Fleet Disaggregation – Sense, Decide, Effect

Andy Mitchell

Deputy Director – Navy Capability Sponsor

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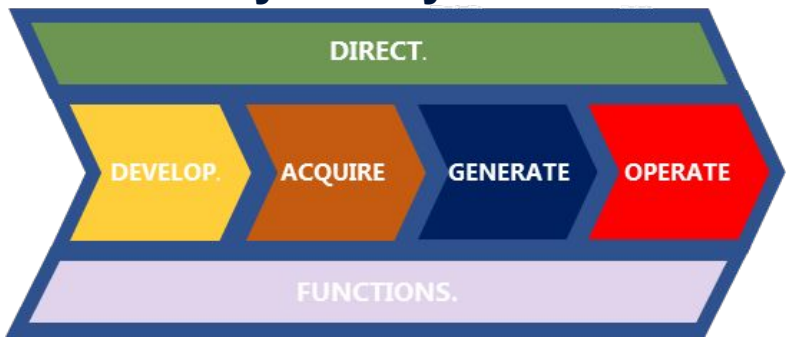
Navy Develop's Purpose

Design and develop the *right* Navy to meet defence and naval policies and strategies, and launch the *right* change projects to deliver that Design.

Royal Navy NCOM



What is Capability Sponsorship?

We define ***Capability Sponsorship*** as …

"The top level architectural design of …,

the launching as a change programme of …,

and the monitoring during acquisition and in-service of …

… *specific maritime capabilities*."

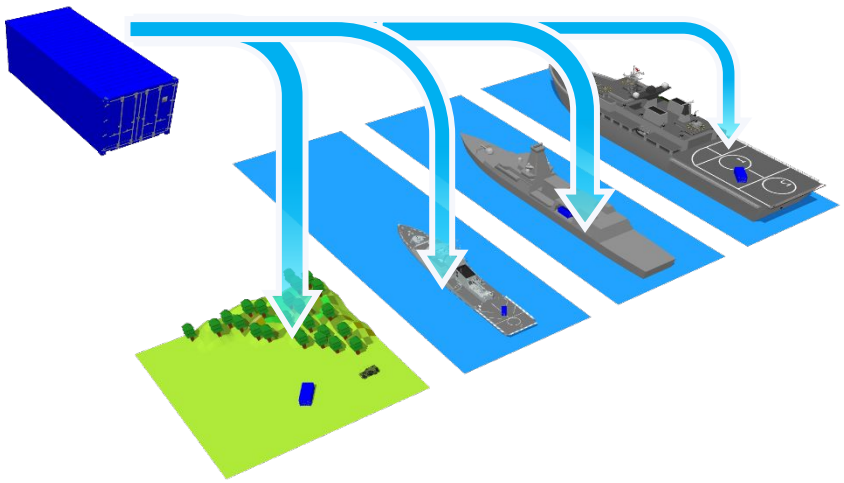
What the future Security environment means to the maritime domain

- State level competition
- Technology proliferation
- Affordability
- Climate Change
- Demographic change

