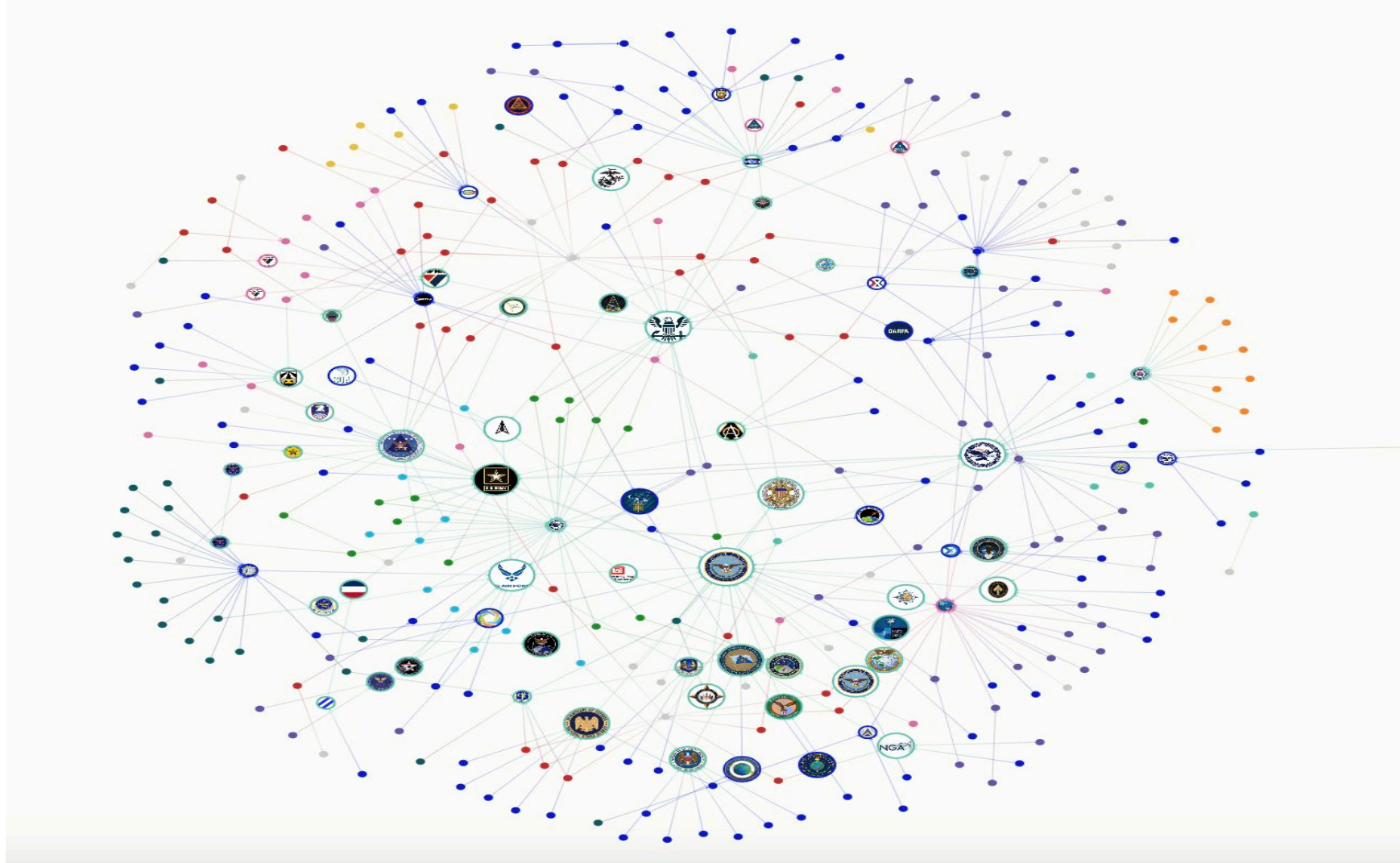




# Conceptualizing the Next Generation DoD Innovation Ecosystem



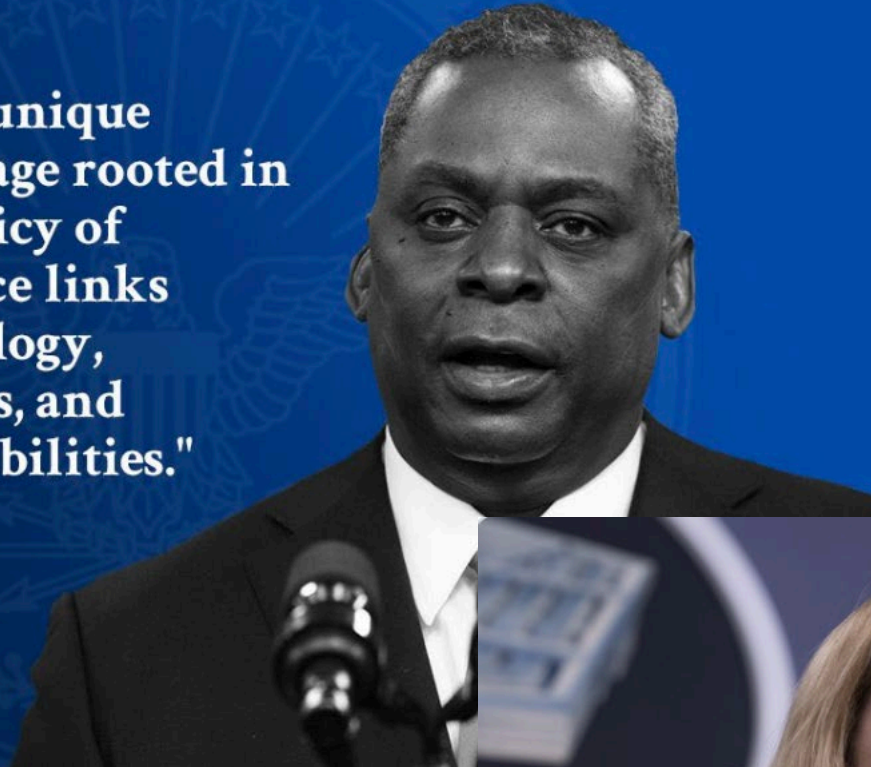
**Dr. Dale L. Moore**

**The Moore Group LLC**

"America also has a unique competitive advantage rooted in innovation. Our policy of integrated deterrence links cutting-edge technology, operational concepts, and state-of-the-art capabilities."

