



**Australian Government**  
**Department of Defence**  
Defence Science and  
Technology Organisation

# **An Organisational Interoperability Agility Model**

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# Introduction: Organisational Interoperability Agility

- An organisation's potential to adapt their non-technical interfaces to deal with changing circumstances
  - In the environment
  - In the activities to be conducted
  - In coalition partners and roles
- Provides an agile contribution to a coalition, not necessarily agile on its own.



# Background: Trends in Military Operations



- Unilateral operations are rare
- Coalitions are often formed on an *ad hoc* basis. They may be led by non-military organisations
- Coalitions are fluid - partners may rescale commitments
- Concurrent Operations
- Increase in operations other than war



## Background: Agility

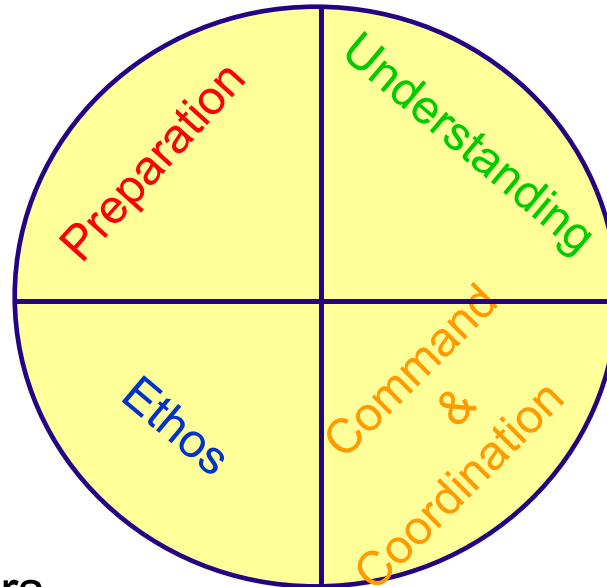
- “The ability to adapt proficiently (thrive) in an environment of unpredictable change” (Dove and Hartman, 1996)
- The ability to create and utilize options (Smith, 2004; Hartland et al, 2004)
- Robustness, resilience, adaptation, responsiveness, innovation, flexibility (Alberts and Hayes, 2003)



# Background: Organisational Interoperability Model

How well prepared are collaborators to perform the goals?

How well developed is the level of mutual understanding and knowledge sharing?

