The Disruptive Role of M&S in Capability Acquisition

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Agenda

▶ Three main takeaways:

    ▶ Battlespace Communications is too complex a network to test in its entirety – OT&E through simulation.

    ▶ Capability Acquisition to be responsible for acquiring the synthetic test models, to allow for the joint simulation of that platform in war gaming exercises.

    ▶ Disruptive future simulation of potential adversaries at IOC for consideration during Gate Zero acquisition processes.

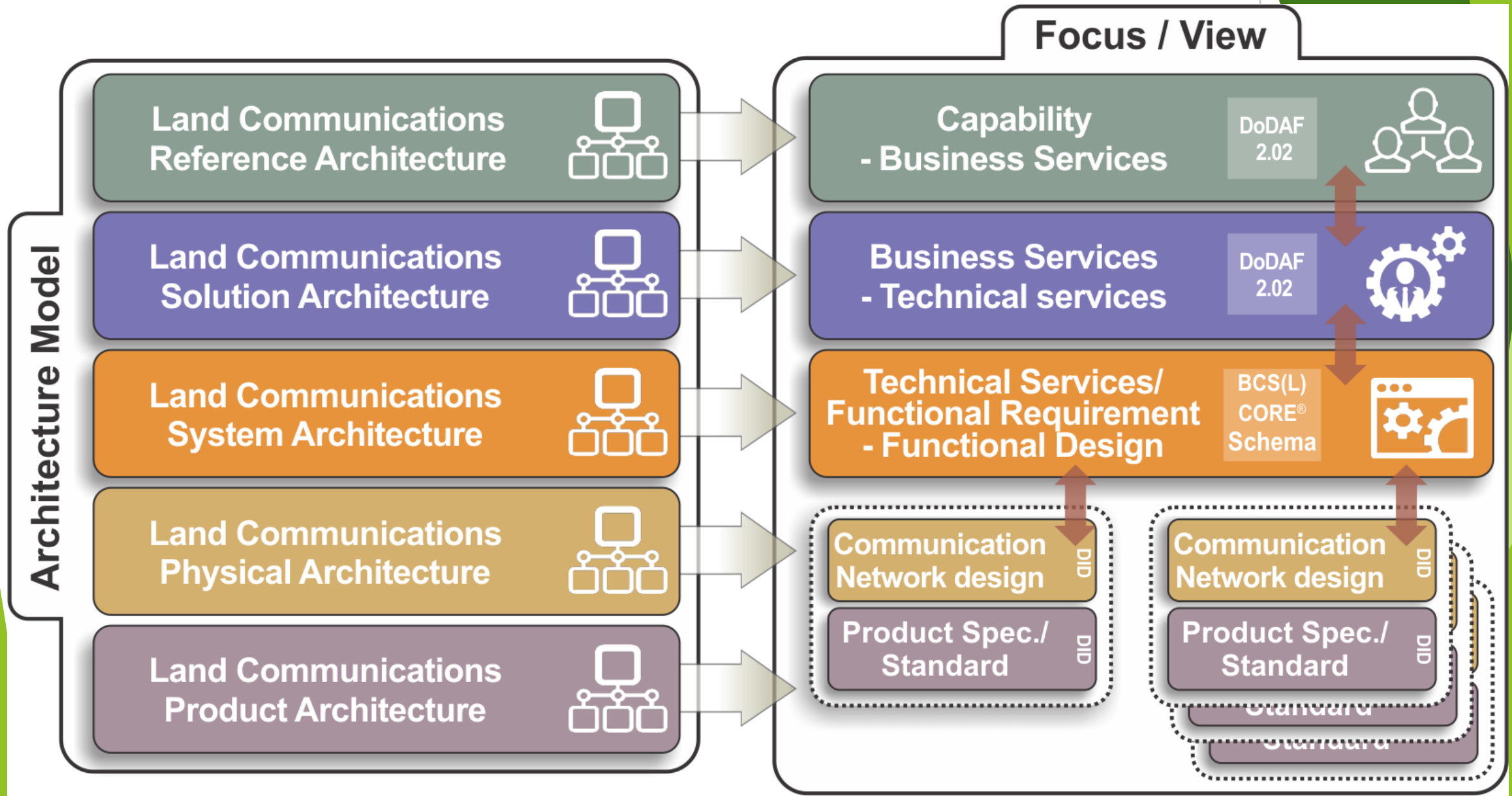# Battlespace Communications Problem Space
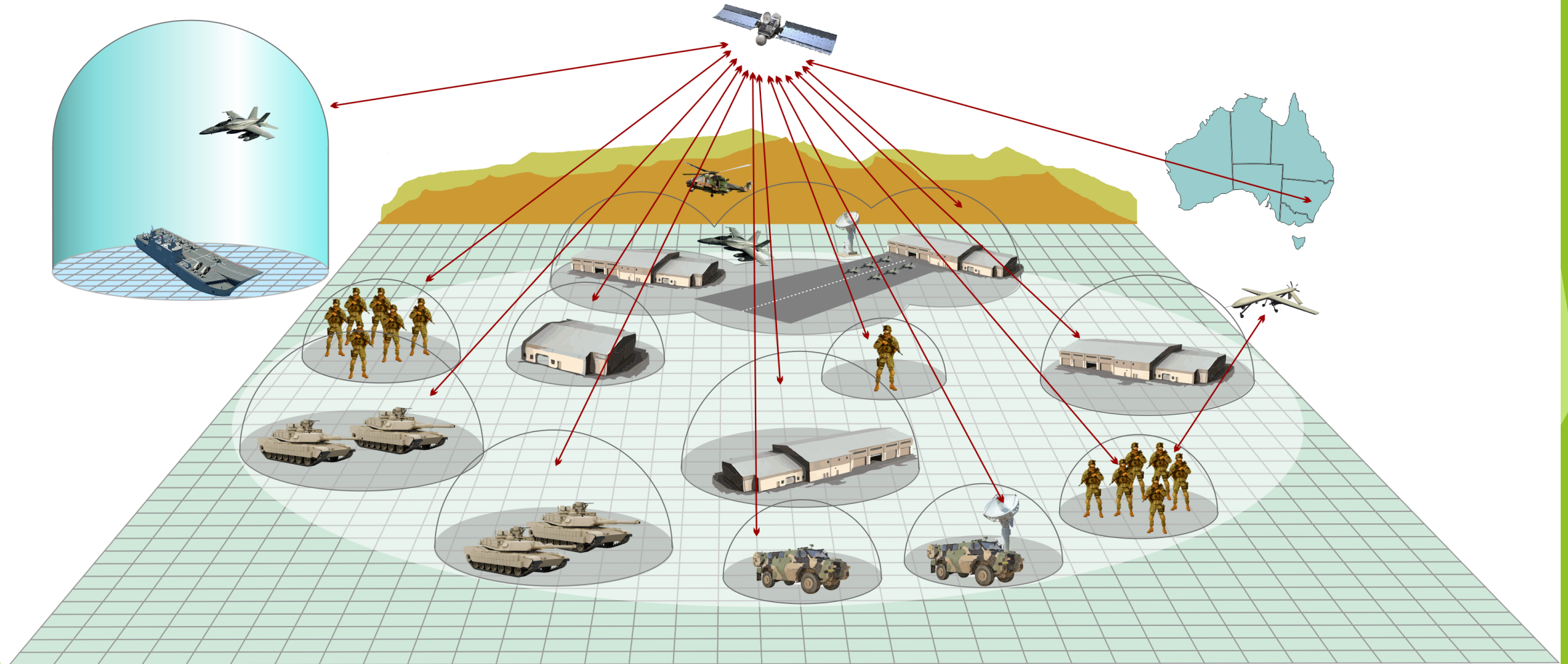
The Battlespace Communications System (Land) is expected to:

- Provide Voice, Data and Video communications between deployed and tactical forces

- Interface with User Applications to enable information services on the Land Network

- Seamless communications across ADF strategic and coalition networks
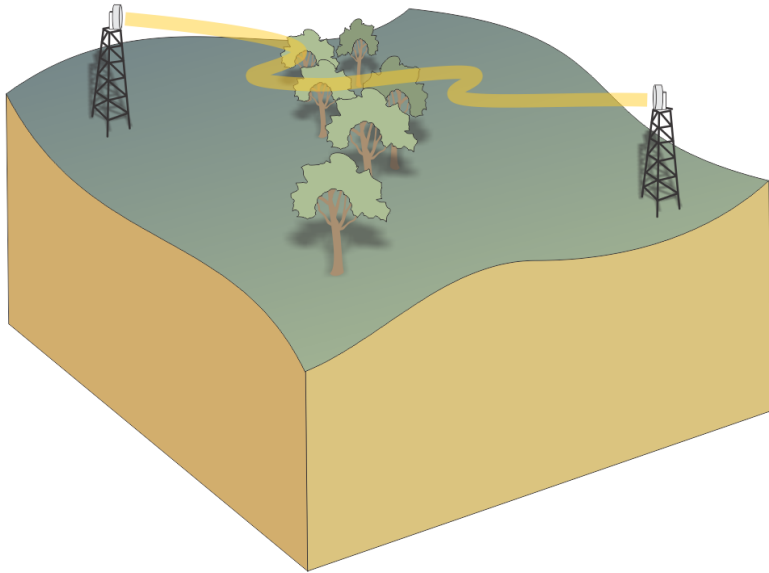
- Interface with government and commercial networks

BCS(L) Architecture Model

Architecture Model

- Land Communications Reference Architecture
- Land Communications Solution Architecture
- Land Communications System Architecture
- Land Communications Physical Architecture
- Land Communications Product Architecture

Focus / View

- Capability - Business Services — DoDAF 2.02
- Business Services - Technical services — DoDAF 2.02
- Technical Services/ Functional Requirement - Functional Design — BCS(L) CORE® Schema
- Communication Network design — DID
- Product Spec./ Standard — DID
- Communication Network design — DID
- Product Spec./ Standard — DID

Simulation for OT&E Calculations

Testing

Real world testing across terrain and with varying input parameters to record real results.
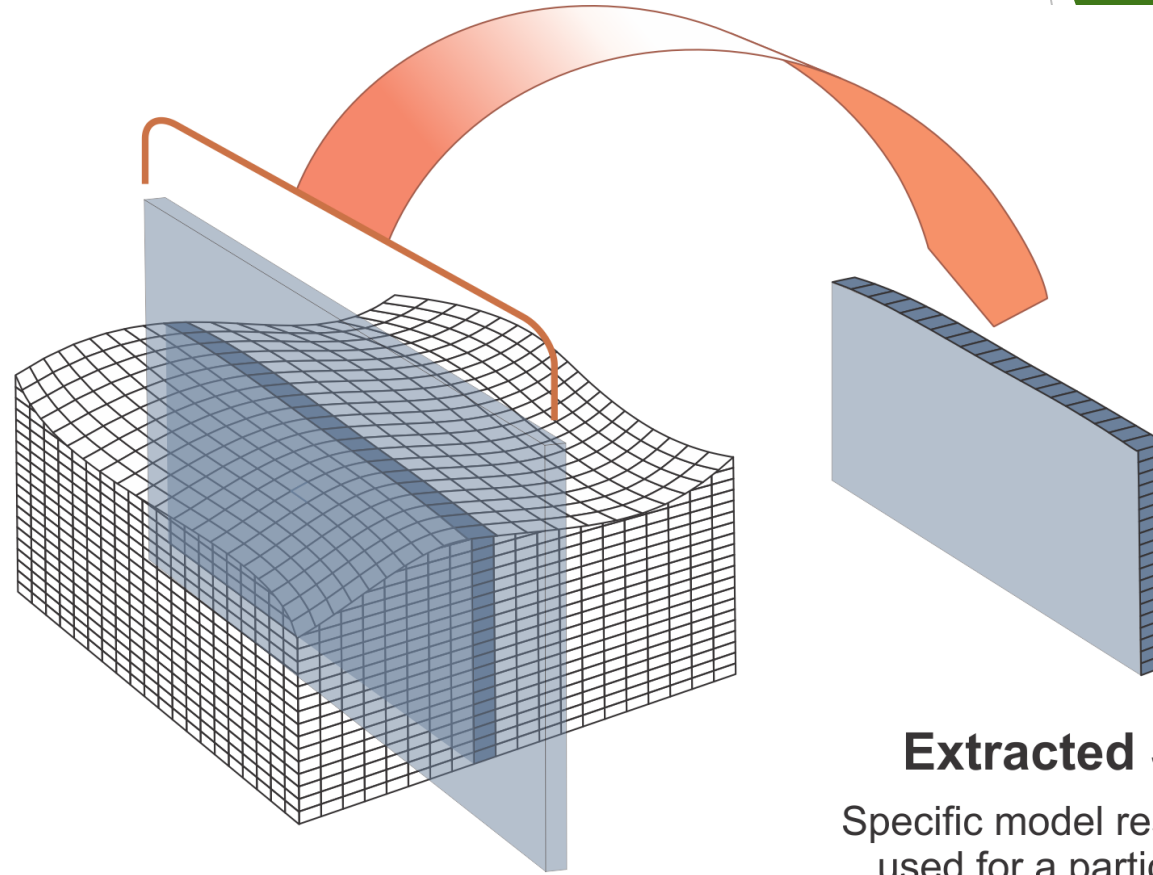
Conceptual Model

