Shared Awareness and Agile Mission Groups

Lt Col Merfyn Lloyd -Dstl

Anthony Alston - QinetiQ

UK NEC Development Team

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The Panel Discussion

Shared Awareness and Agile Mission Groups

- The contextual information

  - What is Shared Awareness

  - Capability Analysis

  - Use Case

- Panel Discussion

  - Dr David Alberts

  - Dr Richard Hayes

  - Dr Reiner Huber

  - Mr Graham Mathieson

Definitions

"… situation awareness focuses on what is known about past and present situations, while understanding of a military situation focuses on what the situation is becoming (or can become) and how different actions will impact the emerging situation."
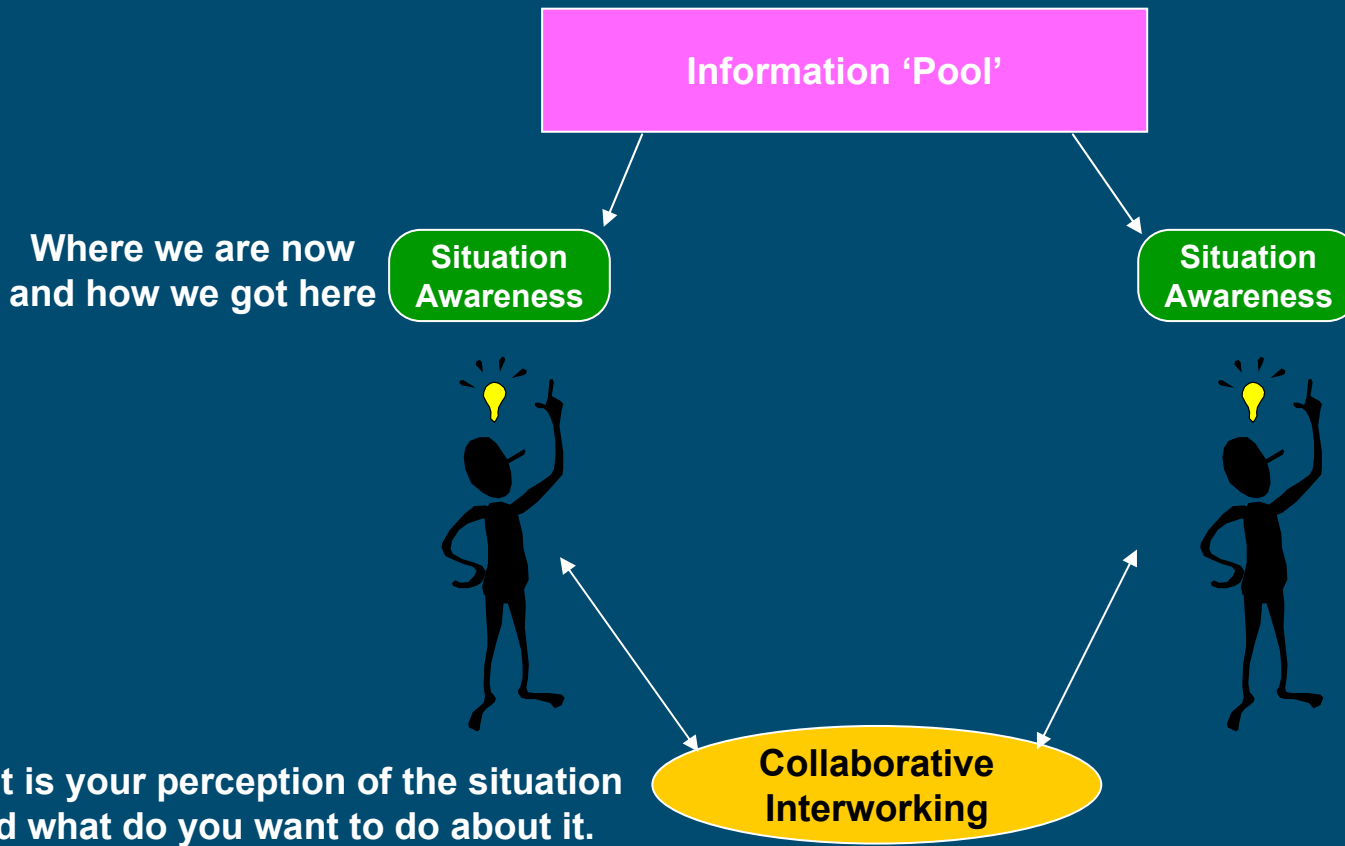
Understanding Information Age Warfare, Page 19

