

# Computational Strategic Thinking Modelling

1

Major Leon Young  
Future Concepts Strategist  
Australian Army

# Scope

- ▶ Contextualise the problem of strategic thinking
- ▶ Cover the methodology basics
- ▶ Overview the results
- ▶ Brief analysis on what we found

# Context of the problem

# Situation

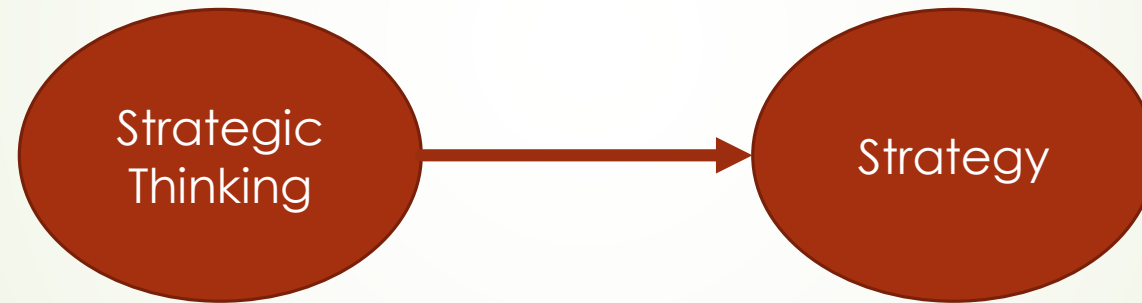
- ▶ There appeared to be a lack of strategic thinking within Defence
  - ▶ *“...the Australian Defence Force (ADF) needs to identify and develop Commanders that think at the strategic (macro) level in order to design and implement effective campaign plans”*, Operational report, 2012
  - ▶ *“...there is plenty of room to improve education of military planners and ... personnel to think in terms of effects”*, Operational Report, 2011

# Scope of problem

- ▶ Strategy
  - ▶ *“Strategy is fundamental to the success and sustainability of any organisation”, Berg Consulting, 2011*
  - ▶ *“No subject is more essential in the preparation of national security professionals and military leaders than the teaching of strategy”, Douglas C. Lovelace Jr, 2010*
- ▶ Strategic Thinking
  - ▶ *“Strategic thinking is a valued skill in the Civil Service. It is one of the six core requirements in the Senior Civil Service competency framework” UK House of Commons, 2010*
  - ▶ *“Strategic thinking is required to secure the long term future of nations and organisations” Zabriskie and Huellmantel, 1991*
  - ▶ *“lack of strategic thinking as the main problem in their organisations”, Bonn, 2005*
- ▶ Capability
  - ▶ *“capability is the capacity to be or do or affect something” Gaidow, 2006*

# Research question

- ▶ How can we develop a strategic thinking capability?



# The real problem

- ▶ Strategy is poorly understood
  - ▶ *“Strategy has “acquired a universality which has robbed it of meaning” Strachan, 2005*
- ▶ Strategic thinking is poorly understood
  - ▶ *“There is no agreement in the literature on what strategic thinking is” Bonn, 2001*
  - ▶ *“That debate revealed considerable confusion in strategic thinking”, Behm, 2007*
  - ▶ *“strategic thinking has turned into a synonym for almost all of the concepts with strategic as their first word” Jelenc and Swiercz, 2011*
- ▶ There is no agreement on quantifying strategic thinking ability
  - ▶ *“none actually measure strategic thinking using a cognitive approach logic” Daghir and Al Zaydi, 2005*
- ▶ Apparently no literature on how to create a strategic thinking capability, 2015

