

ENGINEERING EXECUTIVE

An Initiative of the Centre for Engineering Leadership and Management

APPLICANTS HANDBOOK (EngExec)



ENGINEERS
AUSTRALIA
Centre for Engineering
Leadership and Management

**Revision 1.4
August 2006**

Copyright

Engineers Australia, 11 National Circuit, BARTON ACT 2600

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without prior written permission from Engineers Australia. Requests and inquiries concerning reproduction and rights should be addressed to:

Director of Education and Assessment
Engineers Australia
11 National Circuit
BARTON ACT 2600

ISBN: 0 85825 734 3

ENGINEERING EXECUTIVE VALUE PROPOSITION

What is an Engineering Executive?

Through its Centre for Engineering Leadership and Management (CELM), Engineers Australia has developed a competency based assessment and accreditation framework for engineers with a proven professional engineering track record who are interested in pursuing management and leadership opportunities in both the private and public sectors.

Engineers Australia will recognise the achievements of members who satisfy the relevant leadership and management competency standards in the form of a new post-nominal 'Engineering Executive' (EngExec).

The status of Engineering Executive will be available to professional engineers, engineering technologists and engineering associates who can satisfy the competency requirements, and who are members of Engineers Australia. Chartered status is not a pre-requisite.

Why was 'Eng Exec' introduced?

CELM was established in 2002 as a strategic response to the complex and changing environment in which engineers work. CELM's key purpose is to enhance the professional opportunities for members of Engineers Australia by developing, recognising and promoting their ability to lead in business, innovation and change.

Many members find great value and satisfaction in leading the field by attaining high level technical expertise in their chosen areas of practice. Engineers Australia continues to encourage and support these important aspirations. However, over time, career options for members of the profession generally become more and more diverse. In broad terms, engineers who are approaching mid-career are often increasingly focused on leadership and management roles in addition to their technical roles.

For many engineers the EngExec competencies complement and support technical engineering careers. For others, it may mark a transition to a less technical and more managerial role.

The EngExec program assists in strengthening the profession by helping to retain and in some cases re-engage members with broader career aspirations. It also enhances the CELM objective to change both internal and external perceptions and attitudes to the leadership and management roles of engineers within the engineering profession and in the broader community.

Is it worth the effort?

Engineers Australia acknowledges that many of its members already acquire additional professional qualifications to enhance their career prospects (eg through MBA and similar programs). This is often undertaken at considerable financial cost and pressure on the balance of work and family. Participation in the assessment and accreditation process associated with EngExec also requires a willingness to dedicate a reasonable amount of personal time and effort.

What the EngExec framework offers in return is that by being competency based it is a clear benchmark against which actual skills and experience in business, leadership and management

can be assessed and tested. Attainment of the EngExec post-nominal signals to professional peers, senior management and potential employers that its bearer has demonstrated these skills and attributes in the work place, and continues to maintain them through continuing professional development.

Engineering Executives will be acknowledged as understanding and achieving very high personal and professional standards of leadership, business acumen, and management skills. They will have built on their early professional experiences with successful and diverse examples of broader leadership and management achievements. They will have acquired a solid reputation for leadership and innovative and reliable team-based performance as an integral part of a business-based initiative.

Engineers Australia will market and promote the value of EngExec widely to industry and public sector organisations that employ engineers. Engineers Australia is confident that as the reputation of the Engineering Executive status, with its post-nominal EngExec becomes known in the wider market, so then will the regard in which engineers with this status are held.

ASSESSMENT OF STAGE 3 COMPETENCIES AND ENGINEERING EXECUTIVE STATUS GUIDELINE FOR APPLICANTS

Introduction

Maintaining world-class standards of engineering practice has long been the objective of the most progressive Australian engineering enterprises and the engineers they employ. Attaining Engineering Executive Status of Engineers Australia ensures that you will be recognised in Australia as being competent in advanced leadership and management.

Congratulations on your decision to apply to become an Engineering Executive in Australia and seeking to achieve a major milestone in your career.

Stage 1 competencies are essentially educational or knowledge-based in nature. The competencies required for Stage 2 are developed by applying Stage 1 knowledge through professional experience. As Members of Engineers Australia, Stage 2 Engineers are granted Chartered status in one of three occupational categories: Chartered Professional Engineers (CPEng), Chartered Engineering Technologist (CEngT), and Chartered Engineering Officer (CEngO). Chartered status and inclusion on the National Professional Engineers Register (NPER) represent the achievement of the generic National Competency Standards and are often the benchmark by which governments and industry select qualified engineers. They require adherence to Engineers Australia's Code of Ethics and a commitment to a range of career-enhancing requirements such as Continuing Professional Development.

Beyond Stage 2, career options for members of the profession become more and more diverse. In broad terms, engineers who are approaching mid-career are increasingly focussed on leadership and management roles in addition to their technical roles. For those wishing to proceed through career consolidation to predominantly management and leadership roles, Engineers Australia now offers a form of recognition to those who can demonstrate advanced skills in leadership, business and management competencies through professional experience in the workplace.

As the reputation of the Engineering Executive status, with its post-nominal EngExec, becomes known in the wider market, Engineers Australia is confident that engineers with this qualification will be held in high regard. Engineering Executives will be acknowledged as understanding and achieving very high personal and professional standards of leadership, business acumen, and management skills.

Achieving the status of Engineering Executive may require considerable effort on your part. This Guideline is designed to assist you in preparing for the competency-based assessment for EngExec, which comprises the preparation of an Engineering Executive Practice Report (EEPR) and a Professional Interview. In preparing your EEPR you are required to analyse your professional work experience to show that you have attained the competencies of an Engineering Executive.

What are Competencies?

