

## Overview

This standard identifies the competences you need to establish design requirements for clients, in accordance with approved procedures. You will be required to consult with the client in order to obtain details of their requirements, and to present the results of such consultation to the relevant people, in the appropriate way.

Your responsibilities will require you to comply with organisational policy and procedures for ensuring the successful identification of design requirements, and to report any problems that you cannot personally resolve to the relevant authority. You will be expected to work unsupervised, either on your own or as part of a team, which you may lead or direct, taking full responsibility for your actions and, possibly, for the work of colleagues or subordinates.

Your underpinning knowledge will provide a good understanding of your work, and will provide an informed approach to identifying engineering design requirements. You will understand the client consulting process, and its application, and will know about general and design-specific engineering principles and processes, in adequate depth to provide a sound basis for carrying out the activities to the required standard. You will have a good knowledge of your organisation's procedures and systems, and will be able to identify patents, copyright and intellectual property issues. You will also be able to identify and apply appropriate specifications, details and formats to the client proposal.

You will be fully aware of any health, safety and environmental requirements, and the appropriate legislative and regulatory frameworks applicable to your area of responsibility. You will be required to ensure that safe working practices are maintained throughout, and will understand the responsibility you owe to yourself and others in the workplace.

## Performance criteria

### *You must be able to:*

1. work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. establish who is the client for the engineering products or processes
3. obtain accurate information on the requirements of the client
4. confirm the client's objectives for the engineering products or processes
5. identify any unique or specific features that need particular consideration
6. determine the feasibility of achieving the client's requirements
7. confirm the requirements and other relevant issues with the client
8. record all relevant information in the appropriate information systems for future use

## Knowledge and understanding

### *You need to know and understand:*

1. the health, safety and environmental issues relating to the design of engineering products and processes
2. how to obtain and interpret legislative and regulatory documentation
3. the clients that you normally work with, and how they fit into the supply chain
4. how to obtain information from a client, and how to assess whether it is accurate
5. whom you should deal with in the client's organisation
6. the procedures for contacting the client's organisation
7. the types of information required for establishing design requirements
8. the extent and limit of your own organisation's capabilities for producing various designs
9. the types of design feature that should be considered unique or specific, and why it is important to give these particular consideration
10. the factors that affect the feasibility of achieving a client's requirements
11. how to assess the feasibility of achieving the client's requirements
12. how to prepare a brief confirming the requirements of the client, and why it is important to do so
13. the various ways of presenting the brief to the client, and the importance of selecting the most appropriate method of presentation
14. the organisational process or procedure for recording the design requirements
15. the importance of using company information systems for recording design requirements
16. the extent of your own responsibility, and your level of authority when dealing with clients
17. to whom you should report if you have problems that you cannot resolve

## Scope/range related to performance criteria

1.

Establish the client from **one** of the following:

- 1.1 external – existing client
- 1.2 internal – existing organisational requirement
- 1.3 external – potential client
- 1.4 internal – new organisational opportunity

2.

Agree with the client a product or process to be designed, from **one** of the following areas or activities:

- 2.1 research
- 2.2 installation
- 2.3 manufacturing
- 2.4 commissioning
- 2.5 design
- 2.6 maintenance
- 2.7 configuration
- 2.8 production
- 2.9 engineering operations
- 2.10 decommissioning

3.

Obtain accurate information to establish the design objectives, including **six** of the following:

- 3.1 function
- 3.2 life cycle
- 3.3 technologies
- 3.4 resources
- 3.5 budget
- 3.6 performance/capability
- 3.7 monitoring/servicing/maintenance frequency
- 3.8 delivery schedule
- 3.9 volume
- 3.10 aesthetics
- 3.11 usability
- 3.12 timing
- 3.13 materials
- 3.14 interfacing
- 3.15 environmental/sustainability
- 3.16 branding
- 3.17 safety
- 3.18 ongoing support
- 3.19 other specific design objective

## Identifying engineering design requirements of clients

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4.

Ensure that engineering design requirements comply with **three** of the following:

- 4.1 organisational guidelines and procedures
- 4.2 recognised compliance agency/body's standards directives or codes of practice
- 4.3 equipment manufacturer's operating specification/range
- 4.4 customer standards and requirements
- 4.5 British, European or International standards or directives
- 4.6 health, safety and environmental requirements

5.

Brief the client to contain **six** of the following:

- 5.1 confirmation of objectives
- 5.2 draft design concepts
- 5.3 supporting calculations and data
- 5.4 high level functionality
- 5.5 feasibility of achieving requirements
- 5.6 description of proposed implementation (including any special features)
- 5.7 detail of specific issues for customer consideration (such as product safety, health and safety, impending regulation changes, emerging technologies)
- 5.8 project review process
- 5.9 product life cycle requirements
- 5.10 client ongoing support

6.

Record and communicate requirements to the appropriate people, using:

- 6.1 a verbal report

plus **one** from the following:

2. electronic mail
3. computer-based presentation
4. computer generated report
5. specific company document
6. other appropriate media

## Behaviours

# Additional Information

You will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as:

- strong work ethic
- positive attitude
- team player
- dependability
- responsibility
- honesty
- integrity
- motivation
- commitment

## Identifying engineering design requirements of clients

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