Practitioner information

Introduction

This resource introduces learners to sources of funding for new enterprises (loans or equity investment from angel investors or venture capital firms) and some key cost and time considerations that influence the amount of funding a startup requires. Learners complete some simple funding calculations and consider how different risks or decisions might affect the time to market and development costs that need to be funded.

Topic links

- Enterprise
- Sources of funding for startups
- Financial and economic concepts

Suggested learning outcomes

Learners will be able to:

- explain the importance of fully capturing costs when calculating funding needs
- list sources of funding and give an advantage/ disadvantage of each
- list considerations when identifying the right form of funding.

Why this topic is relevant for engineers

Learners on many Level 3 engineering courses will explore enterprise in engineering and consider factors that contribute to a successful startup.

It is also vital for learners to build their understanding of the need to predict and then manage costs during the early stages of a startup, before sales and profits are sufficient to cover capital spending and operating costs. The brief introduction to funding requirements complements the consideration of potential sources of funding and helps learners appreciate the reasons for approaching potential funding providers.

Delivering the theory: What are your funding requirements?

- Ask learners to create and operate your college workshop from scratch. Learners can organise their ideas into capital spending and overheads.
- Learners can identify common costs and where costs might differ between startups in different industries, for example, on research or manufacturing capacity.
- This is a simplified worked example. Review the startup, which will need to spend a lot on developing and testing its hardware and software.
- Review the capital costs and discuss what the 20% contingency might cover: higher than expected costs for key equipment.
- Review the monthly costs and contingency, which might be needed to cover higher than expected expenses, for example, if an additional staff member is hired or more legal fees are incurred to file a patent.
- The initial funding need is for the capital spending and 12 x monthly operating costs, including contingencies.

Practitioner information

Delivering the theory: Calculating your funding requirements

- Explore the runway metaphor – aircraft need to accelerate to generate enough lift to stay in the air and the enterprise equivalent to lift is income and profit.
- The additional funding after launch must cover the difference during those months where the gross profit is less than the monthly operating costs: in the first case, months 1 and 2. Calculate the difference between costs and income in each month, and then add these differences to establish the total extra funding required.
- The additional funding if sales and therefore gross profit are halved extends to the first four months. Again, calculate the difference between costs and income in each month, and then add these differences to establish the total extra funding required.
- Discuss why the finance director may ask for this: their experience might be that a lower, more prudent prediction is more accurate.
- The **Funding for startups and scaleups online interactive tool** helps learners to investigate and respond to the investment needs of two different startup companies and identify each company's likely funding requirements, time to launch, and time to profitability. The answer sheet includes further questions to understand these requirements and timings and to consider wider questions around funding.

Delivering the theory: Sources of finance

- Ask learners to suggest where startups obtain their funding. Share ideas before discussing the three sources in the table. Highlight that angel investors and venture capital firms essentially do the same thing: they offer funding in return for equity (a share in the business) but at different stages of the startup lifecycle.
- When discussing self-funding, learners may identify the advantages that entrepreneurs from more advantaged backgrounds may enjoy. Emphasise that this highlights the importance of developing your personal network and of the help and support local or regional enterprise hubs can provide, levelling the playing field for a more merit-based approach.
- Highlight that intrapreneurs face the same challenges as entrepreneurs, to secure funding by not only persuading an investor of the startup's own merits, but that it is a better use of the investor's money than competing startups or projects.

Delivering the case study: Risks, gains, and investment

- Note that the startup is in the very early stages, so the risk of failure is high.
- Explore the idea of opportunity cost: investors or internal sponsors will weigh the possible gains and risks of an internal project against other uses for the money and within a company. Directors have a legal obligation to maximise shareholder returns.
- The need for intrapreneurs to find and persuade internal project sponsors links to the resources in **2. Teamwork and networking for entrepreneurs**, **4. Negotiation skills for entrepreneurs**, and **6. Pitching for entrepreneurs**, where learners can learn more about these skills.