

Engineering leadership and management competencies

EngExec

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ENGINEERS
AUSTRALIA

Engineering leadership and management competencies: EngExec

1: Leadership

Element of competency	Indicators of attainment
1.1 Exercise personal attributes of leadership	a) Purpose and values are established b) Creativity and innovation employed c) Integrity, sincerity of purpose and values are communicated d) Strengths of others are capitalised on e) Teams are successfully developed and lead f) Natural personal leadership style/type is recognised g) Leadership style is adjusted to suit context h) Written and oral skills are effectively used i) Negotiation and mediation skills are employed
1.2 Exercise leadership in organisations	a) Vision for organisation identified and communicated b) Strategy and actions are planned and implemented using recognised principles c) Creativity/innovation processes are used (eg Simplex Model) d) A process approach is used in realising and monitoring progress of organisational objectives e) Appropriate organisational structures are adopted for achieving desired outcomes f) Desired organisational values are identified and deployed g) Leadership and management concepts , tools and techniques are appropriately selected and employed to enhance leadership, eg: <ul style="list-style-type: none"> – Strategic plans – Business plans – Risk management plans – Performance management – Performance appraisals – Management reviews – Reporting regimes – Corrective and preventive action – Reward systems – Training/educational needs assessments and delivery programs

Element of competency	Indicators of attainment
1.3 Appreciate stakeholders	a) Needs and expectations of stakeholders relating to the business are identified and addressed, including in regard to: <ul style="list-style-type: none"> – Owners – Customers – Employees – Community b) External factors are appreciated and appropriately addressed, including in regard to: <ul style="list-style-type: none"> – Community – Legislative/regulatory – Political – Safety – Environmental
1.4 Promote the Engineering profession	a) Engineering profession promoted b) Professional leadership demonstrated c) Development of the profession advocated on behalf of Engineers Australia
1.5 Display creativity	a) Creativity is encouraged b) Management styles that foster creativity are selected and employed c) Different methods for being creative are employed d) Creativity sessions are contributed to e) Innovation teams are facilitated f) The inter-relationship between organisational structures and creativity is managed g) Staff are selected and deployed so as to enable/encourage creativity and innovation
1.6 Manage workplace change	a) Understanding of change is encouraged b) Changes/Improvements are planned and implemented

2: Strategic direction and entrepreneurship

Element of competency	Indicators of attainment
2.1 Provide strategic direction and display entrepreneurship	a) New business opportunities and ideas are identified b) New business initiatives are championed c) Strategic direction and objectives are identified and communicated eg in regard to customers and suppliers d) Supporters for enterprises are identified and recruited, eg joint venture participants e) Contacts for the success of the business venture are identified and realised
2.2 Embrace new technology	a) Measures to identify new technology are employed b) Adoption of new technology is evaluated c) New technology is introduced
2.3 Assess feasibility	a) Possible ventures are compared, including in financial terms b) Present value techniques are used c) Financial judgements are made
2.4 Appreciate risk	a) Business risks are identified and appreciated
2.5 Establish business financing	a) Finance sources for new ventures are identified b) Financing arrangements are evaluated c) Finance is secured
2.6 Recognise importance of personnel aspects	a) A future outlook in staff encouraged b) Corporate core competencies are identified and nurtured (corporate core competencies are a limited number of corporate capabilities that customers value, are mutually reinforcing and difficult to imitate)
2.7 Establish business structures	a) New business structures are identified b) New business staffing is identified c) New business organisational processes are identified