SECRETARY OF DEFENSE

**Lloyd J. Austin III**



## The Innovation Imperative

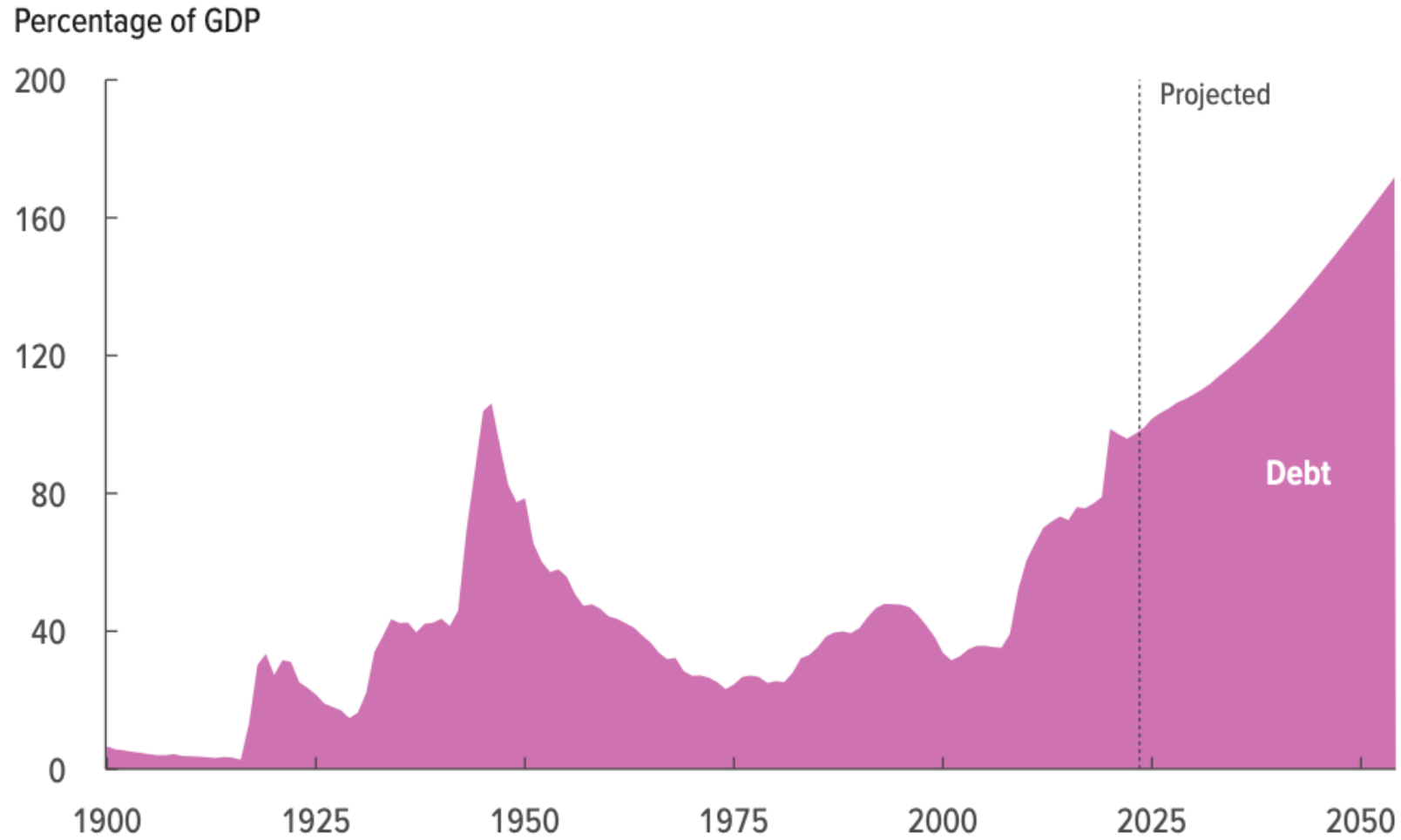
March 28, 2022 - FY23 Budget Rollout

"We must *out-innovate* and *out-perform* would-be threats."

