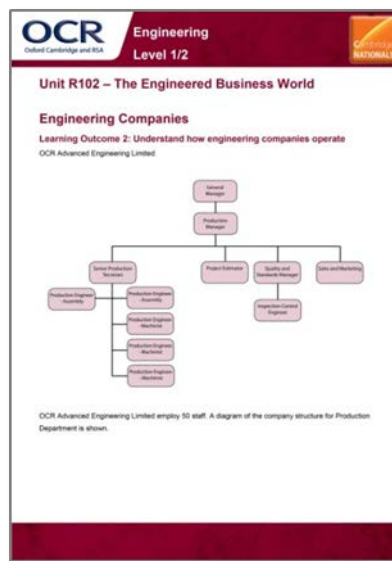


R102 – The Engineered Business World

Engineering Companies

Instructions and answers for teachers

These instructions should accompany the OCR resource 'Engineering Companies' activity which supports OCR Cambridge Nationals in Engineering.



The Activity:

This resource comprises of 2 tasks.



This activity offers an opportunity for English skills development.



This activity offers an opportunity for maths skills development.

Associated materials:

'Engineering Companies' Lesson Element learner activity sheet.

Suggested timings:

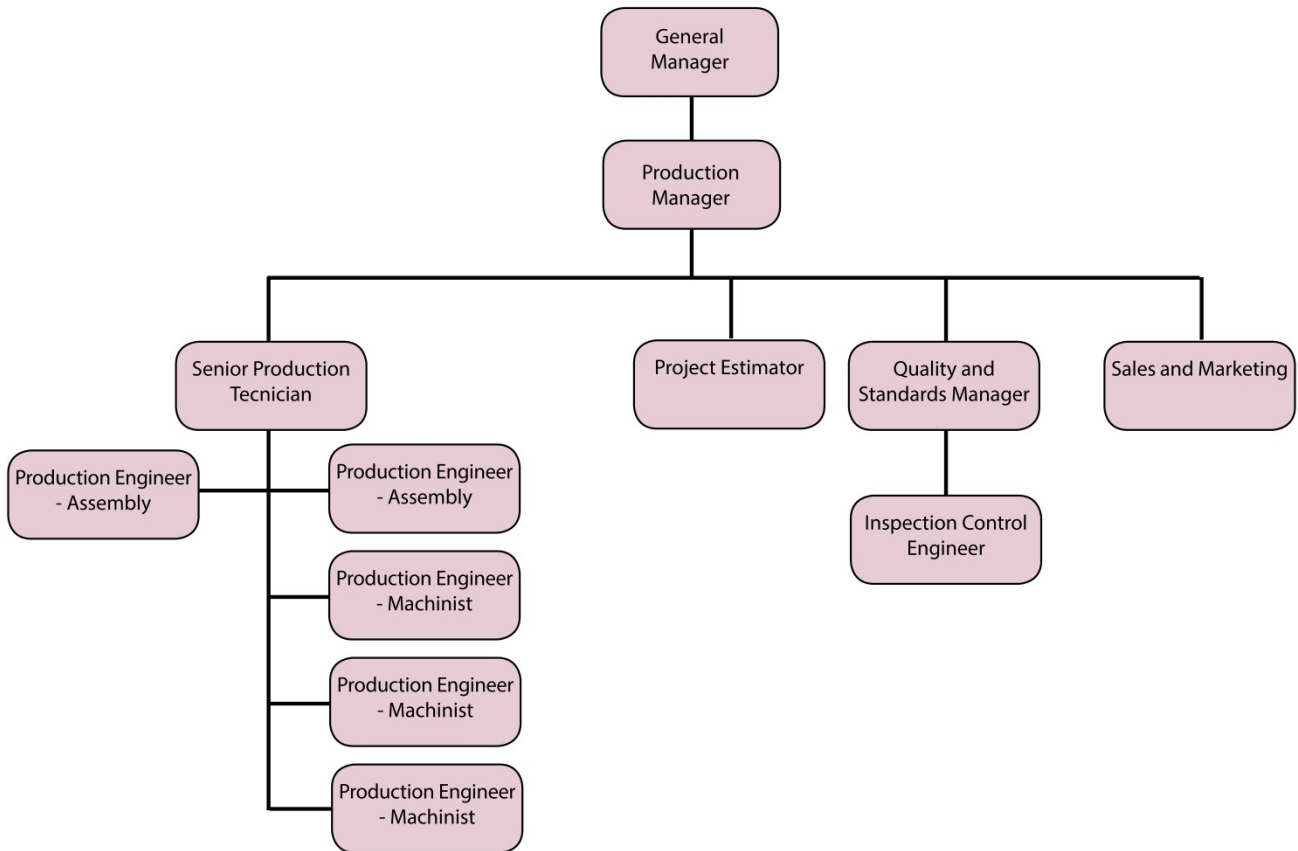
Task 1: 30 minutes

Task 2: 60 minutes

The aim of this resource is to support learners' understanding of the characteristics of engineering companies and their structures, roles and functions and how responsibility and reporting within company structures can apply. Companies purchase goods for production to facilitate the supply of their products and services. Learners will use the task to consider the impact of the supply chain.

