

Insanity is Doing the Same Thing and Expecting a Different Outcome – Supporting the Success of Modern Projects



Dr Naomi Mathers

Director, Industry Liaison and Member Services

International Centre for Complex Project Management

The importance of diversity in complex projects

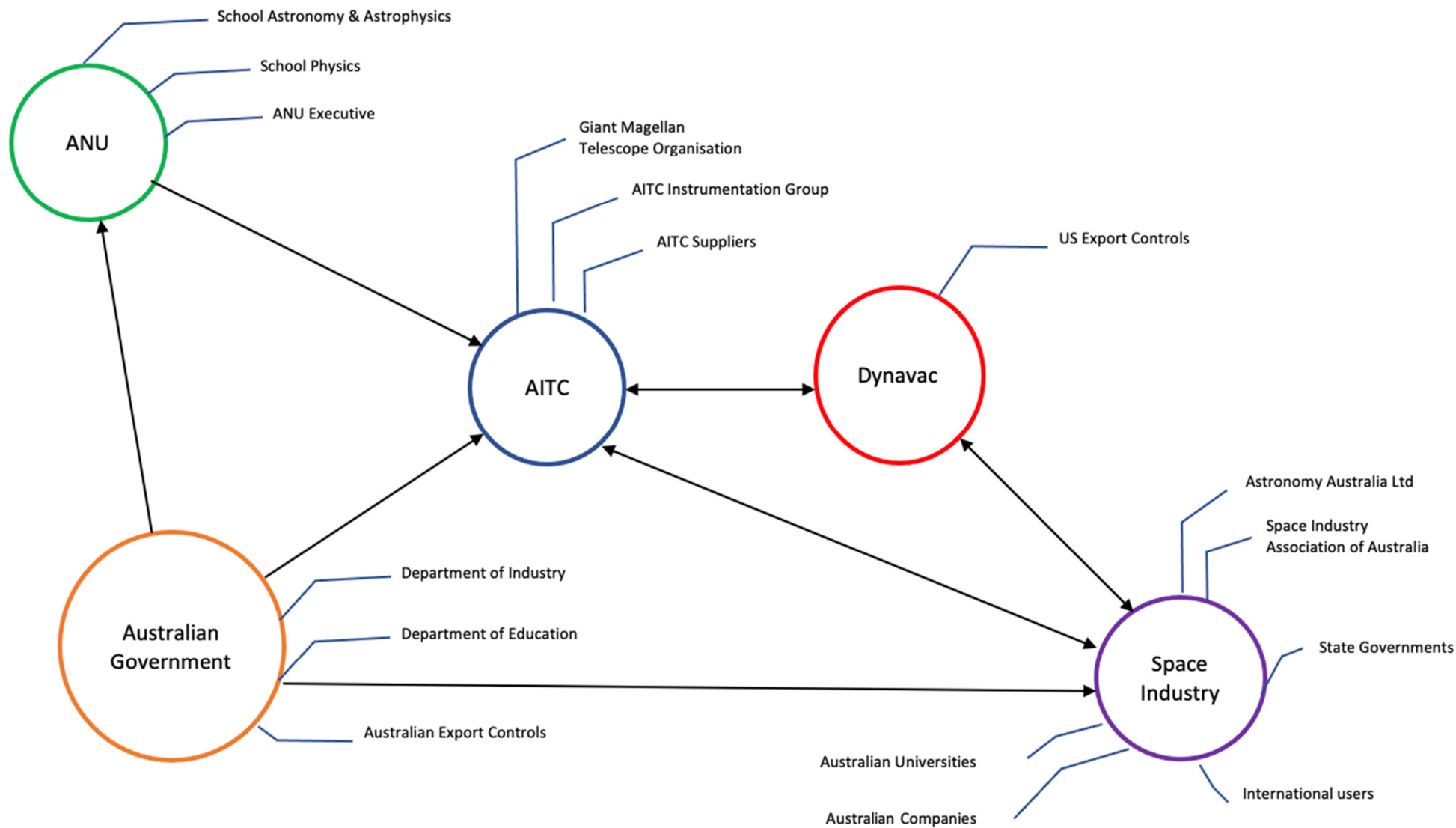


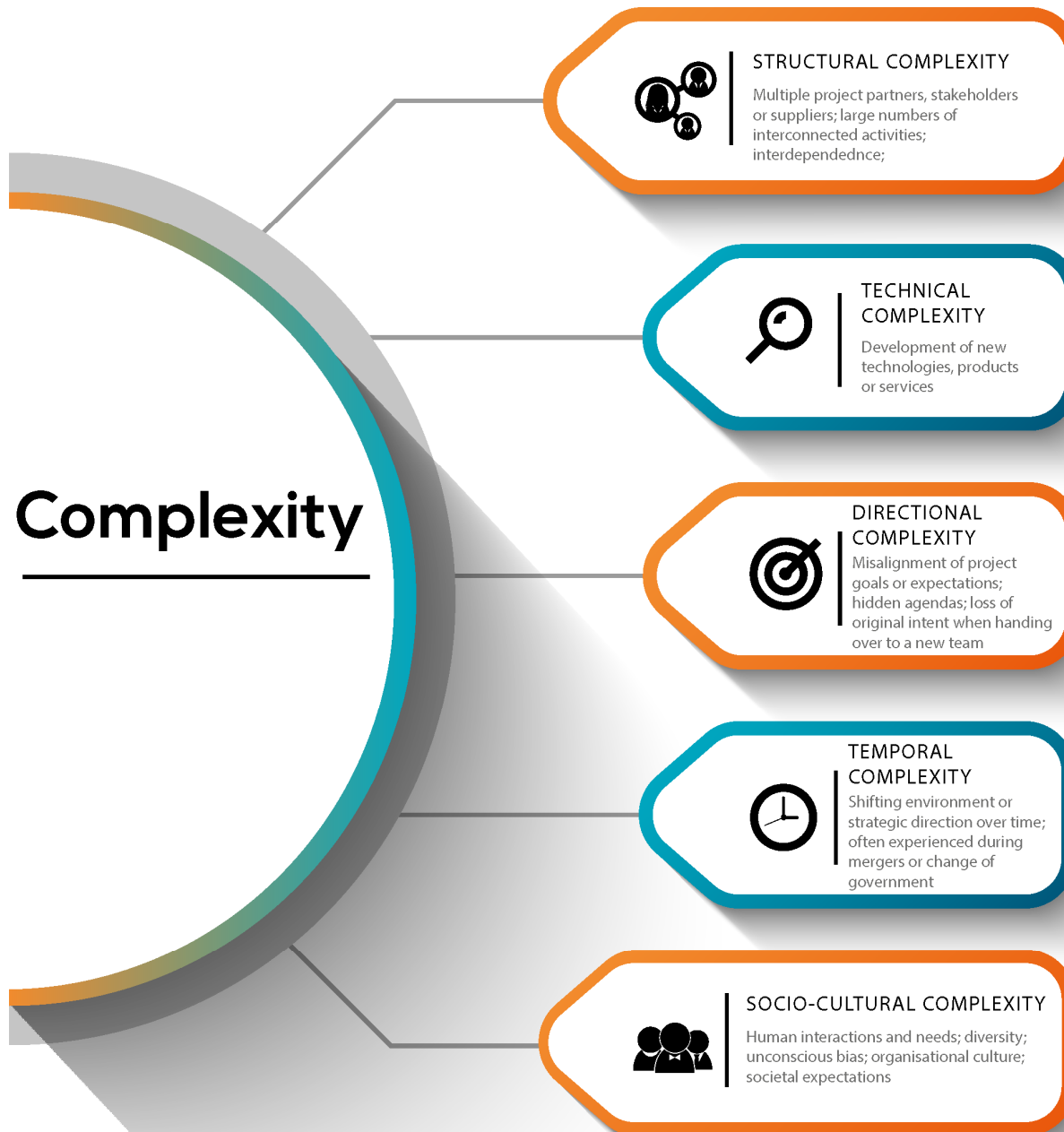




Space Simulation Facility (Wombat)

- Funded by the Government as part of the Super Science Initiative
- Commitment to translate astronomy research into industry impact
- Advanced Instrumentation and Technology Centre (AITC)
ANU owned and managed facility
- Requirement to be financially self sustaining
- Space Simulation Facility - First of its kind facility in Australia
- Re-configurable to support satellite and thruster testing (world first)
- National facility to support all universities, government and industry







How was success measured?

- We had a working facility
- It was operational within an acceptable time
- Cost overrun was minimal
- Political ribbon cutting event
- Almost as much money spent on the procurement process and reporting as there was on the facility
- Improved relationship between academics and commercial operations staff
- Space and Spatial Industry Innovation Precinct
- Positive impact on space industry
- The definition of success is different for different stakeholders

