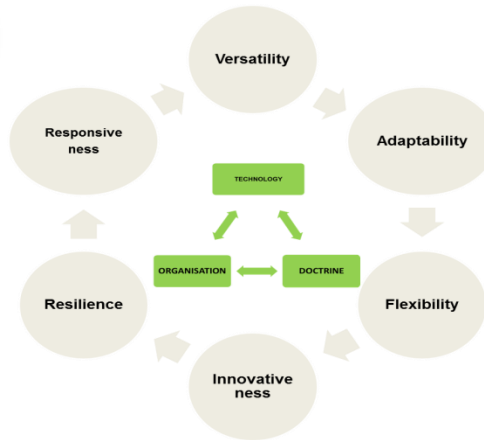




Agility - The Danish Way



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Email: imo-11@fak.dk

Twitter: BattlespaceRD4G



‘A’ PLAN...



- Theory
- Research Completed
- Operationalizing Agility Research
- Future Agility Research

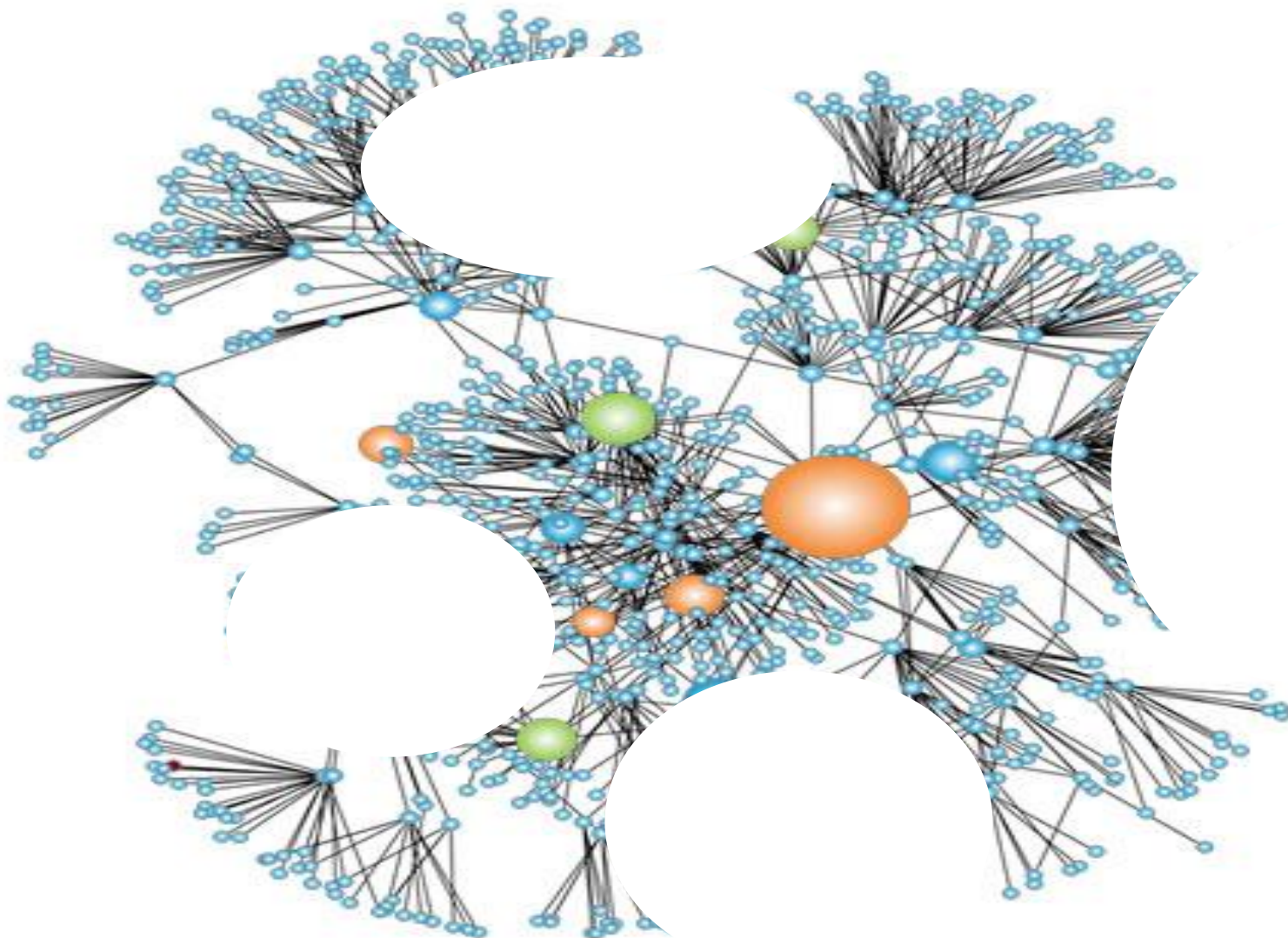


**Agility is the capability
to successfully effect, cope with and/or exploit
changes in circumstances.**

Why do we think we need agility?



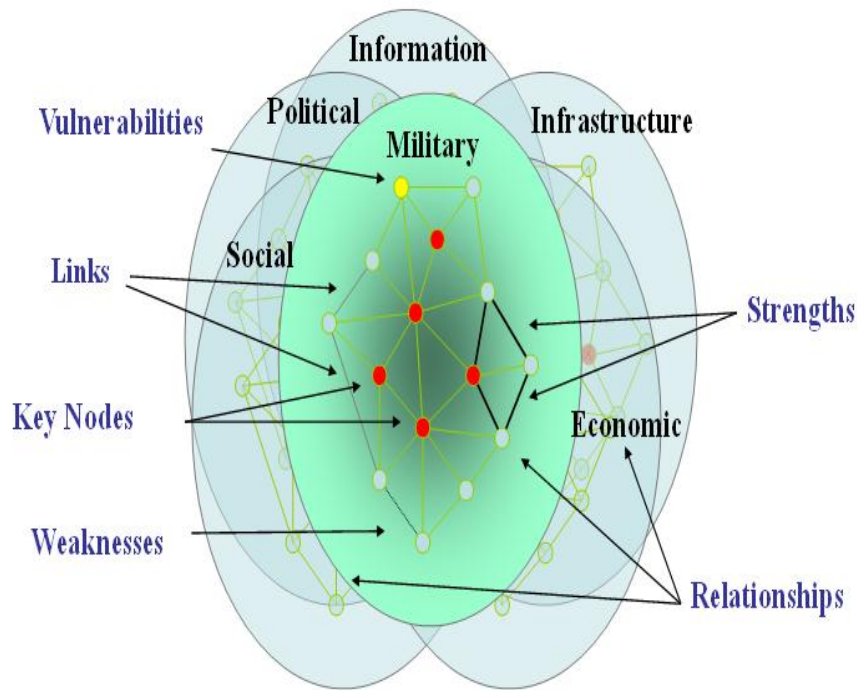
...complex adaptive battlespaces



IN THE INFORMATION AGE - ADVERSARIES LEARN FASTER AND ADAPT FASTER



Complexity in the Battlespace



1. Information increases
(Go from 1 to 6
dimensions)

2. Variety increases (M
+P,E,S,I,I)

3. Interconnections
increases

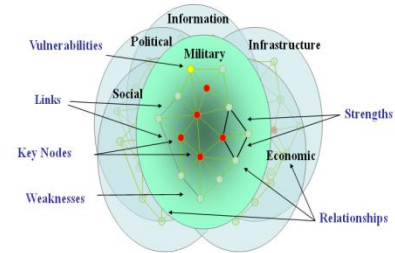
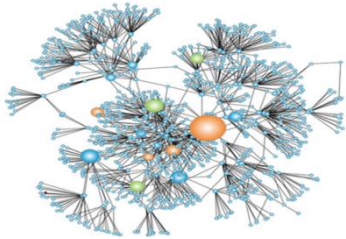
Go from 0- 720 (P×M×E×S×I×I)

(Assumption: That types of interconnections
are known.)

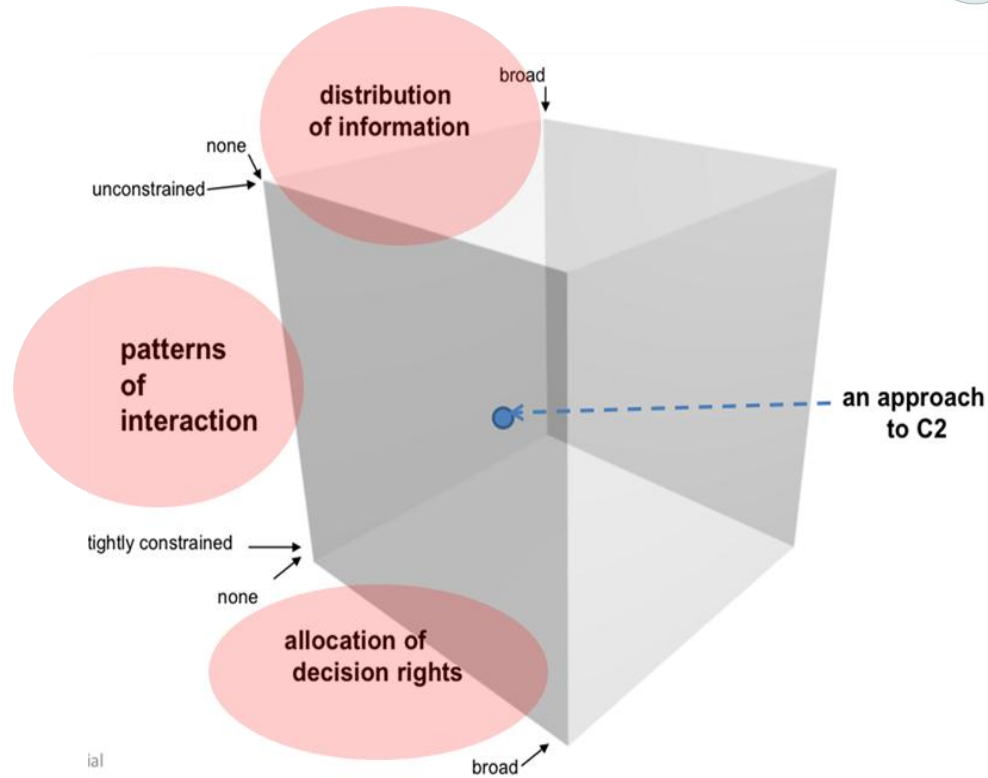
4. Types of
interconnections are not
known and have to be
discover or invented.



21st Century battlespaces demand agility...