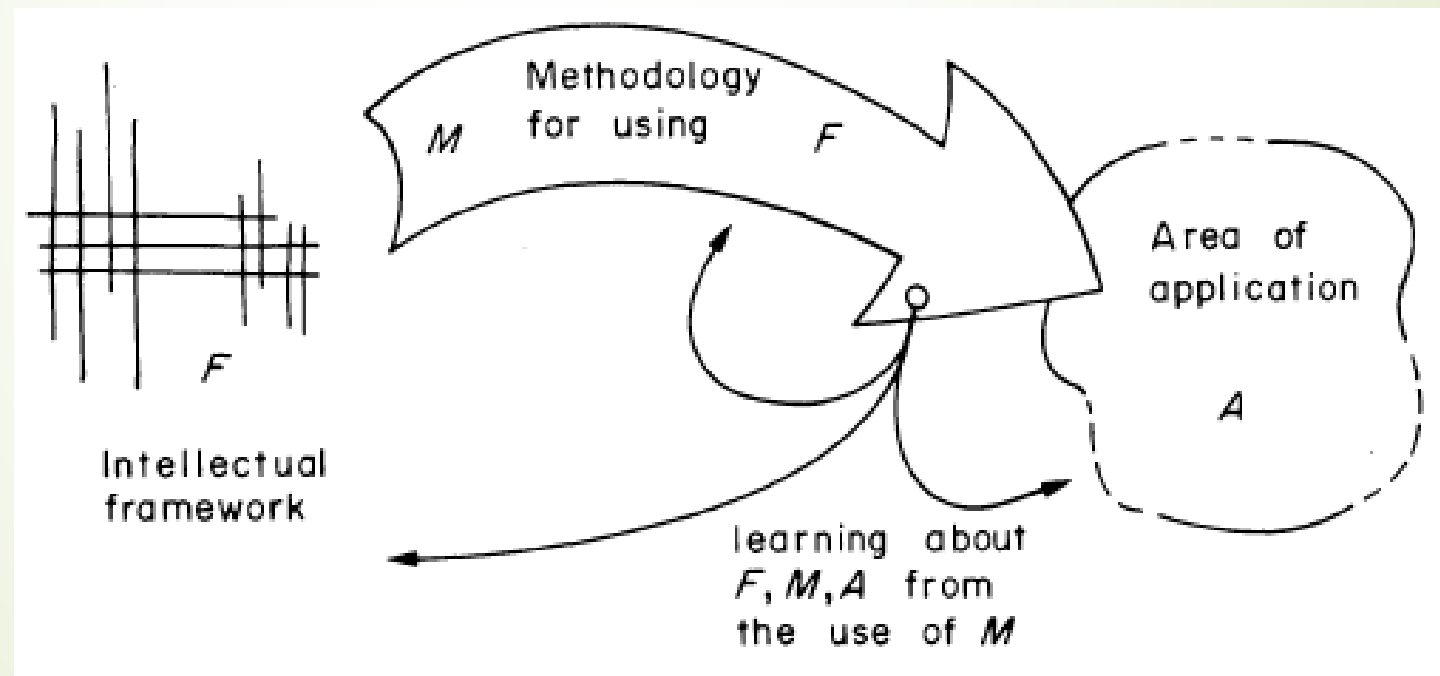
This is a problem of understanding  
rather than of optimising