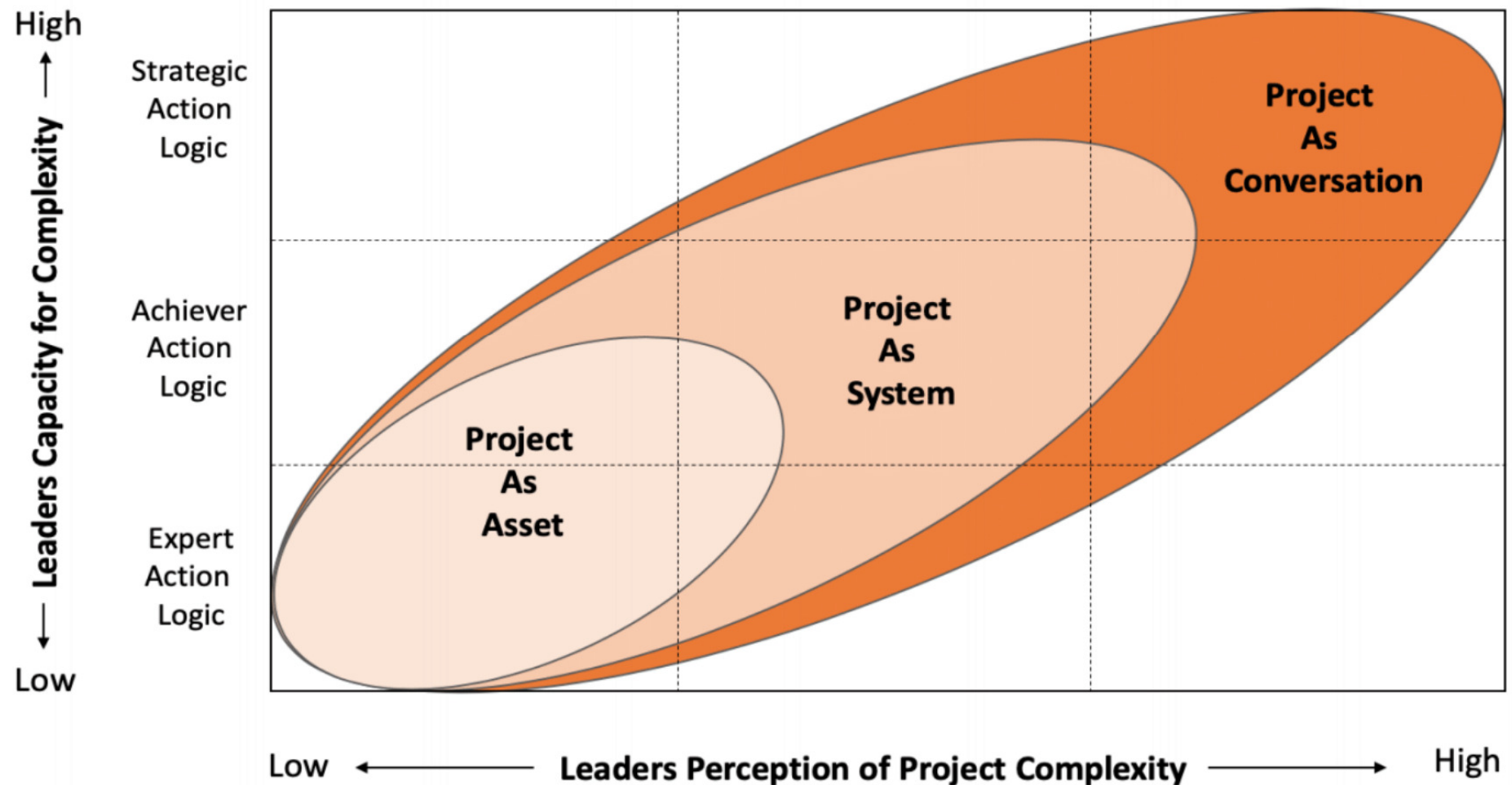


What did I learn?



Insights from the 2018 ICCPM International Roundtable Series

Figure 1 Paradigms for Leading Complex Projects





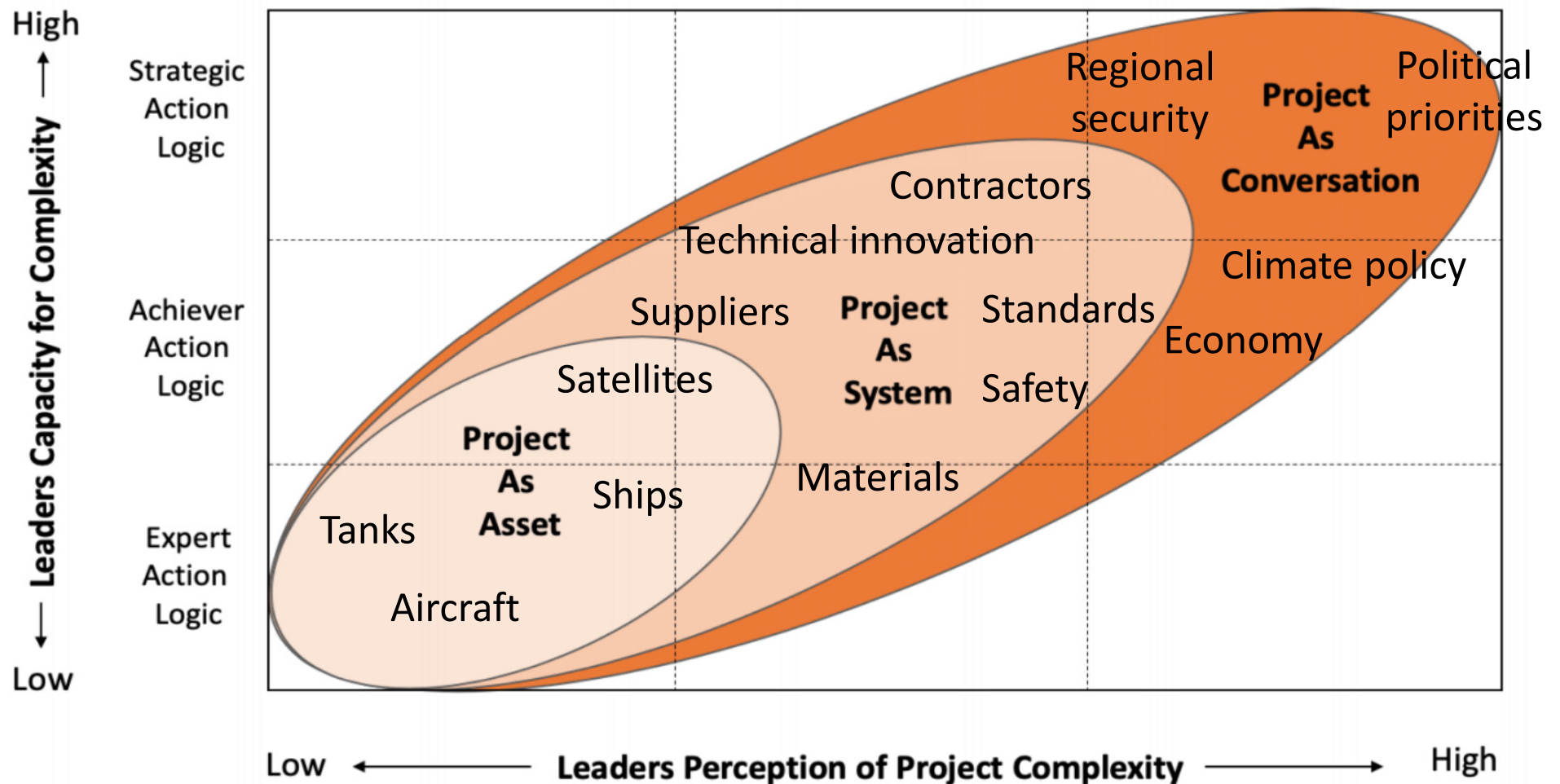
What is the modern project environment?

