10. Valuing startups and scaleups

Business models and finance
Raising finance

Success in enterprise relies on a consistent focus on the right things. Learners need to understand that investors will make a realistic and often tough appraisal of their strengths and weaknesses, and look for a complete 'package' that demonstrates strengths in every key area. Successful entrepreneurs cannot rely only on an innovation: they will also need the ability to deliver both a product and company performance, combining both engineering and business skills.

Royal Academy of Engineering

Sources of value for investors

For investors, the value of an enterprise depends on its potential to deliver a significant return on their investment. Most will aim to get back many multiples of their investment at an agreed point in the future.

This value is a combination of many factors. Some factors will depend on the investor's experience and understanding of the sector and technology.

Team	the experience, skills, and qualities of the founders
Technology	the technology that underpins the product or service
Product	the actual design of the product or service, or ability for the underlying technology to be developed into a viable product
Intellectual property (IP)	the patents, registered designs, and trademarks that protect the unique features and functions of the product or service

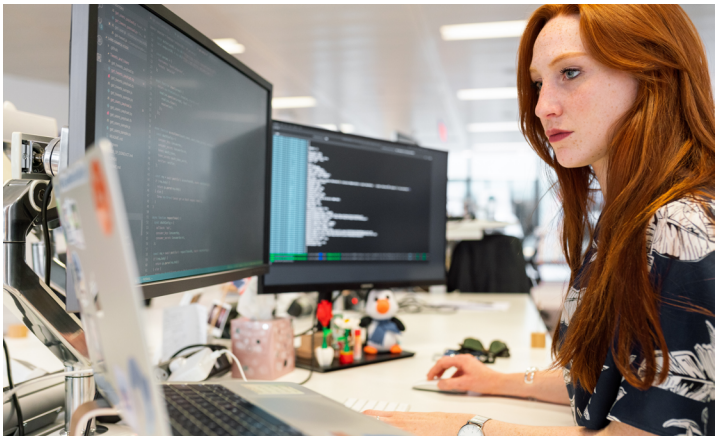
Qualitative factors like these contribute to the unique customer value the product or service can create for customers, and how hard it might be for someone else to copy the idea.

Other factors will depend on the investor's experience and understanding of the market and overall operating environment.

Market size	the total value spent on similar products or services
Market growth	whether this amount is predicted to grow or shrink in the coming years
Access to market	how well the company can reach potential customers
Environment	wider economic, social, or other issues that might influence future sales income

A relentless focus on creating customer value will drive enterprise success and investor valuation.

Customer value → Sales value → Growth potential → Investor confidence → Investor valuation



Check your understanding:

1. Research what forms of IP protection are available, what each one protects, and which form might add the most value for potential investors.

2. Suggest some growing engineering markets that would be of interest to investors.

Pre-revenue valuation

Startups or spinouts (commercial enterprises created out of university research findings) need time, people, and resources to turn innovations into viable, market-ready products or services. Without sales income and profit figures, pre-revenue valuation often relies heavily on qualitative factors. This valuation is important for a potential **angel investor** – a high-net-worth person who invests individually or collectively in interesting and promising startups in exchange for equity (a share of the business).

The **Berkus method**, named after a successful angel investor, assigns a value, for example, up to £500,000, to each of five areas of risk. This allows a startup to be valued at up to £2.5 million in this example, or the angel investor's preferred maximum.

This table outlines the five areas of risk.

Concept	The quality of the core technology or innovation and its commercial application is one area of risk: a poor concept is a high risk.
Prototype	A working prototype adds value by reducing the risk that the technology is not viable.
Team	The experience, skills, and qualities of the founders reduce business risk.
Relationships	Early relationships with partners, retailers, or potential customers reduce the risk of being unable to access customers.
Production	A strong understanding of how to turn the prototype into a quality, reliable product reduces risk.

Example

An investor who is impressed with the team and their innovation might assign £400,000 to each of concept, prototype, and team, but only £200,000 to relationships and production if the team is unable to provide a strong marketing and production plan, valuing a startup at £1.6 million out of a possible £2.5 million. Unless the team can address these weaknesses, the investor may choose not to proceed.