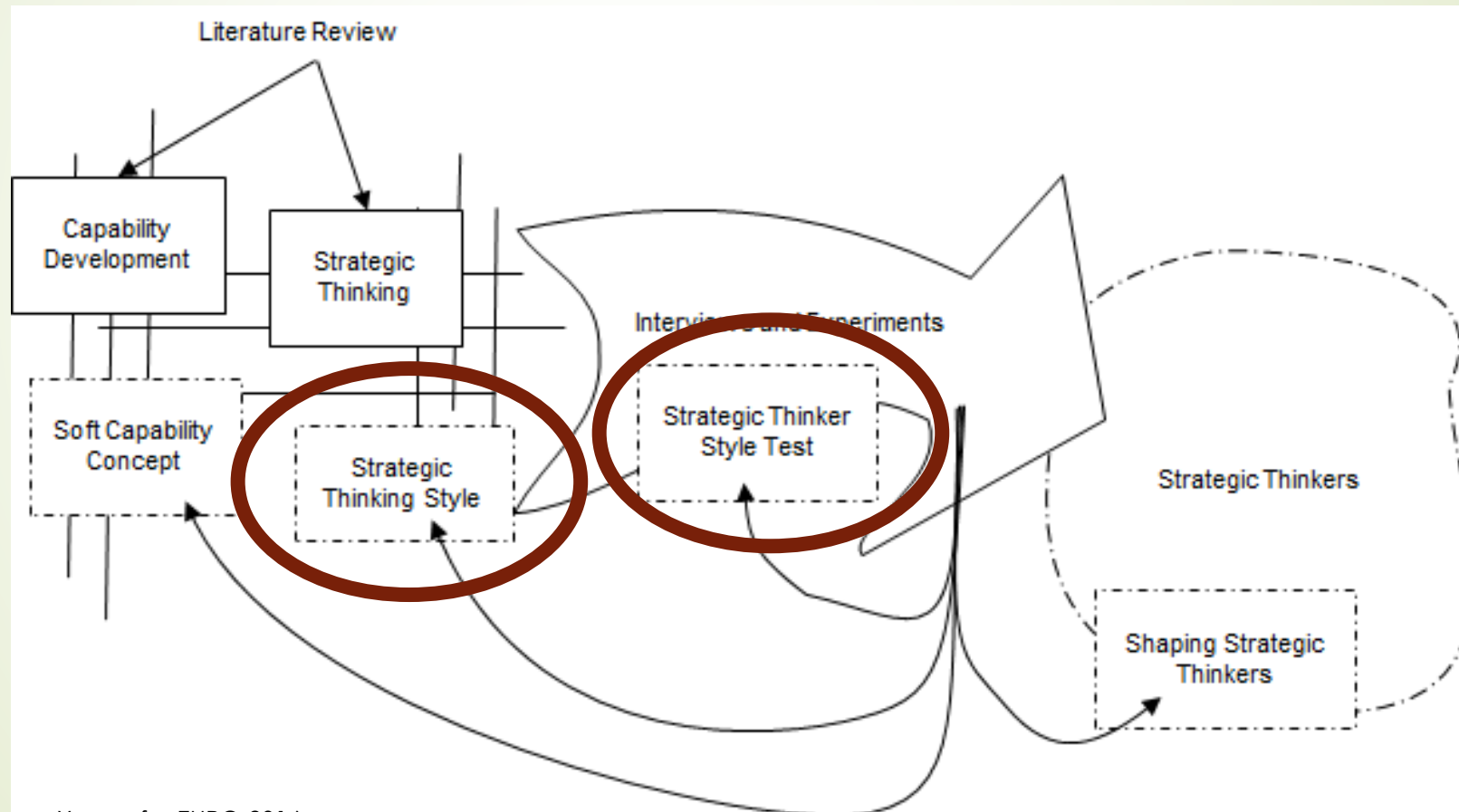
# Methodology

# A soft systems approach

- Based on Checkland (1985) Action Research and his adaptation of Rational Thought



# Applying Action Research to Strategic Thinking Modelling



# Results

# The Framework (F)

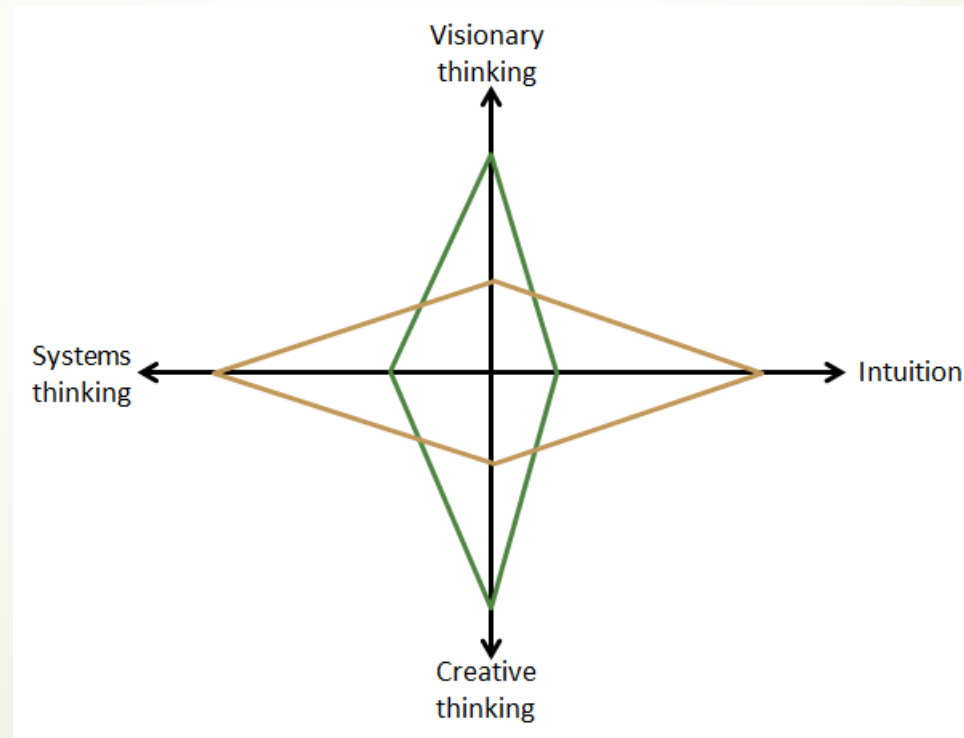
- ▶ A nodal analysis on the existing studies into Strategic Thinking revealed four key cognitive characteristics:
  - ▶ Creative Thinking
  - ▶ Systems Thinking
  - ▶ Visionary Thinking
  - ▶ Intuition (Holistic Big-picture and Holistic Abstract)