- UN Sustainability Goals
- Climate change adaptation
- Australian Industry Content
- Workforce development
- Indigenous procurement
- Modern Slavery Act
- Rapid technical innovation
- Regional security
- Supply chain disruption
- Changing financial models
- Transition to circular economy
- Social media
- Pandemic and other global health impacts



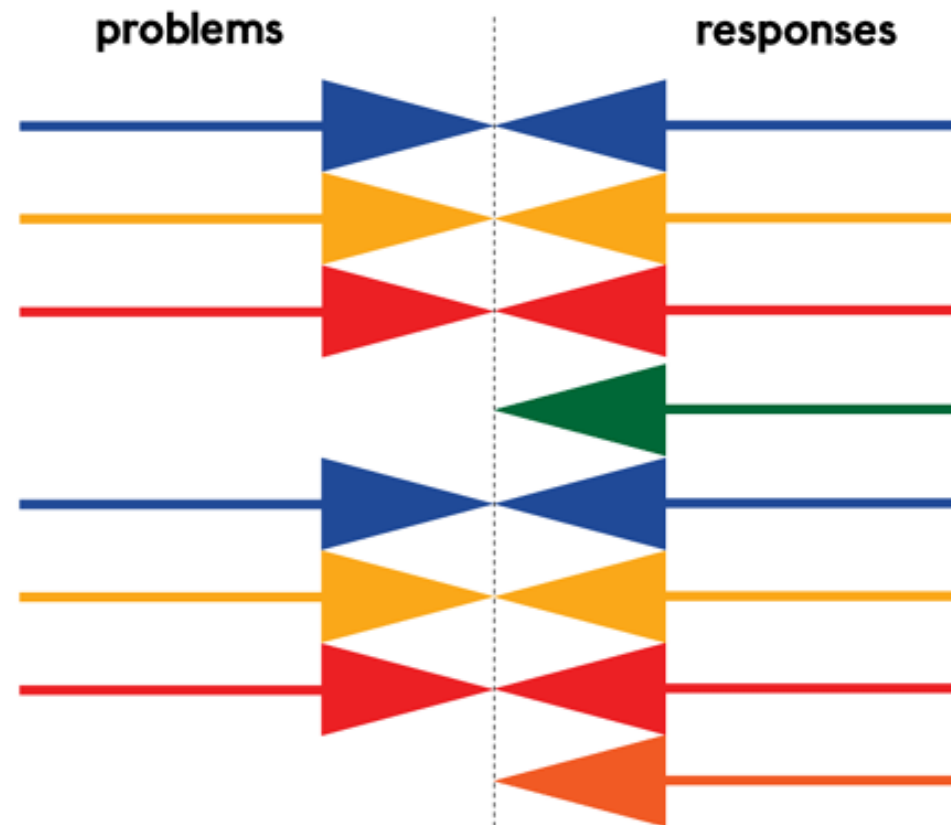
Insights from the 2018 ICCPM International Roundtable Series

Figure 1 Paradigms for Leading Complex Projects



What does this mean for
project management and
project controls?

Requisite variety



requisite variety: (at least) the right variety in responses to deal with variety of the problems