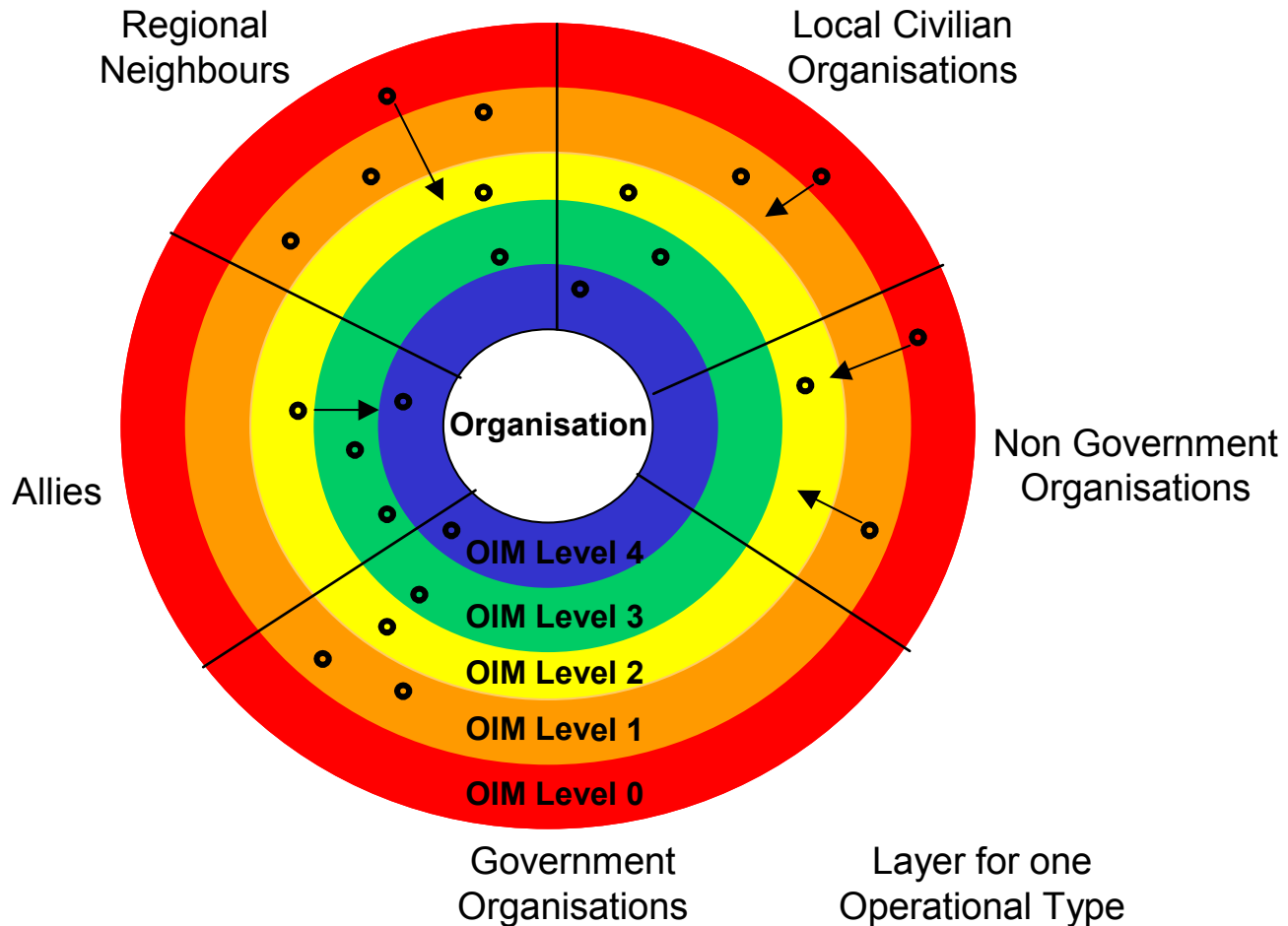


What impact do Socio-cultural factors have?

How well do collaborators fit into the command structure and adapt to the command style?