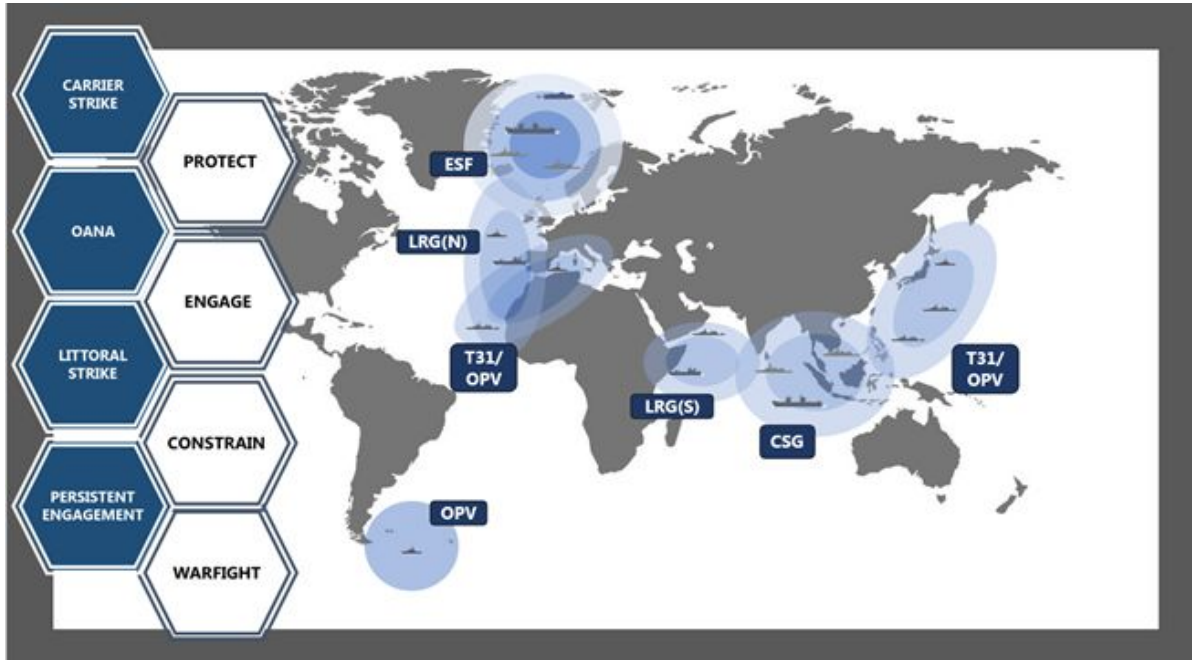
The Maritime Operating Concept

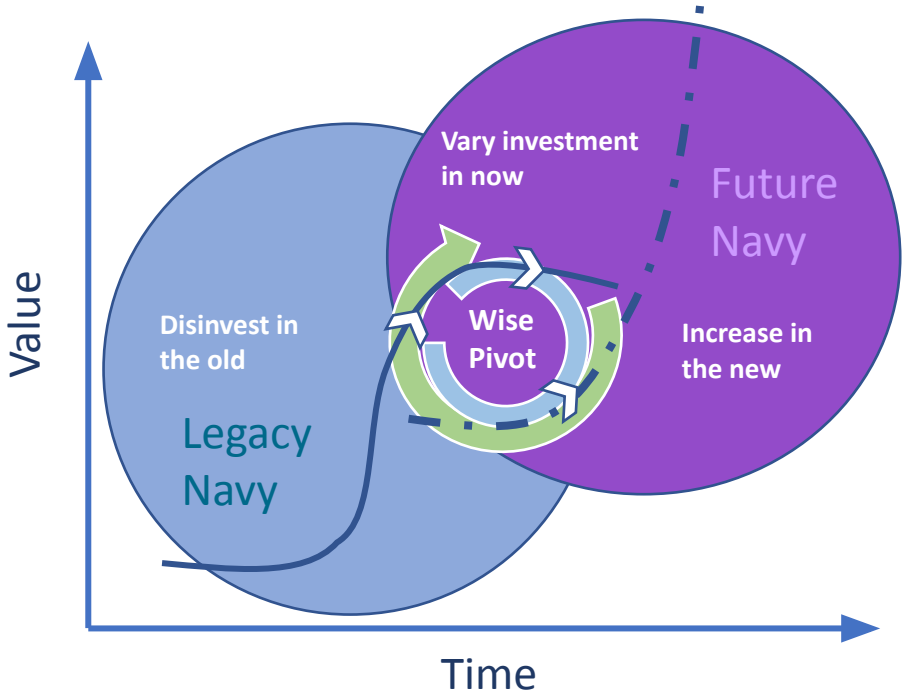
MarOpC Themes:

- Becoming a Distributed Protean Force
- Adopting a System of Systems Approach
- Executing the Wise Pivot



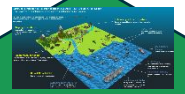
Capability not platform focussed – 'Podular' with disaggregated sensors, deciders, effectors and enablers connected via a Navy 'mesh network'





