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Resourcing a Mosaic Force: Lessons from an Acquisition Wargame

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Resourcing a Mosaic Force: Lessons from an Acquisition Wargame

**Joel Predd, Jon Schmid, Elizabeth Bartels, Jeff Drezner, Bradley Wilson, Anna
Jean Wirth, Liam McLane**

May 2022

Project Overview

Motivation

DARPA has an ambitious vision of Mosaic warfare

The Mosaic vision

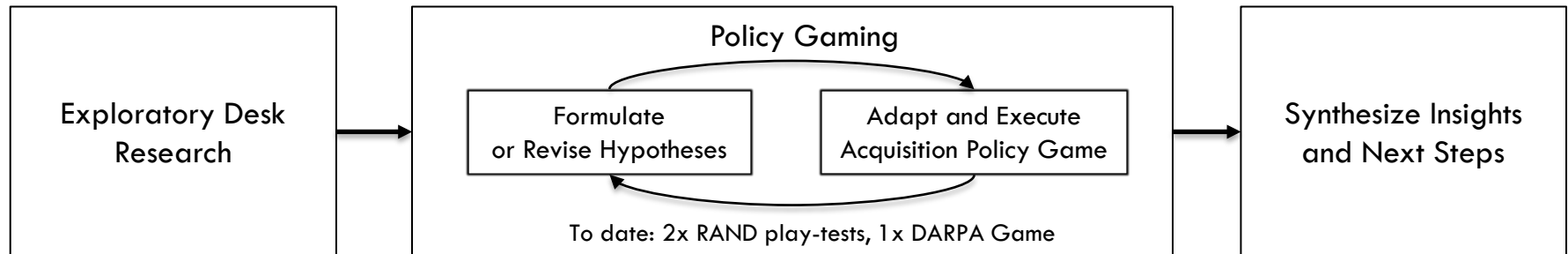
- is conceived by STO leadership as a
 - warfighting concept
 - means to accelerate capability development & fielding
- depends on DARPA advancing multiple technologies

- is inherently more challenging to “transition” than a program

Research Questions

1. Are DoD’s existing requirements, resourcing and acquisition system compatible with fielding a Mosaic? Are those management systems compatible with envisioned increases in time-effectiveness?
2. If not, what are viable alternatives to the existing management systems?

Research Approach: Embrace Policy Gaming as Means to Experiment with Acquisition Models



How did we conceptualize Mosaic?

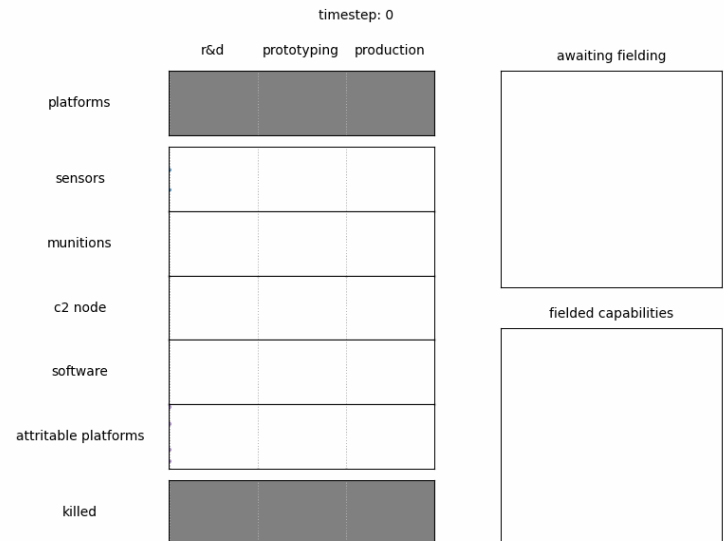
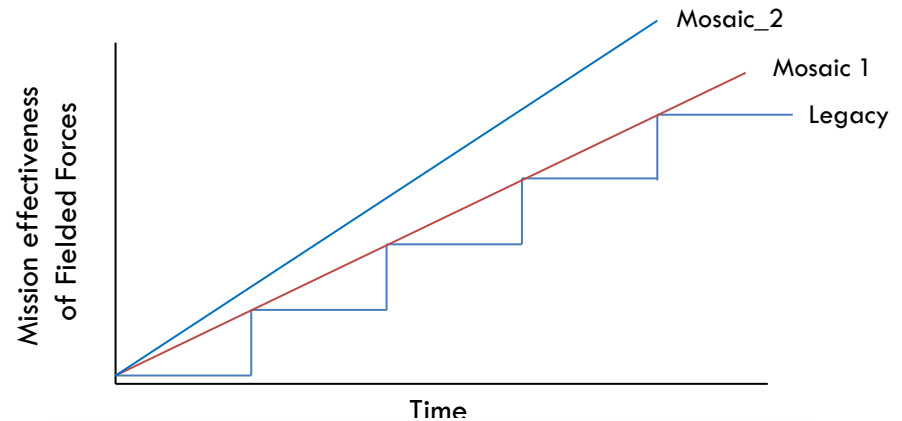
Heterogenous, fractionated capabilities, dynamically composed on tactical timelines