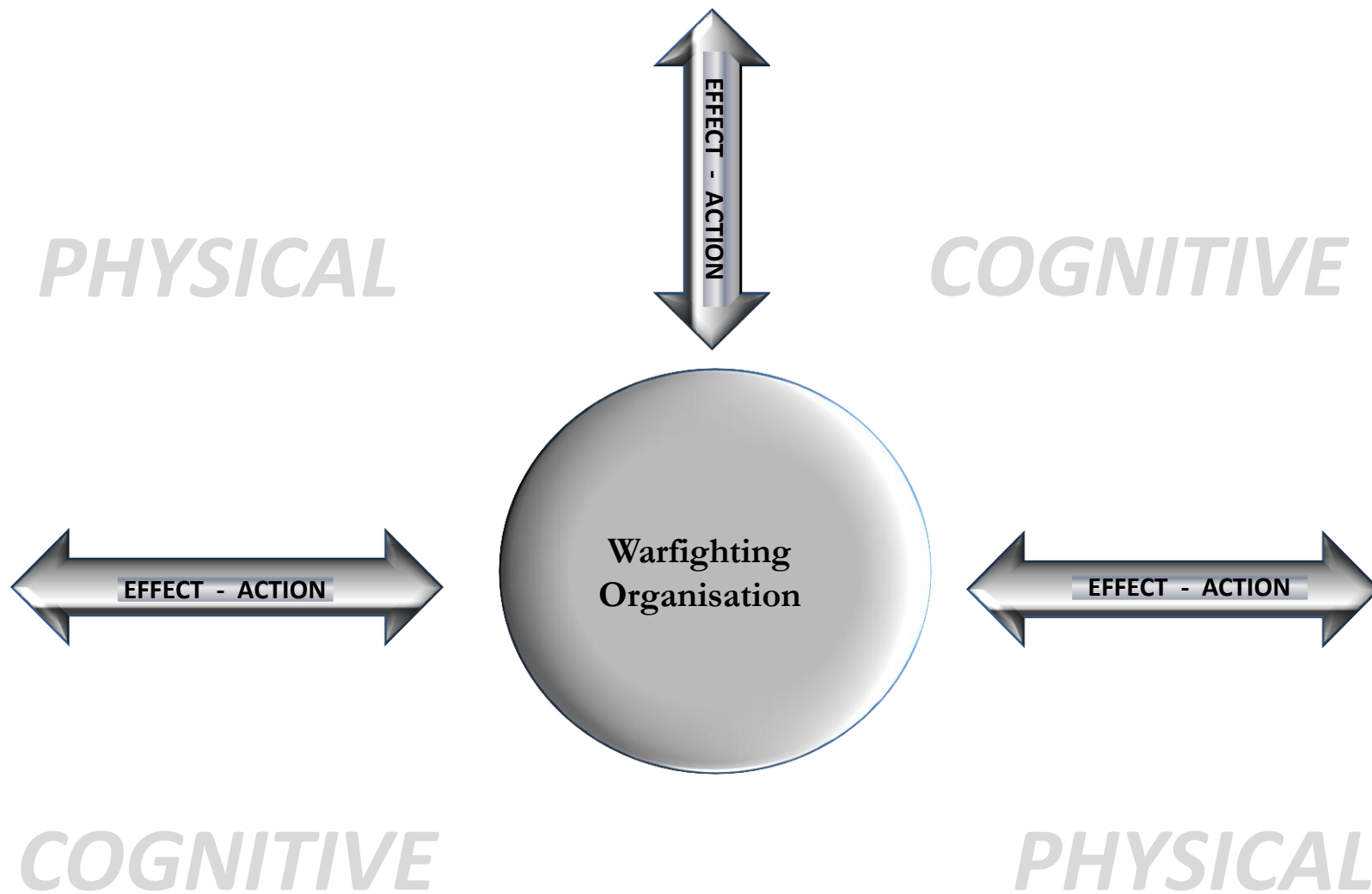
REQUIRES A CONSCIOUS APPROACH TO AGILITY



Yours ...and theirs...



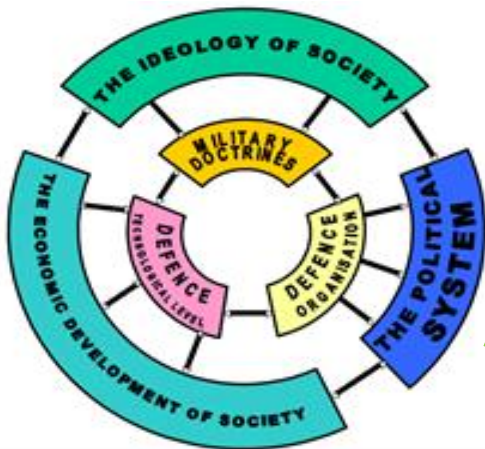
The Battlespace



Hmm... SOFCOM Motto : "He who manages intersubjectivity best – wins "...



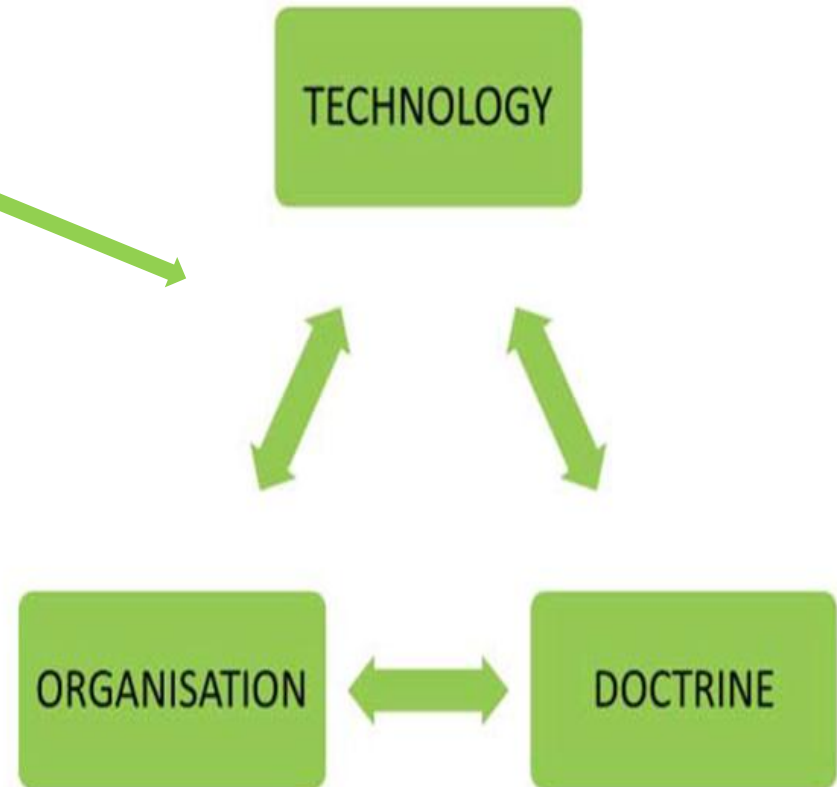
THE DANISH WARFIGHTING MODEL



The model was developed in the 1960s brought back into action in 2001 due to activist foreign policy.

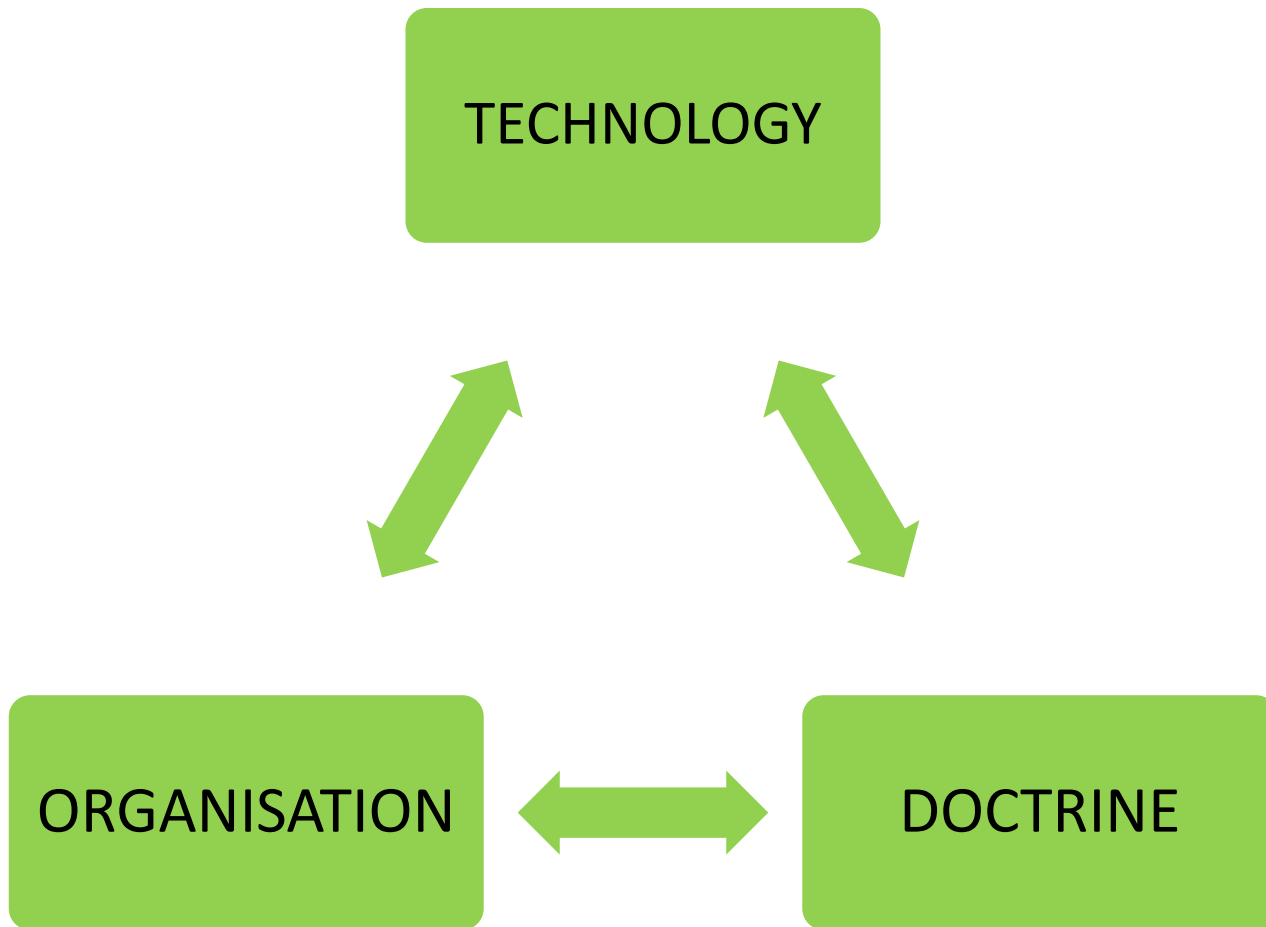
Figur x – Krigsførelsen kredsløb

- Yugoslavia
- Kosovo
- Iraq
- Afghanistan
- Horn of Africa
- Libya
- Mali
- Syria