Competency is the ability to perform activities within an occupation to standards expected and recognised by employers and the community.

The Engineering Leadership and Management competencies are set out in the following units:

Leadership

- 1 Leadership
- 2 Strategic Direction and Entrepreneurship

Management

- 3 Planning
- 4 Change and Improvement
- 5 Customer Focus
- 6 Processes, Products and Services
- 7 People/Human Resources

Business

- 8 Supplier Relationships
- 9 Information
- 10 Finance, Accounting and Administration

Underlying each unit is the need to demonstrate leadership, innovation and continual improvement including the application of the (PDCA) approach of Planning, Doing, Checking and Acting.

Each **Unit** of Competency comprises a number of **Elements**. Each Element comprises a number of activities, or outcomes capable of being measured. In the past, these were often called Performance Criteria but modern practice is to refer to them as **Indicative Defining Activities**.

For example:

Unit:	2. Strategic Direction and Entrepreneurship
Element:	2.1 Provide strategic direction and display entrepreneurship
Indicative Defining activities:	2.1.1 New business opportunities and ideas are identified 2.1.2 New business initiatives are championed 2.1.3 Strategic direction and objectives are identified and communicated, (eg in regard to customers and suppliers) 2.1.4 Supporters for enterprises are identified and recruited, (eg joint venture participants) 2.1.5 Contacts for the success of the business venture are identified and realised

The indicative defining activities, grouped into themes under the unit headings, are intended as the intrinsic competencies of leadership and management that may be applicable to the full range of engineering leadership and management contexts. This thematic approach has been adopted in preference to documenting competencies for each specific application, eg that for project management, program management, asset management etc.

The full set of 10 Units, with some 50 elements and 200 indicative defining activities, are included as part of this Guideline at **Appendix A**.

It is not expected that any one person would necessarily achieve a high level of competency against all the identified indicative defining activities. For Stage 3 attainment of a depth and range of competencies appropriate to the context of the applicant is required.

Where applicants identify gaps in their competence, they may address the gaps by either demonstrating that either it is not relevant or important to their particular circumstance, or that they have compensated for it in some other way.

It is envisaged that assessments would individually assess elements using the indicative defining activities as an aid, i.e. in general, each defining activity would not normally be individually assessed.

To summarise:-

- Graduate Engineers are Stage 1 Professional Engineers who have demonstrated the attainment of essential educational competencies through the completion of a recognised professional engineering qualification. Stage 1 Engineers work under guidance and supervision.
- Chartered Engineers are Stage 2 Engineers who have shown that they are able to practise in a competent, independent and ethical manner. They will have demonstrated practice competencies relevant to their area of practice.
- Engineering Executives are Stage 3 Executives who have built on their early engineering experiences with successful and diverse examples of broader leadership and management achievements. They will have acquired a solid reputation for leadership and innovative and reliable team-based performance as an integral part of a business-based initiative.

Leadership and Management Development

It is not possible to stipulate a minimum period to develop leadership and management skills to the level appropriate for Stage 3 recognition.

This period of **Leadership and Management Development** will depend on the rate at which you can acquire and demonstrate a good cross-section of the necessary competencies. Given the diverse nature of these competencies, and as a guide, in most instances a period in the order of 10 years will be necessary before candidates who have achieved Member status (MIEAust, TMIEAust or OMIEAust) are likely to be in a position to demonstrate a sufficient breadth and depth of competencies for consideration for Stage 3 recognition.

Formal tertiary studies leading to a degree or post-graduate diploma (eg MBA) may be seen in the assessment process as reinforcing an applicant's claims, but will not of themselves constitute evidence that competencies have been achieved. This applies equally to applicants who have acquired these competencies through informal study (eg in-house training or private reading).

Applicants must rely on achievements in the workplace to demonstrate attainment of competencies in practice.

Preparing your Engineering Executive Practice Report

The Stage 3 assessment will be competency-based.

You will need to prepare and submit an **Engineering Executive Practice Report (EEPR)** addressing each of the 10 Competency units at *Appendix A*.

The following Steps are intended to assist you in that process.

You will need to review your career during your Leadership and Management Development period, and consolidate your achievements in a way that demonstrates the attainment of competency at a responsible and complex level.

The steps you should follow are:-

STEP 1 – Eligible?

This step is to confirm that you are qualified to apply.

The status of Engineering Executive is available to professional engineers, engineering technologists and engineering officers (associates) who can satisfy the Engineering Leadership and Management competency requirements, and who are Members of Engineers Australia. Chartered status at Stage 2 is not essential.

STEP 2 – Initial self-assessment

Before you commence work on your application, it is suggested you familiarise yourself with the full set of EngExec Stage 3 Competency details at *Appendix A*. Your EEPR will need to demonstrate achievement of a substantial depth and range of these competencies.

During this process, it may assist if you make a set of initial self-assessments against the listed Competency Units and Elements using the Applicant's Self-Assessment Checklist at *Appendix B*. This is provided in open Word file format to enable electronic completion and lodgement – do not be overly-concerned with formatting.

This should help assure yourself that you have sufficient coverage of the competencies to justify proceeding with your application.

STEP 3 – Write up your EEPR

Review your career achievements, consolidating like experiences against relevant competency Units/Elements.

Now write up these achievements in the form of your EEPR. The wording should clearly indicate how these competencies have been demonstrated, emphasising:

- your personal contribution and responsibilities
- the problems you faced
- the solutions you found
- the leadership and management judgments you made
- the impact your solutions and judgments generated for the team and the organisation.

Your EEPR should be word processed in English, in narrative form, using the active voice, first person singular and should describe the specific contributions and achievements that you yourself have made.

