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COMPLEX PROJECT  
MANAGEMENT

# International Centre for Complex Project Management

Management of Projects in Complex  
Environments

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# Presentation Outline

- The Complex Project Management (CPM) Initiative and ICCPM
- International Concepts and Trends - ICCPM's Executive Roundtables and Reports:
  - First Executive Roundtable and Report (2009) “The Conspiracy of Optimism – Why Mega Projects Fail”
  - 2010/11 International Task Force and Report – “CPM – Global Perspectives and the Strategic Agenda to 2025” (Report launched in the Asia Pacific, Americas and Europe)
  - 2012/13 Executive Roundtable and Report – “Complexity in a Time of Global Financial Change – Program Management in the New Economy” (Report “Hitting a Moving Target”, launched in London October 2013)
- ICCPM research
- Education, Tools and EBooks
- Questions?
- Gower Book Draw

## A Global Response

Australian, UK and US Governments and Defence Industry have supported an initiative to improve the international community's capability to deliver very complex projects across all industry sectors

### Three strands:

Competency Standard for use as a framework for assessment and development of complex project managers

Executive Masters and Continuing Professional Development in Complex Project Management



Formation of the International Centre for Complex Project Management (independent international not-for-profit peak body for CPM)



## *Key Objectives:*

- International Engagement and Dialogue
  - Develop and sustain effective collaborations
  - Develop and disseminate practical knowledge and solutions
- Research
  - International CMP Research Development and Dissemination (KD2)
- Professional Services
  - Education Services
  - CPM Tools and Methodologies
  - CPM Advisory Services

# ICCPM - Partners & Supporters

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## *“The Conspiracy of Optimism – Why Mega Projects Fail”*

- Unaccommodated or unaligned stakeholder view of success
- Tension between product success and project success (product vs outcome)
- Political and public relations pressure militating against doing the right thing
- Lack of understanding or acknowledgement of non-technical risk
- Use of competition as a weapon
- Institutionalised procurement practices
- Few project managers are equipped as project delivery leaders
- Lack of opportunity for engagement between government and industry
- Future capability (projects) are predicated on attaining rational estimates
- Current tools and decision processes unsuitable for analysing uncertainty
- Inevitability of scope creep (cost & schedule) especially if contract too early

*(ICCPM Executive Roundtable Series 2009)*

*(Full Report available to Members at [www.iccpm.com](http://www.iccpm.com))*

## ***“CPM Taskforce Report – Global Perspectives and the Strategic Agenda to 2025”***

ICCPM and GAP sponsored a Global CPM Taskforce which commissioned the report titled ***Global Perspectives and the Strategic Agenda to 2025***, released in 2011



**9 Policy recommendations – CPM Strategy**

**60 Action recommendations – Implement now**

**Establish global research centre and APN support services**

*(ICCPM International Taskforce 2010/11)*

*(Full Taskforce Report available to members at [www.iccpm.com](http://www.iccpm.com))*

## ***“Hitting a Moving Target – Complex Project and Program Delivery in an Uncertain World”***

A Need for New Solutions:

- **Learn from complexity and chaos sciences**
- Need foresight and distributed leadership capacity
- **New tools needed to deal with/simplify complexity**
- **Faster approaches to research/knowledge creation**
- Participatory research to develop more robust models of complex systems
- Need for Technical AND Political Leadership to deal with paradox, cross-boundary issues
- Many old methods valuable; married to new methods

Recommendations:

- **See projects as whole systems**
- Be constantly and immediately aware of the dynamics of Internal and External issues/changes
- Provide leadership to/work with the broader political community
- Acknowledge and work with multiple (often competing) interests
- Prepare for the unexpected – anticipatory awareness
- Be flexible enough to respond, and, if necessary, change direction without fear or apology

*(ICCPM Executive Roundtable Series 2012/13)*

*(Full Report available to Members at [www.iccpm.com](http://www.iccpm.com))*

## The International CPM Knowledge Development and Dissemination Centre (KD2)

- Developed an international interconnected research community and Advisory Group
- Updated CPM Competency Standard
- International projects in Europe - Complexity Assessment Tool and Benefits Realisation
- CSIRO, UTS & QUT collaboration to establish a CPM Management Digital Library (May 2013)
- >\$2.5m invested with Australian Universities, Government and Industry to bid for a Cooperative Research Centre (CRC) in 2014 – If successful, A\$70m+ over 7 years from 2015