- Heterogenous: more diverse
- Fractionated: functionally simpler
- Composable: architecturally uncommitted to specific kill chains until mission execution

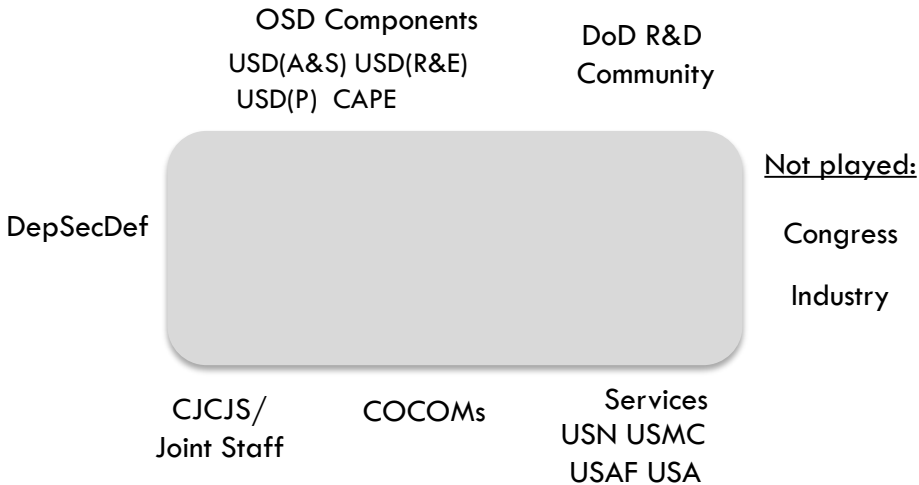
DevOps + Systems of Systems

A means to dramatically increase time-effectiveness



Concept: Gain insight by requiring DoD reps to make decisions within, live with consequences of a Mosaic world

Players inhabit the roles of DoD decision-makers



Force Planning Scenario w/in an Acquisition Scenario

Acquisition Scenario

- 2028 to 2032
- Strategic Continuity (DoD committed to priorities of 2018 NDS)
- Overall military competition between U.S. & China is contested
- U.S. has advanced new JWC but remains committed to a post-Cold War force structure
- DARPA in collaboration w/ USAF & USN R&D demo initial ASuW Mosaic
- SecDef and Congress note success, move to institutionalize a Mosaic

Force Planning Scenario

- 2035
- Chinese invasion of Taiwan
- Mission: ASuW

A three half-day virtual event

	Half Day 1: Mosaic in Today's System	Half Days 2&3: Mosaic in an Alternative Model
Goal of exercise	Identify conditions under which today's requirements, resourcing & acquisition systems support a Mosaic model	Exercise an alternative to today's management systems to assess viability & identify improvements
Role of participants	Experienced professionals and analysts	Role playing DoD stakeholders