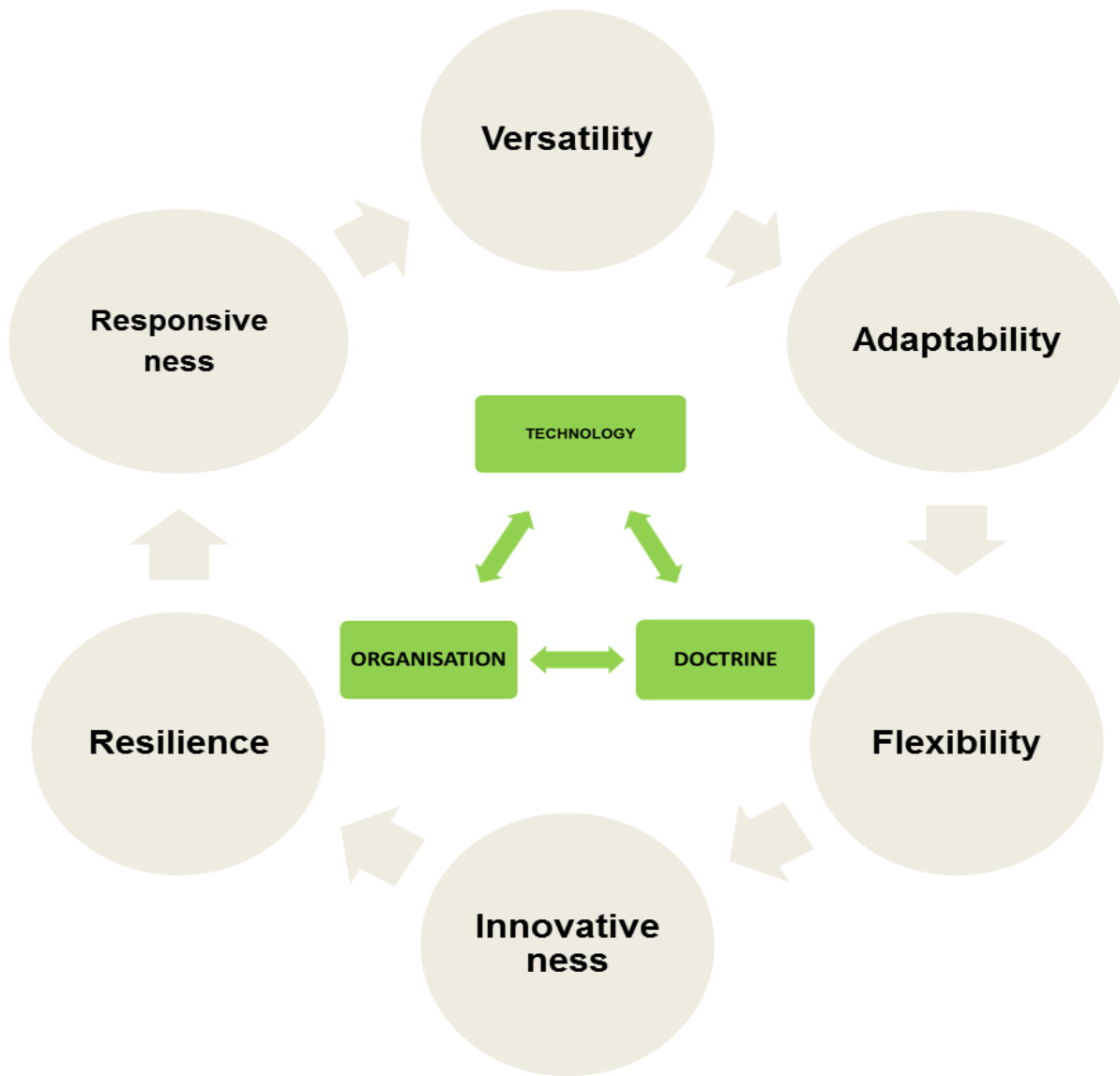
THE DANISH WARFIGHTING MODEL
(Danish "krigsføringskredsløb")
Optimality & The Warfighting Organisation



Optimality achieved through a harmonization of all 3 elements



RDDC AGILITY ASSESSMENT FRAMEWORK

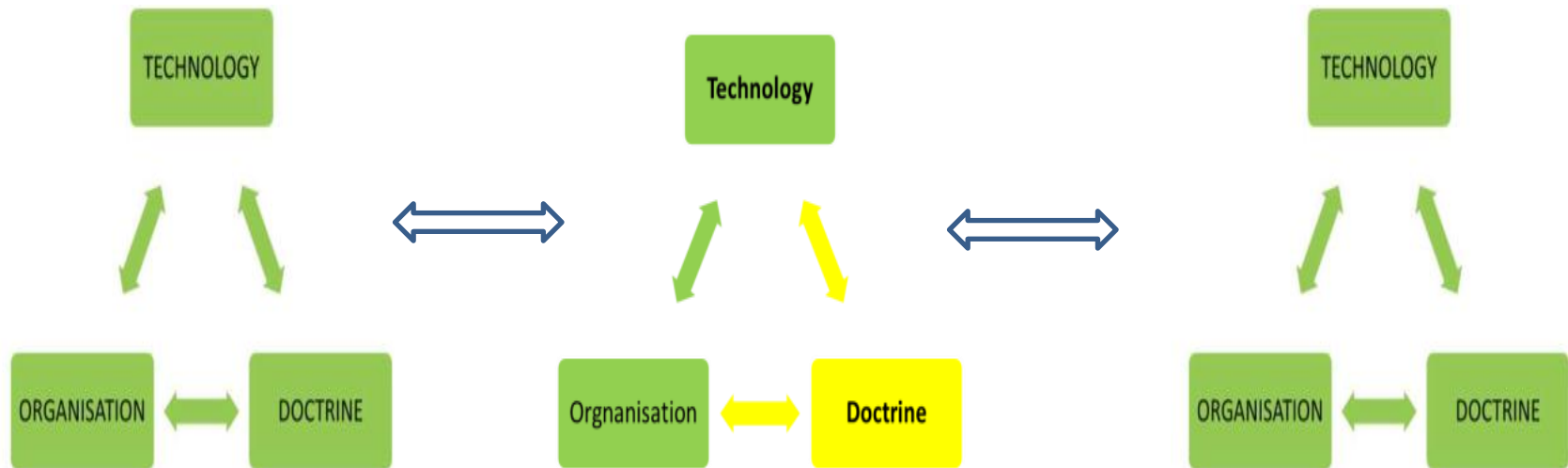




RDDC BATTLESPACE AGILITY ASSESSMENT FRAMEWORK



EX. How did doctrine affect battlespace agility for TF 444 during Operation XYZ?



Generate MoPs as defined by SAS 050 – ex. *Decision correctness ; shared awareness; action accuracy; action appropriatness; ect...*



RDDC:



MEASUREMENTS OF INTELLIGENCE ANALYTICAL AGILITY IN THE BATTLESPACE

INDICATOR	DEFINITION	More Agile when ...
Intelligence Timeliness	Extent to which currency of information is suitable to its use.	HIGH
Intelligence Currency	Difference between the current point in time and the time the intelligence was made available	LOW
Intelligence Correctness	Extent to which intelligence is consistent with ground truth.	HIGH
Intelligence Accuracy	Degree to which intelligence quality matches what is needed.	HIGH
Intelligence Precision	Level of measurement detail in intelligence item.	HIGH
Intelligence Relevance	Extent to which intelligence quality is relevant to the task at hand	HIGH
Intelligence Completeness	Extent to which intelligence relevant to ground truth is collected.	HIGH

(NATO SAS-050 Definitions)



RDDC Agility Research

Dept. of Joint Operations

(WARFIGHTING CONTEXT ONLY)

BATTLESPACE AGILITY

The speed at which knowledge is turned into the appropriate actions for desired effects in the battlespace.

(speed & precision)

FOCUS SQUARELY ON INTELLIGENCE

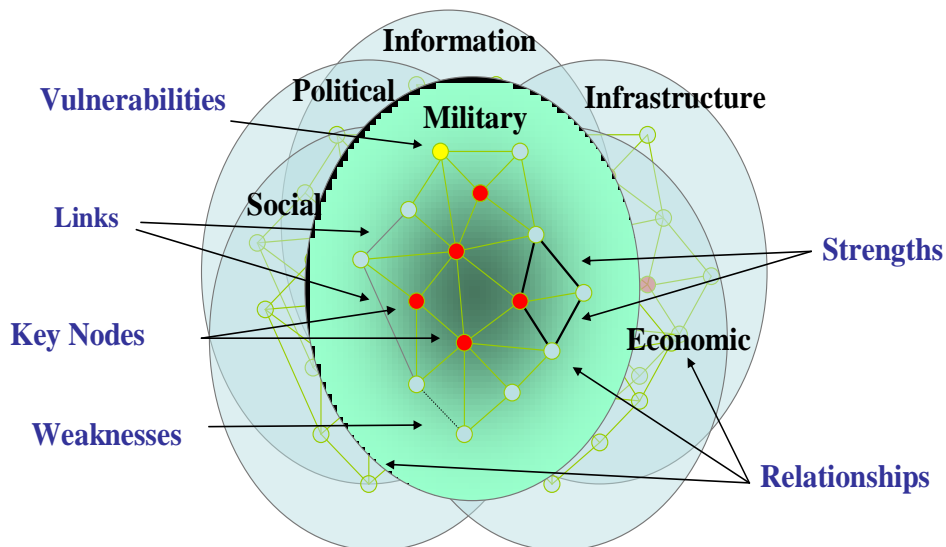
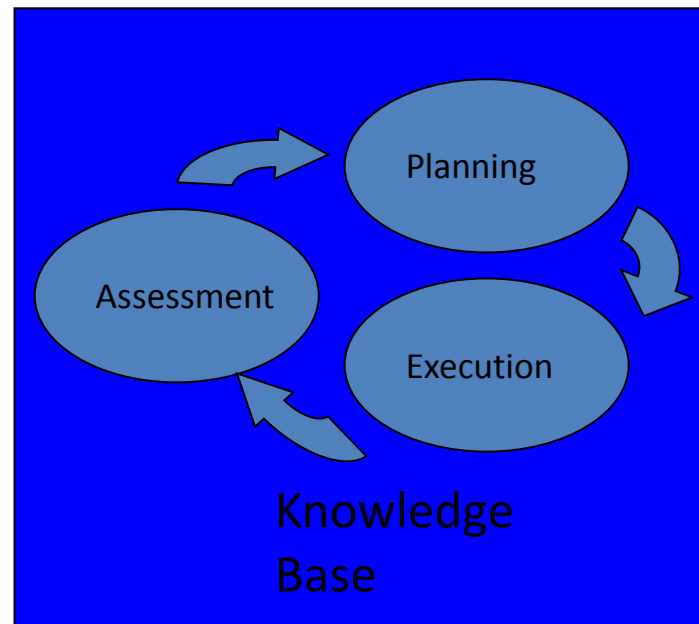
- **Axiom 1: Agility is relative (not absolute) to the situation/adversary.**
- **Axiom 2: Understanding the situation/adversary is a prerequisite for being agile.**



Scope of Agility Investigation Restricted to Existing Battlespace Operations Doctrine