- Many International participants in CRC including DAU, NASA, and UK Government

# Cooperative Research Centre

- ICCPM, five Australian universities and CSIRO are preparing to submit an application to the Australian Government for a Cooperative Research Centre for Managing Complex Projects and Programs (CRC-MCPP) in 2015.
- The CRC-MCPP is a proposed \$70M, **end-user led** research collaboration bringing together key sectors of the Australian economy such as defence, aerospace, resources, energy, infrastructure and the public sector.
- The CRC-MCPP extends traditional/classical project and program management practice and service delivery through interdisciplinary systems approaches to applied research and problem solving.
- The CRC-MCPP will provide Australia with an unprecedented opportunity to realise real efficiencies against a project pipeline of \$944Bn. A 10% improvement in the performance of delivered construction projects could lead to an increase in Gross Domestic Product by 2.5%.
- The CRC-MCPP proposes five research programs: People and Culture, Project Strategy and Life Cycle, and Information, Decisions, Risks and Opportunities.



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# Research Program I: People



- Integration and alignment of **teams of teams** performance
- **Leading and managing** complex projects and programs



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# Research Program II: Project Strategy and Lifecycle

- Project scoping and critical assumption testing
- Benefits realisation, accountability and innovation
- Complex contracting and procurement
- Contextualised and tailored knowledge capture, access and dissemination



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# Research Program III: Information, Decision, Risks and Opportunities



- Contextualised and tailored knowledge capture, access and dissemination
- Optimising governance, decision making and risk management for customers and suppliers



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*Working together to advance teaching and research in Complex Program Leadership:*

– **Queensland University of Technology - Australia**

- Programs since 2008

– **University of Ottawa – North America**

- Planning to offer the QUT program from early 2015

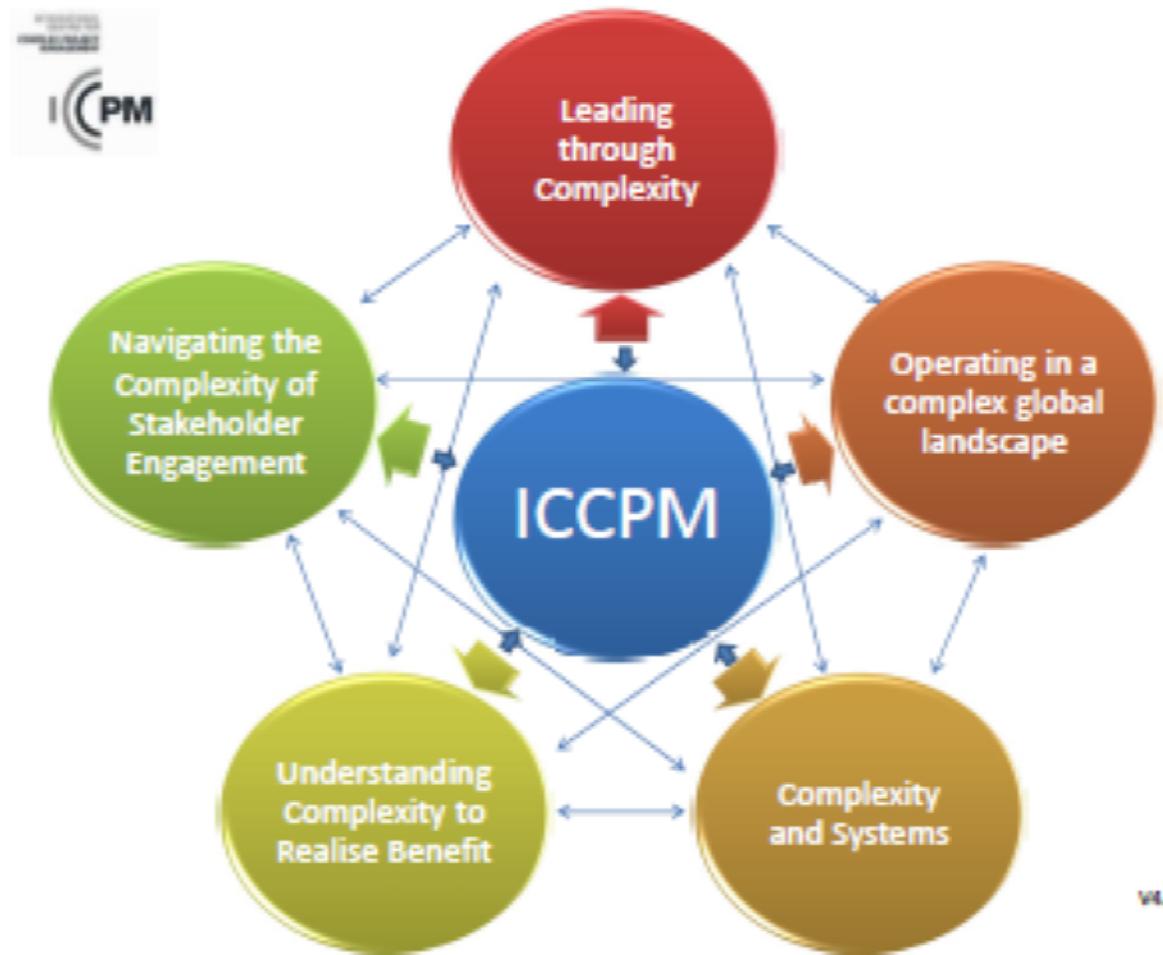
– **Pan African Business School – Africa and Indian Ocean Rim**