The EEPR should be limited to around half to one and a half pages per competency Unit, progressing through Units 1 to 10 in sequence, drawing on performance and the various career experiences you have reviewed and consolidated, to a total of around 10 pages. Depending on your own personal career, you may find you have more than a page to write on some Units, and less than a page on others.

The sample at *Appendix C* (addressing Unit 2 – Strategic Direction and Entrepreneurship) is typical of the style expected. It demonstrates attainment of competency elements to varying degrees across the Unit.

Double-check your initial self-assessment checklist in the light of what you have written in your EEPR.

STEP 4 – Competency gaps?

Where you have not been in a position to demonstrate successful outcomes against some competency elements, you should present at the end of your EEPR a brief explanation of how you have developed ways of managing any such competency gaps.

STEP 5 – Referees

You are likely to have demonstrated leadership, business and management competencies while occupying several different roles and even with different employers. To a reasonable degree, you should nominate as referees professionals with appropriate experience and standing who could verify your claims with respect to the different positions you have held (as defined in your CV). The Professional Interview panel may wish to seek clarification with these referees where issues or queries cannot be resolved directly at interview.

STEP 6 – Lodgement

You are now able to complete your application by providing the following electronic documents:

- Engineering Executive Application form (Appendix D)
- Your own detailed Curriculum Vitae including your personal details, Engineers Australia membership number, employment history, responsibilities and summary of key achievements
- Your Engineering Executive Practice Report (EEPR)
- Completed Applicant's Self-Assessment Checklist Form

As an applicant for EngExec, all statements in your EEPR will be assumed to be true and correct and your claims of acquired competencies made in good faith, that you will advise Engineers Australia of any matter affecting your fitness for admission to Engineering Executive status, and that you will continue to be bound by Engineers Australia's Royal Charter, Bye-laws and Code of Ethics, unless you inform us otherwise.

Application Fees

An application fee is payable on lodgement. The schedule of fees payable can be found on the Engineers Australia website (www.engineersaustralia.org.au).

E-mail these documents to the National Assessor in your Division. Contact details for National Assessors can be found on the Engineers Australia website (www.engineersaustralia.org.au).

STEP 7

When preliminary assessment indicates that your EEPR satisfies Stage 3 competencies, you will be invited to a one-hour ***Professional Interview (PI)***. The PI is essentially a peer review of the competencies you have claimed. The National Assessor who has assessed your EEPR will conduct the initial interviews, together with two senior experienced engineering executives.

At the start of the PI you will be asked to make an uninterrupted fifteen-minute presentation in support of your application. During the remainder of the PI you should be prepared to answer questions on and discuss the Indicative Defining Activities pertaining to the Stage 3 Elements of Competency.

You should note that as a practising Engineer in Australia you are expected to be able to communicate effectively in the English language. Your competencies in English will be assessed both during the PI and in the assessment of your EEPR.

Appeals

Any form of appeal or grievance over the standing, conduct or outcome of an assessment process is to be referred to the Chair of the Engineers Australia Membership Committee who will determine a suitable review mechanism.

Subsequent CPD Requirements

Applicants who gain Stage 3 competency recognition will be expected to maintain their Continuing Professional Development (CPD) at a satisfactory level relevant to leadership, business and management competencies in accordance with the policy at *Appendix E*.

Checklist

A checklist to assist you prepare your EEPR and participate in your Professional Interview is provided at *Appendix F*.

Enquiries

Contact the accredited National Assessor through your Division Office of Engineers Australia in the first instance.

ENGINEERS AUSTRALIA

STAGE 3 – ENGINEERING LEADERSHIP AND MANAGEMENT COMPETENCIES

Units of Competency

UNIT 1 – LEADERSHIP

Element	Indicative defining activities
1.1 Exercise personal attributes of leadership	1.1.1 Purpose and values are established 1.1.2 Creativity and innovation employed 1.1.3 Integrity, sincerity of purpose and values are communicated 1.1.4 Strengths of others are capitalised on 1.1.5 Teams are successfully developed and lead 1.1.6 Natural personal leadership style/type is recognised 1.1.7 Leadership style is adjusted to suit context 1.1.8 Written and oral skills are effectively used 1.1.9 Negotiation and mediation skills are employed
1.2 Exercise leadership in organisations	1.2.1 Vision for organisation identified and communicated 1.2.2 Strategy and actions are planned and implemented using recognised principles 1.2.3 Creativity/innovation processes are used (eg Simplex Model) 1.2.4 A process approach is used in realising and monitoring progress of organisational objectives 1.2.5 Appropriate organisational structures are adopted for achieving desired outcomes 1.2.6 Desired organisational values are identified and deployed 1.2.7 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	Indicative defining activities
1.3 Appreciate stakeholders	<p>1.3.1 Needs and expectations of stakeholders relating to the business are identified and addressed, including in regard to:</p> <ul style="list-style-type: none"> - Owners - Customers - Employees - Community <p>1.3.2 External factors are appreciated and appropriately addressed, including in regard to:</p> <ul style="list-style-type: none"> - Community - Legislative/regulatory - Political - Safety - Environmental
1.4 Promote the Engineering profession	<p>1.4.1 Engineering profession promoted</p> <p>1.4.2 Professional leadership demonstrated</p> <p>1.4.3 Development of the profession advocated on behalf of Engineers Australia</p>
1.5 Display creativity	<p>1.5.1 Creativity is encouraged</p> <p>1.5.2 Management styles that foster creativity are selected and employed</p> <p>1.5.3 Different methods for being creative are employed</p> <p>1.5.4 Creativity sessions are contributed to</p> <p>1.5.5 Innovation teams are facilitated</p> <p>1.5.6 The inter-relationship between organisational structures and creativity is managed</p> <p>1.5.7 Staff are selected and deployed so as to enable/encourage creativity and innovation</p>
1.6 Manage workplace change	<p>1.6.1 Understanding of change is encouraged</p> <p>1.6.2 Changes/Improvements are planned and implemented</p>

