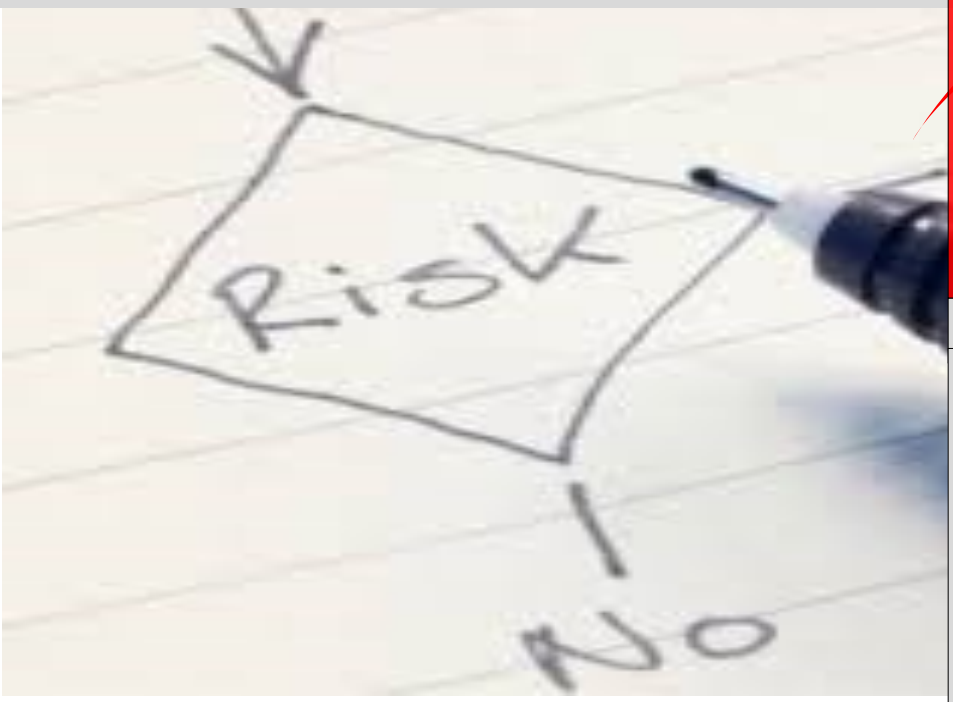
OPPORTUNITY

Risk Engineering News

Quarterly Newsletter

Dec 2017— Volume 2 Edition 4



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RES COMMITTEE

Geoff Hurst (President) - VIC

Brian Truman (Immediate Past President—WA)

David Cox (Treasurer—QLD)

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Ed Lewis (ACT)

Dorothy Saristavros (VIC)

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Risk Engineering Society

President's Update

Hello colleagues in RISK and welcome to our final edition of OPPORTUNITY vol. 2 for 2017. Thank you to all those who have contributed to the Newsletter and also those that are still working on items for future newsletters. We are still missing contribution from some states so please don't hold back on contributing.

Last month the **REBOK Project Committee** had its inaugural meeting and the project is set to involve members from the First quarter 2018. The team comprises: Peter Flannigan, Marcus Punch, Praneet Mehra, Jim Whiting, & David Skegg. We still need a coordinator if you are interested. The intention is to host and capture our Chapter CPD events as recorded Webinars. This makes 16 events available to all members.

Networking is still available in the home chapter venue and encouraged for 4 of the 16 events.

Each RES Chapter is very active with CPD programs and we are now well into planning for 2018.

The RISK 2018 Sydney conference planning team is working hard on firming up management arrangements for this conference. Details will be announced in the first quarter 2018. AusEngCon 2018 is also being held in Sydney - September 17 - 19.

We look forward to continuing to receive news of interest from our wider membership for publication in future quarterly editions of OPPORTUNITY. Also please visit or post discussions on the RES LinkedIn Group.

If you are not connected to the RES Group here is the link to the discussion…

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QUARTERLY NEWSLETTER

The Risk Engineering Society is a Technical Society of Engineers Australia.

For Engineers Australia members, please remember to nominate your membership of RES when you renew your membership. NB: Non EA members can also join RES.

Risk Engineering Society

ENGINEERS AUSTRALIA

Continued from page 1...President's Report

page: http://www.linkedin.com/groups/3751665.

I would like to wish each and every one of you (and your families) a very happy festive season and look forward to a happy new year.

Regards

Geoff Hurst **(President)**

News from Standards Australia

Technical Governance Review | Summary of submissions released

Following the completion of the first phase of work on a review of Standards Australia's technical governance, a summary of submissions has been released and feedback is sought on whether key issues have been appropriately captured.