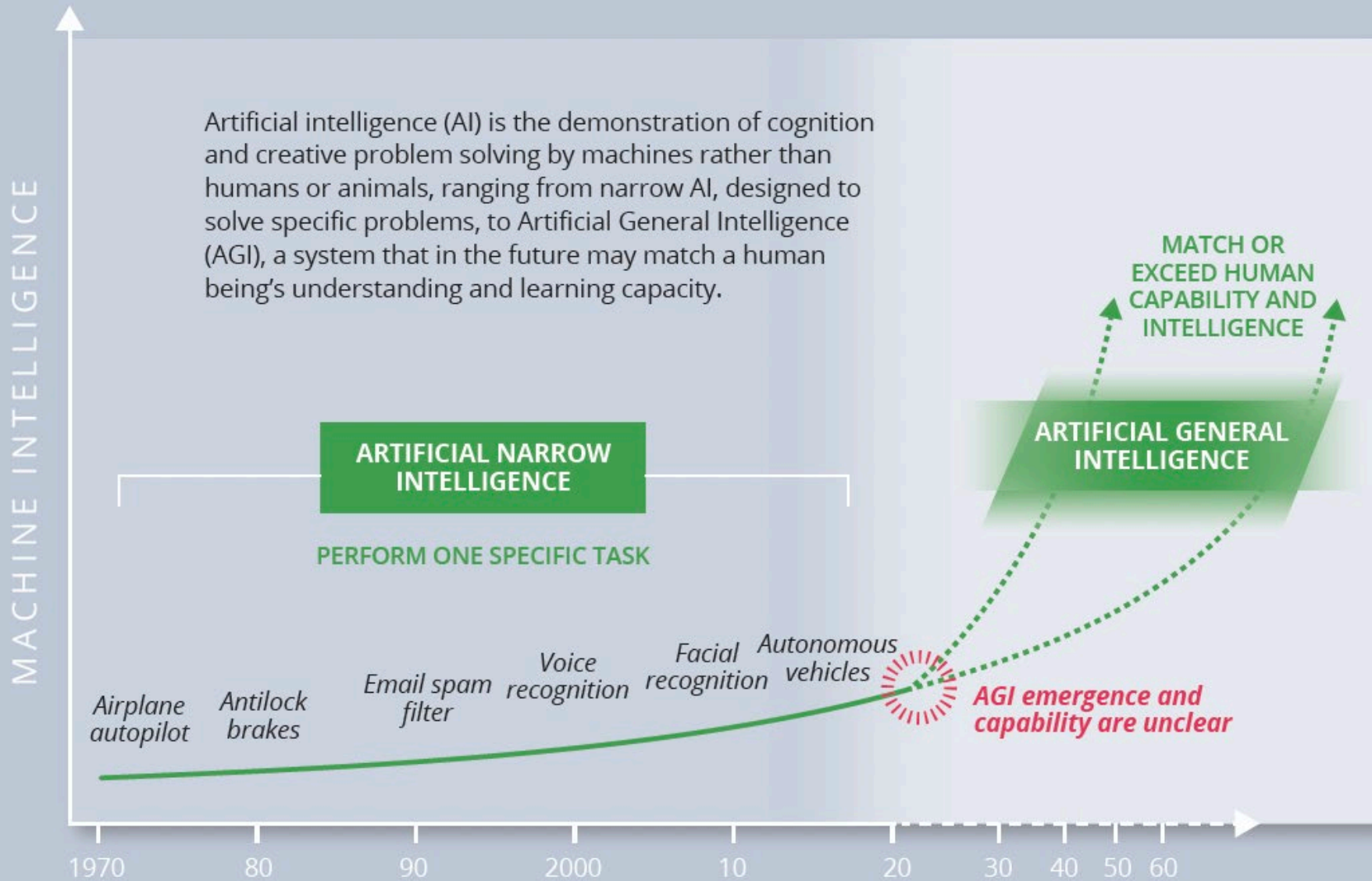
DEPUTY SECRETARY OF DEFENSE  
**Dr. Kathleen H. Hicks**



# CBO Long Range Budget Outlook 2024 – 2054



# TRAJECTORY OF ARTIFICIAL INTELLIGENCE



## The Challenge is Keeping Pace

Exponential  
Technology  
Acceleration  
vs.  
DIB Rates of  
Awareness,  
Learning,  
& Application  
@ Scale