The Berkus method highlights the importance of addressing every area of risk. Entrepreneurs must prove to potential investors that they understand the risks attached to their enterprise and that they can minimise these through a sound concept, reliable prototype, impressive team, and a plan for how to produce quality products that reach a large target market.

Check your understanding:

3. Compare how an investor might view a startup aiming to target a large market but with slow or little predicted growth, with one targeting a small but rapidly growing market. What key risks might the investor identify?

Post-revenue valuation

Enterprises that succeed in launching their product will soon want to scale up, grow, or diversify. Venture capital (VC) firms – investor funds that provide funding to early-stage and emerging companies in exchange for equity – use a range of methods to value a potential investment.

The **scorecard method** assigns a score to different factors. These are weighted so some factors affect the score more than others. Each factor is assigned a comparison score that compares the strength of each factor with a benchmark company from the same sector. A relative weakness would be scored less than 100%, while a strength would be more than 100%. When multiplied, each factor's weighting and comparison score contributes to creating a value for the company that compares it to the value of this benchmark company.

Example

An investor has scored a startup as follows:

Factor	Weighting	Comparison	Contribution
Team	30%	120%	0.36
Technology and intellectual property	15%	100%	0.15
Product	15%	150%	0.225
Market size	10%	90%	0.09
Market growth	10%	110%	0.11
Access to market	10%	80%	0.08
Environment	10%	80%	0.08

Total: 1.095

Against a benchmark of £2M, they value this company higher: 1.095 x £2M = £2,190,000

The **VC method** calculates the future value of a company in the investor's **exit year**, when they will sell their stake. VCs expect a high return on investment, for example 25% growth each year.

The VC will discount the future value by this percentage every year from their exit year until the present. For example, something worth £100 in a year's time would be worth £75 today. This estimates a much lower **present value** for the company.

The investment needed, as a percentage of this present value, gives the **stake** the investor expects. A £100,000 investment in a company worth £500,000 today would give a 20% stake.

Check your understanding:

4. A successful startup is ready to grow. They ask a VC company to invest £400,000 for a 10% stake. The VC will exit after five years and expects a 25% yearly return. Use the **Valuing startups and scaleups online interactive tool** to:
   - Predict upper and lower future values for the company using the pop-up information.
   - Find out what % stake the VC will expect at the upper and lower valuation.
   - Consider which of these valuations the founders might prefer to use when they present to the investor, or whether a valuation based on different assumptions might be better. Explain your reasons.

Case study: Valuation, ownership, and success

Background

An engineering startup aims to help groups of homes or small communities connect their home renewable generation and battery storage within a micro-scale smart grid. The founders need £500,000 seed funding for their venture and have met with two angel investors. Both investors have made their scorecards available to the entrepreneurs, to provide feedback.

Investor 1 has helped other renewable energy startups launch and grow.

Factor	Weighting	Comparison	Contribution
Team	25%	90%	0.225
Technology and IP	25%	150%	0.375
Product	20%	120%	0.24
Market opportunity	15%	75%	0.112
Access to market	15%	100%	0.15
			Total: 1.102

Benchmark valuation: £2M **This valuation: £2.2M** **Desired stake: 20%**

Investor 2 is a new angel investor who has previous experience in construction.

Factor	Weighting	Comparison	Contribution
Team	30%	120%	0.36
Technology and IP	15%	100%	0.15
Product	15%	150%	0.225
Market opportunity	20%	120%	0.24
Access to market	20%	100%	0.2
			Total: 1.175

Benchmark valuation: £4M **This valuation: £4.7M** **Desired stake: 10%**

Your task

1. Review each investor's weightings, comparison scores, benchmarks, and experience.
2. Identify an advantage and disadvantage of proceeding with each investor.
3. Choose which investor you would accept and justify your decision.

Extend your learning

- Consider what research an entrepreneur might do to help them partner with the right investor. What questions might they ask the investor after their pitch?