"Shared awareness is a state that exists in the cognitive domain when two or more entities are able to develop a similar awareness of a situation. The degree of similarity required (or difference tolerable) will depend on the type and degree of collaboration and synchronization needed."

Understanding Information Age Warfare, Page 26

Issues arising

- Situational Awareness is cognitive
  - But it can be supported by IT.

- Situation Awareness has at least two aspects:
  - Perception of the current environment and how it came about
  - Understanding of potential futures

- Sharing Awareness concerns one or more entities sharing these aspects in order to arrive at a common understanding

- Sharing Command Intent is key to understanding potential futures

Shared Awareness

Information 'Pool'

Situation Awareness

Situation Awareness

Where we are now and how we got here

Collaborative Interworking

What is your perception of the situation and what do you want to do about it.

The Question for the Discussion

Central Proposition

Achieving Shared Awareness is key to the successful transformation from an industrial to an information age military.
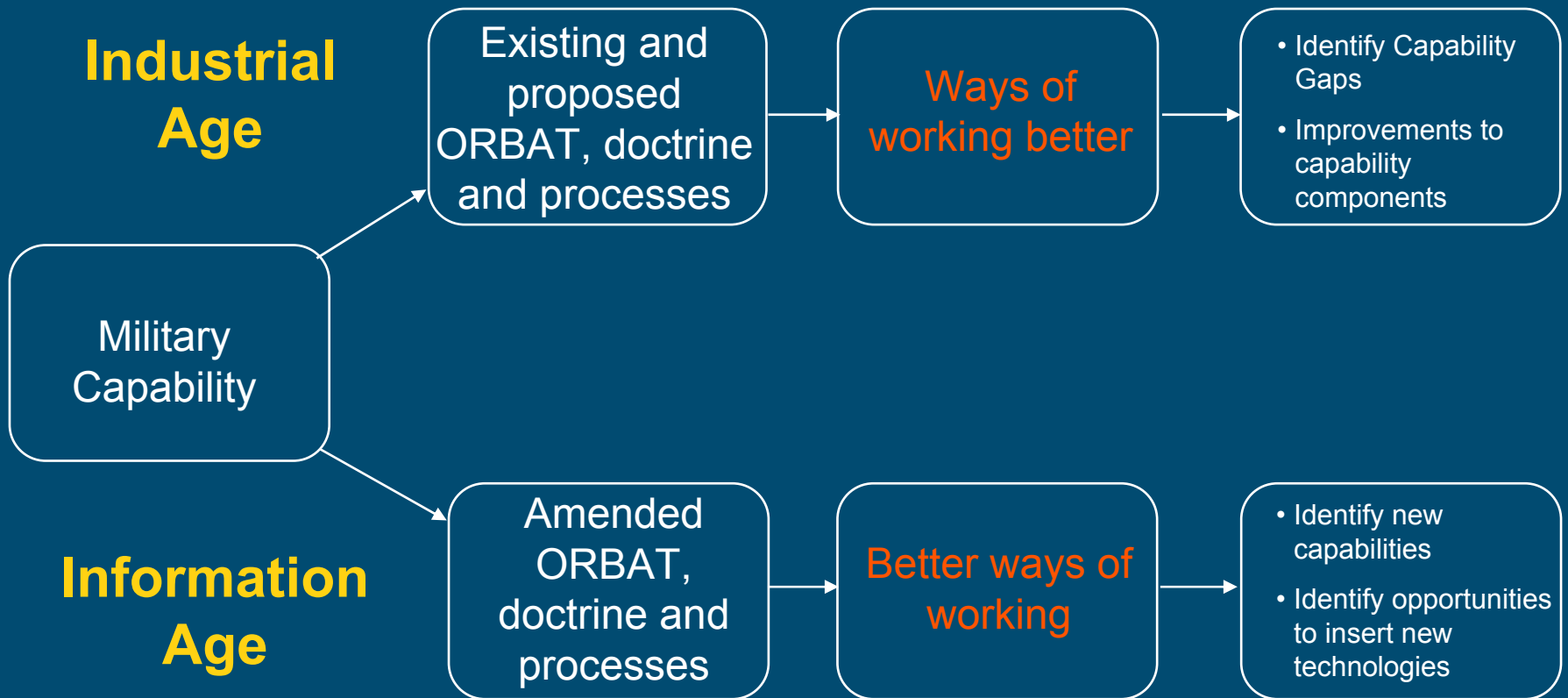
Question