This follows Cameron Ralph Khoury being appointed as independent consultants to assist in a review of Standards Australia's technical governance in August 2017 and the release of an Issues Paper calling for submissions.

Interviews were conducted with a range of stakeholders from industry associations, government, professional associations, private businesses and community interests. Consultations were also conducted with Standards Australia staff.

Stakeholders are asked to review the summary document to ensure key areas of focus have been captured. Non-confidential submissions will be uploaded over the coming days.

Any comments on the summary should be provided directly to Cameron Ralph Khoury by

21 December 2017.

A recommendations report is expected to be provided to Standards Australia in by March 2018.

Your RES Chapters in Review

New South Wales

A good and busy year for us!

- Feb: ***Quantitative Risk Analysis*** success factors by Dave McKay (InfraSol)
- Jun: ***HSiD*** by David Heins (Roads and Maritime Services)
- Aug: ***Lessons Learned in facilitation of successful Project Risk Assessment Assignments,*** by Peter Flanagan (Capital Insight), Mark Neasbey (ACVM) and Pedram Danesh-Mand (Aquenta/Jacobs)
- Sept: Meeting with the Department of Infrastructure and Regional Development (DIRD) regarding RES' response to DIRD Cost Contingency Guide Note 3A
- Sept: 1st ***Project Controls Conference 2017*** (jointly with ACES), attended by +250 people—see our wrap out article in this issue
- Nov: (Webex presentation between Sydney and London) ***Lessons learned of Australia and UK project risk management in major projects***, by Gareth Byatt (Independent), Darren Mullan (Turner & Townsend) and Pedram Danesh-Mand (Aquenta/Jacobs)

Western Australia

Five technical presentations during the year and 10 committee meetings for WA.

- Mar: ***Use of Risk Based Techniques in Infrastructure Investment Decisions*** by Douglas Thomson, Network Planning Manager, Western Power. The presentation covered the challenges and opportunities that are involved with using risk based techniques for infrastructure investment decisions. The presentation was organised by Committee Member Raj Sreenevasan.
- May: ***Operational Technology Security - Current State, Threats and the Future of Cybersecurity*** by Tom Jreige, Principal Adviser, Hivint. The presentation provided a generalist view around the cyber security state of these systems and environments with applicability to all industries, sectors and vendor technologies. The presentation was organised by Committee Member Kevin Foster.
- Sept: ***Organisational Resilience - How Organisations Can Prepare to Survive Crises*** by Phil Hanson, Practice Leader, Emergency Management, Critchlow Ltd. This presentation discussed some examples of recent emergencies, the impacts and how organisations can prepare to survive a crisis. The presentation was organised by Committee Member Daniela Tutman.
- Oct: ***Fundamentals of Project Quantitative Cost and Schedule Risk Analysis (QRA)*** by Pedram Danesh-Mand, Director of Risk Management (Aquenta) and NSW President of the Risk Engineering Society. This presentation outlined an explanation of the QRA basics, the recommended approach to achieving effective QRA outcomes and common tools and techniques. This was a joint Risk Engineering Society and Australian Cost Engineering Society event and was organised by Committee Member Michael Dean on behalf of RES.
- Dec: ***How to Reduce the Risk of Injury*** by Dr Andrew Short. Andrew investigates the circumstances of injuries in public areas, playgrounds, workplaces, shafts and tunnels for lifts and mines, and in vehicle crashes including cars, trucks, ATVs, cyclists and pedestrians. The presentation was organised by Committee Member and National Deputy President Brian Truman.

Your RES Chapters in Review

Australian Capital Territory

- May: (Canberra) ***RES Contingency Guideline*** by Pedram Danesh-Mand (Aquenta/Jacobs)

Victoria

We organized 2 and cohosted 5 events this year!:

- Feb: ***Climate and Energy Dilemma:*** *Fossil Fuels and the Transition to Renewables, plus Existential Risk*. Lead host: SENG.
- Feb: ***Deep-water Horizon Revisited:*** *Investigative Insights.* Cheryl Mackenzie, Investigator at the United States Chemical Safety and Hazard Investigation Board (CSB) and Peter Wilkinson, General Manager, Risk – Noetic Group. Lead Host: Chemical and Biomedical Engineering Foundation - University of Sydney; with Cohost: SIA.
- Mar: ***Unconscious Bias Training*** by Dr. Mark Toner. Lead Host: WIE; with Cohost: YEAV
- Apr: ***Risk and Tunnels*** by Arnold Dix Principal ALARP Group and Gavin Halling Director Risk Tools. Lead Host: ATS
- Aug: ***THE FUTURE – What are the Hazards and Benefits of New Developments?*** Evening Symposium of 6 presentations. Lead Host: RACI HS&E Group.
- Oct: ***Insurance For Engineering Managers*** Willis Towers Watson's Construction Practice, and Loss Adjustor Crawford GTS.
- Dec: *General Meeting followed by Presentation & dinner:* ***Western Risk Engineering:*** *Just 7 Mathematical Procrustean sins? or Who said predicting the future was easy?",* Arnold Dix Principal ALARP Group.

