

Practitioner information

Introduction

This resource helps learners understand buying and outsourcing as strategic choices, especially when buying in critical parts for a product. Learners consider how procurement choices lie along a spectrum, from making every part in-house to completely outsourcing manufacture. They consider how to balance risks and advantages, and explore structured processes for selecting and managing suppliers to maximise the benefits.

Topic links

- Enterprise
- Supplier management
- Business risks

Suggested learning outcomes

Learners will be able to:

- understand the importance of supplier management for costs and quality
- describe the process of choosing a supplier
- describe the stages in supplier management and the positive impacts this can deliver.

Why this topic is relevant for engineers

Every enterprise relies on suppliers. Informed decisions about what to buy and from whom, made against clear criteria as part of a strategic approach to supplier selection and management, help minimise risks and maximise the benefits. This allows an enterprise to use suppliers to maximise its competitive advantage, quality, and profitability.

Delivering the theory: The decision to buy

- Ask learners to suggest as many engineering and non-engineering things an engineering startup may need or wish to buy as they can, then divide their ideas into what learners think might be critical and non-critical items (you may need to agree these definitions).
- Explore the idea of a spectrum of buying decisions. Discuss how this might work for parts of a familiar engineering product learners have already experienced, referencing their ideas above.
- In your discussions, remind learners that purchasing decisions relate to the business need to focus on customer value and beating the competition – how do the items they listed contribute to this?
- You may wish to consider a familiar company that outsources all its manufacturing, like Apple. Discuss some reasons why Apple protects its intellectual property and how it might do this (for example, exclusive manufacturing and stringent legal agreements).

Practitioner information

Delivering the theory: Procurement: selecting suppliers

- Introduce the idea of 'due diligence', which also relates to how potential investors investigate a startup (you could relate this to sensible guidance about online shopping).
- Go through the procurement steps one by one.
- Ask learners to suggest who might be involved in each step, or what engineering knowledge and experience might be needed, such as product designers, material specialists or electrical engineers, or employees who might use manufacturing equipment. What information or insights could they provide?
- For a specific example, consider a machine in your workshop or a familiar engineering product like a machined or fabricated item that uses different materials, machining steps, and fasteners.
- Link this to the different parts of your course specification and to learners' areas of career interest, to see how purchasing decisions will be relevant to them.

Delivering the theory: Managing suppliers

- Introduce the idea that suppliers can become stakeholders in an enterprise – parties that can both affect and be affected by the business, and therefore have an interest in its success.
- Note that not every supplier will require supplier management. What kinds of supplier do learners think do not need to be managed, and for which suppliers might management be critical?

Use familiar engineering examples to help learners consider this, such as basic fastenings compared to critically machined components.

- Explore the process. Learners have already explored procurement. 'Onboarding' is a relatively new term that they may not be unfamiliar with. Relate this to learners' orientation when first arriving at college, when they were made familiar with systems and expectations.
- 'Optimising' is an important step. Discuss how a supplier relationship might evolve as a startup scales up for growth or diversifies into new products and markets.
- The table listing examples of benefits of effective supplier management links to negotiation, explored in the resource **4. Negotiation skills for entrepreneurs**, because it creates 'win-win' outcomes. Remind learners that they may find themselves on both sides of supplier negotiations.

Delivering the case study: Balancing priorities

- This case study uses the **Managing suppliers online interactive tool** which explores multiple supplier decisions for materials and components.
- Learners first use the interactive to prioritise each of quality, cost, and delivery time, and investigate the effect on the other criteria.
- They can then consider how to respond to simple customer scenarios and balance more than one desired criterion.