3: Planning

Element of competency	Indicators of attainment
3.1 Undertake business planning	<ul style="list-style-type: none"> a) Vision and objectives are appreciated b) Current context and external environment are assessed and documented (business, economic and/or political) c) SWOT analyses are undertaken d) Critical success factors are identified and addressed e) Customers needs and expectations are identified and addressed f) Strategic and business plans are documented, tested and acceptance of them gained g) Implementation of plans is set up and monitored in a structured way h) Performance is measured, monitored and reported against agreed criteria i) Plans are reviewed and updated
3.2 Manage risk	<ul style="list-style-type: none"> a) Risk management plans developed, implemented and improved
3.3 Undertake market planning	<ul style="list-style-type: none"> a) Customers' current and future needs are identified b) Market segments are identified and value assessed c) Marketing plans are developed, including plans/strategies for: <ul style="list-style-type: none"> – Identifying and assessing competition – Retaining existing customers and engaging additional customers – Branding promotion – Product or service range – Distributing products or services

Element of competency	Indicators of attainment
3.4 Undertake operational planning	<ul style="list-style-type: none"> a) Operational (eg annual, product, service and project) plans* are established in alignment with strategic and business planning b) Performance indicators to monitor the progressive and final implementation of plans are established c) Performance indicators are assessed for effectiveness d) Plans are set up and co-ordinated e) Implementation of plans is monitored in a structured way f) Performance is measured, monitored and reported against agreed criteria g) Plans are updated when needed
3.5 Undertake resource planning	<ul style="list-style-type: none"> a) Resource plans for human resources, supporting infrastructure (eg workspace, process equipment, hardware, software and communication services) and the work environment are prepared in line with strategic and business plans b) Technology plans are prepared in support of strategic, business and operational plans etc c) Implementation of resource and technology plans is set up and monitored in a structured way d) Performance is measured, monitored and reported against agreed criteria e) Resource plans and technology plans are updated

* Operational Plans typically include supporting plans for managing matters such as scope, program, cost, risk and technical and other compliance.

4: Change and improvement

Element of competency	Indicators of attainment
4.1 Review organizational performance and identify improvement opportunities	<ul style="list-style-type: none"> a) Processes for review of organisational performance are identified, planned and set up b) Pertinent information on organisational performance is identified and collected c) Performance is assessed against pre-established performance criteria and targets d) Inferior performance and other improvement opportunities are identified and recorded e) Superior performance is acknowledged and success rewarded
4.2 Plan improvements	<ul style="list-style-type: none"> a) Causes of inferior performance are determined and risks are assessed to support decision-making process b) Improvement opportunities are agreed and are prioritised by a suitable method c) Measurable objectives are established for each improvement project d) Implementation actions, responsibilities and timescales for completion are determined e) Resources for improvement projects are identified and provided
4.3 Implement improvements	<ul style="list-style-type: none"> a) Improvement projects are implemented b) Progress (towards measurable objectives) are regularly reviewed and monitored and interventions taken as appropriate
4.4 Verify effectiveness of improvements	<ul style="list-style-type: none"> a) Improvement projects are verified as complete b) Measurable objectives for the project are achieved c) Planned improvements in operational performance are realised

5: Customer focus (Note: customers may be internal to the organisation.)

Element of competency	Indicators of attainment
5.1 Research customers	a) Customers are identified b) Customers' pertinent attributes are identified
5.2 Manage communication with customers	a) Customers' requirements are identified b) Unclear requirements are clarified c) Feedback and complaints are effectively addressed
5.3 Assess customer satisfaction	a) Customer satisfaction is measured b) Results of customer satisfaction measurement used in design of products and processes.

6: Processes, products and services

Element of competency	Indicators of attainment
6.1 Employ innovation (How the individual acquires, evaluates and implements creative ideas to accelerate business)	<ul style="list-style-type: none">a) Innovative ideas are harvested for processesb) Innovative ideas are recognised and supported, eg allocated resourcesc) Ideas are selected and converted to assist in the satisfaction of customer expectationsd) Research and new technology and techniques are utilised in developing idease) Processes are identified, developed and designed (including improvements to existing processes) so the best process is used for the task at handf) Needs and expectations of customers (existing and potential) are met when developing new ideas.