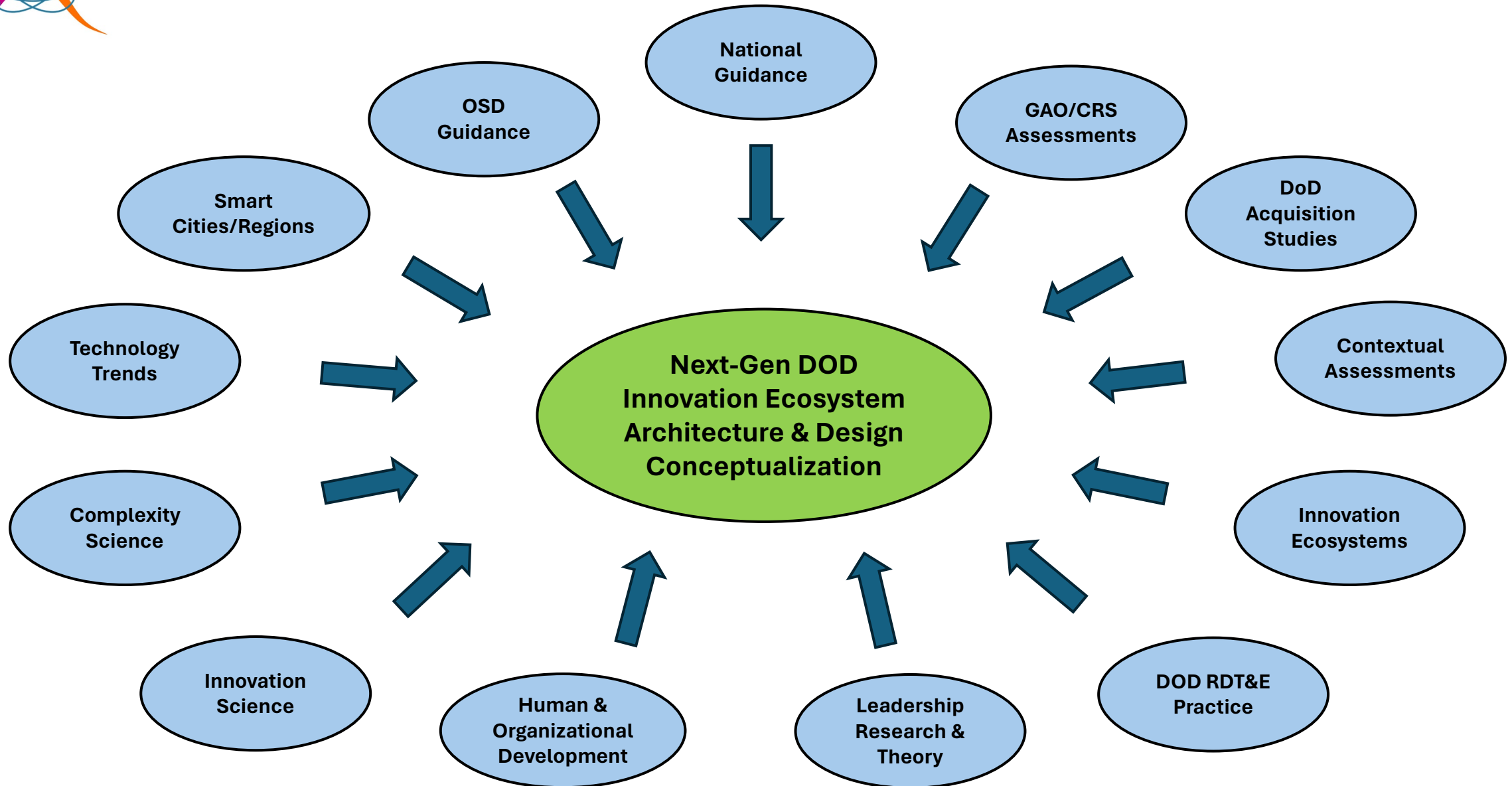


# Research Questions

- 1) What are the major factors and trends that will impact the future of DoD Acquisition?
- 2) What are the barriers and constraints to accelerating innovation into enabling capabilities across the DIB?
- 3) How can DoD's Adaptive Acquisition Life Cycle evolve and transform to accelerate and exploit innovation, and best sense, anticipate and adapt for the future from a strategic perspective of the DoD innovation ecosystem?
- 4) How can DoD be best organized, structured, and led to operate most affordably and meet the emergent and disruptive needs and requirements of the future?



# Meta-Study Domains for Conceptual Convergence





What are the major factors and trends that will impact the future of DoD Acquisition?

- Exponential Technology Accelerations/Emergent Disruptions
- Pace and Scale of Commercial Technology Research and Development
- The Imperative for Continuous Change and Transformation at Scale and at Pace
- Need for End-to-End Acquisition Development Acceleration
- Continuous Innovation for Superior Capabilities at Scale
- Affordability (Emerging Debt Crisis)
- Advanced Digital Tools and Enabling Capabilities
- Smart City and Smart Regional Concepts
- Workforce Talent and Skills



What are the barriers and constraints to accelerating innovation into enabling capabilities across the DIB?