Is it possible to understand Shared Awareness enough to be able to build it into our future military capabilities?

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Capability Analysis

- **How can we analyse military capability that takes account of the value of Shared Awareness?**

- **Can we use the notion of Shared Awareness to differentiate between industrial age and information age views of military capability?**
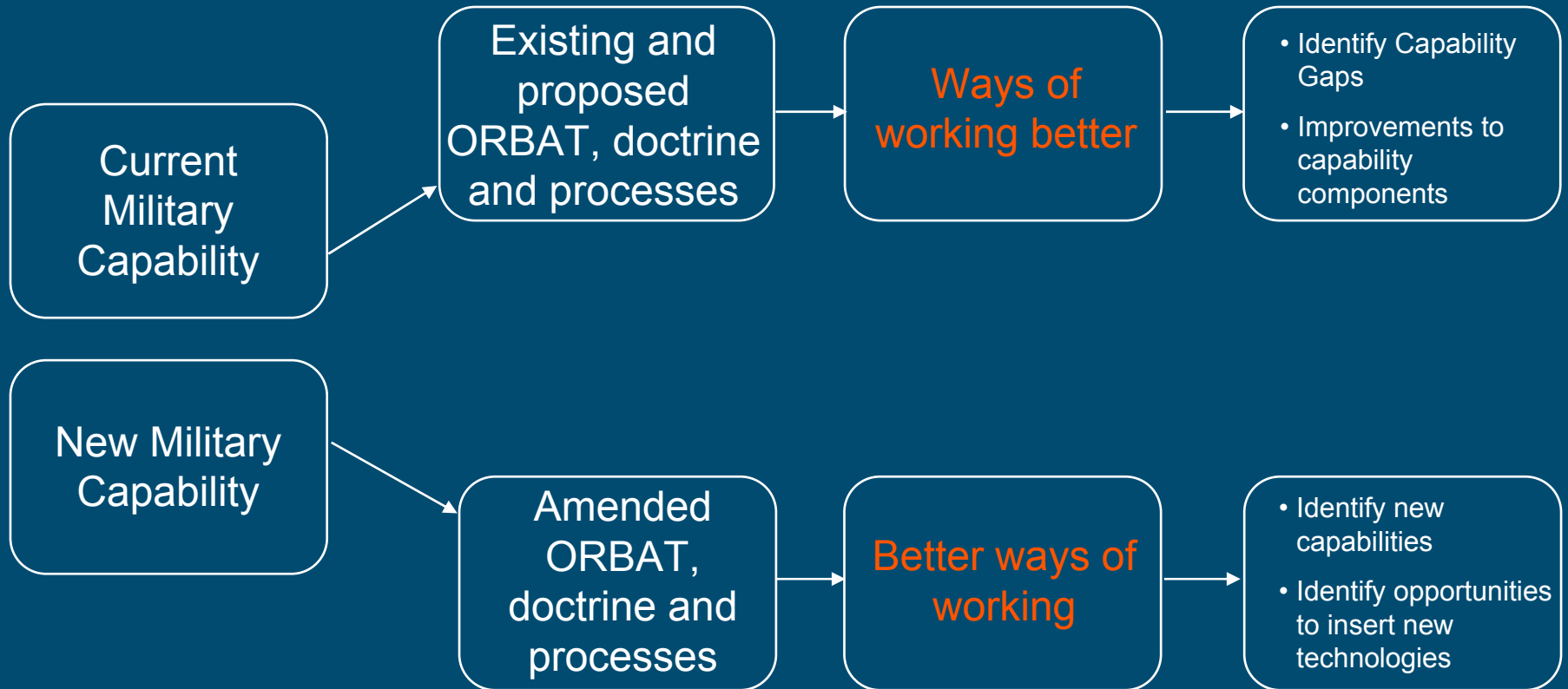
Analysis of Military Capability
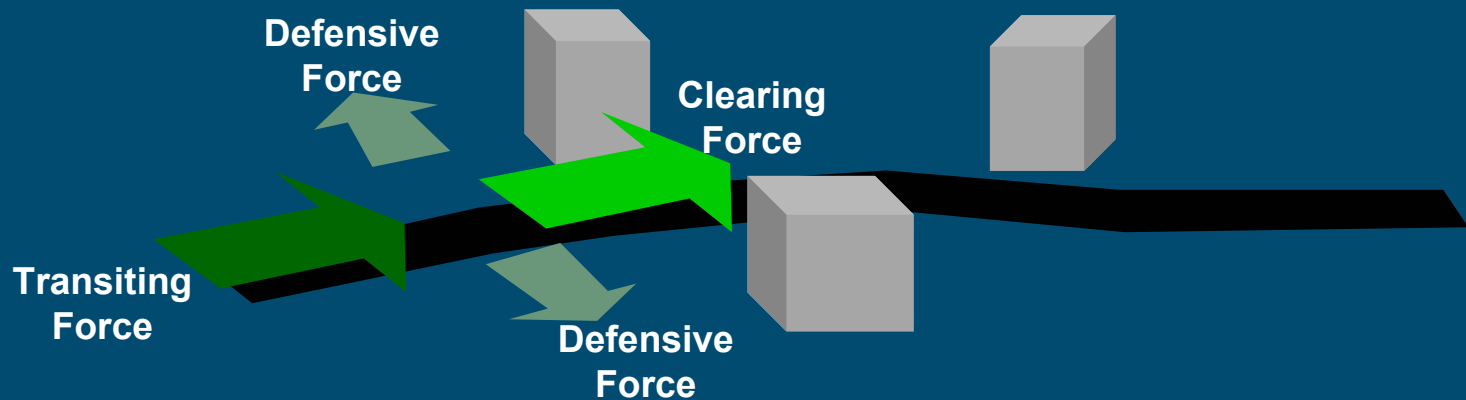
Industrial Age