Mathematical interpolation of actual results to build up a conceptual model of results that can be used in simulations.

Extracted Slice

Specific model results to be used for a particular set of parameters.
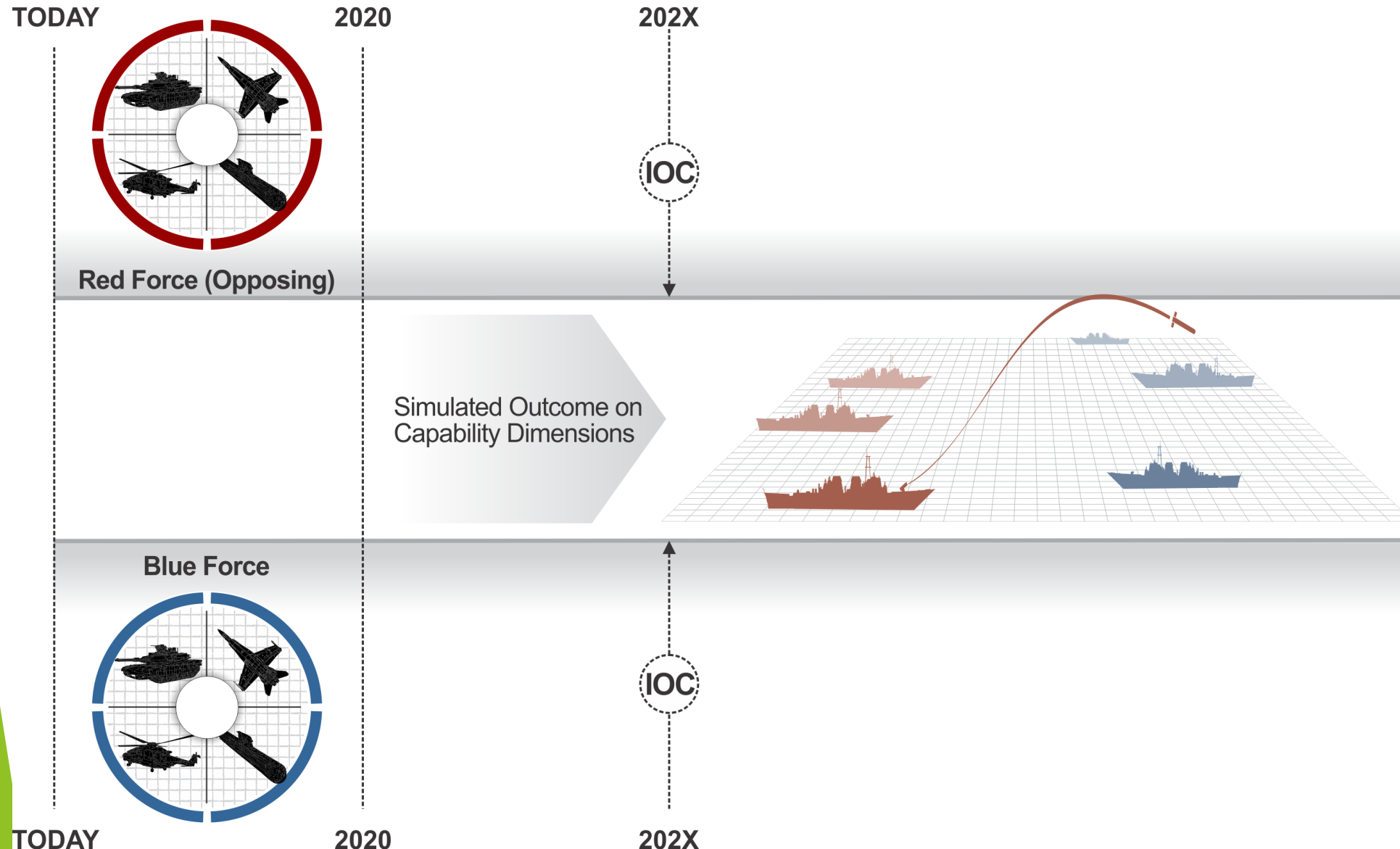
Who develops simulation capability for OT&E?