INDUSTRY 1.0

Mechanization,
water power, steam
power

1784

**Years are estimates*



INDUSTRY 1.0

Mechanization,
water power, steam
power

1784

**Years are estimates*

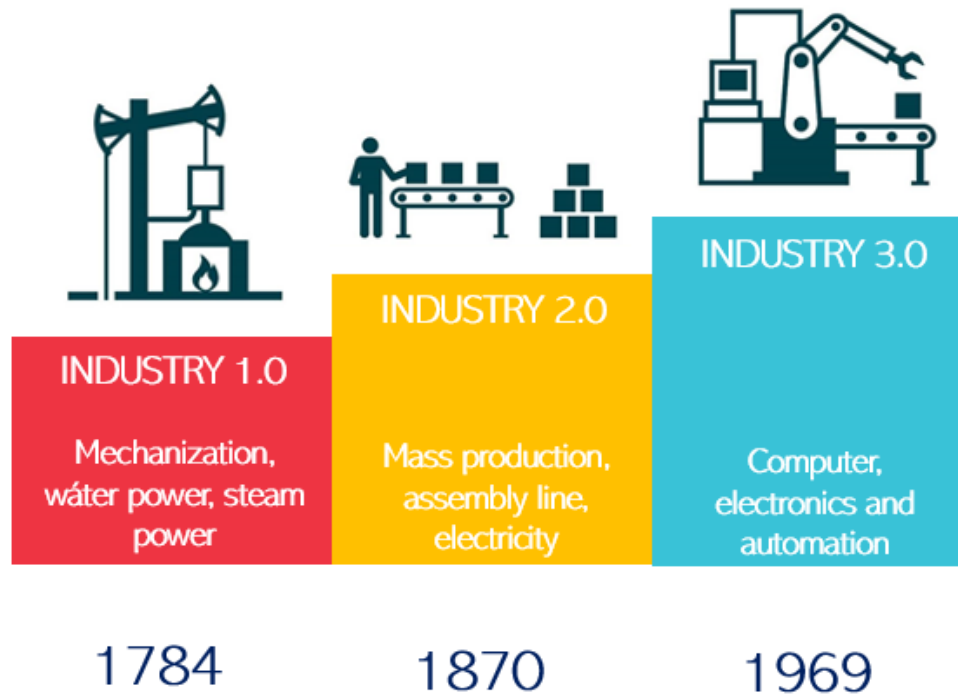


INDUSTRY 2.0

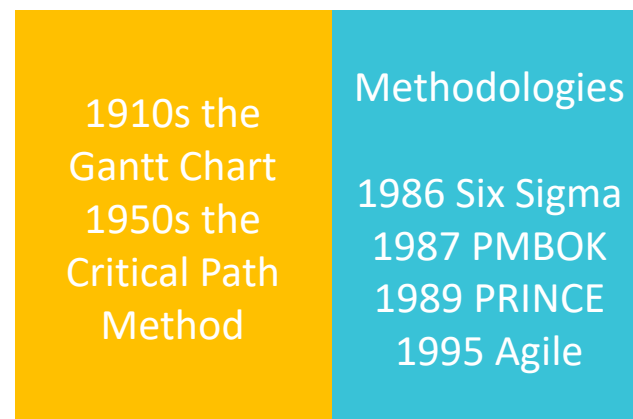
Mass production,
assembly line,
electricity