Queensland

Also a busy year for Queensland.

- Mar: ***Managing the Risks of Globalisation*** - the role of robust standards in ensuring safe construction products (with Materials Australia) presented by Arun Syam (Business Development Manager for OneSteel)
- May: ***Practical Applications of Quantitative Risk Assessment*** presented by Dr Garry Marling (Principal of Marling Group) and Torrens Stephane (DNVGL)
- June: ***Development of Risk Assessments*** (Joint event with Joint Chemical Engineering Committee, QLD) presented by Maureen Hassall (Associate Professor at UQ and Director of UQ R!SK)
- Aug: ***Introduction to Cyber Security*** presented by Dr Garry Marling (Principal of Marling Group), Lee Warrener (IT specialist with Marling Group) and Kourosj Parsa (Functional Security and Systems Safety Specialist with Marling Group)
- Aug: ***False Assurance***: - Why do safety activities do more to make us feel safe then be safe. (Joint event with Joint Chemical Engineering Committee, QLD) presented by Dr Drew Rae.

Upcoming Events 2018

RESERVE THESE DATES IN YOUR CALENDAR!

* **20 Feb—RES QLD**: Safety Cases—still of value in Safety Risk Management? (This event will be proceeded by the Annual Meeting)
* **17-19 Sept**—Australian Engineering Conference—Sydney

Project Controls Conference 2017 Wrap Up Report

(by Pedram Danesh-Mand)

The 2017 Project Controls Conference (jointly held by Risk Engineering Society (RES) and Australian Cost Engineering Society (ACES), 20-22 September at Sydney International Convention Centre) included 6 workshops, 15 keynote speakers, 24 technical presentations and a number of interactive panel discussions through 3 streams of 'People', 'Process' and 'Technology'. The event was well attended by more than 250 people both locally and internationally.

Most of talks were workshops, case studies or practical presentations focused on different aspects of effective and efficient risk-based project controls development and implementation across a wide range of projects and sectors.

Across Australia and Asia, the engineering profession is in the middle of an explosion in infrastructure spending with a circa $70 billion spend planned over the next 5 to 10 years just in Australia. With this surge in investment as well as challenging disruptors e.g. new technologies, alongside significant opportunities, comes the well-known risk of cost and time overruns.

In our view the conference could successfully share and highlight the importance of Project Controls profession as a central part of the solution, encompassing all the competencies for control of cost and time, estimating, budgeting, planning, scheduling, trend analysis, risk management, change control, forecasting and effective and transparent communication within PMO environment.

The Project Controls 2017 Conference was not just talks and workshops. We also had a social get together event on Wed afternoon as well as a gala dinner on Thu evening including an interesting trivia with lots of prizes and laughs.

With a number of announcements including RISK 2018 Conference in Sydney, Australian Engineering Conference Sep 2018 in Sydney, and possible 2nd Project Controls 2019, the conference was successfully concluded on Fri 22/Sep/2017 after more than 30 sessions of planning!

A big thank you note from both RES and ACES committees to our members, all attendees, government agencies, speakers, EA officers, venue managers and everyone who helped us to have such a great time together. Special thank you note to all our sponsors too – list below.

Well done everyone and see you at RISK 2018 Conference. Meanwhile risk wisely for opportunities!

If you want to know more about what RES does or you would like to join us and support your profession, please contact us on: *res@engineersaustralia.org.au*

Question & Answer Segment

Do you have a question that you would like answered?

Please email us at res@engineersaustralia.org.au

Question:

How can an organisation's risk appetite be linked to its risk matrix?

Answer:

One of the most common challenges for many organisations is how to articulate, integrate and communicate their risk appetite into risk management processes and procedures across the organisation. Regulators may also require the board to set a Risk Appetite Statement.

So, for an efficient approach my recommendation is usually to take a 3-step approach for understanding, setting and integrating your Risk Appetite.

Step 1: Defining the definitions
Step 2: Setting rules for expressing Risk Appetite
Step 3: Linking to the Escalation Table for reporting purposes

Step 1: Clearly define Risk Appetite, Risk Tolerance and Risk Capacity for your organisation.