- ▶ The group responsible for capability acquisition (preferred).

- ▶ The group within Joint command that runs the joint simulations?

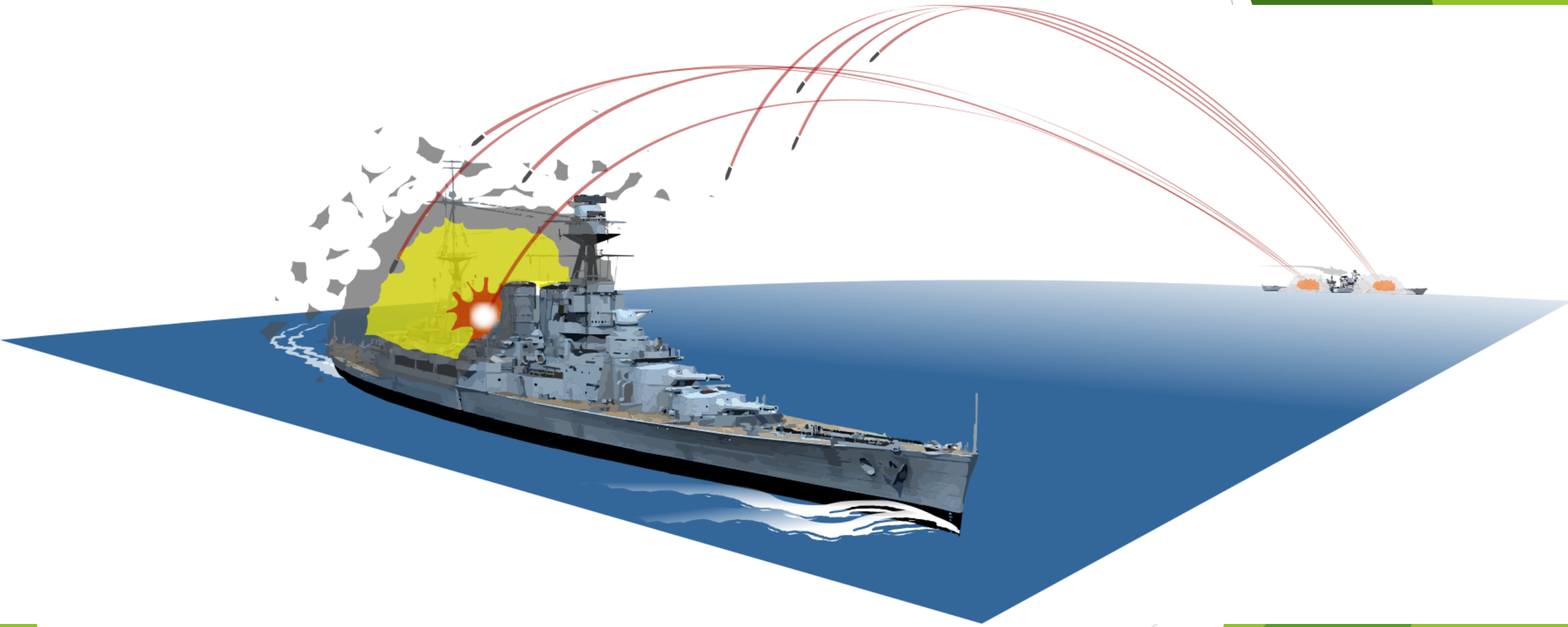- ▶ A third group with no acquisition knowledge or operational knowledge of simulation? (least preferred)

Disruptive Feedback from Simulation of Requirements

TODAY   2020   202X

IOC

Red Force (Opposing)

Simulated Outcome on Capability Dimensions

Blue Force

IOC

TODAY   2020   202X

The famous *Spitfire* vs the *Joint Strike Fighter*

Summary

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    - Disruptive future simulation of potential adversaries at IOC for consideration during Gate Zero acquisition processes.

Questions and Answers

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