakeholders of a business may need.

Stakeholder	Needs of the stakeholder
Directors	Pay, bonus, overall performance, job security
Employees	Pay, bonus, personal performance, job security
Shareholders	Share price growth, dividend payments

Stakeholder	Needs of the stakeholder
Customers	Prices, quality, delivery times, assured supply
Suppliers	Assured custom, high prices
Financiers	Interest payments, ability to pay back loans
Government	Tax, law, wealth of nation
Pressure groups	Environment or other ethical issues, pricing etc.

Step 4. Formulate value propositions for stakeholders



Once an organisation has identified the relevant stakeholders, ranked and prioritised them and identified their needs, it's time for the organisation to **formulate value propositions**. This is a **promise of value to be delivered**,

communicated and acknowledged to stakeholders. These value propositions should meet the needs of the high priority stakeholders.

The value proposition for a school towards its pupils may be to meet the educational needs of its pupils in a safe and supportive environment.

In Step 2 we identified Ryanair's customers as one of its high priority stakeholders. Based on the understanding that its customers want cheap air fares, its value proposition to them may be the message that Ryanair is the a very cheap, but safe, airline. For its staff, it might be to provide a secure, fairly paid job, while for shareholders it might be to provide high returns on investment.

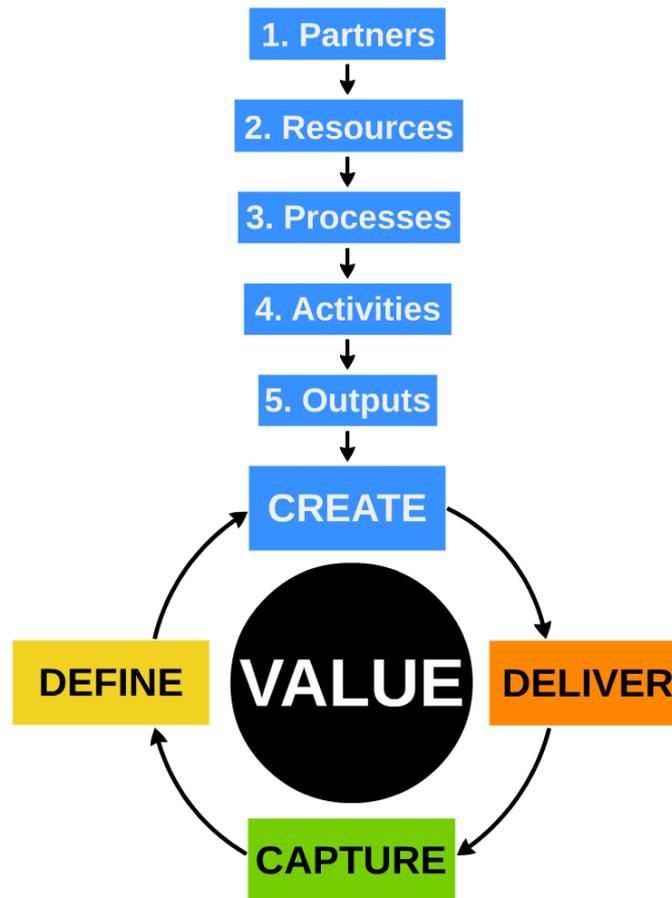
As we can see from these two examples, the value proposition for stakeholders changes depending on the needs of the stakeholders and the organisation.

At the end of this stage the organisation will now know what to focus on when they move onto creating the value for the stakeholders.

4. Create value

So by this stage the organisation should know the stakeholders they are creating value for, the stakeholders they are creating value with and what the stakeholders want! And so now the organisation can begin to plan how they are going to create value.

There are five different features (partners, resources, processes, activities and outputs) that an organisation has to link together in order to create value.



The five features of value creation

1. Partners

Partners are the high-priority stakeholders; they are any group of stakeholders that organisations create value with, **typically employees and suppliers**. Partners help organisations gain access to resources, markets and technologies. These are then used by the organisation to produce goods, services or experiences.

If we return to Ryanair, there are a whole host of partners that help create value. For Ryanair the value would be delivered through providing cheap airfares. Obviously, there are the pilots who fly the planes and the cabin crew on-board who show customers to their seats. But there are also all of the other employees, such as the ground crew, HR team, marketing, and, of course, finance staff. Now, all these employees are not necessarily employed directly by Ryanair, the roles may be, outsourced and so the partners would be the companies that employ them.

But the partners wouldn't just stop with employees, it would also include the suppliers, such as Boeing who provide Ryanair's planes, right down the company who provides the ice for Ryanair's onboard drinks!

As the goal is to keep prices for customers low, Ryanair will aim to work with their partners to make services as efficient as possible, and aim to keep their costs down as far as is practical.

2. Resources

Having a strong relationship with partners means that organisations will be able to source the correct material and resources in the correct volume required and then manage them effectively. These **resources can take a variety of different forms, including; financial, physical, human, intellectual (things such as patents or licence agreements) and natural resources.**

So, what may be some of the resources for Ryanair? Well, a financial resource would be the loan financed by Irish Air which we saw in the first section. The finance team will be tasked with ensuring funding is used in the best way and interest paid as required.

The physical resources would be things such as the planes which they received from their partner Boeing. Those planes will need to be serviced, managed and organised in the most efficient way possible while also ensuring they meet all regulations.

3. Processes

So the organisation has its resources (also known as inputs) which it needs to convert into products and services (which are known as outputs). **At this stage, the organisations would have to design and set up the processes that will turn the resources into the goods.** Well-designed processes can mean that productivity, costs and quality are improved and can create better value.

There are a huge amount of processes that Ryanair have to undertake in order to deliver value including processes for: making bookings, checking-in passengers, managing the finances, organising people, scheduling planes and training staff. To add value these processes would be designed in a way that keep costs down, so, for instance, only allowing online booking to remove the costs of booking staff.

4. Activities

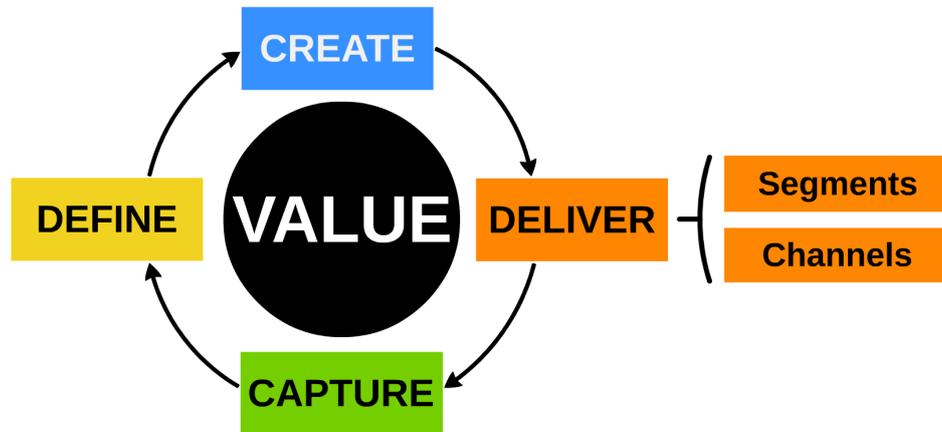
Now the resources have been acquired and the processes put in place, the **workforce can come together to undertake the processes**, e.g. take bookings, manage staff and look after the finances of the business.

5. Outputs

The **outputs** should now be created, and these **can be anything: products, services or experiences that aim to meet the value that the customers desire and which was defined in the very first stage of the business model.**

Of course, in the case of our Ryanair example, the outputs would be low cost flights, and, hopefully, happy customers and staff!

5. Deliver value



In the creating value stage, we looked at how an organisation produces its goods, products or services. But producing isn't enough! **The organisation will only earn its revenue when the consumer receives the products or use the services.** As such, it is vital that the organisation learns how to reach its customers.

As you can see from the diagram, there are two elements that we are looking at in this section:

Segments

Customer segments are different groups of people an organisation serves or is aiming to serve, and are divided up, for example, by gender or income level. **It is important organisations understand their customers so they can deliver them relevant messages.**

For example, Ryanair will typically sell to people on lower incomes who value low cost flights. However they might want to segment that market further. For example, students might be one target audience they might consider focusing on.

Channels

Channels are **the way that value is delivered to the customers.** Channels can include, retailers, distributors and increasingly the internet. One example of this would be Ryanair's customers purchasing tickets directly from its website. That would be its sales channel.

Let's have a look at each of these in more detail.

Segments

To get the different groups of customers, organisations divide their customer base using specific variables. This process is known as customer segmentation. There are four main variables on which customer segmentation can be based.

Variables of customer segmentation	Examples
Geographic segmentation	By country or region, or perhaps qualities of an area such as climate
Demographic segmentation	Age, income, education level.
Psychographic segmentation	Focuses on the intrinsic traits the customer has and can range from values, attitudes and interest to lifestyles and opinions, so for example when going on holiday some people might value adventure, others safety, and others relaxation.
Behavioural segmentation	Similar to psychographic segmentation but focuses on specific reactions and how the customers act as well as the processes behind their decision making and purchases. So, for example, some people tend to make impulse purchases while others take their time to consider and weigh up the pros and cons prior to making a purchase.

The consultants Bain and Company suggested several ways that an organisation should carry out customer segmentation:

- **Divide the market into meaningful and measurable segments**, according to the needs of the customers, how they have acted in the past or their demographic profiles.

Ryanair has customers all over Europe; it could easily segment its customers based on their country of residence. Now the airline can target those specific customers with information about Ryanair's services that will directly affect them and perhaps encourage them to purchase tickets.

- **Determine the profit potential** of each segment through analysis of the revenue received and costs spent on serving each segment.

Perhaps due to external factors, such as recession, Ryanair finds that one country has less disposable income than other segments while another is much higher.

- Then the organisations can **target the segments** according to their profit potential; after all, there's no point targeting an unprofitable segment!

In the country where incomes are down they might decide to reduce prices or fly only to lower cost airports in that country (perhaps surprisingly, some airports actually pay Ryanair to fly to them!).

- **Measure the performance** of each of the segments so that the approach towards the segments can be changed when conditions dictate.

If Ryanair continued to monitor these customer segments, they may find that conditions change. Perhaps the country's economy improves and air travel becomes more popular again and it adapts its flight policies accordingly.

- To make sure that the customer segmentation is as effective as possible Bain and Company also suggest that organisations **invest resources** so that the products, service, marketing and distribution can all be **tailored to suit the needs of the specific segments**. e.g. investment in planes, staff and marketing to launch into a new country.

Channels

Once their customer segmentation is understood, organisations can deliver value to the customer through a number of channels. **Traditionally these would have been the communication, distribution and sales channels.**

So to purchase tickets for an airline previous to the rise of digital technology, customers might have gone to go to a travel agency (the sales channel) to book a flight. This has changed with the growth of the internet as Ryanair now sell tickets directly through its own website (which is now the sales channel).

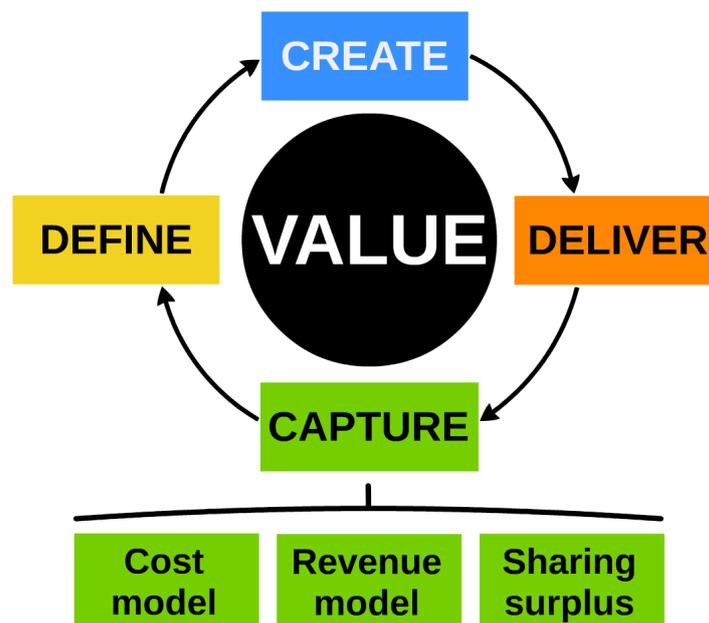
Through developments in technology, however, **new channels have been opened up for organisations to connect with their customers**, such as social media and smartphones. These technological developments mean that customers also expect to be able to receive services through this new technology.

This simple example is supported by research undertaken by the computer software company the Oracle Corporation. It claims that the **vast majority of customers use two or more channels to browse for, research and purchase products**, showing how important it is for organisations to operate a multi-channel approach.

It is vital for this multi-channel approach to be integrated into businesses. Oracle suggests that **organisations must collect, clean, connect and transform customer**

data in order to drive personalisation seamlessly across the different channels. For an airline, they might, for instance, allow customers access to their online account via a web browser, a mobile app and through a customer helpline. When people use their browser or app, they could use existing data on past purchases to make suggestions for locations they might be interested in, or tailor special offers specific to their needs.

6. Capture and store value



In the three previous stages represented by the business model, the organisation will have incurred costs. Just think how many costs Ryanair incurs to get its planes in the air; it has to pay for aircraft, employees, fuel and airport landings amongst many, many other costs.

However, they will have also earned revenue through ticket sales.

In this stage of the model, the organisation must now capture value. **Value can be captured when the revenue is greater than the costs of creating it, leaving a surplus.**

But who gets the surplus? Well, it has to be shared with the **stakeholders who have helped create and deliver the value but have yet to receive any value themselves!**

There are three main issues that affect the size of the surplus:

Cost model

The cost model refers to the costs that have been incurred by the organisation in creating and delivering value. There are **four factors that help establish the costs that are incurred**:

- **The efficiencies of the process** - For example, Ryanair run a low-cost model and so they have to run incredibly efficiently. If they don't, then costs will rise, and they won't be able to offer low-cost fares and will fail to offer the value proposition established in the define value stage.
- **The levels of activity** - For example, as Ryanair fill more seats on a plane their profits will rise.
- **The resources consumed during activities** - Unsurprisingly the amount and type of resources consumed during activities will affect the prices.

In 2017 Ryanair ordered new Boeing planes with the aim of cutting its fuel consumption by 16%. By cutting resources used, Ryanair is trying to cut costs. It can then either pass those cost savings onto consumers in the form of cheaper tickets or have more surplus to share with stakeholders such as shareholders.

- **The price paid for resources**- In 2019 Ryanair released a profit warning because of rising fuel prices. The higher fuel prices rise the lower Ryanair's profits.

Revenues

We have already seen that revenue is only earned when the goods or services have been delivered to customers. **The price of the goods or services reflect the customer segment that has been targeted**. For example, a private jet company would not target customers that normally use Ryanair flights as the price of goods would not reflect the needs of the customers.

The **revenue collected will also be affected by**:

- **The market conditions at the time** - For example, in 2019 Ryanair announced a second profit warning because of high levels of competition in its markets.
- **Any regulatory control in place** - For example, in 2019, the UK Government announced that an increase in airport passenger duty. A spokesperson for the flight industry claimed that the high duty was causing the British airline companies to be uncompetitive when compared to European airlines which weren't liable to pay such high levels of duty.

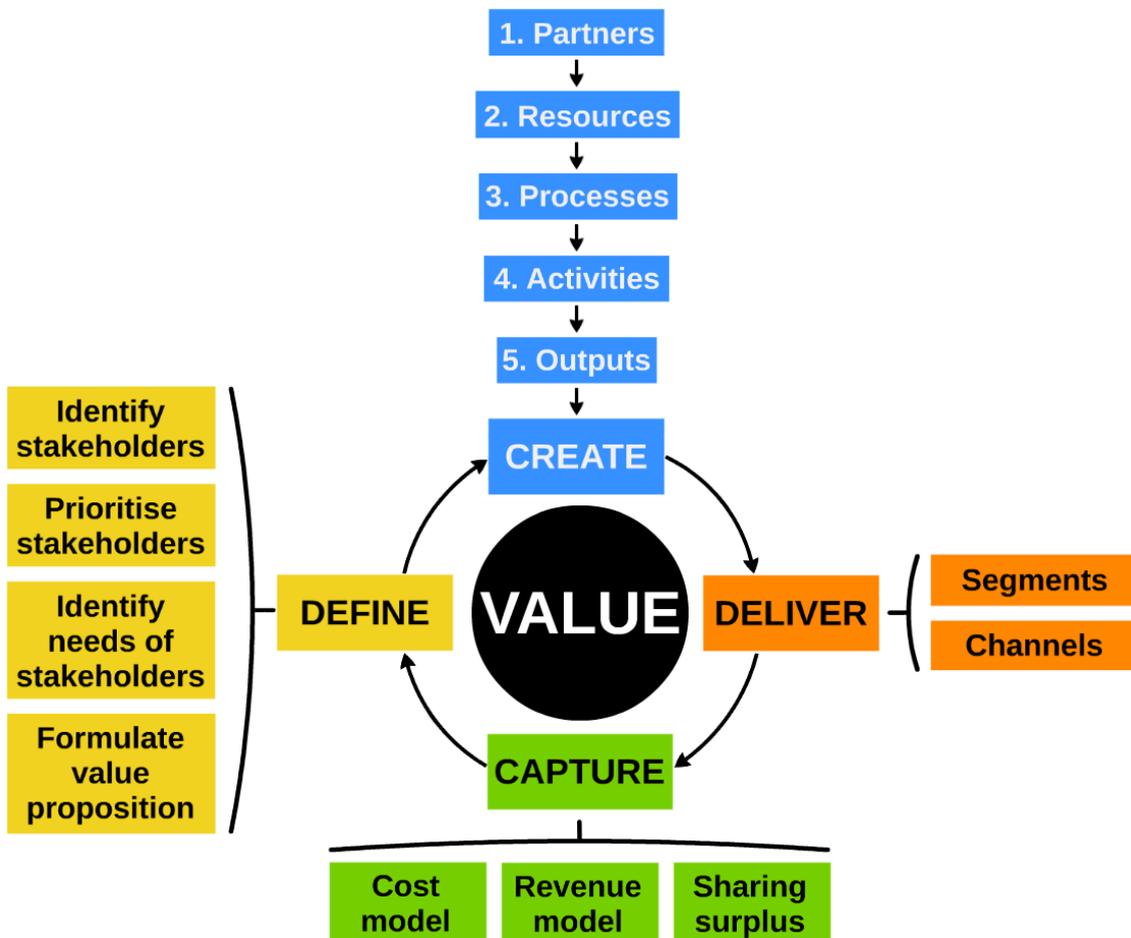
Sharing residual value

The third issue that affects the surplus is **sharing residual value**. Once the costs have been subtracted from the revenues, the **surplus value can be shared amongst the shareholders and other stakeholders**.

The stakeholders under consideration at this stage would be the:

- **Government** - The surplus would be used to pay taxes
- **Shareholders** - The surplus would be used to pay dividends
- **Executive incentives** - The surplus would be used to pay for bonuses
- **Organisation** - The surplus would be retained for investment opportunities

7. The complete CIMA business model



And here we are, the CIMA business model in full.

We've used the example of a low cost airline as we've progressed through this chapter. But remember, the business model would be very different if we were considering a company providing flights on private jets; the way value is created is completely different and so the way value is created, delivered and captured is different too.

Each company therefore needs to understand and define its own business model, and keep that model up-to-date to ensure they remain competitive. It is one of the keys to success for any business!



CIMA Operational Case Study

Chapter 3

Digital Business Models

1. Disruption

How are disruptive technologies changing industries?

In the early 80s, the computer was considered a disruptive technology when first used in accountancy departments. Multiple ledgers, day books and even typewriters gave way to software that could contain the information in much smaller, accessible formats with a reduction in staff numbers needed to log entries. We would now consider it to be a huge task to keep a company's accounts without computers, illustrating how disruptive technologies help to force businesses to grow and develop.

Disruptive technologies, such as artificial intelligence (AI) and cloud computing, that we will be looking at in this chapter, **change the way businesses function, creating new, normal methods of operation.**

Here are a few more examples of how technology is currently disrupting existing industries:

Industry	How technology is 'disrupting' the industry
Public transport (such as taxis)	AI is being used to create self-driving cars, so a taxi driver will eventually no longer be needed to transport passengers.
Supermarket	Self-checkouts are becoming more common and reduce the need for human checkout workers.
Energy	Renewable energy sources from new technological advancements mean that traditional energy sources, such as fossil fuels, are being used less and less.
Banking	Financial technology (FinTech) is beginning to replace the technical roles that only banks have previously done, such as investment advice and banking services.

Competitive advantage

Competitive advantage means that a business is in a position that is superior to its competitors. Being the **first in the industry to use these new technologies gives a great competitive advantage.** From creating a new way for consumers to shop, to introducing new business ideas, the pioneering business will gain a reputation for being the first to implement that idea.

Consider the introduction of a newer, more convenient shopping method. Consumers have almost unlimited access to technology and are constantly looking for easier ways to buy new products and services. In an age where a quick purchase and fast delivery is attractive to most shoppers, customers will be more likely to shop from a certain business if the experience is easier and more convenient for them. The better the service, the bigger the competitive edge the business has over its rivals.

An example of competitive advantage

Let's look at an example in the real world. Monzo Bank Ltd. is a new, completely online bank in the UK. It has no branches, operating with customers only via its smartphone app. Monzo Bank Ltd provides an option for customers to open up a bank account within minutes, from the comfort of their own home, simply by sending in a photograph of identification and a short video. If a customer has this option, why would they choose to go to another bank which could require time-consuming visits and meetings at bank branches?

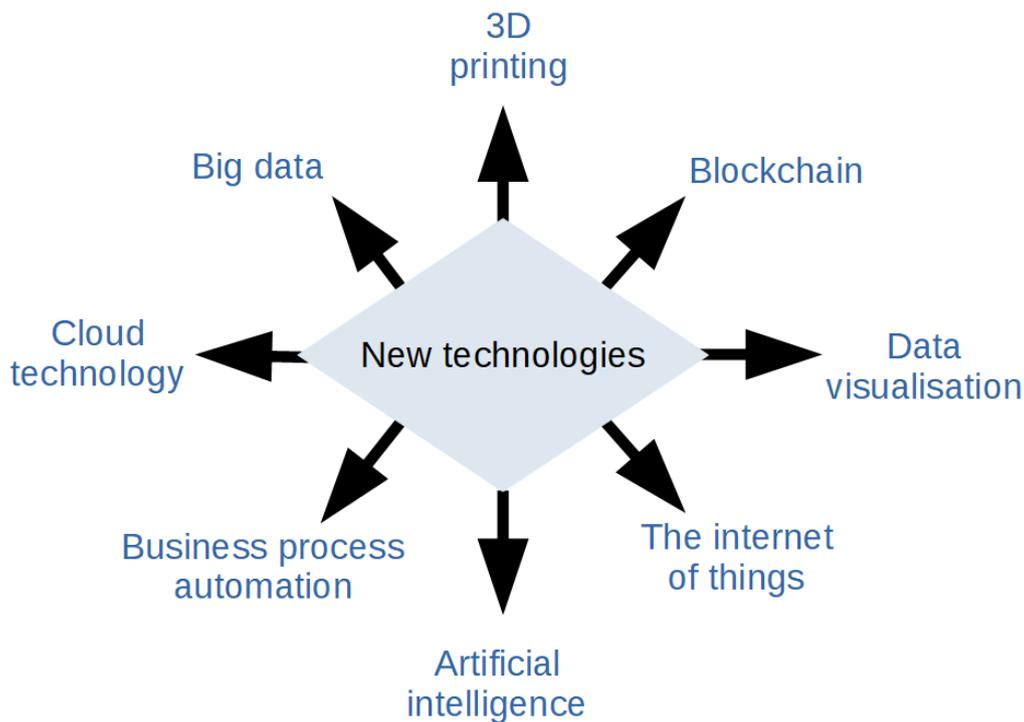
Monzo has been successful, doubling its valuation to £2bn in just eight months by the start of 2019! It's clear that customers respond well to this convenience, even though Monzo is a new bank and doesn't have the same reputation as well-established banks, such as HSBC. Monzo is reaping the benefits by being a pioneer of this business idea.

Those businesses that are slower to implement these advances often suffer at the hands of technology-forward competitors who have already established their use of technology. Customers are enticed into more convenient and innovative shopping experiences, often by the first business to offer it, like Monzo.

On the flip side of this, remember the mobile phone manufacturer Nokia? Nokia's lack of investment in new technologies, e.g. the smartphone, caused customers to buy from its competitors. The value of Nokia dropped by approximately 90% in just over five years! Showing just how important it is to utilise new technology in a modern business!

Disruptive technologies used in business

These some of the major technologies that can be considered to be disruptive. You have seen many earlier on in your CIMA studies, but we will review the main ones relevant for E2 again in this study text.



2. Roles of the board and senior leadership in digital strategy

Kodak was a global company that dominated the photographic film market during the 20th century, and in 1975 it actually invented the world's first digital camera. So, why are we all not walking around with a Kodak digital camera then?

Well, because it was film-less, and remember Kodak was a photographic film company; the management at Kodak didn't want to release the camera as they were so worried about the impact of this new technology on photographic film sales! This strategic decision meant that Kodak missed the digital revolution and filed for bankruptcy in 2012.

So, from this example, hopefully **we can see how important the role of the board and senior leadership is when deciding digital strategy!** Let's have a look at more ways they should be involved in strategy formulation.

Change management

It's no surprise that digital disruption is going to involve a lot of change, so the **qualities, such as communication, facilitation and support that are needed to support business change will most certainly apply** here!

Let's imagine that Kodak's management team had decided to invest more heavily in new technology to produce and sell digital cameras. Its long-time staff would surely have found the change really difficult, after all they would have been experts with film and suddenly, they would have been expected to work with a totally different technology. It would have fallen to Kodak's **senior leaders to be energising and confidence inspiring**, so as to convince the workforce that digitisation was the correct strategy!

Strategy

Often setting strategies in large companies is a long process of analysis and review, from which a long-term plan arises. But, would that be suitable where disruptive technologies exist? On one hand, yes; the investment in research and development in new technologies can be significant and require many years, and so a long-term plan is important.

On the other hand though, **if a competitor enters the market with a disruptive technology long-term plans are less useful**, as the market-leading mobile phone manufacturer of the time, Nokia, found after Apple introduced the smartphone. **A more flexible approach to strategy is therefore required to adapt to disruptive changes.**

Business models

Disruptors often mean that industries and markets are changed irrevocably, that means business models also have to change, otherwise the traditional processes and objectives of the organisation may become redundant. Just as we saw with strategy, **the board and senior leadership will have to make sure they are choosing the correct business model that suits the organisation's new direction.** IBM, the world leading PC manufacturer of the 80s and 90s changed tack to focus on business systems and consultancy as costs of computers fell and the market changed. In 2017 their turnover was \$79bn, demonstrating their successful change in business model.

Mutuality

This concept, which we explored when talking about ecosystems, describes the idea of mutual benefits for all of the participants of the ecosystem. If everyone is to benefit, it is **important that the board and senior leadership carefully choose who they collaborate with.**

Technology

One of the **drivers of disruption is the technology itself, from 3D printing to AI.** The board and senior leadership need not only to make sure that the company benefits from the most appropriate technology, but also that they ensure employees tasked with using the technology are given sufficient training to use it effectively.

Other abilities that the board and senior leadership will have to demonstrate, such as **retaining and recruiting staff** and **analysing the success of the new strategy**, will be examined in greater detail later on in this chapter.

Characteristics of digital CEOs

As we've seen, the roles of leadership and the board change when setting strategy as a result of disruptive technologies. Let's look more specifically at the role of the CEO now though. What characteristics will they have to adopt in the digital era? The World Economic Forum states, in its white paper on *The Digital Transformation of Industries*, that there are **six ways that the role of the CEO is changing**. They will have to be:

1. **Creator of vision and mission** - This means expanding the traditional mission statement, to make sure it includes the transformation purpose, these are the intended **changes that the organisation will undertake with regards to the digital era**.
2. **Strategic planner** - We've already seen that senior leadership should be using **more flexible strategy models**, the **CEO should be looking at shorter planning cycles**, perhaps one-year rather than the more traditional five years. This allows for more flexibility, leaving more time to take advantage of any new opportunities that may arise, or any uses for new technology that are developed.
3. **Driver of information-based business models** - Using big data, a company is able to design products and services for audiences that are big enough to ensure profitability. The role of the CEO is to encourage this approach to production.
4. **Shift towards on-demand operating models** - The CEO should move the organisation away from traditional hierarchical structures and make use of more models that allow for more flexible attributes. For example, this means the organisation would be able to benefit from staff on demand (hiring staff temporarily for specific jobs when needed) and communities in the workplace (structuring work so employees can contribute to work outside of the traditional hierarchy).
5. **Innovation promoter** - This means that the CEO shouldn't just look for innovation for the organisation's products, processes and services, but also **promote external innovations**. External innovation aims to go beyond the organisation, perhaps through collaboration, to expand the possibilities for finding ideas and solutions.

- 6. Operational excellence driver** - The CEO should **champion the use of automation in all areas** to improve performance and reduce costs. As we have seen in other chapters in this study text, using automation means that an organisation can reduce workforce costs as well as improve its processes by reducing human error.

3. The trends of digital disruption

So far, we have looked at how the traditional business market is being disrupted. Below are **five key trends that organisations should consider and utilise when forming their strategies**, as suggested in the World Economic Forum's *White Paper on the Digital Transformation of Industries*:

The internet of me

The internet of me is a wide-ranging term, firstly it can mean **users are being placed at the centre of digital experiences, or it can serve as a description of technology which connects users minds and bodies with the online world**. The over-riding point is that people are now at the centre of technology.

This can include people being able to control heating systems and refrigerators using mobile phones, but it can also be more personal. There are apps that link to smartwatches and other devices that monitor users to reveal the levels of their anxiety and their moods. Applications may exist to marry these new types of data with business uses. For example, businesses could use information about stress levels to target relaxation products or health services.

So how does this fit into an organisations strategy? Well, the internet of me as a concept focuses on **asking how the goods, services or experiences that an organisation is producing can be improved for the end user through the use of digital tech**.

The outcome economy

Traditionally organisations compete with each other over a product they sell or a service they provide. However, in the outcome economy, organisations **compete by delivering measurable, post-purchase results of a product or service** that are in some way meaningful to the customer. A gym might not just focus on providing fitness classes and equipment, but on the overall health of its customers, using that as the overall measure of their success.

An agricultural supplies firm may sell products such as seeds, fertilisers and pesticides to farmers. To sell these products, the company would have competed with other companies on price and quality so that a farmer chooses their products. However, with the outcome economy, companies focus on the outcome, so agricultural suppliers would compete on the promise of the expected high yield of crops the farmer could get from their land.

The agricultural company would be able to do this through an analysis of data, such as the farmer's climate and soil composition, alongside combining analytics software in connected tractors and planters so that the exact seed mix can be sown in the most optimal way.

The platform revolution

Platforms are best described as computer systems that can host services that allow everyone from businesses to consumers to connect and sell resources.

The impact of platform businesses could already be seen by 2013, when 14 of the top 30 brands (ranked by market capitalisation) were platform orientated.

Platform-based companies, such as Airbnb and Uber, are made possible by advances in cloud and mobile connectivity. In order for businesses to be able to stay competitive in their markets, they will need to be part of the platform revolution, in order to expand and nurture their ecosystem.

The intelligent enterprise

By taking advantage of advances in data science and cognitive technology (where artificial intelligence carries out tasks previously done by humans) organisations can turn big data into smart data. **Smart data can be defined as big data that has been processed and turned into actionable information that can be used by the organisation.** Smart data can be **used to drive automation processes with the aim of improving levels of operational efficiency and innovation.**

For example, a system may contain all the historical data of a salesperson's previous sales. The intelligent enterprise system would use data and be able to predict which present deals would likely close in the short term and recommend how to achieve this.

Re-imagining the workforce

The use of machines is becoming far more widespread, but it doesn't mean that that is the end for humans! Instead, there is a **greater need for people to work together with technology.** This can be done in a number of ways, from wearable technology to natural user interfaces.

For example, when using the X-Box Kinect, the player uses motion to control games, there is no physical controller to actually play games on the console. This is what is called a natural user interface. While the Kinect did not take-off as a game controller the applications have moved beyond gaming into the workplace and the same technology has been used in operating theatres in hospitals to allow surgeons to manipulate nearby screens via voice and hand-gestures.

In this list of digital trends that are changing the ways organisations work, we have seen that technological advances are starting to impact all areas of organisations. It is important for organisations to understand where they can apply these

technologies and ideas so they can gain a competitive advantage by building them into their strategies.

4. Building disruptive business models

In an earlier chapter in this study text, we looked at how CIMA has redefined business models. According to the World Economic Forum *White Paper on the Digital Transformation of Industries*, when considering digital business models there are two other issues that need to be considered, these are **the innovator's dilemma** and **the incumbents conundrum**:

The innovator's dilemma

The innovator's dilemma revolves around two main issues concerning digital enterprises. **The first is that digital innovation has disrupted traditional business models, which mean that those organisations which have not adopted new technology can no longer function as they traditionally have.**

For example, in 2019, the UK package holiday company Thomas Cook entered into liquidation. One of the reasons that this happened was that the company hadn't reacted to the disruptors in the travel industry; customers could now easily book their own travel (directly through airline websites) and accommodation (through platforms such as AirBnB). Thomas Cook's traditional business model, physical stores selling all-inclusive holidays, could not compete.

The second element of the dilemma is that **to succeed an organisation must be willing to disrupt itself**, after all, if the industry in which the organisation operates has been disrupted it's more than likely that the organisation's existing business models and processes will probably have to be changed. According to Clayton Christensen who proposed and wrote about the innovator's dilemma, the problem for businesses is that these traditional business models and processes were what originally made organisations successful, so it is very difficult for an organisation to change them by disrupting themselves.

If we return to the Thomas Cook example with hindsight, we may ask why did Thomas Cook not respond to disruption and change its business model? Using Clayton Christensen's example the answer would be that Thomas Cook's business model had been successful for decades, it had been responsible for what made it so successful and so would have been difficult to change. The old systems were part of their make-up. The culture was based around them, and the changes necessary would have been too great to make organically.

The incumbent's conundrum

Of course, businesses knowing they have to act doesn't mean that they know how to act; this is where the **incumbent conundrum** is useful. It lists **five different**

options a business leader can take in order to adapt a business model. They are: buy, partner, build, invest or incubate/accelerate.

Buy

This option relates to **an organisation acquiring another**. Google, for instance, purchased Youtube to guarantee its success in the online video market.

Purchasing other companies can be very appropriate when an organisation's **strategy relies on having the majority of the market share** as a purchase means an instant increase in share. Google instantly dominated the video sharing market when purchasing Youtube, whereas their own-brand service (which the later shut down) was a minor player in comparison.

There are other times when this option is most fitting:

- **When economies of scale are needed**, so being bigger means being able to cut costs (e.g. through demanding lower prices from suppliers).
- When it is **not possible to hire the correct type of employees**, so through purchasing another company you can access its talent.
- If the **acquired company provides a new opportunity**, such as access to technology or a new market, for the acquiring company.
- If the **turning point in the market is close** (which is known as market inflection) and the company has to act quickly in acquiring a company with the requisite skills for the market's new era. This would, perhaps, have been the only strategy that could have saved Thomas Cook in the end!

Partner

With this option an **organisation partners with a digital disruptor**, for instance by setting up a joint venture company jointly owned by both companies. This allows the company to learn about the market and the business model.

This is similar to buy, but is a more suitable strategy when there is less urgency for example if the organisation's existing business is still profitable and market change is not imminent. The emphasis is on using the partnership to learn how the digital disruptor operates. The disruptor, on the other hand, may get the necessary funding and wider business expertise that it needs to grow.

Build

Building a new business model may be a better option **if the opportunity is linked to the existing core business**, especially if there is enough time to build before market change and the company has access to a talent pool that will be able to make the changes.

Invest

Invest refers to an organisation with a traditional business model **investing in a start up**, which then allows the company to connect with the correct capabilities and skills that the start-up company employees have. Investment rather acquisition allows the start-up to grow unburdened by the structure of the acquiring company, which could weaken its agility and growth.

Incubate/accelerate

This option is very similar to invest, but whereas invest is an external innovation, **incubate signifies a closer relationship with a start-up company**. This is because the incubator would help very early stage start-ups with its infrastructure and resources, for example allowing the incubated organisation to use the organisation's office space and providing business support (e.g. finance, HR, marketing).

5. Digital operating models

It's not just business models that have to change if organisations are to survive disruption, operating models will have to as well. If business models are a plan for companies saying what they need to do, then **operating models are the way that businesses need to carry out the plan**.

Let's look at five successful digital operating models:

Digital operating models	Description
Customer-centric	<p>As the name suggests this model focuses on using digital technology to make customers' lives easier.</p> <p>The UK retailer Argos, where customers choose their purchases via an in-shop catalogue, which are then delivered to a counter for collection, improved its trading figures by focusing on the customer and improving their experience using digital delivery systems.</p> <p>The company concentrated on a 'click and collect' system (meaning that customers could buy a product online and have the item waiting for them in-store to collect), same-day delivery (customers could order online and have the item delivered to a location of their choosing the same day) and self-service kiosks (customers go to electronic points without the need to queue to order what they want using a credit card).</p>
Extra-frugal	<p>This model looks at how a good product or service can be produced at low cost by optimising manufacturing and supply processes.</p> <p>For example, the budget airline Ryanair is a 'no frills' airline, this means that the passenger just pays for the flight. Any extras such as seat allocation, in-flight meals and priority boarding are paid-for extras.</p> <p>Ryanair can keep costs down through a number of efficiencies, for example it only operates one model of aircraft so that all staff only have to be trained for that one vehicle. The seats on the plane don't recline which means they are cheaper to buy and maintain, and the lack of pockets on the back of the seats means that less time is spent cleaning the plane therefore they can be turned around far more quickly in the airport which again saves money.</p>

Digital operating models	Description
Data-powered	<p>This model is based around proven in analytics and software intelligence.</p> <p>For example, Netflix uses big data and analytics to understand its customers' behaviours so that it can personalise recommendations to entice its users to keep watching and paying for their subscriptions! Netflix also collects data on how its customers interact with the programmes: do they watch to the end, do they pause at certain times, what time of the day do they do their viewing? All this data can be fed back to allow for producers to commission popular shows in the future.</p>
Skynet	<p>This model uses machines to increase the productivity and flexibility in production.</p> <p>Amazon would be a good example of this operating model as it seeks to automate and optimise all its processes from one-click ordering, to automated warehouse picking of products, right through to delivery by drone!</p>
Open and liquid	<p>This model is characterised by an interaction and dialogue with its environment and its customers.</p> <p>For example, the online clothing designer Boohoo uses a 'test and repeat' tactic. This involves producing small quantities of a wide range of clothes, listening to customer feedback on those clothes and finding which sell best. Boohoo then increases production of the top 30% best-selling clothes from the range. This means that Boohoo never has to commit to a large amount of stock that it can't sell and can respond to customer needs.</p>

6. Assembling a workforce for the digital age

Digital talent

So, after looking at what organisations need to do with business models and how they do it using operating models we can now turn our attention to who organisations need to work with to ensure success.

Due to the importance of digital technology to businesses, encouraging its adoption, coupled with its innovativeness, there is a **shortage of workers with the required skill sets**. The World Economic Forum claims that by 2022 there will be a 22% increase in global digital positions, showing that competition between employers to attract the correct calibre of staff could intensify.

As such, **business leaders have to make sure their organisations are able to attract, as well as retain, the talent needed**. One possible method of achieving this is through the introduction of a **staff referral programme**. By incentivising current employees of the organisation to use social media networks to champion the organisation, they will help to attract staff with the relevant skill sets.

Another element of staff retention that leaders in the digital age have to be aware of is the ability of employees to publish 'inside knowledge'. The employees can write what the organisation is actually like to work for on specialist online websites such as Glassdoor. If staff are unsatisfied with the conditions of their employment they now have easy web portals through which to voice their dissatisfaction. These could dissuade potential staff from joining.

Creating a workforce with a digital skill set

The World Economic forum's white paper also advises organisations on how they could combat the talent shortages:

Organisations should assess the skills that they feel they are lacking and try to close these gaps by **creating in-house training for current staff**, to see if they can avoid recruiting.

Another way organisations can combat talent shortage without recruitment is to assess the skill sets of current employees to see if their competencies can be matched with desirable skills.

The third tactic is to recruit; **hire digital natives**, people who have been raised during the era of digital technology and who are, therefore, the most familiar with technology and the internet, so that they can easily be trained for a specific job.

The final point is that businesses should also **bring leadership into the digital age**. The World Economic Forum suggested that this could be achieved in four ways:

- By **leadership working with digital natives** or millennials (see below) to set a joint vision for the organisation's digital future

- By **hiring staff with a digital mindset** and a willingness to challenge the status quo
- By **encouraging staff to take risks and learning from failure**
- **By changing from bureaucratic and hierarchical structures to flatter structures** which helps staff contribute wherever they are in the organisation, rather than simply having to do what they are told

Millennials

The term millennial is used to describe a generation of people who were entering employment around the year 2000. Similar to the term digital native, which we defined above, it can also be used to describe a generation of people that have grown up in the digital era and, as such, **feel comfortable with new technologies**. They can also be useful to organisations by giving them **an insight into what younger consumers desire** from a product.

Desirable employers in the digital age

Perhaps another difference between millennials and previous generations is their attitude towards work. Millennials feel more empowered to decide where and how they work. Because of this, **organisations will have to change to make sure that they are employers of choice in a digital age**.

The World Economic Forum proposed a number of different techniques for companies to become desirable employers in the age of digital workforces:

Improve employee satisfaction - By implementing policies that encourage collaboration. Improving employee satisfaction is important as we have seen how easily employees can write about their experiences at a company online.

Incentivise the workforce - Millennials claim that their development is one of their top priorities, so employers can offer things such as project leadership responsibilities and interesting training options to attract them to the organisation. Other options include providing employee stock options

Engage the workforce - This can be done by identifying appropriate roles within the organisation to match employees' digital technology skills with. The engagement can continue by rotating the workforce into different positions throughout their career in the organisation to help with maintaining satisfaction, as there is less chance for employees to become bored with their roles.

The physical workspace - Employees enjoy being in **personalised workspaces, or being able to work from virtual workplaces**, e.g. working at home using various technologies (such as Skype) to attend meetings etc. Research discovered that flexible work environments lead to more collaboration and interaction in the workplace.

Fostering a digital culture

We've already touched on the idea of digital culture in this chapter and the idea of workplace culture elsewhere in this study text. How does a digital company culture differ from a traditional company? Well, once again the World Economic Forum suggest that, to be effective:

- A digital company should have a **strong mission statement and encourage a sense of purpose**.
- Digital companies must **have a lean business structure**. This means that they should have just enough business structure to suit the task that they need to perform
- They should have a **diverse workforce, the majority of whom are digitally literate**

How leaders can help move towards a digital culture:

Communication - Leaders can make sure that the employees don't merely communicate face-to-face, but use a **variety of digital communication**, such as blogs and shared mailboxes.

Cultural management - Leaders should offer training to middle management to help engage them in the cultural change so that **all levels of the organisation can move towards a new culture**, rather than it coming from the top down.

Make visible changes - Simple techniques, such as charts on walls, showing employees of an organisation the direction of the business and how far it has already come, can motivate staff and help keep them following the correct path.

Change monitoring - Always monitoring performance helps to show any changes that need to be made. As we saw in the change management section, it is vital that change is monitored to make sure that it is effective and to see if any adaptations have to be made.



CIMA Management Case Study

Chapter 4

Culture

1. Culture

Alison has just got herself a new job in an HR department. Everything is going well, but she has noticed something odd: Alison has a standard contract that says that her hours are 9am to 5pm, Monday to Friday, but everyone else in her department with the same working hours goes home at 4pm on a Friday. Should Alison leave early as well?

This behaviour, where employees are allowed to leave earlier than their contracts stipulate, would be part of the company culture. These patterns of behaviour are self-reinforcing; a new employee might tend to adopt the group norm rather than ignoring the crowd and sticking to the official time.

Culture is a combination of the beliefs, values and standards of behaviour inherent in an organisation. Often individuals behave according to group norms, even to the extent that it might contradict their own usual approach, or even company rules.

According to Charles Handy, culture can simply be defined as “The way we do things around here.” It is the standard, generally accepted way of doing things.

Organisational culture

More specifically, however, **culture can be described as the Values, Attitudes, Norms and Expectations (VANE) factors of an organisation:**

- **Values - The beliefs held by the employees, the managers, the directors and by the company itself.**

For instance, Alison's office is part of an educational charity which has very well communicated, specific goals. Further, she has discovered that everyone in her department is very committed to these goals, which has ensured that they are very focused in their roles.

- **Attitudes - How employees regard the company, the work and anything else.**

In her new office, Alison has found that most of her colleagues like working for the company and find their work challenging, but fulfilling. The result is that productivity is high, as is the quality of the work being produced. The atmosphere that this has created also means that Alison is very much enjoying coming to work each day.

- **Norms - How things are usually done in the organisation,** including whether the actions are in line with, or ignore the company's rules or regulations.

For instance, normally everyone in Alison's department leaves early on a Friday, despite their contracts stating they are supposed to stay until 5pm. Nobody knows why, but it has become accepted practise by all levels of employee and management..

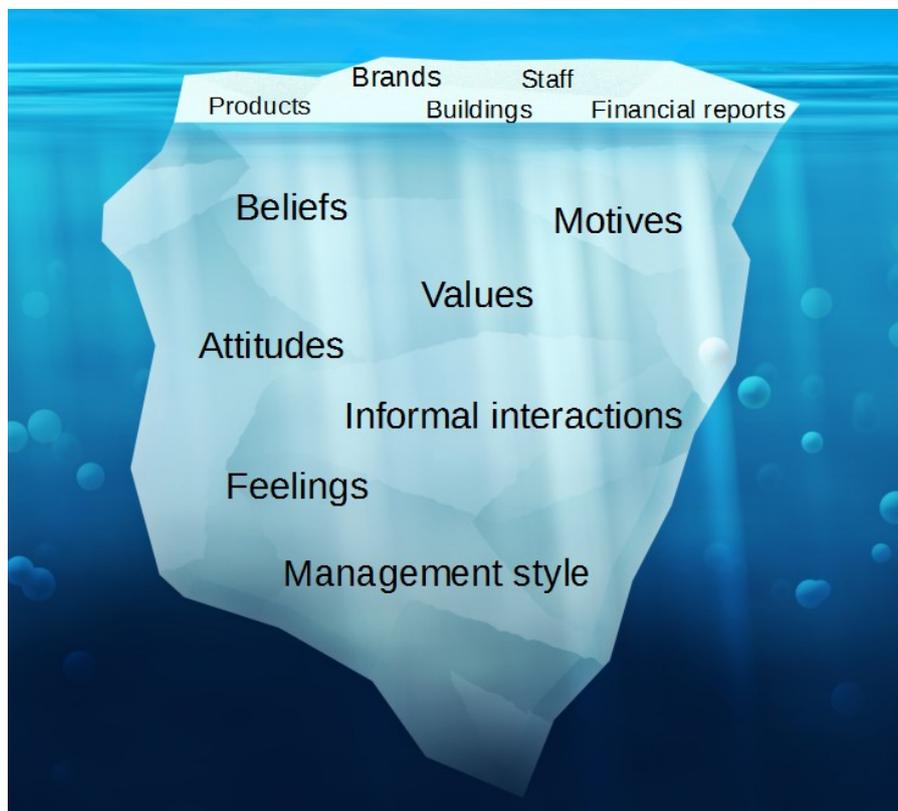
- **Expectations** - These are the unofficial expectations, not enforced as rules or standards, that the employees impose on each other.

In Alison's new office, it is traditional for everyone to bring in a birthday cake on their own birthdays to share with everyone. If she forgot to bring one in, or refused, she would not have broken any rules, but others in the office may feel let down that she did not participate.

The organisational iceberg

The notorious iceberg, famed for its role in sinking the 'unsinkable' Titanic, is also a useful tool for illustrating organisational culture. Icebergs are renowned for the discrepancy between the volume of ice that is visible above the water, compared to the average 90% of their total mass hidden beneath.

Organisations are like icebergs. What you see of a company - its products, processes, premises, staff, strategy, financial reports, business news and so on - is just a small part of what makes an organisation as a whole. Often, the key to success lies below the surface, in an organisation's values, beliefs, attitudes, norms and beliefs, or put another way, in its culture.



The hidden elements of culture may be both positive and negative. There may be bad attitudes, or ill feelings, that may reflect badly on the company, but equally there may be positive behaviours such as great team working, loyal staff or highly motivated individuals. Much of the inner workings of the company will be hidden from the public's eye as so much communication and interaction goes on behind the scenes, yet it is those cultural elements that can so often be the difference between a highly successful business and one which fails.

These hidden facets of the organisation are internal, so the only way for someone to fully understand them is to be in the organisation themselves.

2. The importance of culture in organisations

“Culture is the name for what people are interested in, their thoughts, their models, the books they read and the speeches they hear, their table-talk, gossip, controversies, historical sense and scientific training, the values they appreciate, the quality of life they admire. All communities have a culture. It is the climate of their civilization.”

So wrote Walter Lippmann, and his definition gives a real sense of the importance and influence of culture in any organisation.

As we have seen with Alison's new job, **organisational culture can have a wide-ranging influence on the organisation and its approach**, despite often being ‘unofficial’. These influences can include:

- Action orientation (i.e. taking new opportunities, being task focused)
- Whether decisions are expected to be made only at the top of the organisation (centralisation), or if they can be passed down the organisational structure (decentralisation)
- The treatment of staff/the management style
- Customer/product/production/sales orientation
- The level of innovation
- Future strategies (e.g. the attitude towards expansion)
- The approach of staff (Generally hard working? Motivated?)
- The approach to quality versus efficiency
- The treatment of customers and the level of service provided

Culture is important because it influences behaviours in the company and it also ensures consistency of approach, even where no set rules exist. Therefore, any

issues in an organisation's culture will need to be addressed and this can be done through measures such as:

- Change management programmes
- Ethical programmes
- Quality management
- HR programmes (e.g. to improve staff motivation or efficiency)
- Changes in business strategy

One source of cultural conflict can be when different internal and external groups have different views and perspectives based on their own cultural norms. **Cultural differences need to be managed to avoid negative conflict.**

Ensuring that the company's culture is consistent with the organisation's future direction and strategy is critical to strategic success.

Advantages and disadvantages of strong organisational culture

As already discussed, strong cultures in organisations can influence how people relate to the company both internally (between employees, for example) and externally (reactions from stakeholders such as customers and suppliers). The table below illustrates how a strongly held culture can have both positive and negative impacts on a company.

Advantages of a strong culture	Disadvantages of a strong culture
Brings staff together and minimises perceived differences between them or their beliefs	Conflicts can be caused by different cultures interacting and clashing, e.g. when a company is acquired by a rival
Reinforces the organisation's values and beliefs amongst the staff and ensures those values are continued to be held by the organisation	It may blind the organisation and its staff to outside changes and negatively affect its ability to adapt
Communication and coordination within the organisation is more effective	It could promote or reinforce negative values or behaviour

Advantages of a strong culture	Disadvantages of a strong culture
Directs the formation of the organisation's strategy and could, therefore, affect its ability to respond to change	Strong cultures, or beliefs, can be difficult to change or update
Helps to regulate staff norms and behaviours	It would be harmful to have a culture that is not in line with the organisation's environment, e.g. having a creative and innovative company culture in an industry that requires repetition and uniformity
Gives staff a sense of belonging and a social identity as part of the organisation	

3. Levels of culture

Just as Rome was not built in a day, the culture of an organisation will not be constructed overnight!

What kinds of things are these cultures built on and why might two organisations of similar size working in the same industry have such different cultures?

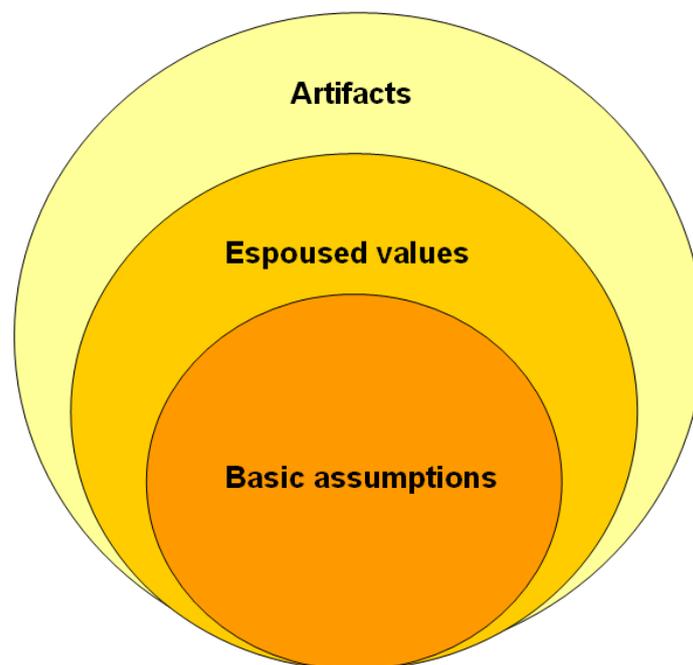
In 1992, Professor Edgar Schein suggested there were **direct mechanisms that had an effect on the organisation's culture**. He divided his mechanisms into three different and distinct levels:

Artefacts - The **visual representation of an organisation such as the logos, symbols, architecture and uniforms/dress code**. They are easily viewed, heard and felt by anyone connected with the organisation. For example, a work place that has a strict dress code in place may feel like a more professional work environment, as a result the staff take it more seriously.

Espoused values - This involves the **values, standards and rules of conduct within the organisation**. This is how the people in the organisation express themselves to those inside and also outside of it, often in the form of policies and statements. A prime example of this would be the company's philosophy. If the company had a philosophy of 'be the best no matter what the cost' then it would most likely end up with some employees acting unethically. Whereas if the philosophy was to 'do what is best for everyone', then employees would go out of their way to act with integrity.

Basic assumptions - These are the **deep-rooted behaviours and beliefs**. These are often unconscious and make up the essence of the organisation's culture. These can be related to the organisation or can just be as a result of human nature.

For example, some organisations may be run with an aggressive, dictatorial management style while others are run in a relaxed, easy going style. This has probably never been specified in a statement of values, but is just the way things are done, perhaps because of the approach of the founder, or because of the type of industry the company is in.



This model is often displayed, and referred to, as an 'onion' model. The reason for this is that when it comes to changing and altering culture within an organisation, the top levels (artefacts - logos, uniforms etc.) can be easily changed overnight. However, changing the outer level doesn't mean the company is going to change the more deeply-rooted cultural values and assumptions.

Furthermore, just as an onion becomes harder to peel **as you go down through the levels, an organisation's culture becomes harder and harder to change.** For example, how does a company change an underlying belief that has traditionally always been present within the organisation? The answer is, it probably won't. Not in the short term at least! Change of this magnitude takes firm and effective management and perpetual supervision over time, to ensure the change sticks.

Levels of culture in action

To aid explanation of this model, let's apply the three levels of culture to coffee shop chain, Starbucks:

Artefacts - The company's famous green mermaid logo. It is unlikely they would, given how iconic it is, but they could easily change it if they wanted to!

Espoused values - What kind of values does the company live by? This will have an impact on both how employees conduct themselves and what the public will expect, this can be seen in the 5 principles and tenets:

1. **Make it Your Own** - Starbucks seek to integrate the creativity and personality of each member of staff into their overall customer experience. Staff are encouraged to embrace their individuality to achieve this.
2. **Everything Matters** - Every small thing can have an impact on the customer experience. Staff are encouraged to pay attention to these small details.
3. **Surprise and Delight** - Starbucks work on the basis that customers love to be pleasantly surprised. A small example is how red coffee cups have been introduced during Christmas.
4. **Embrace Resistance** - Staff are encouraged to value criticism and to also differentiate between customers who have a problem and customers who routinely complain.
5. **Leave Your Mark** - Starbucks support having a positive impact on the local community and wider society, and encourage employees to engage in these activities.

You can see here that the tenets are trying to influence how people act at work. The first one relates to taking charge of your work in order to make things run as smoothly as possible. The next two are all about giving your all to help the customer, always striving to achieve more than they expect. The fourth teaches you to embrace change and ideas, this will make it easier for the organisation to change. The final one teaches employees the value of taking chances and not being afraid to make your voice heard.

In short, the tenets detail the attitude Starbucks wants its employees to have towards work.

Basic assumptions - The way employees act without even knowing it! An example of this could be the ways the baristas conduct themselves when at work. There may be employees who have worked in the stores for decades and have become very accustomed to the way in which they work. Changing this assumption will be very difficult.

4. Influencing culture

An organisation can influence its own culture, but care must be taken to ensure that interpretation of the culture is correct. For example, at Joe's Doll Factory, the production-line only shuts each day for a legally required meal break, but the

company has a culture of allowing a ten-minute break in the morning and afternoon to improve staff morale. Bob the foreman noticed that workers were consistently two or three minutes late back from their ten-minute breaks. He was under pressure to increase production and the only way to do this was to get stricter on break times, or even reduce it. But the workers would surely resist.

Instead of imposing rules over break time, Bob stopped using the word 'break' and started referring to a 'quick stretch'. Over a few months, the staff had adopted the phrase and their behaviour had changed. Instead of thinking about breaks in terms of stopping work, workers came to see the 'quick stretch' as part of the production process. The time they took actually reduced and production increased with no need for increased resources. In short, Bob was able to influence the culture to achieve a business goal. Bob's now the production manager.

So, earlier we discussed how culture makes up an organisation, now let's take a look at **how the organisation itself influences the culture** - just like Bob did!.

These influences include:

- **Size - The size of the organisation** (number of employees, revenue/profits/physical size) will influence culture, e.g. a small organisation may have a personal, 'family' culture.
- **History - How the culture has functioned in the past will influence the culture.** The general history of the culture will also continue to impact the culture. For example, Ben & Jerry's has a history of social responsibility dating back to its initial price offering in 1958. As such, acting responsibly and with integrity should be at the forefront of any corporate and internal decision.
- **Ownership** - The organisation may be a sole trader or a partnership, it may be a not-for-profit organisation - these things will all influence the culture.
- **Age** - The age of the organisation and also of the employees/managers will influence the culture, for example, if the organisation employs only young graduates.
- **Technology** - The technological advances within the company will change the way people work and, therefore, will influence the culture. For example, technological advancements may allow for more employees to work remotely as opposed to in the office. This may alter the culture, such as through reducing working face-to-face relationships.
- **Diversity** - The level of diversity within the organisation will influence the culture. For example, if there are divisions in different geographical areas this could influence the culture of the divisions and the organisation as a whole.

5. Conflict in organisations

Newly-weds, Peter and Mary have been so caught up in their work lives recently that they have both been neglecting their chores at home. They've ended up having an argument about whose turn it is to do the washing up. Depending on how they handle it, this could lead to an uncomfortable atmosphere at home and strain the relationship, or it could lead to them creating a cleaning timetable in order to prevent conflict in the future. Mary's ready with her spreadsheet. Peter agrees. The conflict is over! Like it or not, **conflict exists in everyday life**, in a marriage as in the workplace, **so it's best to learn how to manage it**.

Conflict works much the same way within organisations. **Conflict can be negative, causing delays and poor working relationships** and as such it is **important that conflict is well managed** to ensure that it does not impede the organisation and its success.

There are **benefits to conflict too**. **Conflict in organisations can encourage new ideas and ways of thinking** and can bring about innovation and change. Many organisations try to encourage this type of conflict for the benefits it can bring. The key is to **encourage openly expressed views**, even negative ones, but to have a clear **method of managing those** so issues are dealt with and resolved.

Signs of conflict

How easy is it to identify conflict? Sometimes it can be quite obvious in day-to-day life: if you hear raised voices and slamming of doors, there is a reasonable chance that there is conflict in some form. Within an organisation, symptoms conflict can present in many different ways, including:

- Poor communication between departments, perhaps due to lack of trust that the work will get done
- Dissatisfaction or frustration amongst a large proportion of workers, for example, when systems aren't working
- Jealousy between groups, maybe one group was awarded a bonus, and another felt they also deserved one
- Meetings turning into moaning sessions, rather than a compiling of minds to find a resolution
- High staff turnover, could indicate that there are internal problems

If these symptoms can be identified and addressed, the conflict could potentially be defused before hitting a crisis point and causing further problems for a business.

Sources of conflict

Conflict can **arise for a number of reasons**.

According to Mainwaring, the reasons for conflict arising usually include:

- **Misunderstandings** - Often caused by failures in communication, these can make situations worse where there is tension, or the potential for conflict from other sources.

During Peter and Mary's wedding planning, tensions were already high between them, but then Mary realised that Peter had booked the wrong venue, because he had thought she wanted to be married in the church near their current home, rather than the one near her parents' home.

- **Change** - Changes in society, organisations, groups and individuals can create conflict as well as opportunities.

Once married, Peter and Mary moved in together for the first time. This change resulted in areas of conflict as they learned to live with each other.

- **Limited resources** - Where resources are limited, conflict may arise between individuals or groups fighting over them.

Mary and Peter each had identical budgets for their individual pre-wedding parties, conflict arose when Peter wanted to take some of Mary's budget, so that he and his friends could go to Las Vegas.

- **Stress and failure** - Individuals, groups, or organisations can resort to denying reality, finding faults where there are none, or exaggerating them and committing irrational acts when they feel they cannot cope with the stresses of a situation or problem.

During the course of the stressful wedding planning, several arguments between Peter and Mary began after times when each had been finding faults with things the other had, or had not done, to help the project progress. Later on, they admitted that some of the things they had said were not entirely true and that their claims had been brought on by stress.

- **Interdependencies** - If responsibilities, boundaries or relationships are believed to be unfair or unbalanced, or if they are not clearly defined, they can cause conflict.

Early in the wedding planning process, Mary confronted Peter because she felt he had not been doing his fair share. It seemed to her that she had been making nearly all of the preparations.

- **History** - Conflicts can self-perpetuate, so they reoccur even if the original offence is not committed again.

Even after Peter started doing an equal share of the wedding planning, Mary continued to bring up that she had previously done more and the conflict restarted.

- **Differences** - Differences in priorities, interests, objectives or beliefs can give rise to conflicts.

Peter, as a fan of cinema, wanted a wedding based on a movie theme. However, Mary was not in agreement, as she had a more traditional wedding in mind.

- **Win/lose situations** - Where success for one group, individual or organisation means failure for another, conflict often arises.

Peter and Mary both had their hearts set on different types of venues for the wedding reception. Mary wanted to have it at a luxury hotel while Peter wanted to have it in a castle. Mary was able to negotiate the hotel fees to meet their budget, so she got to have the reception in her preferred venue. This success for Mary caused resentment from Peter.

- **Conviction beliefs** - If one side believes entirely that they are correct or good, they may preach their side to others, which can cause tension, resentment and conflict.

Mary is a vegetarian and has a tendency to preach her beliefs to her meat-eating fiancé, she insisted that the wedding be entirely vegetarian, which upset Peter as he was keen to eat fillet steak.

Consequences of conflict

What could have happened to Peter and Mary's wedding after all of this conflict? They might have cancelled the entire event and split up, it might still be a source of future conflict for years to come, or they might be able to move past it without issue because they know their partner was under a lot of stress and didn't mean all of the things they said.

The different consequences of conflicts can be as varied as the types and causes of the conflicts themselves. Richard Daft suggested that there were several consequences likely to occur due to conflict in organisations:

- Inter- and intra-group coordination and cooperation suffers, and groups can even actively work against each other
- Time and efforts are wasted on the conflict rather than the work
- It can reduce focus on the goals that the groups are working towards, which in turn may negatively affect their judgement
- The 'loser' may lie or exaggerate events, or seek to otherwise dishonestly exonerate themselves

6. Types of conflict

Conflict can be **classified into different types, including either horizontal or vertical conflict, constructive or destructive conflict and intergroup conflict.**

Horizontal and vertical conflict

Would a worker act the same around their boss as they would their colleagues? Sometimes and in some companies, this might be the case, but normally the relationships between colleagues and subordinates/superiors are quite distinct. So, wouldn't it make sense for the types of conflict between these positions to be distinct as well?

Conflict in organisations can be divided into horizontal and vertical:

Horizontal conflict

This **occurs between individuals or groups at the same level within the hierarchy.** For example, between the financial accountants and the management accountants in the finance function.

Horizontal conflict is most often caused by one of the following:

Environmental change - External change, for example a poor economy, can increase pressures on the company, requiring internal adaptation, which can put added pressure in the organisation and which they may resist.

Size - In large organisations, where employees are divided into divisions and departments and groups, these grouping of people may see themselves as separate from the rest of the organisation and act in their own interests rather than those of the organisation as a whole.

Task interdependence - Where groups or individuals rely on each other's work, there is opportunity for frustration where one group feels let down or disagrees with the way the other is working.

Technology - Particularly where systems are shared between different departments, or between one department and the IT department, this interdependence can cause conflict.

Conflicting objectives and reward systems - The accomplishment of goals by one department may have a detrimental effect on another department but may be motivated by reward systems put in place, e.g. the production department hit their efficiency target and get their bonus, however, they do so at the expense of product quality. The repairs department doesn't hit its goals as a result of the increasing number of returned products and friction between the two departments builds.

Differentiation and specialisation - Differences arise between the cognitive and emotional orientations among managers in different functional departments, e.g. the sales department tends to be staffed by outgoing, driven individuals, whereas the research and development department may be more technically-focused, quiet individuals which creates a different culture in each department. These differing cultures can lead to tension between the departments; the sales team may come across as demanding, pushy and slightly intimidating to the R&D team.

Reward system - The reward system governs the degree to which some groups cooperate or conflict with one another.

Vertical conflict

Vertical conflict occurs **among groups at different levels in the vertical hierarchy**. For example, between a staff member and their boss, or between regional managers and the senior leadership of the company.

The sources of vertical conflict are many, like horizontal conflict, with which it shares many, but for vertical, the sources of conflict often relate to the difference in power held by the two parties. The other causes include but are not limited to:

Scarce resources - As the name suggests, a scarce resource is one which an organisation needs, but there isn't enough of! A scarcity of financial resources could be one example of vertical conflict, in which individuals higher up in the organisational hierarchy decide on the level of wages for their employees. Often the employees won't agree that the wages are enough!

Ideology - The different beliefs held by individuals can lead to conflict, particularly if the individual lower in the organisation feels that their beliefs are not being respected by their superior.

Psychological distance - If workers do not feel connected to the organisation, conflict may arise between them and their superiors who are more closely tied to the organisation. The superior may make decisions based on this connection, in the best interests of the organisation, that the subordinate is unable to sympathise with or understand because of this lack of connection.

Power and status - Workers lower down in the organisation can feel alienated from the workings or the purpose of the organisation, which can lead to conflict with superiors who are more in tune with the organisation and may have a say in the direction of the organisation.

Destructive vs constructive conflicts

Volcanoes are considered to be one of the most destructive natural phenomenon, however, there are times when they can actually be constructive. The islands of Hawaii were (and, in fact, are still being) created by volcanic activity. Furthermore, volcanic soil is some of the most fertile soil in the world, so from this immense destructive force, can spring life.

Similarly, conflict can sometimes (and under the right conditions), be constructive rather than just damaging to an organisation.

Constructive conflict

This type of conflict:

- Encourages innovation and inspires change
- Is not based around the individual's personality but around their professional opinions
- Stops issues from festering by bringing them to people's attention so they can be proactively dealt with
- Helps to define how much authority individuals have and what their responsibilities are
- Is considered beneficial to the organisation

Destructive conflict

This type of conflict:

- Tends to occur in the heat of the moment, rather than being planned out and considered by the individuals involved
- Causes alienation between individuals, groups, and departments
- Can be based on personal issues or clashes
- Can demoralise individuals involved in the conflict and other affected by it
- Is harmful to the organisation

Intergroup conflict

Jack supervises a team selling pens and Maxine runs a team selling staplers, both for the same large stationery company. The sales team manager has set up a competition between the two teams, with a prize going to the team who takes the most revenue over the next two weeks.

Jack's team and their rivals are **two separate and distinct opposing groups** with seemingly irresolvable differences. Here we have a prime example of intergroup conflict. This would be considered an example of horizontal conflict as the both teams have an equal playing field, with similar skill sets.

All the ingredients for intergroup conflict are present in this scenario. We have:

- **Group identification** - Each team member **shares similar views and values** with the other members of the group.

- **Group difference** - There are **observable differences between the groups**. The teams sell different products and they sit in separate areas of the office.
- **Frustration** - Frustration means that **only one group will get their way** - the other will have their goal blocked. This impending triumph and failure is anticipated and is part of the cause of the conflict between the groups. In this instance, either Jack's team will win the competition and come away with the prize and the trophy, or their rival team will triumph. This knowledge, that only one team can be champions, drives the conflict between them and causes them to compete.

7. Conflict handling strategies

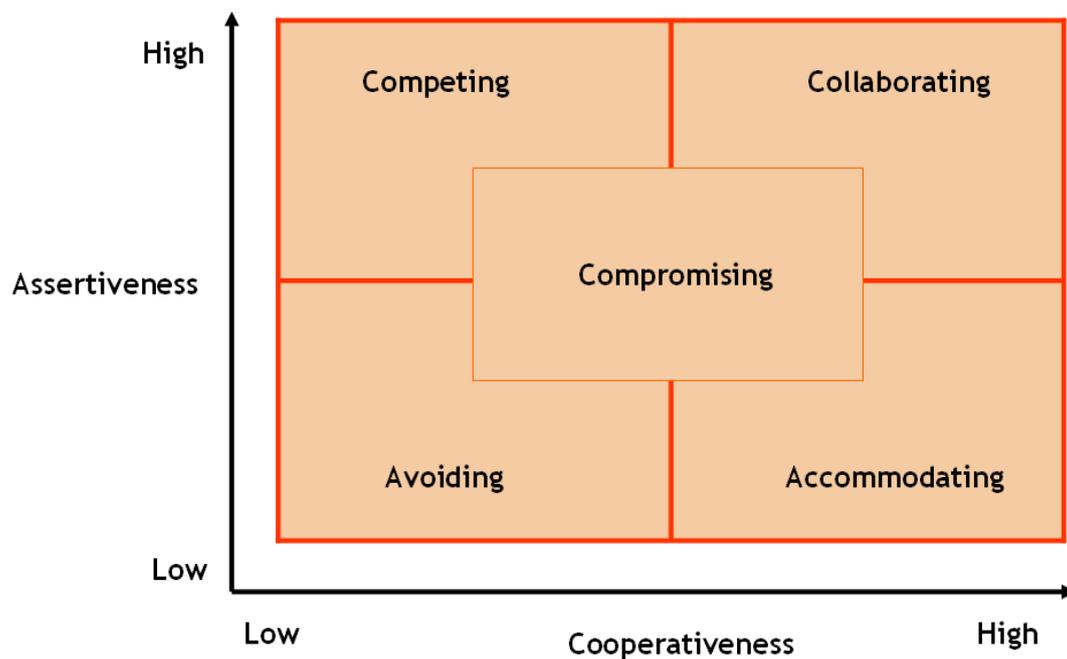
Is it better to win a battle, or end it?