- Increasing System and Organizational Complexity
- Lack of Awareness, Learning, Understanding and Actionable Knowledge
- Lack of Requisite Skills and Enabling Capabilities
- Lack of Creativity and Ingenuity
- Bureaucracy – Lack of Streamlined & Accelerated Processes
- Organizational Fragmentation
- Organizational Rigidity
- Lack of Innovation Adoption and Adaptation
- Lack of Available Resources – People and Money
- Climate of Trust





How can DoD's Adaptive Acquisition Life Cycle evolve and transform to accelerate and exploit innovation, and best sense, anticipate and adapt for the future from a strategic perspective of the DoD innovation ecosystem?

- Expansive Contextual Awareness and Learning
- Master Data, Information and Knowledge Management
- Support Mil-Specs/Standards and Commercial Specification Engagement for Innovation Adoption and Adaptation
- Map & Streamline Processes and Organize around Process Flows – Create Trans-Enterprise Knowledge and Synergy
- Build Social Capital via Mutual Trust and Respect
- Create Opportunities at Scale to Connect, Learn and Share
- Embrace Continuous Change and Transformation
- Innovative Culture and Ecology
- Technology-Enabled
- Open Innovation and Open Strategy Development



How can DoD be best organized, structured, and led to operate most affordably and meet the emergent and disruptive needs and requirements of the future?

- Emulate the Concepts and Theory that Support Complex Adaptive and Anticipatory Systems (CAAS) Thinking
- Map, Integrate & Automate the End-to-End Value Stream
- Educate, Form and Align Enterprises to Engage in the End-to-End Value Stream
- Build Synergistic Intra- and Inter-Enterprise Communities
- Embrace Smart Ecosystem Concepts and Technologies
- Embrace Large Scale, Fully Integrated, High Fidelity Virtual Environments
- Enhance Enterprise-level/Ecosystem-level Orchestration, Management and Leadership
- Enhance Systems Thinking
- Enhance Strategic & Anticipatory Thinking
- Create Agile and Adaptive Innovation Capabilities at the Speed of Relevance
- Enable Generativity and Creativity
- Align and Clarify Expectations, Incentives and Motivations

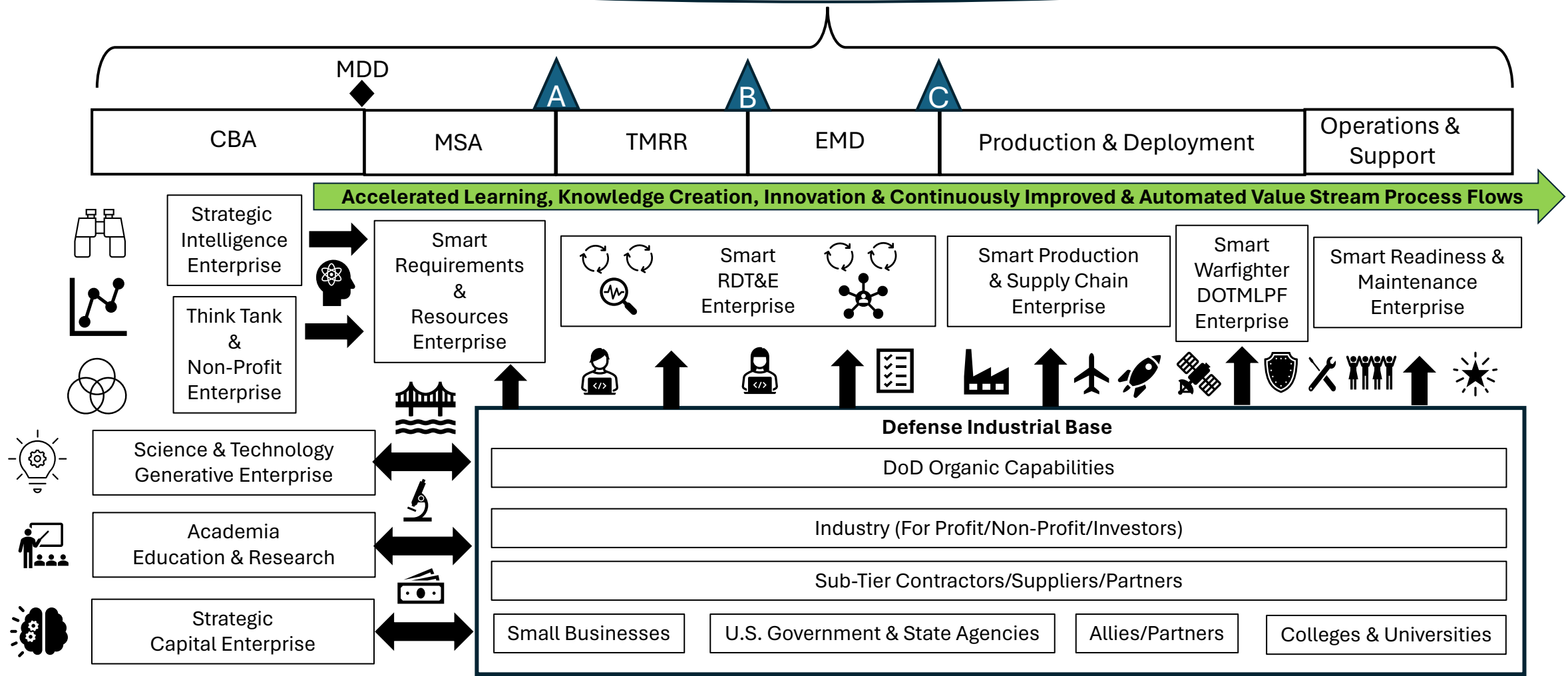
# The Sentient & Wise DoD Acquisition Innovation Ecosystem

