

# 7. Business models for enterprise

**Business models and finance**  
Business strategies and models

Every engineering project or product has a purpose. Aggregating the purposes of projects or products within an engineering business reveals the overall purpose (or purposes, if it is very large) of the business. Business plans define a new enterprise's purpose from the outset to ensure its product or service decisions fulfil its purpose.

When starting a new enterprise, it is important to step back from specific product or innovation ideas and test the founders' assumptions about why they are starting the business, who they will serve, and with what, helping to lay the foundations for a viable startup that can grow and thrive.

# Business models define your purpose

Your business model describes your reason to be in business, what you will sell, and how you aim to make money. Your business model works alongside and overlaps with your **business strategy**, which describes in more detail how you will deliver your business model and outperform your competitors.

Your business model matters. Behind every new enterprise are the founders' assumptions about what it is for, how it will operate, and what it will be in the future. **It is vital to clarify and test these assumptions, to build a strong and resilient new business.**

There are many definitions of a business model, and what one should include, but a typical business model will describe the following.

<b>Mission</b>	Your mission statement describes what you are: why you exist and what difference you aim to make for your customers.
<b>Vision</b>	Your vision describes what you want to become: a better version of the future for both your customers and your enterprise.
<b>Values</b>	Your values are the principles that will guide your decisions and actions: how you will conduct yourselves and treat others.
<b>Product/service</b>	Your business model should broadly describe what products or services you will sell to achieve your mission and vision, and the unique value you aim to create for your customers.
<b>Revenue model</b>	Your revenue model describes how you will make money. Most enterprises aim to make a profit for the owners, but some may choose to operate as a charity or social enterprise (a business with a social or environmental purpose), which reinvests profits to make a difference.



The following pages explore each element in more detail and provide contrasting examples.

(Note that during your course you may also see 'business model' used to describe how an engineering company uses either a traditional or 'agile' approach to team structures and project management.)

## Check your understanding:

1. Why might the founders of a new enterprise need to test their assumptions about how the company will operate?
2. Why is it important for an enterprise to define its values?

# Mission, vision, and values

Your mission, vision, and values help guide how you develop your product or service and select the right revenue model. They will also influence how you identify and negotiate with potential investors, to make sure your values and expectations are a good fit.

Company values can also reflect how an entrepreneur expects their employees to behave towards one another and their customers. They may include values like integrity, respect, honesty, and fairness. Values can also reflect the company's commitment to supporting under-represented or marginalised groups, so they might include diversity and inclusion.

Your mission, vision, and values represent the most fundamental thinking you will do about a new enterprise. Any change to them would represent a significant change to the business, so it is important to invest time and attention to them before considering more detailed elements.

Compare and contrast these two robotics startups.