Mary and Peter did not avoid conflict arising around wedding planning, but, for all of their arguments and conflicting ideas, they did not fight to see who would be 'right'. They found a way to end the argument and get married. On this evidence, their marriage is probably safe.

The same is true in organisations, **there will always be conflicts and sometimes they may even be encouraged to ensure innovation, but those conflicts must be managed if the organisation is going to be successful long term.**

Thomas-Kilmann conflict model

There are several ways in which organisations attempt to deal with conflict, one model is the **Thomas-Kilmann Conflict Mode Instrument (TKI)**. This helps to **map out possible solutions to conflict considering assertiveness and cooperativeness.**



Let's look at these solutions in relation to the newly married Peter and Mary and the post-wedding disagreement, outlined in an earlier section, concerning who is, or is not, doing the washing up.

Competing

This is a state where **both parties do not cooperate, but instead compete to see who wins**. Cooperation is low, assertiveness is high. It is the winner of the competitive battle that has their way. **The problem with this is that it encourages discord between the parties.**

For example, both Peter and Mary refuse to wash up, until eventually Peter gives in and does it. Mary wins, but there is continued unhappiness about this long term.

Avoiding

One or more parties in conflict may seek to avoid, suppress or to ignore the conflict. Cooperation and assertiveness are low.

This can be useful if the conflict is likely to go away with time, for example, in a project team which is coming to the end of its assignment. It's easier to just let things go on and then move on.

Mary continues to do the majority of the washing up. In this case, the washing up doesn't go away so avoiding is not a great solution as Mary continues to feel dissatisfied.

Accommodating

This involves **one party putting the other's interests before their own**. Cooperation is high, assertiveness is low.

This is **particularly relevant where one party has greater power**, for instance where a staff member has a disagreement with the company's CEO. It might be best for the staff member to accommodate the CEO's views.

Peter realises he has been unfair to Mary, and decides to take over all of the washing up himself. Mary's happy, but after a few weeks Peter's unhappy that things have gone too far the other way. Where the parties are on an equal footing, accommodation leaves one party unhappy in the long term and so is often not the best long-term solution.

Compromising

Each party gives up something, often resulting from a negotiation process. Some cooperation, some assertiveness.

Many union disagreements are resolved through compromises between management and the unionised staff, before active disruption occurs which will often not benefit either party.

For example, Peter and Mary discuss what to do. Due to Peter's working hours, he feels he can't do this during the week, but he reluctantly agrees to wash the dishes on the weekend if Mary washes them during the week. It's not a perfect solution as Mary's still doing more dishes, but they compromise and things are okay between them.

Collaborating

This is likely to be the optimum solution. **Differences are confronted and jointly resolved, novel solutions are sought and a win-win outcome is achieved** so both parties can achieve their goals. Cooperation is high, assertiveness is high.

Perhaps a union might agree to more flexible terms of employment in return for their desired pay rise.

For example, the couple agree that Peter will wash up and Mary will dry, hence completing the washing up together. They'll put some music on and have a glass of wine while they do it and make it a time to be together.

Mainwaring - Strategies for managing conflict

Mainwaring proposed a range of strategies for managing conflict:

- **Conflict stimulation and orchestration** - Conflict need not always be destructive. In this strategy, **conflicting roles are built into the organisation in the hopes of stimulating new ideas and approaches**.

Obviously, there must be some sort of limit on how much conflict is generated and conflict must be well managed so that it does not reach a destructive level.

- **Conflict suppression** - The conflict is **suppressed and hidden from view**. If the **threat of authority and force fails to resolve the situation then an attempt will be made to deny that the conflict exists**, effectively 'smoothing' the situation over. It is likely that the conflict will continue in some form as this is not a solution but, from a public relations perspective and as a way to handle conflict in the short term, it may work.
- **Conflict reduction** - This strategy involves the development of **shared objectives between conflicting groups**. By reaching **compromises, it is hoped that the attitudes and perceptions of the parties will be altered**. This may require the intervention of an independent third party (see arbitration and conciliation later). The conflict may not be resolved but reduced enough to ensure all parties work effectively in the future.
- **Conflict resolution** - Management aim to **eliminate the conflict by identifying and removing the underlying cause**. E.g. if the conflict is over the use of a limited budget, then management provide a higher budget for both parties removing the issue.

Other conflict handing strategies

There are a number of other ways that managers can go about managing conflict. Wally and his friends have agreed to go to the cinema with another group of people they know. Wally and his friends think the best movie to watch will be the new action film, but the other group think that the comedy film showing later that day will be much better. We will use this example of an intergroup conflict to see how these other methods for handling conflict could work in practice.

Confrontation - Tensions can be drawn out and can cause issues between the groups for a longer period. Sometimes, the best method for resolving the conflict is to allow it to play out fully through a confrontation and negotiation process where **the groups directly engage with one another and seek to discuss their issues**. However, negotiation does not always work, as the groups may not actively seek to address the underlying conflict, or if they do, it might lead to an argument or a destructive confrontation.

This would involve both the supporters of action films and comedy films entering negotiations in the hopes of coming to some sort of solution or compromise. Confrontation is not always successful and there is a chance that a heated discussion could result in spilt popcorn!

Third-party consultants - The introduction of an **impartial expert from outside the organisation** who should meet with both parties and help to reach a solution.

Perhaps it would be beneficial for both groups to ask for the opinion of a nearby cinema employee, or to compare the ratings received by a well-known film critic.

Arbitration - This is where the parties in dispute **agree to abide by the decision of an independent person (the arbiter)** who will hear the case from both sides and make a decision on how the conflict should be resolved.

For example, the groups of friends agree to abide by the decision of Bob, who isn't going to the film, but who will hear both sides' arguments and make the decision for them.

Conciliation - This is where an **independent person (the conciliator) meets with the parties separately in an attempt to resolve their differences**. Unlike an arbiter they do not make a final decision, but instead hope to help resolve differences.

Bob offers to hear each group's views on the films and suggests that they simply watch one film this time and the other next time. The groups are happy with this and the situation is resolved.

Member rotation - Switching or moving individuals from one group or department to another on a temporary, or permanent, basis helps to defuse tensions between the groups. This is because the individual will teach their new group about their original group and they will **gain an understanding of the values, attitudes, problems and goals of the department they have been transferred into**.

In our scenario, this may involve members of Wally's action film group watching some comedy films with the other group in the future, to get a better understanding of that group's preference.

Superordinate goals - By assigning goals that require the cooperation or coordination of multiple groups, management use this strategy in order to unite both groups with a **common goal** requiring the cooperation of opposing groups. A focus on the organisation's values, mission or objectives is a key focus.

In our example, if the two groups were actually going out to celebrate someone's birthday, then it is that which becomes most important. The focus is on having a good evening for that person rather than focusing on personal wishes.

Industrial tribunals - These are independent panels who hear and make **legally-binding rulings in relation to employment law disputes**. This wouldn't really work for our cinema groups since there is no employment law dispute to begin with.

Training - If conflict cannot be avoided, it may require certain members to receive **special training on how to manage conflict and resolve differences**. They can then bring this conflict resolution knowledge back to the organisation to create a cooperative company culture. This will help avoid future issues.

This may be a bit extreme for our cinema goers! Particularly since, while training can be effective as a method for managing intergroup conflict, it **can also be**

expensive for an organisation. Wally and his friends would probably be better off spending their pocket money on the cinema tickets!

Training typically involves members of the conflicting groups **attending the training outside of the main work environment** and their day-to-day issues. There are a number of steps normally used on these kinds of training courses:

- The groups are brought together in the neutral setting with a particular goal in mind, to explore their relationships and how they perceive each other
- The groups are talked to separately about their perceptions of their own group and their rival group
- The groups are brought back together and invited to report these perceptions while the other group quietly listens
- The groups are again separated to discuss amongst themselves what they have heard, to try and reconcile discrepancies between their self-perception and the perception the other group has of them
- The groups come back together and discuss these discrepancies, focussing on actual behaviour that could be the cause
- The groups are allowed to more freely talk together and try to uncover any other potential discrepancies
- The groups finally brainstorm methods for avoiding future conflicts and managing their relationships more constructively

Intragroup conflict

When conflict occurs within the group, between its members, rather than between two separate and distinct groups, this is called intragroup conflict. Third-party consultants, confrontation and training are common methods that can also be used to help manage this type of conflict within a group.

Dealing with industrial relations conflicts

In some industries, such as teaching or coal mining, trade unions support workers on many levels. Sometimes there may be conflict regarding pay or working conditions and this where the trade union may approach a company on their members' behalf to reach a resolution.

As well as many of the earlier strategies being appropriate to resolve possible union disputes, there are also **some specific union conflict management strategies that entities can employ to achieve a mutually agreeable outcome**. These include:

Union avoidance strategies - The organisation avoids a trade union by setting up its own committees and deals directly with the workers at factory level so **workers don't feel the need to join or set up a union**.

Collective bargaining - This is a **negotiation between representatives of the employer and the union**. The aim is to come to a collective decision on the employment relationship. The process involves joint-decision making between the two parties.

Gainsharing - This is where employees gain when the business gains, e.g. by having bonuses or pay rises based on achieving increased productivity levels.



CIMA Management Case Study

Chapter 5

Management Control systems

1. Management control systems

What are management control systems?

Consider Bob, who runs an accountancy practise in his home town. He's got 10 staff at different levels all supporting him in his work. He needs to ensure all his staff do all the things he wants them to do to achieve his goal, which is to make the business profitable. The way he does this is known as his management control system and for accountancy practice like Bob's this could include:

- The strategic plan - setting out how the organisation will succeed and grow - for Bob this might be to provide the best service of anyone in the town.
- His staffing plans - showing how they are organised and how they are controlled. Bob might create an organisational structure, plan staff recruitment, appraisal systems, training programmes and how he will best manage the staff.
- His financial plans - setting targets for key financial measures and monitoring performance as he progresses. Profit is obviously a key target, but as a growing business cash flow is often important too!
- The culture he aims to create - customer service is obviously key as this is his basis of success, but for an accounting firm following standard procedures and diligence will also be key aspects that ensure success.
- The specific policies and procedures he will impose - tight control over work done using financial controls, checklists and supervision will be key for accurate work.

Definitions

We have two formal definitions of management control systems:

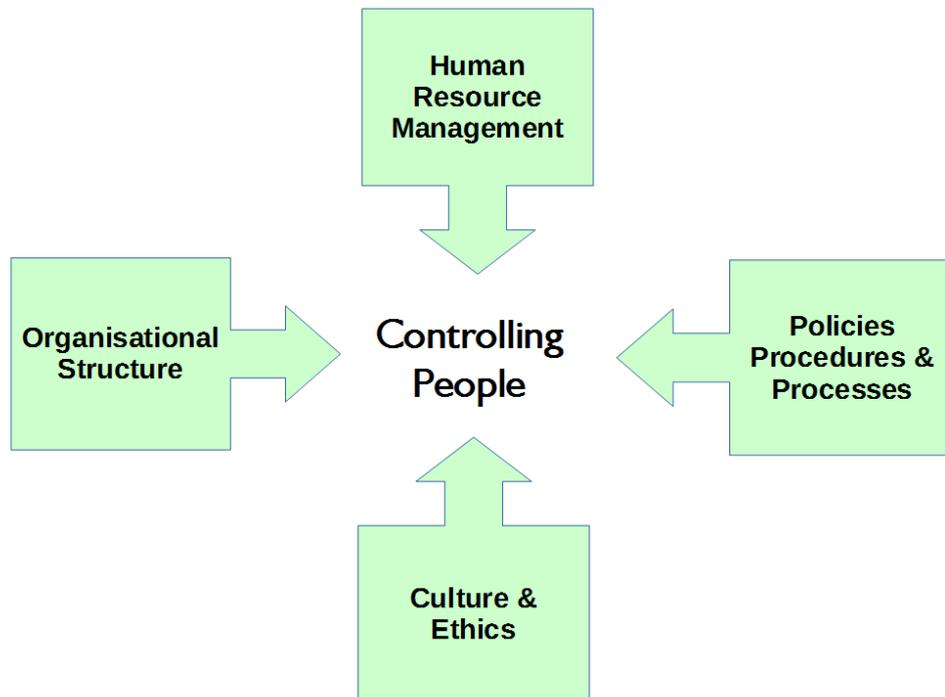
Robert N. Anthony (2007) defined Management Control as **the process by which managers influence other members of the organisation to implement the organisation's strategies.**

According to Maciariello et al (1994), management control is **concerned with coordination, resource allocation, motivation, and performance measurement.**

As you see, management control is about managing people well and effectively to achieve the organisation's goal.

2. Management control - human resources

One key aspect of Management Control Systems is through the control of staff. This can be implemented through the following key management controls:



Organisational structure

An organisational structure **outlines the roles and responsibilities of individuals and groups within an organisation**. An organisational structure consists of activities such as task allocation, coordination and supervision, which are directed towards the achievement of organisational aims.

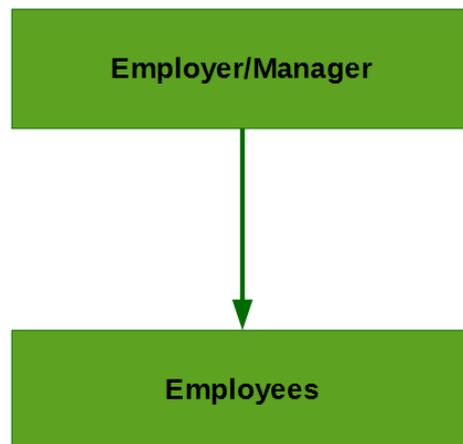
Structure is used for management control as it provides:

- **The foundation on which standard operating procedures and routines rest** as these are often structured and controlled by a specific group. Bob's tax department will be in charge of the procedures for producing tax returns for instance.
- **A focus for decision making** - with clear decision making responsibilities allocated to department managers. Bob's tax manager may be responsible for the results of the tax department and take key decisions based on his knowledge of that product.
- **Functional or project responsibilities can be allocated to specific parts of the structure creating a control centre** which is then responsible for

control of a particular area of the business (e.g. financial control to the finance manager).

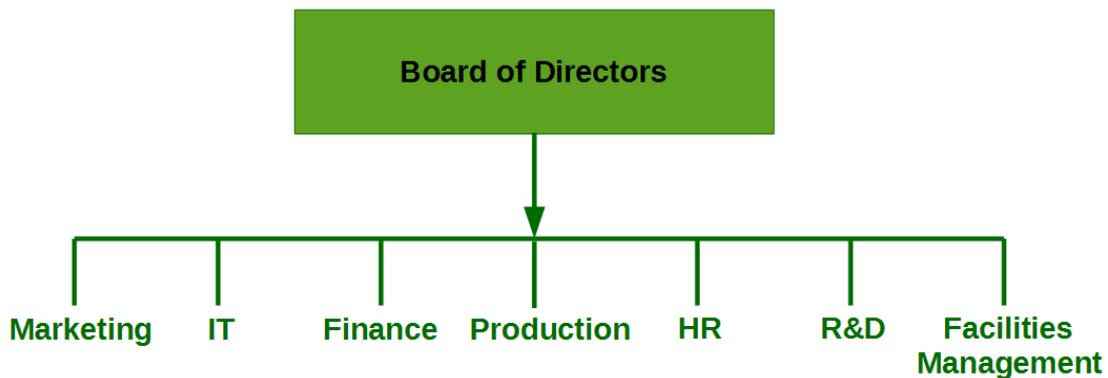
Typical structures and how they relate to control:

Entrepreneurial



Control exercised by the leader, their expertise and the way they run and manage their staff directly.

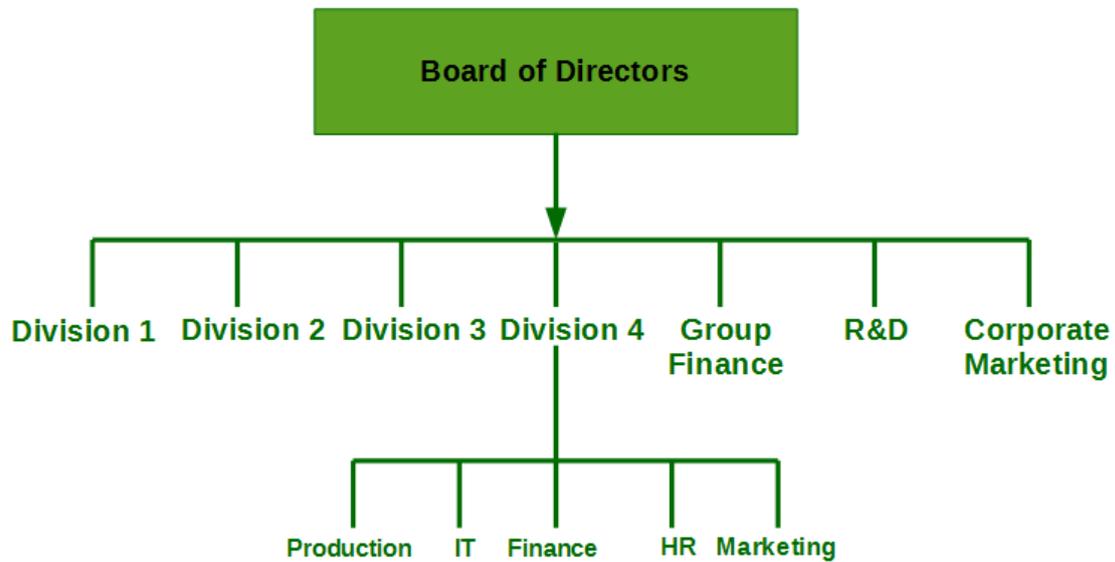
Functional



In a functional structure, groups of experts work together to perform specified roles for the organisation. Control is exercised by functional responsibilities and functional experts.

From a management accounting perspective, each functional area is usually a **cost centre** to which individual budgets are allocated, and costs reviewed and controlled using variance analysis.

Divisional



Divisions can be based on product, customer or geographic groupings. Control is exercised by delegated managerial responsibility for each division.

Each division can controlled using profit based targets for division managers (profit centre). If the manager also controls investment divisions it **can be managed using Return on Investment (ROI) or Residual Income (RI) measures** as an investment centre.

Matrix

	Marketing	Finance	Production	Design
Customer A				
Customer B				
Customer C				
Customer D				

Often used in project environments to get more control over projects through better management and communication in project teams.

Network

Network organisations **depend on the relationships with external organisations**. Control is exercised mostly by well drafted and focused contracts (also called service level agreements or SLAs) including clear performance measurements and penalties for non-compliance. Relationships with partner companies are also key to control.

Human resources management

Human resource management (HRM, or simply HR) is the management of an organisation's workforce, or human resources. Organisational control is exercised by:

- **Attracting and selecting suitably qualified staff**
- **Training** to give people the right skills and attitudes to do the best work
- **Rewarding of employees** including incentive schemes
- **Employment contracts**, setting out clear expectations of role
- **Setting and applying disciplinary procedures**
- **Ensuring staff satisfaction and motivation**, leading to good productivity
- **Performance appraisal** to give feedback

Policies, procedures and processes

Standard policies, procedures and processes ensure people know what is expected of them, and that they operate in a standard structured way. Their work is therefore 'controlled' within the bounds of the policy, procedure or process.

There are three types of business processes:

Management processes, the processes that govern the operation of a system. Typical management processes include "Corporate Governance" and "Strategic Management".

Operational processes, processes that constitute the core business and create the primary value stream. Typical operational processes are Purchasing, Manufacturing, Advertising and Marketing, and Sales.

Supporting processes, which support the core processes. Examples include accounting, recruitment, call centre, technical support.

Business Processes are designed to add value for the customer and should not include unnecessary activities. The outcome of a well designed business process is increased effectiveness (value for the customer) and increased efficiency (less costs for the company).

3. Types of organisational control

There are a range of different ways in which **control can be exercised over staff** in an organisation:

Types of organisational control	Characteristics of type
Personal centralised control	<ul style="list-style-type: none"> • Usually found in small businesses where the owner is the decision-maker • Control through owner's supervision • Personal authority reinforced by reward and punishment • As the company grows, a transfer of control usually leads to the adoption of a Bureaucratic or Output system, as the size of the company may mean it is too complex for one person to supervise
Output control	<ul style="list-style-type: none"> • Found where there is a need for simple, quantifiable measures of performance • Control is based upon the level of output and results (e.g. productivity or profit) • Once output standards are set the employees work semi-autonomously e.g. to achieve profitability targets, often with a bonus based on achieving these.

Types of organisational control	Characteristics of type
Bureaucratic control	<ul style="list-style-type: none"> • Control is based on formalised rules • Job descriptions and task specifications dictate what a staff member does • Reward and punishment systems are used to maintain controls
Clan or Cultural control	<ul style="list-style-type: none"> • Control is based on creating a culture where the right behaviour is a natural part of the way things happen. e.g. everyone works a 60 hour week because they see everyone else doing so. People who do not are shunned and so most people comply. • This strategy relies on careful selection of employees who are able to fit in to the clan and adopt the culture. • The level of trust in the organisation is also an important factor, and this is often related to the culture. If management can trust employees fewer rules and procedures are required.

4. Performance management systems

An important area of management control is performance evaluation, the performance being evaluated may include the business as a whole or just an individual employee.

The primary method for assessing and managing an employee's performance is through the setting of targets.

Depending on the nature of the work being undertaken, these targets may look very different for different people in different industries or companies. However, all targets should be carefully set in order to increase the employee's efficiency as well as their commitment and motivation.

There are some specific methodologies that companies can use to set targets, including Drucker's management by objectives or key objectives, and Kaplan and Norton's balanced scorecard, which are all explained below.

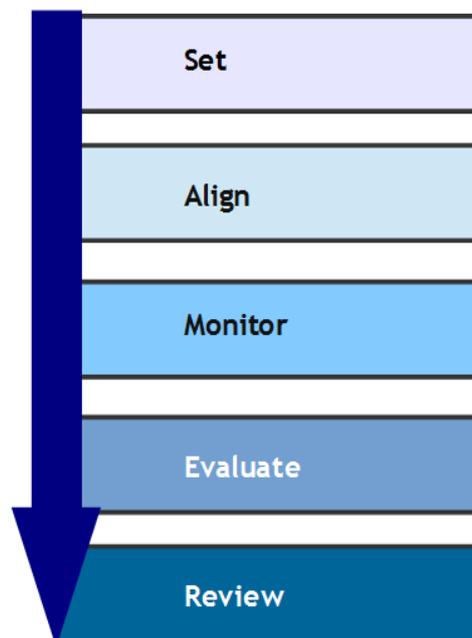
Drucker's management by objectives

A common problem with organisations is that the employees do not always know what is expected of them, many may work to 'set hours' and may just leave when their hours are up regardless of how much work has been done, whether or not they have done a good job or focused on the organisation's goals. A way of combating this is to manage performance by objectives, i.e. your job is complete when your objectives are complete! This way employees know exactly what is expected of them and have something tangible to work towards.

If staff objectives are not aligned to the organisation's objectives then, however well targets are set for staff, the organisation will not move in the right direction. **Drucker believed that objectives should be set at the top of the organisation, related to the organisation's mission, and then passed down the organisation to business units and on to staff.** In this way when staff achieve their targets, the business units achieve theirs and the organisation fulfils its mission. This approach is called **management by objectives**.

One key aspect of MBO is that **staff should be involved in the target setting process, both for themselves and their division.** This helps to obtain buy-in into the targets while ensuring they are realistic to ensure people are motivated to achieve them.

Drucker proposed five steps for effective management by objectives (MBO). The steps in the process are:



Set organisation objectives - What does your company want to achieve? For example, to have the best customer service in the industry.

Align employee objectives - What target can we give our employees to help us achieve this goal of having the best customer service in the industry? For example, responding to all customer queries within a day.

Monitor performance - We need to have a way of checking that objectives are being met. For example, a review of customer queries at the end of the day to ensure that no queries have gone unanswered for longer than a day.

Evaluate performance - Who has been meeting their objectives and who hasn't? We need a way of quantifying whether the objective had been met or not and who has/hasn't met them, online project check-lists for every employee, for example.

Review and feedback - So 10 of our employees have met their objectives and 10 haven't, we need to give positive feedback to those who have met them, and suggest to those who didn't ways in which they can improve in the future. This also applies to review at higher levels too - so that departments and business unit targets are reviewed and lessons learned.

Drucker's eight key objectives

Drucker proposed that **a company cannot survive if they focus only on the profit objective as it is a measure of short term success**. A company may be profitable, for instance, but a competitor beat them in introducing a new innovation and the company subsequently fail. Nokia were the biggest phone company in the world until they failed to appreciate the impact of smart phones on the market.

To be successful the company must succeed in a range of different areas of the business, setting multiple objectives in regards to performance and results that do not merely focus on short-term monetary gains.

Drucker proposed **eight key objectives**:

Market standing - Objectives would be set according to where a company is in relation to its competitors. An increased market share would suggest success in marketing and sales, product quality and reputation. An improved market standing suggests strong longer term performance.

Innovation - Innovation costs money in research and development and so reduces profit in the short term. However, new products or changed designs generate higher profits long term and keep the company ahead of the competition. Apple's innovations of the iPod, iPhone and iPad in the 2000s secured their success for many years after that.

Productivity - Productivity measures the best use of resources. A measure might be the output over a period of time or per employee.

Physical and financial resources - objectives regarding the use, acquisition, and maintenance of capital and monetary resources. e.g. retaining a positive cashflow.

Managerial performance and development - Managers need to perform effectively. e.g. a finance manager will have objectives based on accuracy and timeliness of financial reports. Training objectives would ensure managers are continuously learning and developing.

Worker performance and attitude - the more effective the workers the better their motivation and productivity. They may also stay at the company longer too. Objectives might include worker productivity targets or staff satisfaction survey results.

Public responsibility - Considering corporate social responsibility and ethics ensures the reputation of the business remains high and avoids costly legal issues. A car manufacturer might, for example, have objectives related to the safety of vehicles or emissions levels.

Profitability - Yes, this is important too! It's often the best measure of current performance.

Each organisation is different. The key to success is to balance the objectives - this means having **a combination of short, medium and long term objectives that are not solely focused of generating profit but developing the company and those involved with it.**

Balanced scorecard

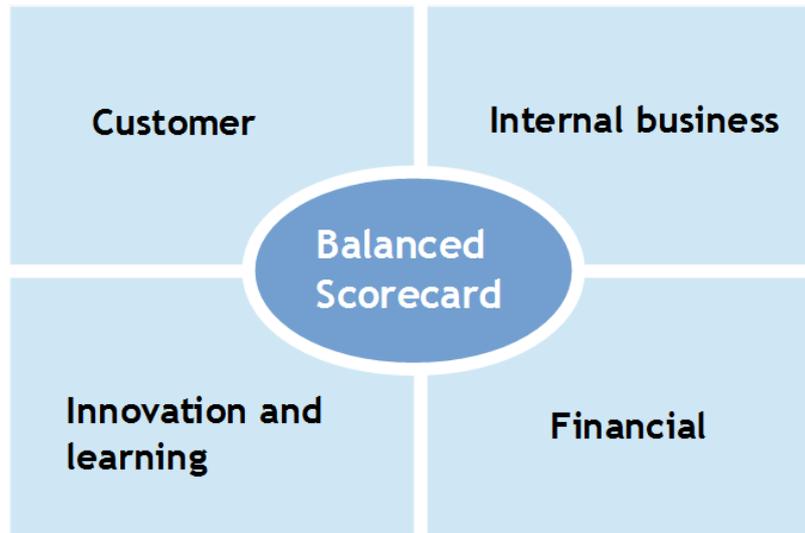
In order overcome possible short-termism of financial measures Kaplan and Norton developed the Balanced Scorecard which **outlined four key areas in which company and divisional performance should be measured to focus on both the short and long term needs of the organisation.**

The key idea is that **managers are to be appraised on a variety of measures which include non-financial measures** so that their focus is both long and short term.

If a manager was just appraised on profits alone then they might lower spending on annual training so profits are higher. Under the balance scorecard though they might also be measured on the 'number of training days' or a similar training measure, and so would need to balance performance over both the short term (profit) and long term (training days) measures.

Similarly spending less on R&D could result in higher profits, but under the balanced scorecard a worse performance on a measure focused on development expenditure or number of new products released.

The 4 perspectives and suitable performance measures in each are:



Customer perspective

Focusing on the customer and **meeting their needs**.

Possible measures:

- Customer satisfaction - provided by a customer satisfaction survey
- Number of returns
- Number of customers moving to the competition
- Call waiting time / service time
- Delivery time
- % of deliveries on time

Internal business perspective

Focusing on the way the business works and operates with a particular focus on **productivity and efficiency**.

Measures include:

- Production time per unit
- Number of defective products
- Cost per unit

- Material wastage rates

Innovation and learning perspective

Focusing on **innovating in product and processes, and developing and learning for the future**. Learning is more than just training, but includes any kind of organisational improvements made.

Measures include:

- Number of new products developed
- Sales from new products
- Development time of new products
- R&D spending
- Amount spent per employee on training
- Number of qualified staff
- Number of training programmes available

Financial

Financial performance remains vital to the organisation's success, as it gives an **indicator of shareholder wealth and ability to survive long term**, and so must also be balanced against the other factors.

Measures include:

- Profits
- Return on investment
- Residual income
- Costs (variance analysis)
- Sales

Linked to strategy

In each category, the organisation **must follow through from the business strategy**, to ensure they are focused on the long term direction of the business.

Clear objectives should be set under each category according to the SMART criteria (Specific, Measurable, Achievable, Relevant and Timebound), measured at the end of the period, and lessons learnt from actual results to help to improve

performance in future periods and keep the organisation on track to achieve its strategic goals.

Problems with the balanced scorecard

While the balanced scorecard is a good all round measure of performance linked to strategy, including both financial and non-financial measures, there are also issues with using it:

- There are **a lot of measures** to work towards which can make it hard for managers and staff to know what to focus upon as it is difficult to achieve targets based on all measures.
- **Some measures conflict** - e.g. better quality also increases costs and so it's hard to know what balance to achieve.
- **Significant additional information is required** to be produced - which may be time consuming and costly and require **new information systems**.
- It requires a **new mindset and culture change** may be required to ensure staff-buy into the new system.

Example - football club

Each real life situation is different and as such requires a different focus for the balance scorecard. Let's look at a football club's balanced scorecard to begin with. Notice as you review this that the customer of a football club wants very different things than a customer of a normal business - league and cup success is the most important thing to them. Efficiency measures for the internal perspective also have to be very different.

Financial

- Profit margins
- Return on investment
- Costs vs. budgets
- Revenues

Customer focus

- Match results and league position
- Match attendances home and away
- Results of customer surveys, e.g. satisfaction with provision at the stadium

Innovation and learning

- Number of innovations implemented
- Spending on learning and development
- Number of new ideas suggested
- Improvements in key environmental measures such as carbon emissions

Internal business

- Retention of current players
- Recruitment of new players of proven quality
- Health and safety incidents

Example - Oil research and production

Now let's look at the scorecard for an oil research and production company (one that sells all their oil on the market and does not do any oil refining).

Financial

- Profit margins
- Return on investment
- Costs vs. budgets

Customer focus

- On time delivery of sales made

Innovation and learning

- Number of innovations implemented
- Spending on learning and development
- Number of new ideas suggested
- R&D spend
- Improvements in key environmental measures such as carbon emissions

Internal business

- Efficiency measures (e.g. output per hour)

- Staff idle time
- Rig downtime
- Health and safety incidents
- Pollution/wastage measures

You'll notice that the financial and innovations areas are reasonably similar, whereas the customer and internal perspectives quite different. Health and safety and environmental issues are critical in this industry and as such must be on the balanced scorecard.



CIMA Management Case Study

Chapter 6

Managing Teams

1. Groups

It is 1am and Aradhana has been out with her colleagues at work for a night out following a long hard week at work. She gets a bit tired and wants to leave. However, her friends want to stay for another hour until the bar shuts. She ends up staying longer as she would rather walk home in a group than by herself because she feels safer that way and doesn't want others to feel she's not playing a full part in the group. The actual activity of walking home and the end goal of being home is the same regardless of whether or not she is doing it alone or with others, but it is human nature to prefer doing things with others or to want to go along with what everyone else wants. A group has a sense of identity where **individuals conform to common norms and goals**.

Groups exist within organisations just as they do in our personal lives and so it's **vital that the way groups work is understood so they can be managed effectively**.

In organisations, groups can be informal or formal.

Informal groups

Informal groups **come together without any formal planning or organisation**. Aradhana's group of party-goers is a great example of an informal work group.

The characteristics of an informal group are as follows:

- The group is self-selecting
- Objectives set by the group itself
- Often temporary and changes when staff join or leave
- The main aim is the welfare and interests of its members

Informal groups are important in organisations as they have a role in communication and culture. Not surprisingly Aradhana and her friends discuss a whole range of work related topics when they're out: their boss (and how much they hate him), the work (and how boring it is), the rules (and how unfair they are) and the working hours (and how long they are). The fact they all go out together and have a good time, bonds them though and this helps when they're in the office they have great time together despite all the things they don't like! Notice then how **the culture of the organisation can be dictated by how informal groups behave and interact**.

Formal groups

Formal groups are **defined by the organisation**, often in a formal organisational structure. The characteristics of a formal group are as follows:

- Objectives mainly set by superior management
- Tend to be permanent
- Organised according to established structure and procedures
- The membership decided by management
- The main function is the realisation of the organisations' aims

Aradhana is a member of the customer services team - that's her 'formal group'.

Self-directed work groups

Self-directed or autonomous work groups are groups who work without the usual management or supervision. They **decide on their objectives and how they will achieve those goals**. The main aim of these groups is to enhance motivation by giving staff responsibility. They are overseen by management who monitor progress but tend not to step in unless it is seen as necessary to resolve problems or issues.

Reference groups

This is a group that **individuals, or a group, will compare themselves to, or aspire to be part of**.

Aradhana's customer service group are always compared to similar teams in other offices around the country. They are appraised based on comparisons of customer response times and satisfaction levels. These are their reference groups.

Teams

A team is a **small group** of people with **complementary skills who are committed to a common purpose, performance goals and approach**. Often a team works together in a coordinated way to achieve those goals.

So would a football team meet these criteria? Let's see:

Small group: 11 of them is just small enough to be deemed a team

Complementary skills: Goalkeepers, defenders, midfielders and attackers - a mix of skills which complement each other and necessary in the best teams

Common purpose and goals: To win the game and the league

Common approach: Perhaps they play a 'passing game' to they have a clear strategy for success

Coordinated: As dictated by the manager who sets a clear system of play

So yes, a football team do indeed fulfil the requirements under the definition of a team.

What about Aradhana's group? Take a look at the details and decide:

Aradhana's customer services group contains 85 customer service operatives, with 5 supervisors overseeing their work. They have group targets focused on customer service and customer response times. They tend to work individually during the day, asking their supervisors when they have queries.

So is this a team?

Aradhana's group have clear shared goals - that meets the needs of a team. However they don't need to be coordinated to work together to achieve their goals as they tend to work individually. To cap it all the group itself is too large to be deemed a team and so the answer is no.

Work teams

So we've seen the criteria of a team, let's have a closer look at the make-up of **formal work teams**:

- **Multiskilled teams** are made up of groups of individuals who are able to perform any of the tasks needed in order for the group's set work requirement, or objectives, to be achieved.

Within a credit management team, each person may be trained to make debt collection phone calls, run credit checks and in put payments received onto the system.

- In **multidisciplinary teams** individuals from different disciplines are brought together in order to complete an overall project made up of specific tasks, requiring specialist skills.

In order to build a house the team would include, architects, surveyors, bricklayers, electricians, plumbers, roofers etc.

2. Formation of high-performing groups and teams

Tuckman's stages

Tuckman suggested work groups (together with any other group) pass through four stages of development after they come together for the first time:

Stage 1 - Forming - Making a personal impression, getting to know the others, often polite behaviour

Stage 2 - Storming - Bargaining over roles and goals, resulting in conflict. Individuals may possibly drop out at this stage if they find they are not comfortable with the group's approach or objectives

Stage 3 - Norming - Involves developing agreed ways of working to achieve goals. Roles, tasks and procedures are set out and agreed

Stage 4 - Performing - Groups now begin to function smoothly and work towards their purpose with a clear focus



By being aware of the typical stages, managers can aim to help to move new groups through these stages quickly with the aim of getting to the performing stage as quickly as possible. This might be through helping people to get to know each other quickly early in the process (e.g. having a group away day or lunch), formally facilitating a group discussion, or allocating roles directly so there is no debate or disagreement.

It is also worth noting that Tuckman also later added to the model the stage of **dorming - where the group stops performing well and does not adapt to changing circumstances**. It is important that groups are continually reviewed and managed therefore, to ensure they continue to be effective.

Group cohesiveness

In order to be effective, three factors should be considered:

Group membership - People with the **right skills, knowledge and ability** that will work well together. Membership of other groups may mean staff members are less loyal and focused so this is not ideal.

Environment - **What is outside of the group** can affect what happens in it. Questions to consider may be: are the group supported by management and well funded? Is the task being achieved consistent with the organisation's goals and strategy? Are there other external factors such as economic, political or technological that may change the way the group work?

Dynamic - Groups continually change. As staff members change, the **dynamics of the group may change**, and these need to be managed.

3. Belbin's team roles

What if everyone in a team wanted to be the boss and no one wanted to do the work? They would spend their time jostling for position, and little would be accomplished! Meredith Belbin made a long study of the mix of characteristics in a team. He concluded that a team composed of the brightest people did not always turn out to be the best (this is known as the Apollo Syndrome). In fact, the **key to success came by understanding the natural roles each individual takes** when they are part of a team and aiming to get a mix of these roles.

The **roles Belbin identified that people take when they work in teams are:**

'Social' roles	'Thinking' roles	'Action' roles
 Co-ordinator A natural leader who likes to guide and support and co-ordinate the team's efforts.	 Plant The source of original ideas and proposals.	 Shaper An action orientated person who 'gets things done.'
 Resource investigator Brings new contacts, ideas and developments. A good networker who knows who or where to go to get things done effectively.	 Monitor evaluator Analyses and evaluates ideas and sees the flaws in arguments. A rational thinker.	 Completer finisher Checks detail, worries about schedules and ensures that tasks are finished.
 Team worker Holds the team together by being supportive.	 Specialist Technical person, if needed, to solve technical problems.	 Implementer The practical doer – they get tasks done quickly and efficiently.

To understand how this works, imagine for a moment a team consisting entirely of ideas people (plants). They would have brilliant ideas, but they would be unlikely to see the downsides (monitor-evaluators), the ideas would never get organised (a coordinator/chair would be needed), there would be conflict (no team workers) and there wouldn't be anyone to get on and get it done (team workers, resource investigators, shapers, experts and completer-finishers).

Similarly, a team full of chairs would all want to be leaders resulting in conflict, while a team full of team workers would probably create a lovely place to work but with no ideas or focus.

Ensuring a **successful mix of roles within a team is vital but seldom achieved.**

This is due to:

- **Lack of understanding of its importance**
- **Teams being small**, so being unable to have people that have a mix of these team personality styles
- **Lack of time**
- **People not available** with differing skills
- **Misunderstanding** of task requirements

Role theory

Specific types of workplace behaviour can be associated with specific roles, for example, cautious behaviour may be associated with someone whose role is linked to health and safety.

Role theory helps managers to successfully manage individuals in groups by examining their behaviour in relation to the roles they may be expected to take.

Role theory suggests that individuals' behaviour can depend on two factors:

- **How individuals expect to act in certain situations** - A manager acts in a bossy way, perhaps because that's what they believe is necessary for that role.
- **Other people's expectations of them** - A manager acts in a bossy way, perhaps because their previous manager was like that and people expect to be treated in a similar manner .

Some expectations of a role come from the visible indicators of the role, known as the role signs. For example, this could be a commercial airline pilot's uniform; it is a formal role sign as most pilots have to wear a uniform to signify authority and the professional image of the airline.

Problems with expected behaviour

There are a number of problems that arise out of role theory:

- **Role incompatibility** - This occurs when an individual's expectations of their role differ from those outside the group. A manager might act bossy, but staff expect a more democratic approach (perhaps because that's the usual company culture). This is likely to result in conflict between the manager and their staff.
- **Role ambiguity** - This is when the individual is unsure about what role they have to carry out, perhaps because they are new to a team. This may mean they don't fulfil their role properly. The manager, for instance, may not have seen their role as a managerial one if it wasn't formally noted in their job description or during the interview process and so doesn't act like one when that's what others are expecting.
- **Role conflict** - This conflict stems from any differences that may occur between the multiple roles that one individual may have. For example, a manager may be in charge of two different project teams and find allocating time between them fairly difficult.

4. High performance teams

So, we've examined the roles of individuals that make up teams, but what makes one team more successful than others? Well, **Google has tried to find out the secrets of high performing teams** by conducting a five-year study into its best-performing work teams and came up with **the following five characteristics of high performing teams**:

- **Psychological safety** - This is a quality where the team members are working in an environment that people can freely express themselves without criticism, meaning that everyone is able contribute and share, increasing teamwork and productivity.
- **Dependability** - People in teams need to be able to depend on each other. This means that people should not only understand their own work and the expectations linked to it, but also what their fellow team members are working on and how their work impacts each other.
- **Structure and clarity** - To become a high performing team, Google suggests that work should be well planned and effectively communicated, so that all members are aware of what needs to be done.
- **Meaning** - Everyone should feel that they are important to the team and that their work carries meaning. This helps give individuals a purpose for the work they do. In a hospital the meaning might come through knowing people

are being helped to recover and the importance of each role to that can be emphasised to ensure they know their role has meaning.

- **Impact** - Making sure the team are aware of how their team is performing and how it is contributing to the organisation's wider goals. So, for example, in the hospital, the results of a department in terms of helping people might be communicated to demonstrate the benefits achieved.

Successful teams

In 1982, Tom Peters and Robert Waterman identified five features of a successful team:

- **A team should be set up to achieve a particular task**, to give it focus. Ideally new teams will be formed for different tasks so that each new team has the right people and the right processes to be efficient.
- **Members should, ideally, have the option of joining a team, they shouldn't be forced.** This is because if they do not want to be a part of it, they are unlikely to contribute as much as other team members. Of course, at work, this may not be possible!
- **The teams should be small** as larger teams are slower to react and harder to manage.
- The team should focus on the activity that they have to complete by **creating a plan of action.**
- **Communication should flow easily** and freely around the team.

If teams are not working as well as expected, they suggested that it is possible for managers to help teams reach their potential through group activities such as team-building exercises where teams can work on characteristics such as efficiency and trust.

Measuring the effectiveness of high-performing teams

So, we've seen what makes up a high-performing team, but how do we know that a team is performing to the best of their abilities? There are a variety of ways that success can be measured. These measures can be based on the following questions:

- Have the team's objectives been met?

A team in a hospital might measure whether lives have been saved.

- Was the quality of the team's outputs of a high standard?

Outputs are what is produced. A hospital, for instance, might ask if the standard of care was high, perhaps through conducting a patient survey.

- Did the individuals work well as a team? Was there conflict? Are they satisfied? This could be measured with team questionnaires.

5. Motivating group members

In order to get the most from any group or team, the individuals must be motivated so that they work hard, and in the direction of the group's aims. Practically this will mean:

- **Selecting group members** who show **enthusiasm** and alignment with other group members and the group's goals
- Ensuring there is a **clear leader** who sets a clear direction, uses a democratic management style to get the group's participation, and deals with conflicts in the group
- Giving the group as a whole **responsibility for their achievements**, with related **rewards**
- Giving **individuals responsibility** for parts of the group's activities, with related **rewards**
- **Creating competition** with similar groups
- **Avoiding hygiene factors (Hertzberg) that cause dissatisfaction** such as poor working conditions, lack of supervision, bureaucracy and internal conflicts

6. Benefits and problems with groups

"Teamwork makes the dream work," they say (part of a quote by John Maxwell). But not automatically. As we've seen, feeling part of a group and doing things together can bring many benefits in terms of morale and productivity. But it also brings its own set of problems.

Benefits

- **Shared ideas and improved information flow between members of groups**
- Leads to a better understanding throughout the group and a better coordination what they do
- **Increased efficiency** - As co-ordination of activities and roles between members of the groups increases

- **Improved focus and responsibility** - As there is more accountability to the group who know it is this role to achieve the group's goal and others are relying on the work being completed
- **Increased motivation** - As everyone is working towards a common goal
- **Improves relationships** - Staff will have to work together and work out ways to overcome personality clashes which in turn improves communication and cooperation
- **Improved problem solving** - As groups have a greater amount of knowledge than individuals and so are more likely to be able to solve problems

Problems

- **Different values and beliefs between individuals or other groups** - e.g. Harry believe that it is important to always be on time but one of his colleagues is often late and does not see this as a problem. Conflict arises and the team-working between them becomes difficult.
- **Hostility and jealousy between groups** e.g. Harry's team are always top of the in-house productivity league which creates resentment with other lower performing teams
- **Poor communication** - Harry's team don't communicate with other teams because they don't want to give away their team's secrets
- **Conforming to group behaviours** - These might not be appropriate (e.g. they could be unethical) or could be an inefficient or ineffective and yet the group's behaviour persist because people just conform to the norm
- **The Abilene paradox** - This idea is based on the story of a family who ended up driving to Abilene, Texas because they all thought that everyone else wanted to go, although really nobody wanted to go, they just didn't want to be the only one to say so. This is a common issue in groups where the **group norms dictate actions even when it's not really what anyone thinks is the best way of doing things.**
- **Group polarisation** - This is the idea that groups will make more extreme decisions than the individuals within the group would normally make. This is also sometimes called **risky shift**. It occurs because the **consequences are often shared** and if everyone else seems to think it's okay then others will go along with it too
- **Groupthink** - This occurs when the members of a group reach a decision in order to create harmony rather than because it is a good idea

7. Communication

When J. Edgar Hoover was the Director of the FBI he had very clear directives over the memos he received. They were to be no longer than two pages and have wide margins each side so he could write notes. On one occasion an agent minimised the margins so they could fit more on and still be under two pages. Hoover sent it back stating “watch the borders,” meaning the memo needed to be rewritten with larger margins. Before he knew it, hundreds of FBI agents were sent to the borders of Canada and Mexico, all over a misunderstanding of the word ‘borders’. This is a great example of the importance of communication within an organisation and what can happen if it goes wrong.

Good communication is an essential tool in achieving productivity and maintaining strong working relationships at all levels of an organisation. Just try to think for a moment how much worse your job would be if no one ever kept you informed about what was going on or how you could improve!

Employers who invest time and energy into delivering clear lines of communication will rapidly build up levels of trust amongst employees, leading to increases in productivity, output and morale in general.

Poor communication in the workplace will inevitably lead to demotivated staff that may begin to question their own confidence in their abilities and inevitably in the organisation.

The role of communication in organisations

Communication is vital to organisational success in:

- Providing **information for planning and control**
- Providing **information about the organisation to the outside world**
- **Swapping of ideas and knowledge** within the organisation
- **Clarification** of tasks, ideas and information
- **Informing subordinates** (of tasks)
- **Informing superiors** (of progress)
- **Developing and maintaining interpersonal relations**
- **Resolution of conflict** by negotiation
- **Training** staff

The process of communication

Communication is the process of conveying information between two or more people, and the **communication process is the steps we take, or order, to make our communication successful.**

The **first stage** of the process **begins with the sender.** If we were to use this study text as an example, that would be us. We are attempting to convey a particular message to you.

In order **to communicate our message we must first encode it.** In other words, we are manifesting the message into a certain form; written word in this instance. Other ways of encoding could be gestures, non-verbal cues, talking, music and so on.

The **channel** is the **medium through which the message is sent.** We are using this study text. If we were giving a speech, the channel could be a meeting or lecture.

As you read these words, you become the **recipient** of the message. To fully understand the message requires you to **decode what is written and gain meaning from it.** It is at this point you will discover whether the process was successful or not!

The **final stage is feedback,** and we will look at it in more detail now. It is the point at which you convey your appreciation for the incredible clarity of this study text or indeed tell us something wasn't clear to you and so we could improve it in future!

The reason why companies, like us, are always looking for feedback is that it is very important that we know that our message has been received successfully. If it is not, then we are failing to engage our audience effectively. If our message is met with a confused frown or a 'what?' we know that the receiver is confused and we will have to clarify our message.

Non-verbal communication

Non-verbal communication revolves around what isn't said! Instead, **attention must be paid to body language and how something is said,** for example: facial expression, stance, posture and contact.

It is important that individuals are aware of these factors when communicating with colleagues. For instance, a manager might assign work but notice their staff member's face shows they're not quite sure what they need to do because of a look of confusion. This will then enable them to ask about this and then clarify anything they're not sure about.

Barriers to communication

Noise

No communication process would be complete without noise. By noise, we do not just mean physical noise like cars outside or loud music. We are talking about **all the different ways communication can be interfered with**.

A few examples of noise are the likes of hard-to-read fonts or colours (Environmental noise), poor eyesight or hearing (Physiological noise), different dialects or languages (Semantic noise) or even feelings and prejudices (Psychological noise).

Sender and recipient

Barriers of communication can be viewed as happening on the side of both the sender or recipient of the information.

Barriers to communication	
Sender	<ul style="list-style-type: none"> • Being unclear in what is the focus of the communication • Omitting important information • Using jargon • Sending an inappropriate amount of information • Sending mixed messages
Recipient	<ul style="list-style-type: none"> • Unwilling to accept the message (e.g. they don't believe it) • Unable to handle the amount of information • Filters out unwanted information • In an unfit state to receive the message (e.g. they are ill, upset or angry)

How can we overcome these barriers?

Looking at these points we can see ways in which communication can be improved. The sender should be mindful of the recipient and their situation. The message being communicated should be clear and well structured so that is easily

understood. The feedback received should be consistent with the message so that it is obvious that it was successfully received.

Any noise should be considered and reduced. The recipient should listen (or read) attentively, and any misunderstandings communicated in the feedback.

Example

Nicole is in charge of her team at work and has a potential antagonist amongst her team - Clare. Clare is an event coordinator who often grumbles about her position, feeling she is overqualified for the tasks she is given. This can cause her to challenge Nicole and can introduce conflict and negativity in the group. She often feels she knows best and doesn't listen to Nicole. This is often compounded by the fact that instructions are never written down, either by Nicole or Clare. A lot of poor quality work is being done, which is regularly delivered late, and Nicole is in fear of giving negative feedback because of the reaction she'll get.

So, what are the key problems here from each perspective?

Sender - Nicole

- Tasks are never written down, and so it's not entirely clear what is expected
- Nicole is not providing feedback, and so when tasks are misunderstood there is no clarification
- Nicole has not raised the underlying issues with Clare concerning her attitude

Receiver - Clare

- Clare is resistant to the message being received, and believes she is too qualified so does not fully listen
- She does not write down tasks which can mean that details are missed
- She is not open and positive which means the sender (Nicole) does not communicate well with her

Whatever she does, great communication is going to be critical to Nicole's success. She needs to discuss Clare's perspective and resistance, and understand what she wants and how to get there. She'll need to have regular meetings to manage progress and support her, or indeed to discuss Clare's attitude with her if it continues to be poor. She'll need to write tasks down. Great communication and management of the individual can help ensure that the group as a whole works harmoniously and potentially gain Nicole a valuable member of staff.

Communication methods - oral and written

Effective and regular personal communications are vital to ensure project progression and to identify problems quickly.

Oral communication can take many forms:

- Face-to-face meetings
- Telephone conversations
- Video conferencing

Written communication is normally achieved by emails and internal messaging to team members, external letters and regular project reports to customers.

Communication methods - meetings

In order to ensure that meetings are effective and successful, preparation is vital. The following needs to be carried out:

- Clarify the purpose of the meeting
- Establish who needs to attend
- Determine the agenda in advance and distribute to those attending
- Make suitable arrangements for the location and time in advance
- Facilitate discussion - often by having a chairman
- Summarise and create action points
- Publish results/minutes

Roles of team members within meetings

In order for a group to be effective, a number of roles need to be established:

Facilitator - He or she should take responsibility for setting the agenda for discussion and ensuring that the meeting achieves its objectives

Chairperson - His or her main responsibility is to ensure that the agenda for the meeting is followed and that all the members have the ability to participate equally and that all views are listened to

Secretary - His or her responsibility is to take minutes of the meeting and provide a hard/electronic copy of these minutes to the team member after the meeting

Protagonist/Antagonist - A positive supporter/negative detractor of the issues under discussion - the aim being to get a balanced view to enable broad open discussion

Common problems with meetings	Ways to overcome the problems
Participants talk over the chairperson and don't allow them to talk	Ensure there are restrictions on who can talk in the meetings, setting out when and how long participants can talk for - alternatively, depending on the meeting type, don't allow interruptions.
No decisions made at the close of the meeting	The chairperson will have to try to reach a compromise to ensure that those at the meeting can reach some sort of agreement, or reschedule with action points so that the meeting can be reconvened in the near future with a possibility of agreement.
Scope creep	This is when the focus of the meeting is lost and participants start talking about other issues. The chairperson should take control and refer everyone back to the agenda.

8. Negotiation

So you think you deserve that raise, do you? That's all well and good, but unfortunately the decision isn't up to you! You'll have to sit down with the management team and come to an agreement. This is a negotiation! Organisations must negotiate both within the organisation (e.g. between groups or individuals) and outside the organisation (e.g. with suppliers), and so it's vital that staff can negotiate effectively.

Characteristics of negotiations

- **Conflict of interest** between two or more parties, e.g. you want a pay rise, your employer would prefer to keep their costs down.
- Either **no established set of rules for resolving the conflict** or the parties prefer to work outside of an established set of rules to establish a solution.

- Some organisations, particularly in the public sector, have a set pay scale. It may well be that there is no room for negotiation on pay as a result.
- **The parties prefer to search for an agreement** rather than to openly fight, to have one side capitulate to break off contact permanently or to take their dispute to a higher authority.

Stages of negotiations

Successful negotiation usually involves the following key stages. We will use an example of a negotiation with a supplier to purchase some computers:

Preparation - knowing the background to the problem and collecting information (e.g. about the organisation's needs (how many computers, of what type and when they will be needed) and costs of competitors (e.g. market prices, quotes from other suppliers)).

Opening phase - both sides presenting their starting points (e.g. the company will state their needs (e.g. to buy 100 computers of a particular speed) and supplier what they will do and how much it will cost - say £30,000).

Bargaining phase - the aim is to narrow the gap between the initial positions (e.g. discussing what is included in the contract and how much will be paid).

“£30,000 is too much, how about £20,000.” “Sorry we can't do that but how about £30,000 with a free 5 year warranty included?”

Closing phase - agreement is reached (over contract details and price). “OK, £28,000 with a free 5 year warranty.” “Agreed. I'll get the contracts drawn up.”

Successful negotiation

In 2013 the Walt Disney Company acquired Lucasfilm, the home of the Star Wars brand for \$4.05 billion. This is a great example of successful negotiation for a number of reasons.

Firstly, both sides made clear their **primary objectives from the start**. Lucas had begun to plan his retirement several years previously and was looking to pass on his legacy whilst Disney were hoping to become a leader in the animation and superhero film market. **Both parties were prepared to settle** in what seemed a fair deal.

Both Disney and Lucas attended **face-to-face talks**, in order to attain their goals and there was an **element of trust** between the two parties. They both ended up with what they wanted from these negotiations having effectively balanced wins and losses.

Types of negotiations

The 'win-win' approach

This approach has been shown in the Disney example. The characteristics are that **both sides have the potential to make gains**. The agreement will result in both parties profiting from the deal.

The 'win-lose' approach

These negotiations involve the **parties seeking maximum gains and therefore maximum losses to the other**. In 2012, Apple filed a lawsuit against Samsung on copyright grounds. Negotiations took place, but neither company were willing to compromise, and they subsequently went to trial. Apple ultimately won \$409 million - maximum gain for them and maximum loss for Samsung - their bitter rivals.

Whilst win-win situations are usually seen as favourable, it does not always make business sense, as in the Apple case. If you have the necessary leverage to gain more, then it may be the best option, particularly when it is at the expense of a rival!

9. Mentoring

“Tell me and I forget, teach me and I may remember, involve me and I learn.” Thus spake Benjamin Franklin on the subject of mentoring. A **mentor is someone who advises and supports another individual (the mentee) to facilitate both their current work and the individual’s development**. Often a mentor is an **experienced member of staff** who can use their experience to support and guide their mentee. Typically they are **not their line manager**, as this allows the mentee to be more open and also allows the mentoring to continue as the mentee moves into different roles in the organisation.

Benefits of mentoring include:

- Improved **motivation** among employees
- **Lower** levels of **staff turnover**
- Faster **career progress**
- Fewer, and more quickly **resolved disputes**

The mentoring process

The steps in the mentoring process are:

Building the relationship - Getting to know the mentee and building trust between them and the mentor

Negotiating agreements - Defining the mentor and mentee's roles, the timing and regularity of meetings, the basis of the relationship they will have, limitations that may exist

Developing the mentee - Providing guidance, support, counselling, coaching, and a sounding board, resourcing and using influence to help the individual

Ending the relationship - Evaluate the progress made against the mentee's goals and the effectiveness of the mentoring and agree on how the mentee will continue in their development in the future, outside the mentoring relationship

Example

Nicole decides Clare should have some mentoring. She realises she can't do that herself and so asks Aradhana if she would do it. If successful, not only will she help Clare perform and progress, but she can learn some valuable people skills in the process. Aradhana takes Clare for a coffee so that they can get to know each other better and build the relationship.

Although Aradhana will not be working directly with Clare in the events office, they arrange to meet once a week. This is the negotiation stage.

Aradhana and Clare meet once a week so that Aradhana can offer advice to Clare, help her set some personal goals and to answer any questions. Here Aradhana is developing the mentee.

After three months, Aradhana feels that Clare has got all she can from their mentor/mentee relationship. She is asking fewer questions and seems to be getting along better in her group. Aradhana discusses the progress with Nicole, who has also noticed the difference in Clare. Clare is also happy to bring the relationship to a close. They agree a plan going forward and end the mentor relationship.

10. Influence and persuasion

Influence

Being able to influence people is a very valuable skill to have. Imagine if John had a brilliant idea for a product that could revolutionise the mobile phone his company manufactures. He takes the idea straight to his manager, confident that he will see the potential in the idea and give John a well deserved promotion. Unfortunately, John lacks the ability to influence the manager's decision. Subsequently, the company misses out on an incalculable amount of money and John fails to get the promotion.

If John had known about **Cialdini's six principles of Influence** the outcome might have been different. These are six ways in which people are influenced, sometimes without even realising they are being influenced at all. His principles are:

1. **Reciprocity** - People feel **indebted to those who do them a favour or give them a gift**. Perhaps John should have taken on some of the workload of his manager for the few weeks before proposing his idea or simply given him an unexpected gift a week or so before.
2. **Commitment and Consistency** - We all desire consistency. If we say we will do something, usually we will, so if you are able to get someone to commit to something, the chances are they will make an effort to see it through. If John could get a small commitment from his manager, so for example, that part of the idea is good, then it's more likely that the manager will later go ahead and take the idea on.
3. **Social Proof** - **People are more likely to follow those around them** than act alone. We might choose to go to a film because 'everyone else has seen it' for example. John could test out his idea with lots of other people and then present it together with a group who all think it's a good idea. The manager is then far less likely to reject it.
4. **Liking** - A very simple concept. **You are more likely to say 'yes' to someone you like**. Perhaps John's relationship with his manager was not great and he would have been better off improving this first before proposing the idea.
5. **Authority** - **We tend to trust and respect people with authority and are more likely to be influenced by them**. For instance, someone might go to a film because a film critic said it was good. Unfortunately John doesn't have much authority and that could be one reason he is not successful.
6. **Scarcity** - This principle relates to supply and demand. **The less there is of something, the more desirable it becomes**. If you hear there are just 2 two tickets left for a film you are far more likely to snap them up for fear of missing out, even if you weren't completely sure you wanted to go. If John could have pitched his idea, such that it was a short time opportunity that the competitors would get very soon then the manager would have been more likely to go with the idea.

Persuasion

The six principles of influence also apply to persuasion. Persuasion differs influence in that **persuasion is direct and intentional**. To persuade someone is to actively alter a person or group's attitude towards something or someone. Influencing someone can be much more discrete and can be indirect and unintentional.

For instance if you were to walk past someone eating a pizza at a restaurant and it smelt amazing you might decide to have a pizza too - your decision was probably influenced by that person. If whilst walking past the restaurant the waiter had

stopped you and offered you a deal on a pizza and a good table, this would be an example of persuasion.



CIMA Management Case Study

Chapter 7

Project Management

1. Project management

When the English Football Association decided to rebuild Wembley stadium it agreed a construction contract with Australian firm Multiplex for £445m. Demolition began in 2002. Five years later, one year later than planned, the stadium finally opened. Not only did Multiplex fail to make a profit on the contract, they actually spent what was estimated to be £628m on building the stadium, recording a £183m loss for them! The main problem lay with the 'Wembley Arch', a load-bearing arch that hangs over the whole stadium. The design was innovative and new and it was not as easy to build as originally thought. Combined with the fact that Multiplex were the lowest bidder in a tender process and had underestimated their costs, you end up with a project management disaster that had huge business implications for Multiplex and which was a serious embarrassment for the English Football Association.

This example is, of course, just one of many examples of projects gone wrong. Initial estimates of the cost of the Scottish Parliament building were no more than £40m. When it was finally completed in 2004, it had cost a whopping £414m. The Canadian Firearms Registry had an estimated initial cost of CAN\$2m, and ended up costing CAN\$946m! The person who made that original estimate was no doubt in the firing line. The Sydney Opera house was expected to cost AUS\$7m and ended up costing AUS\$102m, while the UK's Humber Bridge was expected to take 5 years and cost £28m and actually took 9 years and cost £98m.

As you can see **projects can easily go wrong**, and when they do the consequences can be huge. **In some organisations**, such as consultants or builders, **the majority of their work is project based** and in these companies **good project management becomes of vital importance**.

Even in businesses whose end product does not involve projects, there will be a whole range of internal projects going on whenever new one-off tasks are created. Some examples could include: a new IT project, moving offices, a culture change programme, changing the production system, building a new factory and developing a new product. **Project management is, therefore, vital to most organisations.**

In this and subsequent chapters, we will examine what a project is and how best to manage projects to avoid project failures and ensure they get completed on-time and on-budget.

What is a project?

The word "project" is probably a word many of you are familiar with and I am sure you all have your own idea of what it means, but what does it really mean from a business perspective?

The Association of Project Managers defines a project as **"A human activity that achieves a clear objective against a time-scale."**

The term "project" is often used to describe something outside of normal day-to-day repetitive work. It is often characterised by:

- **A one-off event**, e.g. build a conservatory
- **Clear objective**, e.g. build a brick conservatory with 10 windows and a slate roof
- **Set time scale**, e.g. finish the conservatory within 3 months
- **Project manager organising and controlling the project**, e.g. Bob the home owner will manage this project
- **Project team charged with executing the project**, e.g. Bob hires a construction company to deliver the project
- **Resources and budgets allocated**, e.g. £10,000 limit agreed and contract signed
- **An end-customer**, e.g. Bob the home owner

Example

You are a senior manager working for a company that manufactures standard beds on a large scale. One day a wealthy client asks you to create a very extravagant bed that comes with all kinds of special features and fits perfectly into their bedroom. You are told that you are to lead the construction of this and your co-workers, Paula and Abdul, will assist. They need the bed by Christmas and are willing to pay £50,000 which means the bed must be made for less than £40,000 to achieve the company's 20% margin.

Is this a project? Let's dissect it using the characteristics above:

- **One off event?** - Yes, it is a bespoke order from one particular client and not part of your regular mass production operations.
- **Clear objective?** - Yes, the client has told you exactly what they want you to provide.
- **Set time scale?** - Yes, the bed needs to be completed and delivered by Christmas.
- **Project manager?** - You have been tasked with creating this bed and so YOU are the project manager.
- **Project team?** - Paula and Abdul will assist you, they are your team.

- **Resources and budget?** - You know you need to make it for less than £40,000, so that is your budget.
- **End user?** - The client is the end user, so the bed must be made around their specifications.

As you can see, constructing this bed has all the characteristics of a project! Indeed, it is a project.

What is project management?

A formal definition of project management is:

"The **integration of all aspects of a project**, ensuring that the proper **knowledge and resources** are available when and where needed, and above all to ensure that the expected **outcome** is produced in a **timely, cost-effective** manner" (CIMA: Official Terminology).

Project management **differs from line management which is the management of day-to-day operations**, for example a supervisor managing a production line or a sales manager managing their sales team. Line managers have the same area of responsibility day in, day out and manage the same team doing the same basic tasks, often using the same standard processes, whereas project teams have a one-off objective and operate over a set time period.

Project management methodologies

When planning a project, the project manager needs to consider how they want to go about delivering the completed project. If they want to follow a disciplined and systematic approach to their project management, the project manager can follow one of the project management methodologies such as Prince 2.

There are **a number of different standardised methodologies that a project manager can use to help plan a project and ensure its successful completion**. These methodologies are guides for how projects can be carried out, and they include the processes, methods and techniques that a project manager can utilise.

The methodologies used can vary for many reasons; for instance, due to the country where the project is taking place, the type of project being undertaken, or the individual characteristics of the organisation. There are also advantages and disadvantages of using a project management methodology:

Advantages of using a project management methodology	Disadvantages of using a project management methodology
The set processes of the methodology can become familiar to the project team, so the team can anticipate parts of the process and compare them to other projects.	The methodology must be carefully chosen as no single methodology suits all projects or organisations.
Gives a systematic guide to managing the project stage-by-stage.	The methodology may need customising to fit a particular project, which can be difficult to do effectively.
Projects can be assessed according to the methodology, making any deviations from the plan or methodology easy to detect.	Formal, standardised project management methodologies may be too bureaucratic or too complicated and detailed for smaller projects.
The methodology can be improved and adapted over time according to the individual project team's needs in order to create a best practice approach.	If the wrong methodology is selected and it is not suitable, it can make the project management less effective.
	Some parts of a chosen methodology may not be suitable or necessary for the project.

Two such project management methodologies are the PMBoK (Project Management Body of Knowledge) which we'll discuss below and the PRINCE2 methodologies. PRINCE2 is discussed in depth in another chapter of this text.

Nine areas of project management

There are nine key areas of project management outlined in the Project Management Body of Knowledge (PMBoK) as outlined by the Project Management Institute (PMI).

Let's take a look at each of these, and where there was a relevance of this to the Wembley Stadium delay we will apply them to this project.



Scope

Scope covers the **content and objectives of the project** - what is included, and not included, and what is to be achieved?

Clearly defining, planning and controlling the scope and setting objectives at the start of the project ensures it is **clear from the start what the project boundaries and objectives are**, and as such this should help focus planning and project control within overall budgets.

Multiplex claimed that they were tasked with dealing with over 600 changes in scope during the Wembley Stadium build and this was one of the causes of the overrun and delays.

Time

It is important to **define key activities and their duration** and **sequence them** appropriately. Developing time schedules such as Gantt Charts and Critical Path Analysis can help provide a clear plan and support time-based control.

Multiplex, of course, planned each task in an overall plan. The combination of a changing scope and the project timings being underestimated resulted in a total delay of a year in the build.

Cost

At the start of the project it is vital that a **clear budget** is developed that is consistent with the programme plans and is achievable. **Cost monitoring** and cost control should then be applied throughout the project, including the use of **variance analysis**, to ensure costs remain within expectations.

The project costings were Multiplex's biggest mistake. They underestimated the costs of building the Wembley arch and this was a major reason for their £183m loss.

Quality

Developing a **quality plan** ensures that key elements of quality are retained throughout. Quality needs to be balanced against cost as the higher the quality the higher the cost. **Ongoing review** of quality as the production continues helps to control quality.

Multiplex had quality targets agreed with the English FA as part of their contract. There has been little debate that they hit these targets and delivered a world-class football stadium.

Resource management

Ongoing management of all key resources including **management of staff, inventories, machinery, IT and buildings**, ensures that the optimum use of all resources is made at all times. Tools such as a resource histogram can be used to plan resources to ensure they are properly managed.

One problem faced by Multiplex was a constructor strike after 200 workers were dismissed in a dispute over working hours and pay. In another incident, the UK newspaper The Sun claimed many of the workers were using drugs and alcohol on site, a claim denied by Multiplex.

Procurement

Effective procurement includes **selecting the right suppliers, negotiating, contracting and monitoring supplier performance** throughout the project. Balancing elements of cost and quality with contractors can help keep the budget under control while achieving the required project quality.

One cause of delay in the Wembley project was that the wrong type of concrete was used in the foundations, work that had to be re-done.

Integration

Integration relates to the bringing together of everything in the project to be **coordinated, well run and well managed**. This includes the use of project plans to manage the project, and managing change and uncertainty throughout.

When the project came in late, a range of changes had to be made: the FA Cup final was moved to Cardiff while concerts by Take That and Bon Jovi were moved to Milton Keynes.

Communication

Communication **must be carried out between all the different stakeholders** involved in the project to ensure everyone is fully informed, **to avoid misunderstandings** and **to ensure good coordination**.

In particular, the project scope must be laid down by the project board/customer and communicated to the project manager and team, and progress reports passed upwards to keep the board informed and to enable them to take relevant action. The project team must be regularly informed of their tasks and project updates to keep the day to day work on track, and the team coordinated through good communication with suppliers and contractors.