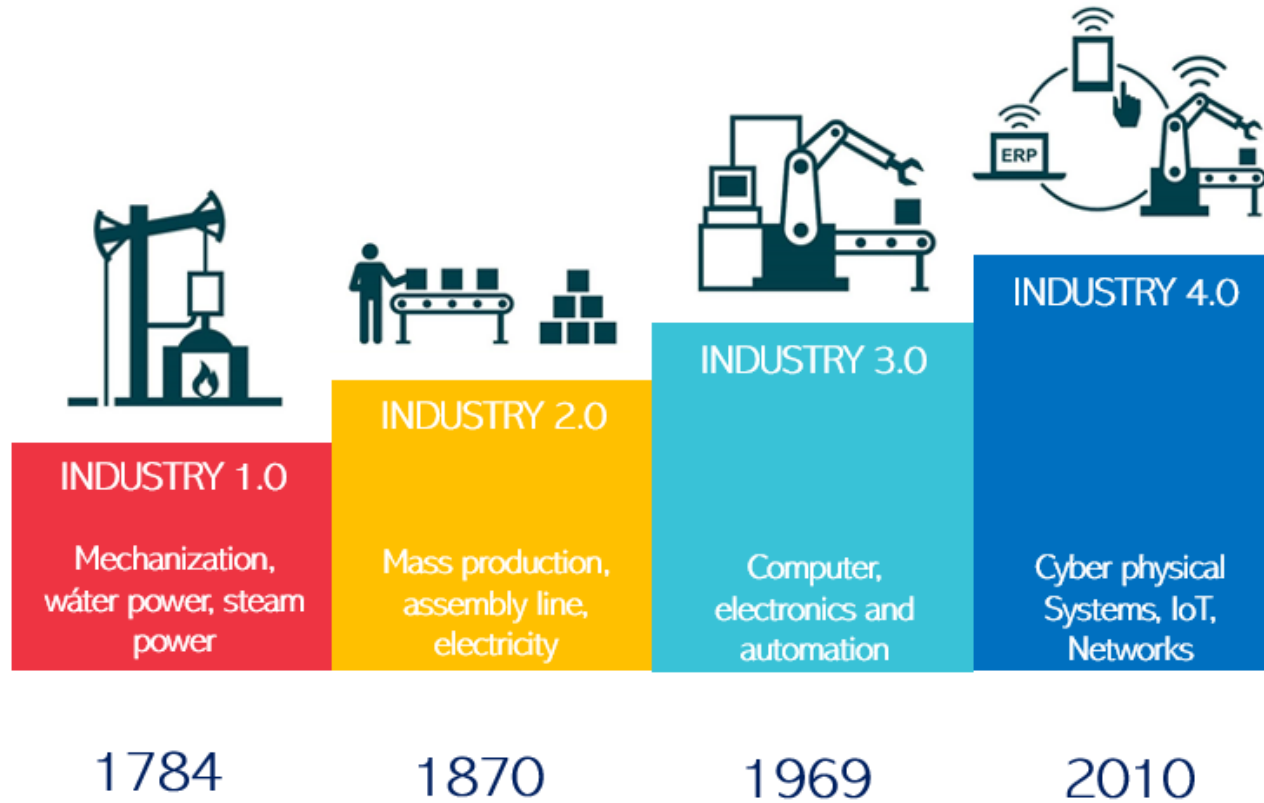
1870

1910s the
Gantt Chart
1950s the
Critical Path
Method

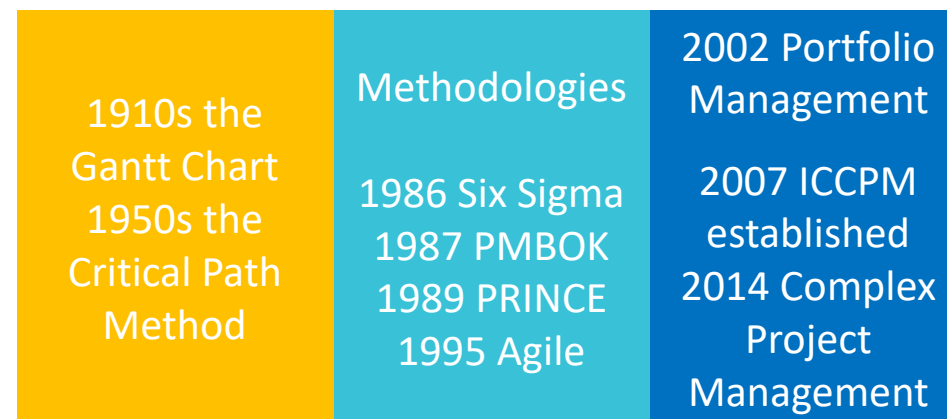


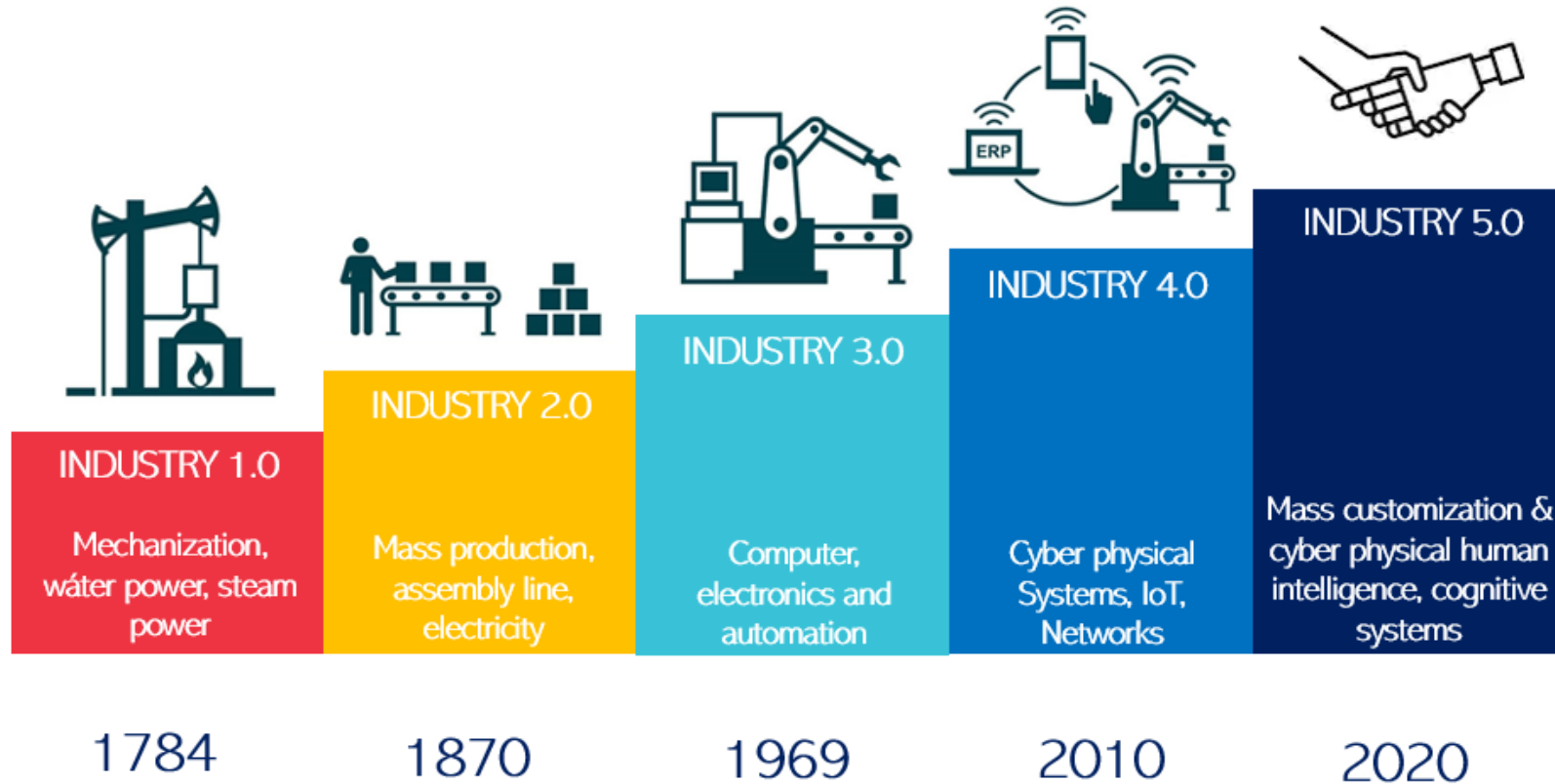
**Years are estimates*





**Years are estimates*





**Years are estimates*





Hard Systems

Soft Systems

How?: How to best achieve and test the selected option of development and analysis

What?: What is it that we need to do to achieve an improvement?
What is the purpose of the system?