Royal Navy Outputs

Developing Capability



Operational Advantage in the North Atlantic

Carrier Strike

Littoral Strike

Persistent Engagement

Primary Functions

- **Under Water Battlespace**

- **Above Water Battlespace**

- **Commando Force**

- **Naval Aviation**

Tasks

Capabilities

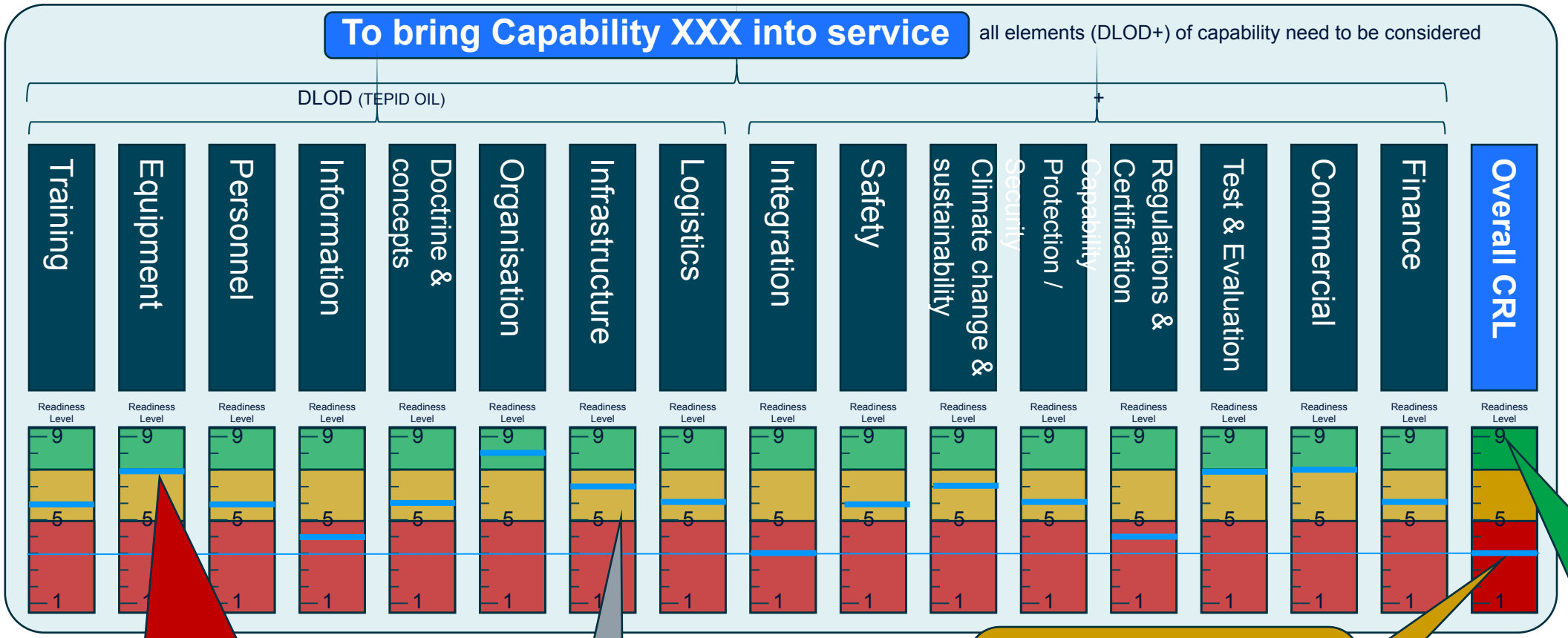
Enabling Functions

- **People**
- **Digital & Data**

- **Support & Infrastructure**

- **Tactics, Training, Trials & Evaluation (T3E)**

To bring a new capability into service, avoiding the valley of death, think Capability Readiness Level (CRL)!



1. Don't just focus on the Technology (or Equipment) Readiness Level (TRL). This is **almost never** the lowest of the capability element readiness levels.