There was criticism of a lack of communication between the FA and Multiplex throughout the Wembley project causing misunderstandings between the two parties. As delays occurred, their relationship worsened.

Risk

Identifying and quantifying risks and planning strategies on how risks will be reduced and managed throughout the project ensures that key risks are controlled and the project is well prepared for most eventualities.

When Multiplex first announced the expected losses on the stadium they also implemented a range of 'new risk control measures' to help mitigate the losses and rescue the project. As we can see, risk is not just something that should be planned for at the start, but should be monitored throughout.

Example

Let's say you're a freelance web designer and a client approaches you to build his new business website. You now have a project and even though you're a one-person team, you still have a project that you must manage, with one client and two stakeholders. So you must first agree the scope of the project: a website with a blue colour scheme, containing a home page, three service pages, a blog and a contact page, with stock images, using Helvetica font. Quality has been met when the items listed in the scope are present.

There is a high risk of the client trying to add to the scope mid-project so to manage this risk you agree that anything extra to this list is outside the project scope and can be added later, once the project is completed and paid for. Now you cost your project: assuming you charge £50/hour you estimate your time needed as 10 hours: your labour cost is £500. You double this to allow for your business overheads. Next you add the cost of procurement of images at £300. You don't need any further resources, so the cost now runs at £1300. You add your profit margin of, say, 60%. Now you have your price of £2,080.

Now you agree the time frame for completion, so if it will take you 10 working hours undisturbed, you double this to allow for interruptions such as phone calls

and so on, giving you a 20-hour, or three-day deadline. Now you can communicate to your client: you can communicate the price, the time-frame for completion and payment, the time-frame in which the client must approve or reject the work and the time-frame in which the client must provide his elements. Lastly, you agree when you will come together to review and control the project.

Now the client has agreed and bought into the project, you can begin. At the 3-day mark you can present your work and the client can review it against the scope. Has everything been done? That's when the client will say he would like it in green instead. If you've done your job as project manager, this eventuality is already covered. Yes, you foresaw this risk and your contract states the request is out of scope, so after the client pays, you can quote for the colour change!

As you can see, even small projects require all the project management elements to be effectively managed if the project is to succeed, as it did in this case.

Programme management

Programme Management relates to **the management of a portfolio of linked projects**. It is an overarching function, in which overall goals for the programme are clarified, and the projects which will drive the programme decided upon. These are then prioritised, planned, and coordinated to ensure that, not only do the individual projects achieve their objectives, but that the combination of projects achieve the outcome required for the organisation/programme as a whole.

Example

The Olympics contains a wide range of individual projects in the overall programme. These projects will include construction of a range of venues, IT systems, staff training, planning each event, and so on. These all come together into the overall programme designed to produce a successful Olympics for the competitors and spectators.

Causes of project failure

Project failure does not just mean the absolute failure of the entire project, meaning it needs to be scrapped. Project failure can refer to **any failing against the scope of the project**, i.e. failing to meet the agreed budget for the project, because the costs have exceeded predictions.

While there are a huge number of specific reasons why a project might experience failure, even when a suitable project management methodology has been used, there are certain common causes. These include:

- **Poor initial plan** - If the plan for the project was inadequate in any way, it may well cause the project to fail in one way or another. These inadequacies include things like not complying precisely with the project sponsor's requirements/demands, not considering all costs and resources to be involved, not considering all relevant regulations, etc.

E.g. A project is set up to revamp the computer systems of a large corporation, part of the costing of the plan includes an estimate of the impact on the company's revenue due to downtime. When the project is completed, it becomes apparent that this estimate was significantly lower than the actual result. In this case the project may have been completed, but would be deemed to have failed as costs would have overrun.

- **The project plan is not followed** - If the specifications within the project are not followed, such that the needs of the end user are not met the project can be said to have failed.

E.g. If the IT project's plan specified a particular brand of software to be installed on all computers, but the project team decided that there was a cheaper alternative that was easier to install, but had worse functionality which affected the end users, then the project would have failed to deliver one of its objectives.

- **Lack of sufficient skills** - The project leadership and team need to hold the right set of skills to fulfil each of their individual roles. If one of them is ill-suited to the tasks assigned to them in the project plan, it can cause problems and failings in the project. The human component of the required project resources needs to be planned carefully to avoid this.

E.g. If the project team working on the IT systems update did not have enough members with a sufficient understanding of a specific programme used by the corporation, it would delay the project and might cause it to run over budget or exceed the deadline.

- **Inaccurate estimates** - The project plan is based on assumptions and estimates made at the start of the project. Estimates are often based on subjective assumptions at a particular time, meaning they are prone to imprecision and human error. If these estimates are misleading or inaccurate, the actual project will not follow the plan and may experience failure.

E.g. If the IT project plan's estimated time of completion, which the organisation is dependent on in order to continue operations, were to be delayed because the time allowed for individual tasks was inaccurately estimated, the project would have to be scrapped or entirely re-planned to meet the essential deadline.

- **Inadequate leadership** - Strong and stable leadership is essential to the success of a project. If there isn't a sufficiently qualified project manager in charge, the project team may fail to properly follow the project plan, or the project plan itself may be improperly generated.

E.g. If the IT project's manager did not have any understanding of IT, because they believed only the project team would need the skills to

understand the technical details, they would probably be unable to plan or act appropriately if problems arose.

- **Poor resource management** - Suitable utilisation of both material and human resources is vital to the success of a project. Poor usage of resources can cause a project to go over budget, or can lead to a skill shortage that stops the project in its tracks. When making resource management plans for the project, if the project manager has not considered all of the relevant factors, it can lead to problems. These considerations need to extend to things like the time required to transport materials, train new team members, or how much elements needed will actually cost.

E.g. In the IT project, despite spending weeks negotiating, the project manager was not able to acquire the necessary software for the anticipated costs, so the project was both behind schedule and over budget. If the project manager had decided to accept the increased cost, rather than waste weeks negotiating, they wouldn't need to spend more on speeding up the project to reduce the delay either.

- **Instability in the project team** - If there is conflict within the project team, or if members of the team leave, it can cause issues for the project. If project team members leave, they may take with them vital skills or knowledge about the project, making it difficult (or sometimes impossible) for the remaining team to make up the shortfall. And conflict amongst the project team can be disruptive to the project and can cause it to fail.

E.g. One of the IT project team was a specialist who was in charge of backing up the computer system onto a secure server. However, after that specialist left, the new one that was brought in did not know the system their predecessor used, delaying the project until back up could be accessed.

2. Stakeholders

We all know that organisations as a whole have many different stakeholders whose best interests must be addressed. Well, just like companies, specific **projects have their own specific stakeholders too.**

Let's consider for a moment the stakeholders for the Wembley Stadium project:

- The Football Association (the customer who wanted an excellent stadium delivered on budget and on time)
- The government (with an interest in supporting the English game and having a national stadium that showed the best to the world and who also provided £120m in funding)

- Multiplex (the contractor who wanted to complete the project well and for a profit)
- The suppliers (who wanted supply contracts and to be paid)
- The employees (who wanted safe working conditions and good pay)
- Football supporters and other end customers (who wanted a great stadium to view football matches and other events)
- The media (who took a very strong interest in the project as it started to fail).

As you can see, the stakeholder group was varied and meeting all group's needs a real challenge. Hence the importance of clear stakeholder management in this and any other project.

Gido and Clements hierarchy of project stakeholders

In 1999, Gido and Clements identified a hierarchy for decision-making amongst project stakeholders. From highest position to the lowest, the hierarchy is as follows:

- **Project sponsor** - The **sponsor provides funding and resources and makes the investment decision**. They need to be satisfied that the project is viable in relation to the business, before they agree to initiate the project. They also appoint the project manager and approve the project plan, as well as monitoring the project's progress throughout.

E.g. For the Wembley Stadium project, the sponsors would be the Football Association and the Government, as both are providing funding and sharing the responsibility for the investment decisions.

- **Project owner** - An **individual, or group of people, tasked with overseeing the project**. The project manager will periodically report to the project board/owner who will assess progress and have authority delegated to them by the project sponsor to allow significant project changes.

E.g. In the case of Wembley Stadium, the project owner is also one of the project sponsors, the Football Association

- **Customers/client** - **The end-user, who will ultimately benefit from the project's completion**. These may be internal as well as external clients. Often this can be a group of people, so getting a consensus on what everyone wants can be challenging. Conflict can also arise between the client and the project owners or sponsors, since both parties will have their own ideas of what the project should entail and both aim to benefit as much as possible.

E.g. The football supporters and teams who will use the stadium.

- **Project manager** - The project manager **is responsible for the project and its success**. This role will be discussed in more detail further on.
- **Project team** - **The group that undertakes the project activities**. This could include, architects, lawyers, construction firms, plumbers, electricians, etc. Whilst, in large projects, you will usually find people or groups in all these roles, in smaller projects, some of these roles may not exist, or may be undertaken by the same person or group.

Similarly, in some projects, particularly if they are smaller, or based in simple organisations, multiple stakeholder roles may be held by individual groups or people. So, an individual in a small company might be the project manager, project sponsor and project leader. In the building of Wembley Stadium, the Football Association was both one of the project sponsors and the project leader (the leader is above the project manager in the project management hierarchy).

In this hierarchy, **project proposals, schedules, status reports and other reports are passed up** the chain of command. **Project briefs, allocations of funds, and terms of reference are passed down** the hierarchy.

Other common stakeholders

Other stakeholders, not explicitly included in the Gido and Clements hierarchy, include:

Project board/project steering committee - They **make the high-level decisions during the implementation of the project**. In larger organisations, the project board and project steering committee will most likely be separate groups. Where they are separate, the steering committee answers to the board, but they meet more frequently. The board might meet a few times a year, whereas the steering committee is likely to meet monthly. The board or steering committee should have senior representatives from different stakeholder groups of the project and should be chaired by the project owner.

Project champion - **This is an informal role. A champion is usually a senior member of staff who supports the project** and will facilitate its progress without necessarily having any formal involvement in the project itself. For example, in a large company, a lower-level manager might have an idea for a project, but may not have the necessary influence to get the project approved. That manager could approach a senior figure in the organisation to be the project's advocate to other high-level figures who would be in a position to approve the project.

Suppliers - Suppliers provide the materials, assets and services needed in the project.

Stakeholder communication and relationships

Communication

Communication is vital to successful project management since it achieves buy-in and avoids misunderstandings which can cost time. Imagine for a moment the sheer complexity of coordinating the 3,500 workers who worked on building Wembley stadium so that they all knew what was happening when, and what their role needed to be. Combine that with all the other stakeholders and you can see how important stakeholder communication is.

Relationship management

As discussed in the chapter dealing with general stakeholders, managing stakeholder relationships and retaining their support is vital. This applies in the same way for project management in order to ensure an efficient and successful project.

In order to do this, **the roles of the different stakeholders need to be defined early on**, as it is not always necessarily obvious who is who. For instance, investors behind a mutual fund may be the ones actually paying for the project to go ahead, but, in actual fact, the investments' director at the fund is the sponsor with the decision-making power.

The most common cause for **conflict amongst stakeholders is due to conflicting objectives between them**. They all have an interest in the project, often financial, so it is important to them that the project is carried out the way they want it to be done.

There are, however, many other reasons why conflicts may occur, for example:

- **Personal grievances or differences**
- **Lack of clear or established hierarchy** between stakeholders
- **Lack of clear communication** between stakeholders

Others are covered in the sections on conflict elsewhere in this study text, which describe common reasons for conflicts within and between groups. Whatever the reason for the conflict, **the project manager needs to be prepared, and able, to deal with these stakeholder conflicts** when they occur. There are several approaches which they could take, including:

- **Negotiation** - Where the dispute is discussed between the parties and they aim to come to a mutually acceptable solution. This may be supported by an independent person known as a mediator.
- **Satisficing** - Coined by Cyert and March, this is a mix of the terms sacrificing and satisfying, where both sides of the conflict have to compromise to find the fairest and least objectionable solution for each side.

- **Sequential action** - Taking turns focusing on the needs of different stakeholder groups.

And again, more methods for resolving are discussed in more depth in the sections about conflict elsewhere in the study text.

Meetings

One method of stakeholder communication, in particular, worth noting is through meetings. These **meetings can be between the project manager and their team** to ensure all members know what is happening on the project, progress review meetings with the project team and the client or project owner, or between others.

These meetings, whether formal meetings to provide updates to senior stakeholders or informal catchups with team members, are **vital for keeping everyone informed and improving stakeholder relations**. The **meetings can also be held to address specific issues**, such as emerging risks or threats that the project faces.

The role of management accountants in project management

Certified management accountants can be involved in projects in various ways, and can be part of different stakeholder groups related to the project.

In particular, **the skills possessed by certified management accountants make them good candidates to undertake the project manager role**. These skills include:

- Managerial and leadership experience and knowledge
- Negotiation skills for dealing with suppliers
- Mediation skills for handling relationships between project team members
- Problem-solving skills that can help them to manage the risks that will almost certainly arise during the course of the project

Management accountants, as part of the finance department, are also often called upon to **provide financial information for the feasibility assessment during the project planning**. This financial knowledge **can also be applied during the rest of the planning and execution of the project, where financial information or budgeting is needed**.

Management accountants can also occupy senior positions, which may mean they are in charge of parts of the project and will need to make appropriate decisions for it. For instance, **senior members of the finance function at organisations can be put in charge of funding projects, making them the project sponsor** in effect as they are the ones making the investment decisions for the company, which

would also be considered the project sponsor as it is providing the funding for the project.

3. Project manager

The project manager is a vital role in any project. It is the project manager's responsibility to look after the nine key areas of project management and ensure the project is completed on time, within budget and to the required standard of quality.

Skills required of the project manager

To effectively manage the project, the project manager needs a variety of skills and knowledge.

These can be related to each of the **nine project areas**, as they need skills and knowledge in each to manage them effectively.

Project management areas	Skills required
Integration	<p>Change management skills:</p> <ul style="list-style-type: none"> • Overcoming resistance to change • Change management tools and techniques (e.g. Lewin)
Scope	<p>Project area knowledge (e.g. an IT project needs someone with some good understanding of IT).</p>

Project management areas	Skills required
Resource management	<p>Leadership skills:</p> <ul style="list-style-type: none"> • Obtaining results through personal direction and influence • Team participation and consultation • Fostering team spirit and motivation • Recognising staff achievement • Conflict resolution <p>Delegation skills:</p> <ul style="list-style-type: none"> • Communicating overall and individual objectives • Passing down responsibility for tasks • Encouraging individual learning
Time	<p>Use of time-planning models and software</p> <p>Assertiveness to keep staff and suppliers focused on key targets</p>
Cost	<p>Budgeting and finance expertise</p>
Quality	<p>Planning and monitoring skills</p> <p>Knowledge of quality techniques such as Total Quality Management, Quality circles and Six Sigma.</p>
Communication	<p>Communication skills:</p> <ul style="list-style-type: none"> • Verbal/people • Report writing • Running meetings

Project management areas	Skills required
Procurement	<p>Negotiation skills:</p> <ul style="list-style-type: none"> • Knowing the desired outcome (quality and price) • Understanding leverage points • Seeing the buyer's perspective • Knowing when it's best to walk away
Risk	<p>Problem-solving skills:</p> <ul style="list-style-type: none"> • Analysing problems • Brainstorming solutions • Decision-making

Performance measurement and control

One of the most important roles of a project manager is to **monitor and control the project's performance and report back on it to the relevant stakeholders**, such as the project owner and the project team.

Performance management can be split into two considerations for a project manager:

- **Performance management - Considers the project's key performance indicators (KPIs)**, which are based various measures depending on the nature of the project. For instance, project KPIs might be chosen to ensure adherence to the project plan and schedule, costs stay as specified in the budget, etc.

E.g. The project is a limited-run line of bespoke clothing to be produced for a theatre production, and the project manager is measuring and working to ensure that the number of clothing items produced meets the client's requirements and that this is done on-budget. In this case, the KPIs would be the amount spent compared with the budget, and the number of completed clothing items produced to the specified quality standards.

During the project, the project manager might also monitor progress and, if production is falling behind schedule, find ways to catch up again or contact the relevant stakeholders to explain the delay.

- **Conformance management** - Ensures that the **output of the project will meet the requirements** or specifications of the project sponsor and project customer, or that it is within an acceptable range of tolerance.

E.g. The clothes produced will be allowed a certain number of small defects, but any significant problems with the fabric or the stitching will be rejected by the client.

Project control reporting

In terms of performance management, there are a number of types of reports that a project manager might submit on a regular basis. The point of these reports is to inform relevant stakeholders about the planning and progress of the project. The types of report include:

- **Executive summary** - At the planning stage of the project, provides an overview of the project, summarising all the sections of the project plan. The executive summary is a useful report for any stakeholder who needs a quick overview of the project, like the project sponsor or the director of the organisation.
- **Project status report** - Details how the project has progressed since it started until the status report was written. It often compares the project's progress to the original plan, the issues encountered and how they were dealt with, and what is coming next.
- **Risk report** - Also known as the risk register, the risks facing the project should be summarised. This should be updated if new risks emerge, or if any risks become more or less likely to occur.
- **Exception report** - If things are running according to the project plan, an exception report can be filed instead of a full project status report, detailing only the specific ways in which the project has deviated from the plan.

The specific stakeholders who will be involved in the review of these reports will vary, depending on the project, but they will generally be submitted by the project manager to someone higher in the stakeholder hierarchy. The reports are most often submitted to the project board, so that they are informed of any updates and can act on any relevant or significant changes that may have occurred.

Reports may also be viewed by subordinates where necessary, e.g. a project team reading the project status report to see how the project is progressing.

4. Project team

In 1910, Robert Falcon Scott's ship Terra Nova set off from Great Britain for Antarctica. The five-man expedition was partly funded by the Royal Geographic Society which had given Scott specific scientific objectives. But Scott also wanted to reach the South Pole and claim it for the British Empire! Indeed, he seemed more focused on this goal than on the scientific needs of his stakeholders.

In preparation, he had sent a dog expert to Siberia to acquire the sled dogs needed. He also asked the dog expert to purchase some Manchurian ponies while he was there. Unfortunately for all concerned, the dog expert was not also a pony expert and the ponies he bought were ill-suited to the Antarctic conditions. Many of them died and when one of his team advised Scott to kill ponies for food, Scott refused.

Well, perhaps you already know how this expedition ended. Scott reached the pole, but a Norwegian expedition had reached it before him using dogs, which were better suited than ponies. Having failed in his goal to claim the pole, Scott turned back but the team all died on the way home, through a mixture of exhaustion, starvation and cold. Scott, as project manager, had a personal goal that was at odds with the needs of his stakeholders; he selected inexperienced team members for mission-critical roles, used inappropriate resources and ignored the advice of competent team members that could have saved the mission.

Before a project can begin, an effective project team must be mobilised. But what exactly does a project team do and what makes an effective team? The project team is **responsible for undertaking project activities**.

To be successful the project team must:

- **Work as a team** - E.g. individual and overall goals should be aligned
- **Be well co-ordinated and controlled** - E.g. have an effective project manager
- **Be motivated**
- **Have the right skill mix** - e.g. the right expertise deployed in the right directions
- **Have the right mix of personalities** - E.g. Belbin's team roles could be used (see a later chapter)
- **Be effectively managed through the stages in group development** - E.g. the Tuckman model: forming, storming, norming, performing
- **Be given clear objectives**
- **Have the appropriate resources** - E.g. budget, staff, equipment

- **Have clear roles and responsibilities defined to each team member**

Successful group and team working are discussed in more detail in the chapter on the management of groups.

Project team structure

The project team must have **a clear internal structure**. It should have **clear leadership** (usually from the project manager) and **delegated responsibilities** to team members for specific parts of the project. The larger the team, the larger the hierarchy is likely to be.

For example, in a small home-improvement project, the builder, the carpenter and the decorator will likely report directly to the customer as project manager. In a large project, like building Wembley stadium with 3,500 people working on it, the structure will have a range of different divisions each with their own responsibilities, and a clear project hierarchy so everyone has a known supervisor to whom they report.

Organisational structure and the link to project success

The **likelihood of success of a project may depend on the organisational structure**.

In **divisional or functional organisations**, where project working is less common, the **culture may be more resistant** to project-based working and project members less experienced at working in project teams and in a project environment.

For example, a parent company with three country divisions might launch a company-wide project. Each country division may have had little or nothing to do with its counterparts before and they may even be in competition with each other for resources or roles, so there may be resistance to collaboration.

Project members will also have responsibility to their department as well as the project, and may have to spend time on departmental duties (e.g. departmental meetings) while on the project.

Matrix organisations have a structure and internal systems that naturally allow for new projects to start up. As a consequence, **projects in matrix organisations may be more successful**:

- Project members are likely to be team players since this will be considered part of the selection process
- The project management process will be familiar to everyone
- Obtaining resources will be a straightforward process built into everyday operating procedures



CIMA Management Case Study

Section B - F2

Chapter 8

Long-term Finance

1. Long term finance

Introduction

Most businesses are going to aim to grow over the course of their existence and there are a number of ways to do this. **You can grow organically** by increasing your customer base and sales through marketing and developing new products. **Equally, you can acquire other businesses to quickly expand** the range of things that your business can do. But, **whatever method you choose, your business is going to need money to achieve this growth.**

For instance, let's say you are exclusively a red wine maker and, in order to grow, you decide to start producing white wine too. If you go by the organic growth route, then this new kind of product is going to need research and development and potentially new staff or training of existing staff. This all comes at a price.

So does acquiring another company. You may be a wine-maker, but you have to buy all your wine bottles from the glass-blower next door. But, rather than having to buy bottles every week, you decide that you want to just buy the glass-blowing business to save time and money in the long-term. That's going to be expensive and you won't necessarily have the cash available to afford these things right away.

What can you do to raise funds for long-term projects? What can the strapped-for-cash wine-maker do to develop her business in the long-term? These are the questions we want to answer in the following chapter on **long-term finance**.

Sources of finance

We have established that our red wine maker, let's call her Wendy, wants to grow her business, but she lacks the immediate cash to buy the vineyard next door, or to start producing white wine on her own land. Let's take a look at her options for raising money for these projects.

Capital markets

A capital market, also known as a **stock market**, or **stock exchange**, is a way of **looking at the capital of an entity as a purchasable commodity**. Think of it as a giant supermarket where on the shelves of each aisle are small portions of the capital of any business who wants to sell there. **Each small portion of capital is a share and when you purchase it** from the supermarket, **you then own a small portion of that business.**

Therefore, one option for Wendy to raise money is to sell small parts of the company to investors. She could sell 1 share for £10, where 1 share equates to 0.0001% of the business. This would mean that 100% of the business would be worth £100,000.

But, if she sells 100% of her business, then she is no longer an owner and so it wouldn't be her business any more! So, if Wendy takes her business to a capital market, then in order to retain control, she will need to maintain at least 51% of the company.

In this case, Wendy could raise £49,000 by selling shares of her business to investors. While she retains control of the business by retaining 51% of the shares, Wendy will now have to consider the needs of other shareholders as part of her duties as a director of the business.

Roles of capital markets

A capital market **provides a business with the opportunity to raise both debt and equity finance**. Like any kind of market, it is a way for a business to reach a large group of potential investors in order to raise money. This is the **primary function** of capital markets.

However, a capital market has a **secondary function** which is to **provide investors with an opportunity to trade with one another**. Thus, it creates a scenario in which investors can make a lot of money by trading shares in a capital market, essentially creating a secondary business of their own (the business of buying and selling shares).

From Wendy's perspective, once she's sold her shares, the shareholders can buy and sell those shares to others on the market. If they do, she doesn't receive anything (even if they sell at a higher price than the shares were originally purchased for). There is an advantage to this secondary market for Wendy though, and that's that it gives her investors liquidity, the opportunity to sell their shares if they wish, and that means she is more likely to attract investors.

Bank borrowings

If Wendy doesn't want to give up ownership of her company, then she can try to raise money by borrowing from the bank. She could either take out a **short-term loan** or a **long-term loan**. The difference here is that **short-term refers to less than 12-months**, whilst **long-term refers to greater than 12-months**. Long-term loans are generally larger loans that are paid back (with interest) over a number of years.

Terminology

There is a lot of terminology regarding the status of companies, so let's take a moment now to make it clear.

Public vs. Private

A public company is one which **may sell shares to the public**. They are called public because any member of the public could potentially purchase a share in the company and thus the company is to some extent owned by the public.

A private company, on the other hand, **does not sell their shares to the public**. The company is completely owned by private investors, who were usually, but not necessarily, involved in the founding of the company.

Limited vs. Unlimited

The term 'limited' is an abbreviation of '**limited liability**'. This refers to the fact that **shareholders in a limited company will only risk the loss of their investment in the company**. In other words, if you invest £1,000 in a company and that company accrues huge debts, you will only lose your £1,000 investment and your personal assets will be safe.

Unlimited, on the other hand, does not provide this safety and so if you had invested your £1,000 in an unlimited company, you may also have to pay out of your own private funds to repay the debts of the company.

Listed vs. Unlisted

Listed refers to the fact that a company is listed (also 'quoted', or has been 'floated') **on a stock exchange**. This is an important distinction to 'public', because **a public company can sell shares without being listed on a stock exchange**. In this case, the company is **unlisted**.

Using these definitions, we can have the following combinations:

- **Listed Public Company** - A limited liability company that sells shares to the public through the use of a stock market.
- **Unlisted Public Company** - A limited liability company that sells shares to the public without the use of a stock market.
- **Private Limited Company** - A limited liability company that does not sell shares to the public. (Note that private companies cannot be listed).
- **Private Unlimited Company** - An unlimited liability company that does not sell shares to the public.

2. Equity finance

Introduction

An **equity investment refers to the buying and holding of shares on a stock market by individuals or firms**. There are two main ways in which an equity investment will make money for an investor:

- **Dividends** - This is a **distribution of company profits among shareholders**, often in the form of cash payment, or sometimes additional shares.

- **Capital gains** - This is the **increase in value of the share over time**. For instance, if you buy 100 shares at \$1 each and they increase in value to \$1.05, you will have made a capital gain of $100 \times \$0.05 = \5 .

Ordinary shares (or 'common stock')

Ordinary shares are the **most common type of share**. This is the kind of share most people think of when they talk about owning stock in a company and is essentially your basic, lowest-level share.

Features relevant to ordinary shares are:

Dividends

Dividends are only **payable at the discretion of the directors** and are **not compulsory**. This means that **the share could only make money for the investor by increasing in value**, but that depends on many other factors. Thus, there is no guarantee that a share will make the investor any money at all and it may in fact cost them money instead if the share price decreases!

Winding up/liquidation

Ordinary shares generally have the lowest priority in recovering their investment in the event of 'winding up' (this essentially means dissolving the company by selling assets and paying off debts, or 'going into liquidation'). This means the ordinary shareholders will be compensated last and potentially face losing their investment if the business has insufficient funds.

Voting rights

Ordinary shareholders are the owners of the company and receive **voting rights**, meaning that they can vote on issues raised at shareholder meetings. This can include electing directors and members of the board.

Risk

All of this means that **ordinary shares are the most risky** of all types of investment in a company. For this reason, investors require a high return on their investment in the company to cover the risks involved.

Preference shares (or preferred stock)

A preference share (or preferred stock), is a share that gives the holder a number of beneficial rights over holders of common shares.

Dividends

When a company declares a dividend, they are **obliged to pay preference shareholders before they pay those who own ordinary shares**. So, in this instance, preference shares are preferable to ordinary shares.

In addition to this, preference shares usually carry a **fixed dividend**. This means that if a company sells preference shares, then they will be obliged to declare and pay dividends to these shareholders at regular intervals (usually annually).

Winding up

In the event of a winding up or liquidation of the company, **preference shares have a higher priority** than ordinary shares, so an investor is more likely to recover their investment in this case. However, preference shares are subordinate to debt or bonds.

Voting rights

A preference share usually carries **no voting rights**, so preference shareholders are **unable to vote in shareholder meetings** on important issues regarding the company (such as electing directors).

Risk

This means that preference shares are generally a **lower risk** than ordinary shares, but will also be at a **higher cost** than ordinary shares. This means **returns are more likely**, but that they **will probably be smaller**.

Status

Preference shares function in a specific way that make them more like a bond (which is a kind of debt finance). Therefore, preference shares are considered to be a **hybrid instrument**, because they **have elements of both equity and debt**.

Summary of ordinary and preference shares

	Ordinary shares	Preference shares
Dividends	Not compulsory	Usually carry fixed dividend
Priority (winding-up)	Lowest priority	Higher priority (subordinate to debt)
Voting rights	Yes	No
Risk	High	Lower
Other	Basic/common stock	Convertible, hybrid instrument

Types of preference share

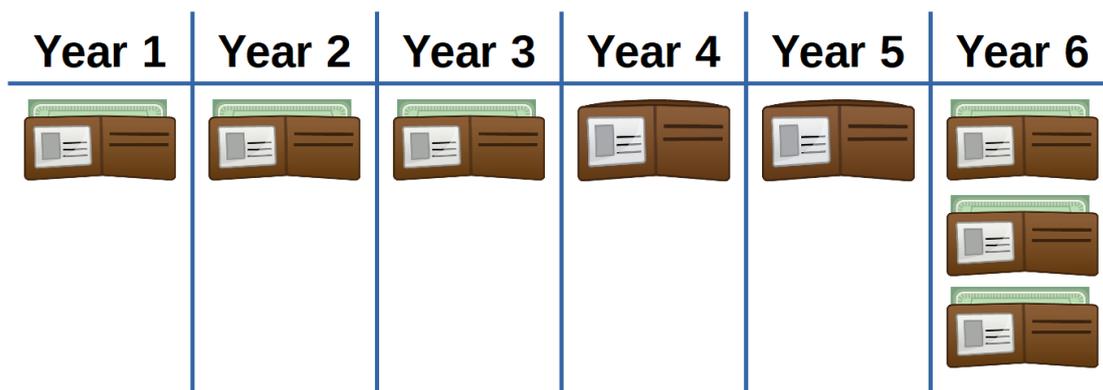
There are **four kinds** of preference share and they all work in slightly different ways.

Cumulative preference shares

The name 'cumulative' comes from the fact that **these shares receive a regular dividend** from the issuing company **and these payments must be paid no matter what**.

So, imagine you have cumulative preference shares in a company called Lemon and they pay a fixed dividend every year on their preference shares. In year 1, year 2 and year 3 you receive your dividend as usual. But, in year 4, Lemon declare a dividend, but it isn't paid (sometimes this does happen) and then, the same thing happens in year 5.

Now in year 6, things are back to normal and you receive the fixed dividend for that year. But, because you have cumulative preference shares, the company must pay you for year 4 and year 5 too and so in year 6 you receive dividends for years 4, 5 and 6.

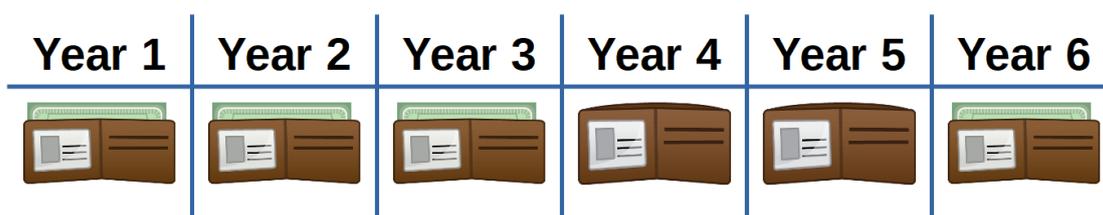


Thus, the name comes from the fact that your dividend payment accumulates each year, even if it isn't paid.

Non-cumulative preference shares

These shares are just like cumulative preference shares, except **the company doesn't have to pay you for previous periods when you didn't receive a dividend.**

So, using the example of Lemon, you would only receive a dividend in years 1, 2, 3 and 6 and nothing for years 4 and 5.



Participating preference shares

This type of preference share gives the holder the opportunity to **earn extra dividend income based on the company hitting certain targets.** Going back to our example, if you had participating preference shares in Lemon and they declare that a proportion of the profits of the new subsidiary Orange will be paid to participating shareholders in the form of a dividend, then you will receive your usual fixed dividend AND the extra dividend from Orange.

Convertible preference shares

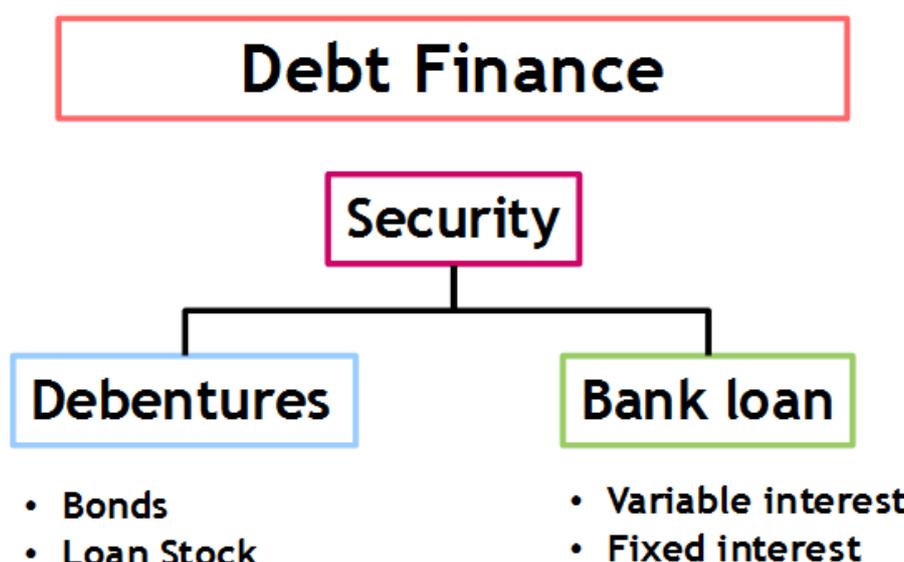
Convertible preference shares are shares that **give the holder the right to convert the preference share to an ordinary share** at a later date. So, if you have convertible preference shares in Lemon and you decide that you'd like to have a vote in the company shareholder meetings, then you may want to exercise your right to convert your share to common stock.

3. Debt finance

Debt finance is a form of long-term external finance whereby an entity borrows funds from investors or lenders to finance its strategy.

A **debt investment** is a way for a company to raise finance without losing any ownership. Rather than selling portions of their capital, a company is essentially selling a **promise to repay a fixed amount, with interest, at a future date**.

Banks and the bond market play a pivotal role in the raising of debt finance, but we'll get onto this later in this section.



Security of debt finance

Security is a way for a lender to **protect themselves from losing the money they have loaned**, in the event that the person to whom they lent money cannot repay their debts.

It's like leaving your credit card with the waiting staff at a bar. Rather than paying for all of your drinks each time you order, you can start a 'tab' and add the cost of the drinks to that, paying the cumulative total at the end of the night.

But, from the bar's perspective, they want to make sure you stick around and pay the tab at the end of the night, rather than just running off without paying! And, they want to make sure you actually do have the money to pay, so they will take a credit card - which will guarantee payment - as a **security to ensure that the debt is paid for** at the end of the night.

Of course, businesses can't leave their credit card with a bank - so what can they do?

Fixed and floating charge

When it comes to securing debt finance for a business, there are two main kinds of security, or 'charge', that can be used.

A fixed charge secures a debt against a specific asset, such as land or buildings. This would mean that, in the event that the company defaults on the loan, the lender would gain ownership of the specific assets (land or a building).

This is the **less risky option**, since **a fixed asset is clearly redeemable by the debtor**, regardless of the financial position of the company after defaulting on debts.

A floating charge secures a debt against 'general' assets, so there is no specific asset. This would mean that the debtor would gain ownership of the company's general assets until the debt is repaid. This is a **riskier option**, since there is a good chance that the company will have no assets to offer if they have defaulted on a loan and so the lender will not be repaid.

Debt covenants

One way in which a lender can seek to protect themselves is to **make the loan conditional on certain requirements**. For instance, a lender may agree to lend money to an entity only under the condition that the entity maintains a minimum current ratio (current assets/current liabilities) to make sure they have assets to cover their debts. This condition (or covenant) makes it more likely that the lender will be paid back by the entity. Examples of debt covenants include:

- **Ratio limits** - A lender may request or demand that **certain ratios** (like the current ratio mentioned above) **are at a minimum level**. The current ratio, for example, must be at least equal to 1 to ensure that assets cover liabilities. Ideally, a lender would want a much higher figure than 1 in this case.
- **Dividend restrictions** - This covenant would **limit the amount that the entity can pay out to shareholders in dividends**. The thought here is that more money stays in the company (rather than being distributed among shareholders) which means the lender is more likely to be paid back.
- **Financial reports** - A lender may ask for regular financial reports in addition to the financial statements so that **the position of the company can be regularly monitored**.

Types of debt finance

Debt finance comes in many different forms, but is mainly obtained from **two main sources; banks and capital markets**.

Bank finance

1. Bank loans - Bank loans provide a **specific amount of funding for a set period of time** at either a **variable interest rate**, (one which changes with the market rates), or **fixed interest rate**, which remains unchanged throughout the loan period.

Loans can be unsecured, although for larger amounts the bank will most likely want security (or collateral) on the debt. **Unsecured loans will be more expensive** than secured debt due to the increased risk being taken by the bank.

Banks loans are **simple** and **easy to arrange** and are the **most common type of debt finance**, particularly for small and medium-sized businesses. They can be flexible when it comes to the terms and conditions of lending and **borrowers can also pay off the loan in full at any time with minimal warning**.

The disadvantages of bank loans are that the interest charged is often, although not always, linked to regional interest rates, as loans are generally dependent on the rate banks are charged. **This means that the rates offered may be subject to change**.

2. Revolving credit facilities (RCFs): An RCF is a **bank facility which allows a borrower to withdraw funds up to an agreed credit limit**. The amount available to use varies as the funds are borrowed or paid in a similar manner to a credit card. RCFs are **very flexible** debt financing options as they allow an entity to **minimise interest payments by only taking out loans for what they need**. A **bank overdraft** is a type of RCF.

Capital market finance

1. Debentures, Bonds, or Loan Stock: A debenture is a **medium to long-term debt instrument used by large companies to borrow money**. The term is used interchangeably with **bond, loan stock or note**. A debenture is thus like a loan, **evidencing the fact that the company is liable to pay a specified amount with interest**. Like a loan, a debenture may also be secured on company assets.

The debenture is **offered to potential buyers via the bond market**, which is part of the money market where debt can be bought and sold, in a similar way to how company shares are bought and sold. Generally, a company offers a bond at one price, e.g. £100, and repays the investor at a higher price, e.g. £120, some time later. This is the incentive for purchasing bonds.

Debentures are generally **freely transferable** by the debenture holder and **may be traded on an exchange**. Debenture holders have **no rights to vote** in the company's general meetings of shareholders, but they may have separate meetings or votes, e.g. on changes to the rights attached to the debentures.

The interest paid by the company on a debenture is called a **coupon**.

2. Convertible debentures: Convertible debentures are debentures which **can be converted into equity shares of the issuing company** after a pre-determined period of time.

"Convertibility" is a feature that companies may add to the bonds they issue to **make them more attractive to buyers**. For example, if you own a convertible bond and you see that the company's share price is growing, you can convert your bond to a share and make a profit on the increasing share price.

As a result of the benefit of being able to convert, convertible bonds typically have **lower interest rates** than non-convertible corporate bonds. This means that **the investor will receive less from the company in interest**, which is better for the company and worse for the investor.

Key terminology relating to debentures or bonds	
Face value	Also known as par or nominal value , which is the price paid for the debt instruments by investors .
Coupon	The interest paid by a company on a debenture or bond.
Redemption date	Also known as the maturity date , the date by which a company will have to repay their investors .

Yield to maturity

The yield to maturity (YTM) is **one method of calculating the yield or return on a debt instrument**.

Yield to maturity for a redeemable debt

This method takes into account the **difference between** the debt instrument's **current purchase price** and **redeemable value**, expressing its return as an **annual percentage rate**.

Example

Let's say we have a bond with a face value of £1,000 and a coupon rate of 10%. The bond is redeemable in 5 years. We are told that the current purchase price of the bond is £800. As well as earning 10% per year, there is also a gain of £200 over 5 years.

The yield to maturity takes into account both these elements to find an overall interest rate.

To calculate the yield we use the following formula, which you should have seen in previous studies as the **internal rate of return (IRR) formula**:

$$\text{IRR} = A + \frac{\text{NPVa}}{\text{NPVa} - \text{NPVb}} \times (B - A)$$

Where A is the first discount rate used to calculate NPVa and B is the second discount rate used to calculate NPVb.

You should have previously studied IRR and discount factors and as such we are going to assume you understand this concept in this explanation. If you do not know it, or remember it, you'll need to review your management accounting studies for this technique.

You should recall that **in IRR calculations we calculate the effective rate of return**. In previous studies this would have been for a particular project so you could decide if the return was good enough to decide whether to proceed. **In this case we're going to work out the effective rate of return on a bond.**

We start by working out the Net Present Value at two different discount rates. The goal is to use two different rates that the effective rate will fall between. In this case, we know that the market value of the bond is £800 and the annual interest is £100. That works out to roughly 12.5%, so we could estimate a range of 12% to 18%.

Calculating NPV at 12%

Firstly we're receiving £100 for 5 years. In the cumulative discount tables (see the final chapter of these notes) we can look up a cumulative discount factor at 12% for 5 years.

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326

The present value of the interest payments is: £100 x 3.605 = £360.5

Next we know that £1,000 will be received in 5 years time, so we look up a 12% discount rate for 5 years in the standard discount tables:

Periods (n)	Interest rates (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335

Present value = £1,000 x 0.567 = £567

The total present value of holding the bond is: £567 + £360.5 = £927.50

We then take off the purchase price of the bond of £800 to find the NPV.

NPVa = £927.50 - £800 = £127.50

Calculating NPV at 18%

Then, we'll repeat the process at a discount rate of 18%.

(£100 x 3.127) + (£1,000 x 0.437) = £749.70

NPVb = £749.70 - £800 = -£50.30

Calculate yield to maturity

Let's put these values into our IRR formula:

$$\text{IRR} = 12 + \frac{127.5}{127.5 - (-50.3)} \times (18 - 12)$$

IRR = 12 + 4.3

IRR = 16.3%

This illustrates that the effective yield of the bond until the time of redemption is 16.3%. This is better known as the **yield to maturity**, and takes into account **the difference in face value and market value of the bond while also accounting for the time value of money**.

YTM for irredeemable debt

The above example shows you how to find the yield to maturity for redeemable debt. It is also possible however to calculate yield to maturity for irredeemable debt, in what is fortunately for us accountants, a much simpler calculation. Don't worry, we will be looking at what redeemable and irredeemable debt is in more detail in chapter three of this study text! However for the moment, you just need to be aware of the two methods for calculating YTM.

So let's re-use the example from above however, in this instance, let's imagine that the bond is irredeemable. To calculate the yield on this bond, we would use the following formula:

$$\left(\frac{\text{Annual interest}}{\text{Current purchase price of debt}} \right) \times 100\%$$

Told you this was the easier of the two YTM calculations! Let's add the numbers from our example to this formula and see what we get:

$$\left(\frac{\text{£100 (£1,000} \times 0.1)}{\text{£800}} \right) \times 100\% = 12.5\%$$

Bond Markets

The capital or bond markets are the **source of long-term debt finance for stock exchange listed entities**. Just like a stock market, the bond market has a primary and secondary market.

The primary market enables the raising of debt finance from a large pool of potential investors. The entity raises the finance by issuing a bond for lenders, or bondholders to invest in. **The secondary market allows the bondholders to buy and sell bonds to others.**

The bond issuance process and role of key players

The most common process for issuing bonds is through **underwriting**. This involves one or more **securities firms or banks forming a syndicate, the syndicate then buys either a proportion of, or the entire issue of bonds from the issuer, in the event that they do not sell.**

The underwriting syndicate's intention is to then **re-sell them to investors**. Underwriters may place the bonds with specific investors via a 'bond placement' or sell to a wider range of investors via the bond market.

The underwriter **takes the risk** of being unable to sell on the issue to end investors.

Primary issuance or primary offering **is simply the process of offering shares for the first time.** The process is arranged by the book runner, which is just another term for the lead underwriter!

This lead underwriter has direct contact with investors and advise the bond issuer about the timing and price of the bond issue. When bonds are announced to the public, it is the book runner that is listed first among all underwriters participating in the issuance. **Remember that there can be lots of underwriters forming a syndicate during an issuance,** and the book runner is simply the lead underwriter!

The book runner's willingness to underwrite must be discussed prior to any decision on the terms of the bond issue as there may be limited demand for the bonds.

Listing and trading bonds in the bond market

Issuing bonds physically in the bond market requires:

- **Listing on a recognised exchange** (listed entities will already have done this)
- Filing documentation to allow **admission to trading**
- **The appointment of a market maker:** a dealer in securities or other assets who agrees to buy or sell at specified prices at all times. This ensures that the bonds have quoted buy and sell prices throughout the day to allow them to be bought or sold (traded) by the buyers and sellers.

4. Other long term finance

Sale and leaseback

Just because a company has a **large amount in retained earnings does not mean that they are in a position to fund new projects.** In fact, the level of retained earnings only really reflects the amount of profit accumulated over the entity's life. Therefore, it is not the same as cash and so does not represent the availability of finance for a company. **Older established companies with significant assets can still find themselves short of cash. However, there may be a solution - sale and leaseback.**

Sale and leaseback involves **selling non-current assets, most likely property and equipment and leasing them back over a number of years** (usually 25 or more). The result is that funds are released through the sale of the asset without any loss of its use.

In 2001, UK retailer Marks and Spencer needed funds to grow its weakening business. Its key assets were its stores which were located in prime high street locations throughout the UK. It was able to raise £348m in the sale of 78 of its stores which were immediately leased back to ensure that operations were in no way disrupted.

One **drawback** of this option is that **any potential capital gain on assets is forgone.** So, if the **asset that the company sells increases in value over time, then this added value will be lost by the company,** since they are now only leasing the asset. In fact this has been the case for Marks and Spencer as the UK property market has grown significantly since they sold their stores.

Warrants

A warrant is **a security that entitles the holder to buy the underlying stock** of the issuing company **at a fixed exercise price**, (buying or selling price), until the expiry date. For instance, a warrant would give you the right to buy 100 shares in company A at €1 at any date up until 201X. This warrant will become profitable as soon as the share price rises above €1.

Warrants may be **attached to bonds or preference shares** to make them more attractive to investors to **encourage uptake** and/or to allow the issuer to **pay lower interest rates or dividends**.

Additionally, **warrants may be detachable and therefore, able to be sold independently of the bond or stock**. Warrants are traded in some financial markets such as Deutsche Börse and Hong Kong.



CIMA Management Case Study

Chapter 9

Cost of Capital and Capital Structure

1. Cost of finance

Introduction

Imagine you own your own business and have a great new idea but you just don't have the upfront money (capital) to get going. Well, broadly speaking, you have two options:

Equity finance

This is the option where **you sell shares in your business to investors**. You get income from the investors and the investors get a return on their investment because they are entitled to some of the profits of your company.

However, there are **costs associated with raising this money**. For one thing, certain kinds of shares pay a guaranteed **dividend to the shareholder**, which means an extra cost for the company. This is an expense that must be accounted for.

Debt finance

If you don't want to go down the equity route, you may want to use debt. This is where a firm may decide to **raise funds by selling debentures or getting a bank loan**. This kind of finance will also **incur costs, usually in the form of interest payments and security**.

The cost of capital

Most companies actually decide to use a **mixture of debt and equity finance**. However, as you can imagine, calculating the associated costs of fundamentally different kinds of finance can be tricky.

In order to account for these costs (the cost of debt and the cost of equity), accountants and investors have developed a way to calculate an overall average that shows the **average of the cost of debt and the cost of equity**, called the **Weighted Average Cost of Capital**.

Uses of the Cost of Capital

In NPV (Net Present Value) calculations

An NPV calculation will **show whether the predicted revenue from an investment will cover the initial cost of investment** and thus **whether the investment should be undertaken**.

Thus, we can use the cost of capital to identify **whether the project will give a return to satisfy both the costs of share and debt capital**. If the cost of capital

gives a **positive NPV**, then the investment will effectively **pay back interest** and give shareholders a **return above their cost of capital**.

Finding the optimum gearing levels

The **gearing ratio shows the level of debt to equity** for a company. For instance, a company that funds most of its projects through debt finance and very little equity, will be 'highly geared', because the debt-to-equity ratio will be fairly high.

Therefore, a business will want to find the **optimum gearing levels that minimise their financing costs** by assessing changes in the cost of capital at different levels of debt and equity. They can then **aim for a gearing ratio which yields the lowest average cost of capital**.

We will return to how to calculate the WACC later in the chapter. For the moment, we will get to grips with each element individually.

2. Dividend growth model

Turning first to the **cost of equity, K_e** . Let's look at what this is and how to calculate it.

Dividend growth model

The dividend growth model is **a way of valuing a company, finding its share price or working out the cost of equity capital**, based on the theory that a share is worth the discounted sum of all of its future dividend payments.

We are used to calculating the Net Present Value of an investment to understand its value. The dividend growth model is simply a way to value shares using the same approach, but instead **valuing a share based on the Net Present Value of the future dividends**. The equation used is called **Gordon's growth model**, named after Myron Gordon who originally published it in 1956.

The Formula

$$P_0 = \frac{d_1}{K_e - g}$$

Where:

P_0 = The current share price

g = The growth rate expected for the dividends

K_e = The cost of equity

d_1 = The value of the next year's dividend

No growth

If dividends remain constant, then g is 0 and the formula becomes:

$$P_0 = \frac{d_1}{K_e}$$

Cost of equity capital

This equation can also be used to calculate the cost of capital by rearranging it to:

$$K_e = \frac{d_1}{P_0} + g$$

Current dividend

d_1 can often be calculated using the current year's dividend, if next year's dividend is not available, as it is simply this year's dividend with one year of growth, or:

$$K_e = \frac{d_0 [1 + g]}{P_0} + g$$

Calculating the cost of capital**Example - no growth**

A company's shares are quoted at £1.20 **ex-div** (**ex-dividend - meaning that a dividend has just been paid**) with the dividend being 20p. If there is no growth in dividends, what is the cost of equity expected?

Note: Always use the ex-div price, the value of the share after the dividend has been paid, in calculations. Should you be given the "cum-div" price, the price just before the dividend is paid, deduct the value of the dividend from the price first.

Well, all we need to do here is plug in the numbers to the formula:

$$K_e = \frac{d_1}{P_0} + g$$

$$K_e = \frac{0.2}{1.2} + 0$$

$$= 16.7\%$$

Example - with growth

That was fairly straightforward, but what if there is predicted growth in the dividend? Let's try another example:

A company's shares are quoted at £1.20 ex-div with the dividend just paid being 20p. If there is growth anticipated in dividends of 5% per year, what is the expected cost of equity?

Again, we just find the relevant data and plug it into the formula:

$$K_e = \frac{d_0 [1 + g]}{P_0} + g$$

$$K_e = \frac{0.2 [1 + 0.05]}{1.2} + 0.05$$

$$= 22.5\%$$

So, this is higher than when there is no growth in dividends. That's because shareholders are getting a higher return when dividends grow in future, and the higher the returns, the higher the cost of capital.

Calculating share price**Example - expected share price**

Investors looking to invest in X Ltd require a minimum return of 12% from the investment. The current dividend paid by X Ltd was 20p per share. The dividend payments typically rise by 5% each year. What is the expected share price?

$$P_0 = \frac{d_1}{K_e - g}$$

$$P_0 = \frac{0.2 [1 + 0.05]}{0.12 - 0.05}$$

$$= £3.00$$

Again, all we needed to do was find the appropriate arrangement of the formula and plug in the data. Fairly simple stuff.

Calculating growth rates

OK, so something else that might come up in an exam is calculating growth rates. There are two main way to do this: **Historical dividends** and **Earnings retention**.

Historical dividends

So, one way we might estimate dividend growth is by **taking the average for periods of growth**. This is what we do when using the historical dividends method. The following formula can be used to calculate the growth rate:

$$g = \sqrt[n]{\left[\frac{\text{Final dividend}}{\text{Initial dividend}} \right]} - 1$$

Where:

g = The growth rate

n = The number years the dividend has been growing

Example

If the last 5 years of dividends have been 30p, 31p, 32p, 33p and 34p these can be used to estimate dividend growth using:

$$g = \sqrt[4]{\left[\frac{34}{30} \right]} - 1$$

Note: n is 4 as there are **4 years of growth** from year 1 to year 5. n is not the total number of years! This is a common error!

Also note that you will need a scientific calculator to work this out. If you don't have one, you will need one for this exam!

$$= 1.032 - 1$$

$$= 0.032$$

$$= 3.2 \%$$

Earnings retention

This concept is **based on the idea that the growth in dividends will come from profits retained in the business**. The more that is retained, the greater the investment and hence the greater the dividends. The formula is as follows:

$$g = rb$$

Where:

g = The growth in dividends

r = The accounting rate of return = profit/capital employed

b = The proportion of profits retained

Example

T Ltd have a current profit of \$10m and net assets of \$100m. Total dividends just paid were \$4m. Calculate the growth in dividends.

$$r = \frac{10}{100} = 0.1$$

$$b = \frac{10-4}{10} = 0.6$$

$$g = 0.1 \times 0.6 = 0.06$$

Problems with the dividend growth model

Assumes growth rate is less than cost of capital

The dividend growth model works on the **basis of a steady and perpetual growth rate less than the cost of capital**. If you look at the formula you will see $k_e - g$, which would of course become negative if g was greater than k_e . This is not an entirely sound assumption, since **dividends do not always grow**. Even when they do, there is **no guarantee that it is a steady growth** and, even if that is the case, it **may still be greater than the cost of capital**.

Assumes shares pay a dividend

If the **shares do not currently pay a dividend, like many growth stocks, the model cannot be used**. By 2017, despite being some of the biggest companies in the world, none of Facebook, Amazon or Alphabet (aka Google) had paid regular dividends to investors. Their aim was to reinvest profits into profitable projects and deliver returns via increasing the share price (capital growth). Thus, **the model is only useful in the case where dividends are paid on shares**.

Hyper-sensitive to growth rate

The **stock price resulting from the Gordon growth model is hyper-sensitive to the growth rate (g) chosen, which is only an estimate and ignores real-world factors** that might be determining this change. e.g. if there is a recession, growth is unlikely to be the same for the next few years, but the model does not account for this!

3. Cost of preference shares

Gordon's growth model can also be applied to the cost of preference shares, such that:

$$K_{\text{pref}} = \frac{d}{P_0}$$

Where:

- K_{pref} = The cost of irredeemable preference capital
- d = The annual dividend (assumed to be received in perpetuity, i.e. forever)
- P_0 = The ex-div price (i.e. price after a recent dividend payment)

Example

A company has 50,000 10% preference shares with a nominal value of £1 which were issued at £1.20 per share 5 years ago. The current ex-div price is £1.30 per share. What is the effective cost of the preference shares.

The dividend is payable on the nominal value, so 10% of £1 = £0.10.

Therefore:

$$K_{\text{pref}} = \frac{0.1}{1.3}$$

$$= 0.077 \text{ or } 7.7\%$$

Some key points to note from this example:

- The **nominal value is a standard nominal amount, often £1 or \$1, which does not relate to the initial market price of the shares**, (as you can see from the example they were initially sold at £1.20 per share), or the current price (£1.30). In this example, the model is used to calculate the dividends payable. In the SOFP, it is used to calculate the total share capital in the

equity section, which is the number of shares multiplied by the nominal value).

- The 7.7% cost is the **cost against current market value**, so is the cost of preference capital required by debt holders currently. They can buy the shares for £1.30 and get 10p per share- a 7.7% return.

4. Cost of debt finance

Introduction

Debt finance is the kind of finance raised by an entity by taking out loans or selling debts to investors (such as debentures). Therefore, **the cost of debt measures the minimum amount an investor requires as a return on a debt investment**. Hence, another term for the cost of debt is the market value of debt.

The cost of debt is calculated based on whether the debt is **redeemable** or **irredeemable**:

- **Redeemable debt** - This is a debt that is **paid back by the entity after a period of time**. This is like a bank loan, in that a set figure is repaid to the lender by a certain date, at which the repayments cease.
- **Irredeemable debt (or perpetual bond)** - This is a **debt that it is not paid back by a specific date, but goes on indefinitely**. Thus, this kind of debt functions in a similar way to dividends paid on shares, in that there is a steady payment for an indefinite period of time.

Cost of bank borrowing

When it comes to calculating the cost of debt, there are unfortunately some fairly complex calculations centring around bonds or debentures that you will need to get your head around.

So, before we get our brains in a twist looking at these more complex calculations, we're going to warm up by looking at how to calculate the cost of bank borrowing. Fortunately, this is a slightly simpler calculation!

The formula for calculating the cost of bank borrowing is as follows:

$$K_d = r(1-T)$$

Where:

r = The annual interest rate in percentage terms

T = The corporate tax rate

K_d = The cost of debt

Example

A company takes out a £50,000 bank loan with an annual interest rate of 8%. If the entity is subject to a corporate tax rate of 20% in its home market, calculate the cost of this bank borrowing.

This is a really simple calculation, where all we need to do is add the figures from the above example into the formula for the cost of bank borrowings:

$$K_d = 8\% (1-0.2) = 0.064$$

Our cost of debt for this example is therefore 6.4%!

Irredeemable debt

Firstly, it is worth noting that irredeemable debt is very uncommon in the real world. However, the concept is worth understanding. The cost of irredeemable debt finance can be calculated in a similar way to preference shares.

The key difference between them is that **debt interest is tax-deductible**. So, if the corporation tax rate is 30%, for every £10 paid by the company in interest, the tax bill is reduced by £3, meaning that the net cost to the business was just £7.

As a result, the formula to be used for irredeemable debt is:

$$K_{d \text{ net}} = \frac{i[1 - t]}{P_0}$$

Where:

K_d = The cost of debt capital

i = The interest paid

t = The tax rate

P_0 = The market price of debt capital

Example

A company has 10% irredeemable debentures with a nominal value of £100 and with a current market value of £130. Corporation tax is 30%. What is the effective cost of the debt?

The nominal value relates to an amount of debt on which interest is paid. Often (but not always) the debt was issued at 'par', meaning that, for every £100 of nominal value, £100 was originally received.

The **interest is calculated based on the nominal value, which** here is 10% of the nominal value of £100, and so is £10.

The current market value for each "£100 nominal value block of debt" is £130.

Therefore:

The dividend is payable on the nominal value, so 10% of £1 = £0.10.

Therefore:

$$K_{d \text{ net}} = \frac{10[1 - 0.3]}{130}$$

$$= 0.0538 \text{ or } 5.38\%$$

Redeemable debt

Redeemable debt is where **the debt will be repaid at some point in the future**.

The calculation here is more involved since we have to account for the repaid amount as well as interest. In fact, the calculation is very similar to what you may be familiar with as the **internal rate of return (IRR)** calculation.

Example - without tax

A debenture is quoted at £90 and pays interest of 10% with the last payment having just been made. It is redeemable in 3 years' time at par. What is the cost of the debt to the company?

So, like an IRR calculation, we work out:

- The present value at **one interest** rate
- The present value at a **second interest** rate
- Use the standard **IRR formula to calculate the cost of capital**

Let's take the first interest rate as 10% as this is the base amount. Assuming someone purchased the debt now (at £90) and held it to maturity, their cash flows and present value would look like this:

Time	Cash flow £	10% discount factors (from tables)	Present value £
0	(90)	1.000	(90.00)
1-3	10	2.487	24.87
3	100	0.751	75.10
		NPV	9.97

Hopefully you are familiar by this stage in your studies with looking up discount factors in tables, but you may like to take a look at the tables which you will find at the end of this text to double-check you can find the right numbers - particularly the annuity factor for years 1-3 which is in a different table from the individual year 3 factor.

As this is a positive NPV, let's take the next rate as higher (if it were negative you would take a lower discount factor).

Time	Cash flow £	20% discount factors (from tables)	Present value £
0	(90)	1	(90.00)
1-3	10	2.106	21.06
3	100	0.579	57.90
		NPV	(11.04)

Using the IRR formula:

$$IRR = A + \frac{NPV_a}{NPV_a - NPV_b} \times (B - A)$$

$$K_d = 0.10 + \frac{9.97}{9.97 - (-11.04)} \times (0.2 - 0.1)$$

$$K_d = 0.1475 \text{ or } 14.75\%$$

So, in this case, we have a cost of debt of 14.75%. This means that for every pound spent by debt holders, they are receiving around 15 pence in return. **If the company were to reissue new debt now, this is the likely return they would need to provide.**

Example - with tax

As we have mentioned, debt interest is tax-deductible. This means that, from the company's point of view, in the presence of tax, the cost to the company of the interest payments is lower than the actual amount paid.

So, using the same figures as in the previous example, but assuming 30% tax, the answer looks like this:

Time	Cash flow £	10% discount factors (from tables)	Present value £
0	(90)	1	(90.00)
1-3	10 x (1-0.3) = 7	2.487	17.41
3	100	0.751	75.10
		NPV	2.51

As this is a positive NPV, let's take the next rate as higher (if it were negative you would take a lower discount factor)

Time	Cash flow £	20% discount factors (from tables)	Present value £
0	(90)	1	(90.00)
1-3	10 x (1-0.3) = 7	2.106	14.74
3	100	0.579	57.90
		NPV	(17.36)

Using the IRR formula:

$$K_d = 0.10 + \frac{2.51}{2.51 - (-17.36)} \times (0.2 - 0.1)$$

$$K_d = 0.1126 \text{ or } 11.26\%$$

In this case, with tax accounted for, the cost of debt has dropped significantly to 11.26%. Note, that again the **tax shield**, (the reduction in the overall tax liability for the company as a result of the interest paid) as it is commonly known, **has reduced the cost of debt to the company**.

Convertible Debt

Another type of debt that you may need to know in your exam is convertible debt. Fortunately, this process is similar to that for the cost of redeemable debt, in that **it employs the internal rate of return (IRR) calculation.**

The main difference when calculating the cost of convertible debt centres around the **uncertainty regarding the type of return** that an investor will receive upon repayment. After all, at redemption date, **the investor may receive a cash sum, but may equally have taken up the convertibility option of the debt and, hence receive shares.**

This creates a slight problem when accounting for this type of debt, as there are in effect two different returns that we need to deal with. How do we know which one to use when using IRR to calculate the cost of convertible debt?

The resolution to this issue is actually fairly simple, however, it does add another layer to your calculations and is something you need to watch out for in the exam.

When calculating the cost of convertible debt, you must always **use the type of return which is assumed to provide the greatest redemption value when the debt is redeemed.** Let's put these ideas into practice by tweaking our previous example and working this through!

Example

A convertible debenture is quoted at £90 and pays interest of 10% with the last payment having just been made. It is redeemable in 3 years time at par and the current tax rate is 30%.

Investors have the additional option of the debenture being converted into 15 ordinary shares. These shares have a current value of £6.50 each and are expected to grow in value at around 3% per year.

Firstly, we need to work out which of these two options, (shares or cash), would provide an investor with the greater return. Cash returns are easy to calculate as we know that these will be at par (£100). For the value of the returns from the share option, we use the following compounding formula:

$$V = P(1 + r)^n$$

Where:

P = Market price of debt capital

r = Interest rate

n = Number of time periods

$$V = 15 \times £6.50 (1 + 0.03)^3 = £106.54$$

As the redemption value of the share option is clearly greater than the redemption value of the cash option, it is this £106.54 figure which we need to use when calculating the cost of this convertible debt using IRR.

Now that's sorted, we can proceed with our IRR calculation in the same way that we calculated the cost of redeemable debt earlier:

Time	Cash flow £	10% discount factors (from tables)	Present value £
0	(90)	1	(90.00)
1-3	$10 \times (1-0.3) = 7$	2.487	17.41
3	106.54	0.751	80.01
		NPV	7.42

As this is a positive NPV, let's take the next rate as higher, (if it were negative you would take a lower discount factor):

Time	Cash flow £	20% discount factors (from tables)	Present value £
0	(90)	1	(90.00)
1-3	$10 \times (1-0.3) = 7$	2.106	14.74
3	106.54	0.579	61.69
		NPV	(13.57)

Using the IRR formula:

$$K_d = 0.1 + \frac{7.42}{7.42 - (-13.57)} \times (0.2 - 0.1) = 0.1354 \text{ or } 13.54\%$$

Hence, in this example the cost of debt is 13.54%.

5. Weighted Average Cost of Capital (WACC)

WACC

So far, we've only been looking at the aspects of the cost of capital independently from one another, but, in reality, a business will be funding their projects with a mix of debt and equity finance. Therefore, **there aren't always clear lines between the amount of debt or equity being used in a given situation.**

Equity tends to be more expensive to the company than debt due to the higher risks taken by equity holders than debt holders, (uncertain dividends and share price). Equally, debt tends to be cheaper because investors are taking a lower risk, (high likelihood of payment of interest and debt repayment).

The WACC is a way of working out the average of the different types of finance used and aims to work out the average return that is required by the company on its investments in order to satisfy all shareholders and debt holders.

The weighted average cost of capital can be calculated using the following formula:

$$K_0 = K_e \left[\frac{V_E}{V_E + V_D} \right] + K_d \left[\frac{V_D}{V_E + V_D} \right]$$

Where:

K_e = The cost of equity

K_d = The cost of debt

K_0 = The weighted average cost of capital (WACC)

V_E = The market value of equity

V_D = The market value of debt

Example - WACC

The company's shares are quoted at £1.20 ex-div with the dividend just paid being 20p and dividends are growing at 5% per year. There are 1m shares in issue and a bank loan of £1m at 10% interest. What is the WACC?

So, all we need to do here is assign each of the elements of the formula with a value, and then perform the calculation.

Cost of equity

$$K_e = \frac{d_0 [1 + g]}{P_0} + g$$

$$K_e = \frac{0.2 [1 + 0.05]}{1.2} + 0.05$$

$$K_e = 22.5\%$$

Market value of equity

$$V_E = £1.20 \times 1m = £1.2m$$

Market value of debt

$$V_D = £1m$$

Cost of debt

$$K_d = 10\%$$

$$K_o = 0.225 \left[\frac{1.2}{1.2 + 1} \right] + 0.1 \left[\frac{1}{1.2 + 1} \right]$$

$$K_o = 0.1227 + 0.0455 = 0.1682$$

So we have a WACC of 16.82%.

But what exactly does this mean?

6. Uses of WACC

Interpreting WACC

The weighted average cost of capital tells us the **minimum rate of return at which a company produces value for their investors** and so, it is generally used as a tool for making decisions about investments. It can also be used internally as a way to measure the efficiency of the company's investment in capital.

So, let's say the company in the previous example produces a return on investments of 30%. We calculated the WACC to be 16.82%, let's call this 17% for simplicity. That means that **for every £1 the company invests into capital, the company is creating around 13p of value** for their investors, i.e. the company is providing a return which is 13p higher (30p) than the WACC (17p).

By contrast, **if the company's return is less than the WACC, the company is essentially losing money from investment** and so an investor will use their funds elsewhere.

Using WACC as a discount rate

Financial analysts often employ WACC to value investments. In discounted cash flow analysis, for instance, **WACC is used as the discount rate applied to future**

cash flows for deriving a business's net present value. However, this is only appropriate **if certain conditions are met:**

- **The new investment is marginal** - If we are only looking at a small investment then we would not expect the WACC to change materially. If the investment is substantial, and so requires significant new amounts of debt or equity, it will usually cause the WACC to change.
- **The new investment does not carry new risks** - The business risk profile for a new investment should not differ significantly from the current risk profile, since accounting for risk has a material impact on calculations as both equity and debt holders will want a higher or lower rate of return dependent on the new risks changing k_e and k_d .
- **Capital structure is constant** - If the capital structure changes, (i.e. a significant change in the percentage of debt or equity finance), then weightings in the WACC will also change.



CIMA Management Case Study

Chapter 10

Group Accounting

1. Introduction to group accounts

The biggest acquisition in the world

Mannesmann AG was a German corporation founded in 1890 originally to produce seamless steel tubes, but, over 100 years later after several changes in the business, in 1999 it was acquired by Vodafone in one of the largest acquisitions in recent history.

Prior to acquisition, Mannesmann was traded on the Frankfurt Stock Exchange. The company had 130,860 employees worldwide and revenues (1999) of €23.27bn. Things were going well.

Then, in 1999, Vodafone Airtouch PLC acquired Mannesmann AG for \$183bn. Just think about that number for a second. That's \$183,000,000,000! If you piled that many dollar bills on top of one another, the tip of the pile would bump into GPS satellites that orbit the earth at around 20,000 km!

As an accounting student, you will appreciate the stress of getting all of your accounts to balance, even for relatively little sums. Imagine for a moment that you were an accountant for Vodafone in 2000 and you had to figure out exactly how to deal with this acquisition. Where do you even begin?

Well, in order to understand this, we need to start at the bottom. The first thing we need to be clear on is the notion of a business combination.

Business combination

A business generally has **two options** when it comes to growth:

Organic growth

This is when a company builds up its customer base, increases its market share and develops new products over time, **purely through the results of its own business operations**.

A good example of this is the UK retailer 'Poundland'. Poundland is a UK-based variety store chain which sells every item in its stores for a single price - £1. It was formed in 2000 and has grown, by opening new stores across the country, due to its clear focus on a constantly rotating product range sold at a single price point.

Ten years after starting up, Poundland was sold to a US venture capital firm for £200 million, which brings us on to our next growth strategy...

Inorganic growth

This is when a company **grows via the acquisition of subsidiaries**. Now, the company will still aim to increase market share and release new products or services as before, but this is done by acquiring competitors (to increase market share - as in the Vodafone/ Mannesmann example) or companies in a related area of business (to integrate the supply chain - such as a shoe factory acquiring a shoe retailer).

The acquisition results in a business combination of the entities and this is what we will be looking at over the next few sections.

What is a group?

Control

In a business combination, **one entity controls one or more other entities. This relationship is known as a group**. So, for instance, Vodafone would have had control over Mannesmann AG after the acquisition. In addition, assuming that Vodafone had never made an acquisition before (which isn't the case, but let's pretend), the acquisition would have resulted in the formation of the Vodafone Group, which would have consisted of the two entities, Vodafone and Mannesmann.