*A Cyber-Cognitive Ecology for Continuous Sensing, Awareness, Learning, Innovation, Transition, Improvement and Transformation*

AI-Enabled, Hybrid Cloud-Based Digital/Virtual Collaborative Platform(s)  
 PLM, Big Data, IoT, MBSE, LVC, JSE, AR/MR/VR, Digitize, DEVSECOPS/ZT, 3D AM, MOSA, IP/Data Rights, AI/ML/LLM, GLSI, OTA

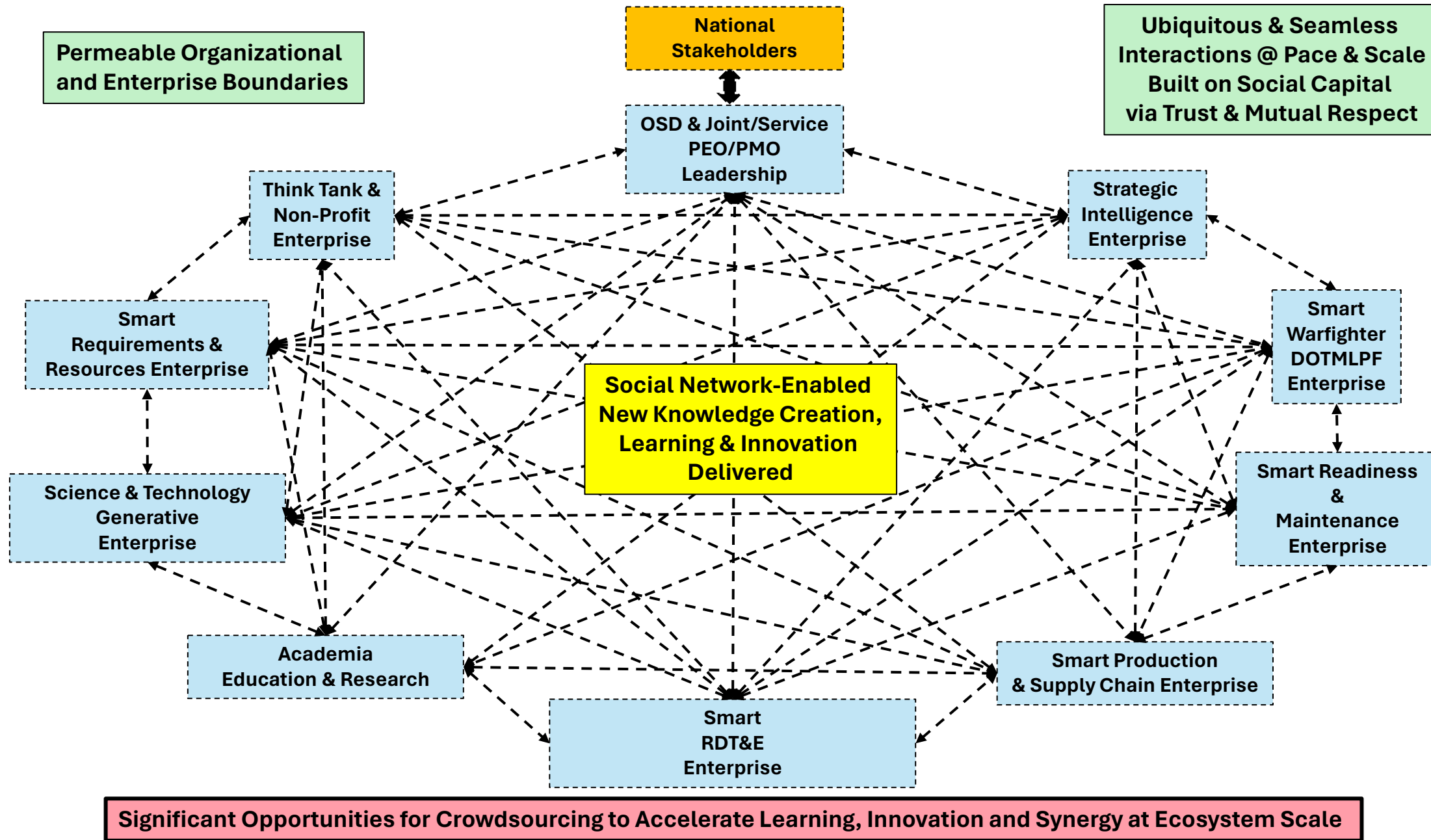