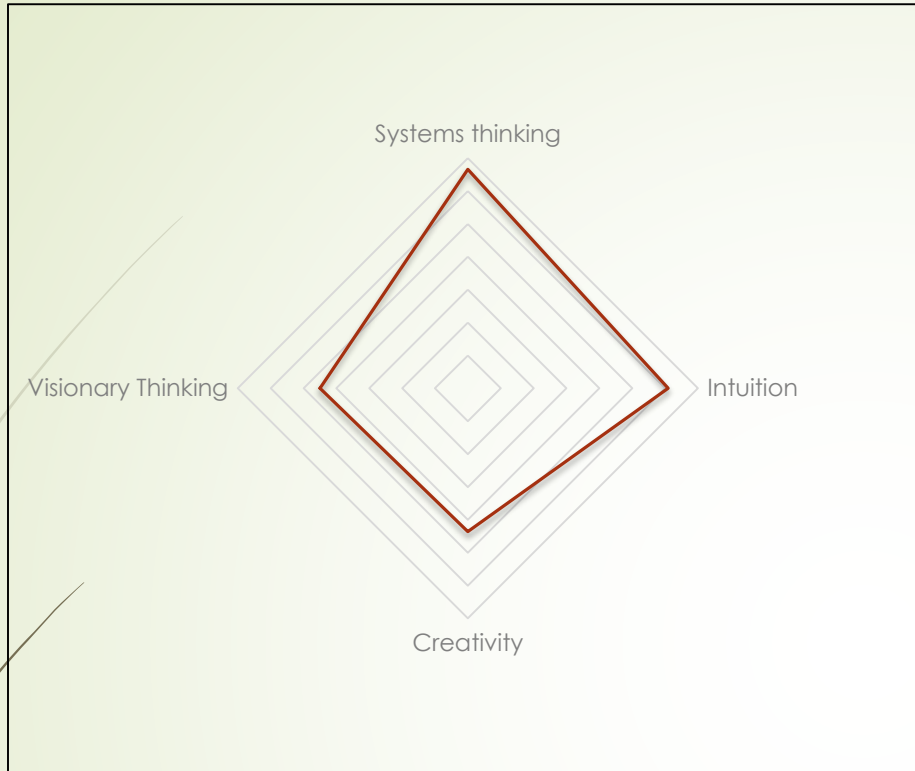
# Learning about the Methodology (M)

- ▶ Designed a strategic thinking test
  - ▶ 26 min (average) survey that can be conducted on-line or on paper.
- ▶ Used existing tests for:
  - ▶ creativity (fluency, flexibility, originality and quality); and
  - ▶ intuition (TIntS by Pretz et al, 2014 measuring Inferential, Affective, Holistic Big-Picture and Holistic Abstract)
  - ▶ Systems thinking (simple assessment based on Cardenas et al, 2010)
- ▶ Developed tests for:
  - ▶ Visionary thinking (based on articulate, plausible, desirable and actionable)

# Learning about the Framework (F)

- After applying the Strategic Thinking cognitive framework (F) using the test (M) onto the strategic thinkers (A), I found that individuals had very different strategic thinking styles (F+)