IFRS 10 Consolidated Financial Statements sets out a **three part definition for control over a subsidiary**. An investor (parent) will control an investee (subsidiary) if all of the following are in place:

- The investor has **power over the investee**. This means that the parent has the ability to determine the business activities undertaken by the subsidiary and, therefore, directly affect its performance.
- The investor has **exposure, or rights, to variable returns from its involvement with the investee**. This essentially means that the parent's performance will vary depending on how well the subsidiary is doing. So, if a parent acquires full control of a subsidiary, which then enjoys a highly profitable financial year, then the parent's ownership would entitle it to these rewards. Similarly, the parent would benefit less from a year in which the subsidiary did poorly.
- The investor has the **ability to use its power over the investee in order to have an impact on the amount of its returns**. This is linked to the first point, but looks at it from the other perspective, i.e. the parent has the power to affect the performance of the subsidiary in order to control the returns it (the parent) receives through ownership.

If you are wondering what power means specifically, then **IFRS 10 describes it as the "existing rights" that give an investor "the current ability to direct the relevant activities" of a subsidiary**. Most commonly, this will be achieved by acquiring the share capital and, therefore, voting rights of a subsidiary.

Let's see how all this would look in practice:

Company A acquires 100% of the share capital of Company B such that, post acquisition, Company A becomes the parent and Company B the subsidiary.

In the first few months following the acquisition, Company A carries out a review of the products that B makes. Finding that some of Company B's products are making really low profit margins, it instructs Company B's directors to drop these from their product range. (Power over the investee)

Company B goes on to have a very successful first year as Company A's subsidiary, hence their consolidated accounts look fabulous and the shareholders (in Company A) are very pleased. (Exposure to variable returns from, its involvement with the investee)

However, Company A wants the returns from Company B to be even higher and requests that Company B performs a full cost review of its processes. On reviewing Company B's findings, Company A determines that certain changes need to be made which result in a reduction in Company B's costs of 30%. (parent has power over the investee in order to have an impact on the amount of its returns)

Unsurprisingly, Company B's returns the following year are even higher, which again make the group accounts look even better than the previous year. (Exposure to variable returns from its involvement with the investee)

Percentage ownership

Percentage ownership is used as a guide to the degree of control, or influence, enjoyed by the parent. An entity can **achieve control by having more than 50% of the ordinary shares** of another entity, and, therefore the associated voting rights.

Just like if you were an investor and you owned more than 50% of the shares in a company, this would make you the majority shareholder and you would ultimately have the majority of votes, i.e. 1 share = 1 vote. **This would amount to you having ultimate control over the company**, (although it wouldn't be uncontested, since another investor could come a long and buy more shares than you, should new shares become available).

Minority control

To summarise what we know so far, **the controlling entity in a group is referred to as the parent** (or holding company), whilst **the controlled entity is known as a subsidiary**. So, in the Vodafone/ Mannesmann acquisition, Vodafone became the parent (by owning more than 50% of the shares and thus gaining control) and Mannesmann became the subsidiary.

However, there are situations in which **a parent may not own the majority of the voting rights, but control still exists**. This is determined by the **degree of power**, (or dominant influence). This can be exercised, for instance, to cast the majority of voting rights and appoint/remove directors.

For example, say you own only 40% of the shares of a company. That isn't enough to own the majority of shares, but you may still be the shareholder with the most individual shares. Say there were 3 other shareholders and they each owned 30%, 20% and 10% of the shares respectively. When it comes to a vote, perhaps on the appointment of a CEO, you may end up with the dominant influence, since the other shareholders would have to join forces to out-vote you!

Legal form and economic substance

Legally, the parent and its subsidiary remain distinct and as such they **still prepare individual financial statements**. However, in **economic substance** they can be **regarded as a single entity** (a 'group'), and as such, the **parent is required to prepare accounts for the group as a whole**.

This is a really important point, as **parents will have to produce individual statements that show the investment in the subsidiary and group statements** (more on this later). Twice as much accounting!

Groups and the basis of consolidated accounts

So, where a group relationship exists (based on economic substance), **group financial statements are prepared**. These are referred to as **consolidated accounts, consolidated statements or group accounts** and are prepared **in addition** to the single entity's financial statements.

The **purpose** of consolidated accounts is to:

- **Present the financial information of both the parent and its subsidiary as a single economic unit** - This shows how the group that results from the acquisition is structured (in terms of its finances). This is **important for investors because the new subsidiary could have a big impact on the financial structure of the parent** (e.g. if the parent acquires a company with a lot of debt, it will cause the debt of the whole group to go up).
- **Display the economic resources controlled by the group** - This **shows the balance of control in the group over assets** and who has authority to make decisions to buy, sell or transfer them.
- **Show the financial obligations of the group** - This shows the **total liabilities for the group**. As mentioned previously, the acquisition of a subsidiary with high debt could have an adverse effect on the position of the group.
- **Show the results and performance of the group as a whole** - This shows how the group performs as a whole, and thus gives some insight into how wise the decision to acquire the subsidiary ultimately was!

In this manner, a set of consolidated statements can be used to judge both the individual performance of the entities that make up the group and also the performance of the group as a whole.

Key reporting standards

Such a complicated task as an acquisition means there are lots of ways to make a mistake. Equally, there are more ways for directors to not do the accounts properly and attempt to cover up bad investments.

In order to help accountants and keep directors accountable, (for the sake of the shareholders), there are a number of specialised standards specifically for business combinations:

- **IAS 1 - Presentation of Financial Statements** prescribes the basis for presentation of general-purpose financial statements.
- **IFRS 3 - Business Combinations** details the specific accounting treatment of business combinations.
- **IFRS 10 - Consolidated Financial Statements (2011)** defines control and the guiding principles for consolidated accounts.
- **IFRS 11 - Joint Arrangements** details the accounting treatment for a specific type of consolidation that we'll be dealing with in a later chapter.
- **IAS 27 - Separate Financial Statements (2011)** handles the separate (non-consolidated), financial statements where a business combination exists. **The parent must prepare separate financial statements** and must record its investment in the subsidiary based on the standard's guidelines.
- **IAS 28 - Investments in Associates and Joint Ventures** details the accounting treatment for two types of consolidation we'll deal with in later chapters too.

2. Parent's separate financial statements

So, according to IAS 27, **parents still have to produce individual financial statements** even if they have formed a group by acquiring a subsidiary. This is **because the acquisition represents a significant investment by the parent** and so we still want to be able to **judge their financial performance as a distinct company** rather than just as part of a group.

General approach

Under IAS 27, **when the parent invests in a subsidiary, associate or joint venture, it must show this investment in its separate (non-consolidated), financial statements.** The cost of the investment is recorded on the face of its

Statement of Financial Position (SOFP). So, in the Vodafone case, they would have needed to show an investment of \$183 bn in their SOFP.

IAS 27 states that these investments must be recorded at one of the following:

- **Cost**
- **Fair value through profit or loss, in accordance with IFRS 9**
- **Cost with adjustments for post-acquisition changes in the investor's share of the investee's net assets, using the equity method as per IAS 28**

Fair value is defined as a rational and unbiased estimate of the potential market price of the subsidiary whereas **cost** is the price paid at acquisition.

In our examples, we will assume the cost of investment is recorded at cost unless stated otherwise. The calculation of fair value is more complicated and will be dealt with at a later stage.

Example

The statements of financial position of P Ltd and S Ltd at 31 December 20X8 are as follows:

	P Ltd £'000	S Ltd £'000
ASSETS		
Non-current assets		
Property, plant and equipment	320	80
	<hr/> 320	<hr/> 80
Current assets		
Inventories	100	50
Trade receivables	80	10
Cash	300	100
	<hr/> 480	<hr/> 160
	<hr/> 800	<hr/> 240
EQUITY AND LIABILITIES		
Equity		
Share capital	300	75
Retained earnings	100	25
	<hr/> 400	<hr/> 100
Current liabilities		
Trade payables	350	120
Income tax payable	50	20
	<hr/> 400	<hr/> 140
	<hr/> 800	<hr/> 240

P Ltd purchases 100% of the shares of S Ltd 'at par' for £100,000 cash.

Show the parent's post-acquisition Statement of Financial Position.

Solution

So, let's go through how we would answer this kind of question.

Firstly, let's define some of the new terminology. Everything in the statement should be familiar to you by now, but the term 'at par' may be new. This simply means at face value, so the purchaser is paying no more or no less than the actual value of the shares. This makes it a simpler process for us.

Method

So, let's break this down into steps:

- **Step 1: Show P Ltd's investment in S Ltd at cost** - Here we are going to show P Ltd's investment of £100,000 by including it (at cost, which is the price paid, remember) under non-current assets. This is because it is a long-term investment that will return economic benefits for P Ltd (i.e. it meets the criteria for a non-current asset).
- **Step 2: Reduce the cash balance by the investment** - The investment was paid for by cash (as stated in the question) so we need to make sure we credit the cash account by the cost of the investment (£100,000).
- **Step 3: Leave all other assets and liabilities unchanged** - A nice easy step to finish with because we don't need to do anything!

Okay, so before we produce to the statement, let's reduce the cash balance. Though the logical order would be to first show the investment, we may as well show the whole statement completed at the end.

Reducing the cash balance:

	£'000	£'000
DR Investment in S Ltd	100	
CR Cash		100

P Ltd's statement of financial position will now comprise of the following:

	P Ltd £'000
ASSETS	
Non-current assets	
Property, plant and equipment	320
Investment in S Ltd	100
	420
Current assets	
Inventories	100
Trade receivables	80
Cash	200
	380
	800
EQUITY AND LIABILITIES	
Equity	
Share capital	300
Retained earnings	100
	400
Current liabilities	
Trade payables	350
Income tax payable	50
	400
	800

So, what's happened here? Well, essentially, the movement of value has been entirely contained within the assets; £100,000 of value has moved from 'Cash' in current assets to 'Investment in S Ltd' in non-current assets. This has resulted in very little change on the face of the SOFP.

However, had the acquisition been funded by debt (a loan) or equity (the issuing of shares in P Ltd), we would have had a more complicated scenario on our hands! For now though, we will be keeping it nice and simple.

3. Group financial statements

Control and consolidation

Just a quick recap of where we are so far:

- Where there is **control**, (normally as a result of **owning more than 50%** of the voting rights of an entity), a **parent and subsidiary** relationship will exist, hence **forming a group**. The group is seen, from an economic perspective, as a **single entity**.
- With the establishment of control, the **parent will be required** (as per IFRS 10) to produce an **extra set of accounts**, known as **group or consolidated financial statements**.
- The group financial statements are **issued to shareholders of the parent only**.
- IFRS 3 Business Combinations outlines the accounting treatment when an acquirer obtains control of a business. The basic principle behind consolidation is that **the group statement shows all the assets and liabilities of the parent and subsidiary**.

The consolidation method

Add together the assets and liabilities

To produce consolidated accounts, we combine the companies' accounts by adding together the lines in the individual companies' financial statements, and then make a few adjustments.

Adjust for investments in subsidiaries

One key adjustment is for investments in subsidiaries. Let's use a simple example to see why. Imagine you and your friend live in two separate houses. Then, one day, you buy your friend's house and everything in it. If you add together your friend's possessions and yours, that's it. You can't also add to your possessions the amount of money you paid for your friend's house - that would be double counting. The same is true for consolidations too - you must add together the assets and liabilities but then remove the investment in subsidiaries.

Adjustment for equity

There's one other thing we must consider too - equity.

- The **share capital is that of the parent**
- The **reserves (at acquisition date) are also that of the parent**

Another way of saying this is that you **do not include the share capital or reserves of the subsidiary in the consolidated statement**.

To consider why this is, remember what equity is - it's the current net assets - the assets less the liabilities. Put another way, if all the assets were sold at their net book value and the liabilities paid, this is the amount left over for shareholders. It's actually one way of valuing a company.

Does the total value of the parent company for their shareholders change just because we've consolidated the accounts? Of course not! The value of that parent company is just the same, and hence the equity is just the same too.

Another way of thinking about it is that, in the parent's books, we are simply replacing the investment in the subsidiary with the assets and liabilities of the subsidiary. The equity is unchanged because it balances out to the same amount.

In summary, two steps are required when undertaking a consolidation:

- **Step 1: Eliminate cost of investment and adjust the equity** - Cancel the cost of investment in the parent's books with the equity (shares plus reserves, which represent this investment) in the subsidiary's books.
- **Step 2: Aggregate the statements of financial position** - This is done by **combining the individual assets and liabilities** of the parent and subsidiary.

Let's see how this works in an example.

Example

In our earlier illustration, P Ltd has control of S Ltd as it owns 100% of its shares. So how would the group's statement financial of position appear?

Solution

Well, applying step 1:

(a) Eliminate the £100,000 cost of investment from the parent (as we're going to combine the assets and liabilities instead).

(b) Remove the subsidiary's equity and reserves so only the parent's remain.

Take a look at the step 1 column in the following calculation to see how this works.

	P Ltd £'000	S Ltd £'000	Step 1	Step 2	P Group £'000
ASSETS					
Non-current assets					
Property, plant and equipment	320	80		320+80	400
Investment in S Ltd	100	-	(100)		-
	<hr/> 420	<hr/> 80			<hr/> 400
Current assets					
Inventories	100	50		100+50	150
Trade receivables	80	10		80+10	90
Cash	200	100		200+100	300
	<hr/> 380	<hr/> 160			<hr/> 540
	<hr/> 800	<hr/> 240			<hr/> 940
EQUITY AND LIABILITIES					
Equity					
Share capital	300	75	(75)	300	300
Retained earnings	100	25	(25)	100	100
	<hr/> 400	<hr/> 100			<hr/> 400
Current liabilities					
Trade payables	350	120		350+120	470
Income tax payable	50	20		50+20	70
	<hr/> 400	<hr/> 140			<hr/> 540
	<hr/> 800	<hr/> 240			<hr/> 940

We then apply **step 2** by **adding up the assets and liabilities of the parent and subsidiary**. See the step 2 column above to see how this works.

The final column gives us our consolidated accounts for P Group.

Even if you don't quite understand the full logic behind each step, don't worry too much; in the exam it's learning what the steps are and doing them that is key and, as you can see from this example, the steps are quite simple.

Parent's exemption from preparation of group financial statements

Sometimes a parent will not be required to produce group financial statements. However, **in order to be exempt**, the following conditions apply:

- **The parent itself is a wholly owned subsidiary** - It's 100% owned by another entity, or a **partially owned subsidiary** (more than 50% owned by another entity) and its owners have no objections.
- **The ultimate parent company produces consolidated financial statements** - If the parent is itself a subsidiary, or a 'sub-subsidiary' then the ultimate parent may already produce group statements.
- **The parent's debt or shares are not traded in a public market** - So if the parent itself trades privately, or not at all, then there is no requirement to produce a group statement.
- **The parent has lost control of a subsidiary** - The parent is no longer the parent and thus no 'group' exists.
- **The parent's subsidiary is temporal and is classed as 'held for sale'** - The subsidiary is just bought purely for sale within a year and as such has never been consolidated. A subsidiary that has previously been consolidated does not qualify for this exemption.

Disclosures when exempt from consolidation

Being exempt from the nightmare of group accounts is a relief, but it doesn't mean you get away with it completely. In accordance with IFRS 10, when exemption from the preparation of consolidated financial statements is permitted, IAS 27 Separate Financial Statements (revised) requires that **the following disclosures** are made:

- **The fact that separate financial statements have been presented and reasons for this (if not required by law)**. So basically an explanation as to why group accounts were not produced.
- **A list of significant investments** (subsidiaries, associates, joint ventures etc.), including **percentage share ownership**, principle place of business and country of incorporation (if different).
- **The method** (e.g. equity method, proportional consolidation, acquisition method - which we just learnt, etc.) **by which those investments listed above have been accounted for** in its separate financial statements.

4. Pre- and post-acquisition reserves

Subsidiary and group reserves

There's some new terminology - let's see what it means:

- **Pre-acquisition** - The time before entity A purchases the shares of entity B to form a group.
- **Post-acquisition** - The time after the purchase of shares, making entity A parent, entity B subsidiary and forming the AB Group.
- **Reserves** - The line on the SOFP that represents any part of the shareholder's equity that isn't basic share capital (i.e. doesn't include the shares themselves, but includes things such as **accumulated profits** or **shareholders' premium** [amount paid by the shareholder above the face value of the share]).

As seen in the previous example, the **pre-acquisition reserves of the subsidiary are not consolidated**. This is because they are included in the value of the acquisition. Thus, at acquisition, **only the parent's reserves appear in the group reserves**.

However, post-acquisition, **the group's share of the subsidiary's post-acquisition earnings must be added to the parent's reserves** to give the total group reserves.

So, for example, if you have a fully owned (100%) subsidiary which has done well and made a profit of say £10,000 in the year after acquisition, this amount would be added to its reserves in the subsidiaries' accounts.

But what about in group accounts? Well, they are added on too. While the pre-acquisition reserves are not consolidated, the parent will include the post-acquisition reserves (£10,000) in the group reserves.

Example

P Ltd acquired all of the shares of S Ltd at a cost of £80,000 on 31 Dec 20X4, when retained earnings for P and S were £35,000 and £15,000 respectively.

As at 31 Dec 20X6, the retained earnings for P and S were £60,000 and £20,000 respectively. What are the group's retained earnings reported in the consolidated statement of financial position at:

1. 31 Dec 20X4?
2. 31 Dec 20X6?

Solution

Let's start with 31st Dec 20X4. Since this is the acquisition stage, we know from earlier that only the parent's reserves are included in the financial statements. Thus we only include the parent's reserves of £35,000.

However, by 31st Dec 20X6, both the parent and the subsidiary have increased retained earnings. Here we must include, in the group reserves, the group's share of S Ltd's post-acquisition reserves.

How do we calculate this? Well, we know that there were pre-acquisition reserves of £15,000 and now there are £20,000. Since the pre-acquisition reserves were eliminated in the group accounts, this effectively means that S Ltd have increased retained earnings by £5,000.

So, the total group reserves as at 31st Dec 20X6 are calculated as the parent's reserves of £60,000 (given in the question) plus the group share of S Ltd's post-acquisition reserves of £5,000, giving group reserves of £65,000:

	31/12/X4 £'000	31/12/X6 £'000
P Group Reserves	(i)	(ii)
P Ltd : Retained Earnings	35	60
S Ltd : Retained Earnings	-	5
	<hr/> 35	<hr/> 65

Another way of doing the same calculation is as follows:

- **Add up the total retained earnings** of the parent and subsidiary (here £60,000 + £20,000 = £80,000)
- **Subtract the retained earnings of the subsidiary at acquisition** (£80,000 - £15,000 = £65,000).

5. Acquisition accounting: goodwill and fair values

Goodwill on acquisition

When Exxon acquired Mobil thus forming energy giant ExxonMobil, the cost of acquisition was \$73.7bn. However, this doesn't necessarily mean that the sum total of Mobil's assets and liabilities came to \$73.7bn. In fact, it is quite likely that Mobil's net assets were less than this figure, and Exxon paid a premium (above face value) for them. It will do that to reflect value in the brand, customer goodwill, staff knowledge and expertise and other intangible factors. This premium is called

goodwill and represents the difference between the consideration paid and the fair value of the net assets of the subsidiary. It is a figure that will be listed as an intangible asset in the statement of financial position.

There is another thing we need to be aware of here, too. Imagine that Mobil was still using the '**book value**' (that is the value recorded in the accounts) for their assets. This is often the historic cost (original price paid) of the asset with depreciation, which **may not always represent the fair value of the asset**. For example, a building may now be worth a lot more than when it was originally purchased.

This is a problem, because Exxon will have paid the 'fair value' for the net assets of Mobil, and brings us to **the first rule** you need to learn **when consolidating for goodwill: before we consolidate we must make sure that the net assets are updated to their fair value**. If we don't, we could end up under or overstating goodwill and completely miscalculating the value of the investment.

For instance, let's say that the book value (historic cost) of Mobil's net assets is \$60bn but the fair value (current market price) is actually \$70bn. If we don't update the net assets to fair value before consolidation, we will end up with goodwill of \$13.7bn (\$73.7bn - \$60bn), which is inaccurate. **Goodwill is defined as what is paid above the market value, not above the book value**. The fair value of the assets is actually \$70bn, so we need to make an adjustment of \$10bn before we calculate goodwill (which will then be \$3.7bn).

Let's sum this up in a table:

	\$billion
Cost of investment (= value of subsidiary)	73.7
Fair value of net assets acquired	(70.0)
	<hr/>
Goodwill on acquisition	3.7
	<hr/>

Positive goodwill

If the goodwill on acquisition is positive (as in our example above), then it is known as positive goodwill. The **positive goodwill will appear as an intangible non-current asset**.

Positive goodwill will stay the same in future years even if value of the subsidiary goes up. However, **we may reduce the goodwill figure in future if the value of the subsidiary falls** in a process which, you may remember from earlier in your studies, is **called impairment**.

Negative goodwill

If the figure from the calculation is negative, then this is known (perhaps not surprisingly!) as negative goodwill. So what does this mean? Well, basically the amount paid was below the value of the business's net assets. So, the purchaser now has an asset for which it paid less than it's worth - an immediate gain! Of course this gain needs to be recognised and, under IFRS3, **negative goodwill must be recognised immediately in the consolidated income statement as an extraordinary gain and will be charged to the income statement for the period.**

Fair value of net assets acquired

In the previous example we discussed fair value, but what exactly do we mean by this? Here's the formal definition:

Fair value is the amount that would be paid to transfer, i.e. sell, an asset in an orderly transaction between market participants at the measurement date.

An 'orderly transaction between market participants' simply means a normal transaction between two parties transacting at current market rates. So if you were buying a house from a stranger at the market rate, that would be the fair value. If you were buying at below market value from a friend then it would not be the fair value.

If you bought a cup of coffee today for £2, you will have paid the fair value for that cup of coffee, because it just means the price paid for the coffee in an open transaction. Since coffee is such a widely consumed product, it is priced at what we call 'market value'. Therefore, we don't really need to go around talking about the 'fair value' of a cup of coffee because there is already a market standard.

On the other hand, if you went out to buy a company, you might have a harder time finding the fair value, since there is not usually a general market value available. The fair value has to be calculated by taking into consideration many factors such as acquisition costs, asset replacement costs, costs of similar companies and so on.

So, when it comes to consolidation, **we need to make sure that the fair value of the net assets acquired is accurately calculated based on these factors.** We then use this to calculate goodwill.

Going back to our earlier example, we said the book value (historic cost) of Mobil's net assets was \$60bn but the fair value (current market price) was actually \$70bn. That gave rise to a \$10bn adjustment.

That adjustment is known as the **fair value adjustment.**

Fair value adjustments are made to the capital account, (the combination of equity and reserves), to bring the net assets to fair value. Let's take a look at an example to see how this works.

Example - Goodwill and fair value

The following summarised statements of financial performance are for H Ltd and S Ltd as at 31 Dec 20X8.

	H Ltd £'000	S Ltd £'000
ASSETS		
Non-current assets (book value)	2,000	500
Investment in S Ltd	1,500	-
Current assets	600	800
	4,100	1,300
EQUITY AND LIABILITIES		
Equity		
Share capital (£1 ordinary)	3,000	300
Retained earnings	1,000	900
Current liabilities	100	100
	4,100	1,300

H Ltd purchased 100% of the ordinary shares in S Ltd on 31 December 20X8 for £1.5m.

It is estimated that the non-current assets of S Ltd possessed a fair value of £700,000 on 31 December 20X8. Notice that this is different from the book value in the accounts of £500,000 so there will need to be a fair value adjustment here.

Let's show you the consolidated statement of financial position as at 31 December 20X8.

Solution

Alright, so let's start by breaking down what needs to be done here. There's been an acquisition and we need to consolidate the statements of the parent and subsidiary.

(W1) Fair value adjustment

As we noted in the question, there is a difference between the fair value and the book value of the non-current assets and so we need to start by making a fair value adjustment:

	£'000
Book value	500
Fair Value, FV	700
FV Adjustment	+200

We need to make an adjustment of +£200,000

(1) to the non-current assets of the group - to increase the value of assets from £500,000 to £700,000.

(2) to reserves of the group capital account (to recognise the increasing value to shareholders' equity and to ensure the balance sheet still balances).

If you take a look below at the finished example and look at the W1 column you'll see the adjustment being made.

(W2) Goodwill on acquisition

So once the fair value adjustment is done, we can calculate the goodwill on acquisition by subtracting the new fair value of net assets from the consideration paid.

	£'000	£'000
Cost of investment		1,500
Book value of net assets acquired	1,200	
Non-current assets + current assets - current liabilities: 500+800-100		
Fair value adjustment	200	
Fair value of net assets acquired (adjusted)	1,400	(1,400)
Goodwill on acquisition		100

The total goodwill is £100,000.

This is shown in the W2 column below. Don't worry that there is no balancing item in capital in this case - we'll ensure it balances as part of our next step.

(W3) Eliminate cost of investment and subsidiary's equity

You may also remember from the previous chapter that, when we do consolidations, we have to:

- (1) Eliminate the cost of the investment from the parent's books by removing the £1.5m.
- (2) Remove the subsidiary's equity. Capital is easy - That's just £300,000. Watch out for reserves though. It's the original £900,000, plus the extra £200,000 we added for the fair value adjustment.

Take a look at the W3 column in the solution to see how this works.

One thing to note is that, if you take columns W2 and W3 together, they both balance out correctly with £1,400,000 taken off of both assets and equity & liabilities. That's important as it ensures the financial statement does balance.

You'll also notice that the final equity in column W4 is the same as H Ltd's equity which is exactly as it should be, showing we've got our adjustment right.

(W4) Aggregate assets and liabilities

The final step is just adding up all the lines. Take a look at the following calculation table to see all of these steps incorporated into one:

	H Ltd £'000	S Ltd £'000	W1	W2	W3	W4 H Group £'000
ASSETS						
Goodwill				+100		100
Non-current assets	2,000	500	+200			2,700
Investment in S Ltd	1,500	-			(1,500)	-
Current assets	600	800				1,400
	<u>4,100</u>	<u>1,300</u>				<u>4,200</u>
EQUITY & LIABILITIES						
Equity						
Share capital	3,000	300			(300)	3,000
Retained earnings	1,000	900	+200		(1,100)	1,000
Current liabilities	100	100				200
	<u>4,100</u>	<u>1,300</u>				<u>4,200</u>

6. Chapter Summary

So in summary...

- A group is formed when **control** is established (usually based on >50% ownership). A **parent** (controlling entity) and a **subsidiary** (controlled entity) result.
- The **cost of the investment** in the subsidiary can be shown in the parent's separate financial statements at **cost or fair value** (IAS 27)
- **Group financial statements** are based on **economic substance** (as opposed to legal form), and show the group as **a single business entity**.
- **IFRS 10** defines **control** and the **guiding principles** for accounts' consolidation, e.g. uniform accounting policies and same accounting periods. Conditions to allow **exemption from consolidation** are also detailed.

- **Pre-acquisition reserves** of the subsidiary **are not consolidated** as they are part of the cost of investment. However, **post-acquisition**, the group's share of the subsidiary post-acquisition earnings must be **added to the parent's reserves** to give the total **group reserves**.
- **IFRS 3** details the specific **accounting treatment** (i.e. the 'acquisition method'), to handle various aspects of the consolidated accounts (e.g. business combination, treatment of **goodwill and use of fair values** for assets and liabilities of the group).
- **Goodwill on acquisition** is calculated by comparing the value of the subsidiary acquired to its net assets. If the goodwill on acquisition is positive, it is known as **positive goodwill**. If it is negative, it is known as **negative goodwill**. IFRS 3 requires goodwill recognition in the consolidated financial statements.
- **Fair value is the price that would be received to transfer (i.e. sell), an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.**



CIMA Operational Case Study

Chapter 11

IFRS 15 Revenue from Contracts with Customers

1. IFRS 15 Revenue from Contracts with Customers

Introduction

In 2017, supermarket giant Tesco agreed to pay a huge £129m fine following investigations by the Serious Fraud Office and Financial Conduct Authority into irregularities in their 2014 financial statements.

In this set of statements, irregularities were found arising from Tesco's revenue recognition approach, with the result being an overstatement of the company's profits by a whopping £263m. Faced with the threat from rivals like Lidl and Aldi, Tesco overstated its profits in an attempt to present a rosier picture of its current financial position.

Unfortunately for the company, irregularities in its recognition of revenue were identified and the company was brought to account.

Not only does this example highlight the importance of revenue as a performance measure for companies, it also provides an indication of why we have recently seen the introduction of a new standard dealing with revenue.

Objective

Adopted in 2014 and becoming effective from January 2018, **IFRS 15 Revenue from Contracts with Customers** is designed to replace the old standards: IAS 18 Revenue and IAS 11 Construction Contracts.

The development of this new standard stemmed from the **importance of revenue as a performance metric** for users of the financial statements and the **lack of a definitive definition of, and detailed guidance for revenue**.

The objective of IFRS 15 is as follows:

“To establish the principles that an entity shall apply to report useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from a contract with a customer”.

Let's break this objective down by picking out and defining some of the key terms.

Revenue

You may have come across other definitions for revenue in the past. However, the aim of IFRS 15 is to provide a definitive definition for the term and so the following is what you should be using and focusing on during your studies. As per IFRS 15, revenue is:

“Income arising in the course of an entity’s ordinary activities”.

This can vary significantly between businesses, from the income that a shoe store will receive from selling shoes to customers, all the way to the hundreds of millions of pounds that football clubs generate from extravagant television deals and the sales of their top players.

Contract

I’m sure nearly all of you will know what a contract is and will probably be part of some some sort of contract in your day to day lives. However, given the prominence of contracts within IFRS 15, it doesn’t hurt to get to grips with exactly how the standard defines this term:

“An agreement between two or more parties that creates enforceable rights and obligations”.

The idea of performance obligations is going to be key later in the chapter, when we consider recognition and the satisfaction of performance.

Customer

‘Customers’ is another simple term that you will all be familiar with, given that most of us will fulfil the role of customers on a daily basis. However, again, it’s useful to know how IFRS 15 defines this term:

“A party that has contracted with an entity to obtain goods or services that are an output of the entity’s ordinary activities in exchange for consideration”.

Consideration here generally implies that they are **obtaining something in exchange for giving something in return**, usually this will be in the form of a **monetary payment for the goods or services**.

Scope

The next question we have to tackle is what does this new standard cover? Large businesses will be involved in a vast range of complex transactions, so how do we know which of these will be covered by IFRS 15?

To answer this question we need to return to two of the key definitions we were looking at in the previous section. Essentially, a company will need to apply the requirements of this new revenue standard to **any contract where the other party involved is a customer**.

This might sound like a simple statement, but clarification comes from applying the precise definitions for contract and customer that we’ve just seen.

Essentially, a contract a business is engaged in, which results in the transfer of goods or services to, or from, a customer, (counterparty) in return for some form of consideration, needs to have IFRS 15 applied to it.

Exemptions

Unfortunately, as with most things, there are exceptions to this rule. The following are considered to be outside the scope of IFRS 15:

- **Any lease contracts** that a business may have agreed which fall within the scope of **IFRS 16 Leases**. So a contract that a supermarket chain agrees allowing them to lease several buildings for new stores would not be covered by IFRS 15.
- **Any insurance contracts** that fall within the scope of **IFRS 17**. In simple terms, a contract like your car insurance policy would fall outside the scope of IFRS 15.
- **Any financial instruments or contractual rights or obligations covered by IFRS 9 (Financial instruments), IFRS 11 (Joint arrangements), IAS 27 (Separate financial statements) and IAS 28 (Investments in associates and joint ventures)**. So, if our supermarket chain were to enter into a joint venture with a fashion brand, the contractual rights stemming from this venture wouldn't be covered by IFRS 15.
- Finally, should two entities within the **same line of business agree to exchange non-monetary items** to generate sales, such an arrangement would also fall outside IFRS 15's scope.

2. Recognition

The five steps of revenue recognition

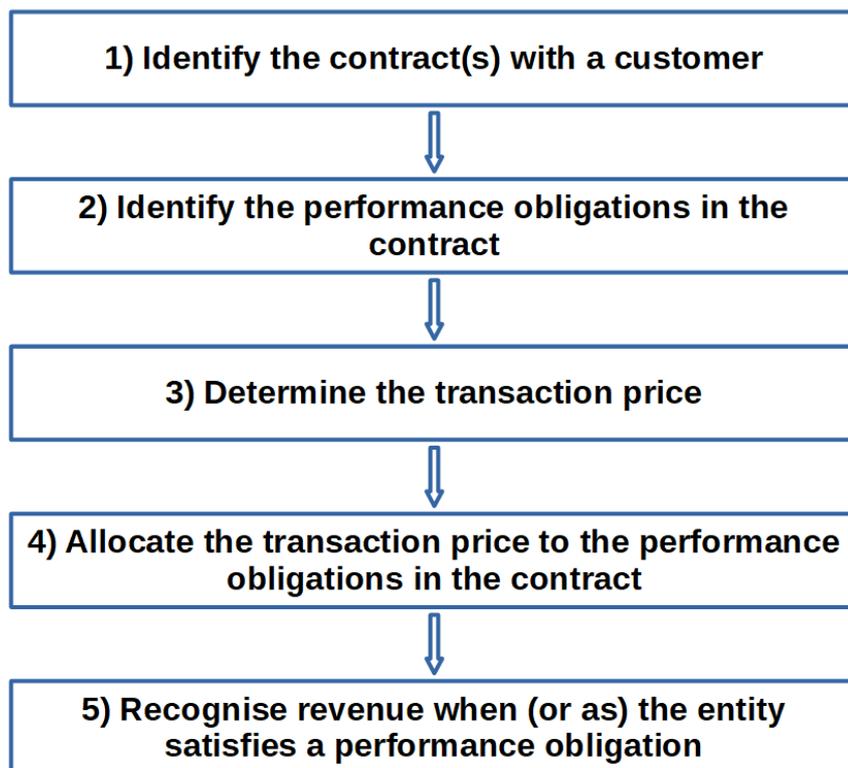
Play Outdoors design and manufacture outdoor playing areas for children. They recently signed a contract agreeing to provide a local primary school with a range of equipment for their new outdoor play area.

The cost of the contract is £6,000, which includes monthly maintenance checks by Play Outdoors's specialists for the first year after purchase, to ensure the continued integrity of the equipment.

The school in question will fund this development via a government grant specifically designed to increase the activity levels in young children.

OK, so given the above, what's the relevant revenue figure that the company should record in its account?

Don't panic! It's not as bad as it seems because IFRS 15 sets out five steps to use to determine revenue recognition:



All Play Outdoors needs to do is follow the steps!

Step 1 - Identify the contract(s) with a customer

If we simplify this a bit, the question to ask is **whether or not there is some kind of contract that creates either a right to be paid or an obligation to provide goods or services**, i.e. no contract, no revenue!

So what are the conditions for identifying a contract? Well, there are a few:

- All parties involved in the contract **must have approved the contract** and **must be committed to performing their respective obligations** as a result of the contract. Approval can be obtained in writing, orally, or via any other customary business practices.
- It must be possible to **identify each party's rights regarding the transfer of goods or services**. That means the customer and the supplier.

- The **payment terms for the goods or services** to be transferred must also be **identifiable**.
- The contract must **have commercial substance** to it. This means that the contract is expected to have an impact on an entity's future cash flows.
- It must be **probable that an entity will receive the consideration that it is owed**, following the transfer of goods or services.

So, back to Play Outdoors. Does the contract meet these conditions? Well let's take a look:

- Play Outdoors and the school have both signed a contract, which means they must have approved the contract and are committed to performing their obligations.
- The contractual rights are also clear - Play Outdoors will provide the school with play equipment and monthly maintenance for the first year after its purchase and the school will provide payment for this.
- Payment terms are also clear - £6,000 for the transfer of these goods and services.
- £6,000 is a large amount for Play Outdoors and so this contract can be seen to have commercial substance.
- Finally, as the funding for the contract is coming directly from a government grant it is very probable that Play Outdoors will receive the consideration that they are due for providing this service to the school.

The answer therefore is yes! This scenario is clearly meeting all the relevant criteria and is therefore identifiable as a contract. We have completed step 1, so on to step 2.

Step 2 - Identify the performance obligations in the contract

This is all about clarifying exactly **what it is that the supplier must provide as set out in the contract**.

For example, say a company sells both new and used cars. The new cars come with a free service in the first year, but the used cars don't. The company would need to know which sort of car had been sold in order to know its performance obligations. If they sell a new car then there is an additional obligation to provide a free service.

So how would a company like Play Outdoors, or the customers to whom they sell their products, recognise what, if any, the performance obligations were? Well for a performance obligation to exist there needs to be:

“A promise in a contract with a customer to transfer to the customer either:

- *A good or service (or bundle of goods or services) that is distinct; or*
- *A series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer.”*

Multiple performance obligations

A crucial point to make here is that **individual contracts can contain multiple performance obligations**. This centres around the idea of whether a good or service is considered to be distinct.

Let's get back to Play Outdoors. The company is providing the outdoor play equipment and monthly maintenance checks for the first year after purchase, so how many performance obligations do we have here?

How do we make this distinction? Well the following criteria come into play, to help us make this judgement. **A good or service is considered to be distinct if:**

- The good or service transferred to the customer is **beneficial either in its own right, or when used together with other resources** which the customer has
- Goods or services transferred as part of a contract are **separately identifiable from each other**

So, if a **contract contains several distinct goods or services, it will contain multiple performance obligations**.

Well:

- Is the play equipment beneficial in its own right with or without the maintenance checks - yes
- Can the school identify the difference between the play equipment and the maintenance checks - yes.

Therefore, there are two distinct performance obligations here.

Step 3 - Determine the transaction price

Unfortunately this step isn't as simple as just saying how much does something cost. The transaction price for a contract is:

“The amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services to a customer”.

Just before we go any further, let's just think about the word '**consideration**', this comes up a lot when talking about contracts. It basically refers to **something given by the recipient to the seller in exchange for the goods and service they are selling**. Usually, therefore, we're talking about financial payments - although not always as you'll see later. Now we've sorted that one out, let's get back to the definition...

This figure does not include any amounts collected for third parties, so for example something like sales tax which is collected for the tax authorities.

As usual with accounting, there are also a number of caveats and other issues which a company like Play Outdoors must take into account when working out the price of a contract.

Variable consideration

So what would happen if Play Outdoors were entitled to an extra 5% bonus on top of their original payment (consideration), as long as there are no quality issues with their equipment within the first year of its purchase?

Well, this would be an example of variable consideration, which is **any amount promised as part of a contract which includes a variable amount**. Examples may include things like performance based bonuses and discounts. Under such circumstances, an entity will need to **estimate the amount of consideration it will be required to transfer**.

A key point with regards to variable consideration, is that it can **only be included as part of the transaction price of a contract if it is highly probable that these sums will be realised**.

What does this mean for Play Outdoors? Well, when they review their data they find that for 95% of the previous play equipment transactions they have been involved in, there have been no quality issues during the equipment's first year of use. Based on these facts, should this extra sum be included in the transaction price for Play Outdoors's contract? The answer is of course yes as this additional consideration could be considered highly probable and should therefore be included in the contract.

Financing components

Another key consideration when determining the transaction price for a contract is **whether this price will be impacted by the time value of money**, (now here's a blast from the past! Time value of money - remember that from your previous studies? If not could be time for a quick recap!). An entity should **consider the following when assessing if a contract contains a financing component**:

- **The difference, (if one exists), between the promised consideration and the cash selling price of the goods or services**

- The effects of a combination of:
 - The **length of time between the transfer of goods or services to a customer and the payment** for said goods or services and;
 - The **prevailing interest rates** in the relevant market.

Taking all of this into consideration ensures that the price of the goods or services accurately reflects the (cash) selling price at the moment at which the sale is actually made, i.e. when ownership, (control of the asset), is transferred.

So if a company sells an asset to a customer for £500,000, for which it expects payment in five years time, (at the end of the fifth year), and the prevailing interest rate in the economy is 3%, there will be an impact on the consideration due to the time value of money. This will therefore need to be calculated.

The £500,000 would need to be discounted to its present value, and this sum would be the one that needs to be recorded in the entity's accounts:

$$\frac{£500,000}{(1.03)^5} = £431,304.39$$

Therefore, £431,304.39 would be recognised as revenue in the selling company's accounts, as and when control of the goods or services in question had been transferred to the customer, (i.e. when they receive the asset).

Non-cash consideration

So when we said we'd discuss the times when consideration isn't always made in cash later - well this is "later"!

Some contracts **may include non-cash consideration** in the form of something like company shares. Unfortunately, this provides another set of complications for us to get our heads around.

Essentially, **non-cash consideration must be measured at fair value. If this fair value isn't attainable**, then what is known as the **stand-alone selling price must be used** for measuring the consideration. You may be familiar with this term from studying at F1. If not, don't worry, let's remind you.

Play Outdoors have a comprehensive price list for all their products so that they can be purchased individually. This includes therefore, the monthly maintenance service and play equipment from our example contract. The prices on this list for these items would therefore be their effective stand-alone selling prices.

In summary, the stand-alone selling price refers to **the price at which goods or services are sold to a customer on a separate basis.**

Consideration payable to a customer

OK. So this is money going from the supplier to the customer - careful not to confuse it with the discussion above which concerned the payment from the customer to the supplier.

Payments to customers may be made for a host of reasons, for example in the form of vouchers or coupons which can be used to discount the price of the next product a customer buys.

So why is this point relevant and what impact do transactions of this nature have on a contract's price? Well, unless the supplier receives goods or services in return for these amounts payable to customers, the supplier should **remove these amounts from their original transaction price, reducing the revenue they would recognise in their financial statements.**

Step 4 - Allocate the transaction price to performance obligations in the contract

So far, we know that Play Outdoors have signed a contract worth £6,000 to develop and install a new outdoor play area for a local primary school. This £6,000 figure includes one year's maintenance cover for the equipment. We know that there are two performance obligations as part of this contract, so how do we know how much of the contract's price needs to be allocated to each obligation?

When allocating the transaction price to individual performance obligations within a contract, the stand-alone selling price, i.e. the price at which goods or services would be sold on a separate basis, **is used** - keep going, there's an example coming up to help explain all this terminology!

Example

With this idea in mind, how would Play Outdoors allocate the transaction price to the obligations within its contract, if the stand-alone prices for the playground equipment and the year's maintenance cover included in the contract are £5,500 and £1,000 respectively?

Well, as discussed above, we must allocate the contract's transaction price to each performance obligation in proportion to the stand-alone prices we've just identified.

So, in our example, the stand-alone price of the equipment being sold is £5,500. The combined cost of this equipment and a year's maintenance cover is £6,500 (£5,500 + £1,000). The ratio of £5,500:£6,500 is roughly 85%, which means that roughly 85% of the £6,000 transaction cost should be allocated to the performance obligation related to the equipment and the remaining 15% allocated to the obligations related to the maintenance. Here are the calculations:

A. Contract price: £6,000

B. Stand-alone equipment price: £5,500

C. Stand-alone maintenance: £1,000

Equipment:

$$\frac{£5,500 \text{ (B)}}{£6,500 \text{ (B+C)}} \times £6,000 \text{ (A)} = £5,076.92$$

Maintenance component:

$$\frac{£1,000 \text{ (C)}}{£6,500 \text{ (B+C)}} \times £6,000 \text{ (A)} = £923.08$$

So £5,076.92 of the transaction price would be allocated to the performance obligation relating to the equipment within the play area, with the remaining £923.08 allocated to the obligation relating to the year long maintenance cover.

The stand-alone price of goods or services is determined based on the prices at the start of the contract. If it is not possible to obtain a stand-alone price for goods or services, then an entity should **estimate this price**. IFRS 15 lists three methods by which this can be achieved:

- **Adjusted market assessment approach** - An estimate based on an evaluation of the market in which goods and services are sold. For instance, Play Outdoors may estimate the stand-alone price for the equipment as part of their school contract, by evaluating the prices of similar equipment provided by their competitors.
- **Expected cost plus a margin approach** - The costs of satisfying a performance obligation are estimated, with a margin added onto this. Here Play Outdoors may calculate how much it will cost them to provide the monthly maintenance and then add a 20% margin onto this figure.
- **Residual approach** - An estimate based on the total transaction price for a contract, less the price of other stand-alone goods or services within the contract. So, if Play Outdoors knew the stand-alone price for the equipment as part of its contract, the company could subtract this value from the total price of the contract, finding the price of providing the monthly maintenance.

Step 5 - Recognise revenue when (or as) the entity satisfies a performance obligation

Congratulations, we've made it to the end of the process! Unfortunately, we have a few final questions to address in relation to Play Outdoors and its contract.

Firstly, when would the company recognise the revenue it is receiving from its contract with the school and secondly, how should the company recognise the revenue from its differing obligations as part of this contract?

Well this is determined by the times at which Play Outdoors satisfies the two obligations within its contract, i.e. when it has provided the play equipment and completed its year's worth of monthly maintenance.

Satisfying performance obligations

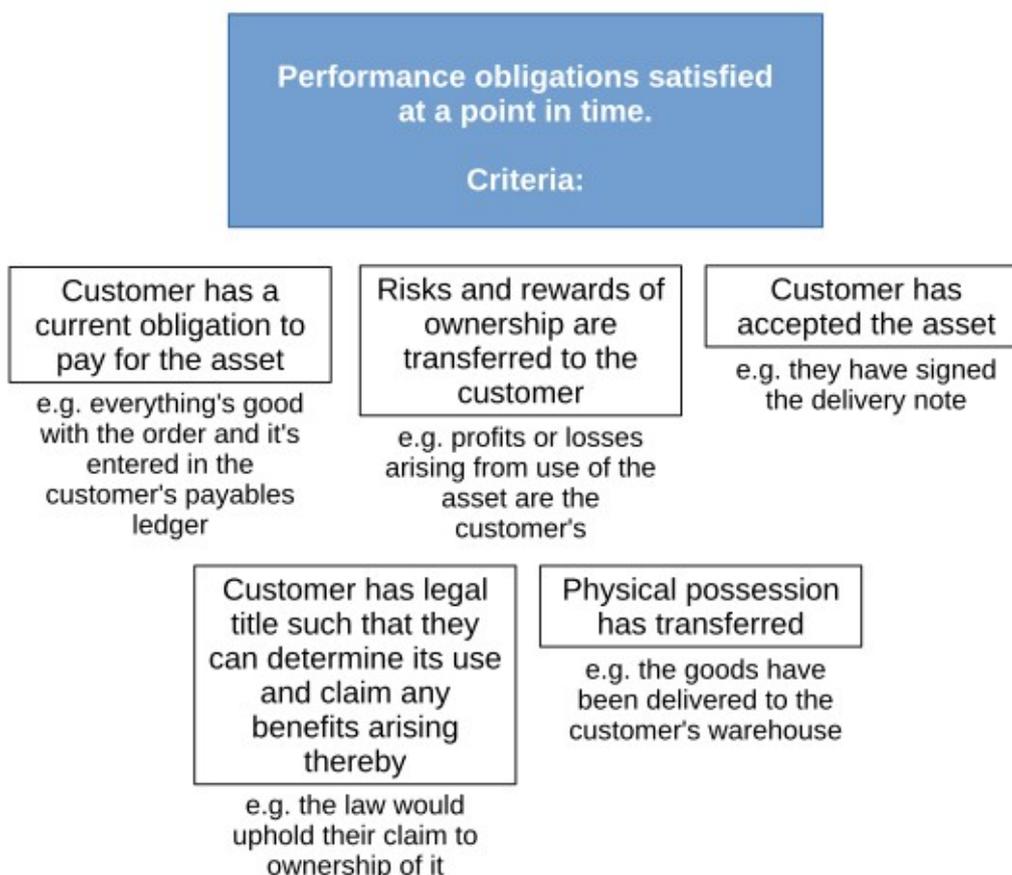
Satisfying a performance obligation centres around transferring of control over the goods or services to the contract's customer. When an entity has satisfied its performance obligations, **it can then, and ONLY then, recognise revenue.**

Control over an asset means being able to direct the use of, and obtain all substantial remaining benefits from, an asset.

Performance obligations are satisfied either at a specific point in time, or over a specified period of time. This is a key distinction for you to be aware of. Where goods are concerned performance obligations are often satisfied at a point in time, i.e. when a customer receives an asset, however, the transfer of services is often satisfied over time; as the service is provided.

Performance obligations satisfied at a point in time

As already touched on, **the point when a performance obligation is satisfied is determined by when control is transferred to a customer.** Indicators that a transfer of control may have occurred include:



Performance obligations satisfied over time

An entity will be satisfying a performance obligation over time if one of the following criteria is met:

- Customers simultaneously receive and consume the benefits that an entity provides, as these are provided.** This is commonly the case with reoccurring or routine services like cleaning. Essentially, for example, you receive the benefit of a clean house, but simultaneously consume this benefit as your house will still need cleaning in the future. In other circumstances however, this criteria may be harder to identify. In these cases, a performance obligation would be said to be satisfied over time, **if another party would not be needed to re perform the work already carried out by the original contracted company as part of taking on the original performance obligation.** So imagine a cleaning company is six months into a 12 month cleaning contract. Were a new company to take up the contract at this halfway point, they wouldn't have to go back to the start of the contract and do 12 months' cleaning from scratch, as six months worth of this work has already been completed. This service therefore doesn't need re performing and the associated performance obligations would be considered to be satisfied over time.

- Its performance **creates or improves an asset which is already under the control of a customer**. A common example here would be the construction of an asset on the property of a customer.
- The asset a company creates has **no alternative use to the entity and the entity has an enforceable right to payment**, (on a contractual or legal basis), for performance completed to date. So here we mean that either contractually, or practically, an entity has no choice but to use the asset which has been created for its original purpose.

In any of the above scenarios, **control of a good, or more likely a service will be being transferred over time. Revenue must therefore be recognised over time accordingly.**

Example

Let's apply this all to Play Outdoors, starting with the play equipment itself. When this is fully installed and ready for use by the pupils, control of this asset will have been transferred to the school. Therefore, the £5,076.92 worth of revenue allocated to this particular performance obligation should be recognised in Play Outdoors' accounts at the point at which the school obtains control of the equipment.

The second part of this contract is of course the monthly maintenance. The school simultaneously receives and consumes the benefits from this service, as work done as part of previous maintenance checks wouldn't need to be re performed if a new business was to take over this part of the contract. This obligation will therefore be satisfied over time.

The £923.08 worth of revenue allocated to this performance obligation will therefore be recognised over the 12 months when this service is provided as shown below:

$$\frac{£923.08}{12} = £76.92 \text{ per month}$$

If the Play Outdoors's contract occurred at the start of their financial year, then this would be easy to account for, as the entire £923.08 would be recognised within the same financial year.

Unfortunately things aren't always that easy! If Play Outdoors's financial year ended on 31 December and the company was required to provide its 12 months service starting in September, then only four months of the revenue from this service would be recognised in the current financial year:

$$\frac{£923.08 \times 4}{12} = £307.69$$

The other eight months being recognised in the following year.

3. Accounting for revenue over time

Imagine that someone wants to build a wall on the border between Mexico and the USA. A substantial undertaking, that's for sure. Well, if they did, there's a good chance that it would take a long time. The border itself is over 3,000 kilometres in length and, with the average length of a brick at 25cm, you're going to need 12 million bricks just for a single layer across the ground! 240 millions bricks will get you a 6ft wall of a single brick in depth.

Anyway, let's say none of that puts them off and they go ahead with it. They get in touch with a large-scale wall building company and receive an estimate of 5 years and a price of \$150 billion to build the wall.

Somewhere, a poor accountant will have to make the entries to account for this building contract. But how will that work? If the rendering of a service occurs within a single reporting period, then accounting for it is easy. However, with long-term contracts, such as constructing an asset like a giant wall, the accounting approach has to be adapted so that annual financial statements include information on how the construction is going. We can't just charge the whole \$150 billion in one year! Perhaps it should be \$30bn per year or, perhaps, there should be another way of calculating it.

IFRS 15

As we touched upon towards the end of the previous section, when performance obligations are satisfied over time, **revenue from these obligations will likewise be recognised over time**. IFRS 15 tells us that the **amount of revenue to be recognised depends on the progress towards completion of the performance obligation**. So for example, if after the first year of wall construction, an estimated 15% of the contract had been completed, then 15% of the revenue could be recognised as a result.

So, we're going to take this basic idea and **apply it to situations where an entity is earning revenue over a long period of time** (such as in the wall example). Recognising this revenue can be broken down in to **four key steps**.

1) Is the contract profitable?

The first step is to determine **whether or not the contract itself is profitable**. There are three outcomes here: profitable, unprofitable and cannot be reliably measured. Let's take a look at each scenario.

Profit expected

If the outcome of the contract can be reliably measured and a profit is expected, **revenue, costs and profit** associated with the performance obligations in the contract should be **recognised based on the project's completion**.

So, let's say the outcome of the Mexican wall contract can be measured reliably. Its total contract value is \$150bn, with costs incurred to date of \$20bn and estimated further costs of \$80bn (\$100bn in total). The first thing to establish is whether or not this contract is profitable:

	\$bn
Contract value	150
Costs incurred	(20)
Costs to completion	(80)
Profit	<u>50</u>

As this contract is expected to be profitable, **the revenue and costs stemming from it would be recognised in the income statement**, based on the project's completion.

Loss expected

However, if a loss is expected, the **entire loss should be recognised as soon as the loss becomes probable**. This is done by **creating a provision**, accounting for what is now an onerous contract (provisions are explained in chapter 17 of this text).

This process relates to the use of one of the key accounting concepts - can you remember which?

Prudence is the answer. As you may remember, the principle of prudence suggests we should always be very careful, even pessimistic. This means never overestimating profits and always recognising losses as soon as they arise.

Let's say the expected cost of building the wall increases from \$100bn to \$200bn. You've already quoted a price \$150 billion, so you'll make a loss of \$50 billion with the increased costs. As soon as this becomes apparent, the full expected loss of \$50 billion is charged at once, even if there are a few years left to completion.

Not measured reliably

Returning to our Mexican Wall example: What if the costs of building materials start to fluctuate, making it impossible to predict the costs of the project? Or perhaps there's political uncertainty and the outcome of the whole project is in doubt?

Where the **outcome of the contract cannot be measured reliably**, the outcome of the contract is uncertain and, as such, **no profit is recognised**.

The **costs are recognised in the period in which they occur**, but **revenue is only recognised to the extent that costs are considered to be recoverable**. (i.e. the revenue is made to equal the costs so the profit/loss is zero).

Let's say that \$20m had been spent on the wall in the first year, the company knew they'd be able to bill more than that for this work in the future, but were uncertain as to the exact billable amount, or, indeed, the overall outcome of the project (making the outcome unreliable). In this case, \$20m would be **shown as both the cost and the revenue** and there would be no profit or loss in the period. However, **once the outcome of such contracts becomes capable of reliable estimation, then profits will be recognised on the basis of stage of completion**.

2) Measuring progress

The next key step in the process is to measure the progress towards the satisfaction of the obligations in question. This **simply means to measure how much of the project has been completed so far**. There are two main ways to calculate this progress:

Input method

Here, the 'stage of completion' is found by looking at the inputs to the project, which of course are the costs incurred to date:

$$\frac{\text{Costs incurred so far}}{\text{Total contract costs}} = \% \text{ complete} \quad \frac{\$25 \text{ billion}}{\$100 \text{ billion}} = 25\% \text{ complete}$$

For example, building the wall on the border was estimated to cost \$100 billion. If the costs incurred so far are \$25 billion, then we would say that the percentage of completion is 25%.

Output method

This method for measuring the stage of completion focuses on the value of work completed in proportion to the total revenue (i.e. the output) for the contract. The value of work completed is calculated based on an equivalent sales value of the work done to date. For example, a year of work on a 4-year contract would be valued at the price of that single year of work. Figures for this amount may be determined by such things as surveys of work performed:

$$\frac{\text{Value of work completed so far}}{\text{Total revenue for contract}} = \% \text{ complete}$$

For example, let's say that building the wall on the border had an estimated revenue of \$150 billion. If the value of the work completed so far was \$50 billion, then we would say that the percentage of completion is 33%.

The stage of completion is assessed and certified by a professional surveyor.

Fundamental accounting concepts

Notice how this process uses the following fundamental concepts:

Prudence concept

- Losses recognised immediately

Accruals/Matching concept

- Costs matched with revenues based on percentage completion
- Costs and revenue recognised in the year they are incurred when they can't be reliably measured

3) Income statement

So far, we've considered how to determine whether a long-term contract is profitable and how to calculate the stage of completion of the contract. But why are we doing this? The reason is that we need to show this contract in the financial statements and to do that, we need some reliable measurements for the reporting period. Let's now consider how we would do that.

We will start with the income statement. This is where we need to recognise revenue and expenses related to the contract - specifically sales, cost of sales and profits (or losses).

Sales revenue

If the outcome of the contract can be **measured with reasonable certainty**, the **sales value of work completed is included as part of revenue**. Since the outcome is certain, we would have no concerns about this information being untrue or irrelevant.

However, we need to be careful of one thing. For subsequent years, the sales values for prior years have to be deducted first, so only the sales relating to the current period are recognised. Let's see an example to illustrate this point.

Example

The following contract details relate to Garget Inc. (the supplier) for an ongoing contract:

	Total contract value	% completed
Year 1	\$20m	35%
Year 2	\$20m	80%
Year 3	\$22m	100%

We will assume this contract can be measured with reasonable certainty. To recognise year 1 revenues, we multiply the total contract value by the % stage of completion in year 1:

$$\begin{aligned} \text{Year 1} \quad & \text{Total contract value} \times \% \text{ stage of completion} \\ & \$20\text{m} \times 35\% = \$7\text{m} \end{aligned}$$

Let's look at Year 2. The revenue to be recognised will be that total contract value multiplied by the percentage completion, which is 80%. We've already recognised the first 35% of that percentage completion in Year 1, so we must subtract it in Year 2:

$$\begin{aligned} \text{Year 2} \quad & (\text{Total contract value} \times \% \text{ stage of completion}) - \text{sales value Y1} \\ & (\$20\text{m} \times 80\%) - \$7\text{m} \text{ (amount recognised in Y1)} \\ & \$16\text{m} - \$7\text{m} = \$9\text{m} \end{aligned}$$

We do the same for Year 3, making sure to subtract the revenue recognised in both Years 1 and 2:

$$\begin{aligned} \text{Year 3} \quad & (\text{Total contract value} \times \% \text{ stage of completion}) - \text{sales value Y1\&2} \\ & (\$22\text{m} \times 100\%) - \$16\text{m} \text{ } (\$7\text{m} + \$9\text{m}) \\ & \$22\text{m} - \$16\text{m} = \$6\text{m} \end{aligned}$$

Cost of sales (COS)

When accounting for these long-term contracts, particularly in the early stages of the contract, the cost of sales is usually a balancing figure found by **deducting the period's profit from the period's sales value**. This is because it is too early to recognise a profit or loss for the contract, for the following reasons:

- **Expected contract losses** - Since the contract usually spans periods longer than a year, they have to be continually reviewed to check if they are still profitable. Whenever there is a loss expected, it has to be **recognised immediately** and this figure is **added to the period's cost of sales**.
- **Uncertain outcomes** - If the outcome of the contract cannot be measured with reasonable certainty, for example, if the contract is still in the early stages, then there can neither be a loss, nor a profit, recognised. The value of **the costs incurred in the year should be recorded and a matching**

amount recorded as revenue (as long as the company are confident they will be able to recoup the costs in the future).

Example

DS Ltd has the following contract details at 31 December 20Y5 for a contract that started at the beginning of the year:

Total contract value	£60m
Contract costs to date	£7m
Estimated costs to completion	£40m
Stage of completion	15%

To record revenue, we might simple multiply the total contract value by the percentage completion, giving us $£60m \times 15\% = £9m$. However, since the contract is in an early stage and the outcome is uncertain, we need to match revenue and cost of sales.

Since we have an exact figure of £7m for the contract costs to date, we will use this as cost of sales. The statement of comprehensive would therefore appear as this:

	£
Sales revenue	7m
Cost of sales	(7m)
Profit/(loss) on contract	0

Contract profits

When the contract is expected to be profitable (as determined in the first step of this process), the contract profits are calculated as the **sales less cost of sales, as calculated by using % stage of completion**.

Again, if there are any **profits which have been recognised in previous years of the contract**, they have to be **deducted from the total profits to date** to get the profit for the current period.

Example

DS Ltd has an ongoing contract that commenced in 20Y1. The following details are for the year ended 31 December 20Y2:

Total contract value	£100m
Contract costs to date	£60m
Estimated costs to completion	£10m
Stage of completion	80%

For the first year of the contract, the year ended 31 December 20Y1, DS recognised profits of £14m. We need to calculate the profit for the 20Y2 year end.

First of all, we need to calculate the total expected contract profit at the end of the project's life, based on the information we have:

	£m
Total contract value	100
Costs to date	(60)
Expected costs to completion	(10)
Total contract profit	<u>30</u>

We can see the project is expected to be profitable, so now we must determine how much of the £30m expected profit should be recognised to date. We do this by using the % stage of completion, which is 80% according to the above information. Therefore, the amounts to recognise for the contract are:

Revenue (80% x 100)	£80m
Cost of sales (80% x 70m)	<u>(£56m)</u>
Profit (80% x 30m)	<u>£24m</u>

However, we are looking for that part of the profit recognised only in the year 20Y2 and the £24m calculated above includes profits recognised in 20Y1. So, we need to deduct this 'old' profit from the total profit to date. The resulting profit is the part of the profits recognised in 20Y2 which is:

Total profits	£24m
Less profits recognised in 20Y1	<u>(£14m)</u>
Profit attributable to 20Y2	<u>£10m</u>

Expected contract losses

If there is any contract loss expected, it has to be recognised immediately. While **revenues and costs are allocated in relation to stage of completion,, expected losses to the end of the contract must be shown in advance** and in addition to the revenues and costs.

Hence, the loss is calculated and shown in total, whereas the revenue or cost of sales will be shown as a balancing figure, depending on the % completion method used:

- **Cost method** - When using this method, we calculate the cost of sales directly and the loss, so the balance will be revenue.
- **Value method** - Using this method requires calculating revenue and the loss, so the cost of sales is the balancing figure.

Example

DS Ltd has another contract that started in 20Y2 and completes in 20Y3. Details at the end of 20Y2 are shown below:

Total contract value	£100m
Value of work completed to date	£75m
Contract costs to date	£85m
Estimated costs to completion	£25m

First, we need to determine the % completed. Using the cost method, we can calculate it to be 77%:

$$\frac{£85m}{£85m + £25m} = 77\%$$

Next, we determine the profitability of the contract:

	£m
Total contract value	100
Costs to date	(85)
Expected costs to completion	(25)
Total contract loss	(10)

The contract is loss-making, so now we calculate how much of that loss would be allocated to each of the two years:

	20Y2	20Y3
	(77%)	(23%)
	£m	£m
Sales	77.0	23.0
Cost of sales	(84.7)	(25.3)
Contract loss	(7.7)	(2.3)

However, since the contract is loss making, we must include whole loss of \$10m in 20Y2. We've used the cost method to calculate % completion, so the revenue (sales) figure will be the balancing figure:

	20Y2
	£m
Sales (balance)	74.7
Cost of sales (77% x £110m)	(84.7)
Contract loss	(10)

If we had used the value method instead, what would be the difference?

The % completed using the value method would be 75% (75/100). The loss remains at \$10m, but this time the balancing figure is cost of sales:

	20Y2
	£m
Sales (75% x £100m)	75
Cost of sales (balance)	(85)
Contract loss	(10)

A small difference, but a difference nonetheless. This highlights the importance of consistency in financial reporting!

4) Statement of financial position

We've dealt with sales, cost of sales and profit, but we haven't yet considered the impact of a long-term contract on the statement of financial position. The main accounts here are receivables (asset) and payables (liability).

Contract assets

As a contract progresses, the costs recognised as cost of sales are based on the stage of completion. However, these **recognised costs might not always equal the actual costs incurred** to date. Remember that, sometimes, transactions recognised

for accounting purposes don't always match reality. For a long-term contract, it is likely that the costs incurred by the supplier may be higher than those recognised (or vice versa). If more costs have been incurred than have been recognised, then those 'unrecognised' costs need to be recognised somewhere in the financial statements.

How is this done? Well, effectively, **a portion of future costs have been incurred, but not recognised, hence these costs should be included as a contract asset** on the statement of financial position, representing money that has been spent, but which relates to a future period (i.e. a prepayment).

Example

DS Ltd has an ongoing contract that commenced in 20Y1. The following details are for the year ended 31 December 20Y2:

Total contract value	£100m
Contract costs to date	£60m
Estimated costs to completion	£10m
Stage of completion	80%

The cost to be recognised as the cost of sales, based on % completion, is:

$$80\% \times (£60m + £10) = £56m$$

However, the costs incurred to date are £60m, which is £4m more than the recognised costs. This £4m is therefore included as a contract asset in the statement of financial position, very much like a prepayment balance.

Receivables

During the course of the contract, the customer usually pays the contractor part of the revenue according to the amount of work done. These payments are known as progress payments. However, as we have seen, we record sales related to the contract based on % stage of completion.

This means that the **actual amounts received from the customer may be less than the amount recognised in the income statement**. When this happens, **the difference is included as a receivable**.

Example

DS Ltd has an ongoing contract that commenced in 20Y1. The following details are for the year ended 31 December 20Y2:

Total contract value	£100m
Contract costs to date	£60m
Estimated costs to completion	£10m
Stage of completion	80%

Progress payments paid amount to £65m

The revenue recognised is 80% of £100m, which is £80m. The progress payments paid are only £65m, so the shortfall of £15m, which is unpaid contract revenue, will be recorded as a receivable.

Payables

Contrary to the above, a customer will sometimes pay progress payments that exceed the recognised revenue. In this case, **a contract liability will be recognised in the statement of financial position.**

Example

Using the earlier example of DS Ltd, suppose this time progress payments paid amount to £90m. The revenue recognised is still £80m, but the progress payments are now £10m more than the revenue recognised. This £10m is the figure included as a contract liability.

4. Consignment inventory

If you look it up, the term ‘consignment’ is all to do with delivering, placing or entrusting goods with another party. In this section, then, we’ll be looking at how to account for consignment inventory (or consignment stock), which is **inventory owned by one party, being held by another party**. The way it works is fairly simple.

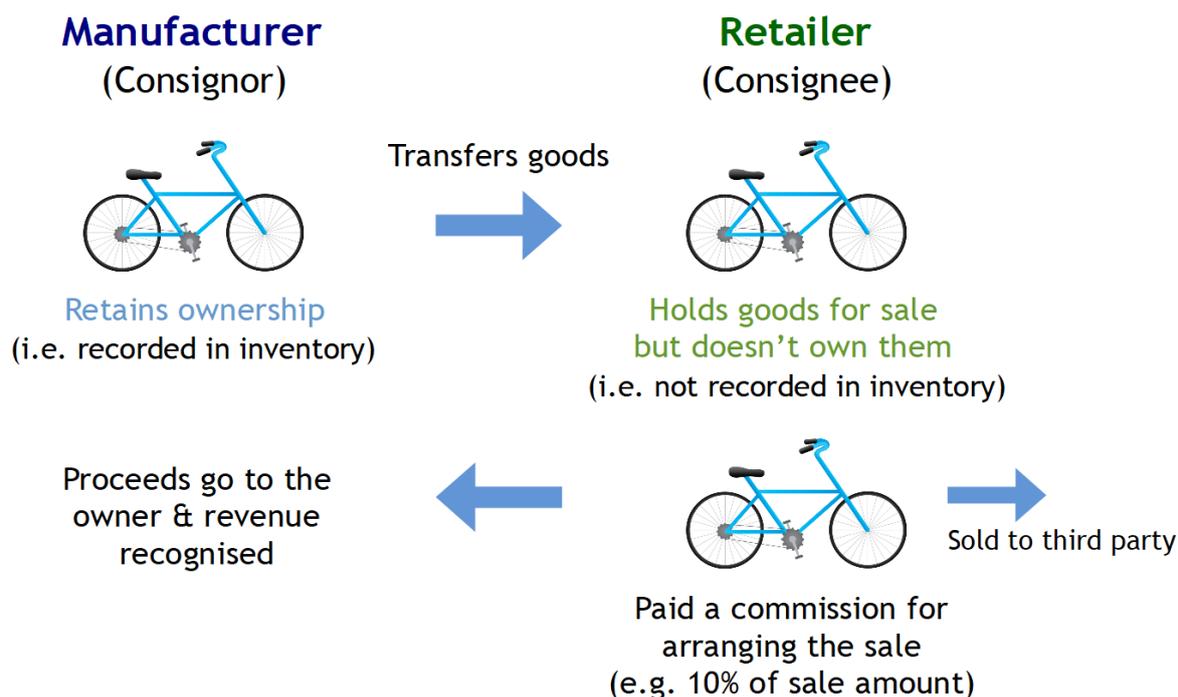
Firstly, you have the two entities involved - the **owner of the goods** (let’s call them the **consignor**) and the **holder of the goods** (let’s call them the **consignee**).

What happens is the **consignor will send goods to the consignee, which the consignee will hold in order to sell**. Upon sale, the **proceeds will go to the consignor** (as they are still the owner) and the **consignee will receive a fee** (paid by the consignor) for their trouble.

This is how consignment inventory works. The aspect that interests us, however, is which entity needs to record the inventory and, thus, de-recognise it upon sale of the goods.

A key aspect of determining when to recognise revenue is when the risks and rewards of ownership have been transferred substantially. We can apply this exact idea to consignment inventory. Thus, the **inventory is recorded only in the books of the consignor** (the owner) until it is sold to a third party via the consignee. It is at this point, **when a sale is made to a third party, that revenue is recognised.**

If no sale is made by the consignee, then the risks and rewards of ownership aren't transferred and no revenue can be recognised.



Example

On 01/01/X1, Pianchi Bicycles (PB) enters into a consignment inventory agreement with bicycle retailer Skidmarx. The terms of the agreement are as follows:

- PB will pay for 15 bicycles to be transported to Skidmarx at a cost of £25 per bicycle
- Skidmarx will arrange for the goods to be distributed and sold for a 10% commission on sale
- Skidmarx must pay an import duty of £50 and selling expense of £10 per bicycle
- The cost of the 15 bicycles is £3,000
- Each bicycle has a selling price of £350
- Any bicycles that remain unsold after six months must be purchased by Skidmarks at cost price

At 01/07/X1, three bicycles remain unsold. How is this consignment arrangement accounted for at this date?