Problems that can be identified and quantified

Focus on Human Activity Systems. Not easily quantified. Wicked messy problems

Simulations using explicit objectives governed by fixed rules.

Acknowledges interpretation is fundamental to sense making abstract aspects and the concrete aspects of situations.

Stochastic – Statistically based on probability
Deterministic – fixed inputs and known outputs

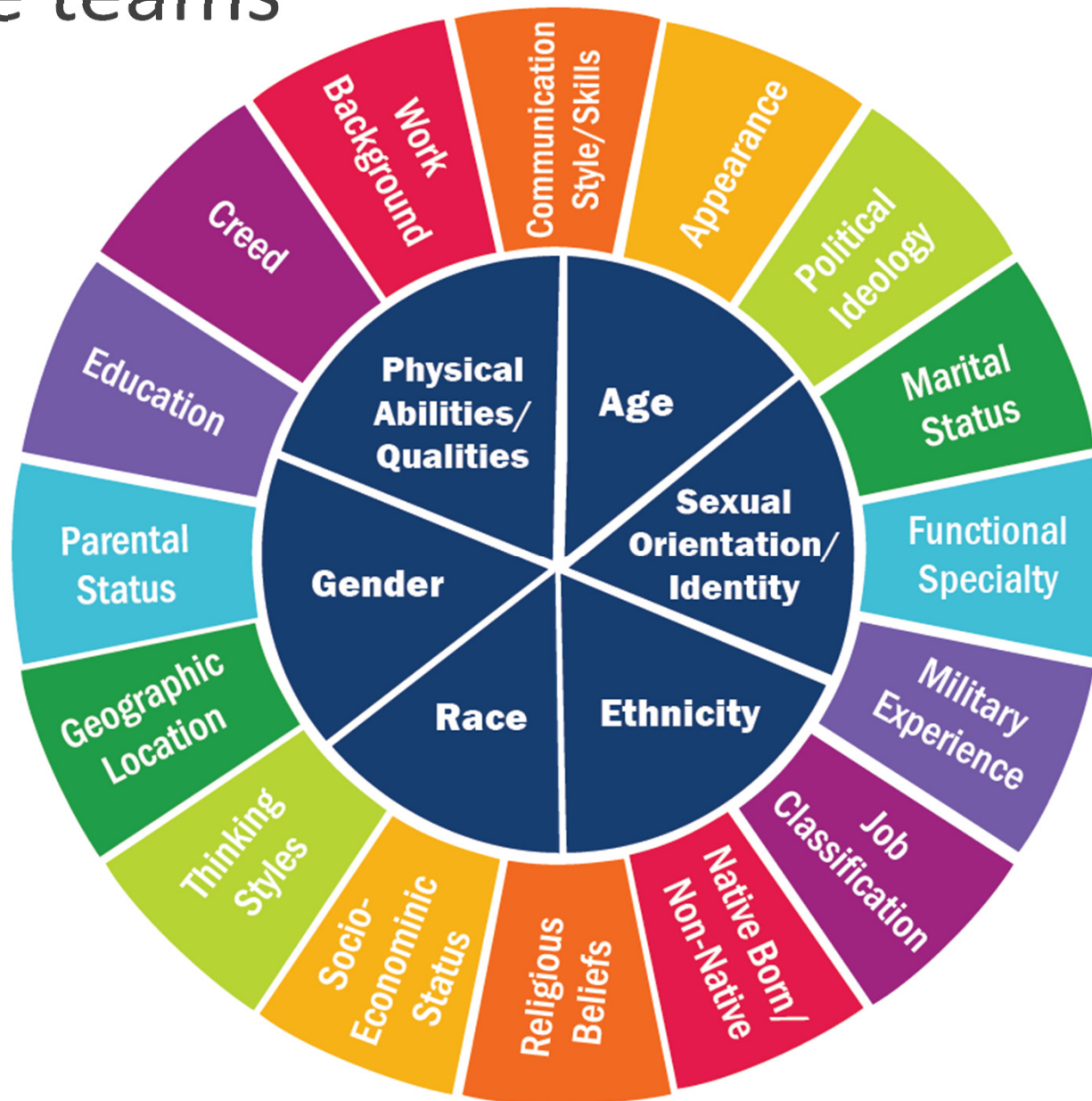
Systemic holistic approaches to understand Human Activity Systems. Inputs and outputs are not repeatable or reproducible.

Project Management (deterministic)
Forecasting (stochastic)
Simulation (stochastic and deterministic)
Mathematical Programming (stochastic and deterministic)

Systems thinking methodologies and complexity management approaches
Advocates multi-methodology approaches.