UNIT 2 – STRATEGIC DIRECTION AND ENTREPRENEURSHIP

Element	Indicative defining activities
2.1 Provide strategic direction and display entrepreneurship.	<p>2.1.1 New business opportunities and ideas are identified</p> <p>2.1.2 New business initiatives are championed</p> <p>2.1.3 Strategic direction and objectives are identified and communicated eg in regard to customers and suppliers</p> <p>2.1.4 Supporters for enterprises are identified and recruited, eg joint venture participants</p> <p>2.1.5 Contacts for the success of the business venture are identified and realised</p>

Element	Indicative defining activities
2.2 Embrace new technology	1.1.1 Measures to identify new technology are employed 1.1.2 Adoption of new technology is evaluated 1.1.3 New technology is introduced
2.3 Assess feasibility	2.3.1 Possible ventures are compared, including in financial terms 2.3.2 Present value techniques are used 2.3.3 Financial judgements are made
2.4 Appreciate risk	2.4.1 Business risks are identified and appreciated
2.5 Establish business financing	2.5.1 Finance sources for new ventures are identified 2.5.2 Financing arrangements are evaluated 2.5.3 Finance is secured
2.6 Recognise importance of personnel aspects	2.6.1 A future outlook in staff encouraged 2.6.2 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	2.7.1 New business structures are identified 2.7.2 New business staffing is identified 2.7.3 New business organisational processes are identified

UNIT 3 – PLANNING

Element	Indicative defining activities
3.1 Undertake business planning	1.1.1 Vision and objectives are appreciated 1.1.2 Current context and external environment are assessed and documented (business, economic and/or political) 1.1.3 SWOT analyses are undertaken 1.1.4 Critical success factors are identified and addressed 1.1.5 Customers needs and expectations are identified and addressed 1.1.6 Strategic and business plans are documented, tested and acceptance of them gained 1.1.7 Implementation of plans is set up and monitored in a structured way 1.1.8 Performance is measured, monitored and reported against agreed criteria 1.1.9 Plans are reviewed and updated
3.2 Manage risk	3.2.1 Risk management plans developed, implemented and improved

Element	Indicative defining activities
<p>3.3 Undertake market planning</p>	<p>3.3.1 Customers' current and future needs are identified</p> <p>3.3.2 Market segments are identified and value assessed</p> <p>3.3.3 Marketing plans are developed, including plans/strategies for:</p> <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
<p>3.4 Undertake operational planning</p>	<p>3.4.1 Operational (eg annual, product, service and project) plans* are established in alignment with strategic and business planning</p> <p>3.4.2 Performance indicators to monitor the progressive and final implementation of plans are established</p> <p>3.4.3 Performance indicators are assessed for effectiveness</p> <p>3.4.4 Plans are set up and co-ordinated</p> <p>3.4.5 Implementation of plans is monitored in a structured way</p> <p>3.4.6 Performance is measured, monitored and reported against agreed criteria</p> <p>3.4.7 Plans are updated when needed</p>
<p>3.5 Undertake resource planning</p>	<p>3.5.1 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</p> <p>3.5.2 Technology plans are prepared in support of strategic, business and operational plans etc</p> <p>3.5.3 Implementation of resource and technology plans is set up and monitored in a structured way</p> <p>3.5.4 Performance is measured, monitored and reported against agreed criteria</p> <p>3.5.5 Resource plans and technology plans are updated</p>

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

UNIT 4 – CHANGE AND IMPROVEMENT

Element	Indicative defining activities
4.1 Review organizational performance and identify improvement opportunities	<p>4.1.1 Processes for review of organisational performance are identified, planned and set up</p> <p>4.1.2 Pertinent information on organisational performance is identified and collected</p> <p>4.1.3 Performance is assessed against pre-established performance criteria and targets</p> <p>4.1.4 Inferior performance and other improvement opportunities are identified and recorded</p> <p>4.1.5 Superior performance is acknowledged and success rewarded</p>
4.2 Plan improvements	<p>4.2.1 Causes of inferior performance are determined and risks are assessed to support decision-making process</p> <p>4.2.2 Improvement opportunities are agreed and are prioritised by a suitable method</p> <p>4.2.3 Measurable objectives are established for each improvement project</p> <p>4.2.4 Implementation actions, responsibilities and timescales for completion are determined</p> <p>4.2.5 Resources for improvement projects are identified and provided</p>
4.3 Implement improvements	<p>4.3.1 Improvement projects are implemented</p> <p>4.3.2 Progress (towards measurable objectives) are regularly reviewed and monitored and interventions taken as appropriate</p>
4.4 Verify effectiveness of improvements	<p>4.4.1 Improvement projects are verified as complete</p> <p>4.4.2 Measurable objectives for the project are achieved</p> <p>4.4.3 Planned improvements in operational performance are realised</p>

UNIT 5 – CUSTOMER FOCUS *(NOTE: CUSTOMERS MAY BE INTERNAL TO THE ORGANISATION.)*

Element	Indicative defining activities
5.1 Research customers	<p>5.1.1 Customers are identified</p> <p>5.1.2 Customers' pertinent attributes are identified</p>
5.2 Manage communication with customers	<p>5.2.1 Customers' requirements are identified</p> <p>5.2.2 Unclear requirements are clarified</p> <p>5.2.3 Feedback and complaints are effectively addressed</p>
5.3 Assess customer satisfaction	<p>5.3.1 Customer satisfaction is measured</p> <p>5.3.2 Results of customer satisfaction measurement used in design of products and processes.</p>