Military Capability →

Existing and proposed ORBAT, doctrine and processes → Ways of working better → • Identify Capability Gaps
• Improvements to capability components

Information Age

Amended ORBAT, doctrine and processes → Better ways of working → • Identify new capabilities
• Identify opportunities to insert new technologies

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Analysis of Military Capability

Industrial Age

```
Current Military Capability  →  Existing and proposed ORBAT, doctrine and processes  →  Ways of working better  →
```

- Identify Capability Gaps
- Improvements to capability components

```
New Military Capability  →  Amended ORBAT, doctrine and processes  →  Better ways of working  →
```

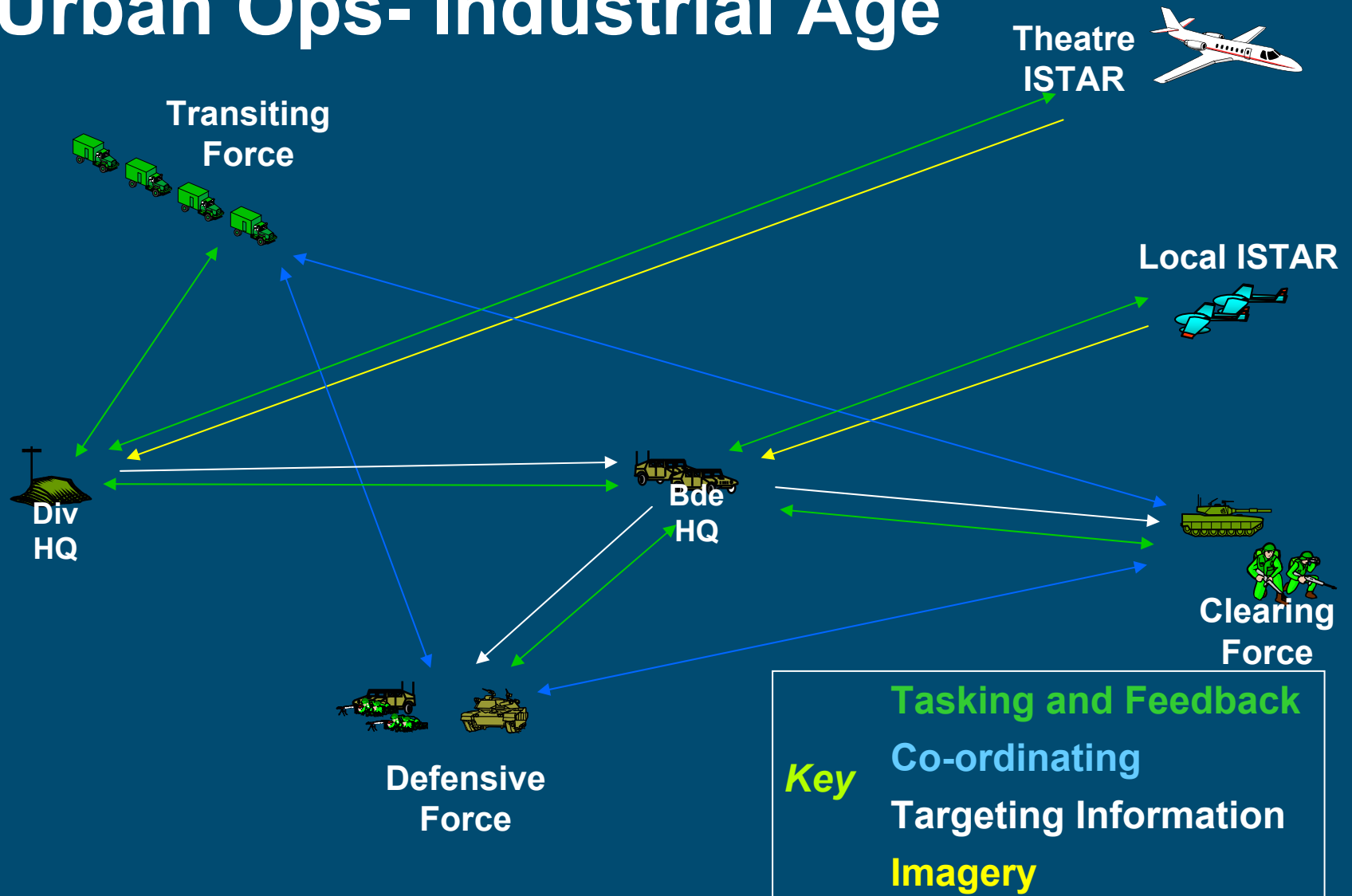- Identify new capabilities
- Identify opportunities to insert new technologies

Information Age

Use Case Synopsis

Clear and maintain a main supply route through a hostile urban area in support of forces forward

Defensive Force

Clearing Force

Transiting Force

Defensive Force

Urban Ops- Industrial Age

Theatre ISTAR

Transiting Force

Local ISTAR

Div HQ

Bde HQ

Clearing Force

Defensive Force

Key
- Tasking and Feedback
- Co-ordinating
- Targeting Information
- Imagery

[dstl]

Context for Capability Analysis

Defence Capability Framework

- Command

- Inform

- Operate (Strike and Manoeuvre)