Element of competency	Indicators of attainment
<p>6.2 Manage improvement</p> <p>(How the individual manages and improves processes- is there a structured approach)</p>	<ul style="list-style-type: none"> a) Processes and their inter-relationships are identified; b) Processes (including verification processes) are planned; c) Briefing/induction and training needs for personnel undertaking processes are identified d) Personnel are briefed/inducted and trained in use of processes; e) Inputs for processes are identified reviewed for adequacy; f) Criteria for acceptability of outputs defined; g) Outputs are reviewed for compliance; h) Performance measures are established and achievement monitored; i) Contributions and participation in improvements encouraged; j) Improvement processes used (See Unit 4) k) Internal customers satisfied (see also customer/client focus); l) Internal customer relationships are identified and managed to achieve external customer satisfaction; m) There are standardised processes; n) Regulations and Standards are reviewed and complied with and processes are suitably modified; o) 6.2.15 Benchmarking is used for comparison and learning.
<p>6.3 Apply quality measures to service and products</p> <p>(What quality indicators are used to compare performance against standards, customer expectations and competitors)</p>	<ul style="list-style-type: none"> a) Quality indicators for in-process and attribute measures relating to customer requirements are established and reviewed; b) Performance levels of processes are established and used to ensure agreed specifications can be met; c) Comparison of products and services with competitors is used (particularly the best performers) to improve the quality, including identification, definition and setting up and monitoring of assessment/measuring techniques.

7: People/human resources

Element of competency	Indicators of attainment
7.1 Manage self	<ul style="list-style-type: none"> a) Personal career goals and objectives are identified and their attainment planned and monitored; b) Personal strengths are identified and capitalised on c) Personal weaknesses are identified and managed d) Strategies to sustain personal motivation and effectiveness are established and implemented e) Use of time is managed f) 7.1.6 Self understanding is appreciated and demonstrated in communication with others g) 7.1.7 Listening and assertive skills are used
7.2 Behave ethically	<ul style="list-style-type: none"> a) Understanding of ethical behaviours is appreciated and demonstrated (including in regard to its importance to organisational image and reputation, team moral, trust and customer satisfaction)
7.3 Recruit employees	<ul style="list-style-type: none"> a) The organisation's personnel recruitment needs are identified. b) Strategies for recruiting required personnel are determined and implemented. c) Criteria and processes for recruitment of personnel are established d) Personnel are assessed against criteria and recruited
7.4 Manage employees	<ul style="list-style-type: none"> a) Performance targets, commensurate with organisational targets are agreed with personnel b) Personnel performance regularly assessed against targets c) Counselling on poor performance undertaken d) Training and development plans agreed with personnel and their implementation monitored (Plans should include building on strengths and addressing weaknesses.) e) Measures are taken to develop the strengths of staff and address their weaknesses eg job rotation, mentoring

Element of competency	Indicators of attainment
7.5 Dismiss employees	a) Equitable processes used for the dismissal of person
7.6 Promote well being and morale	a) Workplace health and safety provided for employees b) Effective personnel feedback mechanisms established, used and reinforced through responsiveness c) Equity and diversity strategies developed and implemented d) Processes for handling of harassment complaints by personnel established

8: Supplier Relationships

Note: The term “supplier” in this context refers to suppliers in general, including providers of consultancy services, plant, equipment, materials and constructed works. Suppliers may be internal or external to the organisation.

Element of competency	Indicators of attainment
8.1 Develop supplier strategy	a) Strategy for purchasing and relationship with suppliers are established and implemented
8.2 Select suppliers	a) Process and criteria for selection of suppliers are defined and established b) Suppliers selected to criteria and engaged c) Feedback and complaints are effectively addressed and matters assessed for identifying potential improvements
8.3 Specify requirements	a) Adequate documents for engagement of suppliers (purchasing documents) are developed, reviewed and approved b) Changes to purchasing documents/requirements are managed
8.4 Undertake surveillance/ monitoring	a) Surveillance/monitoring of suppliers is planned and performed to provide appropriate level of confidence that requirements are met b) Planned surveillance/monitoring utilises appropriate approaches (eg quality control and/or quality assurance) c) Assessed performance of supplier (including results of surveillance) is made known to supplier recorded and used in selections and planning of surveillance