## Example – Panelgleam

**Mission:** to provide automated cleaning solutions for all forms of solar-energy generation

**Vision:** to be the world's number one partner for solar-energy efficiency

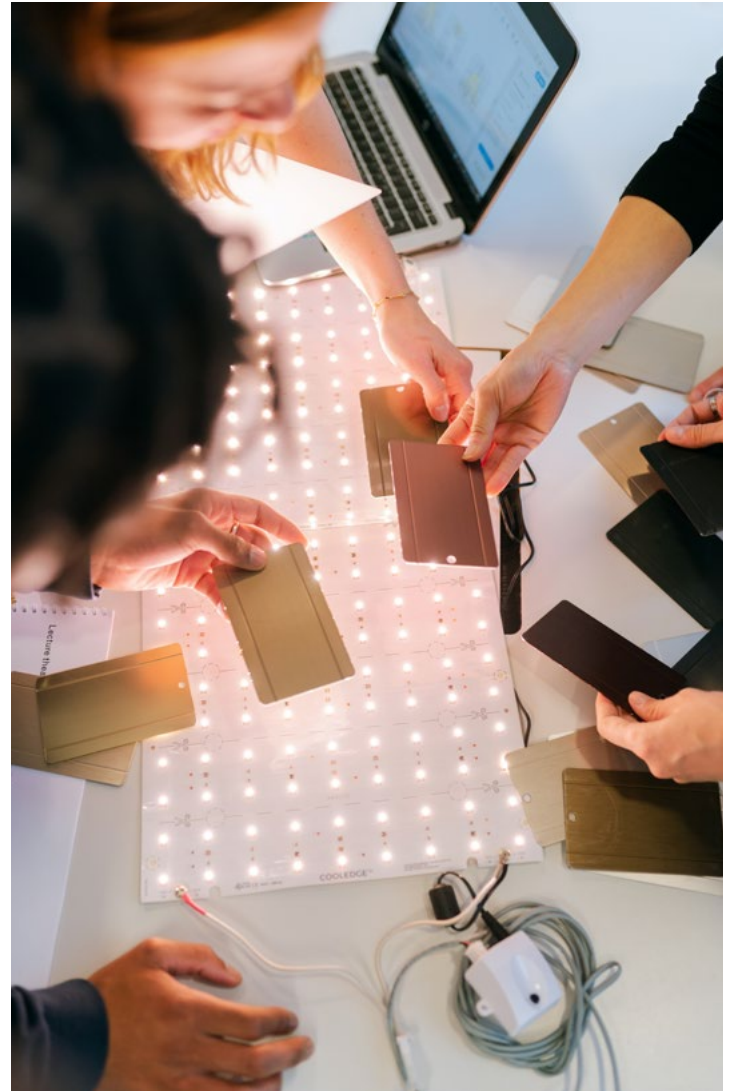
**Values:** innovation, partnership, excellence, drive

## Example – UAVmed

**Mission:** to develop robotic drone systems for medical deliveries in developing countries

**Vision:** better health for everyone, everywhere

**Values:** innovation, collaboration, care, impact



## Check your understanding:

3. How do the values of each example company support its mission and vision?
4. Who might be the target markets for Panelgleam and UAVmed?
5. List three values that would encourage and support innovation.

# Products, services, and revenue models

The product and revenue model parts of your business model begin to answer the important questions about how you will run your business to deliver your mission and vision.

There are many selling or revenue models from which to choose, including combinations of the following.

<b>Product</b>	a physical item that is sold or leased to customers, which may include equipment or consumable parts
<b>Consumer</b>	a customer who purchases a product or service for personal use
<b>Business</b>	a customer who purchases a product or service for commercial use
<b>Partner or distributor</b>	a company through which your product is sold
<b>Selling</b>	the customer owns the product after one or more payments
<b>Subscription</b>	the customer pays a monthly fee to use the product
<b>Leasing</b>	the customer pays to have and use the product but does not own it
<b>Service</b>	a task for which customers pay
<b>Product-as-service</b>	instead of selling or leasing a product, a company provides a service that achieves the same outcome: a simple example is providing a drilling service instead of selling a drill

For example, you might sell a product to consumers through a distributor, or instead provide a service direct to customers through a subscription. Regardless of model, you must also decide whether to operate for profit, or as a social enterprise or charity/non-profit.

Compare and contrast the two robotics startups again.

## Example – Panelgleam

**Product or service:** a product (solar-panel-cleaning robot) or a service (solar-panel cleaning)

**Revenue model:** business sales, leasing, or subscription, for profit

## Example – UAVmed

**Product or service:** a service (providing deliveries to partners such as national or local government health services, or in partnership with a health charity)

**Revenue model:** a service with a per-delivery charge or a monthly subscription based on delivery volumes, as a social enterprise or charity/non-profit

## Check your understanding:

- How does the right selling model help create customer value?
- Why might an entrepreneur (and their investors) want to operate as a non-profit or social enterprise?



# Case study: Transforming the business model

## Background

MachineCo distributes a unique range of small additive CNC machines to engineering companies that need low-volume, precision machining of extremely small parts. Instead of removing material from a block, the machines create parts by heating fine metal powder with a laser.