- Protect

- Sustain

- Project

- Prepare

The Agile Mission Group

- Components of capability brought together to perform a given task

- Components need not be purely military

- Based on the Defence Capability Framework - not Environment

- Have their own command capability

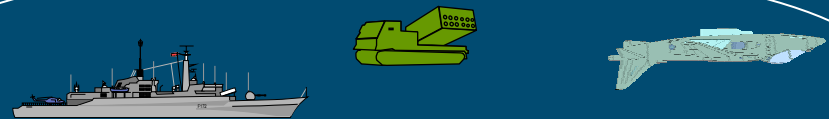- Can be very transient or enduring

Context for Capability Analysis

"Protect" AMG

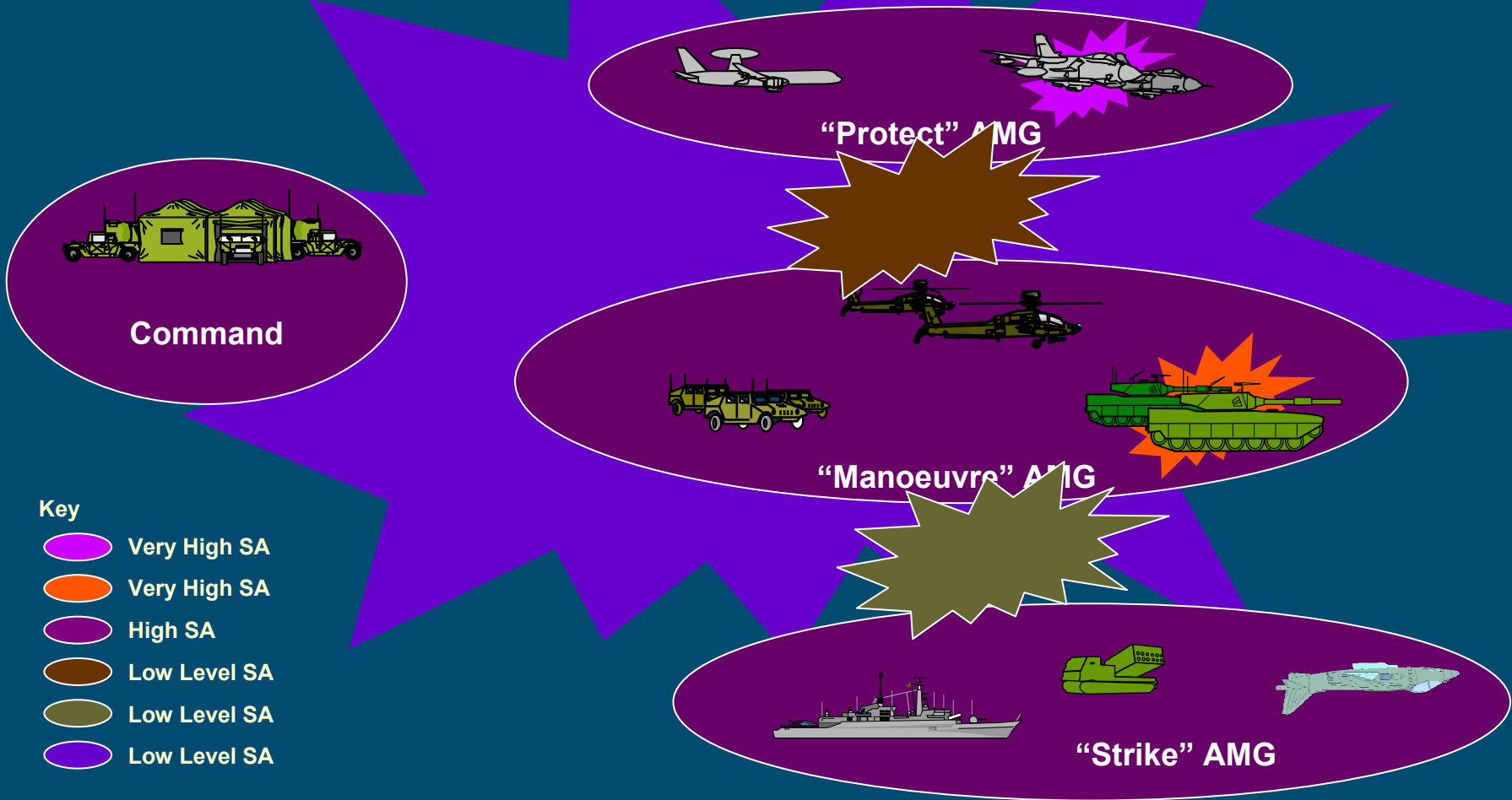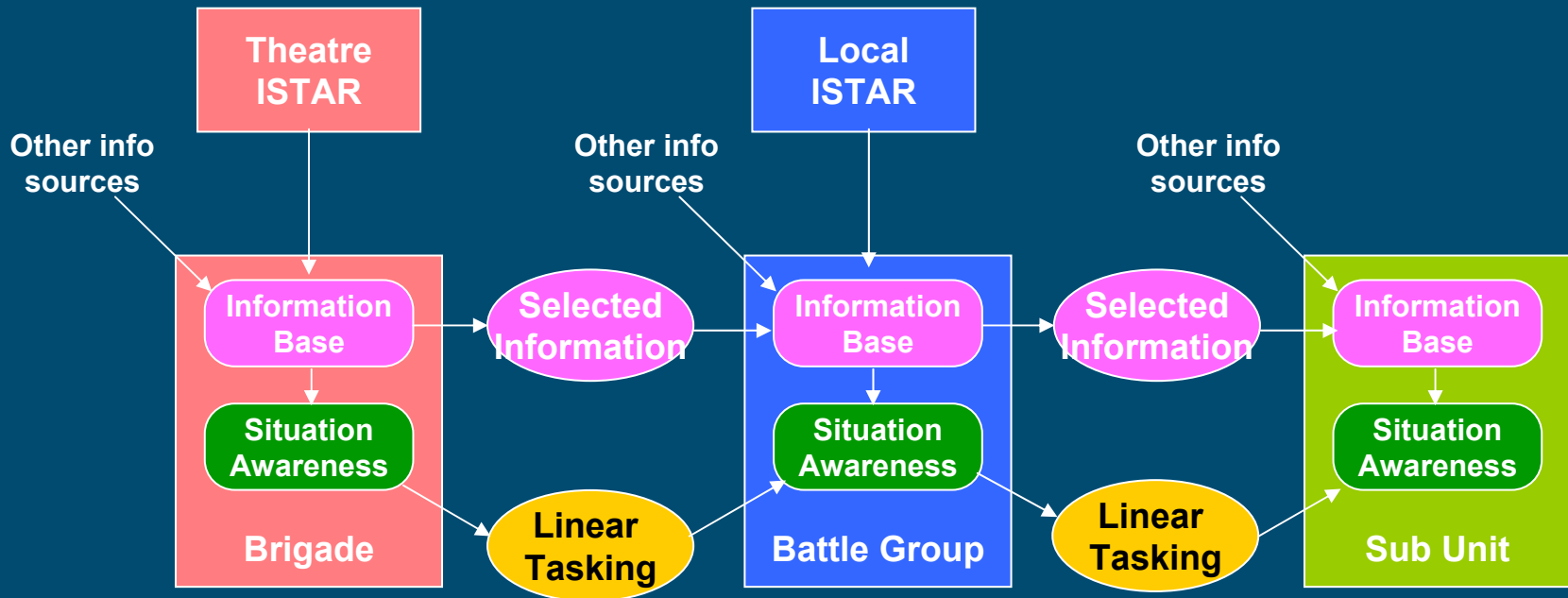Command