Example Capability Element Readiness Levels for Capability XXX

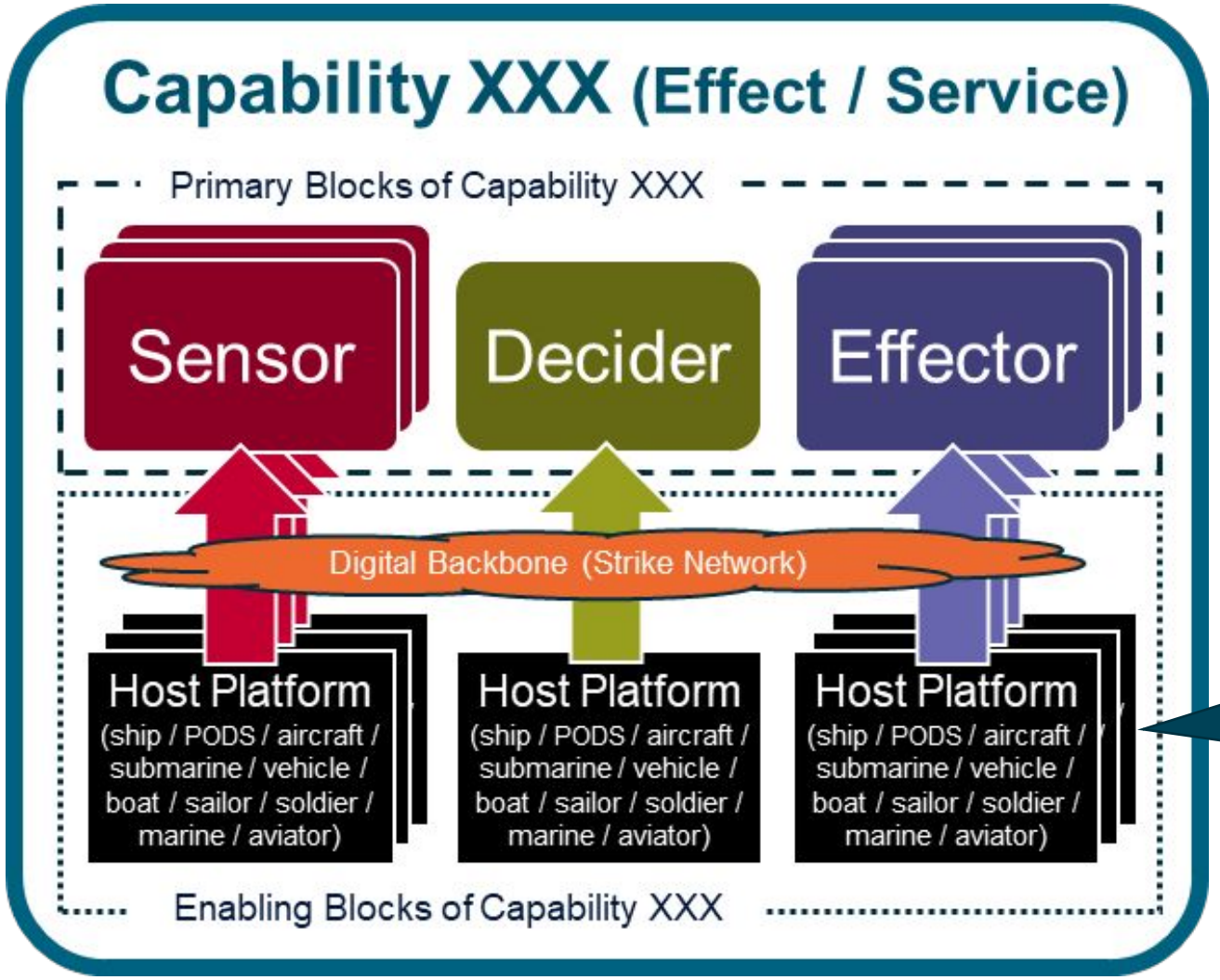
2. The overall capability readiness level (CRL) is the **same** as the **LOWEST** of the capability element readiness levels.

3. To bring a capability into service, focus on raising the level of **all** the capability elements!

Standardising how we describe Capabilities - the Capability Model

A capability model that will enable us to standardise the description of 90%+ of the Defence's capabilities.

It's a model though, so won't be perfect or able to fully describe all we do.