So, as usual, there is a logical process for recording the transactions relating to this contract. Let's go through them one at a time with an example.

1. Consignor - Create consignment inventory account

Firstly, a separate consignment inventory account is set up in PB's books to show that this stock is not the same as the regular inventory:

Dr Consignment inventory	£3,000	
Cr Inventory		£3,000

2. Payment of expenses

As with all inventory, we must include relevant costs when determining the cost value. That means we need to include the transport fees of £25 per bike (£25 x 15 = £375), which is payable by PB. This is a cost to be included in the cost of inventory, so we must add it to the consignment inventory account:

Dr Consignment inventory	£375	
Cr Payables		£375

So, in PB's books, the consignment inventory has a cost of £3,375 at this stage. This is from the two debit entries (£3,000 + £375) to the consignment inventory account, shown above.

Now, we need to consider the consignee's perspective. Skidmarx, the consignee in this arrangement, will pay the import duty and selling expenses on behalf of PB (i.e. PB will repay Skidmarx). These costs come to:

(£10 per bicycle x 12 bicycles sold) + £50 import duty = £170

This amount is recorded as a receivable from PB and an expense payable, effectively showing the expense is eventually to be settled by PB:

Dr PB account	£170	
Cr Payables		£170

However, three bikes remain unsold and Skidmarx will incur the selling expenses for those remaining bicycles.

3. Consignee - Sale of goods

Skidmarx sells the goods on behalf of PB. In this example, we will assume for simplicity the goods are sold for cash:

12 x £350 = £4,200

Dr Cash	£4,200	
Cr PB account		£4,200

The credit entry to the account of the consignor represents an amount due by the consignee to the consignor, as the goods were sold on their behalf and, eventually, Skidmarx will have to give that money to PB.

But don't forget that Skidmarx must also pay PB for the three remaining unsold bikes at cost value. The cost of 15 bikes was £3,000, so the cost of three will be:

$$\frac{£3,000}{15} \times 3 = £600$$

This will be added to Skidmarx's inventory and shown as an amount payable to PB:

Dr Inventory	£600	
Cr PB account		£600
Dr Purchases	£600	
Cr Cash		£600

4. Consignee - Record commission

So, Skidmarx will receive 10% of the sales value for all the bicycles sold. Three bikes remain unsold after six months, so we know they will receive 10% of the sales value for just 12 bikes:

	£		£
12 x bicycles @ £350 each	4,200	@ 10%	420

Which will be recorded as:

Dr PB account	£420	
Cr Commission income		£420

This shows commission income of £420 and a receivable from PB.

5. Consignee - Summarise consignor account

Now, we can figure out how much Skidmarx needs to hand over to PB in total, by putting together a sales summary, which will be sent to PB. The **net income will be the amount payable** to PB:

PB Account - Sales report

	£
Revenue (12 x £350)	4,200
Revenue (3 x £200)	600
	4,800
Import duty	(50)
Selling expenses	(120)
Commission	(420)
Net income	4,210

This will be recorded in Skidmarx's books as:

Dr PB account	£4,210	
Cr Cash		£4,210

6. Consignor - Sales and expenses

Once PB receives the sales summary from Skidmarx, they can make the relevant entries in their own accounts:

Dr Consignment inventory (import duty)	£50	
Dr Selling expenses	£120	
Dr Commission	£420	
Dr Cash	£4,210	
Cr Revenue		£4,800

As the import duty was a cost to be included in the cost of inventory, we must add it to the cost of goods sold by debiting the consignment inventory account.

7. Consignor - Cost of goods sold

Finally, PB will subtract the cost of goods sold to find the net income on the consignment arrangement:

	£
Revenue	4,800
Less:	
Cost of goods sold	3,000
Transport fees (£25 x 15)	375
Import duty	50
Cost of sales	<u>(3,425)</u>
Gross profit	1,375
Selling expenses	(120)
10% commission	<u>(420)</u>
Total	<u>835</u>

5. Sale with Right of Return

HiTek agree a deal to sell 40 laptops to a customer for £700 each. The company offers customers a two month period to return any of the laptops if they are not satisfied with their performance. Based on past transactions, the company estimates that one in twenty of the laptops that they sell will be returned by the customer. The cost of this inventory is £450 per laptop. How would HiTek account for this transaction?

What we've encountered here is what is known as a sale with a right of return, which can be included as part of a contract. Crucially it's specifically mentioned in the syllabus, so is an area you need to be aware of when it comes to your exam.

In a contract which includes a sale with a right of return, **a customer will not only receive control of a product from an entity, but will also receive the right to return the product for various reasons such as dissatisfaction, e.g. it didn't work as promised.** In such situations a customer could receive any of the following:

- A full or partial refund
- A credit which can be applied against other amounts
- Another product in exchange

An entity will recognise the following when accounting for the transfer of products with the right of return:

- **Revenue for the transferred products that the supplier expects to be entitled to.** Therefore, if there is sufficient doubt that the items are going to be returned, then the revenue should not be accounted for.

- **A refund liability**, (i.e. the amount that the supplier will owe to the customer as a result of the refund).
- **An asset** representing the supplier's right to reclaim assets from customers once the refund liability has been settled, (this will also require an adjustment to cost of sales). This recognises the fact that although a supplier will have to reimburse a customer, should they return a product, they will receive the returned product back from the customer. This product must therefore be accounted for.

Example

Now that we know what sale with the right of return is, let's help HiTek out with their accounting. Firstly we need to account for the cash HiTek will receive for this transaction. Whether the customer returns the laptops or not, HiTek will still receive the initial money from the sale:

Dr Cash (40 x £700)	£28,000
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Next we need to recognise the revenue HiTek would expect to receive from this sale. If the company estimates that one in twenty laptops are returned by customers, then two of the laptops sold in this transaction are expected to be returned.

We must therefore recognise the revenue from this transaction minus the value of these two laptops. The value of the two laptops which may be returned is accounted for as a refund liability:

Dr Cash	£28,000	
Cr Sales (Revenue) (38 x £700)		£26,600
Cr Refund liability (2 x £700)		£1,400

Finally, we must account for the laptops that the HiTek would be reclaiming from the customers when the refund liability is settled. Here we also need to adjust cost of sales for the return of these laptops:

Dr Cash	£28,000	
Cr Sales (Revenue)		£26,600
Cr Refund liability		£1,400
Dr Asset (reclaimed for use) (2 x £450)	£900	
Dr Cost of Sales (38 x £450)	£17,100	
Cr Inventory (40 x £450)		£18,000

6. Warranties

Businesses will often provide customers with a **warranty upon the purchase of a product**. This is especially true for more expensive purchases like household appliances or technology. Generally speaking a warranty **provides a customer with assurance that the product that they have purchased will function as per the specifications agreed upon at the time of sale**. It is also possible for some warranties to **provide extra services** to a customer in addition to these assurances.

Option to purchase a warranty separately

If a customer has the option to purchase a warranty separately, then this is **classed as a distinct service** as it is being provided to the customer on top of the main product featuring in the contract.

So, for example, if a customer purchases a laptop and then pays for a year's warranty to protect the product against issues during its first year, then the warranty is classed as a distinct service.

This warranty would be **accounted for in the same way as for any other performance obligation** forming part of a contract. The transaction price for the service would be determined and then allocated to the obligation, with revenue then recognised when the performance obligation is satisfied. This is of course IFRS 15's five-steps of revenue recognition which we went through earlier, so hopefully you are familiar with it by now!

No option to purchase a warranty separately

If the warranty is included as part of the purchase price of a product, then we would account for it according to the regulations set out in **IAS 37 Provisions, Contingent Liabilities and Contingent Assets**. This is because we would effectively be **dealing with a provision** here, (a liability of uncertain timing or amount). There is a dedicated chapter to IAS 37 later in this study text.

7. Principal vs. Agent

When a third party is involved in the provision of goods or services to a customer as part of a contract, an entity will have to deal with principal vs agent considerations.

This consideration centres around whether the **entity has a performance obligation to provide goods or services itself, or whether it is arranging for these to be provided by a third party**. For example, if Play Outdoors were to arrange for a third party groundworks specialist to lay protective surfacing for the school, they would be arranging for services to be provided by a third party.

Principal vs. Agent	
Principal	The entity has a performance obligation to provide goods or services itself.
Agent	The entity has a performance obligation to arrange for the transfer of goods or services through a third party.

For contracts in which an entity is providing multiple, distinct goods and services, it must **distinguish for each set of distinct good or services, whether it is the principal or the agent**. It is possible for an entity to be both the principal and the agent within the same contract. So how do we decide?

Control

The key factor in distinguishing if an entity is a principal, is whether the **entity has control over the relevant goods or service** before it is transferred to the customer. IFRS 15 lists a number of factors which indicate that an entity does control goods or services prior to their transfer to a customer and are therefore a principal:

- The entity is primarily responsible for fulfilling the promise to provide specified goods or services to a customer, e.g. Play Outdoors is responsible for the provision of the play equipment to the school and therefore has control over these goods
- The entity has inventory risk before the goods or services in question have been transferred to a customer, e.g. it will have to bear the losses stemming from any damage to stock prior to sale
- The selling entity can decide on the price of the goods or services prior to their sale to the customers

Revenue

Unsurprisingly, revenue recognition differs depending on whether or not an entity is considered to be the principal or not. If an entity is a **principal, then they will recognise revenue as and when they satisfy their performance obligations**, (as per step five). In this situation, the gross amount of consideration an entity expects to be entitled to will be recognised.

That all sounds nice and simple right? But what happens if, for example Play Outdoors lacks the staff to fulfil the monthly maintenance aspect of its contract with the school? Well, the customer may find another equipment manufacturer to take up this obligation. In the situation would the company be able to recognise the revenue from this part of the contract?

Unfortunately for Play Outdoors, the answer is no! The other company are effectively fulfilling this part of the contract, or rather this performance obligation. This means that Play Outdoors is no longer the principal in this transaction and as a result will not be able to recognise the revenue from this performance obligation.

But, did Play Outdoors act as an agent at any point to provide this service? Did they fulfil this performance obligation of their contract by employing a company to perform this service for the school as they were unable to? Can they therefore recognise any of the revenue linked to this performance obligation? Well again unfortunately the answer is no.

Play Outdoors has had no performance obligations to obtain a maintenance contract for the school from a third party. It has simply failed to fulfil one of the promises within its original contract. It hasn't therefore acted in the role of an agent in this situation and can't therefore recognise any revenue as a result.



CIMA Management Case Study

Chapter 12

IFRS 16 Leases - Lessor Accounting

1. Introduction

Richard Branson was already a successful entrepreneur with his main business being in the music industry when he got stuck in Puerto Rico while, ironically, trying to get to the British Virgin Islands.

“They didn’t have enough passengers to warrant the flight, so they cancelled the flight” he explains on the Virgin website. “I had a beautiful lady waiting for me in BVI and I hired a plane and borrowed a blackboard and as a joke I wrote Virgin Airlines on the top of the blackboard, \$39 one way to BVI. I went out round all the passengers who had been bumped and I filled up my first plane.”

The \$39 represented the average cost per person on the shared journey and from this experience Branson realised that this was an industry in which he could make a profit.

A phone call to Boeing identified a Boeing 747 that he could lease at a knock down price and just a few months later, Virgin Atlantic was born, with scheduled flights between London and the USA beginning with just one plane. Part of Richard Branson's approach to business is to succeed within the first year or exit the market. This includes a one-year limit on everything associated with starting up. In the airline industry this would be tough, but his airline was a success and a new airline was born.

Part of the reason for his success was the ability to lease an aircraft cheaply. With the average cost of a new Boeing 747, (at current prices), being around \$350m, starting an airline with new aeroplanes and making it succeed within a year simply would never have worked, but with leasing he could obtain a very expensive asset at a low price and this would make the venture viable.

Leases are common in the business world. They are the option chosen when businesses wish to use an asset, but do not necessarily have the cash upfront to purchase it outright.

What is a lease?

Having studied leases at F1, you should be familiar with what a lease is by now. However, as a reminder, the basic idea of a lease is where **someone who owns an asset let's someone else borrow that asset for a payment, or series of payments.** You see them all the time in day-to-day life. If you rent a property from a landlord, then you are essentially 'leasing' the property from the owner at a fixed monthly charge.

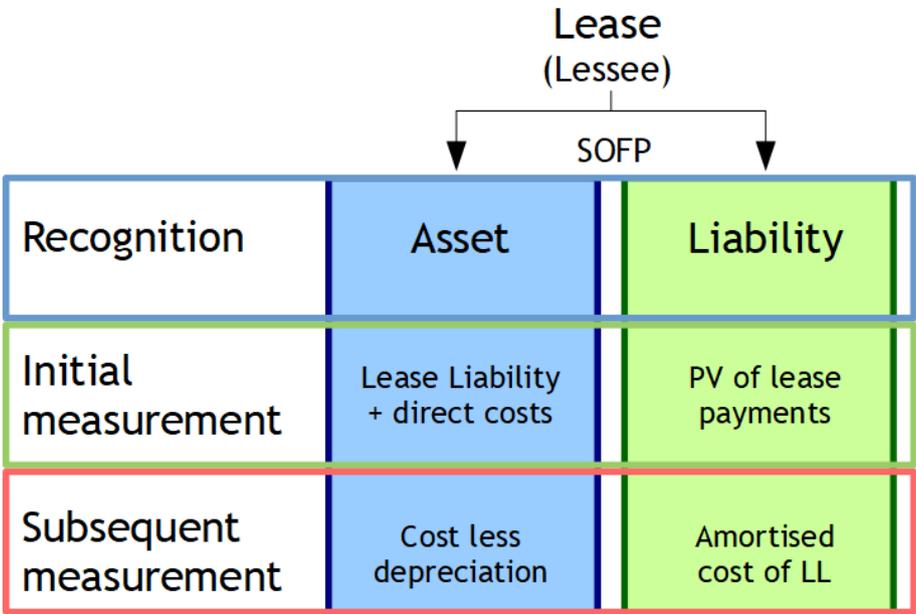
IFRS 16

IFRS 16 is the current accounting standard for leases, setting out the principles for the **recognition, measurement, presentation and disclosure of leases**. This is what you will have been tested on in your F2 exam, so this is the content we'll be focusing on in this chapter. The objective of the standard is to ensure that **lessees and lessors provide relevant information about leases in their financial statements to ensure these transactions are faithfully represented**.

Lessors vs Lessees

IFRS 16 provides the following definitions for lessors and lessees:

IFRS 16 Definitions	
Lessor	An entity that provides the right to use an underlying asset for a period of time in exchange for consideration.
Lessee	An entity that obtains the right to use an underlying asset for a period of time in exchange for consideration.



At management level, we look at things from the other perspective, that of the lessor. Therefore, please note that, for the management level exam **you will only be required to account for leases from the perspective of the lessor!**

Scope

It's useful to have a reminder of **when exactly we need to apply IFRS 16**. The standard applies in almost all cases, but there are **some important exemptions** to be aware of **The general rule is that IFRS 16 applies, unless there is another standard that gives more specific advice**.

For example, IFRS 15, Revenue from Contracts with Customers, gives specific advice on how to deal with licences concerning intellectual property. In cases when we are dealing with such licences, we should always use IFRS 15 over IFRS 16.

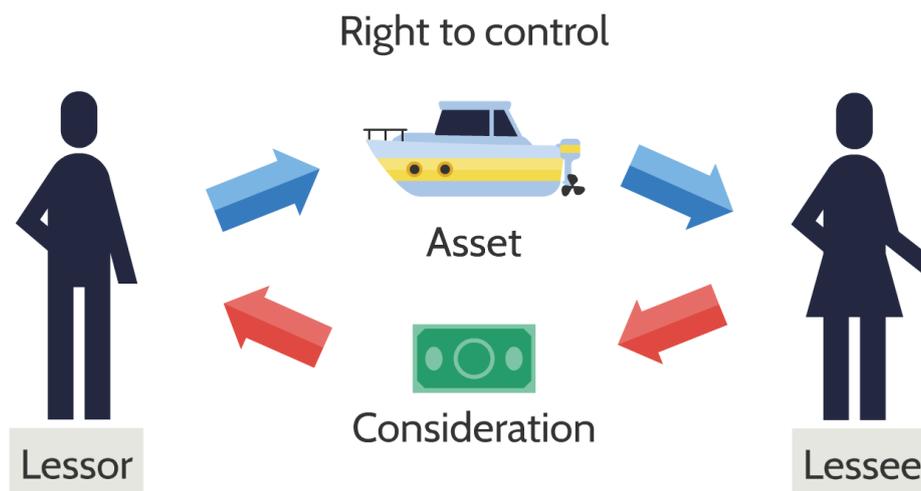
However, there are specific instances when IFRS 16 does not apply:

- Leases to explore for, or use, minerals, oil, natural gas and similar naturally occurring scarce resources
- Leases of biological assets within the scope of IAS 41 Agriculture held by a lessee
- Service concession arrangements within the scope of IFRIC 12 Service Concession Arrangements
- Licences concerning intellectual property granted by a lessor within the scope of IFRS 15 Revenue from Contracts with Customers
- Rights held by a lessee under licensing agreements within the scope of IAS 38 Intangible Assets

Now, you don't really need to know all of these for the exam, but it will help you to understand the limitations in the scope of IFRS 16. Therefore, if you can remember the general rule above and perhaps a specific example, you should be fine!

Identification

A lease is identified if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.



A period of time doesn't have to be measured in time. It may be described in terms of **the amount of use of an identified asset**, such as the number of production units that an item of equipment will be used to produce (e.g. an oven that will bake 10,000 loaves of bread).

Right to control

Establishing the right to control isn't always entirely straight forward. It depends on two things:

- The right to **obtain substantially all of the economic benefits** from use of the asset
- The right to **direct the use** of the identified asset

It is the second point that is most important, as IFRS 16 gives some examples of when the right of use has been transferred. Let's use an example...

If Atlan-Trade leased larger lorries with a restriction on the overall mileage of those lorries of 100,000 miles per year, could it actually be identified as a lease?

According to IFRS 16, yes it could! That's because the **restrictions**, the mileage limit, **define the scope of the lease**. They don't completely stop Atlan-Trade from directing the use of the asset. Apart from mileage, Atlan-Trade can use the lorries for whatever they like.

Separating components - lessor

Sometimes **lease payments include the cost of things other than the rental of the asset**. For example, when leasing machinery there may be a maintenance cost included within the lease payments. We covered how to account for this from the perspective of the lessee in our F1 study text.

So, now to successfully achieve this from a lessor's perspective, we need to tap into our knowledge of revenue and revenue recognition as per IFRS 15. Essentially here, what the lessor would be doing is **carrying out step 4 of the five step process for revenue recognition; allocate the transaction price to the performance obligations in the contract**. This theory is covered in depth in a different chapter of this study text, so please check back to this chapter if you need a reminder of how this process works.

2. Lessor Accounting

As you may have guessed, the accounting treatment for lessors and lessees is, fairly different.

From the **lessors** perspective, they are **losing the use of an asset**, but **gaining regular income**, which may be useful for companies who find themselves in need of a short term cash boost. Think back to Richard Branson and Boeing for a moment - Boeing had an unused 747 on which they were then receiving regular lease payments, thereby making use of that asset to earn an income from it.

However, when we consider the **lessee**, they are **getting the use of an asset**, but **paying a regular expense for this use**. Therefore, this is more for companies who may not want to make a big investment in an asset right away; much like Richard Branson needing an aircraft to test the market at low risk to himself.

When it comes to lessor accounting, we have two different types of leases to deal with. **From the perspective of a lessor, a lease will be either a finance lease, or an operating lease**. Before we explore these two types of lease further, there is one more key idea we need to discuss.

Ownership

Ownership and control are key points for us to understand here.

Ownership vs control	
Lessor	Holds ownership of the leased item, but doesn't enjoy the use of it .
Lessee	Controls the benefits derived from the leased item.

It is important to understand these two points, (ownership and control), because **recognition and accounting for leases depends more on risks and rewards associated with the leased item, rather than just who has legal title over it**.

Under a lease agreement, the lessor and lessee would have agreed upon:

- A period in which the leased asset would be under contract
- The payments which the lessee would have to make in this period to retain the rights of using the leased asset

A lease term is a fixed period, i.e. cannot be cancelled, for which the lessee has contracted to lease the asset. If the lease contract states that the lessee has an option to extend for a further period, and it is highly expected that the lessee will take up this option, then the extended period should also be included in the lease term.

Finance lease

A finance lease is a lease that **transfers** substantially all the **risks and rewards incidental to ownership of an underlying asset**, i.e. essentially the lessee receives any income and suffers any losses associated with the leased asset.

Ownership does not eventually have to pass to the lessee for the lease to be classified as a finance lease.

If **one or all of the following criteria are present**, the lease will be considered to be a finance lease:

- The lease **transfers ownership of the asset to the lessee** at the end of the lease term
- The lessee has **the option to purchase the asset at a price lower than fair value at the option date** and, on the date that the lease begins, the lessee is indicating that there is a high likelihood that they will take this up
- The lease term **covers the major part of the economic life**, (useful life!), **of the asset**, regardless of whether ownership is transferred or not, e.g. if an asset's economic life was ten years and a lease covered nine years of this
- When calculated, the **present value** of the minimum **lease payments** expected, more or less **amounts to the fair value** of the leased asset at the start of the lease, e.g. a new asset costs \$10m and the PV of the lease payments is \$11m
- The lease assets are specialised in some way such that **only the lessee can use them** without having to make major modifications, e.g. purpose built piece of machinery
- The **lessee should be entitled to cancel the lease**, but any losses resulting from this action, which would affect the lessor, **should be paid by the lessee**

- The lessee can continue to **lease the asset for a secondary period** at an amount that is substantially lower than market rent
- The **gains or losses from the fair value fluctuation of the residual value** of the asset **fall to the lessee**

So, if we take the following example:

A company requires new computer servers, but cannot afford to pay for the cost upfront. The company decides to take out a lease with the supplier for 5 years to pay for the new computer servers.

Under the lease agreement, it is arranged that after the 5 years are up and the last lease payment is made, the company has the option to purchase the servers for a nominal amount. There is high likelihood that the company will take this option at the end of the lease term.

Which of the above criteria have been applied?

- *The lessee has the option to purchase the asset at a price lower than fair value at the option date and, on the date that the lease begins, the lessee is indicating that there is a high likelihood that they will take this up* - The company has decided to lease for 5 years and has been provided with the option to buy at the end for a nominal value which would therefore be below the fair value - yes fulfilled!
- *The lease term covers the major part of the economic life of the asset, regardless of whether ownership is transferred or not* - servers are generally considered to have an economic life of between 3-5 years, hence this would also apply

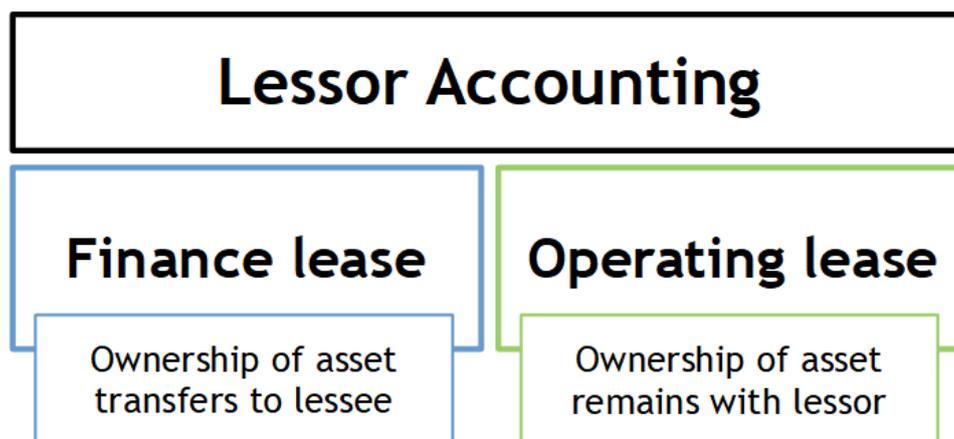
Therefore, as the definition relies on one or more criteria being fulfilled, this would be an example of a finance lease.

Operating lease

An operating lease is basically the opposite of a finance lease. This is any lease that **does not transfer substantially all the risks and rewards incidental to ownership of an underlying asset**. Put simply, if there is **no clear indication that a lease is a finance lease, then it should be recognised as an operating lease**.

A good example of an operating lease would be one that occurs when a company makes lease payments towards its business space. The ownership of the business space does not transfer to the lessee. The lease only allows the company a temporary use of the space.

So the main difference in summary is:



3. Accounting for operating leases

Operating leases are the easier of the two types of leases to account for, so starting here will mean that we can ease ourselves into this topic gently.

Recognition and measurement

Assets held for operating leases are **classified as owned assets in the financial statements of the lessor**. Assets under operating leases are simply rented out, but ultimately, **the rights and risks related to these assets remain with the lessor**.

The assets should be categorised as per the asset classes that they fulfil the criteria of, e.g. office equipment, motor vehicle, machinery, etc. **Depreciation will apply based on the lessor's depreciation policy** for each class of asset and will continue over the asset's useful life.

The **rental payments** due to the lessor will be recorded as **lease income in the profit and loss statement**. It will be **recognised over the lease term on a straight-line basis, based on the total payments** over that period. Basically, this is the average amount that is due to be received per period - however the easiest way to see how this works is via an example:

Example 1

Let's start with a simple example to demonstrate how this works. Company A, (the lessor), leases a machine for £600 a year on a five year contract to Company B. The machine originally cost £2,100 and its useful life will be over at the end of the contract leaving no residual value. Company A uses a straight-line depreciation policy. How will Company A account for this lease?

Annual lease payments:

Dr Bank	£600	
Cr Lease Income		£600

Depreciation:

$$\frac{£2,100}{5 \text{ years}} = £420 \text{ per annum}$$

Unfortunately, things aren't always this simple and there can be a range of variations in terms of lease contracts which need accounting for. Let's adapt our example and take a look at a more complicated scenario.

Example 2

So, imagine that all the information for our previous example remains the same, with the exception that Company A offers Company B half price rental fees on the machine in question for the first year of the lease. Therefore, Company B will now be paying £300 for the first year of the lease and £600 for the remaining four years. How will we account for the lease income here?

Well, lease income is recognised on a straight line basis in the statement of profit or loss. So we can't recognise £300 for the first year and then £600 for the remaining years. The amount we recognise each year must be the same, e.g. effectively the average yearly receipts. This means that we must total up the receipts Company A will receive from the lease and divide them by the number of lease periods:

$$\frac{ (£300 + (£600 \times 4)) }{ 5 \text{ years} } = £540 \text{ per annum}$$

Therefore, now we have this figure, step one in recording the double entry for this transaction would be:

Cr Lease income	£540
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However, we've reached a slight problem now, as we've recognised £540 worth of income (Cr lease) despite the fact that Company A will only receive £300 into their bank in the form of actual lease payments in the first year of the lease:

Dr Bank	£300
Cr Lease income	£540

Essentially, in this situation Company A needs to record some **accrued income**, i.e. money it has earned from the lease which needs to be recognised in year one, but which has not yet been received as cash:

Dr Bank	£300	
Cr Lease income		£540
Dr Accrued income	£240	

For the remaining four years of the lease, this accrued income will be reduced as Company A actually receives the money that it has already recognised in year one. This will look something like this- let's take year two for an example:

Dr Bank	£600	
Cr Lease income		£540
Cr Accrued income		£60

By the end of the lease, the accrued income of £240 will have been reduced to £0 as by this point, the total income will have actually been received by Company A.

4. Accounting for finance leases

Now that we've got our heads around accounting for operating leases, let's take things up a level and look at the more complex process of accounting for finance leases.

Recognition

In contrast to operating leases, assets under a finance lease are not classified as owned assets in the financial statements of the lessor. Although, technically the assets are still under the lessor's name, they cannot be recognised as owned assets, because the **risks and rewards associated with the use of these assets have been transferred to the lessee.**

Instead, the **lessor will recognise the finance lease as a 'lease receivable'** in the financial statements. The lease receivable is recorded at an amount equal to the **net investment in the lease**, (explanation coming up!).

Initial measurement

So, what is the net investment in a lease? Well fortunately, IFRS 16 is on hand here to help us out via some definitions and guidelines. **To understand what the net investment in a lease is, first we need to understand what the gross investment in a lease is - hmm too much terminology!** Let's look at some definitions:

Term	IFRS 16 Definition
Gross investment in the lease	The sum of the lease payments receivable by a lessor under a finance lease plus any residual value , (included even though it is not guaranteed), accruing to the lessor.
Net investment in the lease	The gross investment in the lease discounted at the interest rate implicit in the lease. The interest rate would be quoted as part of the least contract.

So, we have to start with the gross value to get to the net value, however, IFRS 16 further outlines that the following **payments should be included in the present value calculation of the lease receivable**:

- Fixed lease payments
- Variable lease payments
- Residual value guarantees
- The price of a purchase option, if there is reasonable certainty that the lessee will exercise this option
- Any payments in the form of penalties for terminating the lease early

Residual value guarantees

Residual value guarantees may need clarifying further! A residual value guarantee, **is the guarantee to a lessor, by a lessee, that the value of, (or part of), an underlying asset will have a specified value at the end of the lease.**

This 'specified value' will include:

- **Amounts guaranteed as part of a contract** and therefore included in lease payments, **AND**
- **Any unguaranteed amounts** which are not covered by the lease

Example

Company A leases an asset with an estimated residual value of £1,900. The guaranteed residual value as part of the contract is £1,500.

In this example, the guaranteed residual value is obviously £1,500. However, when calculating the company's net investment in the lease, (the lease receivable), we also need to include the unguaranteed residual value.

This is the difference between the estimated and guaranteed residual value figures in the example and equals £400 (£1,900 - £1,500).

The £1,500 guaranteed residual value would be included in the lease payments Company A receives as part of its contract. However, the £400 would need to be added to the sum of the total expected lease payments to calculate the gross investment in the lease. This would then be discounted to its present value to find the net investment in the lease. Simple really! However, if you are still a little uncertain, we do have a comprehensive example coming up to show you how this works.

Double entries

The double entries here are relatively simple. Firstly we need to **recognise the lease receivable**, which as we've just established is the net investment in the lease.

Secondly, we need to **de-recognise the asset being leased in the lessor's statement of financial position**. Finally, in the statement of profit or loss, we then need to **account for any gains or losses** made as a result of the de-recognition of this asset. This would look something like this:

Dr Lease receivable (net investment in the lease)

Cr Non-current asset (de-recognising this in the lessor's SOFP)

Dr/Cr Gains or losses from de-recognition (in SOCI)

Subsequent measurement

Subsequent measurement of a finance lease in the books of the lessor involves two things:

- **Recognising the cash received from the lease, and reducing the lease receivable by this amount**
- **Recognising the interest income from the lease in the statement of profit and loss by increasing the lease receivable**

Double entries

So, the first set of double entries we need to deal with relate to the **cash being received for the lease by the lessor**:

Dr Bank (cash received from lessee)

Cr Lease receivable (reduce asset by amount received from lessee)

Secondly, we then need to recognise the **interest income the lessor will receive from the lease**:

Dr Lease receivable (interest added to the value of the lease asset)

Cr Interest income (recognising this income on the SPL)

Hopefully, you aren't feeling too confused? To add some clarity, let's finish with a comprehensive example which deals with everything we've talked through in this section so far.

Comprehensive example

Company A leases an asset to Company B on a seven year lease for an annual payment of £3,000 paid in advance. The interest rate implicit in the lease is 5%. As a reminder, the asset has an estimated residual value of £1,900 and a guaranteed residual value as part of the contract of £1,500. The asset's book value in Company A's statement of financial position is £20,500.

How would we recognise and then initially, and subsequently, measure this asset in Company A's, (the lessor's), accounts?

Initial measurement

So first we need to calculate the net investment in the lease to be recorded in Company A's accounts. This means we actually need to calculate the gross investment in the lease and then discount this to present value.

As a reminder, the gross investment is the sum of the lease payments receivable plus any unguaranteed residual value accruing to the lessor.

We have calculated the unguaranteed residual value before, so you may recognise it:

Residual value of asset		Guaranteed residual value		Unguaranteed residual value
£1,900	-	£1,500	=	£400

This figure is therefore not included as part of the lease contract.

To this figure we need to add the sum of the lease payments Company A will receive. From our example, we know that the company is set to receive £3,000 annually over the seven year lease period. Our calculation will therefore look like this:

$$(7 \text{ years} \times £3,000) + £400 = £21,400$$

Fairly straight forward right? Well now things get a bit more difficult as we have to calculate the net investment in the lease. To do this, we need to find the present value of this £21,400 figure by discounting it at the implicit rate of interest in the lease, which we're told in the introduction to the example is 5%.

This is done by multiplying the annuity factor for the seven years of the lease by the annual cash payments of £3,000 and then adding this to the discounted value of the unguaranteed residual value of £400.

However, we're going to take the slightly longer route and run through this process year by year to cement your understanding of the process:

Year	Cash flow (£)	Discount factor (5%)	Present value (£)
0	3,000	1	3,000
1	3,000	0.962	2,886
2	3,000	0.907	2,721
3	3,000	0.864	2,592
4	3,000	0.823	2,469
5	3,000	0.784	2,352
6	3,000	0.746	2,238
7	400	0.711	284
			18,542

So, having finished this calculation, we know that £18,542 is Company A's net investment in the lease.. This is the lease receivable which would be recognised in their accounts. At the same time, the company would de-recognise the asset being leased from their accounts, as the risks and rewards associated with it would have been transferred to the lessee.

Finally, Company A will show any gains or losses from the de-recognition of the asset in their statement of profit or loss. From the example, we know that the book value of the asset being leased (£20,500) is higher than the value of the lease receivable we have just calculated (£18,542). This means Company A will have made a loss on de-recognising the asset, which must be expensed in the statement of profit or loss.

This would all look like this:

Dr Lease receivable	£18,542	
Cr Non-current asset		£20,500
Dr Losses from de-recognition	£1,958	

Subsequent measurement

So we've recorded a lease receivable in Company A's accounts and will now need to make adjustments to this figure in every year of the lease period. This is of course for the cash flows from the lease, (which reduce the lease receivable), and interest income (which increase the lease receivable).

Let's start by looking at the double entries for year one, starting with the lease payments:

Dr Bank	£3,000	
Cr Lease receivable		£3,000

So, what about the interest income for year one? Well the key thing to note here is that as payments are made to Company A in advance, we find interest income after cash payments have been removed from the balance of the lease receivable.

At the start of year one, the balance of the lease receivable, is the net investment in the lease which we have already calculated to be £18,542. From this figure we then remove the cash payments Company A receives from the lessee - we have just demonstrated this with the above double entries.

$$£18,542 - £3,000 = £15,542$$

We then find our interest income as 5% of this £15,542 figure and add it to get the balance c/f for the lease receivable at the end of year one:

$$£15,542 \times 0.05 = £777$$

$$£777 + £15,542 = 16,319$$

The double entries for interest income in year one would therefore be as follows:

Dr Lease receivable	£777	
Cr Interest income		£777

The following table should give you an idea of how this process will continue over the seven year lease period. In real life the balance at the end of this period will usually be zero, with any negligible remaining amounts as recorded in the table below, written off.

Year	Balance b/f (£)	Cash payments (£)	Remaining balance (£)	Interest @ 5% (£)	Balance c/f (£)
1	18,542	(3,000)	15,542	777	16,319
2	16,319	(3,000)	13,319	666	13,985
3	13,985	(3,000)	10,985	549	11,534
4	11,534	(3,000)	8,534	427	8,961
5	8,961	(3,000)	5,961	298	6,259
6	6,259	(3,000)	3,259	163	3,422
7	3,422	(3,000)	422	21	443

If payments had been made to Company A by the lessee at the end of the year, this would have impacted the present value of the lease receivable. This is due to the time value of money. A payment of £3,000 made on 01/01/X1 will be different in value to a payment of £3,000 made on 31/12/X1. This is because the later payment has lost an extra year of value. So when we pay in arrears, each payment will be worth slightly less than if we pay in advance:

	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Total
Adv.	3,000	2,886	2,721	2,592	2,469	2,352	2,238	284	
Arr.		2,886	2,721	2,592	2,469	2,352	2,238	2,417	17,675

It would also have required Company A to find 5% interest of the lease receivable balance b/f, with the cash payments then subtracted afterwards in contrast to the calculation we've carried out in the table above:

Year	Balance b/f (£)	Interest @ 5% (£)	Remaining balance (£)	Cash payment (£)	Balance c/f (£)
1	17,676	884	18,560	(3,000)	15,560
2	15,560	778	16,338	(3,000)	13,338

5. Disclosures and Summary

Disclosures

A lessor shall disclose the following for **finance leases**:

- The selling profit or loss

- Finance income on the net investment in the lease
- Income relating to variable lease payments, i.e. payments during a lease term which vary on an unforeseen basis due to changes in facts or circumstances, not included in measuring the net investment in the lease

For **operating leases**:

- Lease income
- Income relating to variable lease payments not dependent on an index or rate must also be disclosed separately



CIMA Management Case Study

Chapter 13

Financial Instruments

1. Introduction

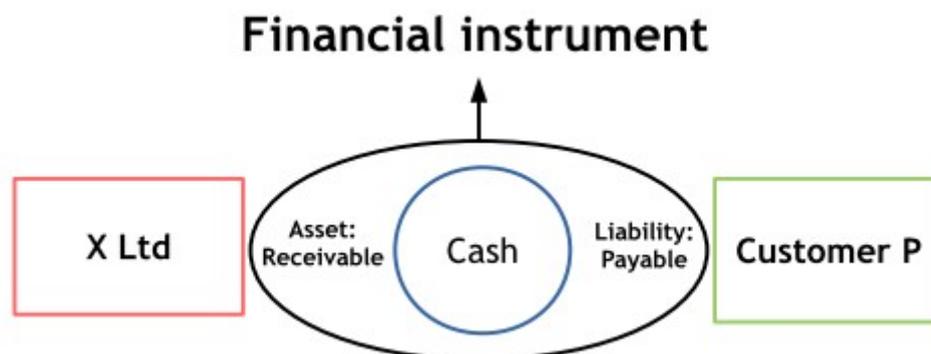
What are financial instruments?

The key to understanding a financial instrument is to think of it not as an object or thing, but as a concept that stands for a particular scenario. Generally, it is the name given to any **contract** that gives rise to both a **financial asset** of one entity and a **financial liability or equity instrument** of another entity.

So what does this mean? Let's consider receivables. This is a term we've come across many times, and we know that it means money owed to an entity by a customer. However, there are accounting implications for both parties; we have an **asset** for the company, (the cash receivable), AND a **liability** for the customer, (the debt, or cash payable).

And, if we look again at the definition, this is precisely what a financial instrument is! A receivable is **a contract that gives rise to a financial asset of one entity**, (the cash receivable for the purchase), **and a liability in another entity**, (the cash payable for the goods/service).

So, in summary a financial instrument is a contract or right, that gives rise to an asset/liability balance between two entities.



Why we account for financial instruments

Receivables is a nice starting place for understanding financial instruments, but unfortunately they do get much more complex. In fact, this is generally considered to be the toughest topic in accounting, so prepare yourself! Here's something to keep in mind that might help to give context to some of the later, more difficult ideas:

Accounting standards for financial instruments were developed in order to properly classify things such as debentures and shares in the financial statements. The complexity arises because these types of investment can get a bit wild, but the

core principles remains the same - how do we include something such as a preference share or irredeemable debt in the financial statements? The aim of the standards on financial instruments is to answer that question.

Prior to the development of accounting standards for financial instruments, there was no comprehensive way to show these instruments consistently in the financial statements. This allowed for the huge accounting scandals that lead up to the financial crisis of 2008. Repackaged sub-prime mortgages, default credit swaps and other complicated accounting tricks effectively covered up the inherent risk in billions, perhaps trillions, of dollars worth of investments and caused the world economy to crash. Regulators thought it might be a good idea to avoid this happening again and so now we have more sophisticated accounting standards for financial instruments.

Accounting standards

There are two aims of this chapter:

- Firstly, you will learn **how to determine whether a financial instrument is a financial asset, financial liability or equity instrument**
- Secondly, you will learn how to **apply the basic recognition and measurement principles of financial instruments**

That may sound complicated, however, it could be a lot worse! There are many aspects of financial instruments that are a great deal more complicated than those that we need to cover for this exam. And of course, we're going to take you through it all step by step with lots of examples - so all should become clear.

There are two accounting standards that we will need to use to learn what has been outlined above:

- **IAS 32 Financial Instrument: Presentation**
- **IFRS 9 Financial Instruments**

IAS 32 tells us how to classify financial instruments as either financial assets, financial liabilities or equity instruments, whilst IFRS 9 tells us the rules for recognition and measurement.

It may seem a bit odd to have two different standards and that's because it is! The reason that this situation has arisen, is due to the fact that the profession is still figuring out how to deal with financial instruments and hasn't yet had time to come up with an all-in-one standard. IFRS 9 is the closest we have come in that regard, and it does a pretty good job.

Prior to these standards, the **financial instruments** were treated as '**off balance sheet**'. This means that financial instruments were neither recognised nor disclosed by companies, even though **shareholders** were unknowingly being

exposed to **significant risks**. This, as we have noted, lead to big problems in the past.

Accounting principles

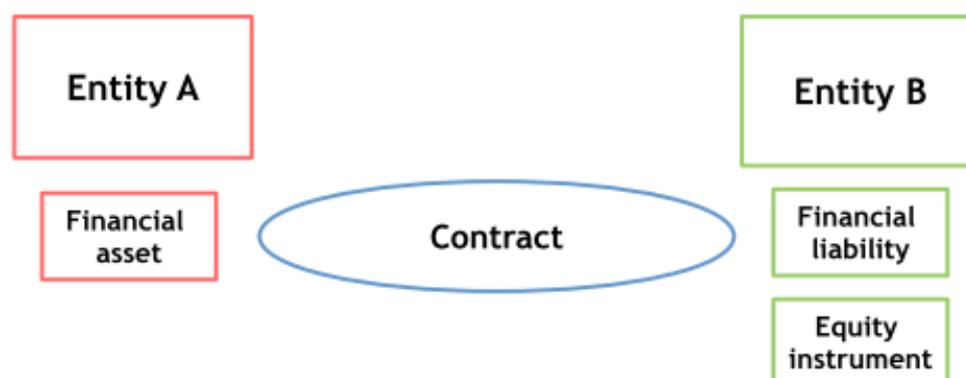
The **basic principle** involved in the financial instrument standards is ‘**reliability**’. The fact is, financial instruments are often based on financial theory and speculation, i.e theory creates a financial product that investors can buy and speculation then drives the demand and price.

The outcome of this has been that, historically, many of the major financial crises have been created by issues arising from unregulated and out-of-control financial instruments. This is why it is so important that accounting for financial instruments is properly regulated and that they are fully documented. This way readers of the financial statements can rely on them as a fair position of the company.

2. IAS 32 - Presentation

IAS 32 Financial Instruments: Presentation

As we discovered earlier, a financial instrument is any **contract** that gives rise to both a **financial asset** of one entity and a **financial liability or equity instrument** of another entity:



Classification

IAS 32 deals predominately with how to **identify and classify financial instruments**, particularly the classification of such instruments into the following categories:

- **Financial assets**
- **Financial liabilities**

- **Equity instruments**

Financial assets

A financial asset can be any of the following:

Cash

So, the simplest financial asset is simply cash. In the receivables example, the asset on which the financial instrument was based was the cash payments for good/ services.

The right to receive a financial asset

A financial asset can be **a contractual right to receive cash or another financial asset from an entity**. With respect to cash, this is a slightly different notion from that given above, since we are talking here about a right to cash, rather than anything physical.

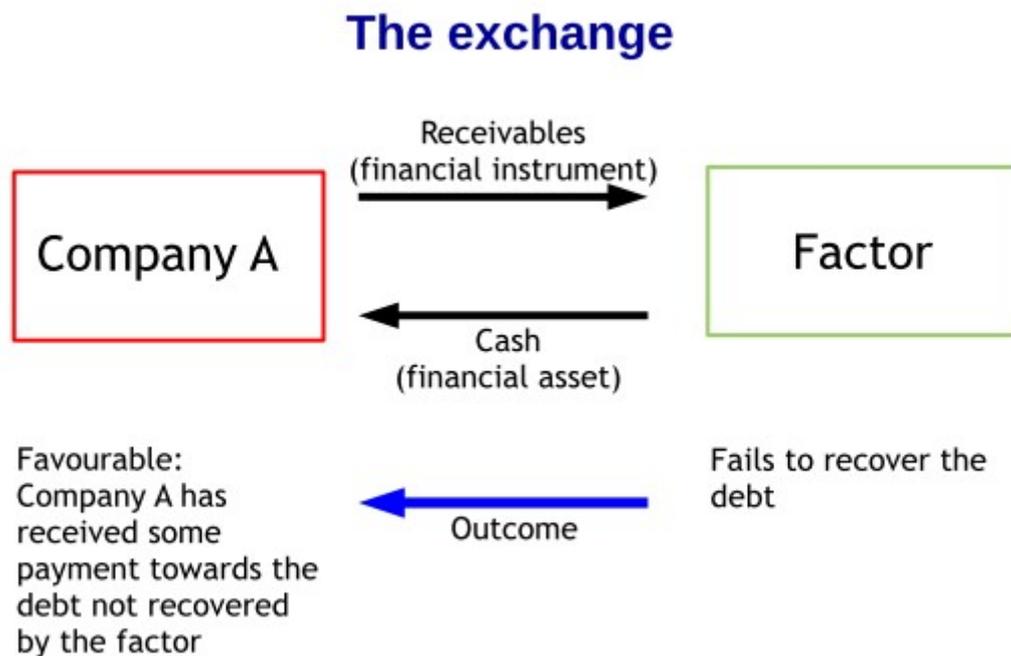
Let's consider a debenture or a bond. If company A invests in a debenture from company B, then company A will have a right to receive cash from company B in the form of interest payments. From company A's perspective, the contract (debenture) gives rise to a financial asset (cash) in their own books. It will also create a financial liability in the books of company B, but we'll look at liabilities in a moment.

The right to exchange financial instruments

A financial asset can also be **a contractual right to exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable**.

Hmm, so what does all that mean? Well, this is where things get a little bit trickier, because now we are talking about the right to exchange a contract between two entities as a measurable asset!

A good way to think of this kind of financial asset would be to recall factoring. Factoring is the selling of an entity's unpaid receivables to an external entity, a factor, at a discount for cash.



In this case, the factor is exchanging a financial instrument (receivables - a right to a financial asset), for cash/financial assets, which could be favourable if the factor is unable to recover the full amount from the receivables, (i.e. Company A receives cash for the receivables, albeit not the full amount as they were sold at a discount, but the receivables are written off as a bad debt and thus make no money for the factor).

An equity instrument of another entity

And finally, a financial asset can be **an equity instrument of another entity**. If company A owns shares in company B, then these shares represent an equity instrument of company B that Company A own. Those shares will be classified as financial assets.

Common examples of financial assets

Financial assets	Cash
	Receivables
	Shares (in another entity)
	Debentures (in another entity)

Financial liabilities

A financial liability can be:

An obligation to deliver cash

Essentially, what we have here is the opposite side of financial assets. A financial liability can either be **an obligation to deliver cash, or another financial asset to another entity.**

So, going back to our opening example, when a customer buys from a supplier they have a contractual obligation to deliver cash to the supplier, i.e. the supplier is a payable for the customer, and this is a financial liability.

We also had the example of company A having a debenture in company B. Since the debenture comes with the obligation to pay interest to company A, company B have an obligation to pay cash and thus the debenture is a financial liability.

An obligation to exchange financial instruments

A financial liability can be **an obligation to exchange financial instruments with another entity under conditions that are potentially unfavourable.**

So, think about the other end of the factoring example here. The company who sells their receivables gets the cash from the factor, but if the factor is unable to recover the debt from the receivables then they will have exchanged financial instruments under conditions that are unfavourable to the factor.

This definition is really designed to refer to complex derivatives, such as options and futures. Don't worry if you don't know what these are, we will introduce them later in the chapter.

Common examples

Financial liabilities	Trade payables
	Derivatives (unfavourable)
	Debentures
	Asset backed securities, e.g. a loan obtained on the basis of using receivables as security

Equity instruments

According to IAS 32, an equity instrument is:

A contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities

Got it? No? It is rather confusing! Let's think about it this way... we know that when we have deducted liabilities from the assets of a company we are left with capital. Thus, residual interest in capital is another way of referring to share capital, or shareholders' equity.

Therefore, the simplest example of an equity instrument is an ordinary share.

Common examples

Equity instruments	Ordinary shares
	Warrants, i.e. a right to shares in the future normally attached to debt
	Preference shares (irredeemable)

Impact on analysis

The definitions of the various financial instruments dictate their classification between debt and equity. Making mistakes on this and thereby misclassifying one as the other can have significant ramifications, such as the impacts on:

- **Financial risk** - The ratio of debt to equity relates to the gearing ratio, which is an important ratio used for financial analysis. Improper classification of debt and equity can have adverse effects on this, i.e. suggesting that gearing is either lower or higher than is actually the case and, therefore potentially exposing shareholders to more risk than they may realise.
- **Profitability** - In a similar way, debt levels have an effect on the calculation of how profitable a company is. Hidden debt, arising from debt being incorrectly categorised as equity, will make an entity appear more profitable than in reality.
- **Profit distribution** - Profit distribution is how investments in debt and equity make a return. Thus, proper classification of debt and equity is needed to ensure accurate interest payments or dividends.

Classification of liability and equity under IAS 32

Considering the above, when classifying financial instruments the following principles must be followed by the issuer of the financial instrument:

- **Substance** governs classification rather than legal form. This means that the legal name of an asset or liability is irrelevant if its nature and purpose are something different. A liability that has all the hallmarks of debt needs to be treated as debt even if the legal agreements calls it equity, e.g. preference shares.
- **Where there is a requirement for mandatory redemption** of the instrument at a future date, then **the instrument will be a financial liability**.
- **Where there is a contractual responsibility to deliver cash**, or similar, to the holder of the instrument, then **that instrument will be a financial liability**.
- **Where there is no such contractual responsibility**, then **the instrument will be classed as equity**.

Characteristics of debt and equity

The basic characteristics of debt and equity instruments are shown in the table below. For example, the return on an equity investment is a dividend and the return on a debt investment is interest; shares denote legal ownership, but bonds are an obligation to repay a debt.

Characteristic	Equity instrument	Debt instrument
Return	Dividends	Interest payments
Rights	Legal ownership	Repayment of debt
Winding-up	What is left after assets are sold and all debt is paid off	Rank before equity holders
Taxation implications	Dividend payment not chargeable against corporation tax	Interest payment chargeable for corporation tax
Income statement impact	Appropriation of post-tax profits	Charge against profits before tax

Complex instruments

There has been a recent trend to introduce **complex instruments** that technically **satisfy the classification of equity**, but for all intents and purposes are **actually debt**. Under IAS 32, these would now have to be classified as equity using a **principle based approach - substance over form**.

For example, the classification of preference shares as debt or equity is **determined by the rights attached to the shares**. If distributions, i.e. payments of dividends, are at the discretion of the issuer, then the non-redeemable shares are likely to be classified as equity as there is no obligation to pay cash. However, where distributions are mandatory, i.e. an obligation to pay cash, the instrument is much more akin to debt.

3. Financial assets

IFRS 9 Financial Instruments

For the rest of the chapter we are referring to IFRS 9 Financial Instruments. This standard covers most of the important stuff, (and a lot of stuff which we don't need for this exam).

Initial measurement

Initial measurement of all **financial assets** is at **fair value (FV)**. The best measure of fair value is the **market price**, although that's not always available, so there are other options which we'll see shortly.

Transaction costs (TC) should be **included in the total cost of the instrument**. For example, if you buy shares in another entity through a stock exchange, that purchase will be done by a broker who will charge a fee and that fee would be a transaction cost. This is effectively capitalised as part of the cost of the financial asset.

The only **exception** to this rule is for assets and liabilities classified as '**fair value through profit or loss**' where the transaction costs are expensed via the profit and loss, hence the name. More on this in the next section.

Subsequent measurement

Fair value through profit or loss (FVTPL)

This is the default category for any equity shares that are held. So if company A holds shares in company B, the following will be true:

- The shares will have been classified as a financial asset

- The shares will have initially been measured at fair value; the market price of the shares
- The shares will be subsequently measured as FVTPL. This means any transaction costs, e.g. the stock broker's fee, will be expensed in the income statement in the reporting period.

This last point makes perfect sense, as we wouldn't want to include the stock broker's fee in the value of the shares.

Additionally, when a revaluation is required, the shares will be remeasured at fair value based on the fair value of the share price. Any gains or losses identified at that point will also go through the income statement in that reporting period.

The idea here is that **the value of any shares held are updated regularly in the financial statements so that the reality of the investment is immediately clear to users** of the statements. Therefore, if a shareholding that was worth £1m decreases in value to £800k, due to a drop in the share price, that loss will be seen in the income statement in the reporting period in which it happens.

Example

AB purchases 100,000 shares in a listed entity TL. The shares were acquired during 20X8 at 120 cents per share, transaction costs were \$2,000. TL's shares are quoted at 31 Dec 20X8 date at 114 cents. AB has classified these financial assets as assets held at fair value through profit or loss. How would these shares be accounted for?

So firstly, we know this falls into the category of fair value through profit and loss. The fair value is simply the value of the shares:

Share purchase consideration = 100,000 shares x 120 cents = \$120,000.

And so, we debit the financial asset account with this value, and credit the bank:

Dr	Financial asset	\$120,000
Cr	Bank	\$120,000

We also know that transaction costs can't be included for this category of instrument, and so the transaction costs are simply expensed in the period:

Dr	Expenses	\$2,000
Cr	Bank	\$2,000

So, as you might expect, subsequent measurement is at fair value. The 100,000 shares should be held at the year end valuation, which was 114 cents per share. This means that AB has made a loss of:

$\$120,000 - \$114,000 = \$6,000$

through the instrument.

As the asset is classified at fair value through profit or loss, the loss should be recorded in the income statement for the period as follows:

Dr	Loss on financial asset (income statement)	\$6,000
Cr	Financial asset	\$6,000

Fair value through other comprehensive income (FVTOCI)

The only real difference with this category is that there is **an intention to hold the financial assets for a longer period**. If, for example, company A buys shares in company B, but with the intention of holding these shares for a few years, rather than trading them in the short-term, then that investment would be fair value through 'other comprehensive income'.

This is the same way that we distinguish between other long-term and short-term assets. For example, a gain or loss on a current asset (short term asset), such as inventory, is shown in the income statement in the period in which the gain or loss occurs. However, a gain or loss in the value of a non-current asset, (long term asset), such as property, is shown in 'other comprehensive income'. It all makes sense after all!

So, going back to our example, here the shares will be remeasured to fair value at the reporting date, but the gains or losses will instead go through 'other comprehensive income'. Remember too that **transaction costs are capitalised in this category**, just as we capitalise expenditure on non-current assets.

Example

If we use the same information from the earlier example, but assume that the shares are expected to be held so are correctly classified as FVTOCI, how would the transaction be recorded in the accounts?

Let's just quickly recap the scenario:

AB purchases 100,000 shares in a listed entity TL. The shares were acquired during 20X8 at 120 cents per share, transaction costs were \$2,000. TL's shares are quoted at 31 Dec 20X8 date at 114 cents.

The initial recording will include transaction costs as it is a FVTOCI asset. Subsequent measurement is at fair value with gains and losses being recognised in 'other comprehensive income' until disposal, when the recognised gains are recycled to the income statement. Let's go through it:

The initial measurement is at fair value:

$\$120,000 + \$2,000$ (transaction costs) = $\$122,000$.

Dr	Financial asset	\$122,000
Cr	Bank	\$122,000

Subsequent measurement is at fair value. The 100,000 shares should be held at the year end valuation of 114 cents per share. AB has made a loss of \$8,000 (\$114,000 - \$122,000). As the asset is classified as FVTOCI, the loss goes through 'other comprehensive income':

Dr	OCI (loss)	\$8,000
Cr	Financial asset	\$8,000

Amortised cost

So we've considered the measurement of short-term and long-term shareholdings, but earlier on we identified that investments in debts, such as debentures, are also classified as financial assets because they give rise to a right to receive cash. How do we measure those?

Well, this is partly the reason for this third category: amortised cost. If you've come across amortised cost before you'll know that it usually relates to measuring future cash flows with a particular interest rate, or cost of capital. Well, it's the same sort of thing here. The debenture itself will have a par value, the amount paid to acquire it, but we also need to consider the future cash flows that we'll receive.

Before we look at the measurement though, there are some strict rules for categorising a financial asset at amortised cost:

- **There must be a business model, e.g. financial strategy, investment scheme, detailing the intention to hold the investment until its maturity**
- **The investment must establish contractual rights to cash flows on specific dates**

So, if a debenture is to meet these conditions, the company holding the debenture must intend to hold the investment until the maturity of the instrument, i.e. the date it expires and the contract is fulfilled, and the contract must give rise to specified cash payments, e.g. a 5% coupon rate, par value £1,000.

Example

Let's say \$1,000 of bonds are issued at a 5% coupon rate redeemable in two year's time at par, i.e. \$1,000 is paid back at the end of year 2. Interest payable in both the first and second year is \$50 (5% x \$1,000).

How do we measure that?

Well, first things first, does it meet the conditions for amortised cost? We're told that the investment is for two years, so we can see there is an intention to hold the investment. Also, the investment pays 5% interest per annum, so we can also see that a contractual right to cash flows is established. So, yes, it seems we are in the category of amortised cost!

Now we need to think about how we are required to show this in the financial statements. We know it's an asset, so we'll show it as such in the SOFP. As for the income statement, it's here that we'll be showing the interest receivable.

So, the value of the bonds are \$1,000 - that's what we'll start with as the cost of the financial asset in the SOFP. Our initial measurement is:

Dr	Financial asset	\$1,000	
Cr	Bank		\$1,000

In year 1, we need to make entries that deal with the interest charge and payments. We charge the interest at 5% and subtract the interest paid each year of \$50:

Year	Financial asset b/f	Income statement Interest @ 5%	Cash (coupon)	Financial asset c/f
1	\$1,000	\$50	(\$50)	\$1,000
2	\$1,000	\$50	(\$50)	\$1,000

The entries for this transaction will be:

Dr	Financial asset (SOFP)	\$50	
Cr	Interest receivable (IS)		\$50

To recognise the interest charge, and then to recognise the interest payments:

Dr	Cash	\$50	
Cr	Financial asset		\$50

The \$1,000 balance is written off when the debt is paid at the end of year 2:

Dr	Bank	\$1,000	
Cr	Financial asset		\$1,000

Debt purchased at a discount

Okay, so that was a simple example to get us going, but there are additional complexities when we have scenarios in which debt is redeemable at a premium, or is purchased at a discount.

For example, the \$1,000 value of the bonds above is the **par value**, which is **the initial value of the bonds**. But, they may be offered at a discount to make them more attractive to lenders.

Thus, you could get a bond with par value of \$1,000 but purchased at a discount of 5%, which means you only pay \$950 for a \$1,000 bond. \$950 will be the cost of the financial asset in the SOFP. The interest, however, will still be based on the par value, which in this case was 5% of \$1,000 = \$50 per year. 5% of \$950 is \$47.50, but we are receiving \$50, so the coupon rate of 5% is no good to us. We need a way to account for this and we will go through this, but we need to look at one more thing first.

Debt redeemable at a premium

There is another additional complexity of which we need to be aware. **Debt can also be redeemable at a premium**. For example, our \$1,000 bonds might be repayable at a premium of \$100, which means the principle of \$1,000 will be repaid, along with a premium of \$100 (and of course the interest). Again, the idea is to make the investment more attractive to investors.

Let's think about what happens if we buy debt at a discount but that debt is repaid at a premium:

Par value	\$1,000
Coupon rate	5%
Discount	5%
Premium	\$100

The cash paid out to purchase the debt will be:

$$95\% \times \$1,000 = \$950$$

The cash received from the debt will be:

Principal	\$1,000
Premium	\$100
Interest	\$100
	<hr/>
	\$1,200

The difference between the cash paid and the cash received is accounted for as interest received, which in this case will be:

$$\$1,200 - \$950 = \$250$$

This means the coupon rate of 5% is not the effective rate of interest on this debt. So, when we are accounting for a scenario like this we have to **charge interest at the effective rate**, (don't worry about having to calculate it as it will be given to you in the question!).

So, let's move on from our very simple \$1,000 bonds to a more complex example that is more in line with what you might get in the exam.

Example

CD invests in debt of \$30 million on 1 Jan 20X1 with a 1% discount. The coupon rate of the debt is 5% per year, payable on 31 Dec, and is itself repayable on 31 Dec 20X5 at a premium of \$5 million, i.e. the total repayment is \$35 million. The effective interest rate is 8.0865%.

How will the debt be accounted for?

Well, it isn't really any different to what we did before, other than we need to be a bit careful with our effective interest rate and interest payments.

Initial measurement is straightforward. The value of the debt in the books should be recorded at the 1% discount, which will give us a cost of:

$$\$30,000,000 \times 99\% = \$29,700,000$$

This will be our starting balance for the financial asset. Let's take a look at what the first year would look like:

Year	Balance b/f	Effective interest @ 8.0865%	Payment	Balance c/f (SOFP)
	\$'000	\$'000	\$'000	\$'000
20X1	29,700	2,402	(1,500)	30,602

Not so bad, right? We charge the interest at the effective rate and then subtract the payment, which will be based on the coupon rate, to get the financial asset carried forward figure. We just need to follow this process for each year of the debt:

Year	Balance b/f \$'000	Effective interest @ 8.0865% \$'000	Payment \$'000	Balance c/f (SOFP) \$'000
20X1	29,700	2,402	(1,500)	30,602
20X2	30,602	2,475	(1,500)	31,577
20X3	31,577	2,553	(1,500)	32,630
20X4	32,630	2,639	(1,500)	33,769
20X5	33,769	2,731	(1,500)	35,000

The balance of \$35m matches the amount that will be repaid in debt.

The accounting transaction for this process would be:

Initial measurement at net proceeds:

Dr	Financial asset	\$29.7m	
Cr	Bank		\$29.7m

Subsequent measurement at amortised cost using the effective interest rate (from table above):

Dr	Financial asset	\$902,000
Dr	Bank	\$1,500,000
Cr	Interest receivable	\$2,402,000

The increase in the asset is the difference between the interest charge and the cash receipts, i.e. $\$2,402,000 - \$1,500,000 = \$902,000$.

Effective interest

Looking back at this last example, it's worth noting that the total effective interest over the 5 years of this loan totals \$12.8m, (that's the total of the effective interest column in the table we produced earlier).

That also happens to equal the total of:

- (1) The 5 interest payments ($5 \times \$1.5m = \$7.5m$)
- (2) The total premium on the debt after discount ($\$35m - \$29.7m = \$5.3m$)

Of course this is not a coincidence - the effective interest rate is calculated to ensure this is the case. You don't have to worry about how the effective interest rate is calculated for this exam, but it's worth noting that this is how it works. Further, it's also worth being aware that the **total finance cost includes both the interest payments and any premium paid**.

4. Financial liabilities

Introduction

Financial liabilities, as you might expect, use the same rules for recognition and measurement as financial assets, only from the opposite perspective. So, generally, what we are talking about here is **accounting for debt instruments, e.g. bonds, debentures, etc., that have been issued by the entity.**

Initial measurement

Initial measurement of all **financial liabilities** is at **fair value (FV)**. The key difference here is that **transaction costs will be subtracted from the fair value**. For example, if you issue a debenture with a par value of \$1,000, but the broker charges \$50 as their fee, then the cash you receive related to the liability will be the par value of \$1,000 less the \$50 transaction costs, which is \$950. This is known as the '**net proceeds**'.

Subsequent measurement

Fair value through profit and loss (FVTPL)

You can ignore this because it won't be in the exam, however for those still reading, it is possible to categorise a financial liability as FVTPL if there is an intention to trade the debt instrument in the short-term. The accounting is the same as for financial assets except of course the debits and credits will be the other way around. Gains or losses will be put through the income statement in the reporting period.

Amortised cost

This is much more likely to be the way that debt instruments are categorised. The accounting will again be the same as with financial assets, expect the entries will be reversed. Just to show you how that works, we'll take the same example as before, but account for it from the perspective of the issuer of debt.

Example

EF issues debt of \$30 million on 1 Jan 20X1 with transaction costs of 1%. The coupon rate of the debt is 5% per year (payable on 31 Dec) and is itself repayable on 31 Dec 20X5 at a premium of \$5 million, i.e. the total repayment is \$35 million. The effective interest rate is 8.0865%.

Initial measurement at fair value less transaction costs. Transaction costs are 1%, so that will be:

$$\$30,000,000 \times 99\% = \$29,700,000$$

Dr	Bank	\$29.7m	
Cr	Financial liability		\$29.7m

This will be our starting balance for the financial liability. Let's take a look at what the first year would look like:

Year	Balance b/f	Finance cost @ 8.0865%	Payment	Balance c/f (SOFP)
	\$'000	\$'000	\$'000	\$'000
20X1	29,700	2,402	(1,500)	30,602

So, rather than charging interest, we are calculating finance costs, which is the same thing except when viewed as a finance cost, it's obviously an expense rather than income. As you can see, everything else is the same. Following through all periods:

Year	Balance b/f	Effective interest @ 8.0865%	Payment	Balance c/f (SOFP)
	\$'000	\$'000	\$'000	\$'000
20X1	29,700	2,402	(1,500)	30,602
20X2	30,602	2,475	(1,500)	31,577
20X3	31,577	2,553	(1,500)	32,630
20X4	32,630	2,639	(1,500)	33,769
20X5	33,769	2,731	(1,500)	35,000

Subsequent measurement at amortised cost using the effective interest rate (from table above):

Cr	Financial liability	\$902,000
Cr	Bank	\$1,500,000
Dr	Finance cost payable	\$2,402,000

The increase in the liability is the difference between the finance cost and the cash payments, i.e. $\$2,402,000 - \$1,500,000 = \$902,000$.

	Financial assets	Financial liabilities
Initial measurement	FV plus TC FVTPL --> TC expensed	FV less TC FVTPL --> TC expensed
Subsequent measurement	<p>FVTPL</p> <ul style="list-style-type: none"> • Default • Trading shares • Gains/losses --> P&L <p>FVTOCI</p> <ul style="list-style-type: none"> • Held shares • Gains/losses --> OCI <p>Amortised cost</p> <ul style="list-style-type: none"> • Intent to hold + cash flows • Held debenture • Par value (less discount) plus effective interest (P&L) less cash received <hr/> <p>FA c/f (SOFP)</p>	<p>FVTPL</p> <ul style="list-style-type: none"> • Gains/losses --> P&L <p>Amortised cost</p> <ul style="list-style-type: none"> • FV less TC plus finance cost (P&L) less cash payment <hr/> <p>FL c/f (SOFP)</p>

5. Hybrid instruments

Definition

The final thing for us to look at is hybrid instruments. A **hybrid instrument** is one that has **both debt and equity characteristics**. The most common example is that

of a **convertible debenture**. This is a form of debt finance that comes with the right to convert to equity, (usually ordinary shares).

For example, an entity might issue debentures worth \$1,000 that come with the right to convert to 1,000 x \$1 shares. Upon conversion, the investment would need to be recognised as an equity instrument, i.e. ordinary shares, rather than a financial liability, e.g. debenture.

Initial measurement

When accounting for such instruments, they must be **classified** as **both a financial liability and equity**. Let's start with a simple example to explain the principles of liability and equity.

Liability

The liability portion relates to any **future cash receipts** (interest payments made from the issuer to the holder) **from the convertible debenture in present value terms**. So, how much will we receive in cash from the debenture and what is the value of that cash in today's money?

Let's say a \$1,000 convertible debenture is issued at a 5% coupon rate, redeemable in one year. Interest payable in the year is \$50. In one year's time, the amount that needs to be paid is the principle and the interest - that's \$1,050.

Of course, that's an amount paid in one year and not now, so to find it in current terms we need to **discount it to its present value using a market interest rate for non-convertible debt**. Why do we do this? Well, this is important because **we want to know the value of the debenture if we don't convert it**. Also, be careful, often the coupon rate will be lower than the market rate because of the benefit to the investor of convertibility, so take care to choose the correct rate.

So, let's say the market rate is 10%. The discount factor is:

$$\frac{1}{(1+0.1)}$$

(or 0.909 if you looked it up in the discount tables.)

$$\text{Present value} = \$1,050 \times \frac{1}{(1 + 0.1)}$$

$$\text{Present value} = \$955$$

So, in current terms the value of the debt portion of the debenture is \$955. That's the financial liability.

Equity

Let's say that the convertible element of the debenture means that the bonds can be converted into 1,000 shares with a market price of \$1 each. Therefore, if the bonds were converted they would be worth \$1,000.

What does all this mean? Well, at the date of issue we can see that the bonds are worth more as equity (\$1,000 of shares) than as debt (\$955 - PV of debt calculated above). Any wise investor would therefore choose the option with the greater economic benefit, which means that the value of \$1,000 must be recorded in the accounts. But, it's not as easy as just putting the \$1,000 in - that figure must be split to show the financial liability of \$955 and the extra gained of \$45 if it is converted to equity.

Subsequent measurement

Liability

Good news! The liability is subsequently measured at **amortised cost**. We've already covered that twice in this chapter so let's try to save paper! We'll briefly go through it again in the example below.

Equity

Even better news! For subsequent measurement, the **equity will remain unchanged** for future statement of financial position (SFP) dates.

Example

HI issues 3,000 convertible bonds at the start of the year. The bonds have a 3 year term and are issued at par with a face value of \$1,000 per bond. The coupon rate on the bonds is 7%. Each bond is convertible at any time up to maturity into 100 ordinary shares.

When the bonds are issued, the prevailing market interest rate for similar debt without conversion options is 9%. At the issue date, the market price of one ordinary share is \$2.50. The coupon expected over the 3 year term of the bonds amount to 10 cents per share at the end of each year. How will the bond be classified in the financial statements?

Liability component

So let's take this one step at a time. Starting with the liability component, we need to start by calculating the present value of future cash flows.

The total cash proceeds from the bond will come to \$3,000,000 payable in 3 years time; 3,000 bonds worth \$1,000 each. There are also the interest payments to think about. The bond's coupon interest rate is 7%, and so $3,000,000 \times 7\% = \$210,000$.