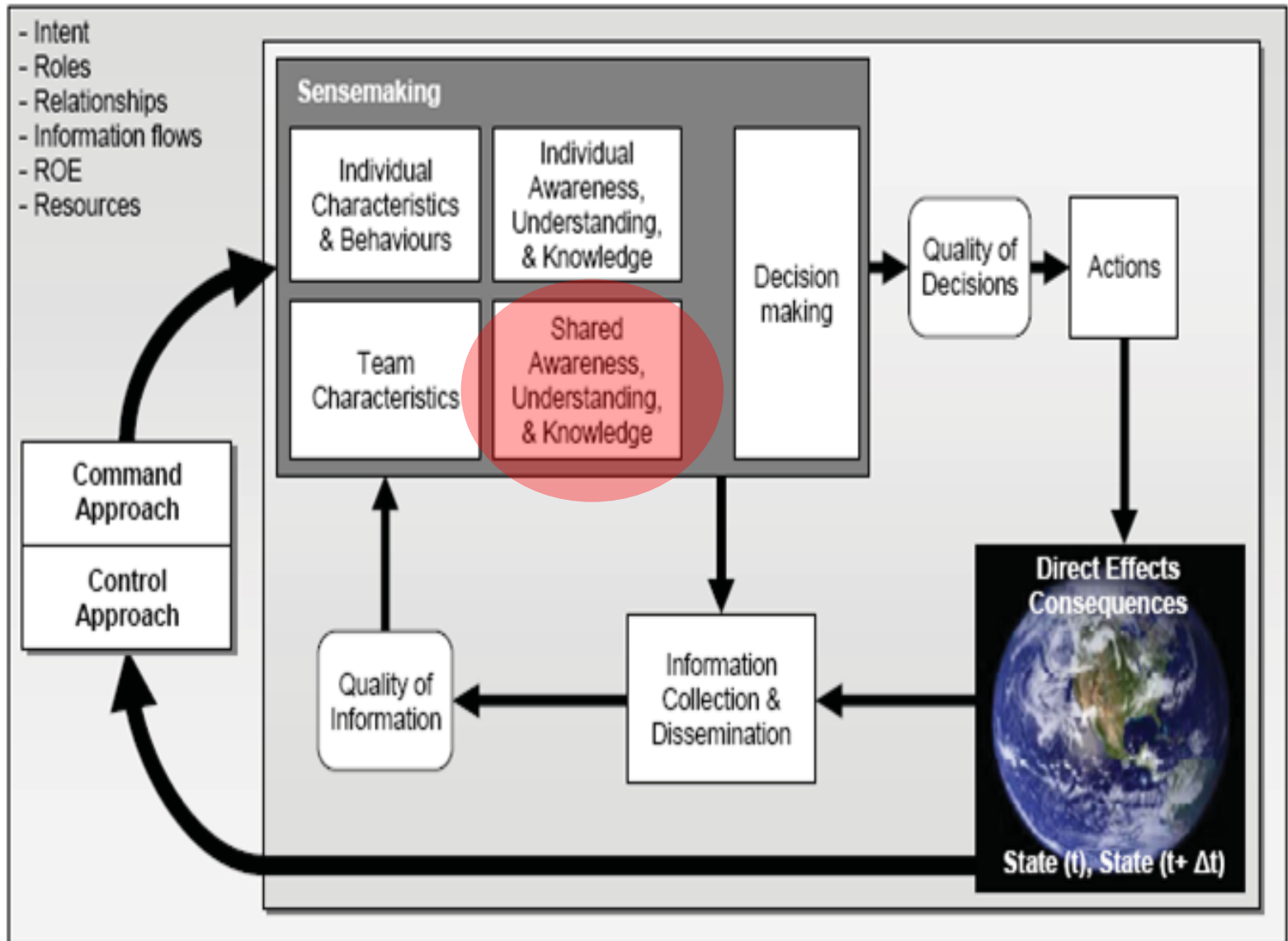
EBT



PMESII

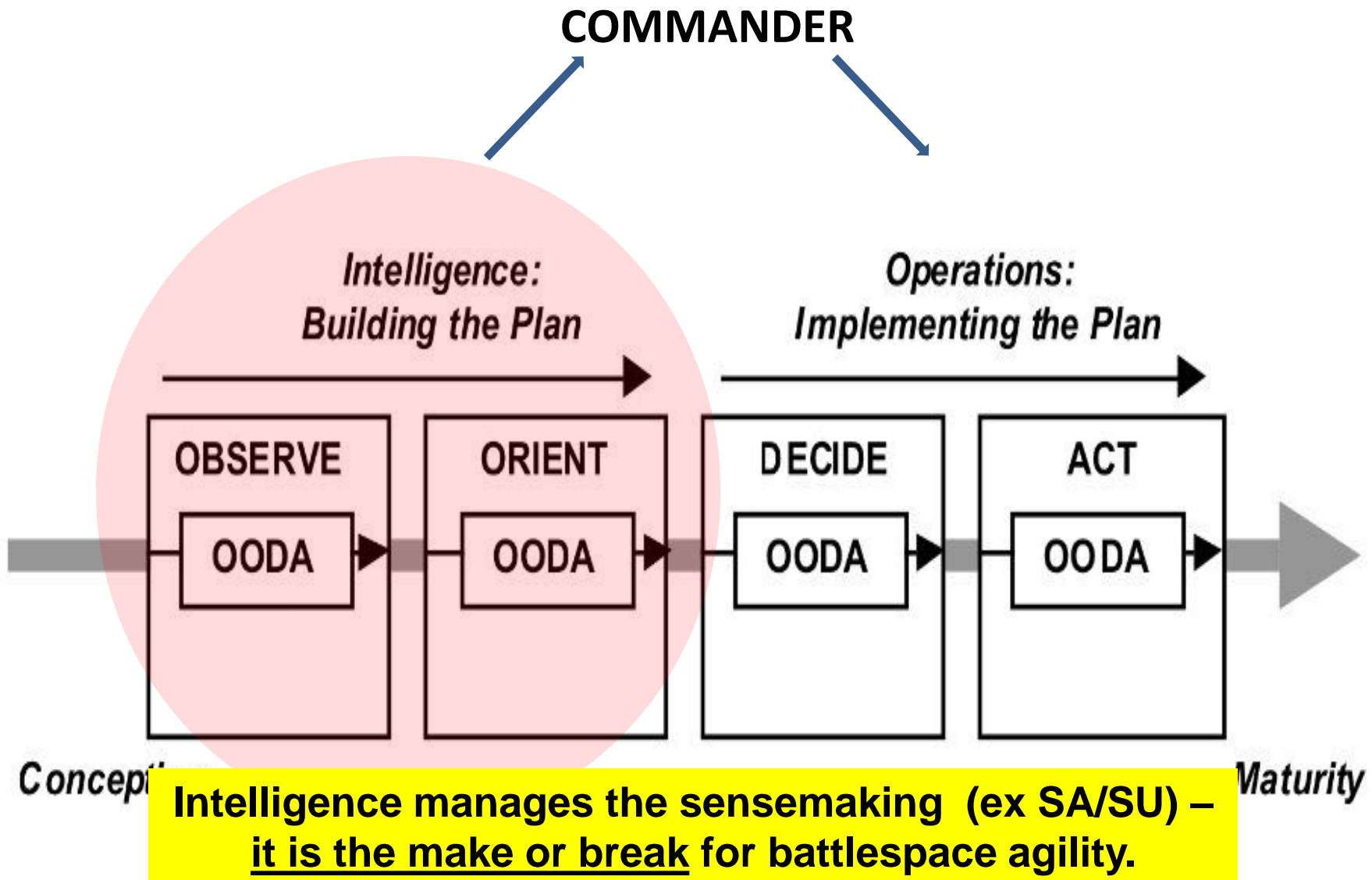


SAS 050 C2 Model – Sensemaking (INTELLIGENCE)





C2 & Warfighting



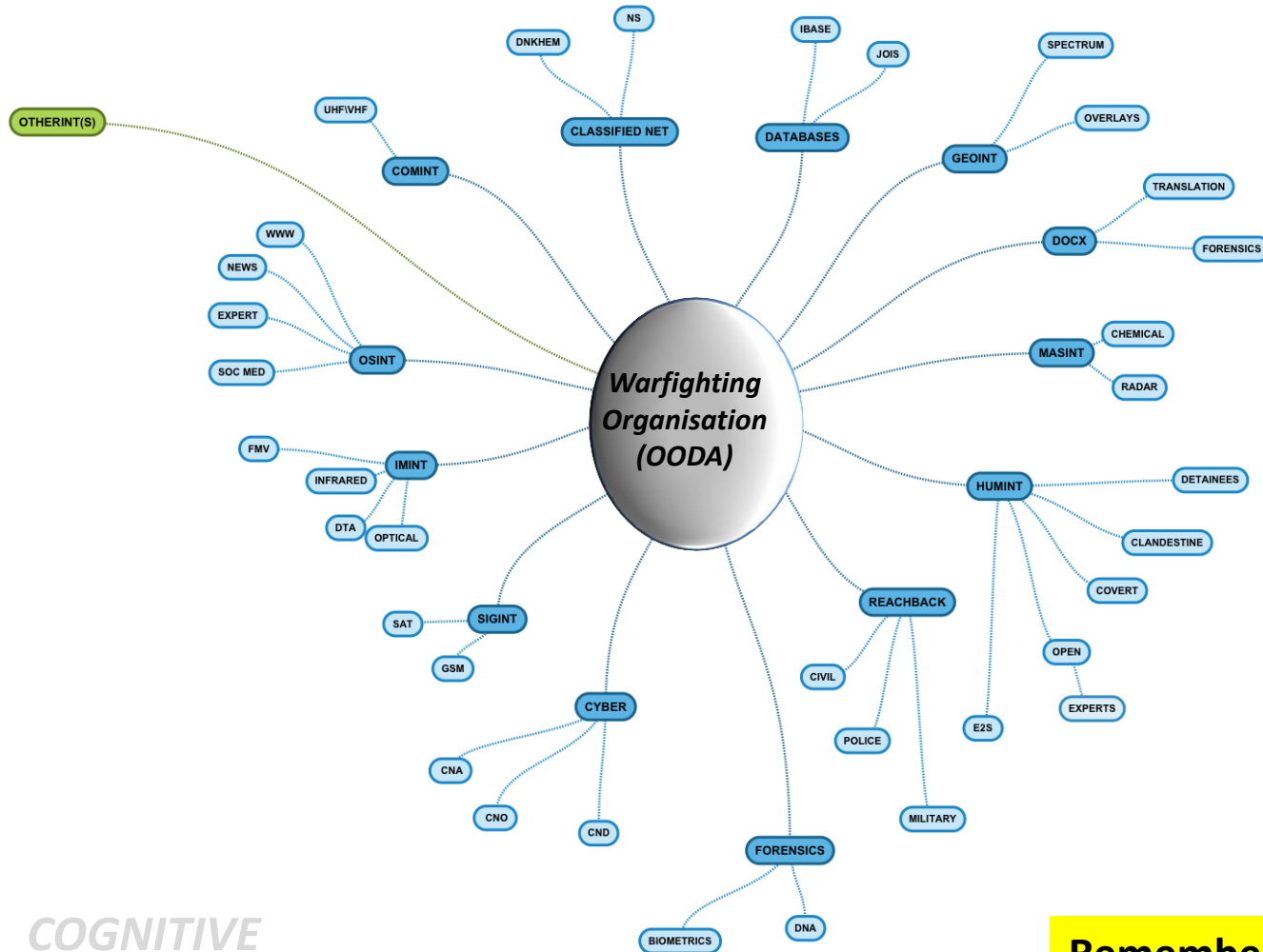


How we 'observe' and 'orient' in the battlespace is the focus of our research.



PHYSICAL

COGNITIVE



COGNITIVE

Remember we're not alone ...



COMPLETED RESEARCH PROJECTS

- 1- PROJECT AL-NUR - PMESII**
- 2- PROJECT KITAE I – C2/Helmand**
- 3- PROJECT KITAE II – SNA Helmand**
- 4- PROJECT KITAE III- HTM Helmand**
- 5- PROJECT CROWS NEST – TNM**



Project AL- NUR

No PMESII training

- Establish presence in Mogadishu and expand with main effort in Southern Somalia.
- Target extremist and encourage negotiation with all other parties.
- Humanitarian relief and CIMIC coordinated with targeting.
- When SASE is established in Southern Somalia - expand success and SASE northwards.
- Deliberate approach to DDR-process.

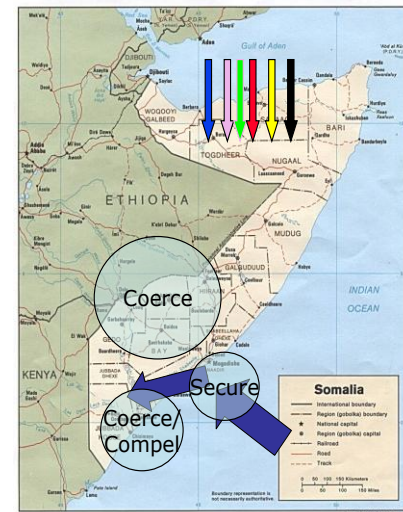
CIMIC – Civil-Military Cooperation
 SASE – Safe and Secure Environment
 DDR – Demobilise, Disorganise, Reintegrate



PMESII trained

- MD1- Establish presence in Mogadishu and expand with main effort in Southern Somalia.
- MD2- Establish small military presence in Somaliland.
- P/SD1-ID Clan Structure Key Leaders in Somaliland.
- ED1- economic incentives to key leaders
- INFOD-Somaliland
- Southern Somalia - expand success and SASE northwards.