UNIT 6 - PROCESSES, PRODUCTS AND SERVICES

Element	Indicative defining activities
<p>6.1 Employ innovation (How the individual acquires, evaluates and implements creative ideas to accelerate business)</p>	<p>6.1.1 Innovative ideas are harvested for processes 6.1.2 Innovative ideas are recognised and supported, eg allocated resources 6.1.3 Ideas are selected and converted to assist in the satisfaction of customer expectations 6.1.4 Research and new technology and techniques are utilised in developing ideas 6.1.5 Processes are identified, developed and designed (including improvements to existing processes) so the best process is used for the task at hand 6.1.6 Needs and expectations of customers (existing and potential) are met when developing new ideas.</p>
<p>6.2 Manage improvement (How the individual manages and improves processes - is there a structured approach)</p>	<p>6.2.1 Processes and their inter-relationships are identified; 6.2.2 Processes (including verification processes) are planned; 6.2.3 Briefing/induction and training needs for personnel undertaking processes are identified 6.2.4 Personnel are briefed/inducted and trained in use of processes; 6.2.5 Inputs for processes are identified reviewed for adequacy; 6.2.6 Criteria for acceptability of outputs defined; 6.2.7 Outputs are reviewed for compliance; 6.2.8 Performance measures are established and achievement monitored; 6.2.9 Contributions and participation in improvements encouraged; 6.2.10 Improvement processes used (See Unit 4) 6.2.11 Internal customers satisfied (see also customer/client focus); 6.2.12 Internal customer relationships are identified and managed to achieve external customer satisfaction; 6.2.13 There are standardised processes; 6.2.14 Regulations and Standards are reviewed and complied with and processes are suitably modified; 6.2.15 Benchmarking is used for comparison and learning.</p>
<p>6.3 Apply quality measures to service and products (What quality indicators are used to compare performance against standards, customer expectations and competitors)</p>	<p>6.3.1 Quality indicators for in-process and attribute measures relating to customer requirements are established and reviewed; 6.3.2 Performance levels of processes are established and used to ensure agreed specifications can be met; 6.3.3 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.</p>

UNIT 7 – PEOPLE/HUMAN RESOURCES

Element	Indicative defining activities
7.1 Manage self	<p>7.1.1 Personal career goals and objectives are identified and their attainment planned and monitored;</p> <p>7.1.2 Personal strengths are identified and capitalised on</p> <p>7.1.3 Personal weaknesses are identified and managed</p> <p>7.1.4 Strategies to sustain personal motivation and effectiveness are established and implemented</p> <p>7.1.5 Use of time is managed</p> <p>7.1.6 Self understanding is appreciated and demonstrated in communication with others</p> <p>7.1.7 Listening and assertive skills are used</p>
7.2 Behave ethically	<p>7.2.1 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).</p>
7.3 Recruit employees	<p>7.3.1 The organisation's personnel recruitment needs are identified.</p> <p>7.3.2 Strategies for recruiting required personnel are determined and implemented.</p> <p>7.3.3 Criteria and processes for recruitment of personnel are established</p> <p>7.3.4 Personnel are assessed against criteria and recruited</p>
7.4 Manage employees	<p>7.4.1 Performance targets, commensurate with organisational targets are agreed with personnel</p> <p>7.4.2 Personnel performance regularly assessed against targets</p> <p>7.4.3 Counselling on poor performance undertaken</p> <p>7.4.4 Training and development plans agreed with personnel and their implementation monitored (Plans should include building on strengths and addressing weaknesses.)</p> <p>7.4.5 Measures are taken to develop the strengths of staff and address their weaknesses eg job rotation, mentoring</p>
7.5 Dismiss employees	<p>7.5.1 Equitable processes used for the dismissal of personnel</p>
7.6 Promote well being and morale	<p>7.6.1 Workplace health and safety provided for employees</p> <p>7.6.2 Effective personnel feedback mechanisms established, used and reinforced through responsiveness</p> <p>7.6.3 Equity and diversity strategies developed and implemented</p> <p>7.6.4 Processes for handling of harassment complaints by personnel established</p>

UNIT 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	Indicative defining activities
8.1 Develop supplier strategy	8.1.1 Strategy for purchasing and relationship with suppliers are established and implemented
8.2 Select suppliers	8.2.1 Process and criteria for selection of suppliers are defined and established 8.2.2 Suppliers selected to criteria and engaged 8.2.3 Feedback and complaints are effectively addressed and matters assessed for identifying potential improvements
8.3 Specify requirements	8.3.1 Adequate documents for engagement of suppliers (purchasing documents) are developed, reviewed and approved 8.3.2 Changes to purchasing documents/requirements are managed
8.4 Undertake surveillance/monitoring	8.4.1 Surveillance/monitoring of suppliers is planned and performed to provide appropriate level of confidence that requirements are met 8.4.2 Planned surveillance/monitoring utilises appropriate approaches (eg quality control and/or quality assurance) 8.4.3 Assessed performance of supplier (including results of surveillance) is made known to supplier recorded and used in selections and planning of surveillance

UNIT 9 – INFORMATION

Element	Indicative defining activities
9.1 Identify & source information needs	9.1.1 The information needs of individuals/teams is determined and the resources are identified 9.1.2 Information held by the organisation is reviewed to determine suitability and accessibility 9.1.3 Plans are prepared to obtain information which is not available/accessible within the organisation
9.2 Collect, analyse and report information	9.2.1 Collection of information is timely and relevant to the needs of individuals/teams 9.2.2 Information is in a format suitable for analysis, interpretation and dissemination 9.2.3 Information is analysed to identify and report relevant trends and developments in terms of the needs for which it was acquired