Learning Outcome 2: Understand how engineering companies operate

OCR Advanced Engineering Limited



OCR Advanced Engineering Limited employs 50 staff. A diagram of the company structure for Production Department is shown.

Task 1:

Use the job role descriptors below to identify their appropriate place in the company structure.

The is responsible for all aspects of production, quality, sales for the Production Department and reports directly to the General Manager.

The is responsible for all aspects of quality, ensuring the appropriate standards are met, the quality of the products meets the design specification before being dispatched to customers, and reports to the Production Manager.

The is responsible for a team of Machinist and Assembly Engineers, and reports directly to the Production Manager.

The is responsible for inspecting materials, assemblies and products to ensure each stage of the production process meets the required standards, and reports directly to the Quality and Standards Manager.

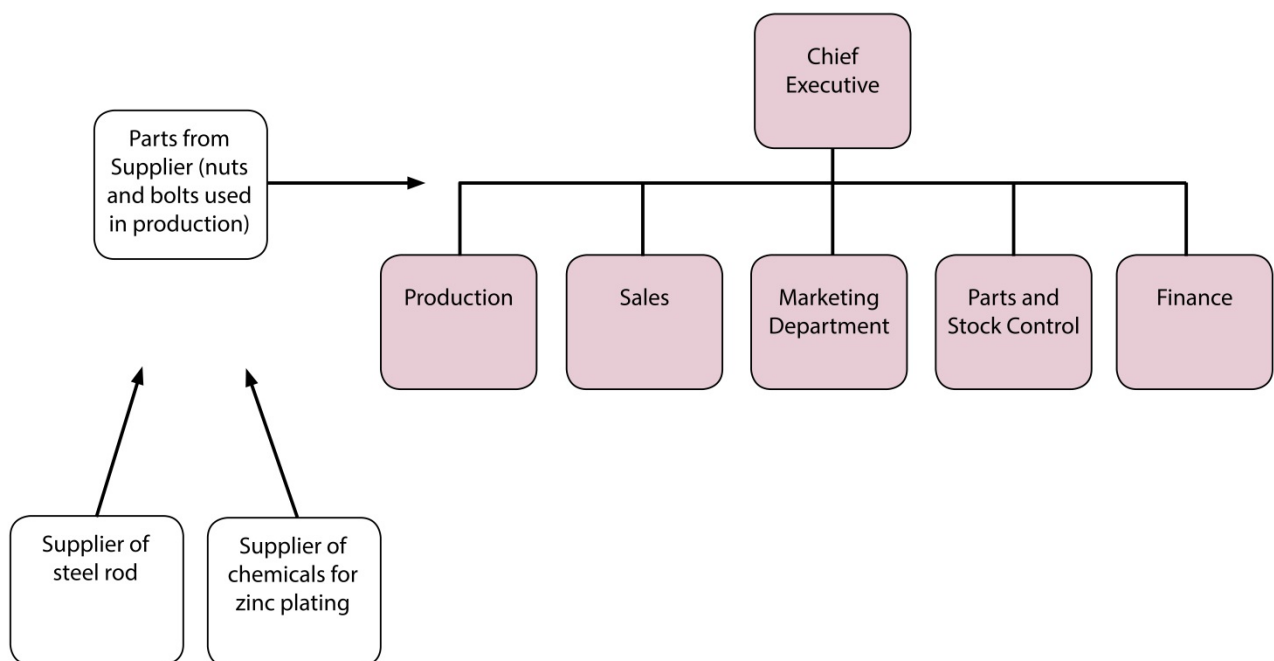
What type of organisational structure best describes OCR Advanced Engineering Limited?

Task 2:

In Task 2, learners could be encouraged to participate in a whole class debate to discuss roles and responsibilities, and accountability within the company.

Learners could be encouraged to think of their own examples of supply chains in engineering/manufacturing such as in vehicle or domestic appliance manufacturing.

Below another engineering company structure is shown.



Using the diagram above.

1. Identify which function would be responsible for ensuring that the supplier is paid for the supplies it provides for production at the appropriate time.

Finance

Learners could have a class debate to answer 2 to discuss and learn how company structures work.

2. It is found that part way through the production, the Parts and Stock Control department do not have enough of the required parts to enable assembly to continue despite the correct number of parts being ordered. A parts order was received and the supplier has been paid for this delivery.

Discuss who is responsible for ensuring:

- a) The correct number of parts ordered has been received
- b) The supplier only receives payment for the order once it has been checked and the invoice authorised.

The Parts and Stock Control department should have checked that the amount of goods received matched the number of parts ordered, and the amount of parts identified on the delivery note and invoice.

The Parts and Stock Control department should not have passed the invoice to the Finance department for payment if the correct amount of goods has not been received.

The Parts and Stock Control department should have informed the Production department that the number of parts received is less than the number ordered and therefore there will not be enough to complete the production of the intended batch.

3. Describe what is meant by the term 'supply chain'.

A supply chain is the flow of goods or services to an end producer or customer. An example of a supply chain is where materials or components are supplied to the customer, such as a producer of an end product for its customers or market.

In the diagram example, there is a supplier of steel rod and another supplier of chemicals to their customer, who makes nuts and bolts. This company produces the nuts and bolts and in turn supplies another manufacturer who uses the nuts and bolts within the end product.

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OCR Resources: the small print

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