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Framework for Organizational Needs of Innovation in the Department of Defense

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Research question

Which **bureaucratic environment** and **innovation environment** attributes describe the elements that need to be considered to support organizational decision-making in:

- −realigning the innovation ecosystem,

- −aligning efforts, or

- −developing new strategies?
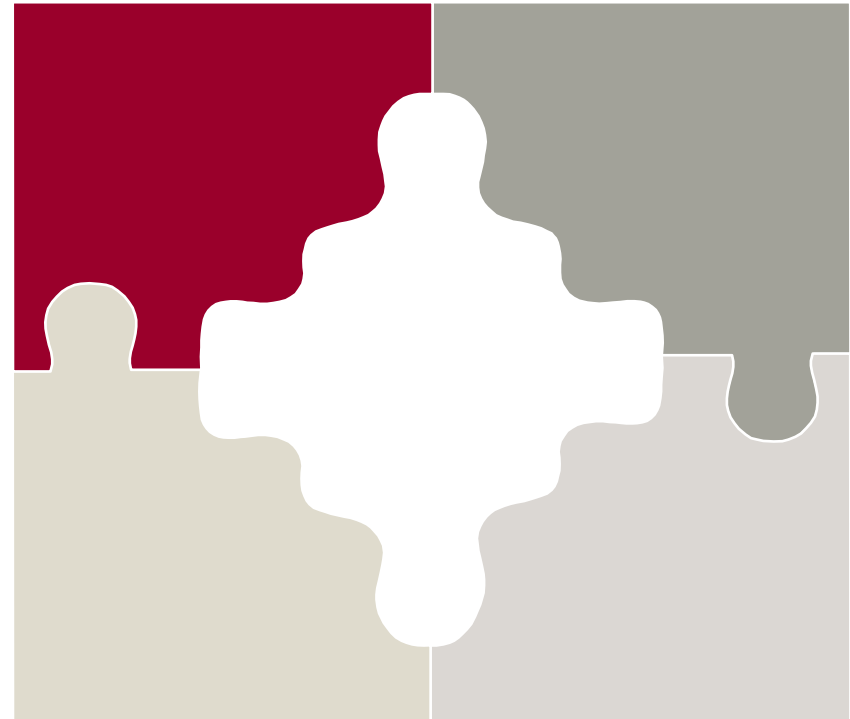
Data Sources and Applications

- This framework was informed by:
    - Over 25 expert interviews
    - Department of Defense documents
    - Innovation and Organizational literature
    - Panel discussions

- This framework may be valuable to provide the attributes to consider in order to:
    - Account for required elements in potential shifts in direction to the innovation ecosystem.
    - Determine potential adjustments in alignment.
    - Consideration of proposals such as consolidation or expansion of innovation organizations.
    - Implement recommendations to establish a Chief Innovation Officer for DoD.
    - Develop an innovation strategy.

Definition of Innovation

New capabilities and practices and changes to existing capabilities and practices that cause disruptive effects: those that, in order to avoid creating a persistent competitive advantage for the adopter(s), mandate either (a) adoption by other competitors, or (b) a corresponding counter-innovation by non-adopters.

Timeline of Illustrative Organizations in the Innovation Ecosystem

- There has been a marked uptick in the creation of these innovation organizations in the last decade.
- DOD's new portal begins to address the criticism that there is no central entry point to the innovation ecosystem. It lists:
  - Science and Technology Reinvention Laboratories
  - University Affiliated Research Centers
  - Federally Funded Research and Development Centers
  - Partnership Intermediary Agreements
  - Software Factory
  - Governance and Guidance Offices
  - Technology Transfer

DARPA	UARCs Authorized	SCO	DIUx SOFWERX	DIB	AFWERX	NavalX	ISG
1958	1996	2012	2015	2016	2017	2019	2021

https://www.ctoinnovation.mil/innovation-organizations

IDA 4

Balancing Organizational Needs

DOD and Innovation Organizations have overlapping, but different, needs.

There is an inherent tension between innovation and ongoing operations.

Organizationally, the innovation organizations need:

- An alignment that will maximize their capacity to drive a renewed mandate and charter

- Freedom to operate differently (i.e., not driven by cost or schedule)

For these organizations to be effective in their mission, it needs to have access to the right people, tools, and technology capable of working in an uncertain and nonroutine environment.

Organizationally, DoD is not optimized to:

- Make fast, agile changes, with a sense of urgency

- Adopt innovative approaches, but there are increasing tools to assist

- Measure the success of innovation

- Support processes that are different from the day-to-day operations

DoD is driven to perform its national security mission, and to maximize results works to make every process and activity as predictable as possible. There is a need for oversight, with the right kind of performance measures.

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How to use the system to support innovation at DoD

Innovation efforts are reinforced and accelerated by maintaining consistent processes for contracting, personnel matters, budgeting, and other organizational concerns.

Minimize the time and effort spent on issues related to these efforts, more space is created to allow for innovative connections to take place.

- **Centralize** those functions– like hiring, budgeting, administration, acquisition management– that benefit from consistency and require oversight.

- **Define** appropriate metrics– traditional program effectiveness metrics may measure the wrong things for innovation. Success should be defined by disruption and adoption.

- Innovation is not driven by requirements, but by "**what could be**."

Innovation organizations inside and outside DoD, are strongly influenced by their founding personalities. Innovation is a human behavior, dependent on personality, and there is **no change without change agents**.