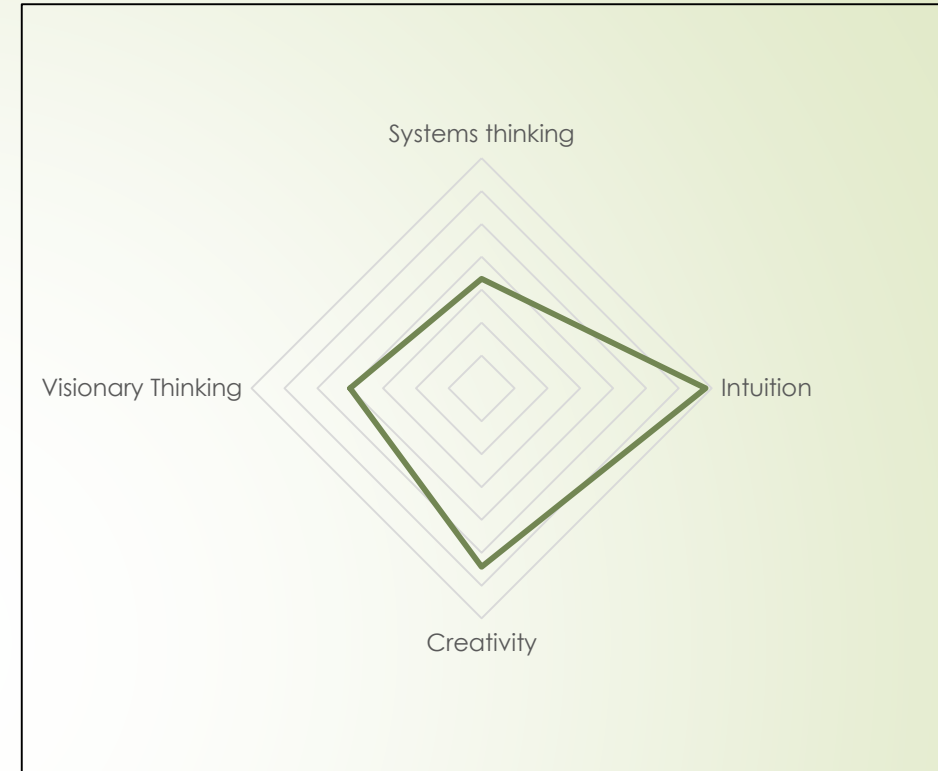


Suited for:

- Immediate operations
- 'strategic' problems

Not suited for:

- Abstract problems
- Absent of direction



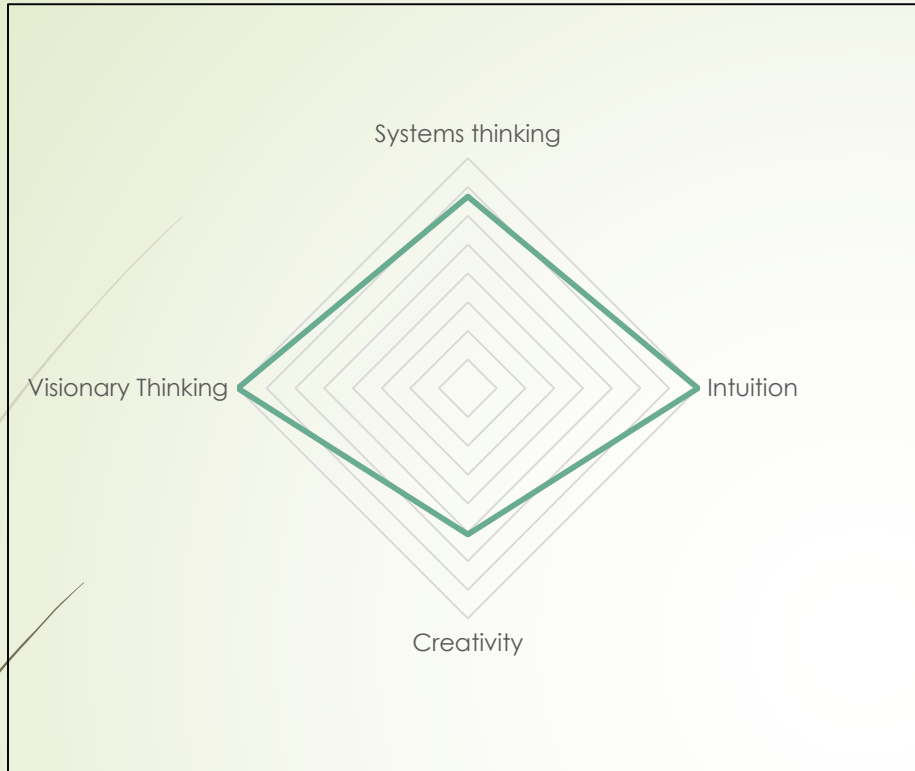
Suited for:

- Immediate operations
- 'tactical' problems

Not suited for:

- Absent of direction
- High level / strategic problems



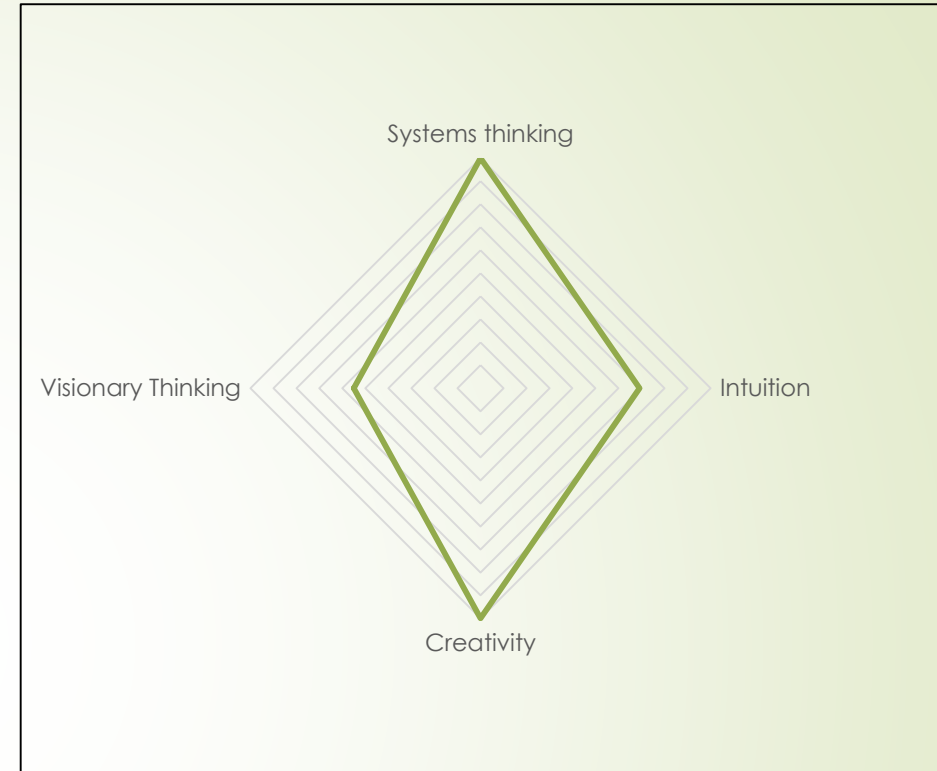


Suited for:

- Problem finding
- Normal problems

Not suited for:

- Abstract problems
- Problem solving



Suited for:

- Problem solving
- Unusual problems

Not suited for:

- Absent of direction
- Problem finding

# The Analysis

# Strategic Thinking Test

- ▶ Learning about F
  - ▶ The metrics appear to be generally accurate
  - ▶ Visionary thinking assessment is based on assessor judgement
- ▶ Learning about M
  - ▶ The test is applied easily
  - ▶ Systems thinking metric may be too simple (only three levels)

# Strategic thinking styles

- ▶ Learning about F
  - ▶ Different strategic thinking styles
- ▶ Learning about M
  - ▶ Broadly accurate though dependent on self-reporting
- ▶ Learning about A
  - ▶ Incredibly useful for workforce planning
  - ▶ Applicable to individuals and groups

# What this means

- ▶ We can quantifiably measure the capacity for strategic thinking

and

- ▶ It is possible to deliberately build an organisational strategic thinking capability

# Questions and comments?

[leon.young@defence.gov.au](mailto:leon.young@defence.gov.au); or  
[l.young@adfa.edu.au](mailto:l.young@adfa.edu.au)