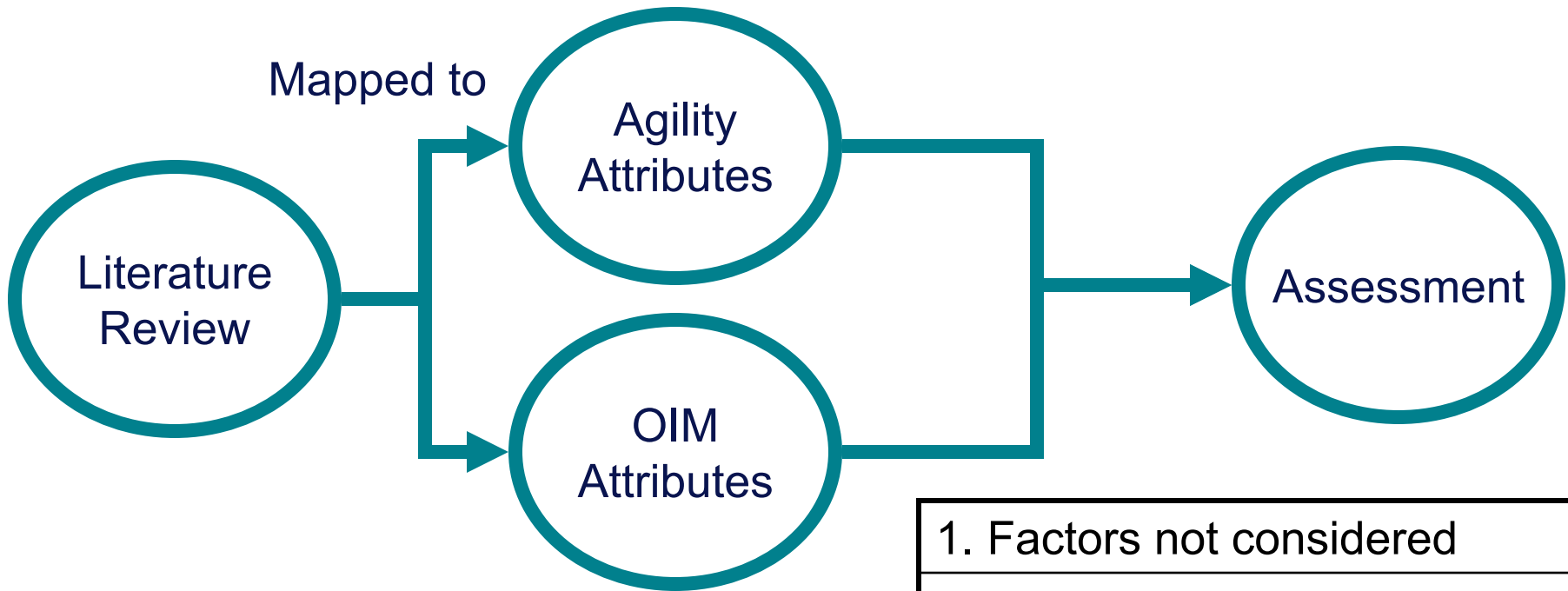


# Requirements: Assessing Organisational Interoperability Agility





# Methodology



- |   |
|---|
| 1. Factors not considered                               |
| 2. Unique attribution of factors                        |
| 3. Hierarchy for achievement of attributes              |
| 4. Related hierarchy of factors                         |
| 5. Dependencies between attribute levels and OIA levels |





# Results: OIM vs Agility Attributes

Methodology Questions	OIM Attributes	Agility Attributes
1. Factors not considered	Most explicit in OIM.	Most based on judgment.
2. Unique attribution of factors	Some overlap with cultural issues in Preparation, Ethos and Understanding. Understanding subsumed.	Most factors related to several attributes. Agility attributes not independent.
3. Hierarchy for achievement of attributes	Two methods identified. Willingness, scope and achievement chosen.	Difficult due to the lack of an agility theory and nature of attributes.
4. Related hierarchy of factors	Readily mapped.	Difficult or impossible to map.
5. Dependencies between attribute levels and OIA levels	Lack of theory but significant experience with OIM enabled initial development.	Lack of theory and practice and above problems hindered development.



# Results: Organisational Interoperability Agility Levels

Level	Description
4. Dynamic	Quick, seamless transition between different ways of operating. Multiple ways of operating within the one organisation. Willing to accommodate differences in goals.
3. Open	Experienced with different interfaces, reinforced by culture.
2. Accommodating	Able to accommodate differences in partners. Willing to adjust own organisation.
1. Amenable	Willing to interact and capable of working with similar organisations.
0. Static	One set of partners, activities and doctrine.



# Results: Organisational Interoperability Agility Attributes

Attribute	Description
Preparation	Preparedness of the organisation to interoperate. This includes the doctrine i.e. the rules and practices that will apply, as well as the degree of previous relevant training and experience.
Command and Control	How well the participating organisation fits into different command structure and adapts to different leadership styles.
Ethos	The cultural and human factors including the quality of personnel, willingness to accommodate differences, and culture of learning, innovation and change.



# Results: Organisational Interoperability Agility Level 3 (Abbreviated)

Preparation	C2	Ethos
Multiple sets of doctrine/procedures covering many activities relevant to the context. Aware of future OI requirements and have measures and metrics to support OIA. Ability to develop doctrine for new activities in advance of operations. Considerable experience working with other organisations	Mechanisms for interacting with most management/C2 styles relevant to the context. Familiarity with different C2 styles and structures. Ability to adjust C2 structures during operations.	Willing to operate and share most information with most organisations relevant to the context. Willing to adapt to changes in procedures. Practiced at gaining new skills. Encouraged to generate alternative mechanisms for interactions. Willing to recognise common purposes with organisations whose goals conflict with each other.



# Additional Research Required

- Gain feedback on OIAM from other researchers.
- Develop a methodology for applying the OIAM.
- Validate OIAM.
- Determine predictive power of OIAM.
- Determine desired levels of OIAM.