Okay, so how about the discount rate? Well, we use the market interest rate of 9% to discount both the bond and the interest payments. Let's put these figures into a present value table:

Year	Cashflow (\$)	Discount @ 9%	Present Value (\$)
1	210,000	1/1.09	192,661
2	210,000	1/1.09 ²	176,753
3	3,210,000	1/1.09 ³	2,478,709
			2,848,123

Note that the discount formulae are used for discount factors here rather than those from the discount tables. That's because the discount table figures round to 3 decimal points and that creates a rounding error later in the process, which it is nice to avoid!

Equity component

Next, we need to calculate the equity component. This is the difference between the cash raised if the bonds were converted and the liability.

The proceeds if the debt were converted will be \$3,000,000 and the liability comes to \$2,848,123. Therefore:

	\$
Total value of bond issue	3,000,000
Total liability component	(2,848,123)
Equity component (balancing figure)	151,877

For subsequent measurement, the **equity will remain unchanged** at \$151,877 at subsequent statement of financial position (SOFP) dates.

However, the **debt will change as follows**:

Year	SOFP Liability b/f	P&L Interest expense @ 9%	Interest paid (coupon)	SOFP Liability c/f
1	\$2,848,123	\$256,331	(\$210,000)	\$2,894,454
2	\$2,894,454	\$260,501	(\$210,000)	\$2,944,955
3	\$2,944,955	\$265,046	(\$210,000)	\$3,000,000

At the end of year 3 the \$3m debt will be paid back cancelling out the \$3m liability.

Summary

	Liability component	Equity component
Initial recognition	<p>Present value of future cash-flows</p> <p>Discount rate of a similar instrument without conversion rights</p>	Balancing figure, i.e. difference between cash raised and liability
Subsequent recognition	Amortised cost	Unchanged

6. Derivative financial instruments

Introduction

Derivatives are financial instruments the **price of which is either dependent upon, or derived from, the price/rate/index of an underlying asset**. This is where the name ‘derivative’ comes from; its price is derived from the value of another item.

For example, one type of derivative is called a futures contract. This contract can be exchanged on a capital market and is basically the right to buy, or sell, a particular asset for a set price at a certain date in the future. Why might such a contract be traded on a market? Well, if the underlying asset is highly volatile (i.e. keeps changing in value unpredictably), then such a contract could be valuable, as it guarantees the sale, or purchase, of the underlying asset at a better price than the market value.

For example, let’s say you have a futures contract to sell 10,000 gallons of oil for £20 million on the 1st September. That means that, no matter what the value of oil is at that date, you have a contract that guarantees the sale. So, if on the 1st September the price of oil drops to £15 million for 10,000 gallons, you now have a contract worth £5 million. Why? Well, because you now have a contract that will get £20 million for 10,000 gallons, whereas everyone else will only get £15 million.

Now, this is simply a demonstrative example to show how derivatives get their value. In reality, derivatives are highly complex and far less straight-forward, so don’t expect to be able to find such a good deal in the real world!

Characteristics of derivatives

Hopefully now you have a basic understanding of how derivatives function. Let's take a moment to understand the **three key characteristics of derivatives**:

Characteristic	Explanation
Value is determined by the underlying item	<p>The value of the derivative at any time is determined by the underlying asset, price, rate or index.</p> <p>Underlying items can be equities, bonds, commodities, rates (interest and exchange rates) and indices (e.g. stock market index).</p> <p>A derivative that is based on the value of a commodity such as gold will vary in value based on the price of gold.</p> <p>E.g. 1 year ago Bob purchased an option to buy gold at a price of \$1,000 per ounce. The current gold price is \$1,200 per ounce, giving his option a value of \$200. If the price of gold goes up, his option value goes up. If it goes down, the option value goes down.</p>
Initial investment is low	<p>The derivative comes with a negligible or low initial investment.</p> <p>Often, a derivative is an agreement to pay or sell some asset in the future, so up front costs are often low.</p> <p>E.g. when Bob purchased his option, gold prices were much lower at \$800 per ounce and prices were not expected to rise, so an option on one ounce could be purchased for just \$20.</p>
It is settled in the future	<p>There will be a future settlement date with the derivative.</p> <p>E.g. Bob's option gave him the right to purchase 100 ounces of gold by 31st December 20X1.</p>

Types of derivative

There are many types of derivative, but we're just going to focus on the five most common types that you are likely to come across.

Forward

A forward contract is **a customised contract between two parties to buy or sell an asset at a specified price on a future date**. For example, Entity A agrees to buy 2,000 barrels of oil for \$100,000 on 1st September 20X5 from Entity B. If the price of oil goes up, the derivative will be worth the difference between the contract price for the 2,000 barrels and the market price.

Forward rate agreement

A contract which fixes the interest charged on a floating rate loan, for a fixed period of time, beginning on a future fixed settlement date. A floating rate refers to an interest rate that is not fixed and is thus determined by a reference rate (i.e. a variable interest rate). This contract fixes the rate for a period of time.

For example, Entity A pays a fixed interest rate of 7% on a \$50,000 loan from Bank B. If the variable rate falls to, say, 5%, then Bank B will be getting an extra 2% than the market rate and this will be the value of the derivative for Bank B.

Futures contract

A tradeable, standard contract to buy or sell a specific asset, at an agreed price, on a planned future date. This is like a forward, except that futures are standard contracts traded on exchanges (in a similar way to which company shares are traded).

Swaps

This occurs when two parties create an agreement through which they arrange to receive the incoming cash flows from each others financial instrument, over a given period of time.

For example, Dale, who lives in the US, agrees to pay the interest payments on François's US Dollar loan, while in exchange, François, who lives in France, agrees to pay the interest on Bob's Euro loan. This enables both to reduce the risk of foreign exchange fluctuations by only paying interest in their home currency.

Options

A contract which creates the right, but not obligation, for the holder to buy, or sell, a specific financial asset, at a pre-agreed price, on either a set date in the future, or during a given period of time.

Bob's option to buy gold in our earlier example was an option. The key with an option is that it is just that - an option. Bob did not have to buy the gold. Had the gold price gone down, he could have let the option lapse. A forward is different, as the owner is committing (i.e. has an obligation) to go ahead with the deal.

Recognition

When it comes to financial reporting, derivatives must be **recorded at fair value through profit and loss (FVTPL)**. At the reporting date, this will, therefore, result in the following:

- **A financial asset or liability will be recognised in the statement of financial position, at its fair value**
- Any **changes in the value of these financial instruments**, resulting from changes in their underlying bases, are **recorded as gains or losses in the income statement**

Example - Derivatives

Let's take the following scenario:

A futures contract has been entered into which requires a payment to be made by FR Ltd on 31 Mar 20X8 for \$440m. The contract was entered into on 30 Nov 20X7 at nil cost. The year end is 31 Dec 20X7 and the underlying item has changed, so that making the equivalent purchase now would see the need to spend \$460m. On 31 Mar 20X8, the value of the underlying item has changed, such that the equivalent purchase would now cost \$445m.

How would the above transaction be recorded by FR Ltd?

Initial recognition

Well, since there is no initial cost associated with the instrument then there is no entry to be made here. The derivative has no value yet, because there has been no change in value of the underlying asset.

At 31 Dec 20X7 (reporting date)

The first entries to be made are for the year end, which is 31 Dec X7. At this date, the underlying asset is worth \$460m, but the value of the asset in the contract is \$440m. The derivative (futures contract) is worth the difference:

$$\$460\text{m} - \$440\text{m} = \$20\text{m}$$

This is recorded as follows:

Dr	Derivative asset	\$20m	
Cr	Income statement (gain)		\$20m

At 31 Mar 20X8 (settlement date)

At this date, the underlying asset has decreased in value and is worth \$445m. It is still worth only \$440 in the contract though, so the derivative still makes a gain of:

$$\$445m - \$440m = \$5m$$

However, a gain of \$20m has already been recorded for the year end, so we need to make some adjustments. The \$20m gain we recorded at the end is \$15m too high, so we would make the following entries:

Dr	Income statement (loss)	\$15m	
Cr	Derivative asset		\$15m

Now that the derivative has been settled, it needs to be removed from the accounts. This will involve recognising the acquired underlying asset and fully removing the derivative asset from the books. This is because the company no longer possesses the future option to purchase it.

All these steps are recorded as follows:

Dr	Acquired underlying asset	\$445m	
Cr	Bank		\$440m
Cr	Derivative asset		\$5m



CIMA Management Case Study

Chapter 14

Integrated reporting

1. The International Integrated Reporting Council (IIRC)

Telling the full story

The world's oldest professional investor was, until his death in 2015, 109 year old Irving King. He frequently bragged about successfully “sidestepping” the Wall Street crash of 1929, and is reckoned to have studied more financial reports than almost any other human being in history!

Indeed, all potential investors must study lots of different information on a company to obtain a broad view of the business. With all these types of reports flying around, it can be extremely confusing. Which one did you read a minute ago? Where did you see that data? What's the difference between that one and that one?

If multiple reports are produced by entities on different aspects of their business (financial, environmental, quality, social, ethical, and so on), there's a real danger that most readers will lose track. Investors and stakeholders will suffer from information overload and not be able to penetrate through the many different reports to answer the key question:

Is the entity doing well or not?

What is required is a framework to link all the separate reports together to give an end-to-end view of the company (the full story). This will help stakeholders and investors make informed decisions.

Integrated thinking and the IIRC's vision

The IIRC was founded in 2010 to respond to the need for a concise, clear, comprehensive and comparable integrated reporting framework (<IR> Framework). The IIRC say that their mission statement is:

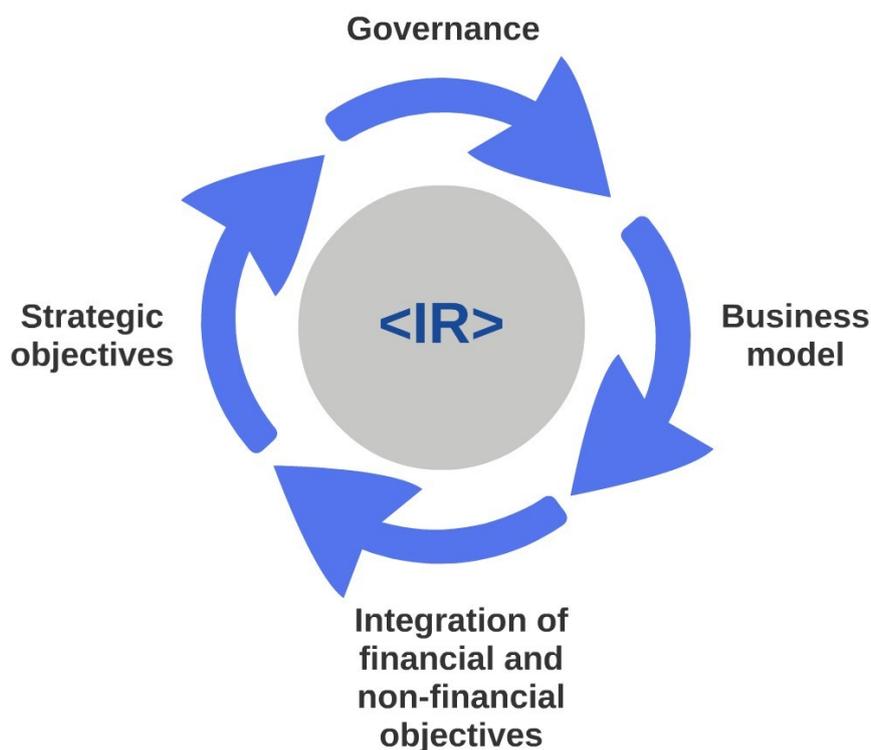
“To establish integrated reporting and thinking within mainstream business practice as the norm in the public and private sectors”

Integrated reporting is a term you may have come across before, but what is **integrated thinking**? In short, it occurs when **an organisation considers the resources (capitals) it uses to create value and how this value relates to its various business units.**

For example, a public sector business may use financial capital to provide a service to the local community; or they may utilise natural capital - a park for instance - to maintain local biodiversity. With this policy decision, the marketing business unit may benefit from the positive public relations impact improving the branding of the entity.

The IIRC wants integrated thinking embedded within normal business practice in the public and private sectors. This can be facilitated by integrated reporting (<IR>) as the corporate reporting norm.

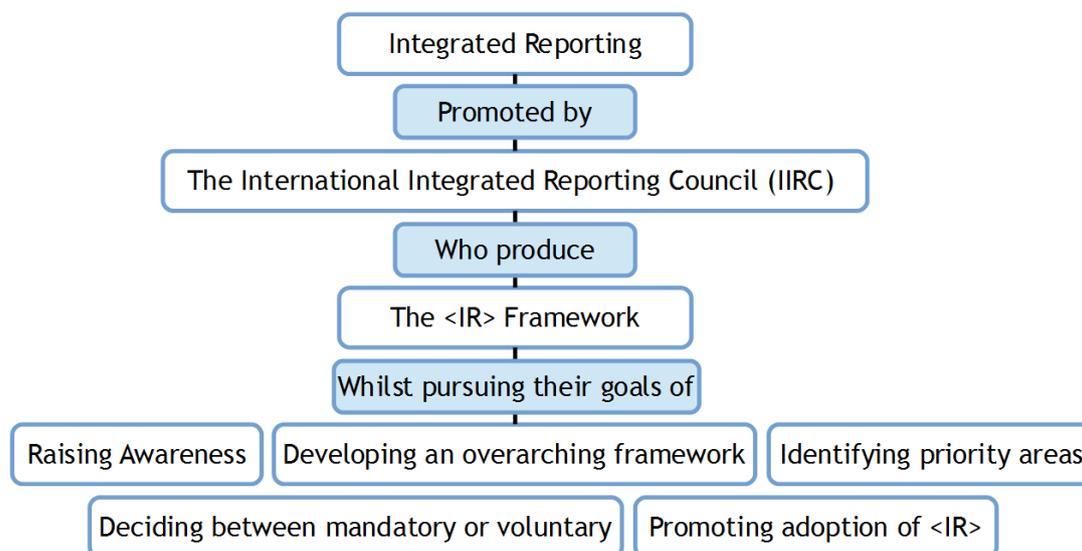
The <IR> Framework combines key information in one clear report:



Role of the IIRC

The role of the IIRC is separated into five distinct goals:

- **Raise awareness of the issue of varying standards of reporting** and develop a consensus among governments, listing authorities, accounting bodies, standards setters, business and investors for the ideal way to address it.
- **Develop an overarching integrated reporting framework** and set out the scope of integrated reporting and its main components.
- **Identify priority areas where additional work is required** and create a plan for development.
- **Decide whether standards should be mandatory or voluntary** and facilitate collaboration between standard-setters and convergence in the standards needed to underpin integrated reporting.
- **Promote adoption of the <IR> framework.**



Example

Imagine a company, Englorious Hair Care which manufactures shampoos and conditioners from potentially harmful chemicals which they also synthesise themselves. The products are sold cheaply in the affordable personal care market. Englorious employ 100 people, most of whom are young, single men from mainland Europe.

Englorious have always previously focussed on financial reporting, but following a buyout by a larger cosmetics company, they start using the <IR> reporting model.

This immediately highlights that although Englorious is profitable, it is currently not environmentally sustainable due to poor disposal techniques of chemicals. Social reporting also highlights that some of the workforce are finding it difficult to integrate into the local community.

The report shocks shareholders, who pressure Englorious to reinvest its profits into environmentally sustainable chemical disposal techniques. The local council uses the report to apply for funding which it uses to create a working men's club in the local community centre. This greatly helps the integration of Englorious' workforce into local life.

As you can see the aim is for reporting to drive real world change where it's necessary, as in this company.

A great real-world example is The Body Shop. Unlike Englorious Hair Care, the company sources natural ingredients (e.g. plants and minerals) from ethical suppliers (i.e. that do not use harmful pesticides etc.). These products are not tested on animals and are packaged in biodegradable packaging. They are sold to

environmentally conscious consumers. Integrated Reporting would highlight The Body Shop's great environmental performance.

2. The purpose of integrated reporting

Definition of an integrated report

An **integrated report** can be thought of like a modern mobile phone. It **should be compact, easy to use and actually serve a great many functions.**

An integrated report is defined by the IIRC as:

“a concise communication about how an organisation’s strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term.”

Basically, **this means that the report will contain both financial statements and non-financial information.** Non-financial assets are often things that may give a company an edge over competition, so it's key that we account for them correctly!

The purpose and objectives of integrated reporting

According to IIRC, the <IR> Framework has the following purpose:

“The primary purpose of an integrated report is to explain to providers of financial capital how an organisation creates value over time. An integrated report benefits all stakeholders interested in an organisation’s ability to create value over time, including employees, customers, suppliers, business partners, local communities, legislators, regulators and policy-makers.”

You'll notice that this definition focuses on the providers of financial capital (i.e. shareholders and lenders). The goal is to show them how value is created through all 6 types of capital as defined under <IR> (more on them later).

The objectives for integrated reporting are to:

1. **Increase the quality of information** available to providers of financial capital to enable a more efficient and productive allocation of capital.
2. **Provide a more cohesive and efficient approach** to corporate reporting that draws on different reporting strands and communicates the full range of factors that materially affect the ability of an organisation to create value over time.
3. **Enhance accountability and stewardship for the broad base of capitals** (financial, manufactured, intellectual, human, social and relationship, and natural) and promote understanding of their interdependencies.

4. **Support integrated thinking, decision-making and actions that focus on the creation of value** over the short, medium and long term.

Sustainability and integrated reporting interconnections

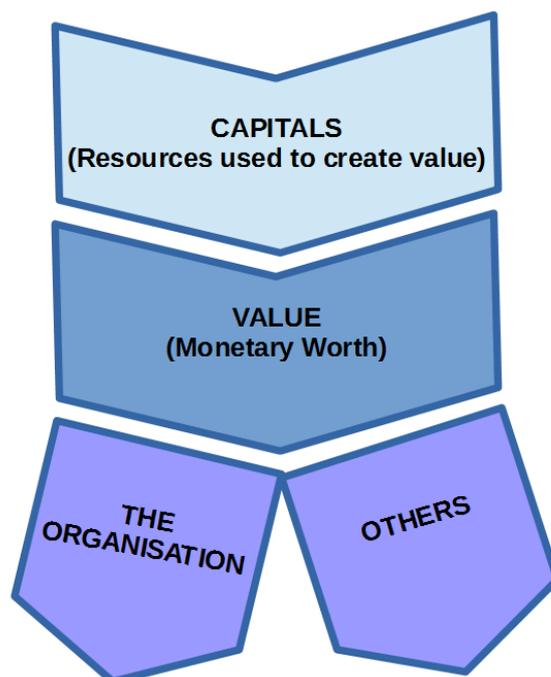
A key element of integrated reporting is sustainability reporting (as per the Global Reporting Initiative guidelines). Integrated reporting builds on the foundations of the sustainability report to show how a company's strategy, governance, performance and prospects lead to the creation of value over a period of time.

For **sustainability** the **value created** is in terms of **an increase in**:

- **Natural capital - Covering all renewable and non-renewable environmental resources**, e.g. reducing pollution and hence improving ecosystem health.
- **Social and relationship capital - Relating to relationship building between the entity, stakeholder groups and communities**, e.g. better relationships with the local community.

3. Fundamental concepts of integrated reporting

Integrated reporting aims to create value (monetary worth) from financial and non-financial resources, and we need to understand who value is generated for, which resources are used to create value (known as 'Capitals') and the process used to create value from resources.



There are **three fundamental concepts** of integrated reporting:

- The capitals
- The value creation process
- Value creation

Let's take a look at each fundamental concept in more detail:

The capitals

The capitals are the resources used by the organisation. These are identified in the <IR> Framework as financial, manufactured, intellectual, human, social and relationship, and natural capital.

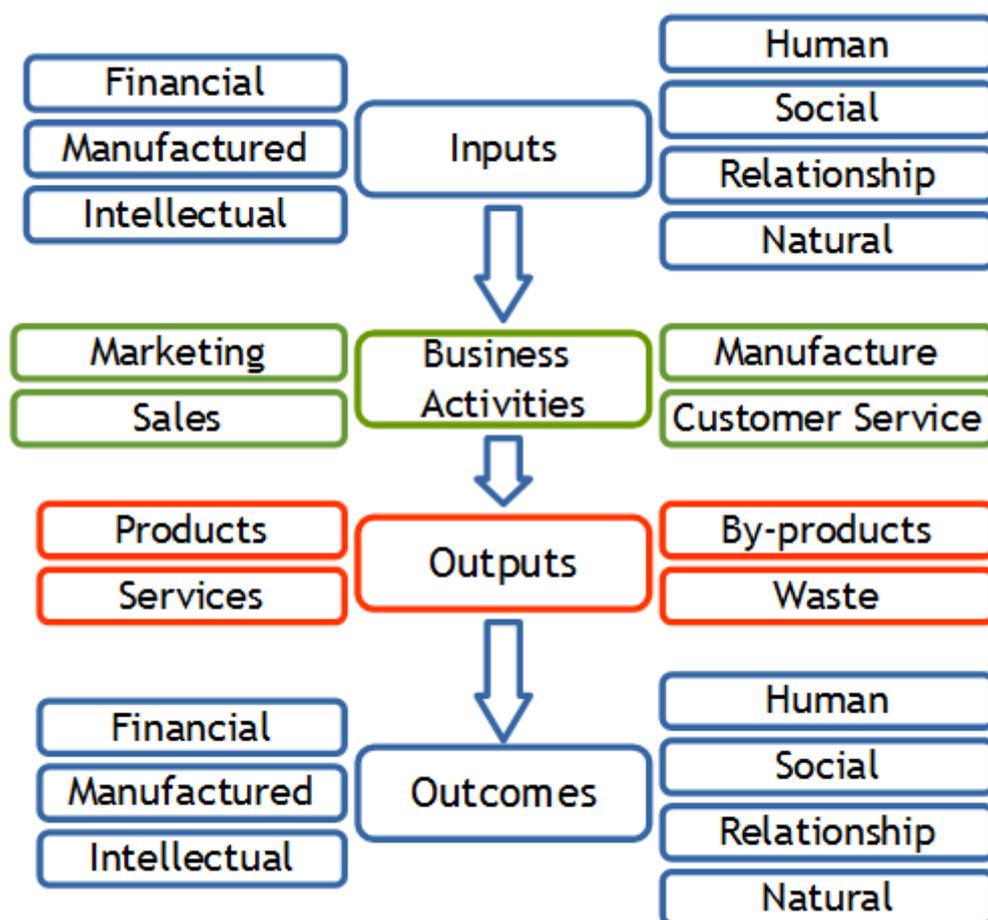
However, all these categories of capital do not have to be adopted in preparing an entity's integrated report, it all depends which are relevant to them. As a result **an integrated report may not cover all capitals.**

In our example of Englorious Hair Care, money (financial capital) is used to purchase chemicals, which are then processed in machines (manufactured capital) to create shampoo, by a team (Human capital), so these two capitals will definitely be relevant. We'll be looking at the various categories of capital in more detail shortly.

The value creation process

Obviously, any profitable business generally adds value to the things it buys prior to selling them. In the case of Englorious, chemicals are manufactured into the more desirable product of shampoo.

Value is created through a process where the capitals are inputs, which are transformed via business activities into outputs such as products, services, and waste. The way these outputs are used then impacts the company's capitals again, and these effects are known as outcomes:



In this model there's one new term for you here - outcome. **The outcome is the final result achieved. An output is pollution and the outcome could be polluted water near the factory resulting in the death of fish (natural capital).**

Example

We can apply the model to Englorious Hair Care. Funds such as financial capital are used to purchase raw ingredients which are defined as natural capital. These are then transformed using machinery, or manufactured capital, and specialist skills which are human capital. Finally, the company have manufactured beauty products, which are the outputs.

Marketing and sales, which are business activities, then help sell these products to customers. The outcomes are that Englorious is a profitable business that adds value to the funds used in the form of profit, dividends and interest, but lacks environmental credentials. Like most businesses, Englorious looks after its community in terms of providing jobs and this is an example of social and relationship capital.

Value creation

Each stage of the value creation process adds value to the capital of the business and these processes are known as **value creation - anything which adds value to the capitals of the business.**

The value created has two elements:

- **Value creation for the organisation** - Allowing good returns on dividends and interest (usually through creating profit) to the providers of financial capital (i.e. shareholders and lenders).
- **Value creation for other stakeholders such as customers, staff and society at large.**

Example 1: a company grows it may employ more people, therein adding value to the local community by increasing employment.

Example 2: manufacturing a product which customers value and want to purchase.

Example

Once again, we'll be looking at Englorious Hair Care, and applying integrated reporting:

Value is created from the transformation of the raw ingredients into beauty products that are sold at a profit. This profit provides financial returns to fund providers (shareholders and banks) in the form of dividends and interest payments respectively.

The value created for others include customers, and they are satisfied as they are purchasing products at an affordable price. In the future Englorious could improve the environmental credentials of its products so that society at large would benefit from less pollution and waste. This would be adding further value to others!

Fundamental concepts and the link to integrated reporting

As part of integrated reporting:

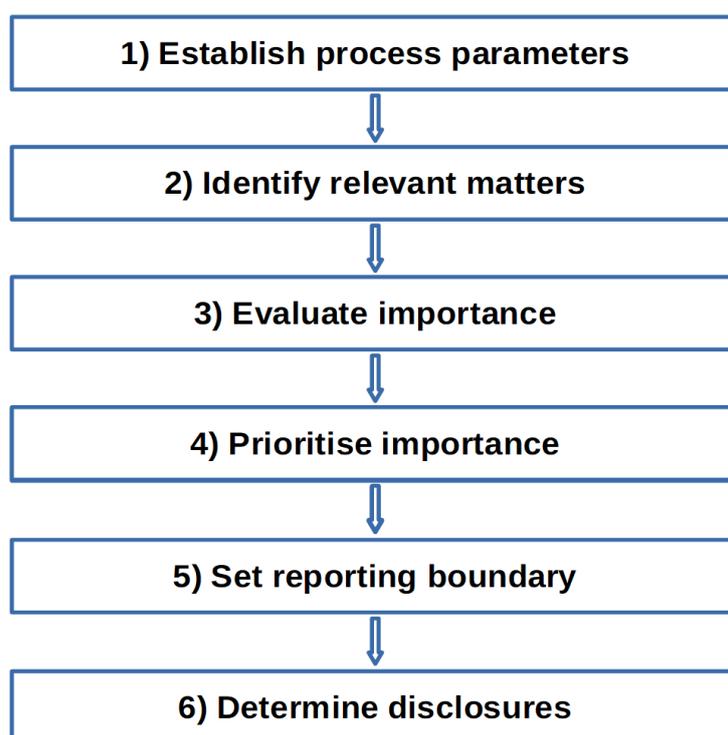
- Capitals are identified
- The value created from those capitals (and the process used to do so) is shown (e.g. the profit margins on a product from the manufacturing process)

Thus, in an integrated report investors and stakeholders can easily see the value added.

This will allow the users to make more informed decisions. Investors (shareholders and banks) see that a financial capital increase in value will provide funds for future growth.

<IR> Framework guidance for reports

The <IR> Framework suggests that the following process be taken to ensure that integrated reports are correctly produced:



Let's break down each step of the process in turn:

1) Establish process parameters

This step is about highlighting **the activities, performance and impacts of an entity, including those of any subsidiaries, joint ventures and investments** that it controls. With this achieved, management can begin to decide what is relevant for the integrated report.

2) Identify relevant matters

At this stage, **matters that may have an impact on the entity's ability to create value are identified and collated**. This would include all matters discussed by senior management that can affect the value created by the business. An example

of this would be a negative policy which has damaged a business's brand in a reporting period.

When identifying these relevant matters for the integrated report, it's important for management to understand the perspectives of key stakeholders like investors and the local community, in order to ensure balance.

3) Evaluate importance

When a relevant matter is evaluated as being important enough to be included within an integrated report, it is considered part of the **materiality of the report**.

For this evaluation, **management need to consider the magnitude of the impact of the relevant matter, together with the likelihood of it occurring** - this is a similar process to how risk registers are made.

Imagine a fashion retail company that are using cheap overseas labour and rely on a positive brand image for sales. The company's management must consider how negatively customers will react to gaining this knowledge and how likely it is to be exposed by something like a newspaper article. The outcome of this decision would relate to the importance of social capital to the business.

4) Prioritise importance

Once the importance of each issue has been evaluated, the next step is to **prioritise matters based on the magnitude of their impact and the likelihood of their occurrence**. In this process, the issues with the greatest effect and likelihood need to be focused upon more. It is important also that the board and management ensure an agreed and effective criteria for prioritising each issue.

For example, a company in the service industry will rely on having a highly skilled workforce to deliver a consistent and high quality service. Hiring new employees, or providing further training to existing employees, are both examples of prioritising human capital issues that would be material to this company's integrated report.

5) Set reporting boundary

At this stage, the material issues for the integrated report have been identified and now the reporting boundaries must be set. To do this, the **reporting entity must be identified and the risks, opportunities, and outcomes linked to external parties** (other entities and stakeholders) who have the ability to impact the reporting entity's value creation **specified**

6) Determining disclosures

Finally, with the various matters filtered and prioritised via clear parameters, management must develop the integrated report. This primarily involves a focus on

communicating the material issues effectively to external audiences and **demonstrating the relationship of these issues with the business's ability to create value.**

So, we know how it works and the intent of integrated reporting to provide clear information to stakeholders and investors. However, there are also some limitations alongside the benefits. Let's take a closer look:

Benefits of the IIRC framework

- **Reduces barriers to information transfer** - By encouraging key staff to adopt integrated thinking, staff have a greater awareness allowing them to share information more freely
- **Encourages long term planning** - Integrated thinking encourages organisations to plan over a longer time frame by aiding their understanding of how each capital has an impact on value creation
- **Provides the 'full picture' to investors** - Integrated reporting means that investors and other stakeholders can see how an entity is performing both financially and non-financially, in a single report

Limitations of the IIRC framework

- **Defining performance measures** - The value created by non-financial resources are difficult for companies to present and measure
- **Too long** - Many integrated reports are over 150 pages and therefore, do not effectively communicate to stakeholders the necessary breakdown of performance
- **Lack of balanced information** - Many reports do not report both positive and negative issues in a balanced way; often containing far more good news than bad
- **Determining materiality** - Many businesses have noted that it is difficult to decide which issues are material to the integrated report

4. Capitals in the <IR> framework

Categories and descriptions of the capitals

Resources that are used and affected by the company are referred to as capitals.

The capitals are stores of value that are increased, decreased or transformed through the various activities and outputs of the company. For example, an entity's

financial capital is increased when it makes a profit, and the quality of its human capital is improved when employees become better trained.

There is no requirement to cover all of the capitals in an integrated report, only those that are relevant. For example, Englorious will hold little intellectual capital as it is not doing anything different to its competitors.

The <IR> Framework categorises and describes the capitals as follows:

Financial capital

This is the **pool of funds that is available to an organisation for use** in the production of goods or the provision of services. It is obtained through financing, such as debt, equity or grants, or generated through operations or investments.

Manufactured capital

Manufactured capital is produced physical objects, as distinct from natural physical objects, that are available to an organisation for use in the production of goods or the provision of services, including:

- Buildings
- Equipment
- Infrastructure such as roads, ports, bridges, and waste and water treatment plants

Manufactured capital is often created by other organisations, but includes assets manufactured by the reporting organisation for sale or when they are retained for its own use. For example, Englorious may be renting a machine which was produced by another company, but it is still manufactured capital which is being used by Englorious!

Intellectual capital

This one's a bit more complicated! **Intellectual capital includes all knowledge-based intangibles.** Knowledge based intangibles are **anything immaterial and intellectual which is owned by the company.**

Intellectual capital will include intellectual property such as patents, copyrights, software, rights and licences. It may also be “organisational capital” such as tacit knowledge, systems, procedures and protocols. For example, if Englorious have a specialist way of mixing shampoo ingredients which is top secret, this is organisational capital.

Human capital

Human capital lies in the people working for the organisation including their:

- Skills and competencies
- Knowledge
- Experience

Social and relationship capital

Relationships have value: for example a customer who continually returns to the company to buy their products, a loyal member of staff or an excellent supplier relationship that ensures priority service.

Natural capital

Lastly, **natural capital includes all renewable and non-renewable environmental resources.**

Natural capital includes air, water, land, minerals and forests, including how this impacts biodiversity and ecosystem health. As such Englorious's synthesising of artificial chemicals and disastrous pollution habits mean the company are actively damaging natural capital!

Measurement and disclosure issues

Disclosure

As we have discussed in the <IR> guidance for reports, the process of producing and disclosing matters as part of an integrated report requires a **large amount of judgment** from the management.

This is particularly difficult as the <IR> framework, established as recently as 2011, is still relatively new and, hence businesses have limited experience in producing high quality integrated reports. As a result, the decisions on disclosure are challenging and often lead to reports that are **too long** or **lacking balance**.

Measurement

On top of the difficulty in deciding what to disclose, there is also the issue of measurement. This is a **particular issue for non-financial capitals**, which **lack the obvious methods for performance measurement** that are available for financial capital.

For example, with financial capital we can use a variety of ratios such as return on capital employed (ROCE), to understand how well the entity is performing. However, how can an entity be as certain of accurate measurement when dealing with non-financial capitals like human capital? For example, the value created by staff and the impact this has on a business can't be simply measured. Typically, **qualitative measures are used for the non-financial capitals** and this results in further issues relating to the subjectivity of management.



CIMA Management Case Study

Section C - P2

Chapter 15

Business Intelligence Systems

1. Business intelligence systems

Meet David. David is a management accountant with a love of all things pink. He has bought many pink items in the past: pink bottles, pink shirts, pink phone cases and so on. One day, David notices that he has some tooth pain. He looks around on the Internet and finds some advice suggesting that he cleans his teeth more thoroughly using small, intricate 'TeePee' brushes designed to go in between teeth.

Later that evening, David is scrolling through Facebook and notices an advertisement from Amazon. Amazon currently has a sale on pink TeePee brushes. What a coincidence! David heads over to Amazon's website and purchases a couple of packs.

So, was this a coincidence? Or has an advanced algorithm collected information on David, processed the fact that he had purchased pink products before, processed the fact that he has been looking at TeePee brushes and directly targeted him with an advert for a product that falls into both of those categories?

Of course, it wasn't a coincidence. Amazon, like many other companies, including Starbucks and American Express, uses historical, real-time and predictive data to personalise advertisements to target individuals more effectively and to make informed decisions within the company. This is known as business intelligence.

The term **business intelligence (BI)** refers to the overarching idea of data and information being a strategic asset for an organisation. It also refers to the infrastructure of systems set up to collect, store and analyse data.

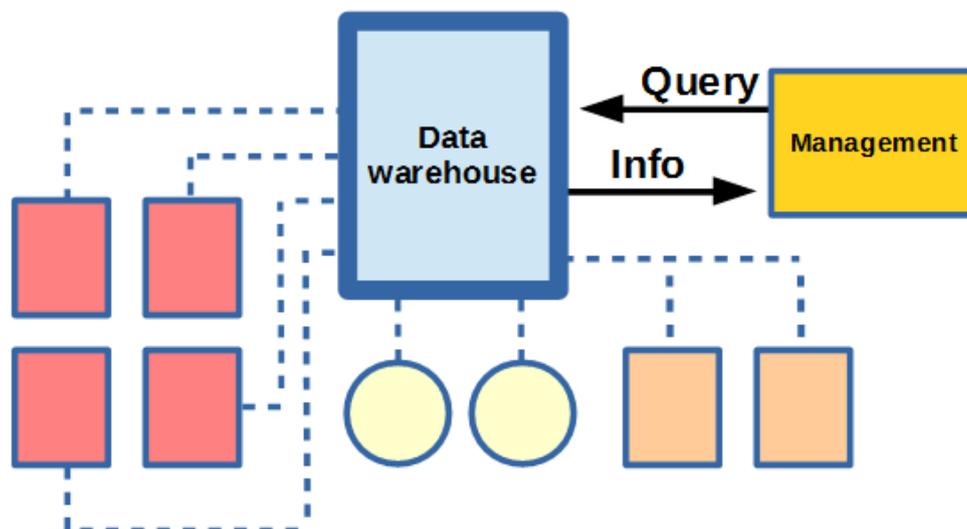
For large organisations, like those mentioned above, **this can be a challenge**. Simply **storing the data is a task in itself**, given that organisations may be collecting hundreds of bits of information from each of their many millions of customers. Once this challenge has been overcome, the next challenge begins: using that information to improve decision-making.

These two activities are known as data warehousing and data mining.

Data warehousing

Let's imagine for a minute that each individual element of data either generated by a business (by its internal processes, such as cash registers) or imported into it from external sources (such as suppliers' invoices) was actually a physical paper file. It would need a separate warehouse to store them all. But, once the information was filed away, it would be out of sight, so an efficient system of storage and retrieval would be required to pull out the right files as and when they were needed. Well, the same is true of electronic files.

A data warehouse is a **large relational database, where vast and diverse sets of data from multiple sources can be stored**. The database can be queried in order to pull out relevant data as and when needed.



Usually, the data warehouse takes the form of a centralised database into which divisions, departments, individual stores or branches feed their own data streams.

Data mining

So we have a centralised database with all of our data in it. Now what? What is the purpose of it?

A data warehouse supports the decision-making process by providing a solid and centralised single base of data that can be analysed to support strategic decisions. This process is called data mining. Data mining can be used:

- **To find associations** - When one event can be associated with another - For example, people who buy DVDs also buy popcorn with their DVDs 60% of the time
- **To identify sequences** - For example, the purchase of a DVD is found to lead to the purchase of popcorn, but not the reverse
- **To identify clusters** - For example, the people who buy DVDs and popcorn together can be clustered together into a certain age group, which helps decide on the relevant DVDs to sell
- **For classification** - For example, the people who buy DVDs and popcorn can be classified as a customer profile, which can help marketing

- **To make forecasts** - For example, it can be predicted that, when new DVDs are released, a spike in popcorn purchases can be expected, so inventory adjustments should be made accordingly

A retailer that knows about the relationship between DVD sales and popcorn, and the respective customer demographic, will be able to tailor its advertising and offers in a way that might increase sales. A retailer that did not know this information would not be able to do this!

Benefits of business intelligence

In the above example, decision-makers would have been able to make decisions regarding the sale of DVDs and popcorn. They could make decisions about inventory and also decisions about marketing approaches. Other benefits of business intelligence systems include:

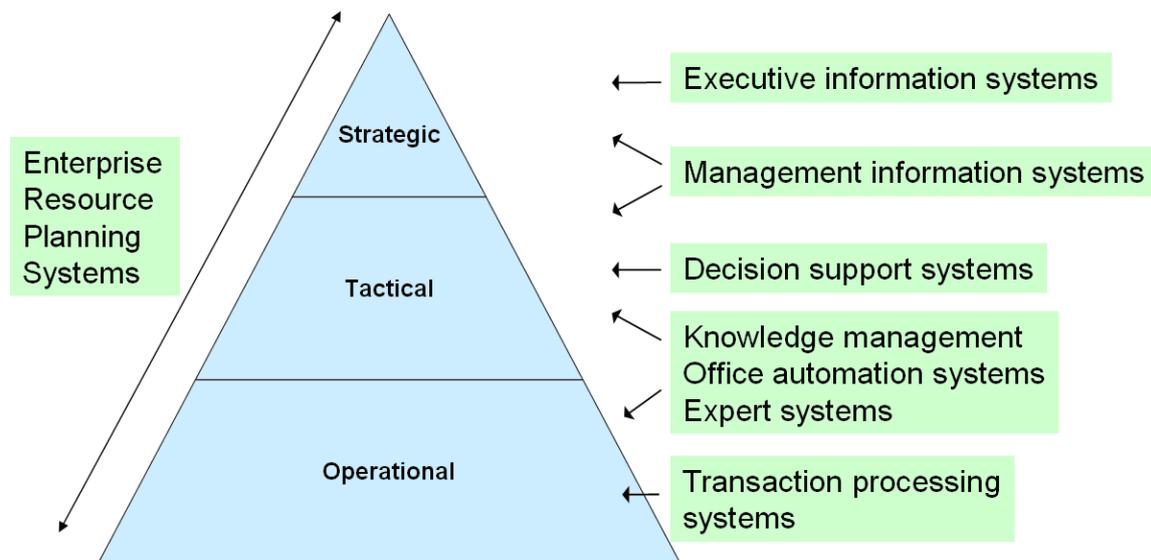
Benefit	Explanation
Improved internal performance	BI systems can identify wasted activities and inefficiencies. This allows departments to utilise resources more effectively and for standardised approaches to be developed.
Improved performance measurement	By identifying the optimum processes, identifying inefficiencies, and standardising processes, it will be easier to appraise the performance of different departments. This will facilitate the ability to reward departments that perform well, and allow for underperforming departments to get assistance if needed.
Increased productivity	By streamlining processes, departments will be able to produce more products in the same amount of time. This means that the organisation will be able to cater to increased demand.
Increased sales	By using systems that can target each customer individually, sales and marketing are likely to be more effective. Earlier in this chapter, David, the management accountant, bought the pink TeePee brushes because he liked pink and had been doing

Benefit	Explanation
	<p>research into those brushes. There would be no value in marketing that product to someone who did not like pink or had no need for the brushes.</p>
<p>Cost savings</p>	<p>Though often initially expensive, BI systems can save money in the long term (and not just the costs saved through improved decisions). Traditional information systems are often quite insular and incompatible with one other, meaning that several systems need to be run side by side, increasing licensing costs.</p> <p>Additionally, an effective BI system should be usable by anyone (unlike traditional systems which can be complex), e.g. a salesperson can find useful sales data and a marketing employee can find useful market data, etc. This reduces the need for expensive IT specialists.</p>
<p>Trend identification</p>	<p>By analysing potentially thousands of variable pieces of data at once, BI systems can spot trends that would be difficult for the naked eye to see. For example, a BI system may find that two unrelated products are often purchased together, despite no apparent link. Once this trend has been identified, actions can be taken to take advantage of it.</p>

2. Types of business intelligence systems

In short, business intelligence systems are systems designed to provide the right information to the right people at the right time throughout an organisation. Therefore, they are crucial to effective decision making.

There is a wide range of different types of business intelligence systems. You won't need to know these in great detail for the exam, but you should be aware of them. Let's take a look.



Executive Information Systems (EIS)

EISs are systems which collate and provide information to senior managers to enable them to make strategic decisions. Characteristics of EISs are:

- **Summarised information** provided to support strategic decisions, e.g. key performance data (sales, profits) or key business ratios (e.g. profit margins, inventory days, receivable days, average delivery times)
- **Can drill down to more detailed information if needed** - for example, if a director sees that inventory days have risen, they can access the details of specific items of inventory to help identify the cause
- **Graphical displays** for ease of use, e.g. charts and graphs
- **Connected to external databases** to provide external information, e.g. economic data, competitor data
- **Flexible for different purposes** so that custom reports can be created, rather than only getting standardised ones

Management Information Systems (MIS)

MISs provide management with information to support decisions made by senior and middle management. Features of MISs:

- Internally focused
- Standardised reports

- Produce simple summaries and comparisons of data

A good example of an MIS that is familiar to many accountants is monthly management reports of sales, profits and other performance data in a standardised way.

Decision Support Systems (DSS)

DSSs analyse data and report on it in a form which helps the user to make decisions. DSSs do not make the decision for the user; they simply provide information that can help make the best decision.

DSSs are distinguishable from MISs because they use detailed mathematical or statistical models to analyse data. MISs simply summarise transaction data.

A simple example of a DSS is a spreadsheet model used during the budgeting process. The model can quickly be updated with a range of different possible sales levels, costs and other variables to produce budgets that are relevant to a variety of different possible circumstances. It is this flexibility that sets a DSS apart from an MIS.

Expert systems

Expert systems analyse and examine information about a situation and, using this, provide an answer to a specific query. An example is tax software - a user enters a customer's income and costs, and the system produces the tax return and amount of tax payable.

Expert systems take the decision-making out of the hands of the expert and **can allow lower-level staff to make decisions** which previously needed to be made by an expert in the field. **This can save the organisation money and can also make decision-making quicker.** The user of the tax software does not need to be a tax expert to be able to produce a tax return or advise the client on how much they will have to pay.

Expert systems can only be used for structured decisions where there are specific rules (e.g. tax rules) which can be applied to specific data (e.g. an individual's income and personal details).

Transaction Processing Systems (TPS)

TPSs record and process the basic transactions of an organisation. These systems produce information that is specific to certain tasks. They are used in every area of an organisation. Examples include:

- Finance (recording items in the financial system)
- Manufacturing (stock/production information)
- Inventory (recording stock in and stock out)

- Human resources (personnel records)
- Marketing (market research information)

TPSs only provide basic transaction-based information, e.g. whether a particular order has been met. The data from TPSs is fed into MISs where the data is analysed to produce broader, more useful information (e.g. total sales by division).

Knowledge management

When you have to make a decision, what do you do? You call upon your knowledge of the subject, weigh up the advantages and disadvantages, and then decide. Knowledge is the information held within people's minds. It is used as part of many tasks which are undertaken in an organisation, for instance, the CEO of a company has built up knowledge of how to manage organisations through years of past experience, and they use that knowledge in board meetings and for making key decisions.

Knowledge management is the process of capturing and storing knowledge to be accessed by relevant staff. This can be for some quite simple day-to-day operations, such as:

- **Tips** on using an IT system shared by an expert user for use by all staff
- **Client knowledge** to help all staff working with that client to serve their needs better
- The **best approach** to dealing with customer queries shared by an experienced member of staff, so that everyone else can use that approach too

By sharing knowledge, people will be able to be more efficient, save time and do a better job, making the organisation more effective overall.

Knowledge management is particularly important for companies where knowledge can be key to the organisation's success, e.g. doctors' practices, consultancy firms or technology companies. **Knowledge work systems (KWS)** help with the capture of knowledge and its distribution around the organisation.

Enterprise Resource Planning systems (ERP)

ERPs integrate internal and external management information across an entire organisation, embracing finance/accounting, manufacturing, sales and service, customer relationship management, etc. Their purpose is to facilitate the flow of information between all business functions in an organisation and manage the connections to external stakeholders (such as customers).

ERPs can run on a variety of computer hardware and network configurations, typically employing a database as a repository for information. Examples include SAP and Oracle.

Key advantages of an ERPS include:

- **Wider sharing of information** around the organisation
- **Quicker processing** of data between systems (as it is all integrated), ensuring that information is produced more quickly
- Data is produced in a consistent format and stored on a common database, **allowing for better analysis of organisational data, producing better information and supporting decision-making**

3. Business reporting

Take a moment and think back to any meetings you have participated in and the presentations you have attended. What kinds of things were presented? Perhaps the company profit figures or stock price?

Now, how was it presented? A huge spreadsheet? A copy of the accounts? Or was it big, bold, colourful and full of fancy charts? Most likely, it was the latter, right?

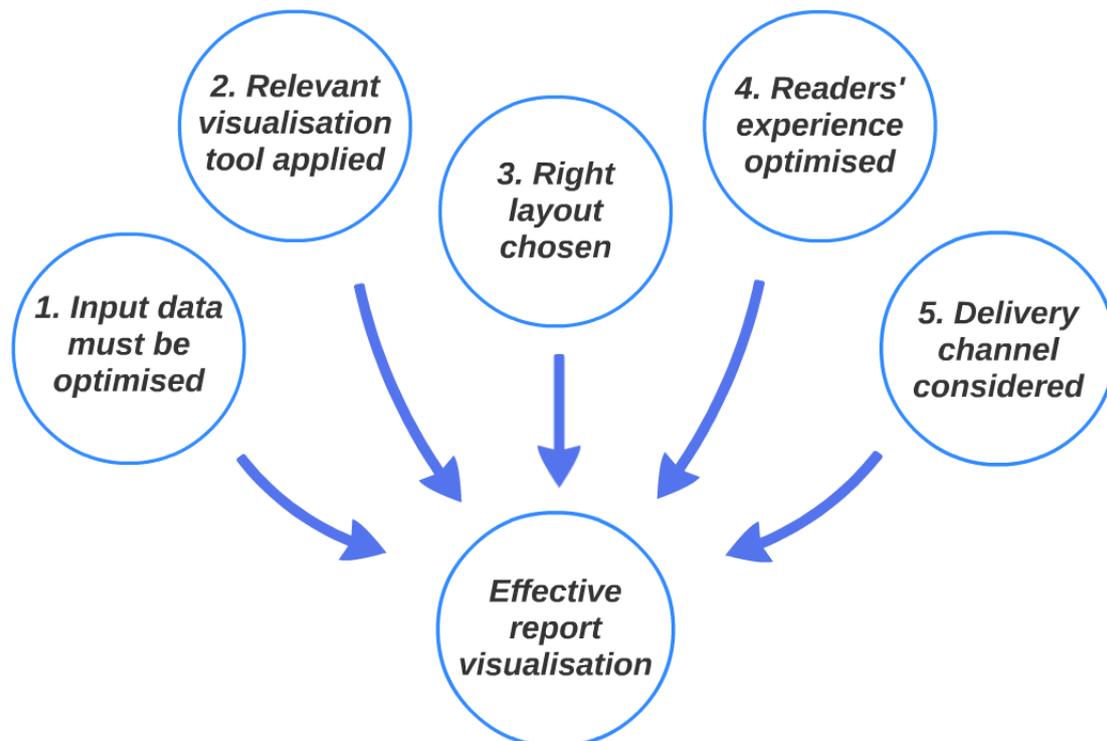
Of course, it was! **For reports to be effective, they must be digestible and meaningful.** They must also provide decision-makers with key summaries that will, in turn, allow them to make effective decisions. In short, a business intelligence system that churns out raw data is not good enough. It needs to **turn that data into something useful:** a report!

But what makes an effective report? Well, before we even begin to look at how to display data effectively, we must cover three fundamental components of any report. Without these, a report isn't worth the paper it's printed on!

Fundamental	Explanation
Specific to the user	In modern-day business, a one-size-fits-all report will not be sufficient. Different departments will have different performance targets. A report must be focused and specific to its intended recipient. Global company data will not help the manager of the Asia sales division to improve sales in Asia!

Fundamental	Explanation
Integrity	The initial input data and subsequent reports must be controlled and maintained effectively. This ensures that the data is correct and reliable. If information cannot be trusted, it cannot be effective.
Consistent	From the layout to the colour scheme, a report should be consistent in its presentation, both throughout the report and across each report produced. If green highlighting means an improvement in one section of the report but something negative in the next section, this will confuse the user.

Now we know the fundamentals of a report. But how do we present all of this information effectively? It's not as simple as you might think. Fortunately for us, CIMA and KPMG have teamed up to provide a handy list of the five key principles of an effective report visualisation. Let's take a look:



1. Input data must be optimised

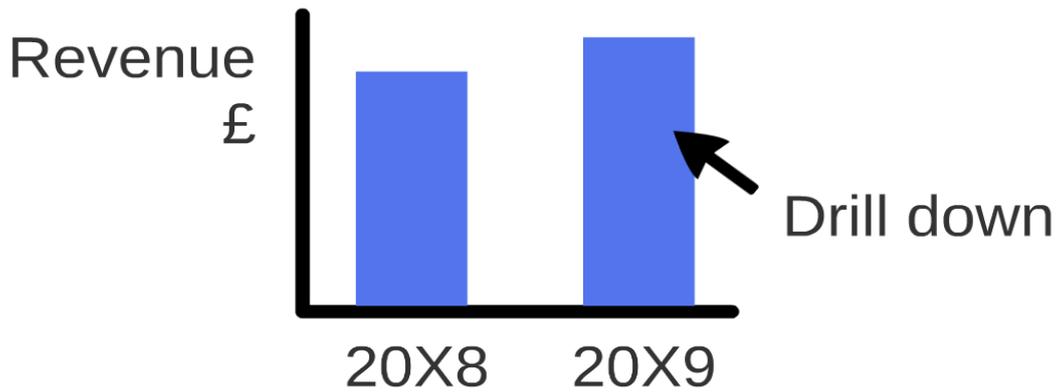
What this means is that **the raw data collected** (all of the facts, figures and information on customers) **must be capable of being presented in a concise report**. If it cannot be presented concisely, then the decision-makers at the organisation need to address this issue with data collection. For example, if the company still collates all information by hand and stores it all in a filing cabinet, it is not going to be turned into a report quickly and easily!

This principle also has a second meaning: the report must be presented in a way that can be broken down. Simply knowing whether or not revenue has grown is not enough. Why has it grown? Which products have grown more than others? Which regions are growing? An optimised report should have many levels that can be 'drilled down' into. For example:

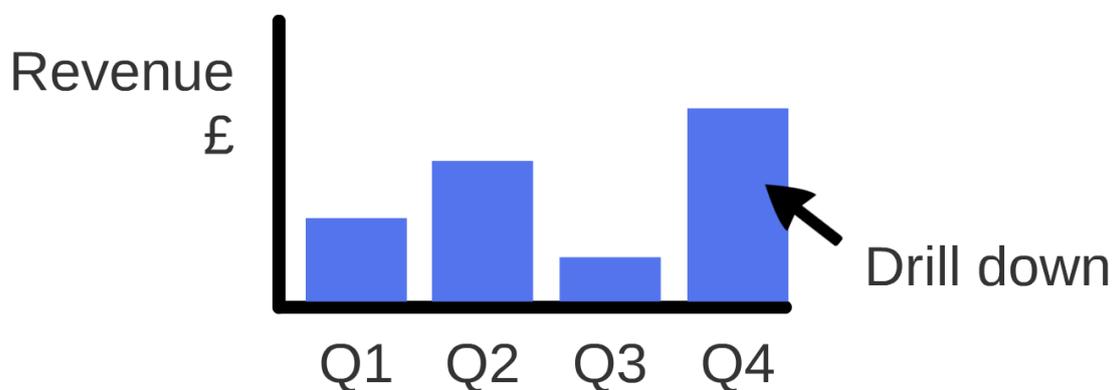


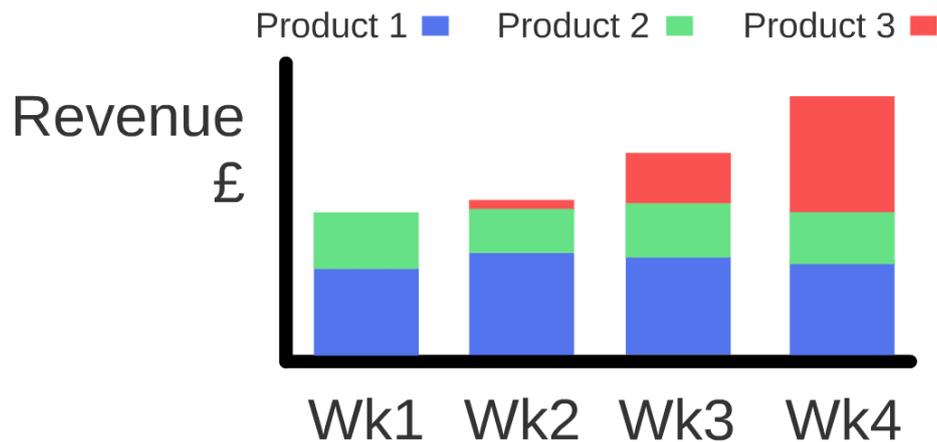
Here we have a revenue figure for 20X9 and 20X8. We can see that revenue has grown, but this graph alone does not tell us why. Was it something we did? Was it just a change in the market conditions?

It would be useful if we could drill down into 20X9's figures. A good computer-based report should allow the user to do this at the click of a button:



Now we can see the quarterly breakdown. This shows us that sales were particularly high in Q4. Management can now ask the question: what did we do in Q4? We should do this again! Or, why was Q4 so much higher? Is there a specific reason? Let's drill down again!





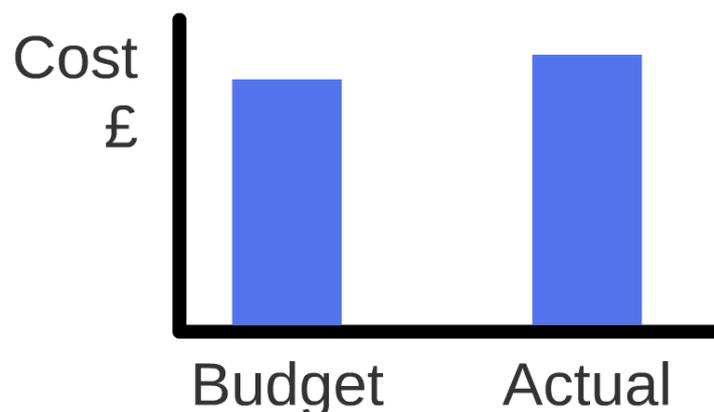
Drilling down again shows that a new product (product 3) was released and is growing quickly. Management can now make a decision on whether or not to put more marketing spend behind this new product to capitalise on its growth. They wouldn't have known this just by looking at the initial revenue chart.

This is just a simple example, as well. Imagine a multinational company with 1,000 products selling in 150 countries to 500,000 customers. It would have no chance of tracking progress without a report that could break the figures down.

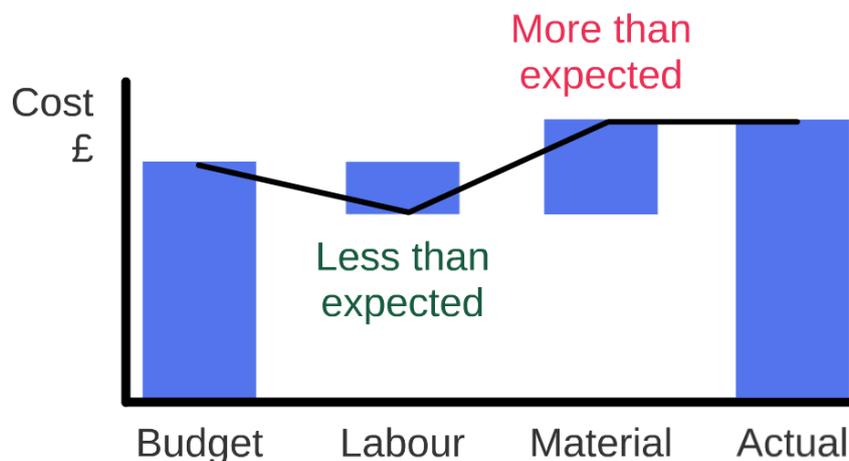
2. Relevant visualisation tool applied

The design of a report should reflect the information being presented and be optimised for the user's experience. This will allow the user to draw meaningful conclusions. For example, a management accountant is concerned that costs are higher than budgeted, but they cannot figure out if this was due to labour or material costs.

A chart illustrating the difference does not help:



However, a waterfall chart, which breaks down the various segments proportionally, will be more revealing:



Both charts show the same information, but only one is presented in a way that visually displays the information that the management accountant was looking for: whether it was labour or material costs.

3. Right layout chosen

The layout must be clean and draw the user's eye. Cramping 20 different pie charts onto one small page is not going to be engaging, and, if it is not engaging, the information won't be processed by the user.

The positioning must also be considered. People naturally read from left to right and then down, so the flow of a report should also follow this pattern. The explanation for a pie chart should be to the right or beneath it; not on the opposite corner of the page.

Appropriate colours must be chosen as well. Something that looks attractive will be looked at, whereas something jarring to the eye will not be. Additionally, certain colours can be associated with certain things. For example, red is often associated with a negative or a loss. If a report uses the colour red to highlight every growth and increase, it may confuse the user.

4. Readers' experience optimised

If the information is going to be digested and processed effectively, then a report must engage with the intended user as much as possible. There are a few ways in which this can be achieved:

	Explanation
Personalised	Allow the user to customise the report, highlighting the particular pieces of information that are most important to them. A common way of achieving this is to allow the user to select a few graphs and have them anchored to the top of the page in a 'dashboard'.
Intuitive and interactive	<p>The report must be easy to use and feel familiar, like using a web page or a smartphone app.</p> <p>Ideally, the report should be interactive as well, allowing the user to find out more information at the touch of a button. In the earlier 'drill down' example, it was helpful that extra information could be found by clicking on parts of the graph. If the user had to look up every single graph and sub-graph manually, they would be less likely to do it.</p>
Customisable	<p>Similar to but different from 'personalised', this relates to the user being able to find out very specific information by adding in their own parameters. A classic example of this is by selecting certain time periods of data.</p> <p>Reports often (by default) will detail annual, quarterly and monthly information. But perhaps a promotional campaign was run for a specific 18-day period. How would the manager know how successful it was? They will be able to find out more if they can adjust the revenue report and set an 18-day time frame between a specific start and end date!</p>

5. Delivery channel considered

This sounds complicated, but it's actually the easiest of the five principles. It simply means to consider how a report will be reviewed, and what kind of device or object it will be reviewed on.

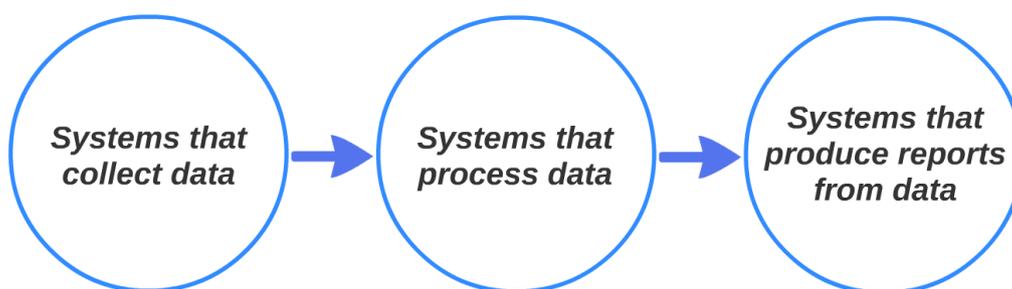
If it is going to be reviewed on a piece of A4 paper, the report should be able to fit on that piece of paper without going too close to the margins or being too small to read. If it is going to be viewed on a mobile phone, the report needs to be

optimised for that. A phone screen is much smaller, so the report should accommodate this!

In summary

There is a lot to consider when creating a report, but it is all very important. A well-presented report will be more useful to decision-makers who will subsequently make decisions that benefit the organisation. However, the report alone is not enough. As this diagram illustrates:

Business intelligence systems



The data itself must be collected, and there must be systems in place that can analyse and process that data. Finally, the report can be produced. So the takeaway here is that business intelligence is not one thing; it is many things that must be considered if an organisation is going to use data effectively to make positive decisions in the future!



CIMA Operational Case Study

Chapter 16

Activity Based Management

1. Activity Based Management (ABM)

Lou owns a craft supplies shop in the town centre which is incredibly popular with the local community. Lou's biggest customers are Doris and Derek who each purchase £4,000-worth of yarn every year - they both favour the same brand and colour of yarn to make blankets for the local hospital. The cost of the yarn to Lou is the same for each customer: £1,000.

Lou generates £3,000-worth of profit from each of Derek and Doris's purchases. So each customer is just as profitable to the wool shop, right? If only she had more customers like Derek and Doris! However, this is the picture that a traditional costing method would paint. In reality, the two customers are very different. Doris purchases her £4,000-worth of yarn over the phone in one order. She then comes and collects it in one visit and isn't heard from again until the following year.

Derek, however, comes into the shop everyday (Lou is even open on Sundays) and asks Lou to talk him through the various types of yarn she stocks before inevitably picking a few balls of the same yarn he always does! He'll then chat to Lou's assistant, Peter, for 20 minutes when he's at the checkout making his purchase - Peter really should be packing online orders instead. Once Derek gets home he'll often call the shop asking for more advice about knitting patterns. Lou estimates that dealing with Derek costs her business approximately £15 per day.

As a result, the annual cost of dealing with Derek is a whopping £6,475; £1,000 for the yarn and £5,475 for the additional expenses (£15 x 365). This means Lou actually makes a £2,475 loss from dealing with Derek (£6,475 - £4,000). Maybe she should ban Derek from her store!

What's the point of all this? By looking at the actual activities Lou and her business have to perform to fulfil Derek's needs, she can see that they vastly outweighed the activities needed to fulfil Doris's needs. All of these activities cost money and so Derek is actually a far less profitable customer than Doris. However, a traditional accounting method would only have included the direct cost of the yarn and written off the rest as 'overheads' and given the impression that Derek and Doris were equally profitable customers.

Following on from this analysis, Lou may make a decision to charge for personal advice (to mitigate the impact felt from spending time dealing with customers for an excessive period of time), or by offering a discount for bulk purchases (thus, encouraging Doris-like behaviour and discouraging Derek-like behaviour). This will improve the profitability of each customer and in turn the business itself.

Lou has, therefore, identified the cost drivers, such as employee utilisation (see previous chapter for full explanation) and **calculated the true cost of dealing with her respective customers**. This is the **purpose of activity based management**

(ABM). Now Lou can use the analysis to make sensible and effective decisions that benefit her business.

As we have seen, ABM can be used **to analyse the costs of employees' time** (as per the above example), but it can also be used to **analyse customers, distribution networks, products and overheads to determine and allocate costs to activities**. By identifying the true cost of business activities, an organisation can improve key growth and value drivers thus strengthening the organisation's competitive advantage, profitability and customer satisfaction.

In short, activity based management moves away from using ABC as a resource for cost information and instead sees it as a **tool for business strategy and performance**.

Example

Kon-struct produces two different products for the construction industry. The first product (Jack hammers) are fast moving products that are usually produced and sold within a couple of weeks, as these are always in demand given their universal usage and low cost. The second product (cranes) move very slowly and will often stay in stock for months, waiting to be sold. This is because only the largest companies purchase them outright for their large construction projects. The cranes are pretty robust and last for many years, and therefore are not replaced regularly.

Due to excess crane stock, a second storage facility is rented several miles away from the main facility. Large batches of Jack hammers are transported to this second storage unit where they are held for a couple of weeks before being returned to the main facility for dispatch.

The cranes cannot be transferred to this second facility due to the size of the doors and the in accessible location (it is located on a business estate fairly central to the city). The Jack hammers cannot be stacked safely in the main facility, due to the lack of industrial shelving in the warehouse.

The directors are well aware that the current process is inefficient, it would be much better if all products could be kept on site until they are sold. However, this is simply not feasible given the volume of completed goods and the lack of industrial shelving. They have looked at ways of installing these and it will cost approximately £500,000.

The company operates using a traditional cost accounting method, so the only direct cost accounted for is the Jack hammer transportation costs which is £200,000. On this basis, it appears as if maintaining the existing set up is the better option financially.

One of the management accountants at Kon-struct feels differently and believes that it would be beneficial to move the cranes to a new secondary site and install the industrial shelves to store the Jack hammers at the main facility. So, they

conduct some research into what is driving the overheads at the company. They identify some **key cost drivers**:

- 1) The **rent at the secondary facility** is £300,000. This is due to its location relative to the city centre. There are actually larger storage facilities with 'aeroplane hanger' style doors available on the outskirts of the city for £200,000. A £100,000 saving. This would allow them to move the cranes there instead of the Jack hammers.
- 2) The **equipment transfer**. As the cranes are self-propelling, they can be driven from the main facility to the secondary one and, therefore, eliminate the need for loading and unloading equipment for the Jack hammers at the secondary location. A saving of £60,000.
- 3) The **cost of maintaining completed goods**. The new, larger hangers are naturally cool, dry and free from dust (unlike the main facility). This means the cranes could be stored there for a period of time without the need for regular cleaning and inspection. A saving of £50,000.
- 4) The **opportunity cost of staff**. Opportunity costs are defined as the loss suffered from choosing one activity over another. In this case, time spent moving Jack hammers back and forth is time not spent producing more Jack hammers! The Jack hammers require a team of workers to load and unload for transport, whereas the cranes are self-propelling and need only one individual to drive it from one location to the next. As a result, the other workers can stay on the production line. The opportunity cost amounts to £200,000.

Once costs are broken down using drivers and activities a different picture is painted:

	£
Transport saving	200,000
Cost savings:	
Rent	100,000
Equipment	60,000
Cost of maintaining finished goods	50,000
Opportunity cost of staff	200,000
	610,000

Decision making focus

Management accountants can use this analysis to improve the efficiency of overheads by identifying where costs are actually coming from. At Kon-struct, the traditional costing system only identified transport costs. By identifying where the overheads were actually coming from, the management accountant was able to

show that the total cost saving from moving facility and installing the shelves was £610,000.

Traditional costing suggested it was only £200,000, which would make the restructuring look inefficient. But by breaking down all the other costs and looking at just how costs are accumulated (as per activity based costing) the accountant was able to show the directors that it was indeed worthwhile, as it would lead to a saving of £110,000 (£610,000 - £500,000).

Digital costing

Analysing cost drivers and making strategic decisions based on the results is particularly relevant in the modern business era, given the rise of tech/internet-based businesses. In a traditional manufacturing organisation, costs can be quite simple to analyse:

- Staff cost £X per hour and produce Y products per hour
- The raw materials costs £X per kg and each product requires Y kg

And so on. But this is not so easy in the digital era. As such, **activity based drivers are even more important in identifying the profitability of a product.** For example, a software company has 100 members of staff, with each one developing a separate piece of software. What's the cost of that software? The salary of the specific employee, right?

- What if that employee spends their time helping some of their colleagues?
- What if it is the other employees who are spending their time on this software?
- What's the opportunity cost of not developing other software?
- What if a senior manager has to get involved all the time?

All of these are cost drivers that increase the cost of the product and decrease its subsequent profitability. As such it is important to be disciplined and have systems in place that accurately monitor exactly who has worked on a product and for how long. **This allows for accurate costing even in the digital workplace.**

Strategic activity based management

Activity based management can be used for operational concerns as we've already discussed. But it can also be used for strategic decisions such as:

- Which products to produce
- The price they should be sold at
- Who should we sell them to

- How should we distribute the products

We'll be coming on to these later in this chapter.

2. Activity based budgeting

You should now be familiar with the concepts of activity based approaches and the idea of focusing on activities that drive costs rather than the actual costs themselves. Activity based budgeting is no different. **This approach to budgeting involves identifying the activities that are driving costs, and then allocating funds based on the level of each activity.** For example, a **traditional budget** for a delivery company might look like this:

Activity	Cost £
Wages	300,000
Vehicle costs	190,000
Equipment costs	110,000
	<hr/>
	600,000

The problem with this method of budgeting is it **does not take into account the reasons for the costs incurred and has little relationship with the activities that actually drive the costs.** Therefore, the basis upon which these funds were allocated may be questionable.