MachineCo's business model includes the following.

<b>Mission</b>	to provide the best CNC machines and support services for low-volume manufacturers who need detailed, accurate machining
<b>Vision</b>	to be the number one choice to help small manufacturers deliver high-quality, high-performance products
<b>Values</b>	service, partnership, excellence
<b>Product/service</b>	sole distributor of a unique range of small CNC machines; maintenance contracts for customers
<b>Revenue model</b>	direct sales of CNC machines; yearly subscription for maintenance

However, the business owners have identified two key factors that may make this model harder to sustain in the long term:

- Rapid innovation means newer models appear every year. Customers are less willing to upgrade this often.
- Cost pressures mean many potential customers are less willing to absorb a large up-front cost for ownership of a CNC machine.

The owners have decided to set up a new enterprise to offer CNC machining of low-volume product runs, to operate alongside the sales and servicing business. Customers will email CNC files and the company will use the latest machines to provide a machining service. These unique machines provide a competitive advantage over competitors' machines.

## Your task

1. Describe a suitable mission and vision for the new enterprise.
2. Identify what key value this new enterprise will offer for customers.
3. Suggest whether the new enterprise needs a different set of guiding values to the current business.
4. Describe the service offer and suggest a revenue model.

## Extend your learning

- Research some leading engineering companies in sectors that interest you. Using the 'About' pages on their websites, find their mission, vision, and guiding values.
- What guiding values would you choose for your own enterprise? Justify how each value would help you innovate and succeed.

# Answers: Check your understanding

These are example answers – your own suggestions may differ.

## Business models define your purpose

1. The founders of a new enterprise need to test their assumptions about how the company will operate to ensure they have the same ideas and expectations, to develop an effective business model, and to be confident about their understanding of their market and customers. It can be difficult and expensive to resolve differences between founders, especially where their investments or ownership of shares or patents are unequal.
2. An enterprise's values can help guide difficult decisions, for example, when the founders disagree. They can also influence which customer groups the company targets and the kind of customer experience the company provides.

## Mission, vision, and values

3. Innovation, excellence, and drive will help Panelgleam in its aim to be the world's number one. Partnership will guide how it works with other companies to deliver its service. Panelgleam might target solar farm owners or operators, who might be energy companies, communities, companies, or individuals.

4. UAVmed's values all suggest a company that will work with others, to help others, and which puts people first, before profit. Its target customers might include hospitals, governments, or non-profit health providers who work in remote areas of more developed countries, or in less-developed countries where other transport is unavailable.

5. Three values that might support innovation include curiosity, creativity, and constant improvement.

## Products, services, and revenue models

6. The right selling model can help create customer value, making it easier and more affordable to pay. For example, a subscription or lease option spreads the cost. Leasing electric vehicles, which can be more expensive than petrol or diesel vehicles, is an example.
7. An entrepreneur (and their investors) might want to operate as a non-profit or social enterprise to reach or contribute to a non-financial goal they feel is important, such as a social or environmental outcome. They may already have made what they feel is enough money; they may also have profit-making investments that fund their non-profit activities, or they may provide a non-profit version of a product or service, which they also sell for profit to other customers.

## Answers: Case study

These are example answers – your own suggestions may differ.

1. Mission: to provide the highest-quality precision CNC machining at an affordable cost

Vision: Every small company can have precision machining on demand.

2. The new enterprise will make high-quality precision CNC machining possible for companies for whom buying or leasing this unique range of machines is not affordable or viable, providing a per-part cost instead of selling or leasing machines.

3. The existing company's values of service, partnership, and excellence would be a good set to use for the new enterprise. They all contribute to the mission and vision, and will help align the existing and new companies. The owners may wish to add 'value' to this list to help them focus on affordability.

4. The new company will provide a machining service. This might be from material blanks or from forged or part-machined parts sent by their customers. The revenue model would focus on sales, calculating prices on the size, complexity, material, and volume of each order.