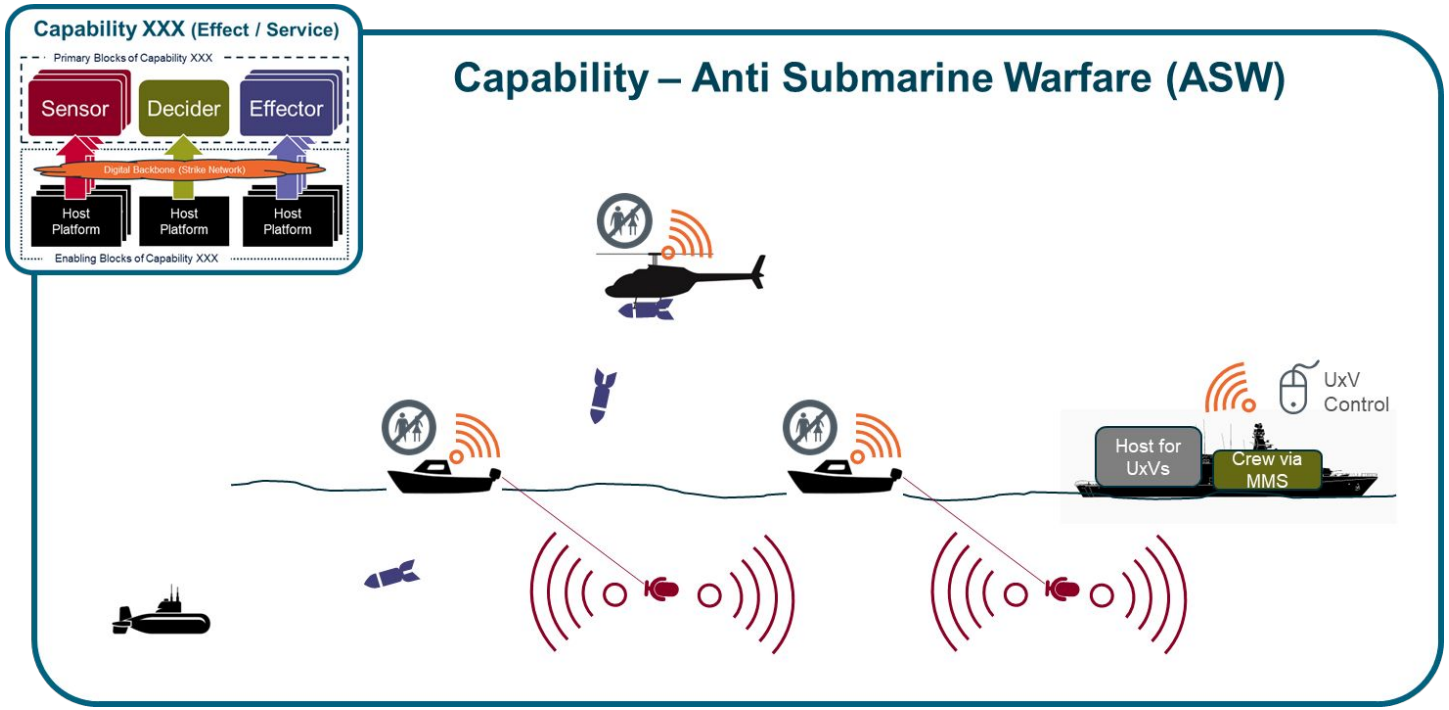


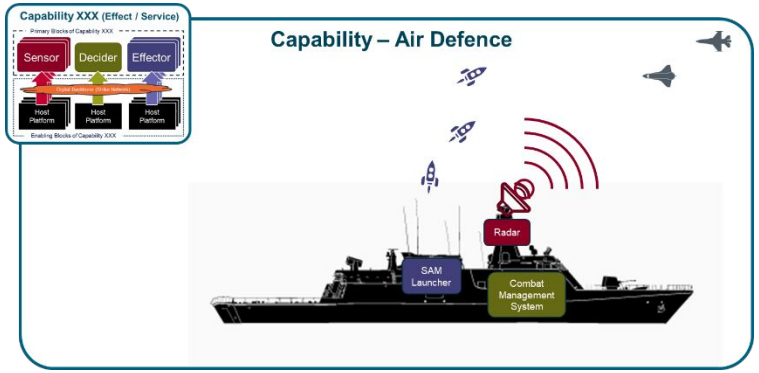
The capability may be fully hosted on one platform, or have its blocks spread across multiple platforms

Navy Systems of Systems Approach

Using SOSA to design and procure the future Navy, based around the capabilities we need;

- Surface Strike, Air Defence, Anti Submarine Warfare, Indirect Fires, Logistics Resupply, Theatre Entry, Mine Warfare, Cyber Offense, Land Strike, etc