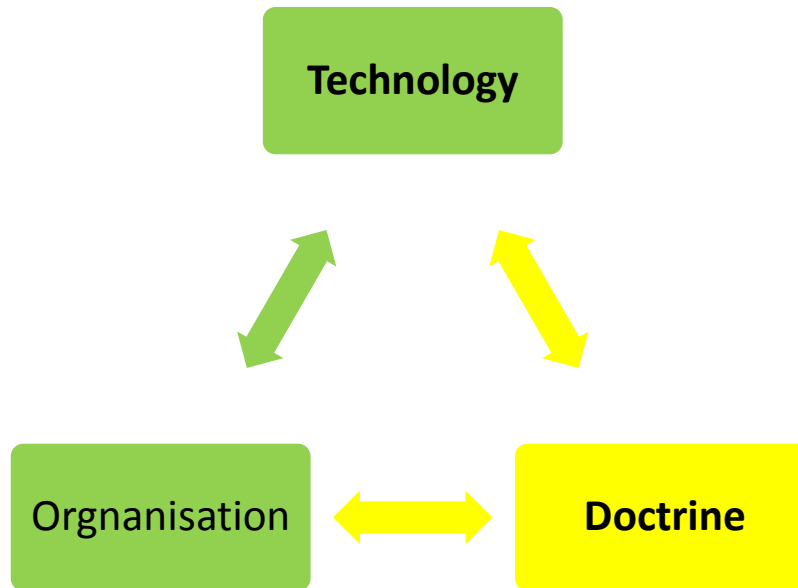
MD 1,2 – Military Dimension 1,2
 P/SD1- ID- Political/Social Dimension 1 – Identification
 ED1 – Economic Dimension 1
 INFOD – Information Dimension
 SASE – Safe and Secure Environment



Commander decided on best operational plan



Project AL-NUR Summary



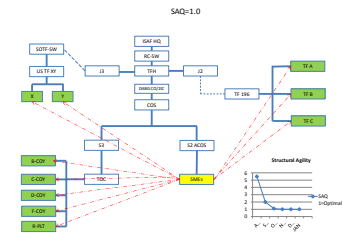
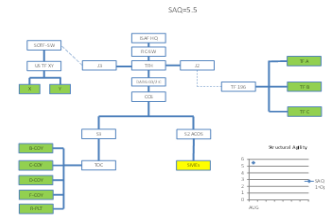
RESULT: SOSA provides more accurate SA/SU and therefore promotes a more flexible and resilient plan, increasing agility.
Need to develop HTM capacity



PROJECT KITAE I, II, II

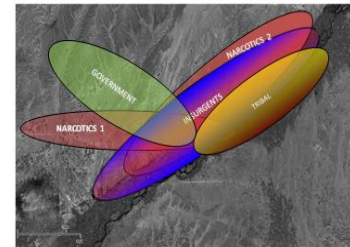


KITAE I: Battlespace agility in Helmand:
Network vs. hierarchy C2

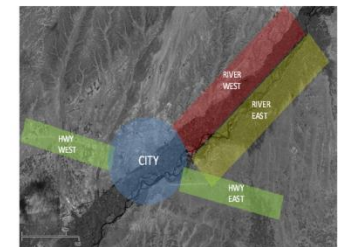


KITAE II: Battlespace Intelligence: Social network vs. traditional time and space analysis in Helmand

MAP 2.0 Wharsh Approach



Map 1.0 Traditional AO

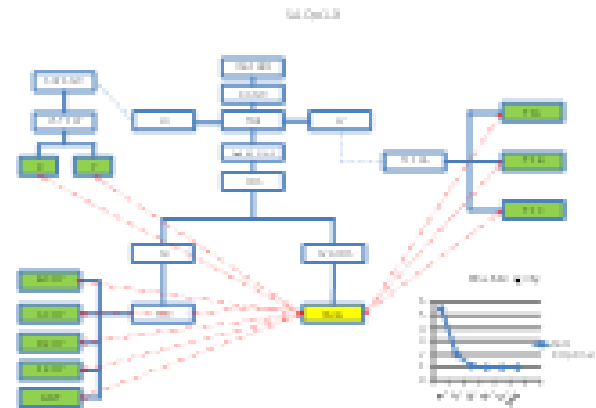
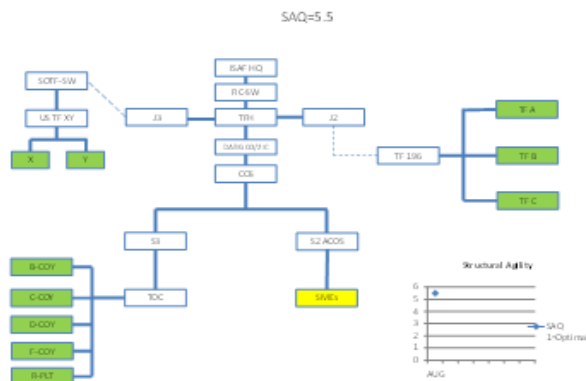


KITAE III: Unit construction for effect in a complex battlespace





Project KITAE I Summary



Technology

Organisation

Doctrine

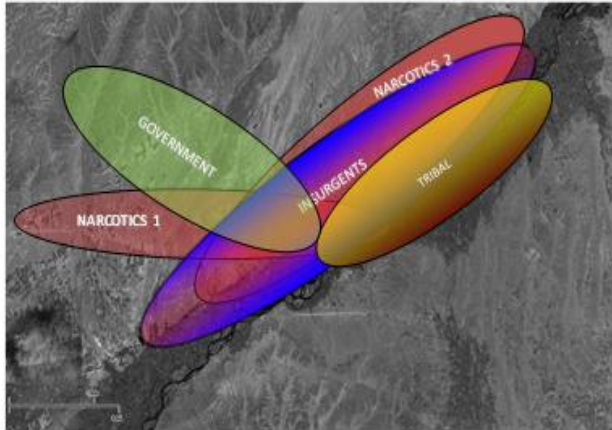
RESULT: The situation called for a greater allocation of decision rights in order to achieve a greater agility than our adversary.



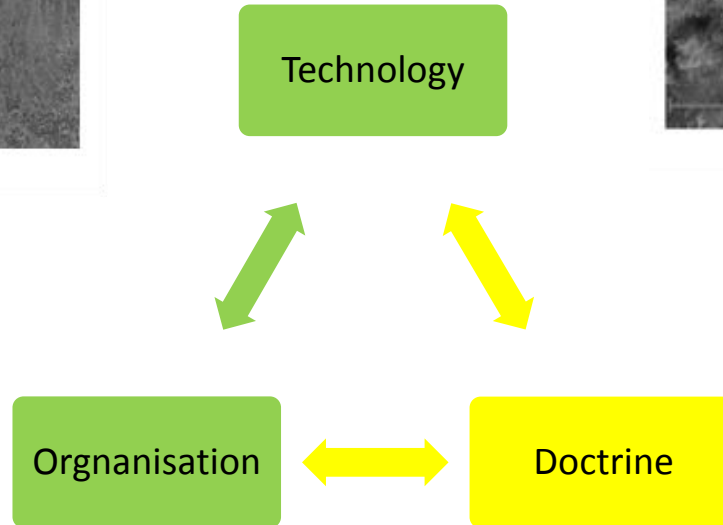
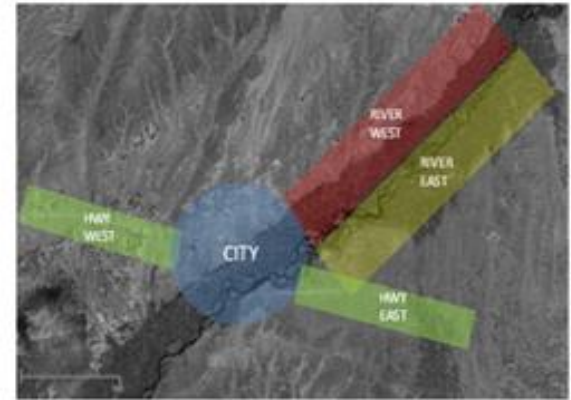
Project KITAE II Summary



MAP2.0 Network Approach



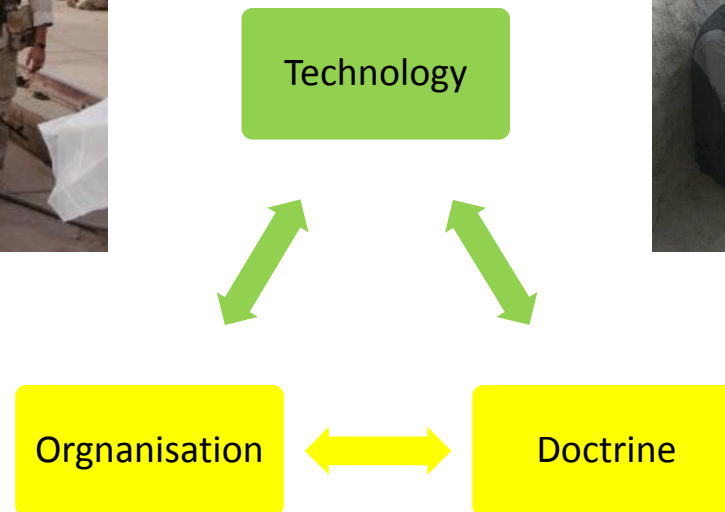
Map 1.0 Traditional A-D Division



RESULT: Time and Space IPB doctrine does not produce ground truth and reduces information accuracy, and therefore reduces agility.



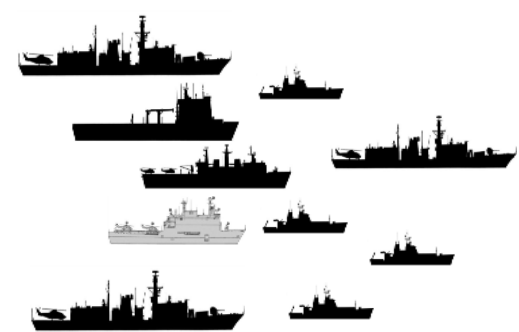
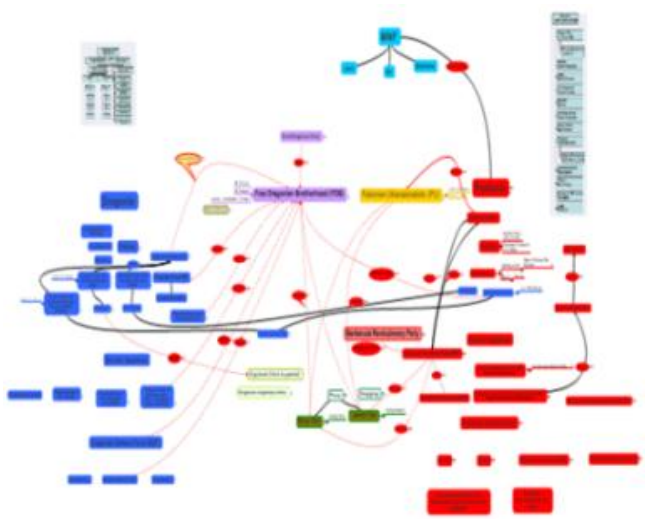
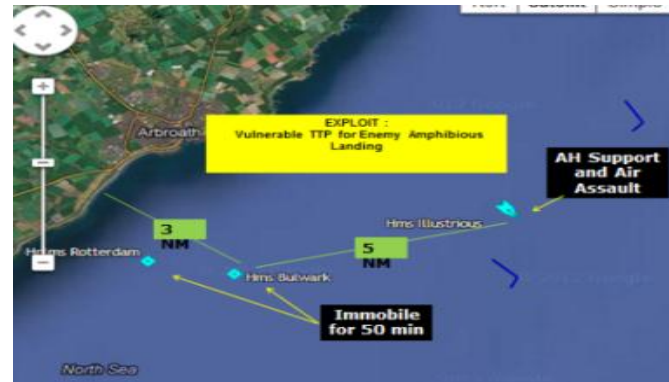
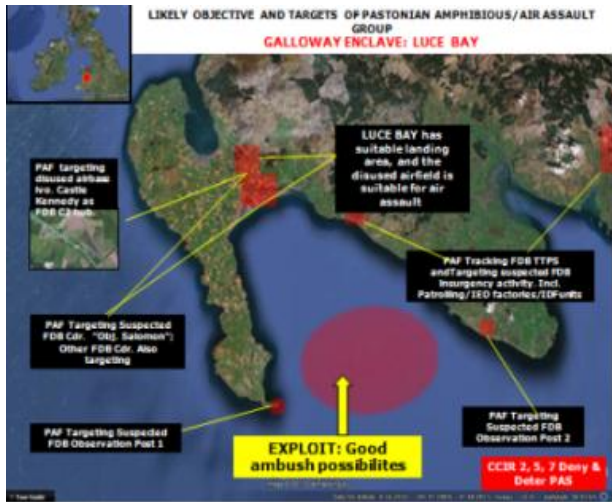
Project KITAE III Summary