- Contextualising the QUT program for a Complex Project and Program Delivery Capacity Building investment for all of Africa

# Findings on Leadership Investment

- Top management leadership support is crucial to project success
- Complex project management competency can be learned but to maximise usefulness to the organisation, this talent needs to be managed effectively
- Apart from technical skills, the key competencies needed by managers of complex projects were emotional intelligence, cognitive flexibility, ability to trust team members, systems and systemic thinking and the ability to reflect on their practice
- These competencies assisted the development of high quality relationships with internal and external stakeholders, increased staff job satisfaction and enhanced project success
- The EMCPM/SP students significantly improved their competencies through their QUT Masters training program
- The transfer climate within the employer organisation plays a critical role in determining whether education and training outputs for individual performance and organisational results are maximised
- Culture change may be needed to gain maximum value from training initiatives

**ICCPM Education:** (Note more through ICCPM Associate Partner Network including QUT Systems Thinking)

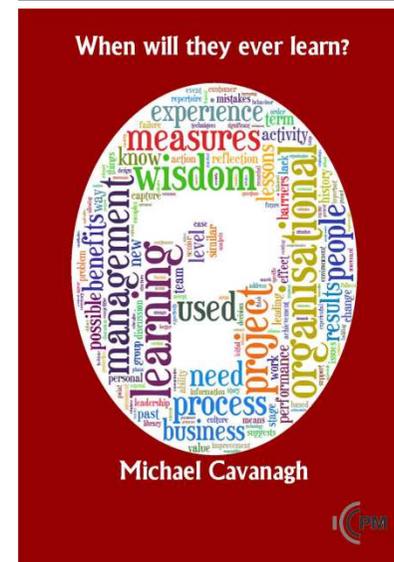
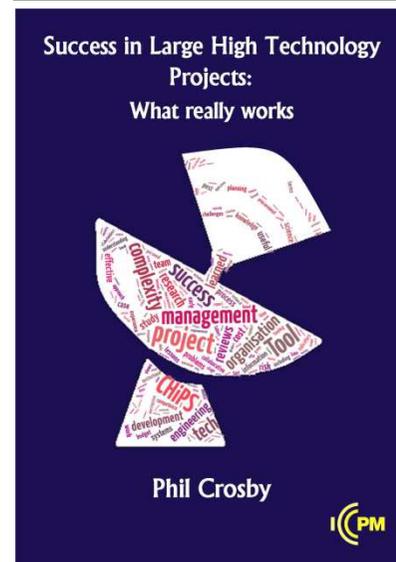
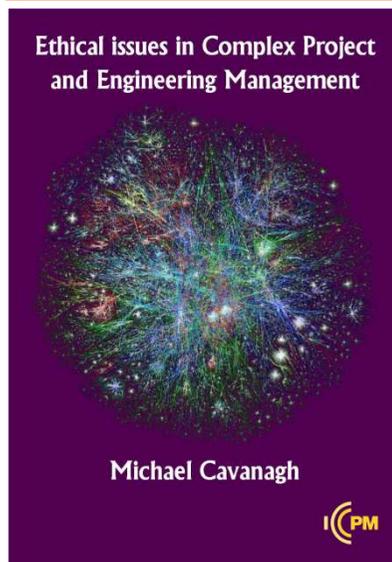
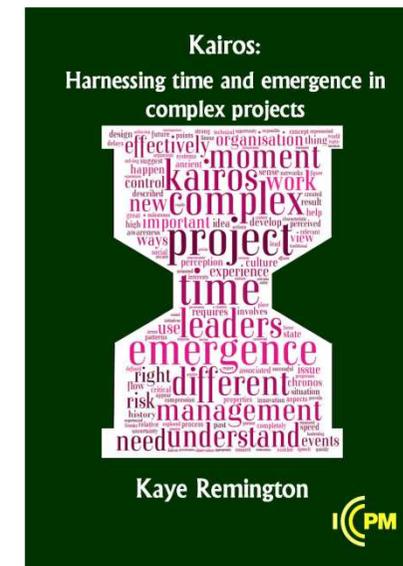
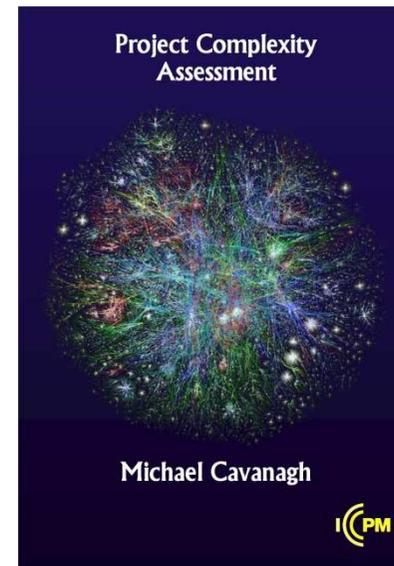
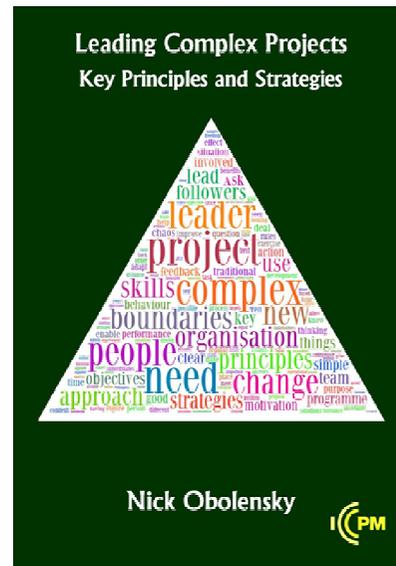
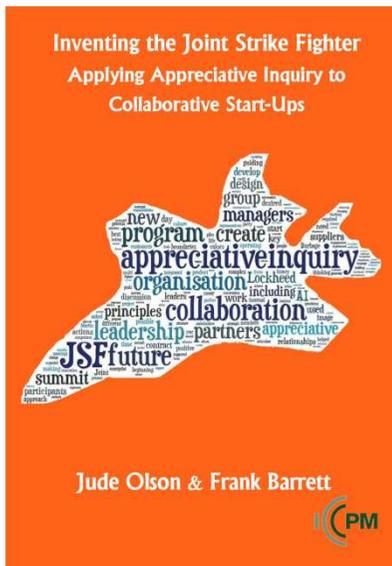


# E Books, Tools and Education

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**E Book Series:** (Complete e-book series listed at [www.iccpm.com](http://www.iccpm.com) and available through Amazon)