Element	Indicative defining activities
9.3 Use management information systems and document control systems.	9.3.1 Management information systems and document control systems are used effectively to store and retrieve data for decision making 9.3.2 Technology available in the work area/organisation. is used to manage information effectively and efficiently 9.3.3 Recommendations for improving the information system are submitted to designated persons/groups
9.4 Prepare submissions	9.4.1 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 9.4.2 Business plans/budgets and other submissions are presented in accordance with the organisation's guidelines and requirements
9.5 Manage intellectual property	9.5.1 Intellectual property of others is identified and used in a lawful manner 9.5.2 Intellectual property of the organisation is protected and managed in an appropriate manner
9.6 Work with legal documents and systems	9.6.1 Working with legal material is undertaken 9.6.2 Understanding of the legal structures of a business (ie the law of association) is exercised 9.6.3 Understanding of the significant features of the law relating to employment and dispute resolution procedures is exercised 9.6.4 Understanding of basic contract law relevant to the business (including management of variations, dispute resolution and arbitration) is exercised 9.6.5 Knowledge of the law relating to independent contractors is exercised 9.6.6 Knowledge of the law relating to occupational health and safety, workers compensation and rehabilitation is exercised 9.6.7 Knowledge of the law relating to conservation of the environment is exercised 9.6.8 Understanding of relevant aspects of Taxation law is exercised 9.6.9 Freedom of information law is complied with
9.7 Use Standards	9.7.1 Australian, International and other Standards are used as appropriate

10. FINANCE, ACCOUNTING AND ADMINISTRATION

Element	Indicative defining activities
10.1 Handle financing	10.1.1 Financial viability of proposals are assessed, including rate of return 10.1.2 Funding sources are identified and assessed 10.1.3 Financial strategies are developed and implemented 10.1.4 Financial position, financial performance and cash flow statements are used 10.1.5 Financial viability of organisations are assessed 10.1.6 Financial performance is monitored
10.2 Manage accounts	10.2.1 Income and expenditure are planned and monitored 10.2.2 Cash flow budgets are prepared 10.2.3 Budget Controls are understood and used 10.2.4 Costing information identified and used 10.2.5 Familiarity with elements of accounts payable system demonstrated 10.2.6 Familiarity with elements of accounts receivable system demonstrated 10.2.7 Familiarity with elements of the payroll system demonstrated 10.2.8 Familiarity with elements of asset management system demonstrated
10.3 Manage auditing	10.3.1 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
10.4 Exercise fraud control	10.4.1 Strategies for the prevention of fraud are established and implemented 10.4.2 Accountable financial and business processes are employed 10.4.3 Incidents investigated and corrective action implemented
10.5 Manage health and safety	10.5.1 Occupational Health and Safety principles understood and implemented 10.5.2 Injury and dangerous occurrences reported 10.5.3 Incidents investigated and corrective action implemented

ENGINEERS AUSTRALIA

STAGE 3 – ENGINEERING LEADERSHIP AND MANAGEMENT COMPETENCIES

Applicant's Self-Assessment Checklist

Applicants should complete the following self-assessment by ticking the relevant column for either “High”, “Moderate” or “Low”. As applicable comments may be added but this is not required for all elements.

Where applicants identify gaps in their competence, they may address the gaps by either demonstrating that either it is not relevant or important to their particular circumstance, or that they have compensated for it in some other way.

The completed checklist should be forwarded with the application.

Element	High	Mod.	Low	Comments not normally required. For clarification only
UNIT 1 – LEADERSHIP				
1.1 Exercise personal attributes of leadership				
1.2 Exercise leadership in organisations				
1.3 Appreciate stakeholders				
1.4 Promote the Engineering profession				
1.5 Display creativity				
1.6 Manage workplace change				
UNIT 2 – STRATEGIC DIRECTION AND ENTREPRENEURSHIP				
2.1 Provide strategic direction and display entrepreneurship				
2.2 Embrace new technology				
2.3 Assess feasibility				
2.4 Appreciate risk				
2.5 Establish business financing				
2.6 Recognise importance of personnel aspects				
2.7 Establish business structures				

Element	High	Mod.	Low	Comments not normally required. For clarification only
---------	------	------	-----	-----------------------------------------------------------

UNIT 3 – PLANNING

3.1 Undertake business planning				
3.2 Manage risk				
3.3 Undertake market planning				
3.4 Undertake operational planning				
3.5 Undertake resource planning				

UNIT 4 – CHANGE AND IMPROVEMENT

4.1 Review organizational performance and identify improvement opportunities.				
4.2 Plan improvements				
4.3 Implement improvements				
4.4 Verify effectiveness of improvements				

UNIT 5 – CUSTOMER FOCUS

5.1 Research customers				
5.2 Manage communication with customers				
5.3 Assess customer satisfaction				

UNIT 6 - PROCESSES, PRODUCTS AND SERVICES

6.1 Employ innovation				
6.2 Manage improvement				
6.3 Apply quality measures to service and products				

UNIT 7 – PEOPLE/HUMAN RESOURCES

7.1 Manage self				
7.2 Behave ethically				
7.3 Recruit employees				
7.4 Manage employees				
7.5 Dismiss employees				
7.6 Promote well being and morale				

Element	High	Mod.	Low	Comments not normally required. For clarification only
---------	------	------	-----	-----------------------------------------------------------

UNIT 8 – SUPPLIER RELATIONSHIPS

8.1 Develop supplier strategy				
8.2 Select suppliers				
8.3 Specify requirements				
8.4 Undertake surveillance/ monitoring				