RESULT: How best to organise for the collection and integrate HTM for targeting processes in the asymmetric environment.



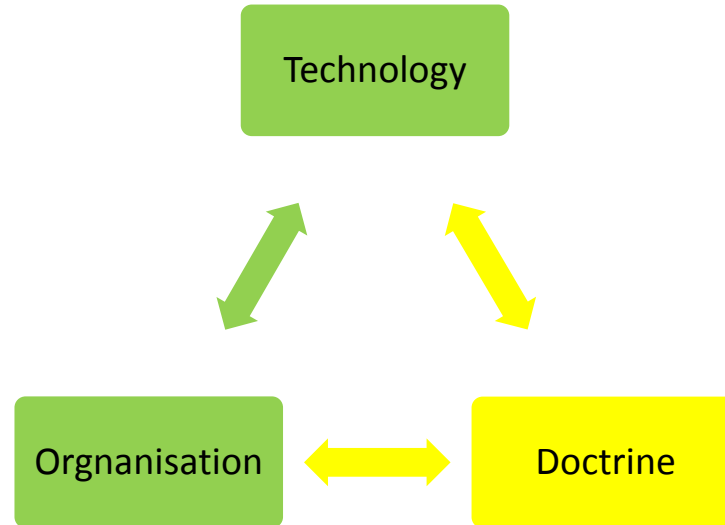
Project CROWS NEST



TEST TARGET NETWORK MODELLING FOR IPB MANAGEMENT AT SEA TO IMPROVE SA/SU



Project CROWSNEST Summary



RESULT: Adopting network target modelling increased SSA/SSU and increased the agility of the fleet versus the adversary.



RESULTING RDDC BATTLESPACE AGILITY ASSESSMENT FRAMEWORK AXIOMS



The warfighting organization should be built to anticipate change and facilitate adaptation.

1. Doctrine should anticipate change and facilitate adaptation.
2. Organization should anticipate change and facilitate adaptation.
3. Technology should anticipate change and facilitate adaptation.

Ex. Does existing doctrine, technology, organisation facilitate task force org? Does it facilitate networking?



Operationalization



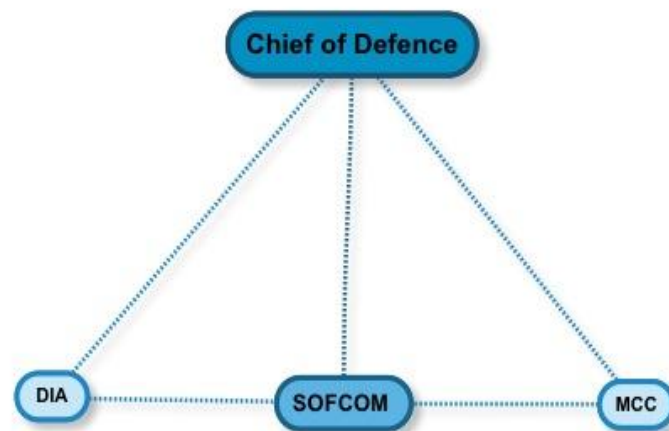
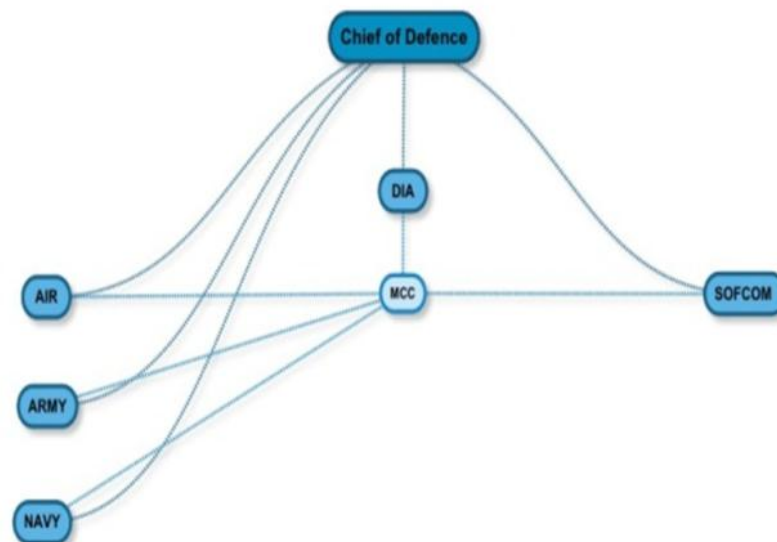
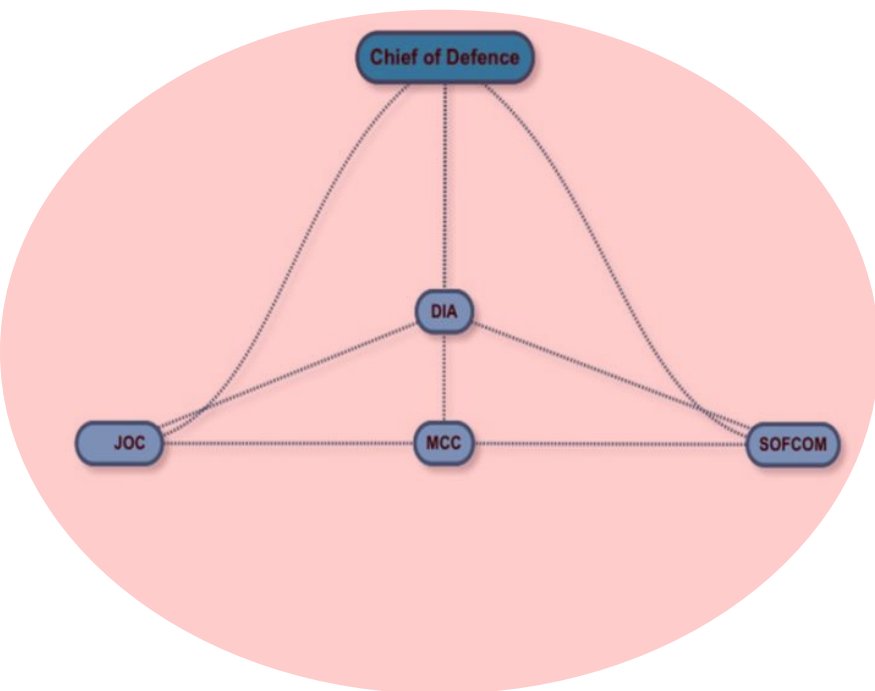
- **EDUCATION**
 - **Senior/Junior Staff Officer Courses (Masters/Bachelors Level)**
 - **Advanced Joint Intelligence Courses**
 - **Commanders Intelligence Courses**

- **DOCTRINE**
 - **AJP-2(A) Section IV – Principles of Intelligence**
 - **AJP -3.4.4 0323 Operational and Organization Patterns**
 - **AJP 1.0 0218 Evolving Character of Operations**

- **PRACTICE**
 - **Establishment of new SOFCOM**
 - **Establishment of new JOC**
 - **Establishment new military intelligence center (2 MI Battalions)**
 - **Introduction of new national intelligence C2 Architecture**
 - **Support for global US SOF Network**
 - **SOPs for N2 use of TNM**
 - **Adoption of AtN Approach**



Ex. Agility research has informed decisions on major restructuring in Danish Defence to best manage a future of complex adaptive battlespace systems





EX- Agility research has driven a renewed focus on the quality of military intelligence in terms of organization, doctrine, and technology and the development of an intelligence.