An activity based budgeting approach addresses these weaknesses by linking fund allocations to the actual cost drivers and might look like this:

Activity	Cost £	No. of activities
Order processing	115,000	190,000
Local delivery	165,000	100,000
Rural delivery	235,000	60,000
Packaging	85,000	175,000
	<hr/>	
	600,000	

This approach provides a far better indication of how costs are incurred and in turn allows for a more accurate budgeting process. For example, if the number of rural orders is expected to rise by say, 2,000, management can accurately estimate the cost of this increase and budget accordingly.

In contrast, a traditional system would have them estimating the extra labour hours, extra vehicle costs and extra equipment requirements of a rural order, all without understanding how much the actual activity of a rural order really costs.

As with all other activity based techniques, **focusing on the cost drivers goes a long way towards the most accurate allocation of costs possible.**

3. Pareto analysis

Pareto analysis, also known as the 80/20 rule, and as rule of thumb, the theory suggests that **80% of effects come from 20% of the cause.** This is an important theory to use for ABM as it **allows managers to create a hierarchy of products, processes and so on.** This in turn allows them to prioritise and focus efforts. In business, pareto analysis may be applicable in many ways such as:

- 80% of sales come from 20% of customers
- 20% of products make 80% of profit
- 20% of the sales team make 80% of the sales

Obviously this is not an exact science and should not be taken as so, what Pareto analysis essentially illustrates is that **small volume can equal high value.**

Often **useful decisions can be made having understood the relationships.** For example, if a business has three different types of customers and using a pareto analysis one type is found to generate 80% of profit, more attention might be paid to that customer type in future, e.g. future marketing could be targeted at gaining more customers of that type.

Drawing a Pareto graph

Pareto analysis can be shown graphically. Let's see an example:

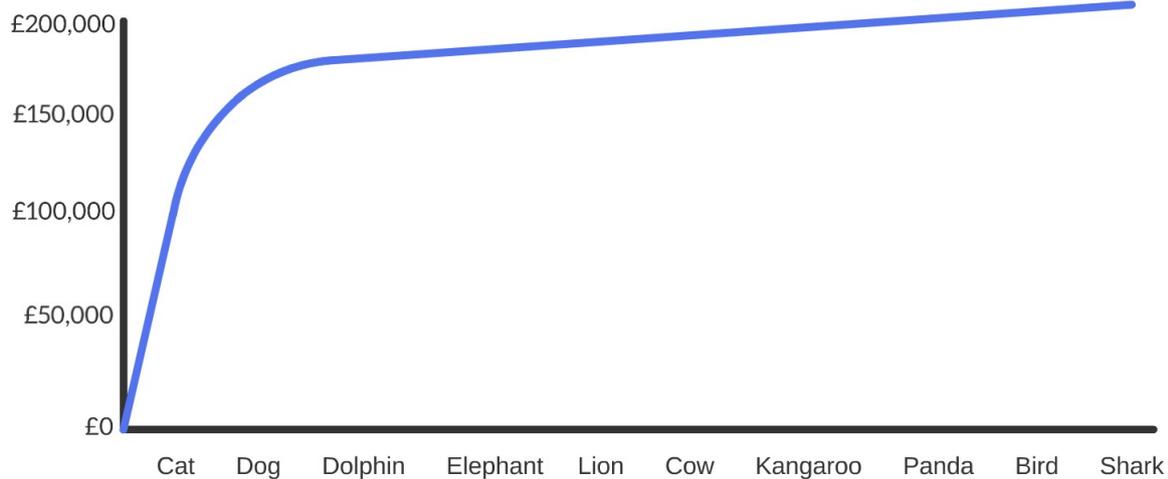
A company makes children's toy animals - equal amounts of each type of animal are produced and management need to assess whether or not they should be doing this and if certain animals should be discontinued. The following information has been provided:

Animal	Sales (£)
Dolphin	12,000
Shark	400
Dog	60,000
Elephant	7,000
Lion	6,000
Cat	100,000
Cow	5,000
Kangaroo	5,000
Panda	4,000
Bird	600
Total	<u>200,000</u>

The **first step is to put the sales in order** (highest value first) and then the **second step is to calculate the cumulative percentage**:

Animal	Sales £	Cumulative sales £	Cumulative percentage %
Cat	100,000	100,000	50.0
Dog	60,000	160,000	80.0
Dolphin	12,000	172,000	86.0
Elephant	7,000	179,000	89.5
Lion	6,000	185,000	92.5
Cow	5,000	190,000	95.0
Kangaroo	5,000	195,000	97.5
Panda	4,000	199,000	99.5
Bird	600	199,600	99.8
Shark	400	200,000	100.0

As you can see 80% of the value is in fact created by 20% of the products produced, next we need to draw these on a graph:



A simple but effective graph confirms the 80/20 rule; the graph also shows us that some products are hardly contributing at all (bird and shark in this instance). Obviously it is not as simple as this and it must be noted that **pareto analysis does not take into account many other factors** but it does at least give you an idea of what is growing and driving a business. In this example, questions such as the following might now be posed:

- Could the business cut back on other animals and only focus on cats and dogs?
- How much time, effort and cost (e.g. design and sales) goes into the minor products and how does that affect the profitability of those products?
- Are some minor products necessary as an on-sell for others? E.g. shark toys, despite having low revenues, must be made alongside dolphins as the local aquarium requires both to be stocked.
- Are there lessons from the sales of cats and dogs that could be applied to other products to increase their sales in future?

Decision making focus

Pareto analysis helps to identify key products, customers, distributors, marketing campaigns, and so on. From this a decision can be made to the extent to which less effective products (or customer, distributors or campaigns) are continued.

ABC Analysis (Selective inventory control)

Warning: It is important to understand that here ABC is NOT an acronym, be mindful not to confuse ABC Analysis with Activity Based Costing.

This control system is similar to Pareto analysis in that it **groups stock/inventory into three different categories**, where 'Stock A' consists of the **products that are estimated to be of most value to the company**. Think of them as the biggest

stars, the A-listers of the company in terms of return. While the rest of the stock is categorised into Stock B, and Stock C which is considered least important. **There are no strict percentages to apply to each category, and management can apply their own criteria based on company objectives.**

As **Stock A is considered to be the most valuable items**, more attention is given to them in terms of analysis and treatment. For example, they may be kept in a secure location and run on a continuous inventory system, while the Stock C levels might only be reviewed once a month.

Going back to the toy manufacturer example, management would consider the cat and dog toys to be Stock A and, as they are popular, must always have stock ready for sale and tight inventory kept of numbers. On the other hand, the company may only perform a manual review of Stock C (bird and shark toys) periodically and produce more only if needed.

4. Direct product profitability (DPP)

Another key ABM method is to look at and analyse the products that a company sells. **Just because a product sells well and generates a great deal of revenue, does not mean it brings more benefit and profit than a product that does not generate the same level of revenue.**

Let's say a bag of fresh salad and a tin of tuna cost the same to purchase from suppliers and are sold for the same amount. Under a gross margin analysis these items would appear to be just as valuable as each other, but, when we think about it logically:

- Shelf life - A tin of tuna can last for years, the salad will only last a few days before it perishes
- Shelf space - The tin will take up little space, the salad takes up far more, both in volume and the fact it cannot have items stored on top of it
- Storage environment - The tin can just sit on a shelf, the salad will need constant refrigeration.

Now we can see that there are far more costs associated with the salad than the tuna, meaning that while both may have the same gross margin, it is highly likely that the tuna is in fact more profitable.

Direct product profitability, often abbreviated as DPP, is used to assess the profitability of product lines to help make product-related decisions. It is used primarily in retail organisations to spread overheads; its **usage is particularly relevant to the grocery industry.**

Before the introduction of DPP retail organisations would simply rely on gross margin calculations (sales revenue - the product's purchase price). However, this is

of no real value or use to an organisation when it comes to the analysis of costs and cost management. This is because gross margins pay no attention to the individual costs and profitability of a product - like the costs of refrigeration or increased wastage rates for salad.

Direct costs

It is worth noting that **only direct costs should be applied** when using a DPP analysis.

Direct costs may include some of the following:

- **Warehouse costs** - How much storage space does the item take up in the warehouse?
- **Transport costs** - This can include the amount of space it takes on the lorry or the distance it has to travel etc.
- **Labour costs** - How many employees are required in the products route to market?
- **Storage costs** - How much space does it take up on the shelf?

Generic costs, for example, the cost of running the company's finance department, are too far removed from products to be able to allocate costs directly to them accurately and in a meaningful way and so are ignored in the analysis.

Comparing product profitability

So now that we know about different direct costs we can apply them to our salad versus tuna example to calculate the true profitability of each product. Let's assume that each product sells for £2.50 and has a purchase price of £1.30, however, they incur different direct costs:

	Salad (£)	Tuna (£)
Warehouse	0.15	0.05
Transport	0.20	0.15
Labour	0.10	0.10
Store	0.30	0.10

With these direct costs we can now perform a DPP analysis of each product:

Salad			Tuna		
	£	£		£	£
Selling price		2.50	Selling price		2.50
Purchase price		1.30	Purchase price		1.30
Gross margin		1.20	Gross margin		1.20
Direct product costs			Direct product costs		
Warehouse costs	0.15		Warehouse costs	0.05	
Transport costs	0.20		Transport costs	0.15	
Labour costs	0.10		Labour costs	0.10	
Store costs	0.30	0.75	Store costs	0.10	0.40
Direct product profit		<u>0.45</u>	Direct product profit		<u>0.80</u>

As you can see, **despite having an identical gross margin** (which is all a gross margin analysis would show us) **one product is actually far more profitable than the other**. We can now use this figure to work out the DPP rate as a percentage of the selling price:

	Salad	Tuna
Selling price	£2.50	£2.50
Purchase price	£1.30	£1.30
Gross margin	£1.20	£1.20
Gross margin rate	48%	48%
DPP	£0.45	£0.80
DPP rate	18%	32%

Decision making focus

Analysis like this is particularly useful to supermarkets as often they do not have the option of simply not stocking the product (both salad and tuna must be stocked to keep customers happy) and **use the analysis to help price the product better, rearrange the shelves to improve utilisation of space, or manage costs better**

(e.g. understanding the causes of transportation or warehouse costs so they can be reduced).

5. Customer profitability analysis

A **profitable customer is one where, in the long term, the revenues exceed all the costs** associated with attracting, selling to and servicing that customer.

Customer profitability analysis involves deducting cost of sales from revenues, as well deducting costs associated with:

- Marketing
- Proposals
- Contracting
- Customer support
- Order processing
- Delivery

One common finding when profits per customer are calculated is that a small percentage of the firm's best customers will account for a large portion of firm's profit. (Think back to Lou and her customers Derek and Doris!)

This is often due to the economies of scale of dealing with larger customers (for example by saving on ordering and delivery costs). Other reasons can also be found for differences in customer profitability **which can then support decision making to help increase profits.**

As an example, some customers may make significant use of a free technical helpline which could reduce overall profitability for that customer compared to one who does not use it at all. The company could decide to address this by limiting the usage of the technical help desk or not selling to particular types of customers (e.g. small customers without their own internal support function).

Customer profitability analysis often uses an activity based approach, with cost pools (e.g. technical support department costs) **allocated to customers based on costs drivers** (e.g. hours spent on technical support line). Let's see how this might work:

Customer profitability analysis example

Consider the following data for two customers of an IT retailer. Beta is a large company with its own IT support group, while Scenko is a small local business, with no support.

	Beta	Scenko
	€	€
Annual sales revenues	30,000	9,000
Cost of sales	20,000	6,000
Contribution	10,000	3,000
Number of orders	5	20
Time on technical support	10 hours	20 hours

Cost per order = €100

Cost per hour of technical support = €50

Analysing this information:

	Beta	Scenko
Contribution	€10,000	€3,000
Profit margin (profit/sales)	33%	33%

On the face of the basic contribution, both customers are clearly profitable with equal and good profit margins. However the situation looks different when we consider how the overhead costs incurred are driven by the customer demand.

	Beta	Scenko
	€	€
Ordering costs (Number x cost/order)	500	2,000
Technical support costs (Hours x cost per hour)	500	1,000
Customer profitability	9,000	0
Margin (profitability/sales)	30%	0%

The lower number of orders and IT support time used on a much larger sales volume make the Beta significantly more profitable than Scenko.

Decision making focus

Following this analysis the company have a range of options:

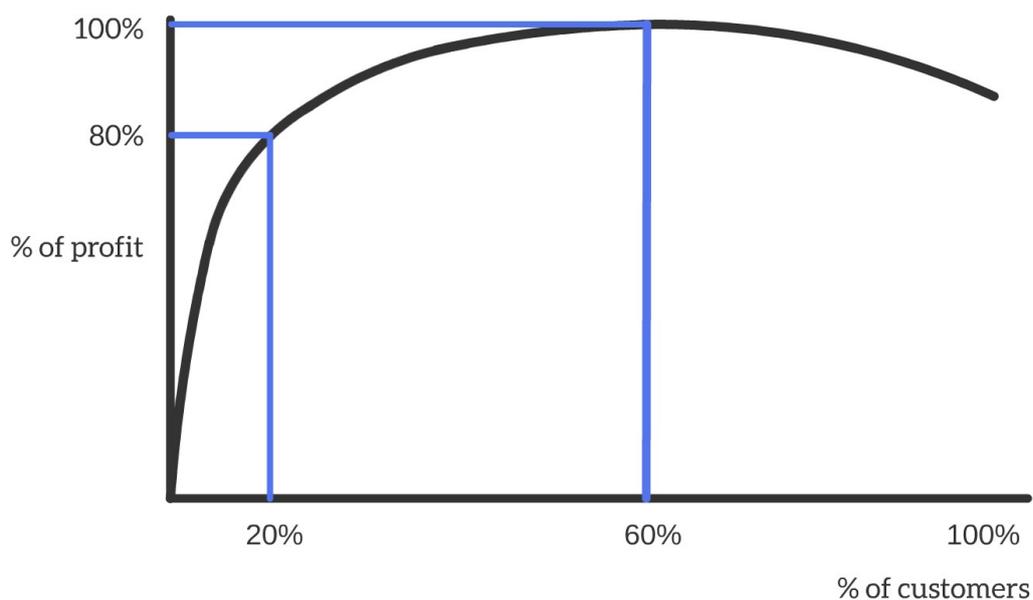
- Start targeting larger customers in the future
- Stop servicing small, unprofitable customers
- Start charging for technical support rather than provide for free
- Impose a minimum order quantity

As with all our cost management techniques the key is not the final number itself but the resulting decisions that the company will use those numbers to make.

Customer profitability curve

An organisation can benefit from looking at the costs each customer incurs and identifying which customers are genuinely of benefit to the organisation. As we have already discussed, some customers can actually have an impact on profits - remember Derek in Lou's craft supplies shop example?

The way in which customers can affect a business can be represented by the customer profitability curve which often follows the Pareto rule:

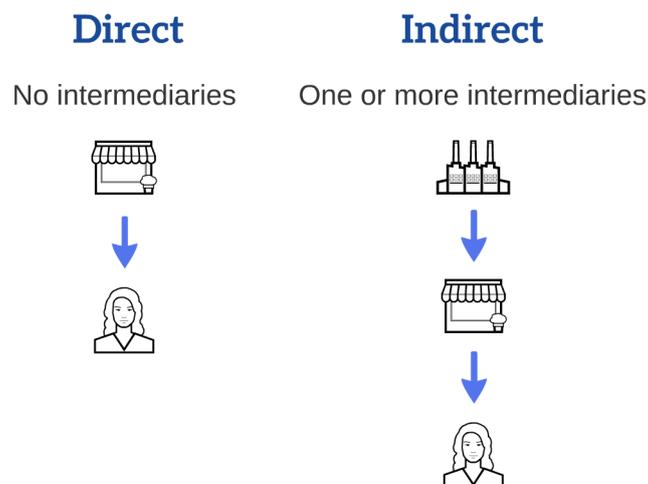


This curve allows management to rank their customers based on their **importance to the organisation**. As you can see, the company represented in the graph above makes 80% of profit from 20% of its customer base. The company has also earned all profit possible from 60% of customers. The remaining 40% of customers has actually caused a reduction in profit as they cost more to serve than revenue generated from their purchases.

However, if a customer is unprofitable, it does not mean they should be turned away. Instead, management should look to find a way of improving the **profitability of these customers**. Again, identifying this and subsequently attempting to solve the issue is the key point of ABM.

6. Distribution channel profitability

Even after a decision has been reached on what to sell, who to sell it to and so on, a decision needs to be made on how exactly a product is going to get from the manufacturer to the end user/consumer. An organisation's **distribution channel relates to how the company reaches its customers**. This can be either via direct or indirect processes and can potentially have an impact on profitability:



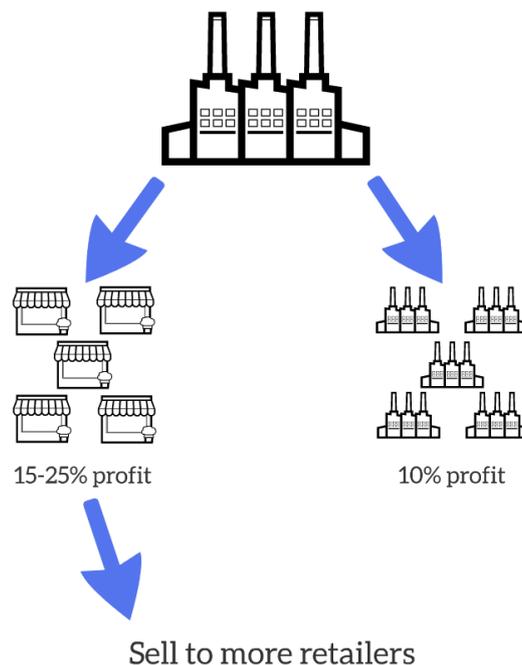
- **Direct** - When there are **no intermediaries between the company and the consumer**. Examples of this would be a shop that sells directly to the customer, a sales team that sell over the phone or a web page which customers can purchase directly from.
- **Indirect** - When there is **one or more intermediaries between the company and consumer**. For example a clothing manufacturer that sells clothing via retailers.

Like customer and product analysis earlier in this chapter, **distribution channels can also be analysed to calculate their profitability**. There may be certain activities that are necessary in one distribution channel, but not another. As a result one channel may cost the company more than the other, reducing profit. Activity based techniques can be used to allocate costs to accurately analyse the profitability of each channel.

Decision making focus

Management can **use channel profitably to analyse the distribution options available and make decisions that maximise profitability accordingly**. For example, management in a manufacturing company are looking to expand operations. They list the various customers they have. Five of them are wholesalers, who in turn sell products on to retailers and the other five are retailers.

Management calculates that profits through the wholesalers have a 10% margin, whereas profit margins through the retail customers range from 15% to 25%. It is clear that distributing through retail outlets is far more profitable, so management can make a conscious effort to supply to more retailers.



The **key decisions that need to be made here are first, which distribution approach to focus the strategy on and secondly, how can costs be managed in each distribution approach to maximise profits.** We could ask what drives the increased costs for sales to wholesalers, which can help us to decide how these costs can then be managed.

For example, if the reason that profit generated through the wholesale channel is lower is due to increased transport costs, (retailers pick up stock, whereas wholesalers require delivery) then perhaps management can arrange an increased sales price incorporating this additional expense, or alternatively, ask the wholesaler to collect.



CIMA Management Case Study

Chapter 17

Risk

1. Risk

What is risk?

Imagine you are going out shopping. As you do that you are taking a whole range of risks, even though you probably don't even think about it - the risk of being overcharged, the risk of buying something you won't use, the risk of being in an accident on the way there or back, the risk you'll meet a friend and get held up chatting and miss an appointment and so on.

In fact we could just go on and on, listing out all the things that could go wrong - and there, in that last phrase, lies the essence of risk.

Here's the definition then...

Risk is the potential that a chosen action will lead to an undesirable outcome.

In business too the number of things that could 'lead to an undesirable outcome' are endless, but they must be understood and managed by the business. Ultimately commercial risks result in a negative outcome in terms of some business goal - an increase in costs, fall in revenues, loss of customers, legal liability, drop in morale of staff and so on.

Upside vs downside risk

Now our general definition above actually relates to '**downside risk**' which is when things go wrong. **Occasionally you may also see a broader definition of risk being anything which varies from expectation when we can also then see the term 'upside risk' that being the risk that something positive happens.** The risk that we turn up at the supermarket and there's a sale on that saves us lots of money, for instance.

Downside risk is typically the focus for risk management, after all we're usually quite happy to take any upsides and don't therefore need to manage these upside risks.

Upside risk is something you'll see dealt with only very rarely throughout this book, and from now on you can usually assume that when we talk about 'risk' we're talking about downside risk unless we say otherwise.

When do you take on risk?

As risk implies uncertainty, it's therefore something that you might imagine business want to avoid at all costs. **Not always so! You may well take on risk when you have an incentive to do so, that is, when the outcome would be beneficial for you** - leading to greater returns, financially or otherwise. You might, for instance, launch a new product where there is a significant risk of failure, for

the potential long term returns. Virgin Galactic is taking immense risks with the goal of building and then leading the market in space tourism - one which could have incredible returns.

Businesses also have to manage the risks against the costs of risk management and may well accept risks when the costs of managing those risks are simply too high.

Most businesses have to manage the potential risk of fire and they often manage that risk using insurance. If the cost of insurance rose too high though there will be a point when it's just not worth taking out, at which point they simply accept the risk and do not buy the insurance.

As you can see, risks must be understood, as must the reasons for taking those risks, combined with the methods and costs of managing those risks. Combining these factors together we have the core of risk management in business.

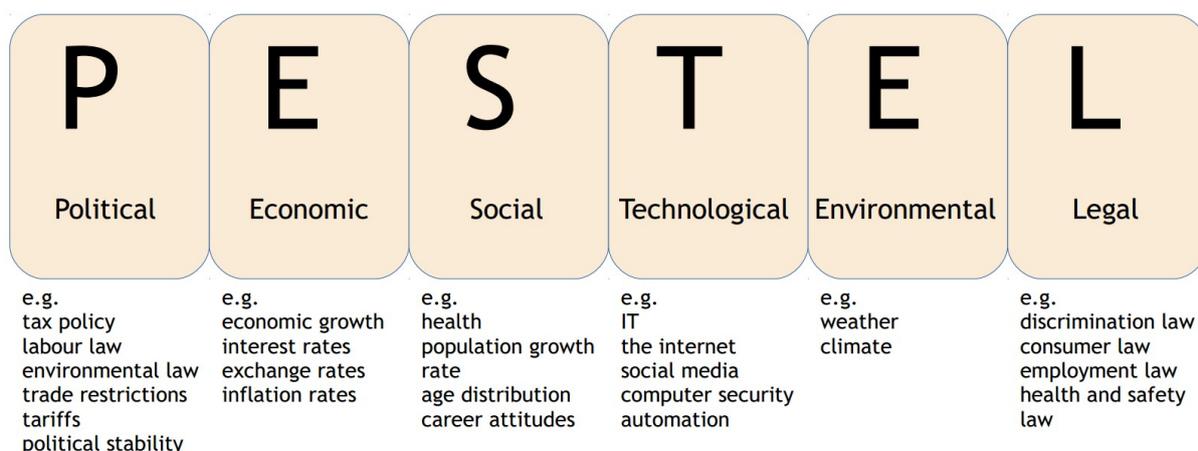
2. Business risk - strategic risks

Business risk relates to the business and its strategic and operational risks. In this section we'll discuss the first element of these - strategic risks.

Strategic risk

Strategic risks are typically managed by the board of directors as part of their remit to set and manage the strategy of the business.

A good starting point is to consider risks arising under the PESTEL factors (Political, Economic, Social, Technological, Environmental and Legal) **which are key sources of external risks:**



Political risk

Political factors are how and to what degree a government intervenes in the workings of organisations. Political factors include areas such as tax policy, employment legislation, environmental laws, trade restrictions, tariffs, and political stability.

Government investment (or lack of) can also play a significant role in the availability of contracts and work for organisations. Governments have great influence on the health, education, and infrastructure of a nation which can also impact the organisations within that country, e.g. the availability of skilled labour, or funding availability within certain sectors such as health or transport.

Political changes can therefore create significant risks for organisations within that country.

Economic risk

Economic factors include economic growth, interest rates, exchange rates and the inflation rate. These factors have a major impact on how businesses operate and make decisions. For example, interest rates affect a firm's cost of capital and therefore to what extent a business grows and expands. Exchange rates affect the costs of exporting goods and the supply and price of imported goods.

Social risk

Social factors include the cultural and demographic aspects in the population which might include attitudes to health, population growth rate, age distribution, career attitudes and a society's emphasis on safety. Trends in social factors affect the demand for a company's products and how that company operates.

Social change can therefore create risk, for example the reduction in demand for unhealthy products as health consciousness increases or a reduction in demand for products for babies if the birth rate falls.

Technological risk

Technological factors include IT, the internet, social media, computer security, automation, and the rate of technological change. Organisations need to stay aware of the changes in key technologies in their industry in order to manage risks so that they fully adapt to new technologies.

Nokia and Blackberry were market leading companies in the mobile phone industry until the introduction of smartphones. They did not adapt quickly enough to this technological change and within a few years had become just minor players in the industry. The consequences of technological risk can be high!

Environmental risk

Environmental factors include weather and climate, which may especially affect industries such as tourism, farming, and insurance. Poor growing conditions can make a huge difference to a farmer's crop yields for instance.

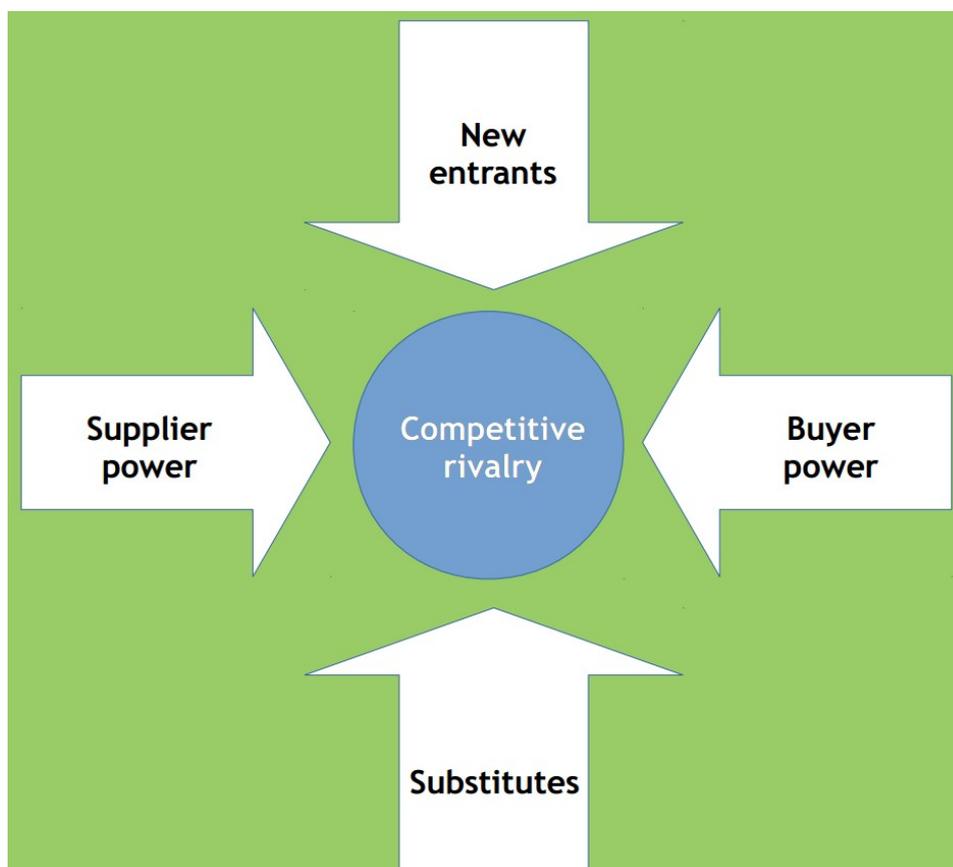
Furthermore, growing awareness of the potential impacts of climate change is affecting how companies operate and the products they offer, both creating new markets and diminishing or destroying existing ones.

Environmental risks can apply to longer term changes that affect markets (e.g. climate change) or short term activities such as a one-off pollution event.

Legal risk

Companies must continue to keep aware of legal changes to avoid the risk that they do not abide by the law which could result in fines, damage to their reputation or even closure.

Our next set of risks to consider can be related to the elements of Porter's 5 forces, a business strategy model which examines the key issues at an industry level (e.g. the oil industry, supermarket industry, banking industry and so on).



Competitive risks

These factors relate to changes caused by competitors in the market. They include new or changing products, price changes, new distribution channels, branding and market positioning.

Risk of new entrants

Are new competitors likely to be entering the industry and what impact would they have if they did?

Supplier risk

Supplier factors include changing prices, availability and reliability of supply, delays in delivery and quality issues. As well as increases in costs imposed by changes in supply, supply factors create risk of poor customer service and ultimately affect the company's reputation and profitability.

Customer risk

Customers may move to other competitors, or exert power to reduce prices. Key customers may also cease to exist, for instance when a business goes into liquidation. Over dependence on a small number of key customers is a major risk of many businesses.

Another related area of risk is reputational risk. This is the risk of a negative impact on the reputation and brand of the company resulting in lost sales. In the current market, more than ever, companies need to be vigilant about their customer's satisfaction, for example, an unsatisfied customer on social media can easily destroy a company's reputation by blogging or tweeting about it.

Risk of substitute products

A substitute is a product that fulfils the same need as the product a company produces. Professional football clubs might see cricket, rugby, basketball, golf and tennis as substitute products. There is a risk that a substitute product will become popular and reduce demand for the company's product.

For example email has taken over from fax machines as the method of immediate document transmission, and fax machine manufacturers would have needed to have been aware of this risk and its effect during the decline of that market.

Example

Let's consider a European firm which sells high quality, branded handbags expanding into China, which, for the sake of this example we will say has a growing market for designer handbags. Let's use these models to consider risk:

Political - There is a completely different political system which may impact the way regulations are set. It is also likely to be more bureaucratic than in Europe. Links with government officials are key to success in China. Significant differences in the political position mean this is likely to be a high risk area.

Economic - The Chinese economy grew quickly throughout the start of the twenty first century suggesting a good country for growth for a higher priced product such as designer handbags. Changing exchange rates versus the local currency will be a risk that must be continually managed as this will affect margins.

Social - The numbers of people now deemed middle class has increased dramatically which may offer opportunities for European products. European brands are seen as being of high quality and desirable. However, failing to ensure products also meet with local cultural norms is a key risk.

Technological - Technological differences are likely to be low risk for the market for handbags which does not depend on a particular technology.

Environmental - Environmental issues are generally seen as being of lower importance in China than the West, as the focus is more on growth than the environment. As such this is likely to be a low risk area.

Legal - China has a range of laws and restrictions that companies must abide by. There is a significant risk here, and being aware of these and ensuring all legal restrictions are met will be key to success.

Considering the key strategic risks from Porter's 5 forces:

Customers - Existing consumers may have loyalty to existing products or brands. Western brands may be attractive for fashion products however reducing the risk. Care must be taken to understand customers and their needs and tailor products accordingly.

Customers could also be considered the outlets through which the company sells (e.g. department stores) and there is a significant risk that the major stores may not want to deal with this company.

There is medium risk in this area.

Suppliers - In this case it is likely that no change in suppliers will be needed - the products are likely to be exported to China. As such this is a low risk area.

Competitors - There will be significant local competition and established brands. They may also attempt to resist a new entrant such as our company with increased advertising or reduced prices.

New entrants - As a growth market there is undoubtedly a risk that other companies will enter the market too. The company should look at which brands may be enter that market and ask what impact that may have on the success of the venture.

Substitutes - The local market may have other substitutes although it seems likely that handbags as a fashion item will be likely to grow for fashion conscious, wealthier consumers. Low risk.

3. Business risks - operational

Key operational risks

Operational risks are internal risks, relating to the day to day functioning of the business.

These can include:

- IT systems breakdown, error or failure
- Loss or corruption of data
- Legal and regulatory compliance
- Health and safety issues
- Loss of key staff
- Increasing wages
- Shortages of skilled staff
- Fraud
- Human error
- Damage, loss or theft of assets.

Risk and large projects

Due to the wide variety of opportunities for problems in large projects such as large construction projects or IT developments, these are often highly risky. Such ventures typically have high cost overruns, benefit shortfalls where initial objectives are not fully achieved, and delays.

Research suggests that cost overruns of 50% are common on large projects, while actual demand for the end services they are planned to provide is commonly 25% less than anticipated.

Large projects therefore need very clear, detailed feasibility analysis at the project inception, and strong project management throughout the project.

Fraud risk

This refers to the potential of an organisation to commit fraud. Some companies are more susceptible to fraud, as a result of the kind of industry they may be in, for example a charity is less susceptible to fraud than a bank, due to the nature of the work.

Employee Malfeasance Risk

This is the risk the employees of an organisation may pose of committing an offence that would reflect on the organisation, for instance, false advertising or breaking legal or statutory codes of conduct.



CIMA Management Case Study

Chapter 18

Risk Management

1. Risk management

In the 1880s French diplomat Ferdinand de Lesseps identified Panama as an ideal location to create a sea-level canal to link the two great oceans (Pacific and Atlantic). To achieve such a thing would have a significant, positive impact on the shipping industry. Ferdinand de Lesseps and his team knew that the weather in Panama was often turbulent and unpredictable and that yellow fever was rife.

However, despite this, no thought was given to how to store/move the ground removed, they just pushed it to the side, so of course whenever it rained (which they knew it would) it all softened and slid back into the canal they were digging out.

On top of this, no precautions or preventative measures were put in place to stop workers contracting yellow fever. Hundreds of workers died, then after many years and millions of wasted dollars, with only a tenth of the work completed the project stopped in 1894.

A decade or so later the same task was attempted by a team put together by President Roosevelt. This time the risks were actively dealt with. They brought in medical experts who knew how to deal with disease and did not even begin digging until an infrastructure was in place for moving the excavated ground somewhere where it no longer posed a landslide risk.

In the same amount of time it took Ferdinand de Lesseps and his team to admit failure, the canal was completed and in 1914 the Cristobal became the first ship to officially sail down the canal.

So what's the point of this story? It demonstrates the value of good risk management. Both teams faced the same risks, both teams knew of these risks, but only one tried to deal with them! In short, having identified a range of risks, the next step is to do something about those risks. In essence this is the process of risk management and that's what we will examine in this chapter.

Let's look at the formal definition:

Risk management is the identification, assessment, and prioritisation of risks followed by coordinated and economical application of resources to minimise, monitor, and control the probability and/or impact of unfortunate events, or to maximise the realisation of opportunities.

A process to manage risks

The definition hints at the steps in the formal process of risk management we'll see later in this chapter. We start the process off by **identifying key risks**. Next an **assessment and prioritisation process** is followed whereby the risks with the greatest importance (typically seen as those with the greatest impact and the

greatest probability of occurring) are handled first, while those of lower importance are prioritised lower and may even be ignored.

We then go on to manage those key risks to reduce the likelihood of them happening (e.g. put controls in place to prevent a fire) and/or reduce the impact (e.g. obtain insurance so the loss is recompensed should a fire actually occur).

Finally we monitor the situation to ensure our risk management process works and no changes are required. For example, a new fire risk could arise which we must set up procedures to manage.

Balancing spending on risk management with benefits gained

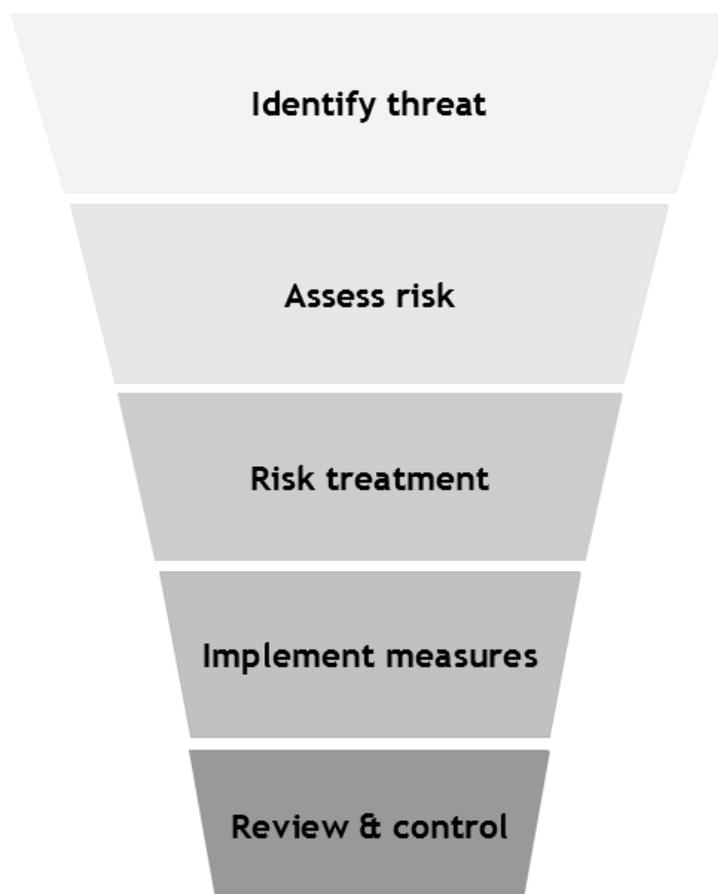
Most risks can be minimised if enough money is spent on them, or extreme measures taken. Building sites can be made extremely safe with very strict procedures, the best staff training, safest equipment and a culture of safety being embedded in the organisation.

A key question though, is just how much money and bureaucracy should be invested in getting safer and safer, and where do you stop? There will come a point where so much money is spent on safety and the bureaucracy and controls are so stringent that the project is unprofitable and hence will not be viable.

Ideal risk management minimises spending on the management of risk while also minimising the negative effects of the risks themselves and achieving a fair balance between the two. What constitutes a fair balance is often a matter for the directors to decide and will often relate back to their risk appetite.

2. Risk management process

In this section we'll take a focused look at each of the specific steps in the risk management process. There are five typical steps to be followed:



Step 1 - Identify threats

You plan to go to dinner tonight. However, it might rain and you don't want to ruin your best shoes. There isn't a guarantee, but as long as there is uncertainty, there is a threat.

Risks are about events that, when triggered, cause problems - you might get wet! The event in this case is rain. Hence, risk identification should start with the source of problems, the events that cause these risks.

Risk sources which can create events include:

- Stakeholders of a project
- Employees of a company
- The weather (as in our example!)
- Political change
- Economic circumstances
- Technological change
- Competitors

In fact many of these sources can be related back to the PESTEL and 5 forces factors we covered previously, and that can be a very useful way to remember them!

Threats can be related to sources, so for example if we take competitors we might say threats are: lower prices, new products or innovations, improved quality or service, better marketing, and so on.

Once a threat is identified, the events that may be triggered can be investigated. For example specific events related to competitors and lower prices might be: sales at particular times of the year, price reductions to sell-off products that haven't sold well or responding to our price reductions.

Example

Throughout this section we'll use a simple example to demonstrate the process. Let's take a small jewellery shop in a local town centre and identify a few (of the many risks) they may face:

- Theft
- Economy declines reducing demand
- Cash flow weaknesses so they can't pay suppliers as debts fall due
- Legislation not adhered to (e.g. health and safety)
- Stock is purchased which cannot be sold (or is sold at a loss)
- Errors in the accounting system

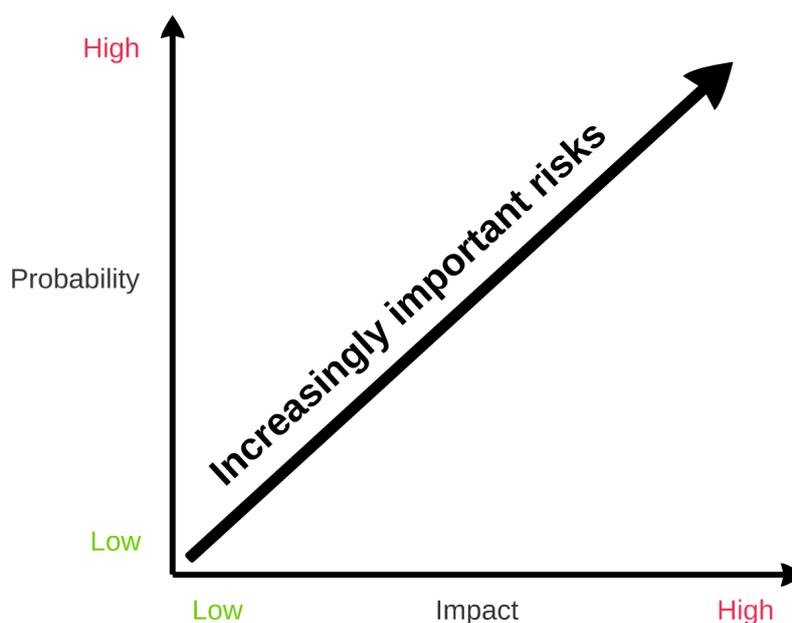
Step 2 - Assess the risks

Once risks have been identified, they must then be assessed as to their:

- **Potential severity of impact** (generally a negative impact, such as damage or loss)
- **The probability of occurrence**

These quantities can be either simple to measure, in the case of the value of a lost asset, or more difficult, as might be the case for a loss in profit caused by a new competitor product. At times then educated guesses are the best that is possible when assessing risk. That does not mean the risk should not be assessed however; it is just important that an acceptance that all risks are not accurately quantifiable is brought into the process too.

These can then be plotted on a risk map.

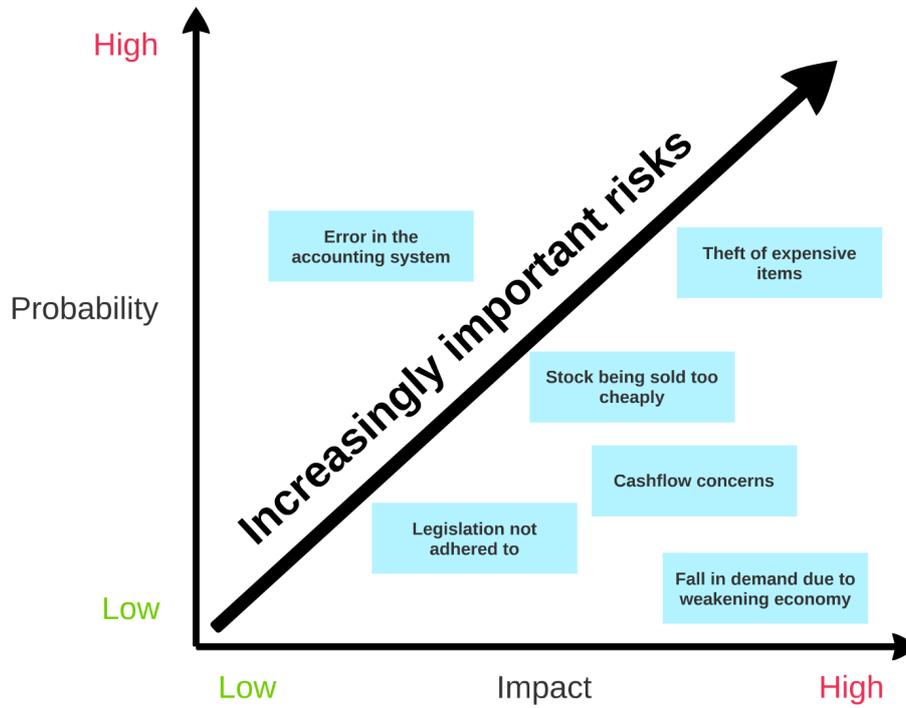


The risk map is a key method for:

- **Analysing the risk** - the more important the risk, the more important it is that mitigating action is taken to reduce that risk
- **Reporting the risk** - e.g. reporting of risks by the audit or risk committee to the board or the board to the shareholders.

Example

Let's map out the risks in the Jewellery shop:



This highlights the real importance of our shop owner ensuring theft of expensive items is dealt with (high probability, high impact), while conversely that perhaps at the moment he doesn't need to worry about the changing economic circumstances (Low probability, Medium to low impact). Although the impact of accounting errors is relatively low, the fact that it's quite likely suggests some greater control over the accounting process is needed.

Step 3 - Risk treatment/management

Once risks have been identified and assessed, techniques to manage the risk fall into one or more of **the four major (TARA)** categories:



- **Transfer** - Sharing with another party e.g. Outsource or insure
- **Avoid** - Eliminate, withdraw from or not become involved
- **Reduce**- Control and mitigate
- **Accept** - Accept the risk and budget for its possible occurrence

Let's examine each in more detail:

Risk transfer

This is where losses are passed on to another party so that the loss is taken or shared.

This is usually done in one of two ways:

1. **Insuring the risk, hence passing the 'financial risk' on to the insurance company.** The risk of a ring being stolen is a good one to pass on to an insurer for instance.
2. **Outsourcing - so that the risk is passed to the outsourcer as part of the contract.** If, for example the jewellery shop was having an extension it might be good to get an agreed price for the completed work, so that any unforeseen issues are passed onto the builder and not the shop owner.

Note that some element of the risk is often retained by the company. In the event of a fire, the business may be able to reclaim the financial losses resulting directly from the fire but they are likely to lose out in other ways too. They might, for

instance, have a loss of profits during the period during which the shop is closed for refurbishment, something which is unlikely to be recoverable from the insurer.

Risk avoidance

This typically involves not performing an activity that could carry risk.

Our jeweller might, for instance, never stock items worth more than £10,000 to completely avoid the risk associated with holding such high-value items.

On the downside, avoiding risks also means losing out on the potential gain that accepting (retaining) the risk may have allowed - selling those higher value items for instance. Another example would be not entering into a new business opportunity; it avoids the risk, but also stops the possibility of earning more profits.

Risk reduction

Risk reduction involves reducing the severity of the loss or the likelihood of the loss from occurring. For example, sprinklers are designed to put out a fire to reduce the risk of loss by fire, while locks on doors reduce the risk of theft, as do security guards.

Our jeweller might put controls in place to reduce the risk of accounting errors (as highlighted earlier). This could include:

- Checking the balance sheet balances
- Using control accounts
- Balancing the bank reconciliation
- Input checks
- Shop owner review of bookkeeper's work
- Using a reputed bookkeeper or accounting firm.

Risk retention/acceptance

This is when you take the risk upon yourself, instead of transferring or avoiding it.

Retention involves accepting the loss, or benefit of gain, from a risk when it occurs. Risk retention is a viable strategy for small risks where the cost of insuring or managing the risk would be greater over time than the total losses sustained. i.e.

Cost of insuring/managing risk > losses sustained = Retain Risk

All risks that are not avoided or transferred are retained by default. This includes risks that are so large or catastrophic that they either cannot be insured against or the premiums would be infeasible.

Our jeweller might, for instance, accept small thefts, and not bother insuring for those which in total are valued at less than £100. He might also accept that occasionally staff will be ill and that will be out of his control and he'll just have to work harder that day to cover them being away.

Any risk which is not insured against or managed is known as **retained risk**.

Create a risk management/treatment plan

For each risk identified as needing to be actively managed, appropriate controls or countermeasures should be selected. For example, an observed high risk of computer viruses could be mitigated by acquiring and implementing anti virus software.

A good risk management plan should contain a schedule for control implementation and responsible persons for those actions.

Each approach must be approved by the appropriate level of management. For instance, a risk concerning the image of the organisation should have top management decision behind it whereas computer virus risks would be managed by the IT department.

The risks and agreed methods of managing these risks are summarised in a Risk Management/Treatment Plan, which documents the decisions about how each of the identified risks should be handled.

Step 4 - Implementation

Implementation simply means taking the action agreed in the risk management plan.

Example

Our jeweller will now need to action his risk management plan. This might, for example, include:

- Purchasing insurance policies for the risks that have been decided to be transferred to an insurer
- Taking security measures to prevent theft
- Not stocking items deemed to be too high risk
- Changing his bookkeeper to someone more reliable

Step 5 - Review and control

Risk management plans should be updated periodically. There are two primary reasons for this:

- **To evaluate whether the previously selected controls are still applicable and effective.** If our jewellery shop had three thefts in a month we might quickly conclude the security controls were not effective!
- **To evaluate the possible changes in risk level in the business environment.** Changes in procedures, technology, schedules, budgets, market conditions, political environment, or other factors typically require re-assessment of risks.

Example

Again, let's take our jeweller; one risk identified was the loss of demand due to the economy worsening. During boom times that might be deemed very low likelihood and not worth considering, but if a recession hit, it would become more likely (and move to the right in our risk map). We would also be in a better position to assess the impact based on the depth of the recession, which may be higher than might usually be expected.

An increase in thefts in other stores locally might also highlight the need for greater security.

The world is a continually changing place and so our risks need to be continuously re-evaluated.

3. CIMA's risk management cycle

CIMA has created its own risk management cycle, outlining the following steps for risk management:

1. Establish a risk management group and **set goals**
2. **Identify risk areas**
3. **Understand and assess** the scale of risk
4. Develop a **risk response** strategy
5. **Implement** the strategy and allocate responsibilities
6. **Implement and monitor** the suggested **controls**
7. **Review and refine** the process and do it again



You'll notice that this is simply another variation of the generic steps from the earlier section - the 5 steps there simply having been expanded into 7 for this model.

4. Ethical implications and public interest

In Ancient Greece, ethics was considered an inseparable aspect of human conduct, and as such was treated with much reverence and consideration. What is right and what is wrong? How should humans conduct themselves? How should we treat others? These were the grand questions that inspired answers from Socrates, Plato, and Aristotle.

But in the modern world, the idea of ethics and morality has become more tangled and confused, and there are even movements to denounce the existence of moral truths altogether. We've somehow managed to separate ethical issues from life, and treat it as a separate subject of its own.

So we are going to back track a few thousand years and take another look at what the Greeks were trying to do. **How should an individual act with regards to**

themselves and their community? What behaviour is morally acceptable and unacceptable? But rather than looking at abstract notions of morality, we will be applying these principles to the real world of accounting and business.

Ethics

Ethics is a code of moral principles that people follow with respect to what is right or wrong. Ethics is relevant as a risk because exposure of an ethically questionable activity can do significant damage to the public's perception of an organisation. In a business environment, common examples might include:

The treatment of workers

There are a whole range of issues here, but the most notable are things such as working conditions in third world countries. Often cheaper labour can be exploited by Western organisations, but at what cost?

Avoiding bribery

Bribery is using money to get people to do what you want, rather than what is appropriate or right. This can be an issue in the workplace, and is a key cause of corruption.

Good professional conduct and honesty

Each member of an organisation should conduct themselves appropriately in the role. They also need to be open and honest about their conduct. If we don't have this, then we lose accountability and a sense of integrity.

Respecting people's personal data

Increasingly a big issue in the modern world. Websites such as Facebook and Google have access to personal information from the users of their sites. Should they have the right to pass that information on for financial gain if it is given freely?

Appropriate and fair advertising

Up until the 90s, advertising for cigarettes was done in the same way as any other consumable commodity. However, as it became more and more obvious that smoking was a health risk, then cigarette companies were forced to disclose this in the advertising.

Safety at work

If an employee injures themselves at work because of a dangerous working environment, who is responsible? Was the employee behaving inappropriately, or was the work environment unsafe? These kinds of questions are why health and safety regulations have been developed in workplaces, to keep people safe, and to reduce the costs to the company.

Why are ethics important to a business?

Having good ethics can be a real advantage to a business. Likewise, having poor ethics can have a really negative impact on it.

Generate good feeling amongst staff - a number of companies pride themselves on their ethical positions on a number of issues regarding trade and openness, and the staff at these companies are likely to feel better and be more productive if they work in an environment in which they feel respected and responsible.

Avoid legal action - behaving unethically usually means that someone is breaking the rules somewhere, and this means legal consequences. The safest bet is to observe the rules and behave ethically.

Avoid bad publicity - reputations can be severely damaged as a result of bad press from unethical behaviour. Tesco Supermarket suffered bad publicity over a scandal in which it was found that horse meat was used in 'beef' burgers. A clear case of 'foal' play.

Competitive advantage - being an ethical company can be a unique selling point and thus serve as a competitive advantage. The Co-op supermarket are founded on principles of fair trade and equality.

Financial reporting and ethics

From a financial reporting perspective, applying good ethics to the reporting process **helps to ensure accurate information is provided, and there is full and open disclosure**. This is good for the company's reputation, and more widely **ethical financial reporting is also in the wider public interest**.

Irrespective of your personal ethical beliefs, there is no doubt that ethical issues crop up fairly regularly in the world of business. Many of the nation's most popular newspapers and magazines regularly put an ethical spin on big financial news, in order to grab the people's attention and sell papers.

Just look at the effect that documentaries in the mid-2000s had on the fast food industry. Look at how the media have covered the global financial crisis of 2008, and how that has created an environment of distrust in the general population of large financial institutions.

Ethics are a very important and powerful element in business, and therefore in accounting too. You should not underestimate the significance of ethics during your studies, as it will come up again and again: you might as well get used to it now!

Public interest

Large organisations can often be seen as shapers of society by virtue of their influence on people's lives. For example, the growth and prevalence of cheap low

frills airlines has altered completely the holiday habits of lower income families, who would have usually have gone to a domestic location to holiday. But, as the old saying goes, with great power comes great responsibility! This applies to the public in different ways.

Organisations have a responsibility to treat the public fairly. For example, to disclose all necessary information truthfully. They also should take care not to exploit the public by overcharging them for something they need. For example, in 2015 Turing Pharmaceuticals increased the price of the AIDs drug Daraprim by 5,000%. Despite there being sound business reasons for this it was seen as scamming the ill and there was a huge backlash against the company and its CEO.

Organisations also have a **responsibility to look out for the well-being and safety of the public.** Returning to our earlier example of low-cost airlines, the company has an obligation to ensure the planes are safe and pose as little risk to the public as possible.



CIMA Management Case Study

Chapter 19

Performance evaluation

1. Performance evaluation

As an accountant, preparing financial reports is only the first of many steps in the accounting process. Financial reports are useless to an organisation unless they are used as a tool to identify strengths and weaknesses and the causes behind them. Remember, the purpose of accounting is not to produce financial reports; the real goal is to use that information to improve financial decision making.

Therefore, performance evaluation is a big part of accountancy, which includes things like variance, trend and ratio analysis. Remember, the purpose in such activities is not to simply calculate the variance or the ratio. The idea is to interpret and draw an educated conclusion from it, which can then be used to facilitate the decision making process.

2. Financial ratios

The need for ratios

Imagine for a moment two organisations. Company A has just reported an increase in revenue by \$1m and Company B by \$2m. Which company performance would you consider to be the best?

The obvious answer is Company B, but, of course, we wouldn't be asking this if it was that simple!

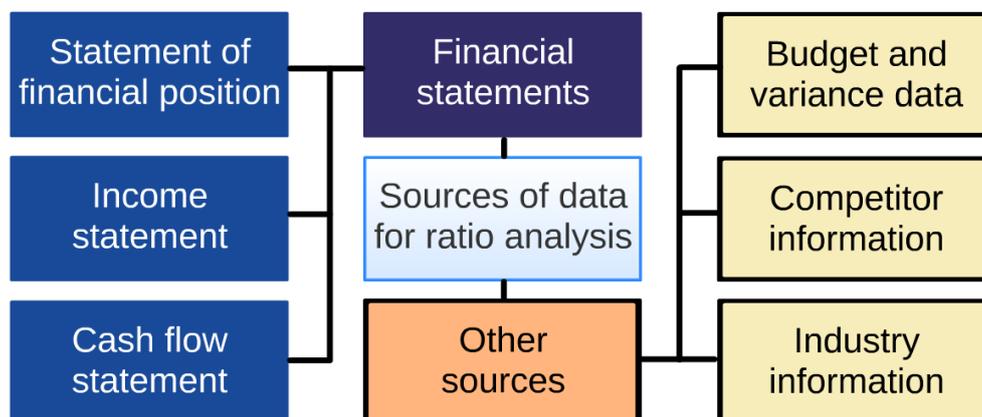
If A's revenues were \$10m in the previous year and B's \$100m, then things look very different. A has just increased revenues by 10% and B by just 2%. Company A therefore appears to have had the better increase in revenues. The percentage (or ratio) has enabled a better comparison between the two companies.

It's for this reason that simply looking at the standard figures on the income statement and statement of financial position can at times be misleading. Profit, for example, is far more meaningful when compared with revenues (in what is known as the profit margin).

Similarly the level of debt is more meaningful when compared with the total assets - a \$1m debt is large for a small enterprise but insignificant for a listed multinational company.

Sources of information

Ratio analysis uses all sorts of information in order to look at an entity's financial health. For examination purposes, the information provided for analysis will come from one or more of the following:



Comparison of financial ratios

It's important to state the importance of the 'other sources' of information from the sources diagram above. As in our earlier example, comparing company A with company B gave more meaningful information than just looking at one company alone. If we were also able to compare their profit rises with industry profit rises then we would have even better information. If the industry average rise in profits was 20%, then suddenly we find both companies have underperformed, and B has done particularly poorly. **Therefore, good comparative data is very important to ratio analysis.**

Comparisons may involve:

- **Trend analysis: Comparing past ratios within the same business** to establish whether things are improving or declining (e.g. the last 5 years).
- **Cross-sectional analysis: Comparing ratios with industry norm or average to see whether the company you are analysing is better or worse than average** within its specific business sector (e.g. average profit margin).

Although important, **ratio analysis on its own is not sufficient for interpreting company accounts**, and other items of information need to be reviewed (e.g. competitor information).

Guidance on interpretation

When you calculate the ratios, **the following questions help turn the data findings into a useful analysis.**

- **What does the ratio mean?**
 - e.g. Company A's growth in profits is 10% of revenue which shows a solid increase in company profits in the last year.

- **What does a change in the ratio mean?**
 - e.g. let's say last year the ratio was just 5%, this shows much better growth compared to the previous year. Examining the reasons for the increase can help the organisation learn about how to maintain this in future.
- **What is the norm?**
 - e.g. Industry norm this year is 20%. This shows although 10% was good, it perhaps was not good enough. Examining what competitors are doing to achieve higher profit growth (benchmarking) may be useful.
- **What are the limitations of the ratio?**
 - e.g. It could be that company A has done better over recent years than competitors and so it might be harder to grow as quickly as them. Comparing profit margins (profits/revenues) might provide a better comparison.

Ratio categories

The financial statements are the main focus of ratio analysis. The ratios are categories based on functionality as follows:

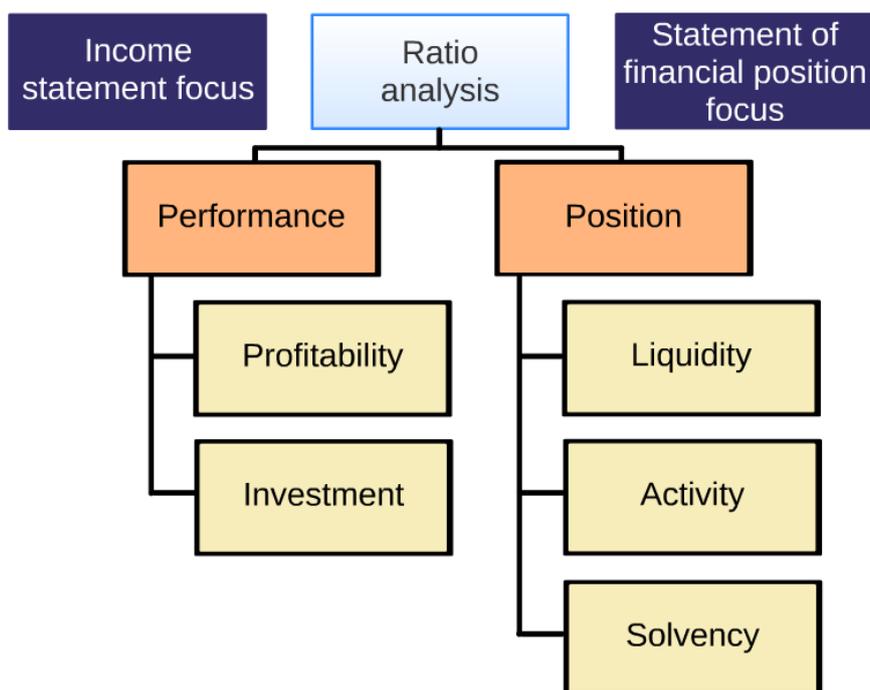
Financial performance ratios, which focus on the income statement.

- **Profitability ratios** analyse the entity's ability to get profitable sales from assets.
 - e.g. profit margin (profit/revenue)
- **Shareholder investment ratios** calculate the actual or potential earnings of an investment in shares, based on dividends or earnings available for distribution.
 - e.g. earning per share (profit/number of shares)

Financial position ratios focus on the statement of financial position:

- **Activity ratios** measure the efficiency of day-to-day tasks / operations.
 - e.g. receivable days ($[\text{receivables}/\text{revenue}] \times 365$) tells you how quickly debts are paid assessing the performance of the credit control department
- **Liquidity ratios** look at the company's ability to meet short-term liabilities.

- e.g. liquidity ratio (current assets/current liabilities) tells you whether the short term assets are enough to pay all the short term liabilities
- By comparison, **solvency ratios** measure its ability to meet long-term liabilities.
 - e.g. gearing (debt/equity) tells you the balance of debt to equity - too much debt increases risk as interest payments are compulsory



Example - Ratio analysis

Arethra is a manufacturer based in Europe. Let's take a look at the financial statements:

Income statement

Income Statement	31 Dec 20X3	31 Dec 20X2
Revenue	516	484
Total operating costs	(499)	(460)
Operating profit	17	24
Finance costs	(8)	(8)
Tax expense	(4)	(8)
Profit for the period	5	10

Statement of financial position extracts

The company has not paid a dividend for the last 3 years. Its current share price is €10.22. There are 1m shares in issue.

The company's management team has the following financial objectives:

- An operating profit margin of 8%
- A total earnings per share of €10
- Financial gearing of less than 30%

Statement of Financial Position	31 Dec 20X3		31 Dec 20X2	
	€m	€m	€m	€m
Non-current assets (net)		395		366
Current assets				
Inventory (including work-in-progress)	59		47	
Trade receivables and accrued revenue	111		88	
Cash and short-term investments	1		7	
		171		142
Total assets		566		508
Non-current liabilities				
Bank loan (repayable 20X8)	102		100	
		(102)		(100)
Current liabilities				
Trade payables and accruals	71		46	
Tax	6		7	
		(77)		(53)
Net assets		387		355

Well, there are the numbers. Let's look at some of the ratios we can use to interpret them.

Profitability ratios

Predictably, **profitability ratios look at how profitable a company is: this means looking at how well prices and costs have been managed.**

Profit margin looks at profits compared to revenues, which you would expect to be consistent over time and against competitors.

	20X3		20X2	
Operating profit	17	= 3.3%	24	= 5.0%
Revenue	516		484	

The profit margin has reduced compared with last year (3.3% < 5.0%), and is well below the company's target of 8%. This suggests that prices have been squeezed

and/or costs have risen. A 1.4% drop is quite a lot and, more worryingly, if Arethra cannot halt this decline they will soon become loss-making!

Return on capital employed compares profit with capital. It gives a view on how well the capital is being used.

	20X3	20X2
Operating profit	18	24
Long term capital (Total assets - current liabilities)	$\frac{18}{566-77} = 3.7\%$	$\frac{24}{508-53} = 5.3\%$

The return on capital employed has also reduced significantly, so things really aren't looking good for Arethra! This is due both to a reduction in profits with an increase in assets. The return on capital employed is very low, and shareholders are unlikely to want to accept such a low return on their investment in the long term.

Working capital ratios

Alongside long-term capital, we also need to examine the short term - and we do this by looking at working capital. The goal of working capital management is to ensure a company is able to continue its operations day-to-day and has sufficient cash flow to pay both maturing short-term debt (short-term debts that must now be paid back, such as a bank overdraft or accounts payable) and upcoming operational expenses.

Working capital management involves managing the relationship between an organisation's short-term assets (inventories and receivables) and its short-term liabilities (payables).

So this is where you might find that although John's lemon stall has £25k in top-line revenue, £5k is tied up in a stock mountain and will most likely be wasted, £5k is owed to him from pubs and bars he sells to, while £10k is payable in three months as two bank loans mature. That tells us a fuller story! So, how do we go about this? We can start by looking at inventory days.

Inventory days measures the average number of days that an organisation holds stock before selling it. Or to put it another way, the amount of time funds are tied up in inventory. The longer the inventory days, the more stock is available to meet customers' needs. However, a higher inventory days ratio means more capital is tied up in stock and there is a higher chance of obsolescence and wastage.

To calculate it, we first need to divide the ending inventory, found on the balance sheet, by the cost of goods sold (or total operating cost) for the period, to give you a single inventory day figure.

We then multiply this figure by 365 to find out how many days of a year this number will extend into. (If you want to calculate inventory days over, say, a 30-day period, you would adjust the 365 multiple to 30).

So let's look at our example of Arethra:

		20X3	20X2
Inventory		59	47
Total operating costs (Cost of sales if available)	x 365 days	499	460
		x 365 = 43 days	x 365 = 37 days

Inventory days have increased. Possible reasons could be worsening inventory management or an increase in unsold items. This is another blow for Arethra, and if you were an investor you would be worried!

The next ratio we could look at is accounts receivable days.

Accounts receivable days measures the average number of days before customers pay debts. The longer the period, the more free credit is being given to customers. On one hand, this could help maintain good relationships with customer, but on the other hand **it can mean cash receipts are delayed, causing cash flow difficulties, and potentially increase the risk of bad debts.**

		20X3	20X2
Receivables		111	88
Revenue	x 365 days	516	484
		x 365 = 79 days	x 365 = 66 days

Receivable days have risen by 13 days, so customers are taking longer to pay. This may be due to customers exerting their buyer power, and paying later, worsening credit control. Or perhaps Arethra is extending credit terms in order to keep customers satisfied.

Accounts payable days measures the average number of days it is taking to pay creditors. Longer payables mean longer free credit being gained from suppliers, but risks worsening relationships with them.

		20X3	20X2
Payables		71	46
Total operating costs (Cost of sales if available)	x 365 days	499	460
		x 365 = 52 days	x 365 = 37 days

Accounts payable days have increased by 15 days, suggesting Arethra are delaying payment to their suppliers. This reduces working capital requirements, and might

be legitimately due to Arethra exerting power over suppliers to extend credit terms.

However, it could also be a result of cash flow difficulties, meaning they are having to delay payment. If this latter situation is the case, they must be careful to ensure supplier relations are maintained to ensure security of supply.

Now that we have inventory days, receivable days and payable days, we can use them to take a look at the company's working capital cycle.

Working capital (or cash conversion) cycle

This ratio represents the time difference between cash payment for raw materials and cash collection for sales. It's often called the cash conversion cycle because it shows the organisation's ability to convert its resources into cash.

If you think about it, **this number effectively corresponds to the time that the organisation's cash is tied up in operations** and unavailable for other activities. Because of this, **management generally aims at a low net count.** The longer the cycle is, the greater the working capital finance that is required to cover it. Here's how to work it out, using Arethra's numbers:

Working capital cycle =

Inventory days (Id) + Receivable days (Rd) - Payable days (Pd)				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 50%;">20X3</td> <td style="text-align: center; width: 50%;">20X2</td> </tr> <tr> <td style="text-align: center;">43 + 79 - 52 = 70 days</td> <td style="text-align: center;">36 + 66 - 37 = 66 days</td> </tr> </table>	20X3	20X2	43 + 79 - 52 = 70 days	36 + 66 - 37 = 66 days
20X3	20X2			
43 + 79 - 52 = 70 days	36 + 66 - 37 = 66 days			

Overall the working capital cycle has increased here, which is an extra strain on the company's cash flow position, and this must be closely managed in the future.

Liquidity ratios

Last week you lent your friend £10 and today you need it back. But your friend can't pay you right now because he doesn't get paid until tomorrow. Today, your friend has poor liquidity. In accounting, liquidity ratios examine a company's ability to pay debts as they fall due.

So poor liquidity means that there is little cash and short term assets available to pay maturing short term debts. Now, that's an important measure when evaluating a company because it indicates its ability to stay solvent going forward. Again, we can use a few different ratios to get a picture of an organisation's liquidity.

Current ratio - this measures the ratio of current assets to current liabilities. **The larger the ratio the greater the ability of the company to be able to pay debts as they fall due.** Here's how to work it out:

	20X3	20X2
Current assets	171	142
Current liabilities	77	53
	= 2.22	= 2.67

Arethra's current ratio has worsened over the year, suggesting there are fewer assets available to meet short term debts due, although it is good that assets (at 171) are greater than liabilities (at 77), as this suggests that short term liabilities are covered.

Quick ratio (acid test) - this is a shorter term measure of liquidity, as it recognises that inventories cannot be immediately sold, so takes them out of the ratio:

	20X3	20X2
C. assets - Inventory	171 - 59	142 - 47
Current liabilities	77	53
	= 1.45	= 1.79

The quick ratio has also worsened over the year, suggesting there are fewer assets available to meet short term debts falling due, although again it is good that assets are greater than liabilities, as this suggests that short term liabilities are covered.

Conclusions

Overall, the liquidity position of the company appears to be satisfactory, but worsening. Both the current and quick ratios have worsened in the year, reflecting what appear to be difficult trading conditions. However, both values appear to be relatively healthy and do not suggest immediate liquidity problems.

Solvency ratios (aka gearing ratios)

Let's imagine you decide to buy John's lemon stall, but you don't have the cash to pay up front for the acquisition. You'll need to raise finance and the two chief ways of raising finance are via debt (a bank loan, usually) and via equity (selling shares in your company to a private equity firm or venture capitalist, for example). We can look at each of these to gain a picture of the company's health and we use a couple of ratios to do this:

The financial gearing ratio shows the level of debt to equity. Since debt means there are compulsory interest payments each year, this raises the break-even point of the company and so increases the risk of insolvency. So the higher the gearing ratio, the higher the risk.

However, debt finance is tax-deductible and cheaper and quicker to arrange, while equity finance is not, so a suitable balance must be found between risk and cost.

Let's look at Arethra's numbers to work out its gearing:

	20X3		20X2	
$\frac{\text{Long-term debt}}{\text{Net assets}}$	$\frac{102}{387}$	= 26%	$\frac{100}{355}$	= 28%

Gearing has reduced in the year, largely due to an increase in assets during the year, which must have been financed out of equity since debt levels have remained similar.