UNIT 9 – INFORMATION

9.1 Identify & source information needs				
9.2 Collect, analyse and report information				
9.3 Use management information systems and document control systems.				
9.4 Prepare submissions				
9.5 Manage intellectual property				
9.6 Work with legal documents and systems				
9.7 Use Standards				

10. FINANCE, ACCOUNTING AND ADMINISTRATION

10.1 Handle financing				
10.2 Manage accounts				
10.3 Manage auditing				
10.4 Exercise fraud control				
10.5 Manage health and safety				

ENGINEERING EXECUTIVE PRACTICE REPORT (SAMPLE ONLY)

Unit 2 – Strategic Direction and Entrepreneurship

2.1 Display entrepreneurship and provide strategic direction

I provide the strategic direction for the business in terms of my allocated sector of the market. My team and I identify the opportunities and I set the priorities. Our strategic direction and objectives are defined in the Sector Strategic Plan which I write. New business opportunities for the coming financial year and beyond are identified in our business plans. I appoint and manage a team of senior personnel who act as my client managers for the various business sectors and I identify key personnel gaps and then negotiate for their employment in the appropriate geographic and functional area within the business. I also directly recruit key staff to fill strategic gaps in the company's local office.

2.2 Embrace new technology

I lead the development of proposals for the New Technology Concepts program within the company and I fund research and development of proposals into the use of new technology and techniques that might value add to our sector clients.

2.3 Assess feasibility

I am a key decision-maker in the GO/NO GO process for strategic client bids. I also influence the appointment of the PM, PD and team members. I also assess the financial viability of every client proposal that we develop to ensure that it is commercially viable. Unless there are strategic reasons for it being otherwise, proposal costs should not exceed our company target proportion of potential project fees.

I was also responsible for identifying potential merger partners in our market sector. As part of this process I produced the business compatibility assessment documents and together with my organisational unit leader, conducted the due diligence and commercial viability assessment of the merger. I obtained support from the Chief Operations Officer and the Chief Financial Officer during this process.

2.4 Appreciate risk

I understand the nature of Risk Management. Business risks are identified in the Sector Strategic Plan. I also work with our company Risk Manager on this area as a business opportunity in its own right. We were successful in getting the company on to the Risk assessment panel of a major client.

In one of my former firms, I ran formal training periods for all managers and line staff in the organisation. This was due to my dissatisfaction with the level of competency in risk management across the organisation. The training was in accordance with the Australian/New Zealand standard. All operations and procedures documents for the organisation were then required to contain a risk management plan and I reviewed each document and provided advice to the head of the organisation on their suitability. I approved all risk management plans within my own group.

2.5 Establish business financing

This is not an area that I have had any need to be exposed to in my recent roles beyond developing and managing a budget each financial year. It has been more in my role as a member of the executive committee for a not-for-profit organisation that I have had to be creative in generating alternate streams of revenue by developing sponsorship documents and exploring alternate uses for some of our fixed infrastructure. We also had to establish a strategic relationship with a local firm that involved a profit/risk share reward scheme that generated additional funding for up front costs.

2.6 Recognise importance of personnel aspects

Having good people is the key to a successful engineering practice. If we have the right people and good client relationships then we will be successful. Together with my direct staff we have identified their long-term goals within the business and identified the experience, opportunities and training required for them to achieve that. This is formally documented in a process that is well-known across the firm. For those people with the potential for management positions, I actively encourage their development of business systems skills and develop their networking opportunities within the business.

2.7 Establish business structures

I have established the structure of my allocated sector Group, which involved establishing new:

- a. Business structures,
- b. Staffing, and
- c. Organisational Processes.

A copy of the Group structure, with individuals, is (not) attached at Annex A.

2.8 Define supplier strategies

We do not tend to have strategic suppliers but we do have relationships and joint ventures with business partners, primes and subcontractors. A number of these relationships are strategic. I have developed and signed a number of Non Disclosure Agreements and where required, Memorandums of Understanding to cover these activities.

APPLICATION FOR ENGINEERING EXECUTIVE MEMBERSHIP OF ENGINEERS AUSTRALIA

Please indicate Engineers Australia Membership No. and grade:

1. PERSONAL DETAILS (Please use BLOCK CAPITALS)

Title: Prof Dr Mr Mrs Ms or Other

Surname:

Given Names (in full):

Sex: F M Date of Birth:...../...../.....

Private Address:
(tick if preferred contact address)

Business Address:
(tick if preferred contact address)

.....
.....
.....

State: Post Code: State: Post Code:

Ph:(.....) Fax:(.....)..... Ph:(.....)..... Fax:(.....).....

e-mail: e-mail:.....

Mobile: Mobile:.....

2. REFEREES' DETAILS (Please attach separate sheet if more space required)

Name: Ph:(.....)

Relationship to applicant:

Name: Ph:(.....)

Relationship to applicant:

3. APPLICANT'S ENGINEERING PRACTICE DECLARATION

All statements of fact in my Engineering Executive Practice Report are true and correct and I have made claims of acquired competencies in good faith. The report is my own work and is a true representation of my personal competency in written English. I confirm that I have read and that I understand the Code of Ethics of Engineers Australia. I agree that, if admitted as an Engineering Executive, I will observe and be bound by Engineers Australia's Royal Charter, Bye-laws and Code of Ethics.

I understand that I have an obligation to inform Engineers Australia of any matter that may affect my fitness for admission to Engineering Executive membership.

Signature: Date:.....

**please note that the Assessment fee is a non-refundable fee.*

4. CREDIT CARD DETAILS Please charge my Credit Card

Visa Bankcard Mastercard Diners American Express

(Please note that only Australian and New Zealand Bankcards are accepted)

Name on Card:

Card No:

Expiry Date: / / Amount: \$.....

Signature: Date:.....