"Manoeuvre" AMG

"Strike" AMG

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Context for Capability Analysis

Command

"Protect" AMG

"Manoeuvre" AMG

"Strike" AMG

Key
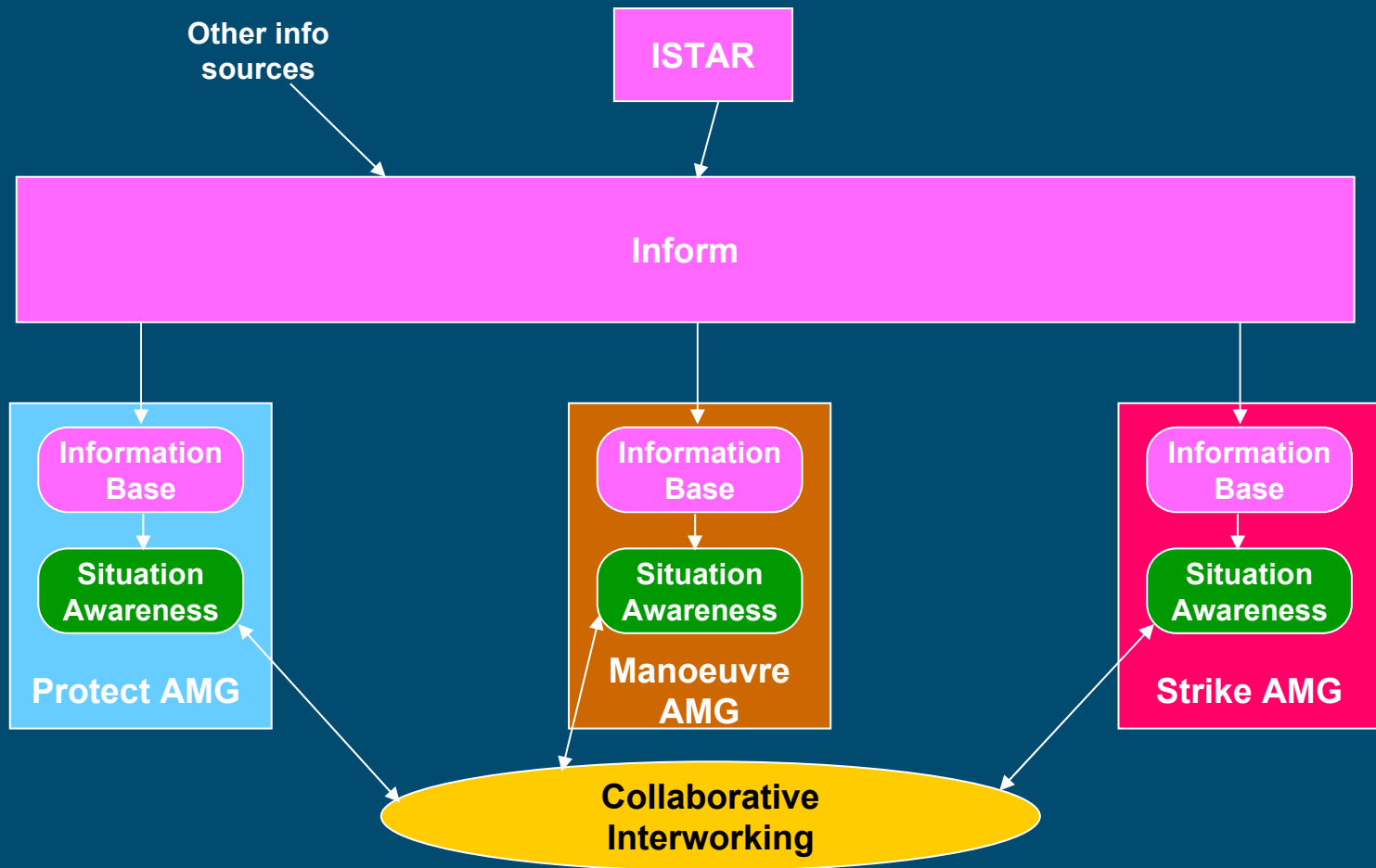
- Very High SA
- Very High SA
- High SA
- Low Level SA
- Low Level SA
- Low Level SA

Urban Ops - Industrial Age

Urban Ops - Information Age

Issues

- Is the concept of Shared Awareness meaningful?

- Are there different types of Shared Awareness?

- Can we distinguish between them?

- Can we determine the relative contributions of information sharing and collaborative working to Shared Awareness?

- Can we determine at design time the type and level of Shared Awareness required?

…and finally

- Is Shared Awareness an emergent property that cannot be determined?

- Is the major contributor to Shared Awareness Collaborative Interworking rather than shared information?

Why this discussion is important

- What constraints does the difficulty in achieving Shared Awareness have on the concept of Agile Mission Groups?

    – To help define the information age command processes.

    – How do we do dynamic collaborative interworking?

    – What do we need to know to create Agile Mission Groups?