Players' Backgrounds Reflect Assigned Roles

Players in RAND Play-test I and II

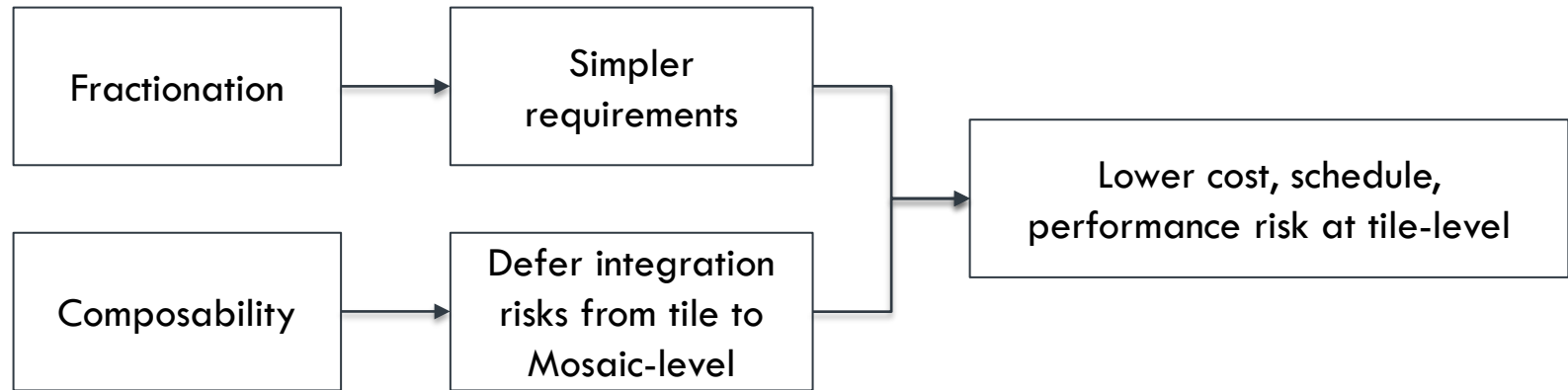
Former DoD officials on RAND staff, e.g.

- Retired O6, Navy rep for JCIDS
- Retired Acting Director CAPE
- Former USD(ATL) Staff member
- Former Navy Dir for Analysis, NAVAIR

Players in DARPA Game

- DARPA STO Leadership & Staff
- Retired OPNAV N81
- Former USD(ATL) Staff member
- Senior Advisor to USD(A&S)

"Why not, let's try it": The logic of Mosaic may promote faster, cheaper, more responsive acquisition at the tile-level, regardless of the model



Thus, enabling various virtuous cycles

Faster schedules → more responsive to threat → less requirements creep

Faster adaptation → shorter services lives → less cost, time to design & build-in sustainability

Lower risks (cost) → less onerous oversight by OSD & Congress → faster schedules

Simpler requirements → expanded performer base → increased competition, innovation

In game(s), players tended to translate simpler requirements, lower costs into willingness to experiment, take risks

PPBE features, consequences, and contrast to Mosaic Warfare

Feature of Current Resourcing System	Consequence	Mosaic Warfare Seeks
PPBE is a calendar-driven process involving a two-year gap between resource allocation and resource availability	Limits ability to respond to unanticipated technology opportunities	Ability to rapidly incorporate new technology into force
	Limits responsiveness to threats	Responsiveness to a dynamic threat environment
	Limits new- and non-traditional firm entry into defense innovation marketplace	A defense innovation system comprised of a greater diversity of contributing organizations
PPBE is inflexible with regard to re-allocating resources	Limits ability to respond to unanticipated technology opportunities and threats	Ability to rapidly incorporate novel technology into force and respond to threats
	Encourages technology lock-in	Ability to rapidly switch technological approaches



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Choice of Acquisition Model Subject to Trade-offs