Successful innovation will be driven by organizational structures that encourage:

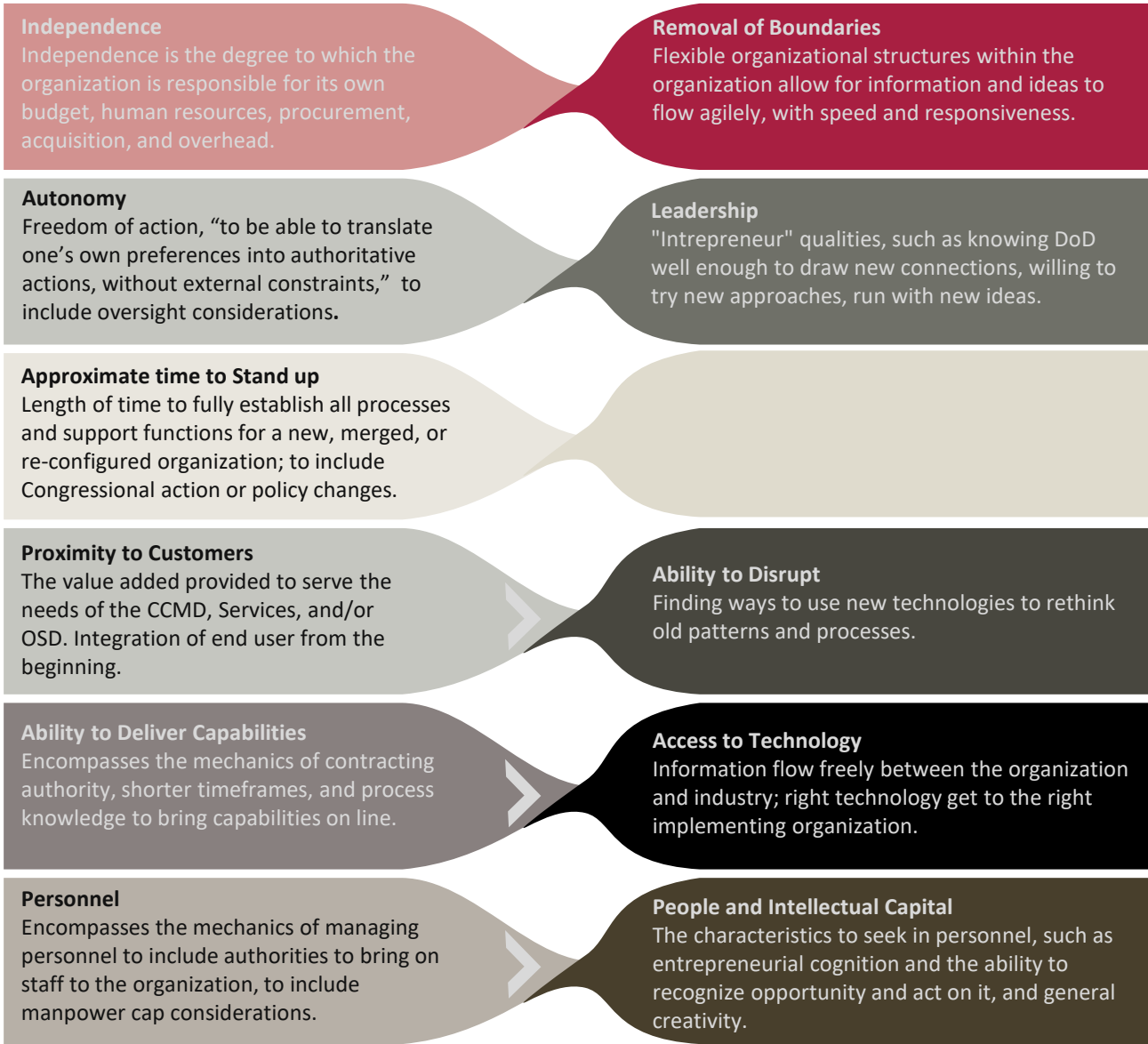**Interactions beyond boundaries and stovepipes**

Continuous learning

Creativity

Finding new connections

Facilitation of interactions with relevant users

The attributes

Bureaucratic Environment Attributes

Innovation Environment Attributes

Independence
Independence is the degree to which the organization is responsible for its own budget, human resources, procurement, acquisition, and overhead.

Removal of Boundaries
Flexible organizational structures within the organization allow for information and ideas to flow agilely, with speed and responsiveness.

Autonomy
Freedom of action, "to be able to translate one's own preferences into authoritative actions, without external constraints," to include oversight considerations.

Leadership
"Intrepreneur" qualities, such as knowing DoD well enough to draw new connections, willing to try new approaches, run with new ideas.

Approximate time to Stand up
Length of time to fully establish all processes and support functions for a new, merged, or re-configured organization; to include Congressional action or policy changes.

Proximity to Customers
The value added provided to serve the needs of the CCMD, Services, and/or OSD. Integration of end user from the beginning.

Ability to Disrupt
Finding ways to use new technologies to rethink old patterns and processes.

Ability to Deliver Capabilities
Encompasses the mechanics of contracting authority, shorter timeframes, and process knowledge to bring capabilities on line.

Access to Technology
Information flow freely between the organization and industry; right technology get to the right implementing organization.

Personnel
Encompasses the mechanics of managing personnel to include authorities to bring on staff to the organization, to include manpower cap considerations.

People and Intellectual Capital
The characteristics to seek in personnel, such as entrepreneurial cognition and the ability to recognize opportunity and act on it, and general creativity.

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