**Intelligence
Orientation for
Commanders
(OF4&OF5)**

**Joint Advanced
INTEL Course
(OF2&OF3)**

**Comprehensive
Intelligence
Analytic Course
(OR7-OF3)**

**Knowledge- &
Intelligence
training on
Military Master
Class Course
(OF2)**

**Joint Intelligence
orientation on
Officers Bachelor
School, Joint
Module
(OF1)**

**Joint Intelligence
orientation on
Reserve Officers
Course
(OF2&OF3)**



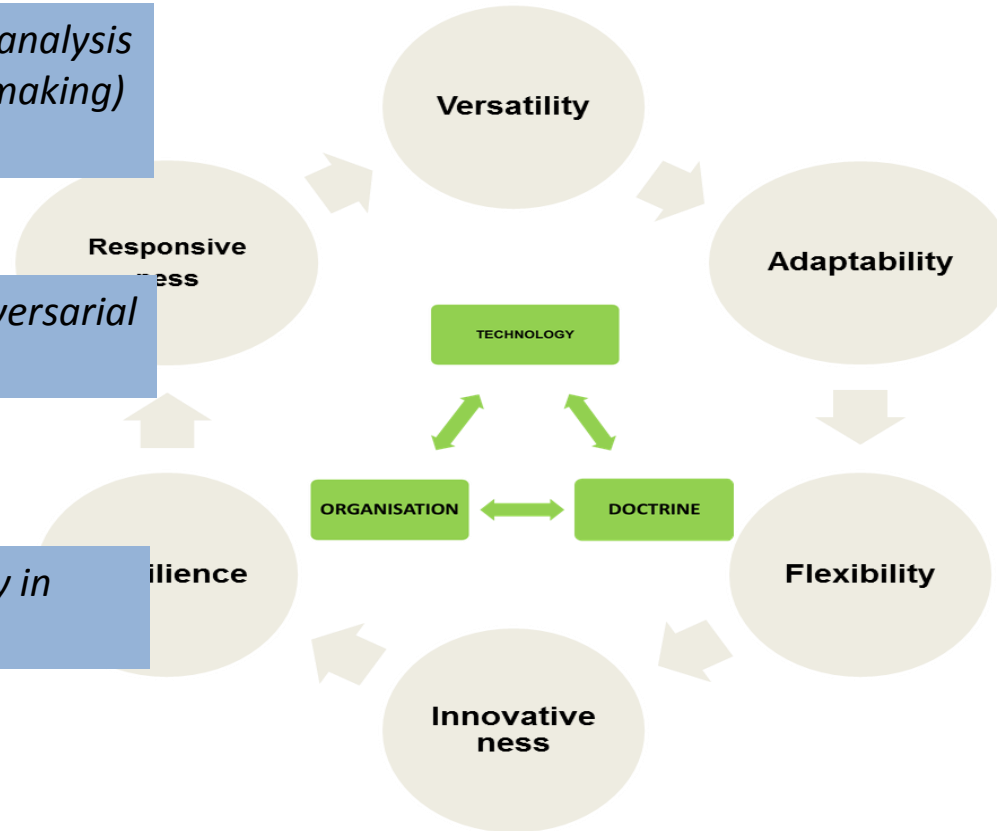
Future Research

NATO SAS-104 Agility Next Steps : 2014-2017

Thread 1: Intelligence analysis methodologies (sense-making) AtN

Thread 2: Defining Adversarial Agility

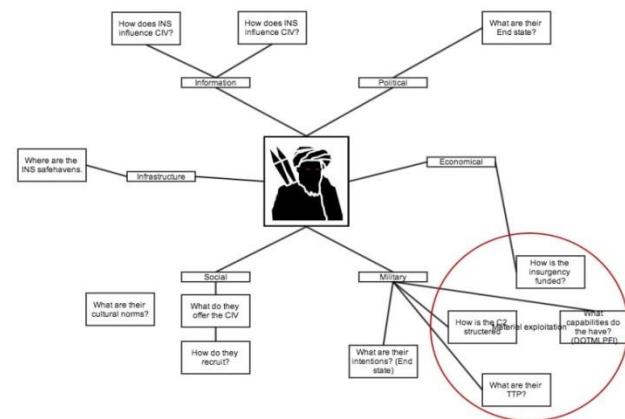
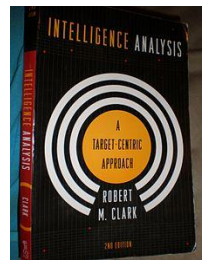
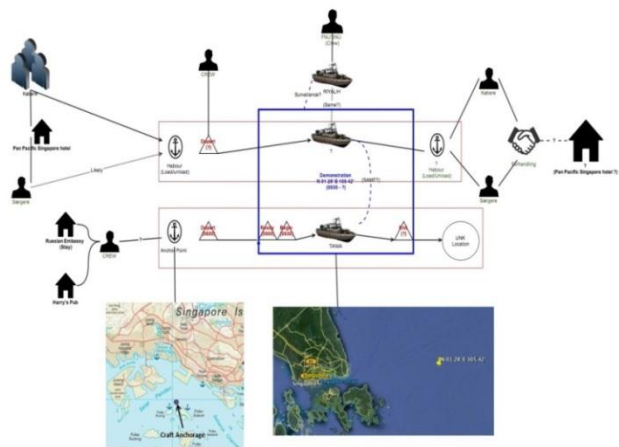
Thread 3: Role of Agility in Deception & Surprise



Ex. What are the effects implementing doctrine X,Y,Z on the operational responsiveness of the military organisation/unit?



THREAD 1: Focuses on increasing the military organisations agility through the further development of tests and SOPs regarding Target Network Modelling (TNM) and other structured analytical techniques for managing and communicating SA/SU.



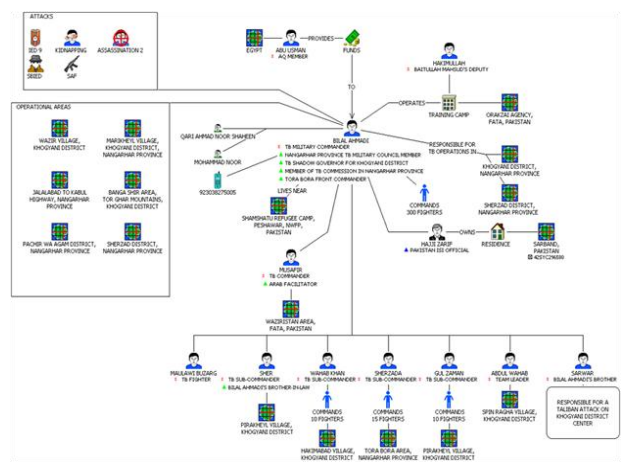
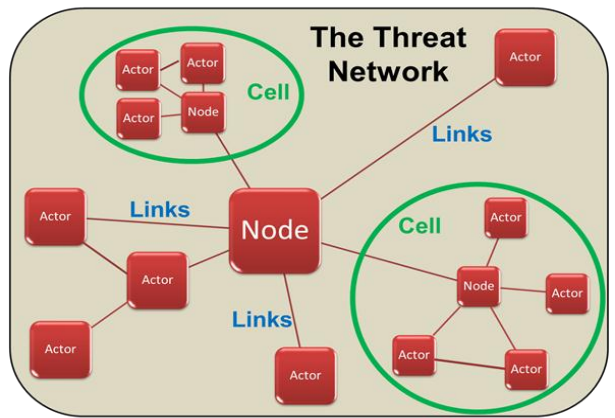
The Intelligence Target is Three Things...

- It is Complex
- It is a System; it has
 - **Structure** - components and their relationships
 - **Function** - results produced
 - **Process** - sequence of activities or events
- It is a Dynamic Network

Your network:
Customers
Collectors
Processors
Analysts

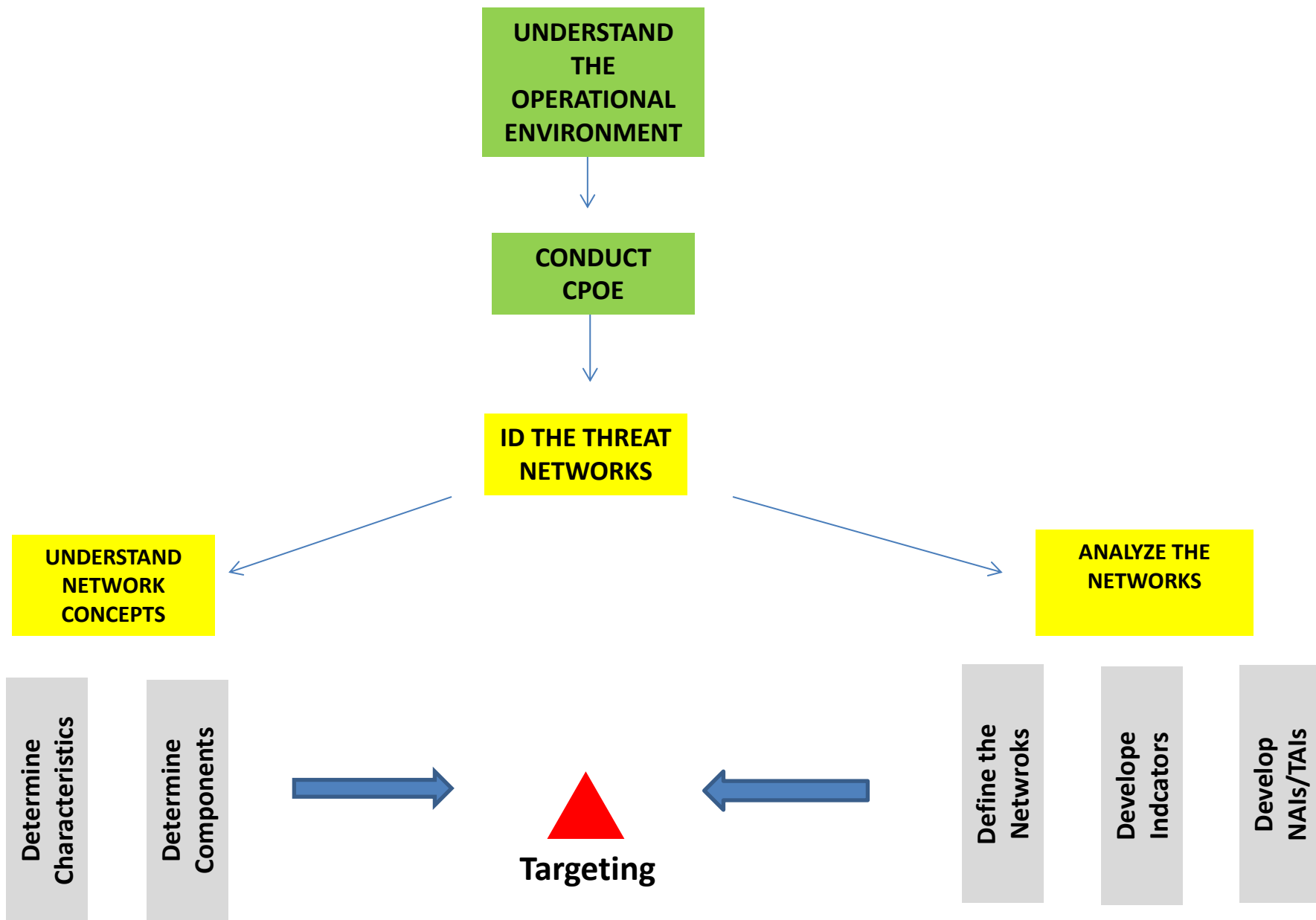
The target network:
People
Places
Things
Organizations

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Thread 1: Attack the Network (AtN)





Thread 1: Major change to operational planning approach...

20th Century

1. Organize
2. Intent
3. Plan
4. Execute

VS.

21st Century (AtN)

1. Understand
2. Plan
3. Organize
4. Execute

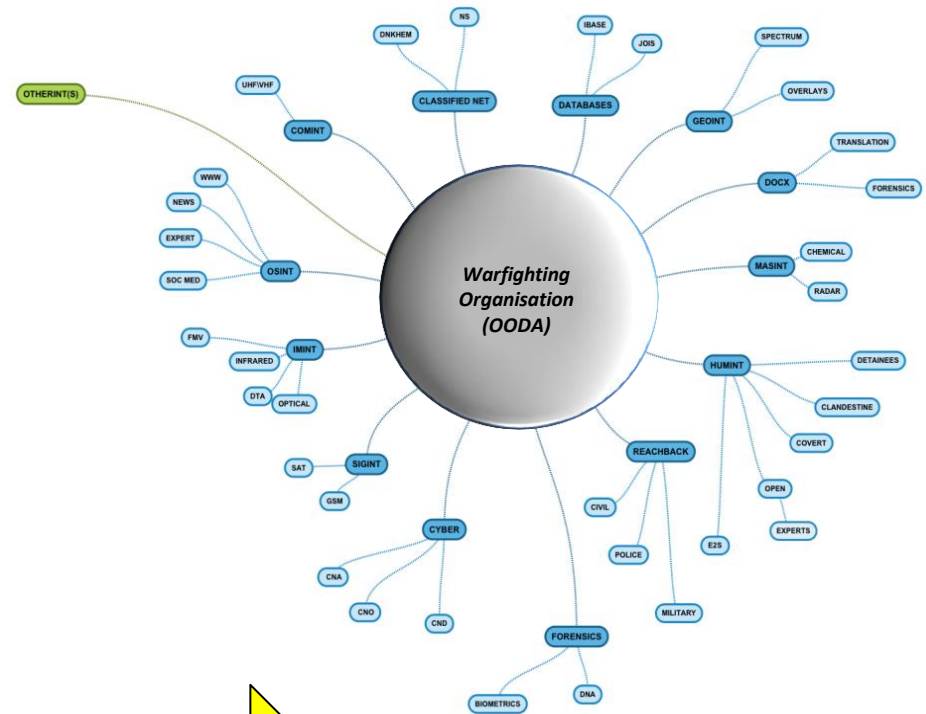
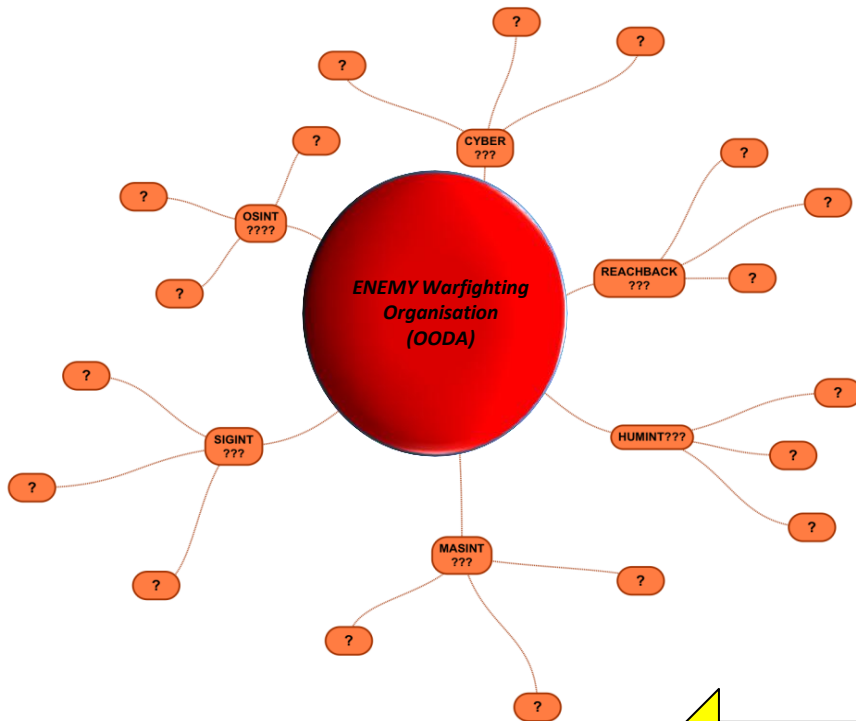
Which approach best facilitates agility and how?