9: Information

Element of competency	Indicators of attainment
9.1 Identify & source information needs	<ul style="list-style-type: none"> a) The information needs of individuals/teams is determined and the resources are identified b) Information held by the organisation is reviewed to determine suitability and accessibility c) Plans are prepared to obtain information which is not available/accessible within the organisation
9.2 Collect, analyse and report information	<ul style="list-style-type: none"> a) Collection of information is timely and relevant to the needs of individuals/teams b) Information is in a format suitable for analysis, interpretation and dissemination c) Information is analysed to identify and report relevant trends and developments in terms of the needs for which it was acquired
9.3 Use management information systems and document control systems	<ul style="list-style-type: none"> a) Management information systems and document control systems are used effectively to store and retrieve data for decision making b) Technology available in the work area/organisation. is used to manage information effectively and efficiently c) Recommendations for improving the information system are submitted to designated persons/groups
9.4 Prepare submissions	<ul style="list-style-type: none"> a) Individuals/teams are involved in business plan/ budget and other submission preparation in a way which uses their contribution effectively and gains their support for the outcomes b) Business plans/budgets and other submissions are presented in accordance with the organisation's guidelines and requirements
9.5 Manage intellectual property	<ul style="list-style-type: none"> a) Intellectual property of others is identified and used in a lawful manner b) Intellectual property of the organisation is protected and managed in an appropriate manner

Element of competency	Indicators of attainment
9.6 Work with legal documents and systems	<ul style="list-style-type: none"> a) Working with legal material is undertaken b) Understanding of the legal structures of a business (ie the law of association) is exercised c) Understanding of the significant features of the law relating to employment and dispute resolution procedures is exercised d) Understanding of basic contract law relevant to the business (including management of variations, dispute resolution and arbitration) is exercised e) Knowledge of the law relating to independent contractors is exercised f) Knowledge of the law relating to occupational health and safety, workers compensation and rehabilitation is exercised g) Knowledge of the law relating to conservation of the environment is exercised h) Understanding of relevant aspects of Taxation law is exercised i) Freedom of information law is complied with
9.7 Use Standards	<ul style="list-style-type: none"> a) Australian, International and other Standards are used as appropriate

10: Finance, accounting and administration

Element of competency	Indicators of attainment
10.1 Handle financing	<ul style="list-style-type: none"> a) Financial viability of proposals are assessed, including rate of return b) Funding sources are identified and assessed c) Financial strategies are developed and implemented d) Financial position, financial performance and cash flow statements are used e) Financial viability of organisations are assessed f) Financial performance is monitored
10.2 Manage accounts	<ul style="list-style-type: none"> a) Income and expenditure are planned and monitored b) Cash flow budgets are prepared c) Budget Controls are understood and used d) Costing information identified and used e) Familiarity with elements of accounts payable system demonstrated f) Familiarity with elements of accounts receivable system demonstrated g) Familiarity with elements of the payroll system demonstrated h) Familiarity with elements of asset management system demonstrated
10.3 Manage auditing	<ul style="list-style-type: none"> a) Purpose and methodology of audits understood and involvement in audits managed. Audits may relate to following <ul style="list-style-type: none"> – Financial – Quality – Environment – Occupational Health and Safety – Risk management – Corporate governance

Element of competency	Indicators of attainment
10.4 Exercise fraud control	<ul style="list-style-type: none"> a) Strategies for the prevention of fraud are established and implemented b) Accountable financial and business processes are employed c) Incidents investigated and corrective action implemented
10.5 Manage health and safety	<ul style="list-style-type: none"> a) Occupational Health and Safety principles understood and implemented b) Injury and dangerous occurrences reported c) Incidents investigated and corrective action implemented



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