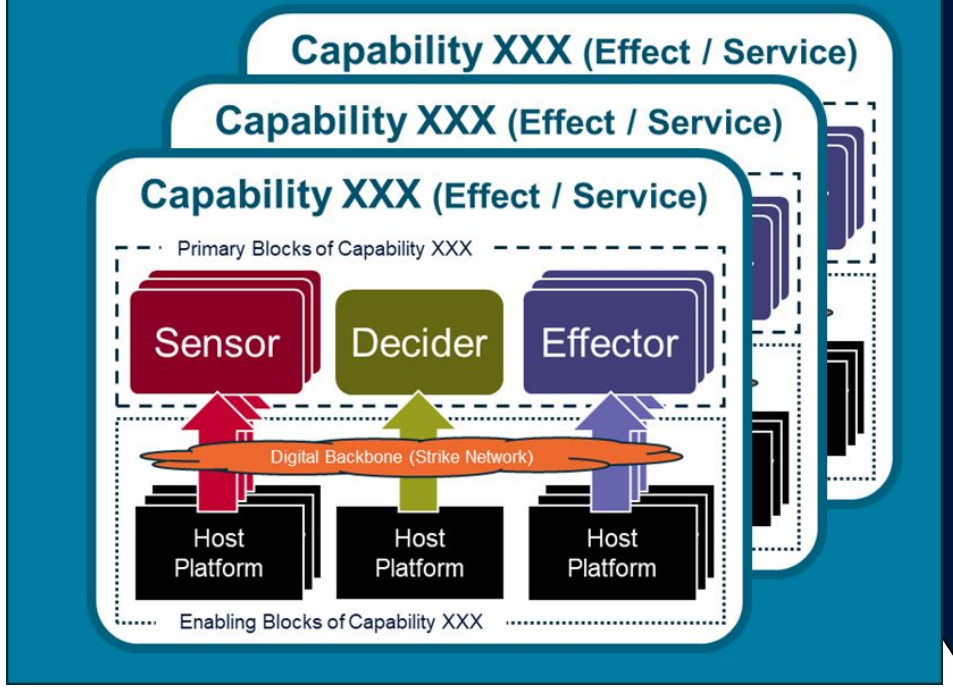


We're changing from platform primacy to capability primacy

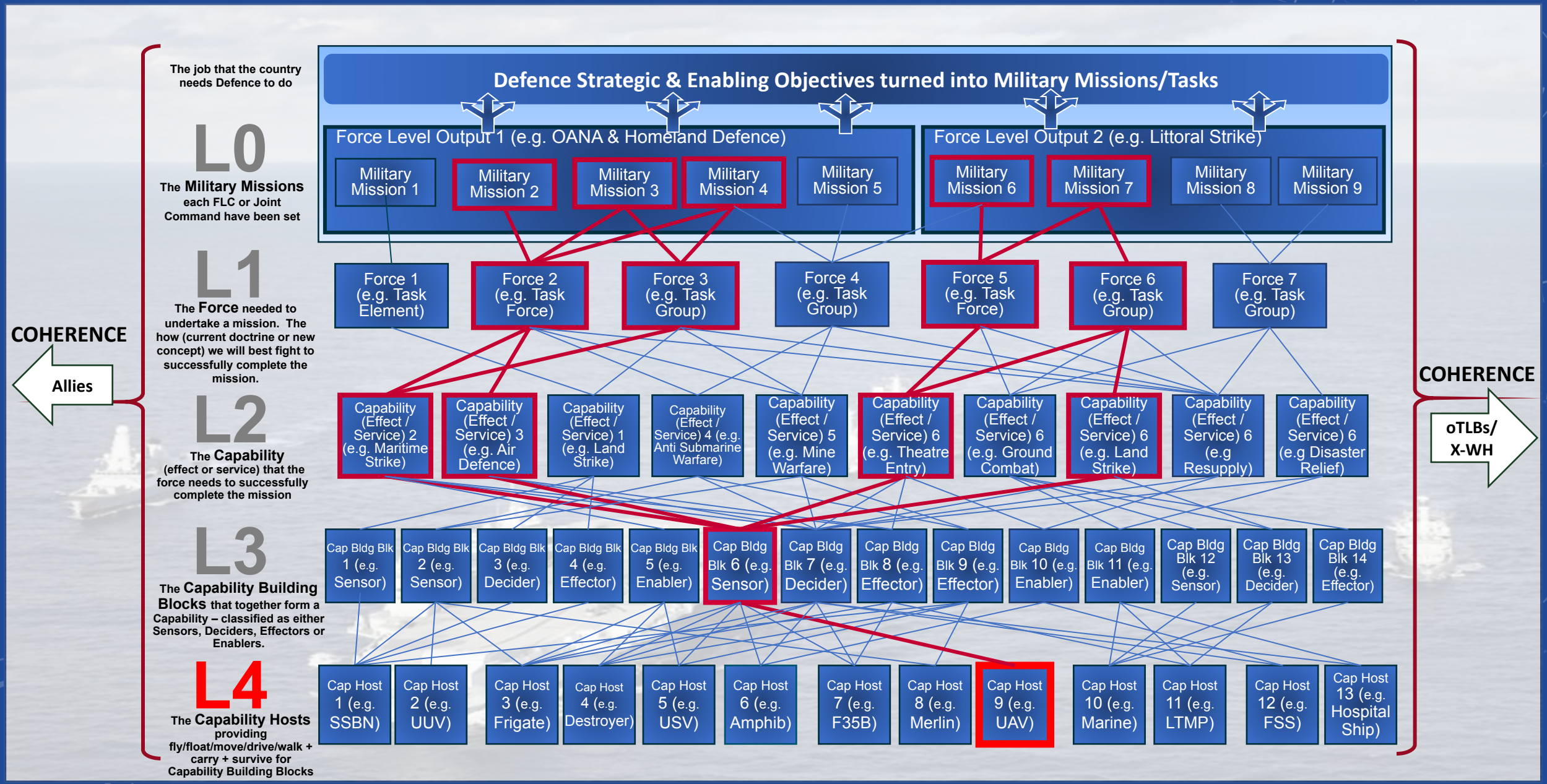
Military Mission AAA

(Objective 123, Threat 234, Geographic Location 345, Allies 456, Season 567, Political Climate 678, etc)

The Force to successfully undertake the Mission – how we will fight

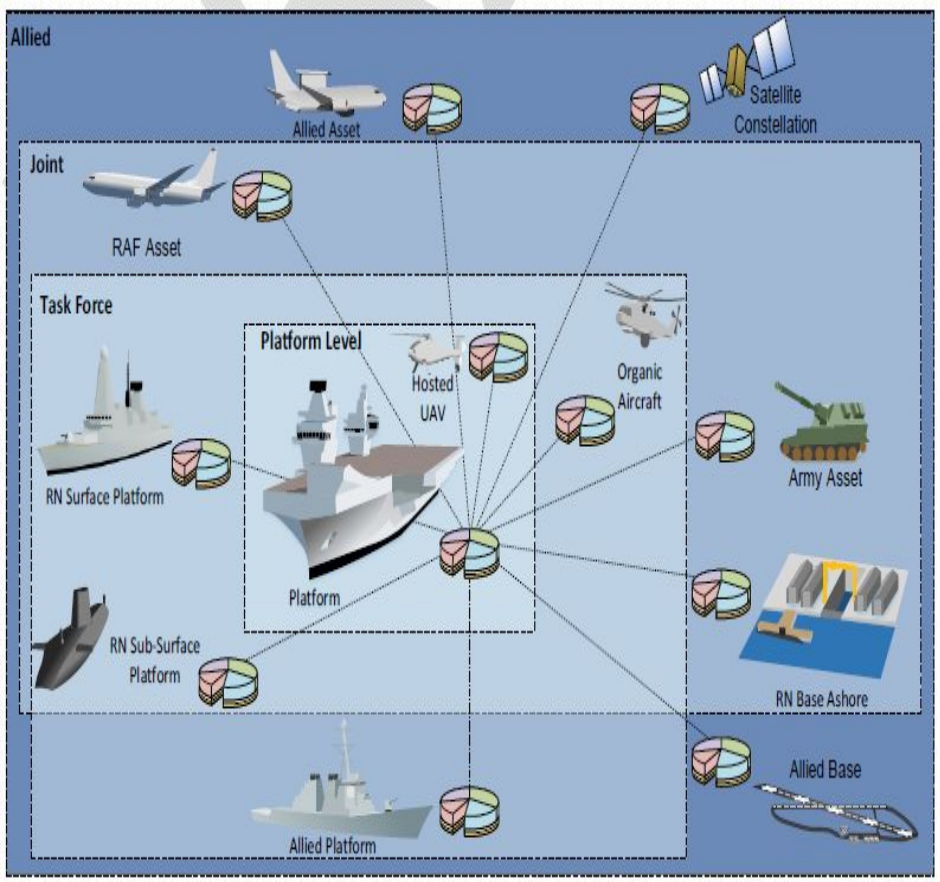


CANDIDATE DEFENCE CAPABILITY FRAMEWORK



Move away from Directional Command

Self-healing integrated network of hosts each with decide abilities



Naval Strike Network – THE key enabler

Open Standards

Industry Offerings

Technology-led Development

Operational Use Cases

1. Establish a Design Authority to

- Develop, own and manage the **architectures and standards** that define NSN Ready;
- Take an iterative, **'Use Case'** approach to examine the **data exchange requirements** of new capabilities;
- Inform the **Key User Requirements** of other projects and programmes;

2. Augment Capabilities as Required

- **Deliver solutions** for priority use cases;
- Provide evidence for C5ISR-focused programmes to **deliver common capabilities**;

3. Resource and Influence Enablers

- A **digital laboratory** for experimentation and assurance, event participation;
- Continual development through **Science and Technology** Programmes.