Thread 2: What about the adversaries agility?

PHYSICAL

COGNITIVE

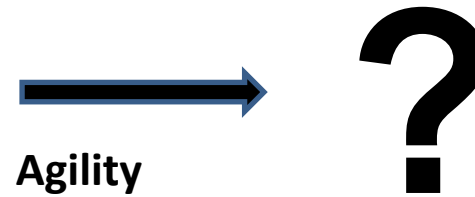
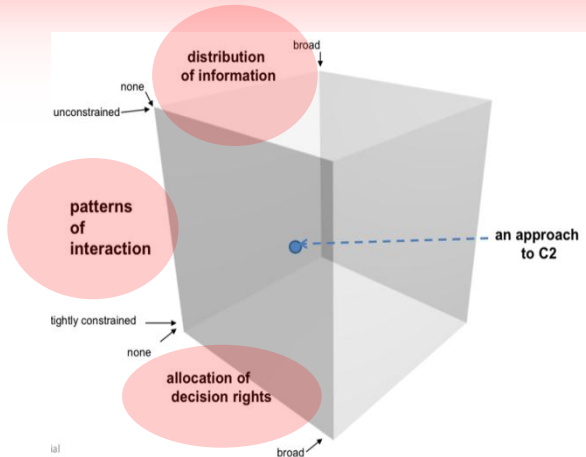
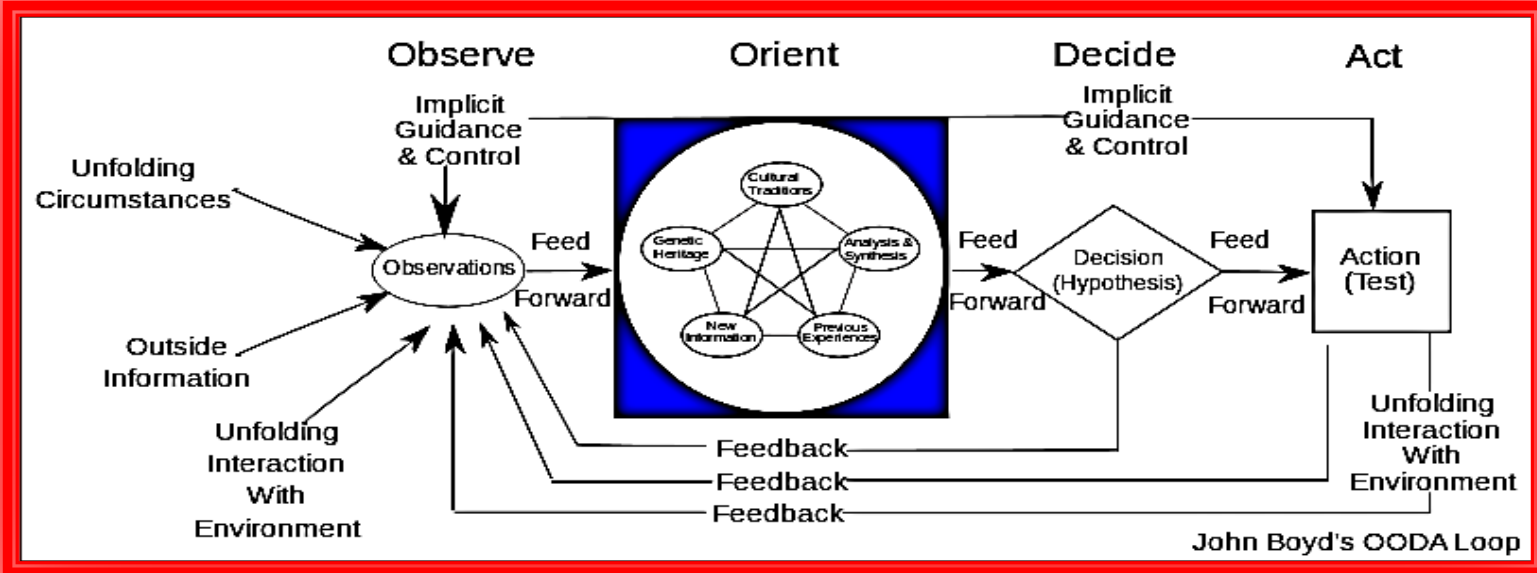


COGNITIVE

PHYSICAL

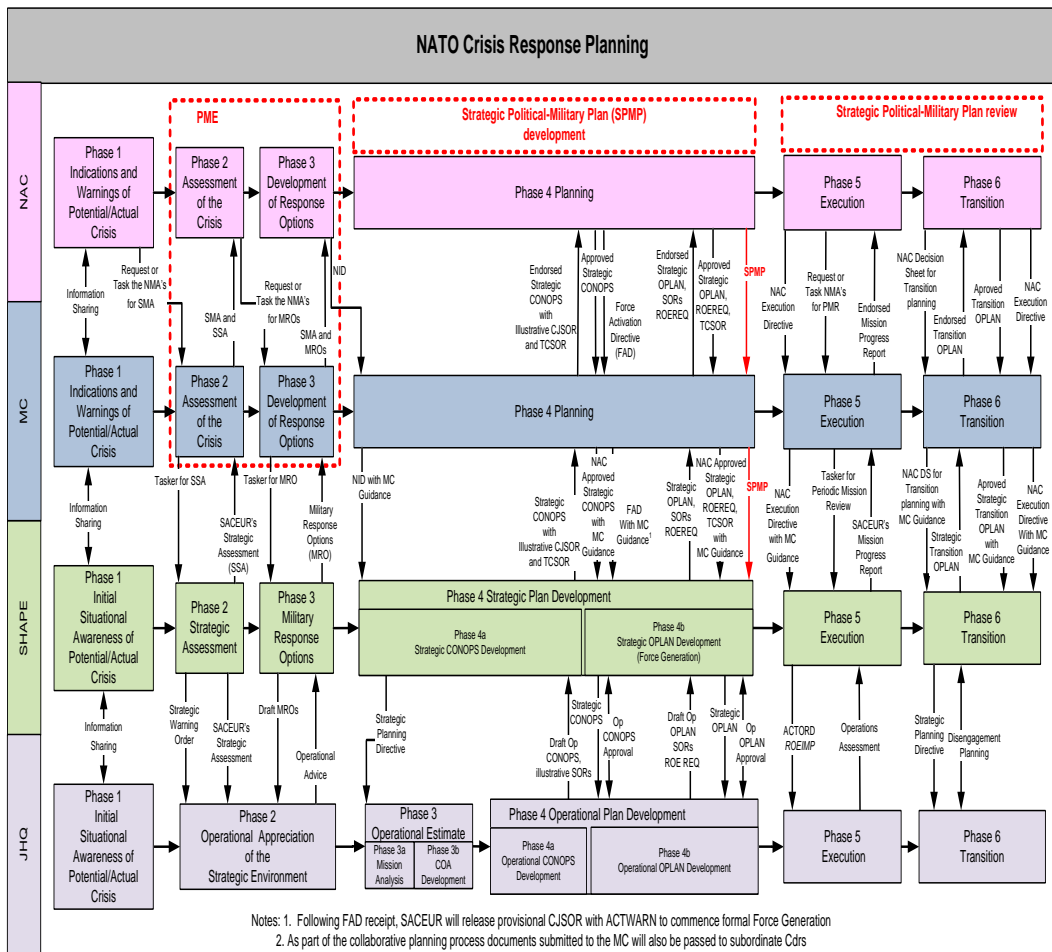


Thread 2: The Adversary





Thread 2: EX. Target modelling your adversaries agility where it concerns allocation of decision rights, distribution of information, patterns of interaction.



VS.





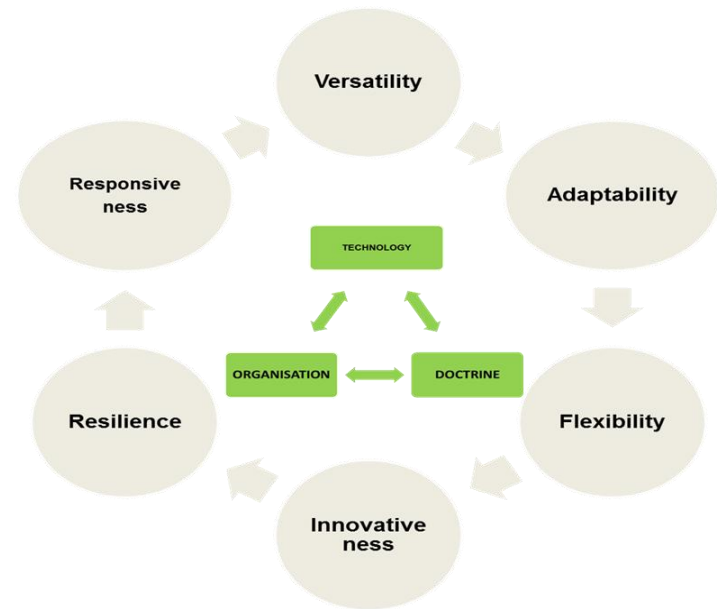
Thread 3: Role of Agility in Deception & Surprise



Modes of Surprise



- **Place** – Point, location, or area threatened. Axis or direction of operations.
- **Time** – Unexpectedness of timing measured in minutes, hours, days, and weeks.
- **Strength** – the amount of forces or assets committed to the operation.
- **Intention** – The scope of fundamental preferences
- **Style** – The form or fashion that the operation is carried out.





Dept. Of Joint Operations on Twitter:

BattlespaceRD4G

Point of Contact:

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Email: imo-11@fak.dk