Gearing above 50% is considered high-risk. A company with a low gearing of 10% would be considered low-risk by investors. Arethra's gearing is currently at 26%, so there may be room for further future financing, secured on non-current assets (e.g. buildings). However, lenders may be wary of lending to a company whose profits are so low, and are likely to want to see clear plans in place to demonstrate how the company aims to turn its profits around.

Interest cover - this shows how easily the company is able to pay its interest payments out of current profits. The lower this figure the greater the risk of being unable to pay (defaulting on) its interest payments.

	20X3		20X2	
$\frac{\text{Operating profit}}{\text{Interest payable}}$	$\frac{17}{8}$	= 2.13	$\frac{24}{8}$	= 3

An interest cover of 2.1 is very low, and the fact that this has worsened over the year, suggests that there is a significant risk of non-payment of interest in forthcoming periods, and a clear need to improve the company's cash position, through improving efficiency and increased sales.

Shareholder ratios

When shareholders buy equity they are buying shares in the ownership of the company. It can be a good way for a company to raise finance but it's not a gift: investors are looking for returns. If you're evaluating a company's performance then the return it gives its investors is an important metric for you to consider, since it gives a good general indication of the company's health and, when combined with other ratios, can complete the picture. There are three ways to do this: by calculating the dividend yield, the earnings per share and the price-earnings ratio.

Dividend yield is the return on the share price in the form of dividends paid by the company to shareholders. Let's check Arethra's numbers:

	20X3	20X2
$\frac{\text{Dividend per share}}{\text{Share price}}$	$\frac{0}{10.22} = 0$	0

Ouch! The lack of a dividend, combined with the worsening business performance is a real concern for shareholders. It suggests the company is facing cash flow difficulties, something that is also supported by the earlier ratio analysis.

Earnings per share (EPS) shows the earnings for each individual share. Ideally this will rise each year. To work it out, just divide the total earnings that could be distributed to shareholders by the number of shares in issue:

	20X3	20X2
$\frac{\text{Earnings distributable to shareholders}}{\text{Number of share in issue}}$	$\frac{5}{1} = 5$	$\frac{10}{1} = 10$

This has reduced in line with the profit reduction, so it's going to be a concern for shareholders, particularly as it is now below the target EPS of €10.

Price-Earnings (P/E) ratio shows the ratio of share price to earnings. The higher this figure is, the better the market's view of the company. Analysts typically compare this with the industry norm to compare how the market perceives this company against others in the industry.

A low P/E ratio could indicate the company is undervalued (and a good buy) or is higher risk due to market uncertainty. Many industries have a P/E ratio of around 8-12 whereas high growth industries have a P/E of 20+.

$\frac{\text{Share price}}{\text{Earnings per share}}$	$\frac{10.22}{5} = 2.04$
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This is a very low P/E ratio, suggesting that the market believes there is significant risk from investing in Arethra, no doubt due to the poor performance and liquidity.

So you can see how each of these ratios adds more information and helps add to an evaluation of the company's performance.

Limitations of financial statement figures for ratio analysis

Although, ratio analysis is a useful technique, **it is limited by the financial statements** which:

- **Only provide historic data and as such ignore future action by management.** For example, if inventory days have increased due to stock being reserved for a huge deal in the coming year, this will not be reflected.

- **Only provide financial information.** Non-financial information such as that given in the notes to the accounts and the management discussion and analysis section of the statements are not shown in ratios.
- **Limited information to be able to identify trends over time.** This can be overcome if we use ratios over a number of years: if Arethra usually has one strong year and then one weak year, the ratios we have seen could be tolerable. If, by comparison, they have worsened every year over the last five, then it's time to panic!
- **Provide only summarised information and therefore lack the detailed information required to get the overall view.** This is in stark comparison to the integrated reports we have previously looked at, which seek to support financial information with a wide array of non-financial data.

3. Reporting of performance evaluation

Financial reports alone provide limited value when it comes to performance evaluation. For example, if a business has a gross profit of £1 million, is that good or bad? **In most cases such a figure on its own is meaningless. Only when we have other information to compare this with will we be able to put it in context and draw a meaningful conclusion.**

This is the reason that ratio analysis is necessary. If we calculate that the gross profit margin is 0.7, we immediately have a better idea of how the business is performing. Furthermore, if we know that the previous year's gross profit margin was 0.5, and that the industry average is 0.4, the picture becomes even clearer.

Therefore it is important to remember that when reporting on performance evaluation, all metrics need to be discussed in context with one another. Ratios or figures only become meaningful when discussed in comparison with budgets, forecasts, prior year results or industry competitors.

4. Non-financial performance indicators

We all know that money is important and historically financial performance was considered the only true measure of an organisation. Now, while **financial metrics** are obviously important and can offer a great deal of information there are **limitations**:

- They consist of **historical data only**, whereas businesses generally like to be forward thinking
- They **can be manipulated** through careful selection of accounting policies
- They offer **short term** feedback only

For this reason many firms also employ non-financial performance indicators (NFPIs), designed to measure progress towards long term goals. Some good examples are detailed in the chart below:

Success factor	NFPI
Competitiveness	Sales growth Number of customers Market share
Productivity	Cost per unit Capacity utilisation Setup time Output per hour
Quality	Number of defects Number of accounts lost Number of on-time deliveries
Customer satisfaction	Staff turnover Job satisfaction Days absent Number of new staff qualifications Training time per employee
Personnel	Staff turnover Job satisfaction Days absent Number of new staff qualifications Training time per employee
Innovation	New products/services launched Sales of new products R&D time per new product

Advantages of NFPIs

- NFPIs are **forward looking**; giving management an idea of future performance (this lies in contrast to financial indicators, which are generally backward looking).
- Allows **all areas of the business** to be measured.
- Are **easily understood** by all personnel. Non-financial managers will not understand financial ratios but will understand things like customer satisfaction and staff turnover very easily.
- Gives a **good indication of long term performance**, as opposed to financial indicators which are mostly focused on the short term.
- **Cannot be easily manipulated** through accounting policies.

Disadvantages of NFPIs

- NFPIs allow every aspect of the business to be measured, which can cause **information overload** and take focus away from the entity's core goals.
- **NFPIs could be set that do not meet ultimate business goals**. It is important that all NFPIs do end up are somehow linked to financial performance in most businesses because improving shareholder wealth is a key goal.
- The large amount of possible NFPIs means businesses can 'over-evaluate', **spending time and resources on measurements that provide little value** to the decision making process.

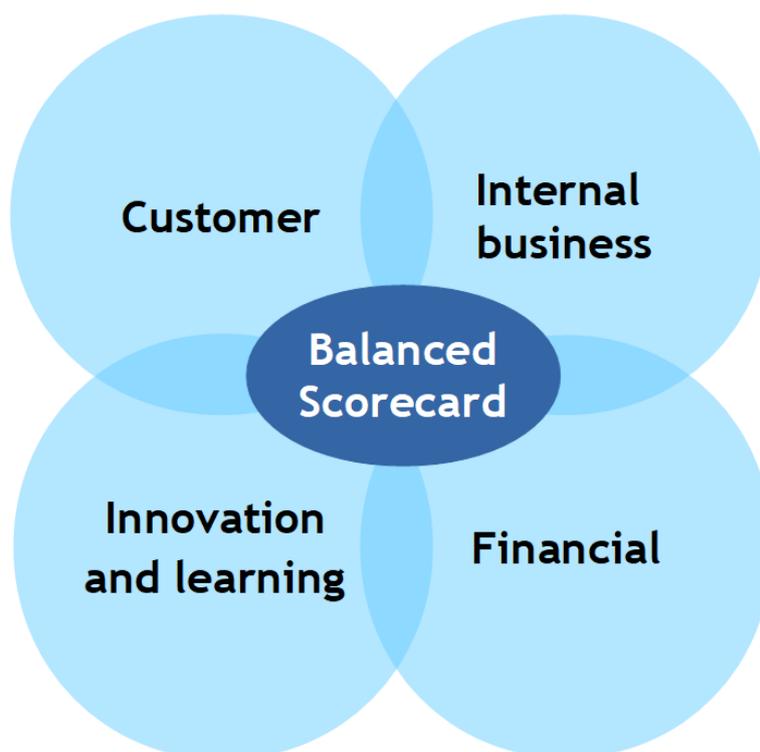
5. Balanced scorecard

In order to overcome the limitations of using financial ratios alone, Kaplan and Norton developed the balance scorecard, which outlines four key areas in which company and divisional performance should be measured. The key idea is that **managers should be appraised on a variety of measures which include non-financial measures so that their focus is both long and short term**.

If a manager was just appraised on profits alone then they might lower spending on annual training so profits are higher. Under the balance scorecard though they might also be measured on 'number of training days' or a similar training measure, and so would need to balance performance over both the short term (profit) and long term (training days) measures.

Similarly spending less on R&D could result in higher profits, but under the balanced scorecard a worse performance on a measure focused on development spend or number of new products released.

The 4 perspectives and suitable performance measures in each are:



Customer perspective

Focusing on the customer and meeting their needs.

Possible measures:

- Customer satisfaction - via a customer satisfaction survey
- Number of returns
- Number of customers moving to the competition.
- Call waiting time/service time
- Delivery time
- Percentage of deliveries on time

Internal business perspective

Focusing on the way the business works and operates with a particular focus on productivity and efficiency.

Measures include:

- Time per unit
- Number of defective products
- Cost per unit
- Material wastage rates

Innovation and learning perspective

Focusing on innovating in product and processes, and developing and learning for the future. Learning is more than just training, but includes any kind of organisational improvements made.

Measures include:

- No of new products developed
- Sales from new products launched
- Development time of new products
- R & D spending
- Amount spent per employee on training
- Number of qualified staff
- Number of training programmes available

Financial

Financial performance remains vital to the organisation's success, as it gives an indicator of shareholder wealth and ability to survive long term, and so must also be balanced against the other factors.

Measures include:

- Profits
- Return on investment
- Residual income

- Costs (variance analysis)
- Sales

Linked to strategy

In each category the organisation must follow through from the business's strategy, to ensure it is focused on the long term direction of the business.

Clear objectives should be set under each category according to the SMART criteria (Specific, Measurable, Achievable, Relevant and Timebound), measured at the end of the period, and lessons learnt from actual results to help to improve performance in future periods and keep the organisation on track to achieve its strategic goals.

Example

Each real-life situation is different and as such requires a different focus for the balance scorecard. Let's look at a football club's balanced scorecard to begin with. Notice as you review this that the customer of a football club wants very different things from a customer as a normal business - league and cup success is the most important thing to them. Efficiency measures for the internal perspective also have to be very different.

Financial

- Profit margins
- Return on investment
- Costs vs. budgets
- Revenues

Customer focus

- Match results and league position
- Match attendances home and away
- Results of customer surveys e.g. satisfaction with provision at the stadium

Innovation and learning

- Number of innovations implemented
- Spending on learning and development
- Number of new ideas suggested

- Improvements in key environmental measures such as carbon emissions.

Internal Business

- Retention of current players
- Recruitment of new players of proven quality
- Health and safety incidents

Example

You'll notice that for an oil research and production company (one that sells all their oil on the market and does not do any oil refining) that the financial and innovations areas are reasonably similar, whereas the customer and internal perspectives quite different. Health and safety and environmental issues are critical in this industry and as such must be on the balanced scorecard.

Financial

- Profit margins
- Return on investment
- Costs vs. budgets

Customer focus

- On time taken to deliver goods purchased

Innovation and learning

- Number of innovations implemented
- Spending on learning and development
- Number of new ideas suggested
- R&D spend
- Improvements in key environmental measures such as carbon emissions.

Internal Business

- Efficiency measures (e.g. output per hour)
- Staff idle time
- Rig downtime

- Health and safety incidents
- Pollution/wastage measures

6. Benchmarking

What is benchmarking?

We all work for company B in the telecommunications industry. We all work hard and provide a great service, we cannot see how we could possibly perform any better than we do. However, we are constantly beaten in every department by company A. Why are they so much better than us? What do they do differently? Well there is a way to do this and its called benchmarking!

Benchmarking is the comparison of performance and business processes to the best in the industry or best practices from other industries, with the aim of learning from those practises to improve performance in the future.

Benchmarking can involve different types of performance comparison including with:

- Other organisations in the same industry (**external or competitive benchmarking**)
- A business function or process (e.g. finance) with similar divisions of other (usually non-competing) organisations (**functional or process benchmarking**)
- similar divisions within the organisation itself e.g. two similar retail outlets (**internal benchmarking**)

Procedure

The following is an example of a **typical benchmarking methodology**:

1. **Identify areas to be benchmarked** - usually areas where performance needs to be improved
2. Map **current processes** and measure **current performance levels** in that area
3. **Identify organisations** which are leaders in this area
4. **Decide who and how to benchmark performance**, including (where relevant) agreeing with the preferred organisation to undertake benchmarking and how to do this

5. **Surveys and data collection** of target organisation's processes - includes performance measurement and process mapping information
6. **Compare performance** and identify process differences
7. **Decide on changes needed** and implement change
8. **Review progress** and control

Difficulties when benchmarking

A key difficulty with benchmarking is how to successfully get relevant information about competitor performance. Financial performance may be able to be obtained through company accounts, the companies product can be purchased to trial and test it, but ultimately a competitor is unlikely to exchange important information about internal processes and results. Functional benchmarking can overcome this problem by exchanging information with non-competing organisations.

In addition, even where information is available, for instance in company accounts, it can be hard to make **meaningful and fair comparisons** due to differences in the businesses or business process, and so data needs to be very carefully analysed.

There are also problems with there being too many measures, so staff lose focus on achieving any one. Measures can also be conflicting, making decision making difficult as the manager tries to balance their wide variety of targets (e.g. higher quality may result in higher costs reducing profits).



CIMA Management Case Study

Chapter 20

Performance Measurement in Responsibility Centres

1. Control theory, performance targets and feedback

Control theory

Bob runs a small electronics shop in his local town. Bob is worried though - his accountant has just sent him the latest accounts and profits are down! Bob looks at the figures and realises that while staffing costs are up, revenue is down, particularly in the sale of televisions. He decides to increase his range of TVs and launch a local marketing campaign to advertise them. He also decides he no longer needs his Saturday assistant and 'lets them go'. One month later, and Bob's sales and profits are back up again, the changes have worked. Bob's happy!

What Bob doesn't know is that he is using control theory. In fact what you probably don't realise is that you are using control theory all the time too!

Control theory is the basic underlying theory of controlling systems. The process of controlling according to control theory is as follows:

5. **Setting performance standards**
6. **Measurement of actual performance**
7. **Comparing actual performance with standards**
8. **Analysing deviations**
9. **Correcting deviations**

Looking at the example of an organisation aiming to 'control' profits...

1. Setting performance standards = profit targets
2. Measurement of actual performance = accounting system used to measure actual results
3. Comparing actual performance with standards = probably summarised by the accounting department and reported to the board of directors for review. In Bob's case it's prepared by his accountant for him.
4. Analysing deviations - probably reviewed by the board of directors (Bob in this case, realising sales of televisions are down and staff costs up).
5. Correcting deviations - decisions made on response to take (Bob changes the TV range, undertakes marketing and lays off a member of staff).

By repeating the process month in, month out, an organisation's profits are controlled, and hopefully, by setting continually improving profit targets and learning from actual performance each month, they can actually be improved. In Bob's case he can keep going with his new range and marketing and keep monitoring performance month-by-month to check that profits remain on track.

We also noted that you use control theory in your lives too. Here are a few examples:

- Controlling body temperature (a lot of this is done unconsciously by your body to keep your temperature at a steady 37 degrees)
- Achieving personal goals (e.g. losing weight, running a marathon, winning a competition)
- Managing your finances (what's your personal target for your bank balance and how do you ensure you keep within it?)
- Eating (your target is not to be hungry, obviously controlled by eating!)

Control theory and performance target setting

One key element of control theory that can be directly applied to organisations is **setting of appropriate performance targets, both for the whole division or department, or for individuals.**

For departments targets could include:

- Financial - e.g. profits, cash flows, return on capital employed
- Customer focused e.g. customer satisfaction, number of complaints
- Internal focused e.g. efficiency levels and productivity
- Learning and innovation e.g. revenue from new products

Measures should also be chosen that are appropriate to that division or department e.g. sales targets for the sales team, and staff skill level targets for HR.

An inappropriate target will drive performance towards inappropriate behaviour, so for example there have been examples of police forces who were measured on number of crimes solved who then diverted resources towards easy to solve crimes in order to achieve targets at the expense of focusing on more important crimes.

Critically targets must be SMART:

- **Specific** - so they are clear and understandable
- **Measurable** - so they can be objectively reviewed

- **Achievable** - realistic and controllable by the manager with responsibility for achieving them - otherwise they will not be motivating
- **Relevant** - to the organisation (e.g. linked to the organisation's objectives) and the individual responsible for achieving them
- **Timebound** - so we know when to review them and to provide a clear target date

Management accounting and control theory

Management accounting techniques often apply control theory. Techniques such as budgeting, responsibility accounting, standard costing and the balanced scorecard focus on target setting.

Variance analysis is a classic use of control theory by analysing differences between budgets or standards and identifying reasons for those differences and then agreeing with management what remedial action will be taken.

Feedback and performance appraisal

Feedback is a critical component of a control system. It is the **comparison between actual results and objectives** that provides feedback that in turn determines the actions to be taken.

In business and accounting feedback is a very common element of control, for example:

- Staff performance appraisals and review
- Review of strategic plans
- Variance analysis and review of budgets against actual costs
- Performance measurement techniques such as the balanced scorecard

Positive feedback is where the feedback is good (i.e. profits are higher than budget) and our aim is to learn why and retain these improvements. **Negative feedback is where feedback is bad** (e.g. profits are lower than budget) where the aim is to learn why and correct this.

Incentive systems

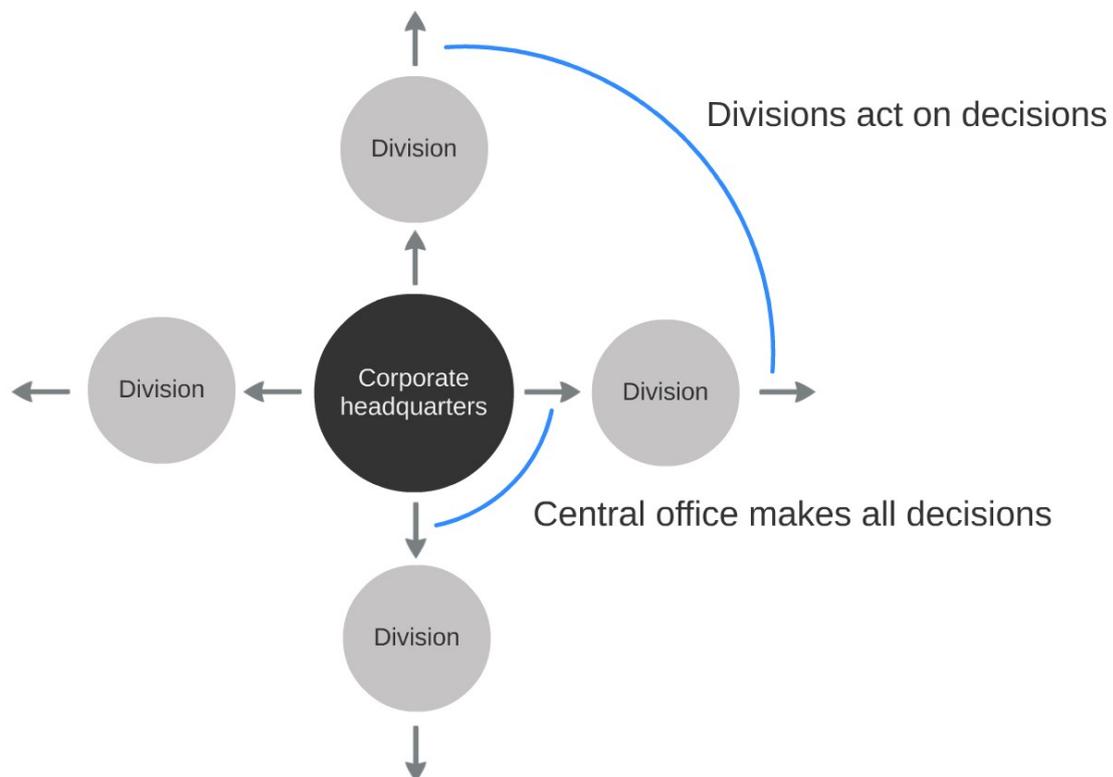
To ensure target setting and appraisal works effectively, **managers should be rewarded for good performance, for instance through a bonus scheme based on achieving their targets, or through future promotion**. Without this incentive the targets set may simply be ignored and become meaningless.

2. Centralisation versus decentralisation

It is important that you understand the distinction between a centralised and decentralised business structure as this underpins the whole concept of responsibility accounting and responsibility centres. The following section analyses both and explains the advantages and disadvantages of each.

Centralisation

Centralisation is where **the majority of decisions are made by senior management or by a centralised function**, rather than by divisional or lower level managers. For example, if all IT decision-making were centralised, a single IT function would make all IT related decisions for the whole entity. The divisional or lower level managers would therefore act to carry out the wishes of the senior management or centralised function.

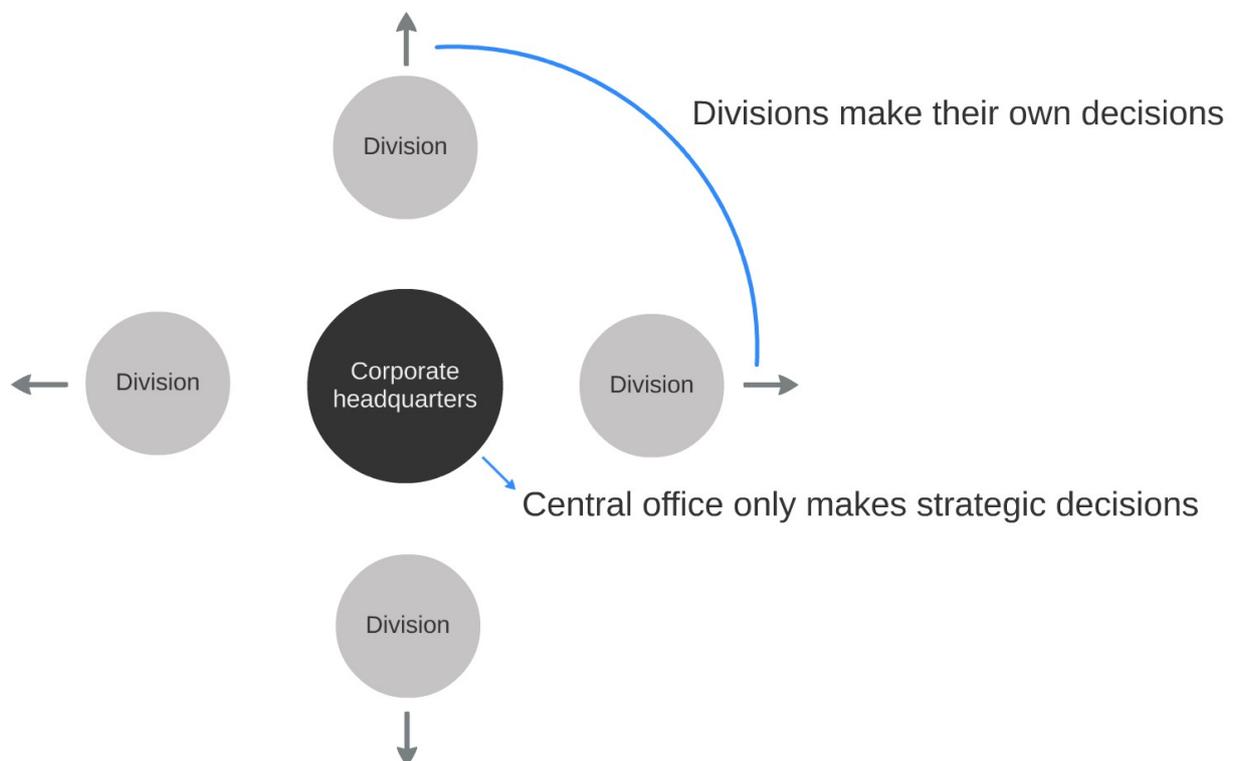


Advantages include:

- **Co-ordination between divisions**, as each individual division is being supervised and managed by the same central function. This function can align all of the objectives of each division to ensure that they are **consistent with the overall organisational objectives**.
- **Costs can be reduced by avoiding duplication of tasks** (e.g. each divisional manager researching and negotiating their own deals on IT) and by bulk purchasing (e.g. IT deals negotiated for the organisation as a whole).
- Standardised processes ensure consistency of approach throughout the organisation. The central function will have a set way of doing everything and will feed this down to each division.

Decentralisation

In a decentralised organisation, **authority is delegated down the structure to divisional or lower level managers to make decisions about their areas of the business**. The **head office instead focuses on making strategic decisions**. For example, if IT was delegated, local managers would make their own decisions about the extent to which they use IT, what they purchase and who they purchase it from.



Advantages include:

- **Divisional expertise applied to make decisions appropriate to product/customer/local area.** For example, the Indian division of a Brazilian company probably has a better idea of how to operate a business in India than the Brazilian-based corporate office. Therefore it makes sense to delegate this responsibility.
- **Motivating for lower level managers** as they have more power and control over their own divisions. This allows them to tailor their division to maximise its own strengths.
- **Quick decisions as power is delegated.** For example, an incident has occurred at the Brazilian company's Indian division. The head of this division knows swift action is needed and takes it. Problem solved! However, if this company operated under a centralised function, they would have to feed their report and suggested solution up the chain and wait for the decision to be fed back down the chain. By then it may be too late to mitigate the effects of the incident.
- **Develops staff** who are able to take more responsibility locally. This helps identify successful managers and means they have decision making skills when they are promoted to head office positions.
- **Senior management are free to concentrate on strategic issues.** It is hard to work out where the company is going to be in 10 years and how to get there when you are constantly concerned with day-to-day operations.

Organisations can use a mixture of both a centralised and decentralised approach for different decisions. For example, IT might be centralised to create a consistent approach and save costs, while marketing decentralised as it needs to be targeted at local customers.

Example

When UK book selling chain Waterstone's was first opened by Tim Waterstone, it was run along a decentralised model. That is to say that each branch of the chain made its own decisions about stock, made its own deals with suppliers and was responsible for its profit and loss.

Tim Waterstone sold his business and it eventually found its way into the portfolio of HMV Media Group. This company was adept at selling music and video through large stores and ran a centralised model and so decided Waterstone's should move to a centralised model.

Centralisation refers to the level in the organisation where decisions are made. Under HMV, decisions were made at company headquarters. The reasoning was sound: centralised buying would bring cost benefits through economies of scale.

Centralised stock control would avoid overstocks and dead stock. Review and control processes could be streamlined and turned into deployable intelligence. Marketing and promotions could be nationalised, and so on.

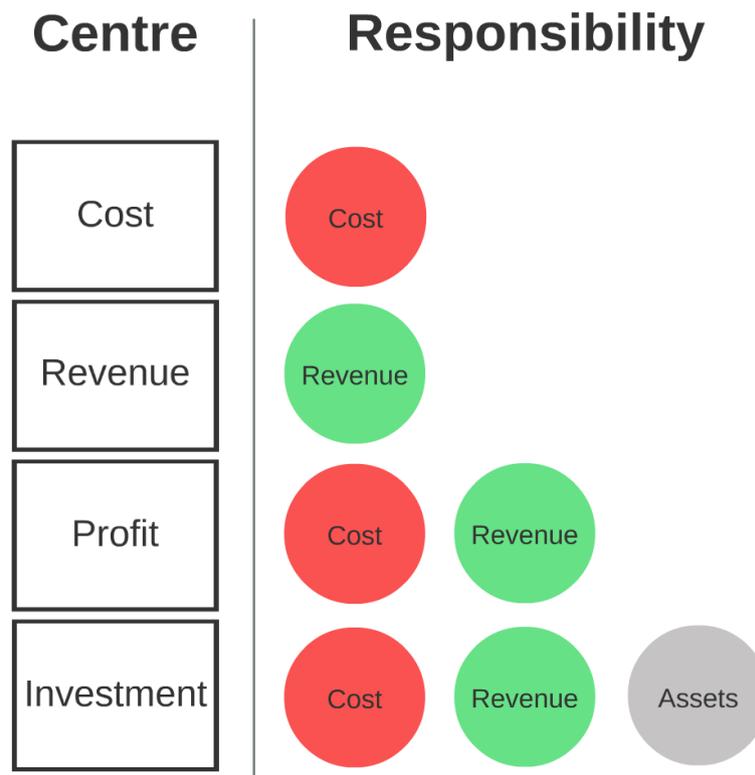
Sadly, the branch managers did not enjoy losing their autonomy and there was significant resistance to the change. Meanwhile, the company discovered that the level and the type of demand for books varied wildly from town to town and could not be effectively managed centrally. Branch managers were in fact best placed to forecast local demand. HMV divested the chain and it's now run with a degree of centralisation and degrees of branch-level autonomy.

This shows the importance of getting the level of control right. What worked for sales of CDs and DVDs didn't work as well for books and this make a big impact on the success of each division.

3. Responsibility centres

Performance targets are typically allocated to specific managers in control of specific departments in the organisation. These 'departments' in accounting terms are called '**responsibility centres**', which means the **areas of the business where one manager is responsible for the centre's performance and budget.**

There are four main types of responsibility centres:



Using appropriate performance measures

Due to the difference in the departments and what their managers are responsible for, each type of responsibility centre should be appraised on a different basis. It is important to appraise managers on the right measures in the right way to ensure they are motivated and achieving the goals of the company as a whole.

Performance measurement is most effective when:

- **There is goal congruence**, i.e. the goals of the company and the goals of the centre's manager are aligned.
- **Only aspects which can be controlled by the manager are evaluated.** Items that are uncontrollable should be disregarded or clearly segregated in reports. This falls in line with the concept of responsibility accounting. If, for example, many of a manager's costs are dictated by head office and she has little control over them then the profit figure is not a true reflection of her performance.
- **Both long-term and short-term objectives are considered.** This generally requires both financial and non-financial performance measures. e.g. annual profits combined with a customer satisfaction measure to ensure that profits have not be earned at the expense of poor service.
- **Managers and divisions are evaluated separately.** High performing managers may be in control of particularly weak divisions and vice versa.

The performance of the division is not always a direct reflection of the manager in charge. Also divisions will be measured on all costs, including those decided by head office, but the manager's should not be (as they can't control them).

Let's take a closer look at the responsibility centres:

Cost centres

A cost centre is a responsibility centre to which **only costs are attributed** (and **not earnings or capital**).

For example, an organisation may consider its customer service division to be a cost centre. The organisation will use this centre to 'collect' customer service costs.

Cost centres are also very useful to organisations because they aid management in controlling costs by allocating specific budgets to particular cost centres. The staff member has a clear limit on what they can spend helping to ensure costs are well managed.

Collating costs in this way also makes it easy to determine the cost per cost unit. For example, if the cost of running the customer service centre is £10,000 for the period, and the centre deals with 1,000 customer queries, then the organisation can conclude the cost per query is £10.

Performance measures for cost centres

The simplest form of measuring performance of a responsibility centre is a **comparison between budget and actual results**. This will measure the manager's ability to control costs. A customer services manager might, for instance, have a budget of €10,000 a month and they will then be appraised on how well they deal with customer's needs within this limited amount.

A key performance indicator (KPI) to this could be the subsequent variance analysis which will indicate how much the manager was under or over budget. They can then work to improve this in the next period.

In addition they may also use **non-financial measures** and KPIs such as:

- **Efficiency and productivity measures** - E.g. customer queries processed per hour
- **Customer focused measures**- E.g. customer satisfaction with answers they have been given
- **Learning and innovation**- E.g. amount spent on training, or number of new ideas implemented

Revenue centres

A **revenue centre is a responsibility centre that is focused solely on generating revenue**. A good example of this may be a fund-raising department of a not-for-profit, or a sales department of a commercial organisation. These centres will allocate all their resources to achieving the highest revenue possible, without any link to the associated costs.

Performance measures for revenue centres

In revenue centres the **key measure is revenue**. A sales department is a good example. Their key focus is achieving sales so that should be their main goal.

Revenue centres are also likely to incur some costs, staff salaries for instance, and as such **can also be measured against costs incurred versus budget** but this is seen of much lower relevance in a revenue centre where sales are the driver.

They may also have **non-financial measures** too. For a sales department that might be:

- Brand awareness amongst key target groups
- Percentage of sales calls resulting in a sale
- Average sales per sales call

Profit centres

A **profit centre is a responsibility centre where the manager has autonomy over both costs and revenue**. An example might be a particular store or brand, operated by a single manager as a stand-alone unit.

This decentralised structure allows businesses to expand in a more efficient way, because tailored decisions can be made faster, than if they had to be referred to a central office for consideration.

Profit centres require more involvement than simple cost and revenue centres, as the manager must control both facets in order to achieve a positive result.

Performance measures for profit centres

Profit centres have the advantage of being both revenue generating and incurring costs and the **main measure is therefore profit**. Profit targets will encourage managers to balance the task of incurring more costs with generating more revenues. Common measures include:

- **Gross profit margin** - The gross profit as a percentage (%) of the revenue. This illustrates how well a manager is keeping control of direct and variable costs.

- **Operating profit margin** - The operating profit as a percentage (%) of the revenue. This illustrates how well a manager is keeping control of additional expenses and overheads.
- **Net profit margin** - The net profit as a percentage (%) of the revenue. Illustrates just how much of the revenue is actually being returned to the company as profit.

Profit centres can have **non-financial measures** too, such as:

- **Customer focused** - E.g. customer satisfaction, number of complaints
- **Internal focused** - E.g. efficiency levels and productivity
- **Learning and innovation** - E.g. revenue from new products

Investment centres

An investment centre is a responsibility centre that is responsible for both costs and revenues, as well as the investment in assets used to support the division.

The manager will therefore be responsible for supporting itself through sound asset disposals and acquisitions, as well as running a profitable operation.

Dividing an organisation into investment centres is a heavy form of decentralisation (where responsibility is passed down the organisation). **In effect, each unit of the business operates with its own management as an independent business unit.** For this reason, investment centres are also commonly known as Strategic Business Units (SBUs).

Performance measures for investment centres

Investment centres require a slightly more thorough approach. This is because managers of these centres are given the responsibility to oversee both profit and level of capital investment. **While the profit, revenue, cost and non-financial measures discussed for early sections are still relevant** there are even better measures that will assess profits in relation to the required investment. Detailed below are some common methods:

Return on Investment (ROI)

Undoubtedly you have heard of this measure in your studies before, as it is widely used and accepted around the world. The formula is as follows:

$$\text{ROI} = \frac{\text{Operating profit before tax}}{\text{Net operating assets}}$$

A basic example may be as follows:

	Centre A	Centre B
Sales	£20,000	£100,000
Profit before tax	£5,000	£50,000
Assets	£25,000	£400,000
ROI	20%	12.5%

Advantages of ROI

- **Easy to understand** - useful for performance measures for non-financial managers and reporting to directors without a financial background.
- **It is a percentage-based measure which allows comparability between different centres.** Notice in the example above that although centre B has a higher profit, its ROI is much lower as they are not making as good use of their assets.
- **Relates profit to the level of investment** in the centre and so is better than profit alone.

Disadvantages of ROI

- **It is based on net assets, which can fluctuate** depending on which point the centre is in their asset life cycle (older assets will have depreciated and so have lower asset values). **It can also deter management to invest for the long term, as large investments will reduce their ROI in the short term.**
- Managers may be reluctant to take on any projects which return lower than the current ROI. In trying to keep the ROI as high as possible, **they may forgo projects that would increase the centre's overall profit, albeit at a lower rate of return.**
- **Can be short-termist in nature** as it is often measured on a monthly, quarterly or annual basis which causes managers to focus on short term profits to the detriment of the long term (e.g. not spending money on training to increase annual profits but potentially leaving the department with a skills shortage)

Let's look at an example of that second point:

Let's say a new project costs £20,000 in investment and returns £3,000 profit a year. Let's look at how each cost centre would end up if they did this project:

	Centre A	Centre B
Profit before tax	£8,000	£53,000
Assets	£45,000	£420,000
ROI	17.8%	12.6%
Change	(2.2%)	0.01%

Note here then how centre B's ROI has gone up, they would do the project, while Centre A's has gone down so that manager would not undertake the project. For the organisation as a whole this can't be right - either the project is worth doing or not!

This is what is known as 'dysfunctional behaviour', which is where the managers act in a way that is right for them given their 'measure' but not right for the organisation as a whole. In this case if the company might want project to go ahead but the managers are taking different views, not because of what is right for the company but because of they way their division is measured.

Residual Income (RI)

Residual income is different from ROI in that it produces an **absolute figure rather than a percentage**. When using this metric, managers are usually encouraged to achieve the highest residual income figure possible, and this **helps avoid dysfunctional behaviour**. It is calculated as follows:

$RI = \text{Profit} - \text{Capital charge}$ (where capital charge = Assets x Cost of Capital)

Let's go ahead and calculate the RI of Centre's A and B to see how they compare. We'll assume a cost of capital of 10%.

	Centre A (£)	Centre B (£)
Profit before tax	5,000	50,000
Capital charge (Assets x 10%)	2,500	40,000
Residual income	2,500	10,000

As can be seen here, the ROI of Centre A is significantly higher than that of Centre B. However, Centre B has a higher RI, meaning it contributes more to the organisation's overall profit.

Let's return to our earlier example to show how RI helps prevent dysfunctional behaviour.

Remember that the new project costs £20,000 in investment and returns £3,000 profits a year. Let's look at how each cost centre would end up if they did this project:

	Centre A (£)	Centre B (£)
Profit before tax	8,000	53,000
Assets	45,000	420,000
Capital charge (Assets x 10%)	4,500	42,000
RI	3,500	11,000
Change	↑	↑

RI will encourage both managers to take on the project as it returns more than the 10% costs of capital. **This is 'goal congruent' behaviour where divisional managers make decisions that are right for the organisation as a whole.**

The central management must also be careful with that approach though, as Centre A simply may not have the same opportunities for expansion as Centre B or be much newer so has not had the time to grow, yet Centre B's RI is much higher than Centre A's. In that case, RI based performance measurement would simply be unfair on the manager of A not because of his poor performance but simply because she's managing a smaller division, and would likely alienate the manager of Centre A.

This demonstrates the issue of goal congruence and aligning the interest of managers and shareholders as a central issue in good performance measurement.

Advantages of RI

- **Focused on maximising shareholder wealth by maximising profit** while taking into account investment, so is better than profit alone.
- **Cost of capital can be altered to reflect risk** (higher risk divisions can have a higher cost of capital used).

Disadvantages of RI

- **Produces an absolute figure which reduces comparability between units.** A large centre like Centre B will tend to have a higher RI than one like Centre A, despite not using their assets as well. **ROI gives a much better comparison.**
- **Like ROI, it is based on net assets, which can fluctuate depending on which point the centre is in their asset life cycle** (older assets will have depreciated and so have lower asset values). It can also deter management to invest for the long term, as large investments will reduce their RI in the short term.
- **Can be short-termist in nature** as it is often measured on a monthly, quarterly or annual basis which causes managers to focus on short term

profits to the detriment of the long term (e.g. not spending money on training to increase annual profits but potentially leaving the department with a skills shortage).

4. Modern performance measurement

We have discussed how traditional accounting metrics can be limited in their usefulness. In the modern era of business, organisations are looking for new metrics that give a more 'real' indication of how the business is performing. Two of these are Economic Value Added (EVA) and cash flow return on investment (CFROI).

Economic Value Added (EVA)

We need to find a way that will discourage our CEO from seeking out short-term profits to the detriment of long-term operations. One solution is to measure his performance on Economic Value Added (EVA).

This is a **measure of performance based on adjusting profits** for items that add value in the long term, or which are simply accounting related items and not focused on cash flows.

Let's see how it is calculated:

Step 1 - Add expenditure which adds long term value to profit

EVA takes our standard profit figure and adds back any expenditure that adds value in the long term. Let's say the profit is £1m, but that includes £0.4m having been taken off for R&D expenditure and £0.2m for training staff. As these have long-term benefit we add them back on to get a figure of £1.6m.

If our CEO is measured on EVA not profit, then there is no benefit for him to cut expenditure on items such as R&D and training therefore.

Step 2 - Add back non-cash accounting adjustments

Non-cash accounting adjustments are also added back, so let's say there was a provision for bad debts of £0.2m, this is added back too to get to £1.8m. The aim is to get a cash-based figure which is more relevant to investors.

This means the CEO is not being assessed based on 'accounting rules' for things such as provisions, but instead on the actual performance of the business.

Step 3 - Subtract cost of capital on assets

The profits a company makes must cover the cost of capital. If they do not then the shareholders are not earning a return.

Let's say that our company has assets of £10m and a cost of capital of 10%, then a £1m return is needed each year to pay shareholders a suitable return.

If we are calculating EVA we now get £1.8m - £1m = £0.8m.

Notice that our CEO is now motivated to try to reduce the cost of capital too (perhaps by reducing the cost of debt financing) which is good for shareholders. If the cost of capital were to reduce to 8% by sourcing lower cost debt finance the EVA would rise to £1.0m.

EVA, then, is an estimate of the value created in excess of the return required to shareholders.

It's worth noting that the capital figure used in EVA calculations starts with the net assets on the balance sheet and then adjusts them for accounting items deemed irrelevant to shareholders. Don't worry you won't have to do this adjustment in the exam, but do be aware that this adjustment exists.

Summary calculation

$$\begin{aligned}
 \text{EVA} &= \text{Profit} + \text{Expenditure adding long term value and non-cash items} - (\text{Capital employed} \times \text{cost of capital}) \\
 &= 1.0 + 0.8 - (10 \times 10\%) \\
 &= \text{£0.8m}
 \end{aligned}$$

There are **disadvantages** to using the EVA measurement too:

- **EVA calls for adjustments to the profit and capital employed figures which require judgement** e.g. is the £0.4m of training really adding value long term to the business?
- **The cost of capital can be hard to correctly identify**
- As it is an absolute measure, **it will not help comparison by investors or directors between divisions of different sizes**

EVA and decision-making

Overall, EVA provides a more meaningful, cash based measure of performance than the standard measures; one that is much harder to manipulate by managers and which goes some way to avoiding the smoke and mirrors practices employed by companies such as Enron. So when deciding whether to buy equity in a company, or when considering an acquisition, an investor or buyer would look for positive EVA, as well as considering the traditional profit and capital figures.

Cash flow return on investment

Cash flow return on investment (CFROI) is similar to EVA in that it uses the economic value of capital as the measurement base. However while traditional accounting measures always use historical figures, CFROI uses **projected future cash flows to calculate the yield**. While forecasting cash flow is not a new concept in management accounting (it is also used in NPV, for example), it is uncommon for forecast figures to be used in the arena of performance measurement.

Current thinking

While it's clear that each different method of performance measurement has its own merits and downfalls, the question of which one to use generally comes down to one central question. Which one will best align the interest of managers and shareholders?

If a manager can be encouraged to pursue targets that are in direct correlation to share price and shareholder value, it results in a win-win for all stakeholders in the organisation.

One potential answer to this issue is the concept of executive share options. If a manager is given shares in the company he is working for, it would be logical to expect that he would only take actions that are in the best interest of the company.

For example, if a manager is given the option to purchase shares in the company for £100 each in 5 years' time, and the current share price is £90, it would be in his best interest to push the company's share price as far over £100 as possible. That would mean maximising profits and shareholder wealth, so as to increase the share price.

This approach, while appearing to be sound on the surface, still spawns its own set of behavioural issues. Managers may be encouraged to manipulate profits, or work within a short term mindset in order to push the share price as high as possible in a small period of time.

Performance measurement for the public sector and not-for-profit

Public sector organisations are owned by the state and are responsible to the government for their business activities. Public sector organisations can be in the form of a state-owned industry or a government-run department. For example, the UK's NHS (healthcare) and The Forestry Commission (managing UK forests).

Not-for-profit organisations do not set out to make a profit for their owners. **This does not mean that they are unprofitable**, but their aim is to provide a service to their members and subscribers rather than maximise returns for owners. Not-for-profit organisations include trade unions, charities, co-operatives, mutual organisations, clubs and societies and educational establishments.

It is hard for not-for-profit and public sector organisations to set objectives as **their motives are likely to be different from profit seeking organisations**. There may be conflicting objectives or immeasurable goals.

For example, a school may aim to get a large number of high grades but may also aim to get a high level of staff satisfaction. The two may not necessarily correlate if the staff are under pressure and have to work long hours to achieve good results.

Objectives in non-for profit businesses often focus around the 3Es of Effectiveness (ability to fulfil its objectives), Efficiency (use of resources) and Economy (costs). Looking at a hospital, examples of the 3Es might include:

- **Effectiveness** - achieving the end goal of making people well - recovery rates, operation success rates
- **Efficiency** - operating as productively as possible e.g. reducing time taken for an operation by using new procedures, or using monitoring technology to reduce staff numbers
- **Economy** - operating as cheaply as possible - e.g. purchasing equipment and drugs in bulk with other hospitals to keep costs down



CIMA Management Case Study

Chapter 21

Transfer Pricing

1. Transfer pricing

What is transfer pricing?

Imagine that you are the manager of an investment centre for a toy car company. The centre you manage manufactures engines - we'll call it Engines.

A colleague of yours, let's call him Jim, also manages an investment centre for the same company. Jim's department manages the body centre, which takes all the different parts of the car and puts them together - we'll call it Bodywork.

As both your centres are part of the same company, Jim is encouraged to purchase his engines from you. Similarly, you are encouraged to supply him with the engines he needs.

You are given autonomy to make your own decisions, as this is seen as a key element in ensuring you are motivated and are appraised on profits earned by your division. As a result you are reluctant to 'sell' your engines to Jim at cost price, as this will only leave you at break-even or maybe even a loss.

Conversely, Jim does not wish to purchase engines from you at market price, as he believes it is nonsensical to pay so much for goods being transferred to him from within the same company.

This scenario is what raises the issue of transfer pricing. **Whenever divisions within the same organisation transfer goods to one another, they must determine a value for the goods for reporting purposes. This value is known as the transfer price**, which, as you can see above is not always an easy value to agree upon. Every manager wishes to send or receive transfers at the best price possible to enhance his/her division's performance. The method to be used will often depend on the organisation's transfer pricing policy and the goals of the organisation.

2. Methods of transfer pricing

A good transfer pricing system should aim to achieve a range of aims. We'll look at these aims and relate them to the position of you and Jim in our example above:

- **Optimal allocation of resources** (so you are making engines for Jim only when that's the best use of resources for the company)
- **Goal congruence** (so you and Jim always make decisions that are right for the company as a whole and not just yourselves)

- **Motivate managers** (so you and Jim believe the system is fair and you are both working hard to maximise performance for the company)
- **Provide fair outcomes** with regards to performance measurement (you and Jim both do well from the sale of engines between your divisions)
- **Retain the autonomy and independence of each division** (helping to keep you and Jim motivated)
- **Be simple to understand and not require frequent revisions** (so you and Jim know what to expect in terms of prices so you can plan your operations with clear knowledge of what you need to do to maximise profits)

As a general rule, transfer prices will fall within two limits:

Minimum transfer price

The minimum that the selling division will sell a unit for should amount to cost price plus any opportunity cost for selling the unit internally. If an engine cost £50 to manufacture, and transferring it internally will result in profits foregone of a further £20 (as you could have sold it externally for £70), the minimum transfer price would amount to £70 as you'll only be motivated to sell at £70 or above.

Maximum transfer price

The maximum price a buying division will pay for an internal transfer will amount to the lowest price that the unit could be acquired for from other suppliers. In our above example, if an engine was available to be bought on the open market for £80, then the maximum Jim would pay for engines internally would also be £80.

In the above scenario, the transfer price would then need to fall between £70 and £80. This is because you would not sell an engine for less than £70, as you could receive a higher price selling elsewhere, and similarly, Jim would not purchase an engine for over £80, as he could purchase cheaper engines in the marketplace.

There's a large number of different methods which can be used to decide on the transfer price. Let's look at the main ones...

Cost-based transfer pricing

With cost based transfer pricing, the price chosen for the transfer price relates to the costs of producing the product. To illustrate the different cost based transfer prices, we'll refer to the following example for the Engine division which as per our previous example we'll imagine you run:

Variable cost per engine	£40
Fixed overhead cost per engine	£10
Total cost per engine	£50

Normal mark-up	£20
External market price	£70

Production Capacity 100,000 units

In addition to selling externally, the engine division can also sell on internally to Jim, manager of the Bodywork division. This division then does an extra £20 of work on labour and parts before selling the finished toy car on the market for £100.

Now, are you with us so far? Transfer pricing is long and difficult so make sure you understand this example before moving on...

Marginal cost

We can assume that marginal cost amounts to the variable cost of a unit. In this case, the transfer price would be £40.

When the selling division can not sell externally, then using marginal cost as a transfer price will always ensure that sales go ahead in a way that is right for the organisation as a whole.

Let's see why this is...

As we can see, Jim's Bodywork division spends an extra £20 on labour and materials before selling the product on. The total variable cost to the business as whole is £60, £40 for the engine and £20 for the remaining parts and labour. If they receive any more than £60 then a contribution is made and in the short term the sale should go ahead.

So how can we get the buying division to think like the organisation as a whole each and every time? The answer - **we make their variable costs the same as the whole organisation** i.e. transfer the unit at £40 making the variable costs to the Bodywork division £60.

Variable costs to bodywork = £60

Variable costs to organisation as a whole = £60

Bodywork make decisions that are right for the organisation as a whole.

We call this '**Goal Congruence**'.

Marginal cost plus profit margin

So, have you spotted the problem with using marginal cost as the transfer price?

Jim's and his Bodywork division are happy! They make a contribution of £100 - £60 = £40.

The company as a whole are happy! They also make a contribution of £40.

You and your engines division are unhappy! You made no contribution at all!

Assuming the company has given you the autonomy to make your own decisions (a key goal of a transfer pricing system) then you'll never want to sell engines to Bodywork.

However, if we were to add in a profit margin, then you may well be! Usually this will only occur when a **division has excess capacity**. Using our example, your Engine division has the capacity to produce 100,000 units. If your demand only amounted to 60,000, then you would then be happy to sell to Jim for anything above £40. At say £45, he'll make a £5 contribution.

If, however, Engine's demand was at or over 100,000 units, you would never want to supply Bodywork at anything less than the market price as you'd be losing out, so the **excess capacity is key to when to use a marginal cost plus transfer price**.

Engines might also not be motivated to supply at this rate longer term as it does not cover their fixed costs which must be covered long term. It's good for one-off short term projects though.

Absorption/full cost (plus mark-up)

In this case the transfer price would be £50 per engine (variable cost plus fixed overhead per unit) - plus a mark-up. Your Engines division is now covering both their variable costs and fixed costs, and making some profit on top. In the long term you will be happy with this as it covers all your fixed costs.

Again though, you would only be happy to sell units at this price if there was excess capacity to spare as otherwise you'd just sell at the market price to an external company.

If full/absorption cost is used as a transfer price, there is also the possibility that the buying division can find a cheaper price from an outside supplier. For example, if Bodywork could purchase an engine elsewhere for £45 they would do it, as it's cheaper than the transfer price of £50.

From a big picture perspective this is a poor use of company resources - a division is paying an external party £45 for a product which can be produced internally for £40.

You may recall one of the conditions of a good transfer pricing system was optimal resource allocation, and in this scenario that is not being achieved. While the Bodywork division is saving money, the organisation is losing money as a whole. This is a **lack of goal congruence** or alternatively known as **dysfunctional behaviour**.

Summing up so far....

Marginal cost only

Goal congruent but Engines are not happy!

Marginal cost plus

Everyone's happy short term,
but Engines may not cover fixed costs long term

Absorption/full cost plus

Engines are happy long term, they cover all costs,
but there is possible dysfunctional behaviour

Got that? Don't dream of moving on unless you have as this is the basis of the next few pages and you really do need to know this before moving on!

Standard cost

One problem with using the marginal cost or absorption cost as a transfer price is that the transferor is able to pass on cost overruns to the transferee. There is little incentive to keep costs down, as the marginal cost, however high it turns out to be, is paid for in full anyway by the buying party.

Using standard cost as a transfer price is therefore considered one of the more equitable options. **Standard cost**, I'm sure you remember from previous studies, **is the cost predicted in advance and often used in the production of budgets and while doing variance analysis.**

Standard cost does not take into account the actual costs. Any adverse variance rests on the shoulders of the transferor, meaning that the transfer price is fixed, and agreed in advance, at a fair level for both parties.

Now, we know that the only price that ensures goal congruence is the actual marginal cost. Unfortunately that is unlikely to be the standard cost, and so there is a **lack of goal congruence** here too.

In summary therefore:

Standard costing is fair if set well in the first place, and it motivates the selling division to keep costs down, but just like with absorption costing, dysfunctional behaviour can result.

Still with us? Move on if you are. If not, just re-read until you've got it!

Two-part tariff/lump sum payments

Now, we saw earlier that a **marginal costing transfer price is the only way to ensure goal congruence**, where decisions made by Jim and his Bodywork division are always right for the organisation as a whole.

But there was a problem. You were not happy, as your Engines division was not earning any profit.

So, perhaps a simple solution here is to make the transfer at the **marginal cost**, with the Bodywork department also required to **pay a fixed fee**. This fee represents a contribution towards Engine's fixed costs.

For instance, in our example the price might be £40 per unit plus £2,000 a month. You are happy as you make £2,000, while Jim is probably happy, as long as the fee agreed is seen by him as fair. This will probably depend on how many units he buys - the more he buys the lower the effective cost per unit.

This approach often works well because both divisions are able to receive some benefit from the intra-company transfer. The key is getting the fee right!

So, let's make sure you're still with all this. Let's do a quick recap - again, make sure you understand it all before moving on as it gets more complicated...

Marginal cost only

Goal congruent but seller are not happy!

Marginal cost plus

Everyone's happy short term

Good when spare capacity for seller

But seller may not cover fixed costs long term

Absorption/full cost plus

Seller is happy long term, covering all costs

But there is possible dysfunctional behaviour

Standard costing

Fair, as agreed in advance

Motivates seller to keep costs down

But possible dysfunctional behaviour

Two-part system

Everyone's happy and goal congruent

As long as the fixed price is set fairly

Market-based transfer pricing

When an organisation is decentralised it is thought to be best that they operate as stand-alone business units, with managers in charge of all aspects of the operation. Under this reasoning, market-based transfer prices, where you just use the market price (£70 in our example) would be the most suitable.

Market prices are often used when the seller is at full capacity and can sell all that they produce externally so there is no benefit for the company as a whole to do an internal transfer over an external sale.

The key issue with this approach is determining a true 'market cost'. This can prove difficult for the following reasons:

- **Different suppliers quote different prices**

- **Different buyers command different prices** (including discounts, credit terms etc.)
- **Current market prices may fluctuate** or be seasonal
- **Internal transfers reduce the need for advertising, sales staff and delivery costs**, therefore the market price may benefit the transferor more than expected
- **The product may not be available on the open market**

In summary then:

Market-based

Good when seller is at full capacity selling externally as it is goal congruent in this instance

But getting the price right can be a challenge

Dual pricing

I hope by now that you remember that the **marginal cost is the transfer price that ensures goal congruence when the seller has spare capacity!**

I hope you also remember that **the problem with this approach is that the selling divisions do not make any profit so they are unhappy!** It also undercuts their ability to operate as a stand-alone business unit, which is the reason organisations tend to decentralise in the first place.

To address these issues, an organisation may resort to a dual pricing method of transfer pricing. As the name suggests, this system uses two prices:

- **The transferor is credited at a price that is equal to total cost, plus a mark-up** (e.g. Engines gets £70)
- **The transferee is debited at marginal cost** (i.e. Bodywork pays £40)

Using two prices has two key advantages. Firstly, the transferor is able to record a profit on each transfer. **This provides an incentive for the manager in charge to supply.**

Secondly, the transferee is able to obtain goods at marginal cost. This means they receive the goods at the marginal cost which in turn means they always make selling decisions which are right for the organisation as a whole (i.e. decisions are goal congruent).

You may have already noticed that this approach **doesn't quite add up from an accounting standpoint**; the debits and credits on each transfer do not match. To remedy this, the difference is debited to a group account known as a transfer pricing adjustment account. This amount is subtracted from the group's overall profit at the end of the period to ensure the accounts remain in balance.

Despite these advantages, dual pricing is rarely used. It is a **complicated and time consuming method**, especially when a high volume of goods are being transferred between multiple divisions.

Dual Pricing

Goal congruent

But complex, the accounting is illogical,
and it needs an accounting adjustment

Negotiated transfer prices

It is sometimes accepted that in a truly autonomous system where business units operate independently, transfer prices should be simply agreed on by the managers themselves. In our example, you and Jim would sit down together in a meeting and discuss and agree what a fair price could be. The assumption here is if the business units are truly operating autonomously, **the managers should be competent to negotiate suitable prices for themselves**.

While this approach might sound simple there are various weaknesses that need to be considered:

- **Negotiations can be time consuming** and drawn out
- **The managers may not be able to reach an agreement**, in which case central management will need to intervene, undermining the managers' ability to operate autonomously
- One manager may be more experienced or more dependent on the other, leading to a **negotiation that is unfair**
- **Might not lead to goal congruence** (for the same reasons absorption/full cost plus)

Negotiated

Autonomy to managers

But will managers always reach a price that's right for the organisation as a whole

Profit maximising transfer prices (Divisional and group profitability)

Ideally, an organisation would want managers to use transfer prices that maximise the profit of the group as a whole. Are our toy cars best sold at £80, £90, or £100, or at a price in between? While £100 might generate the highest profit margin, sales might be quite a lot lower than a sale at £90 and overall profits might be lower.

Using knowledge of the changing demand at different prices organisations can calculate the optimum price.

With this information they can then set a transfer price which ensures that transfers go ahead when it's right for the group's maximum profits (and not after that).

The challenge for central management however, is to develop a system where both the individual divisions are also happy, and that's not always possible. It may well end up being an imposed centralised price that removes the divisional manager's autonomy.

Example

Let's continue our example of Toy Cars Ltd, but let's change the scenario just for a moment, and consider a different toy car.

The key to profit maximisation calculations is that profit is maximised at the point where marginal revenue is equal to marginal cost. So what does that mean? Firstly let's start with the basic definitions:

Marginal revenue is the increasing revenue from selling one more unit, while **marginal cost** is the increasing cost from selling one more unit.

If you imagine that Toy Cars currently sell 100 cars. If they sell one more car (car 101) that will deliver an extra revenue of £75 (the marginal revenue) and that costs an extra £72 in total to make (the marginal cost) then we will want to produce that unit as it generates extra profit (£3 in total).

However, if by selling one more car (car 102) the total increase in revenue is just £72 (as you have to reduce prices to increase the demand), and the total increase in costs are also £72, then that car is not worth making and so at that point we will

continue no longer. **That point is also the point at which marginal revenue equals marginal costs and so is the point at which profits are maximised.**

So, let's see a more detailed example of this...

The Engine Division: At a price of £60 there is no demand, but demand increases by 6 units for every £3 decrease in price. The variable cost of producing an engine is £12. There are no capacity constraints.

A quick piece of terminology you must know here. The idea that there may be different prices at different levels of demand for the selling division is known as an **'imperfect intermediate market'**. **No immediate market** is where the product is not available externally at any price, if this is the case, internal systems must be used and can be used with no regard to external market prices. **A perfect intermediate market** is where the price for the selling division stays the same however many they sell externally. Unfortunately, it's this situation of **imperfect markets** that causes the calculation here to be a lot more complicated!

The Bodywork Division: At a price of £80 there is no demand for finished cars from customers, but demand increases by 50 cars for every £10 decrease in price. The variable cost of a car is £18 (not including the cost of the engine).

To undertake profit maximisation calculations we usually use the following equations to calculate price and marginal revenue:

$$P = a - bx$$

$$MR = a - 2bx$$

P = Price per unit

MR = Marginal revenue

a = The price at which there is no demand

b = The amount the price has to fall to increase demand by one extra unit

x = Number of units

We'll look at this from two perspectives. Firstly, we'll see what the results would be if you, the transferor acted in your own best interest and aimed to maximise your own profit, and secondly what's best for the group as a whole.

Profit maximisation for the transferor

Remember the equation for price is as follows:

$$P = a - bx$$

We can see that the price starts at £60 per unit, and every time it falls by £3 demand increases by 6 units. We can simplify this to say that demand increases by 1 unit for every £0.50 (£3/6) decrease in price.

Mathematically, the equation can then be defined as follows:

$$P = 60 - 0.5x$$

As was provided, the equation for marginal revenue is as follows:

$$MR = a - 2bx$$

Therefore,

$$MR = 60 - x$$

We also know that profit is maximised when marginal revenue is equal to marginal cost ($MR = MC$), and we can see from the information provided that the marginal cost is just the variable cost of £12. Therefore;

$$12 = 60 - x$$

$$x = 48$$

Now that we've discovered our quantity, let's plug it into our price equation to find our point of profit maximisation:

$$P = 60 - 0.5x$$

$$P = 60 - (0.5 \times 48)$$

$$P = 36$$

Therefore our profit maximising price in the Engine Division will be £36 per engine.

Now that we know the price of engines, we can see how this would affect the Bodywork Division and the organisation as a whole.

We know that the demand for finished cars increases by 50 for every £10 decrease in price. We can simplify this to say that demand increases by 1 unit for every £0.2 (10/50) decrease in price. Using the same price equation ($P = a - bx$), we can express this as follows:

$$P = 80 - 0.2x$$

Therefore, because $MR = a - 2bx$,

$$MR = 80 - 0.4x$$

We also know that the marginal cost to Bodywork of producing a car is as follows:

Therefore to find the point of $MC = MR$, we can use the equation:

$$54 = 80 - 0.4x$$

$$0.4x = 26$$

$$x = 26/0.4$$

$$x = 65$$

This can now be plugged into our price equation:

$$P = 80 - 0.2x$$

$$P = \text{£}67$$

Therefore, if the Engine division acted to maximise their own profit, the group will sell 65 units at £67 per car, generating revenue of £4,355.

Profit maximisation of the group

To maximise the group's profit we consider the marginal revenues and costs for the whole organisation.

To do this we need to calculate the marginal cost of a car to the organisation as a whole.

Variable cost of engine	£12
Variable cost of car	£18
Total marginal cost	£30

Using the same equation as before, we know the equation for marginal revenue in the Bodywork division is as follows:

$$MR = 80 - 0.4x$$

And we are trying to find the point of $MC = MR$, therefore:

$$MC = MR$$

$$30 = 80 - 0.4x$$

$$0.4x = 50$$

$$x = 125$$

Now that we know our quantity, we need to find our selling price. Earlier we determined our price equation for the Bodywork Division was as follows:

$$P = 80 - 0.2x$$

Therefore

$$P = 80 - (0.2 \times 125)$$

$$P = 80 - 25$$

$$P = \text{£}55$$

Therefore the group will sell 125 units at £55 per car, generating revenue of £6,875.

It's worth noting that to achieve this we would simply set the transfer price to be the marginal cost.

Conclusion

You will already notice how the revenue differs between the two scenarios. When bodywork aims to maximise profit the group generates revenue of £4,355. When the group as whole aims to maximise profit it generates revenue of £6,875.

Clearly the later is better but it does not satisfy the bodywork division (they could generate more profit selling fewer products at a higher price) and certainly doesn't satisfy the engine department (they make no profit at all!). This is the main problem facing central management under a profit maximising transfer system. It only works when marginal costing is used and marginal costing removes a managers autonomy as they can no longer make decisions to maximise their own departments contribution.

If a balance cannot be achieved then central management will need to look for other ways to appraise the performance of department managers. Such as quality measurement and cost management.

Profit maximising

Maximises profits for the organisation as a whole

But difficult to set a price without removing a manager's autonomy

Opportunity cost-based transfer prices

From everything we've already discussed so far you may now recognise that the minimum transfer price will be the marginal cost (£40 in our case) as anything below that is unprofitable to you as the seller.

The maximum price is the market price (£70 in our case) as the buyer, Jim, will never pay more than the market price as he could just buy externally.

One possible transfer pricing system that usually lands somewhere in the middle is one based on opportunity cost. The transferor will sell at marginal cost, plus any contribution foregone in the transfer (such as the profit it loses from not selling to an outside customer).

In our example, if Engines sells externally at £70, then it will sell to Bodywork at £70. If it doesn't sell externally it will sell at £40 (to cover variable costs). Opportunity cost therefore automatically chooses the market price or the marginal cost where it's most relevant.

Let's also say that when Engines sells externally there are £6 of selling and distribution costs, then the opportunity cost of not selling the unit externally is £70 - £6 = £64, and that becomes the transfer price. As a result, opportunity costs improves on the market price system to take into account other relevant costs.

Opportunity cost

Automatically distinguishes between selling divisions who can sell externally or not

Considers other relevant costs e.g. selling costs

Is goal congruent

Summary of transfer pricing methods

Marginal cost only

Goal congruent but seller is not happy!

Marginal cost plus

Everyone's happy short term,
good when spare capacity
but seller may not cover fixed costs long term

Absorption costing plus

Seller are happy long term, they cover all costs,
but there is possible dysfunctional behaviour

Standard costing

Fair, as agreed in advance
Motivates seller to keep costs down
But possible dysfunctional behaviour

Two-part system

Everyone's happy and goal congruent
As long as the fixed price is set fairly

Market-based

Good when seller is at full capacity selling externally and goal congruent in this instance

But getting the price right can be a challenge

Dual Pricing

Goal congruent

But complex, the accounting is illogical and it needs an accounting adjustment

Negotiated

Autonomy to managers

But will managers always reach a price that's right for the organisation as a whole?

Profit maximising

Maximises profits for the organisation as a whole but difficult to set a price without removing manager's autonomy

Opportunity cost

Automatically distinguishes between selling divisions who can sell externally or not

Considers other relevant costs e.g. selling costs

Is goal congruent

As you can see there are a wide range of possible systems for choosing the transfer price. There is no right system though and organisations need to look at the situation for each division in their own organisation to see what would work well for them.

Remember our overall aims are goal congruence, autonomy and fairness. If these three goals are achieved for the system chosen then it'll be a good one!

3. Ethical considerations in transfer pricing

It is common business practice for international companies to move goods and services between its subsidiaries. While the usual issues with transfer pricing remain relevant here, there is also a new collection of issues that need to be considered.

In 2013 Google paid less than 0.5% income tax on all its earnings in Europe. Corporation tax rates in Europe are much, much higher than this - the UK, Google's biggest European market had tax rates at the time of 24%. So how did they manage this? Transfer Pricing. They shifted revenues out of Europe to Bermuda using internal transfer pricing transactions and avoided this charge. As you can imagine, governments were not impressed and took action to prevent this in future.

By setting transfer prices artificially high (or low), multinational organisations have the ability to manipulate profits and taxes in their overseas subsidiaries. This gives them the ability to repatriate profits between countries, minimise payments to shareholders and ‘plan’ their overseas profits for the most favourable tax outcome. These issues are discussed below:

Taxation

Taxation is considered one of, if not the, main issue with transfer pricing. Many large corporations operate subsidiaries in various countries, which presents the opportunity to manipulate transfer prices in order to minimise taxes. For example, if the tax rate in Hong Kong is lower than the UK, an organisation could simply ‘sell’ products at an extremely low price to the Hong Kong subsidiary. This would effectively reduce profits in the UK and increase profits in Hong Kong, where the tax rate is significantly lower.

A few years ago in the UK, American coffee house Starbucks was exposed for not paying UK taxes, taxes it had been avoiding by paying inflated rates on coffee beans from the Switzerland subsidiary and by paying excessive ‘royalties’ to the Dutch subsidiary. In effect hiding costs from other countries in the UK and hiding UK profits elsewhere, making it look like the UK was not making any profit and thus not needing to pay tax.

Taxation authorities aim to restrict transfer price fixing in most jurisdictions, and unrealistically high or low transfer prices are often punished with double taxation (tax in both countries). **The OECD have since produced guidelines for setting international transfer prices.**

The ‘arm’s length’ principle

Today, the accepted practice is that transfer prices should be set at an ‘arm’s length’, meaning the price should be representative of the price that would be agreed upon between two completely unrelated parties.

The most commonly used method of arriving at this price is the comparable price method. This involves setting an arm’s length transfer price based on comparable products in the market. If this is not possible, a transfer price can be based on gross profit margins in comparable organisations. Again, this is not always possible or accurate, especially when dealing with things such as trademarks and intellectual property. In any case, the onus is on the taxpayer to prove that the transfer price is true and reasonable.

Advanced Pricing Agreements

Because of the uncertainty that can arise in such situations, **taxpayers are now able to enter into an Advanced Pricing Agreement (APA) with the relevant tax authorities of the countries involved. This allows the taxpayer to have their transfer prices set in advance,** so that any disputes, uncertainty, and risk of penalties are avoided.

Repatriation of funds

When a subsidiary exists overseas, exchange controls can limit the amount of funds that can be repatriated back to the organisation's home country. This is a particularly important issue in times of high inflation, as funds that stay dormant in the host country lose value, whereas the value could be preserved if funds were immediately converted back to the organisation's home currency.

To circumvent these controls, organisations could utilise high transfer prices, so that profits were smaller in the overseas subsidiary and funds would be repatriated via the higher prices being paid.

An example might be if a UK company is doing business in India, where inflation is high. It would be in their best interests to repatriate Indian profits back to the UK as soon as possible to avoid the value of the funds being eroded. If however, some sort of exchange control exists which limits the funds that can be repatriated, the UK company could simply increase transfer prices on sales made by the UK division to the Indian division. The Indian company would then pay funds back to the UK parent in the form of high transfer prices, allowing the company to bring funds back to the UK and preserve the value of their profits.

The opposite of this is if import duty and taxes are high. In that case, it is beneficial to keep transfer prices as low as possible in order to minimise the duty that needs to be paid between transfers.

Minority shareholders

As we've seen, artificially high transfer prices can be used to significantly reduce a subsidiary's profit. An organisation can therefore reduce the payouts required to pay any minority shareholders in the subsidiaries simply by setting transfer prices in a way that minimises profit. Again, perhaps this is not ethical, but it is a possibility.