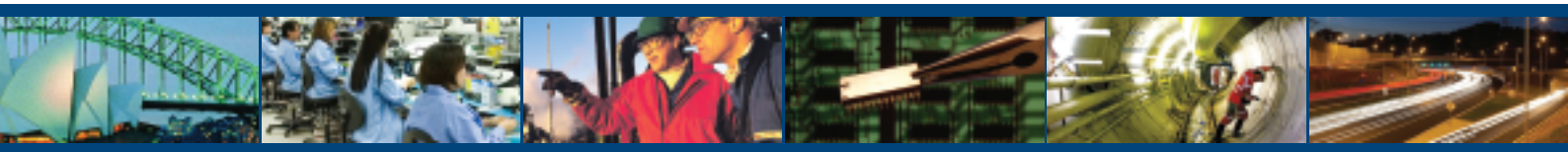
PPIR™

Professional Performance, Innovation and Risk



A New Performance Protocol for Australian Engineering Professionals

The PPIR Project

The Professional Performance, Innovation and Risk Project (PPIR Project) was undertaken under the auspices of The Warren Centre for Advanced Engineering within the University of Sydney (The Warren Centre).

PERFORMANCE: the Third Element of Engineering Professionalism

Engineers have well-defined standards for ethics and for competency. But what's missing is a defined framework for performance, or how an engineer's work is actually carried out and accomplished. So at the heart of the PPIR project is a performance protocol to provide that framework.

The PPIR Protocol defines and recognises performance; that is:

"How does the professional engineer approach, arrange and undertake a new task to ensure delivery of the final agreed outcome"

David Hood, incoming National President of Engineers Australia says:

"There is no doubt that PPIR is filling a gap in the suite of measures that we need to give the community confidence in our engineering work.

Engineering education programs accredited and recognised under Washington Accord protocols, adherence with our Code of Ethics, and competency assessment for being Chartered, in the end, are simply saying that you can now be let loose to carry out engineering work.

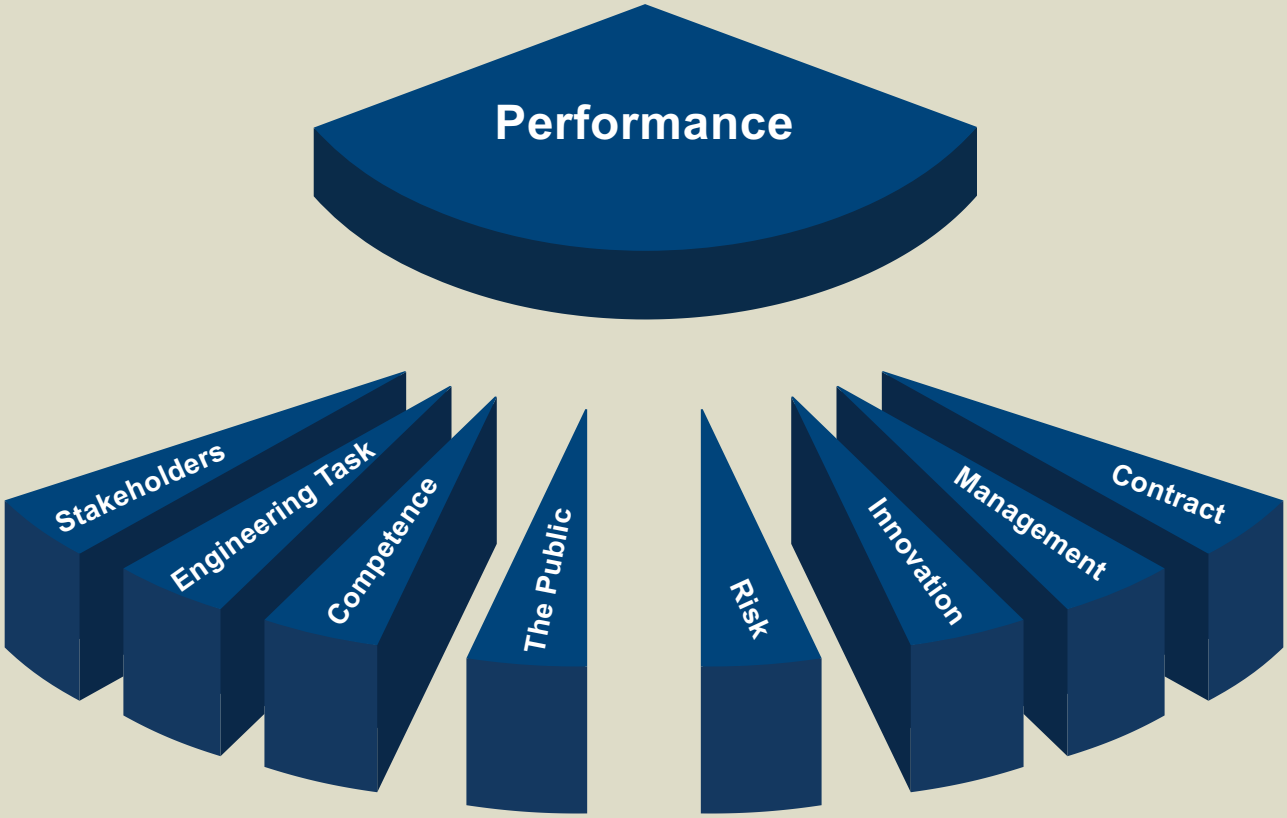
PPIR will set the standards for how you deliver that work; ie. how you will be expected to actually perform, and be accountable "on-the-job".