ICCPM's growing list of eBooks are centred around Complex Project Management tools and methodologies. These eBooks are written by leaders in their field and are meant to be a short and informative read for busy executives

# E Books, Tools and Education

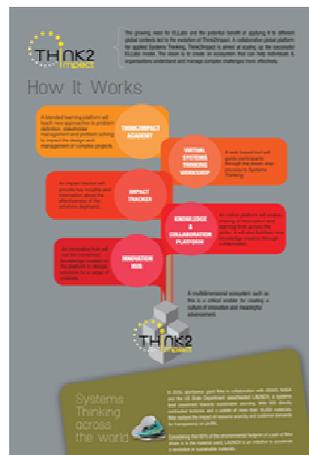
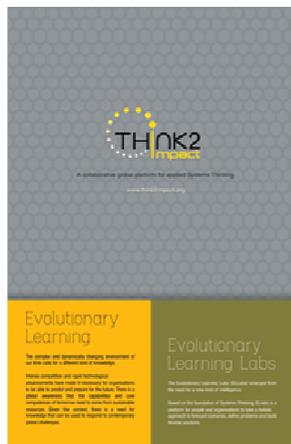
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## New Tools:

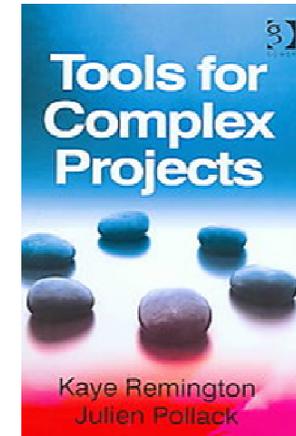
### Think2Impact

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### Tools for Complex Projects

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### Polaris™ by Booz Allen Hamilton

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The Polaris software capabilities overview consists of four panels, each with a chart and a list of features:

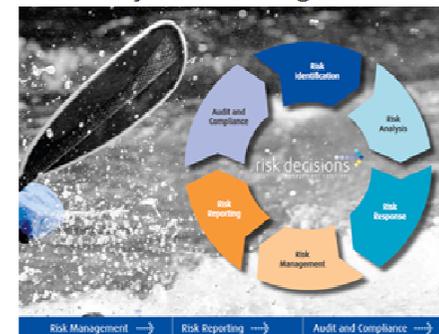
- Schedule Risk Analysis:** Includes schedule health check and schedule risk analysis features with industry leading run-times. Polaris calculates the probabilistic critical path, providing insight into potential program choke points.
- Integrated Cost & Schedule Risk Analysis:** Polaris integrates schedules, cost estimates and risk registers into a single analysis. Polaris quantifies the relationship between cost and schedule revealing the cost impacts of schedule growth and vice versa.
- Analytical Program Management:** Polaris performs real-time scope and requirements trade-off analysis allowing managers to design an architecture that fits into a constrained budget. Polaris identifies least sources of cost and schedule risk.
- Portfolio Optimization:** Polaris looks across a portfolio of programs and allows real-time capability/program trade-off analysis enabling decision makers to quickly optimize their portfolio to provide maximum capability within a constrained budget.

### Risk Decisions – Predict! 4

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### Enterprise and Project Risk Management Software



- London 2013: 8-10 October 2013, hosted by the UK Cabinet Office

“Preparing for the Unexpected: Flexibility and Resilience in Project Design and Delivery”

- A400M Aircraft Project – Rolls Royce
- UK High Speed 1 Javelin Trains – Hitachi Rail Europe
- A350 Aircraft Project – EADS (Airbus)
- UK NHS IT

*(complete video series and presentations available to Members at [www.iccpm.com](http://www.iccpm.com))*

- Paris 2014: 7-8 October 2014, hosted by IHEDN at Ecole Militaire

“Delivering Once in a Generation Transformational Capital and Non-Capital Intensive Programmes”

- A400M Aircraft panel including OCCAR, Airbus, French Audit Office
- Rail Sector panel
- Galileo Satellite Program – European Commission and European Space Agency
- And many more!



[www.iccpm.com](http://www.iccpm.com)