Diverse teams



Transformation





Monitoring and Evaluation

- Project focused processes, incentives, and ways of working are insufficient in dynamic systems. Portfolio management is a good start.
- Need the ability to sense and respond
- Need the ability to monitor and evaluate soft systems as well as hard systems.
- Need to be able to work at the project level, the systems level and the strategic level, and connect the three



Diversity is not a nice to have in complex projects – it's essential for project success

Do we currently harness diversity, or do we encourage people with diverse skills and backgrounds to conform?



THE ICCPM INTERNATIONAL ROUNDTABLE SERIES 2022-23

Data Analytics for Informed Decision Making in **Complex** Projects



Supported by



Anchor Sponsor



Series Sponsors



Supporting Sponsors



www.iccpm.com/rt-2022-23

Confirmed Workshops

Canberra: Thursday 18 August, QUT Executive Education Centre, 2 King St, Deakin

Adelaide: Wednesday 14 September, Raytheon Australia, 1-11 Technology Drive, Mawson Lakes

Sydney: Friday 14 October

Melbourne: Thursday 27 October

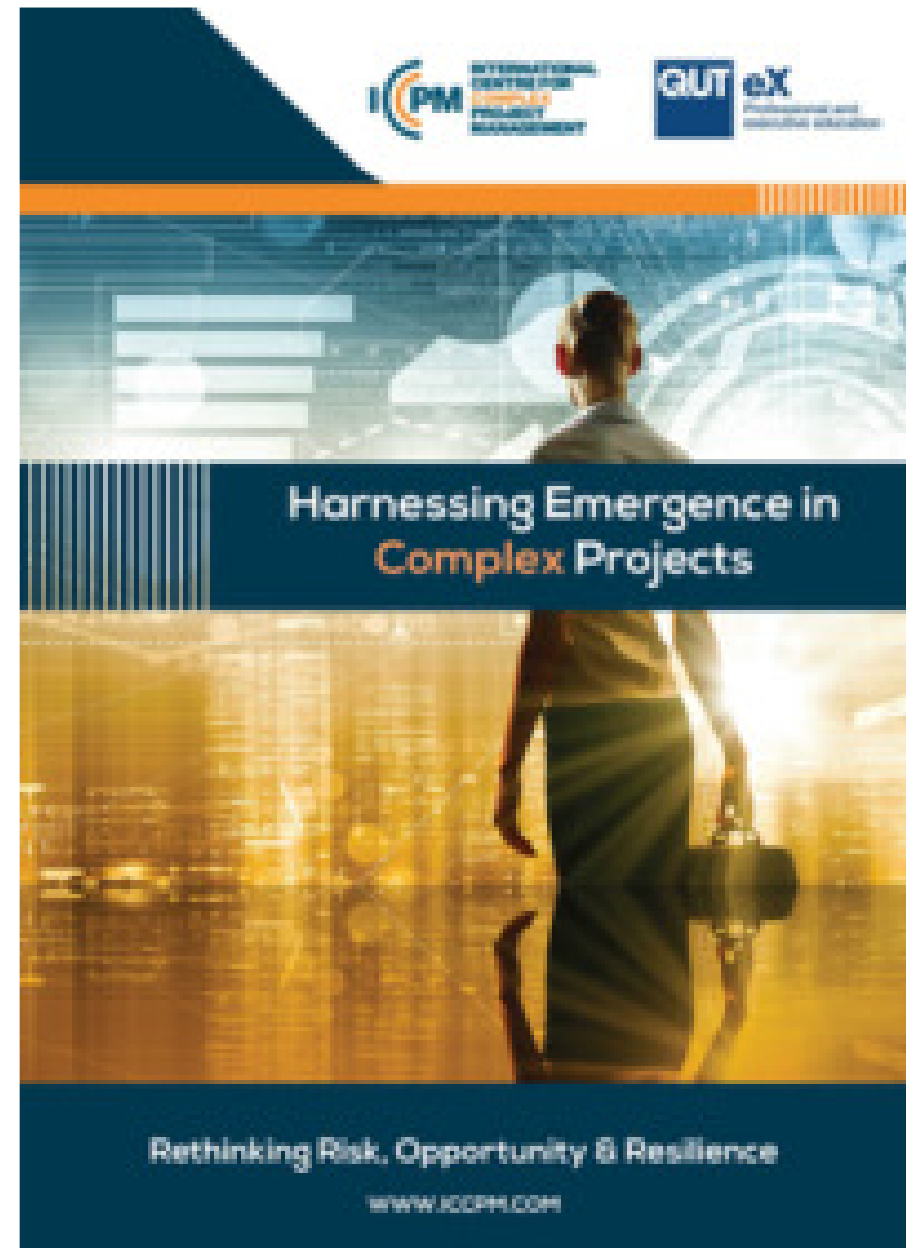
Brisbane: Wednesday 2 November

Download your free copy of the
2020 International Roundtable Series
Report

<https://iccpm.com/harnessing-emergence-in-complex-projects/>

Previous reports available free to
ICCPM Members via the ICCPM
website

ICCPM offers Roundtable
Masterclasses to help organisations
implement the findings from the
International Roundtable Series





Questions?
Comments?