Step 2: Risk Appetite and Tolerance can be described using multiple qualitative and quantitative methods and different calculations including list below:

- Setting a broken line on a probability and impact grid, i.e. Risk Matrix
- Using a qualitative approach with categories such as high, moderate or low
- Zero Tolerance
- Using a quantitative approach such as value at risk (with metrics like economic value at risk), P&L measures, etc.
- Some organisations approach risk statements with overall organisational statements.

Depending on your organisation's specific requirements and the environment it operates (e.g. amount of interfaces with stakeholders e.g. transport government agencies), my general recommendation is to use specific risk appetite and tolerance boundaries based on certain categories of risk.

Step 3: The graph over the page represents this step.

The key benefits of this approach are:

- Consistent approach to definition, tolerance, culture and risk attitude supporting an easier continuous improvement planning
- Linking Risk Appetite to Escalation Table for effective decision making
- Less ambiguity of definition of Risk Appetite and its boundaries for each risk category
- Less filtered data for effective decision making by using Risk Appetite for filtering risks rather than Risk Score

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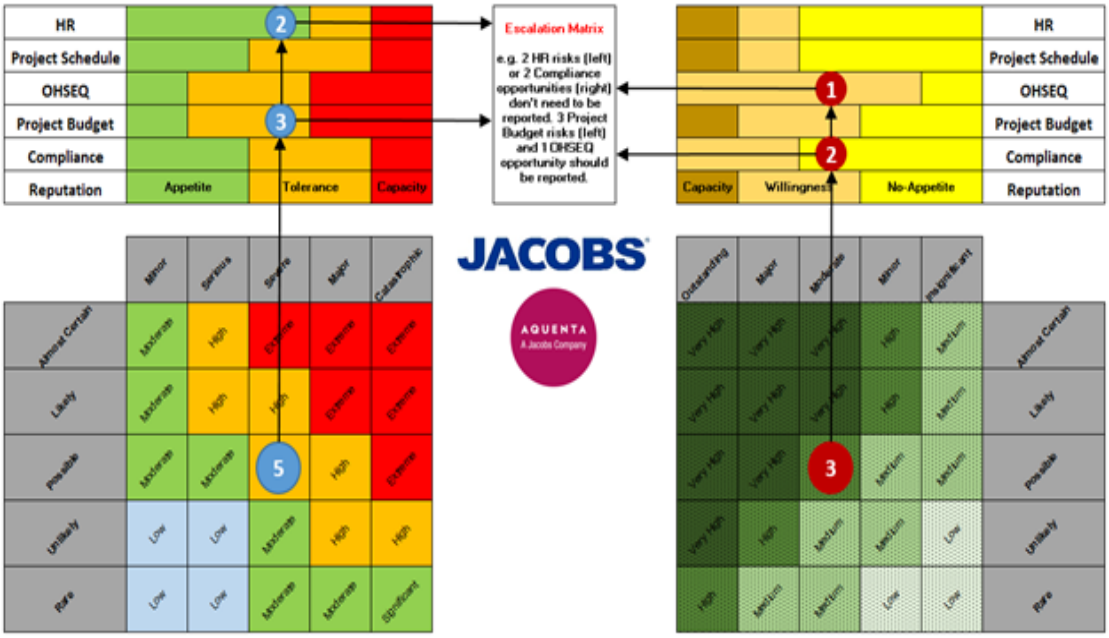
- Similar approach for identification and management of opportunities
- Improving risk culture by using quantitative definitions which help people to better understand risk appetites and tolerance
- Supporting people to better understand the balance between risks and rewards



- Supporting people to better and easier communicate and enforce the application of risk appetite and tolerance
- More opportunities to combine the organisation's already established key performance indicators with the appetite and tolerance levels

If multiple Risk Appetite criteria is required between different Business Units in a large organisation, this method allows Units to set their own thresholds based on an organisation-wide tolerance statement

In my experience, this method might be also a good approach for those organisations which have to achieve their objectives within an environment with multiple external complex interfaces, e.g. key government transport agencies.

Obviously every organisation is different both internally and externally, so after all, there is no one and best solution for all. Each organisation should take its own journey not only in developing and implementing its risk management processes but also to put practical, effective and efficient continuous improvement plans including regular maturity assessment audits in place.

For a full copy of this article, please refer to: https://www.linkedin.com/pulse/has-your-organisations-risk-appetite-linked-matrix-pedram-danesh-mand/

ATTEND & GAIN CPD HOURS
ENGINEERS AUSTRALIA

Interested in contributing to future editions of OPPORTUNITY—Risk Engineering News?

Please submit your article via email to:

res@engineersaustralia.org.au

CUT OFF FOR NEXT EDITION:

17 FEBRUARY 2018

Risk Engineering Society
Email: res@engineersaustralia.org.au
Website: https://www.engineersaustralia.org.au/risk-engineering-society