Stage 6 Industrial Technology

## Industry Study Structural Factors

During the course of their studies students are expected to source, select and sequence information about issues within the industry related to their focus area, developing competence in collecting, analysing, and organising information. As such, in the HSC course students undertake a broad study of their chosen industry, including factors such as structural, technical, environmental and others.

This resource will help students with their understanding of the structural factors affecting companies, as outlined in the syllabus.

## Outcomes

* **H1.1** investigates industry through the study of businesses in one focus area
* **H7.2** analyses the impact of existing, new and emerging technologies of the focus industry on society and the environment

[Industrial Technology Stage 6 Syllabus](https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/stage-6-learning-areas/technologies/industrial-technology) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2013.

## Delivery strategies

This resource is adaptable for teachers to use with online platforms such as Google classroom. Links to the videos and websites could be posted for students to access during learning at home. The activities and questions could be set as classwork documents within Google classroom that the students complete and submit for a grade or feedback. Alternatively, students could receive the activities and questions as worksheets to complete and submit at a later date.

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| Focus area | Structural considerations – Organisation and management |
| Syllabus content | * identify the organisation and structure of businesses related to the specific industry
	+ organisation
	+ management (roles and levels)
* identify structural factors/considerations that affect production, efficiency and quality control within the business studied
	+ marketing and advertising
	+ production and efficiency
	+ restructuring
	+ quality control
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| Resources | * [Australian government – Business structures](https://www.business.gov.au/planning/business-structures-and-types/business-structures) website
* [The executive connection – The guide to organisation structures](https://tec.com.au/guide-organisation-structures-flat-vs-hierarchical/) website
* [Iowa state university – Business organisation and structure](https://www.extension.iastate.edu/agdm/wholefarm/html/c5-111.html) website
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| Activities/ questions | 1. List the four most common types of business structures in Australia?
2. Compare the advantages and disadvantages of a sole trader vs a company. Consider the legal benefits of each structure in your response.
3. Identify the differences between a flat and a hierarchical business structure.
4. Describe the responsibilities of the following management positions:
	* Chief executive officer (CEO)
	* Chief financial officer (CFO)
	* General manager (GM)
	* Marketing manager (MM).
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| Suggested answers | 1. The most common types of business structure in Australia are:
	* Sole trader
	* Partnership
	* Company
	* Trust
2. Sole traders are simpler to set up and operate, however the sole trader has unlimited liability for all debts and losses incurred by the business. Sole Traders can operate under their own Tax File Number (TFN) and they don’t need to use a separate bank account from the person operating as the Sole Trader.

In contrast a company is much more complex to set up, but it is responsible for its own debts and can sue and be sued, without members of the company being liable unless they are in breach of the legal obligations. A company must apply for and then operate under an Australian Business Number (ABN) and must keep financial records and operate a bank account for the business, with the money that the business earns belonging to the company.1. Flat organisational structures remove the middle of the management structure meaning that staff members work directly under the executives. Staff members are encouraged to take a greater role within the business, including taking on team leader roles for different projects.
2. CEO – This person is the driving force behind the company setting the direction for the future and putting together the resources to support the company.

CFO – This person organises the money required for the business to operate by finding investors, dealing with banks and lenders. They may also manage the money and assets of the company.GM – This person ensures that the company operates smoothly and does what it is supposed to be doing to the standard required and in the timeframe available. They are the person who makes the vision a reality.MM – This person sells the products using a variety of methods to ensure the business is successful and meets its sales targets. |

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| Focus area | Structural considerations – Marketing and efficiency |
| Resources | * [Monash university – Marketing](https://www.monash.edu/business/marketing/marketing-dictionary/m/marketing) website
* [Lyfe Marketing – Digital marketing vs traditional marketing: Which produces better ROI?](https://www.lyfemarketing.com/blog/digital-marketing-vs-traditional-marketing/) website
* [Disruptive Advertising – Emarketing vs digital marketing vs internet marketing: What's the difference?](https://www.disruptiveadvertising.com/marketing/emarketing-vs-digital-marketing/) website
* [Rhythm systems – Productivity and efficiency in manufacturing: What's the difference in 2020?](https://www.rhythmsystems.com/blog/do-you-know-the-difference-between-productivity-and-efficiency) website
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| Activities/ questions | 1. Provide a definition of marketing.
2. Explain the difference between traditional marketing and digital marketing. Consider why the latter has a greater potential for success compared to the former.
3. Assess the effect of new technologies on production and efficiency within the [timber and furniture\*] industries.

(\* this could be replaced with whichever focus area the students are studying) |
| Suggested answers | 1. Marketing can be defined as the activity and processes for creating, communicating, delivering and exchanging products or services that have value to consumers and society as a whole.
2. Traditional marketing is about selling products or services to businesses or individuals as a demographic, in other words, as a generic ideal of a type of company or a type of person within the businesses target section of the population. On the other hand, digital marketing seeks to target the marketing far more precisely to specific individuals the business knows is actually interested in purchasing the product and about which the business has already collected a range of information. Digital marketing is all about building a relationship with their customer and knowing what that customer wants.
3. Student responses should demonstrate an understanding of the value of new technologies by explaining their potential effects on production and efficiency within their industries area of study. Responses may include reference to automation, Computer aided manufacturing (CAM), Computer aided design (CAD), rapid prototyping and any other technologies relevant to their focus area that they have studied.
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| Focus area | Structural considerations – Restructuring and quality control |
| Resources | * [Investopedia – Restructuring](https://www.investopedia.com/terms/r/restructuring.asp) website
* [WhatIs – Quality Control](https://whatis.techtarget.com/definition/quality-control-QC) website
* [Dialog – The difference between quality assurance and quality control](https://www.dialog.com.au/open-dialog/the-difference-between-quality-assurance-and-quality-control/) website
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| Activities/ questions | 1. Identify the reasons a business would need to restructure.
2. Provide a definition of quality control.
3. Explain how restructuring a business can have an effect on its quality control.
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| Suggested answers | 1. Businesses may need to restructure for a range of reasons including:
	* when the company is under financial stress and needs to restructure to stay operational
	* when the company is preparing to be sold or merged with another company
	* when the company is expanding or transferring to overseas markets or manufacturing operations.
2. Quality control can be defined as a system by which the standards of manufactured products or services can be tested against the original specification.
3. Student responses should demonstrate a detailed understanding of the causes and effects of restructuring a business and how they might impact on the quality control process. Responses may include reference to changes in personnel and processes, introduction of new machinery and equipment, stress and anxiety of employees and other factors that can affect the quality control process.
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| Further information | Key words |
| Resources | [NESA – A glossary of key words](https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/hsc/hsc-student-guide/glossary-keywords) website |
| Glossary | Students should consider the key words when forming their responses.* Identify – recognise and name
* Describe – provide characteristics and features
* Compare – show how things are similar or different
* Define – state meaning and identify essential qualities
* Explain – relate cause and effect; make the relationships between things evident; provide why and/or how
* Assess – make a judgement of value, quality, outcomes, results or size
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