Answers: Check your understanding

These are example answers – your own suggestions may differ.

Sources of value for investors

1. Intellectual property (IP) is defined by the UK government as 'something you create using your mind'. The main forms of IP protection are:

   - trademark – protects product names, logos, or jingles
   - registered design – protects the appearance of a product including its shape, packaging, patterns, and decoration
   - copyright – protects written works, art, photography, video, audio, and web content
   - patent – protects inventions, machines, and medicines.

Investors will place the most value on a patent, which protects a startup's underlying technology and prevents other companies copying it.

2. Growing engineering markets include renewable energy and other sustainability sectors, battery storage, electric vehicles, automation, AI-driven systems, biomedical engineering, and robotics.

Pre-revenue valuation

3. Targeting a large market has immediate appeal as there is the possibility of strong sales. However, unless the company can drive competitors out of the market, there is little scope for sales growth in the long term. The investor may feel that the startup does not have long-term viability. The key risk is that the market starts to shrink and the company finds itself in a dying sector.

   On the other hand, with the right product or service, the startup may establish a strong position in a growing market, laying the foundations for long-term growth and success. The key risk is that the projected growth may not be as strong or sustained as predicted, or other factors or innovations may change or shrink the market before it grows.

Answers: Check your understanding

Post-revenue valuation

4. The lowest valuation in year 5 comes from the founders' predictions for a low unit price, medium sales and 15% growth. This values the company at £2,521,703 today and the VC would expect a 15.9% stake, higher than the founders want to give away. The risk of this valuation is that the company out-performs these expectations, and the founders gave away too large a stake to the investor, reducing their own share in the future value of the company.

   The highest valuation in year 5 comes from a medium unit price, high sales and 25% growth. This values the company at £5,760,000 today and the VC would expect just a 6.9% stake: much less than what the founders want to give away. The risk of this valuation is that the company underperforms. As the investor realises that they may not achieve their return, they may insist on drastic changes at the company.

   A mid-range set of assumptions might be better, for example, based on a medium unit price, medium sales and 20% growth. This values the company at £3,587,640 today and the VC would expect an 11.1% stake. This balances the risks above and the stake is roughly in line with the founders' expectations.

Explore the interactive

Explore how the value and/or VC's stake varies if:

- the founders make the least and most optimistic predictions possible
- the founders ask for more or less investment
- the VC company chooses to exit in a later year
- the VC company expects a lower or higher return on their investment.

Discuss what implications each decision might have for the founders and for the VC.

You can explore the interactive tool further by using the 'Switch to custom company' button, which allows you to enter your own data to investigate the possible future value of another enterprise, for example if developing an enterprise idea for coursework or an enterprise competition.

Answers: Case study

These are example answers – your own suggestions may differ.

1. and 2.

Investor 1 places more emphasis on the team and their technology. They have made a weaker assessment of the startup's team and of its access to customers. However, they have decided that the startup is worth more than their industry benchmark, which is positive. Investor 1 seems to have strong experience in this sector, which would be helpful to the team as the investor might help with market access and management development.

Advantage: Experience and possible market access. Investor 1's less-positive assessment of the team may also be an advantage by helping identify and solve management problems before they become an issue.

Disadvantage: Investor 1 uses a lower benchmark and so will want a higher stake.

Investor 2 places the most emphasis on the team, but also places more emphasis on market access and opportunity – the size of the future sales potential. They have made a much more positive assessment of the team and, using a much higher benchmark, value the startup at nearly double Investor 1's valuation.

Advantage: Investor 2 wants a lower stake in the business. The high valuation might be good for the founders by making them a more attractive future investment.

Disadvantage: Investor 2 has a background in construction and is therefore likely to lack experience in investing and in the renewable energy sector. They might be unable to offer technical help and may actually make unhelpful suggestions. Their assessment of the team and sales may be overly optimistic.

3. The founders might be wise to ask Investor 1 to support them. While asking for a higher stake in the business, Investor 1 is likely to be much more helpful in growing a successful business. Although the founders' stakes will be lower, the value of their stakes is likely to be higher.