5. APPLICANT'S CHECKLIST

- Application form completed.
- EEPR, CV and Self Assessment.
- Original and two copies submitted.
- Payment enclosed.

Please refer to the Engineers Australia website for the current assessment fee (www.engineersaustralia.org.au)

ENGINEERS AUSTRALIA

POLICY ON CONTINUING PROFESSIONAL DEVELOPMENT FOR MEMBERS WISHING TO RETAIN ENGINEERING EXECUTIVE STATUS (ENGEXEC)

1. PREAMBLE

This Policy on Continuing Professional Development applies to members of Engineers Australia in current practice who wish to retain their Engineering Executive (*EngExec*) status and who undertake to observe the Code of Ethics of Engineers Australia.

Members who attain Engineering Executive status will be working predominantly in management roles and have moved away from discipline-based practice. Engineering Executives are acknowledged as having high professional standards, leadership, business acumen and management skills.

Engineering Executive competencies are recognised as retaining a longer 'shelf life' than technical competencies. For this reason the CPD requirements for maintenance of EngExec status are intentionally less prescriptive than for the retention of chartered status in the Stage 2 technical areas of practice.

Continuing Professional Development undertaken in accordance with this policy may be accumulated, where relevant, for credit towards meeting the CPD requirements for retention of chartered titles viz. *CPEng*, *CEngT* and *CEngO*.

2. MEMBERS OBLIGED TO UNDERTAKE CPD

All members wishing to retain Engineering Executive status (*EngExec*) are obliged to achieve a minimum of 150 hours of CPD over a three-year period.

3. CPD REQUIREMENTS

The type of CPD undertaken will depend on current job responsibilities and career plans.

4. CPD ACTIVITIES

A range of activities with a leadership, management or business focus is available for accumulating CPD hours including, but not limited, to:

- 4.1 Formal tertiary studies, including higher degrees and post-graduate study, and individual tertiary course units whether undertaken for award purposes or not.
- 4.2 Short courses, workshops, seminars and discussion groups, conferences, including Engineers Australia meetings.
- 4.3 Private study which extends your knowledge and skills.
- 4.4 Service to the engineering profession.
- 4.5 The preparation and presentation of material for courses, conferences, seminars and symposia.
- 4.6 Mentoring.

5. ASSESSING CPD HOURS

In calculating your CPD, a weighting factor of 1 should be applied for each hour of activity.

6. RECORDING CPD ACTIVITIES

- 6.1 All members are expected to maintain a professional diary of their CPD activities or have these activities recorded in a professional development plan.
- 6.2 An on-line CPD recording facility is available on Engineers Australia's web site (www.engineersaustralia.org.au)

7. COMPLIANCE REQUIREMENTS

- 7.1 Compliance with this CPD policy will be monitored through an 'honour' system based on a signed undertaking being made each year when the annual membership subscription of Engineers Australia is renewed.
- 7.2 Engineers Australia may undertake random audits of your CPD activities from time to time, and an audit may be triggered if you have been found to be in breach of the Code of Ethics.

8. AUDITING OF CPD ACTIVITIES

If you are required to submit to a CPD audit, the following documentation should be supplied.

- 8.1 **A Statement of key work responsibilities in the three years prior to audit.**
- 8.2 **CPD DIARY** identifying the CPD activities you have undertaken in the previous three-year period and/or a copy of your **professional development plan** showing details of those CPD activities which have been achieved against the plan.

Related Documents

- *Policy on Continuing Professional Development applying to Members wishing to retain Chartered Status (Stage 2) – Council of Engineers Australia November 2004*
- *Policy on Career Breaks and Retirement – NERB July 2004*

August 2005

CHECKLIST FOR APPLICANTS FOR ENGEXEC STATUS

The checklist below is intended to provide useful but not exhaustive guidance for your assistance in undertaking your EngExec accreditation. It clarifies and supplements information contained in the Applicants Handbook.

Do:

- Remember the **Engineering Executive Practice Report (EEPR)** is about leadership and management. Therefore the EEPR should be seen as akin to a submission to top management, i.e. you need to identify what is needed, be to the point and be concise. Unsuitable (eg excessively lengthy) applications will be returned.
- Be prepared to put approximately 20 hours effort into your **EEPR**.
- Submit your **EEPR** in the format of the template provided.
- Address each **Element** of the competencies. If you do not meet any of the Elements, say how you would compensate for that.
- Use the **Indicative Defining Activities** as a guide to what is expected to be demonstrated for each **Element**.
- Use more than your current position to support your claim. Competencies may be acquired throughout your career as well as in community or association roles.
- Be specific in the evidence you provide to support your claim. Don't provide a generic response. Your examples should not simply state what you have done, but the outcomes achieved.
- Complete the **Self Assessment Checklist** and submit with your **EEPR** and full **CV**. Note that comments are not normally required except where you consider clarification is necessary.
- Include details of your referees.
- Be prepared to give a 15 minute presentation at the commencement of your **Professional Interview (PI)**. Make sure that your presentation does not exceed 15 minutes. Should you wish to support your presentation with visual aids such as Powerpoint, you will need to give prior notice of this.

Don't:

- Submit an **EEPR** more than 15 pages long.
- Address the **Indicative Defining Activities** individually.
- Use extensive cross-referencing between **Elements**. One or two cross-references is acceptable but each **Element** is different (albeit differences may be subtle) and requires a different response.
- Use jargon or acronyms unless you have defined their meaning.

ENGINEERING EXECUTIVE APPLICANTS HANDBOOK

Revision 1.4 August 2006

Director of Education and Assessment
Engineers Australia, 11 National Circuit BARTON ACT 2600



**ENGINEERS
AUSTRALIA**
Centre for Engineering
Leadership and Management