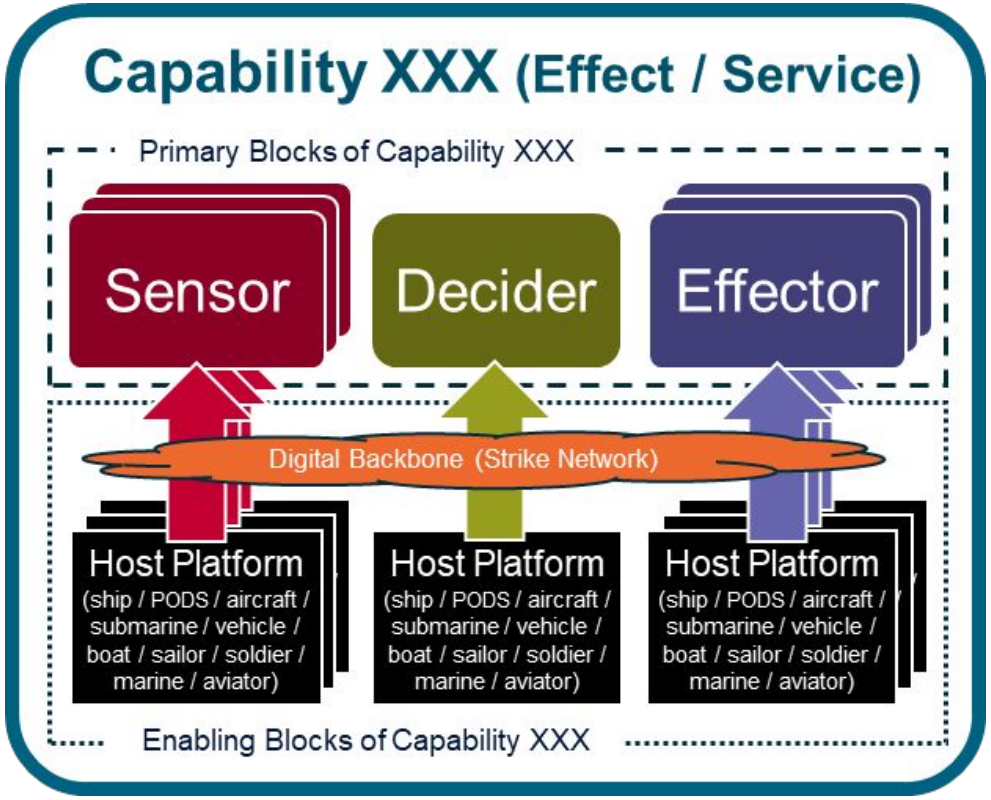
Outcomes:

A well-defined **reference architecture**

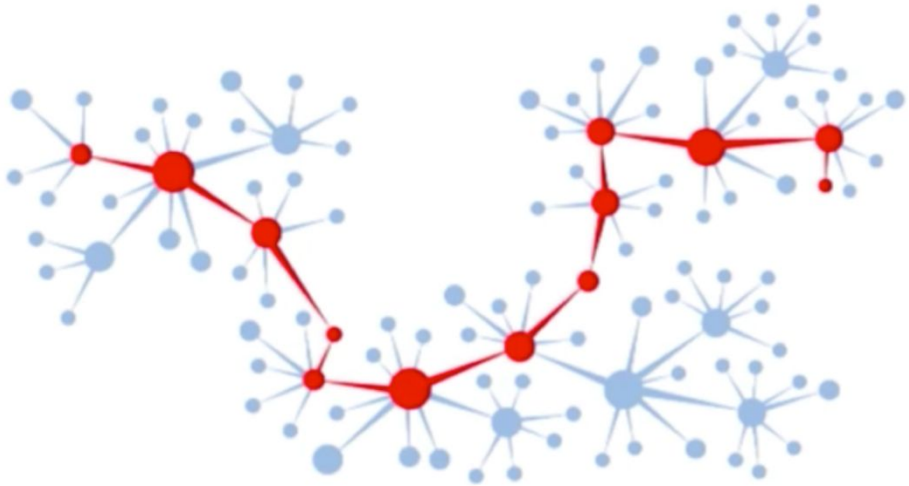
Cohered, agile suite of **networks, bearers and applications**

The ability to **disaggregate sensors, deciders and effectors**

In summary …



From a fleet of platforms to **10,000** nodes on a strike network



Any sensor, right decider, best effector