I applaud The Warren Centre for this excellent project. The profession must now ensure that PPIR is communicated widely, and adopted successfully within our current assessment framework."

networking innovation

THE EIGHT ELEMENTS OF THE PPIR PROTOCOL™

This PPIR Protocol documents the essentials of performance for Professional Engineers acting in a professional capacity. The protocol consists of eight elements:



Relevant Parties and Other Stakeholders

The Professional Engineer should develop a clear understanding of the Relevant Parties to and Other Stakeholders in the Engineering Task and the relationships between them.

The Engineering Task

The Professional Engineer should consult and agree with the Responsible Person the objectives and extent of the Engineering Task.

Competence to Act

The Professional Engineer should assess and apply the competencies and resources appropriate to the Engineering Task.

Statutory Requirements and Public Interest

The Professional Engineer should identify and respond to relevant statutory requirements and public interest issues.

Risk Assessment and Management

The Professional Engineer should develop and operate within a Hazard and Risk Framework appropriate to the Engineering Task.

Engineering Innovation

The Professional Engineer should seek to use engineering innovation to enhance the outcomes of the Engineering Task.

Engineering Task Management

The Professional Engineer should apply appropriate engineering task management protocols and related standards in carrying out and accomplishing the Engineering Task.

Contractual Framework

The Professional Engineer should ensure that any contract or other such evidence of agreement governing or relevant to the Engineering Task is consistent with the provisions of this PPIR Protocol.

Benefits of the PPIR Protocol for the Professional Engineer

The following 2 page brief summarises some of the key benefits to professional engineers from their involvement in the implementation of the PPIR Protocol in the organisation in which they work:

BENEFITS FOR SENIOR PROFESSIONAL ENGINEERS

The best practice template provided by the PPIR Protocol offers significant benefits to the senior professional engineer in setting up and maintaining a fully integrated professional performance environment, in both the engineering and commercial aspects.

The PPIR Protocol guides the senior professional engineer as to what to expect of:

- himself/herself, whether acting as an individual professional or as leader of an engineering team
- professional engineers acting internally as part of that engineering team
- professional engineers acting externally as individual professionals or as engineering team leaders.

The senior professional engineer might express the benefits of the best practice template along these lines:

- *'It helps me understand and respond to the expectations of others and to clarify my responsibilities and the responsibilities of others'*
- *'It gives me a better chance of applying effectively my hard-won professional knowledge and skills to ensure the best outcomes are agreed and achieved'*
- *'It helps my team members understand better what our engineering team should be trying to achieve and to support my team leadership'*
- *'It sets up a much better basis on which to argue for an integrated approach to all the risk issues and for proper management of these risks'*
- *It gives me a basis that is widely-accepted from which to apply my best professional judgement to the issues and the circumstances'*
- *'I have confidence that if my professional judgement is later questioned in a dispute or litigation, my judgment will be assessed using the same approach I used at the time'.*

BENEFITS FOR 'JUNIOR' PROFESSIONAL ENGINEERS

For the 'junior' professional engineer - who is not yet experienced enough to act as an individual professional and so is part of an engineering team - the role of the PPIR Protocol is essentially to guide him/her on what is expected of the engineering team as a whole, and how to play a part in helping the team as a whole meet those expectations.

The junior professional engineer might express the added benefits along these lines:

- *'It helps me to understand a lot more about what is going on and where I fit in'*
- *'It helps me to understand what is expected of me and of our team'*
- *'It gives me more confidence in how to accept responsibility and to act ethically'*
- *'It gives me a really good insight into my future role as a senior professional engineer leading an engineering team'.*

For university undergraduates training to become professional engineers, the PPIR Protocol can be used to introduce them to the practice of the professional engineer and make them much better prepared for this role in the future.

TRAINING OF PROFESSIONAL ENGINEERS IN THE PPIR PROTOCOL

The Warren Centre has now set up a three-year program to implement the project and roll the PPIR Protocol out within the industry and profession. Initial training sessions have been held over the past 2 months. Similar interactive one-day workshops will be rolled out throughout 2011 and 2012, with the aim of expanding PPIR's reach through a train the trainer scheme.

David Spring, from SKM attended the second training session. His comment typifies the positive response from attendees at the sessions *"The training was well done, but more importantly, I now understand the PPIR as an important document in professional engineering development. I'm looking forward to the progression and adoption of this document as it will provide a concrete benchmark with which to assess engineering performance."*

Feedback from engineering employees has indicated strong drivers for its adoption. Chris Turnbull, also from SKM, gave an excellent insight into the program: *"At university, I remember lecturers speaking of how engineers are really problem solvers and that the degree will, while learning technical theory, instil this problem solving quality in students. PPIR defines this quality, breaking down how to provide a complete solution to complex problems."*

PPIR is also seen as providing greater certainty about the expectations of others, as well as a certain protection against being "second-guessed" at a later date. For the lead engineer or supervisor, it provides clear guidelines for the performance of engineers in his or her team. Young engineers, in particular, have welcomed the protocol as a means to improving the professionalism of engineering over coming years.

Join *the discussion at the* PPIR™ LinkedIn *group*

PPIR - A New Performance Protocol for Australian Engineering Professionals
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Established within the Faculty of Engineering in 1983 to mark 100 years of engineering education at The University of Sydney