**Continuous Full Life-Cycle Open Competition for Agility, Innovation and Value**

An End-to-End, Trans-Programmatic Digital Enclave – the DoD Mega-Verse



# The Sentient & Wise DoD Acquisition Innovation Ecosystem via Emergent Social Networks

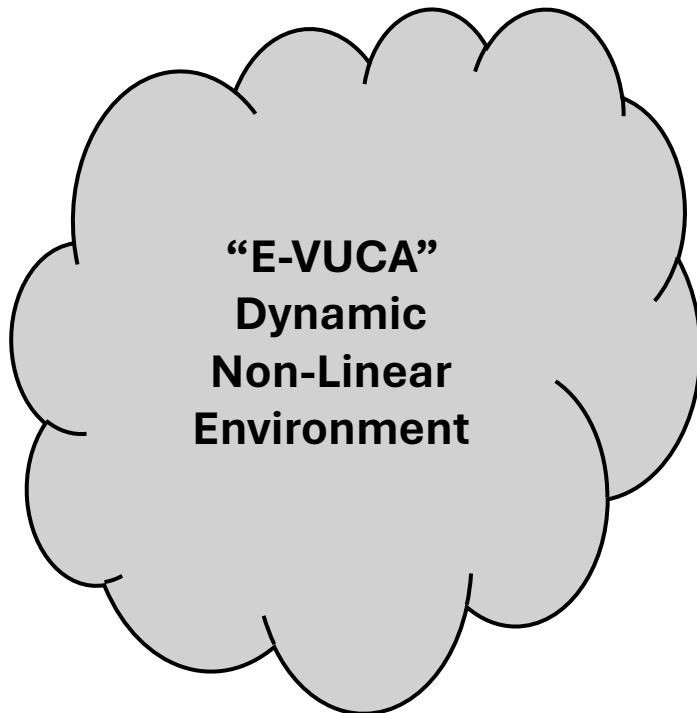
*A Cyber-Cognitive Ecology for Continuous Sensing, Awareness, Learning, Innovation, Transition, Improvement and Transformation*



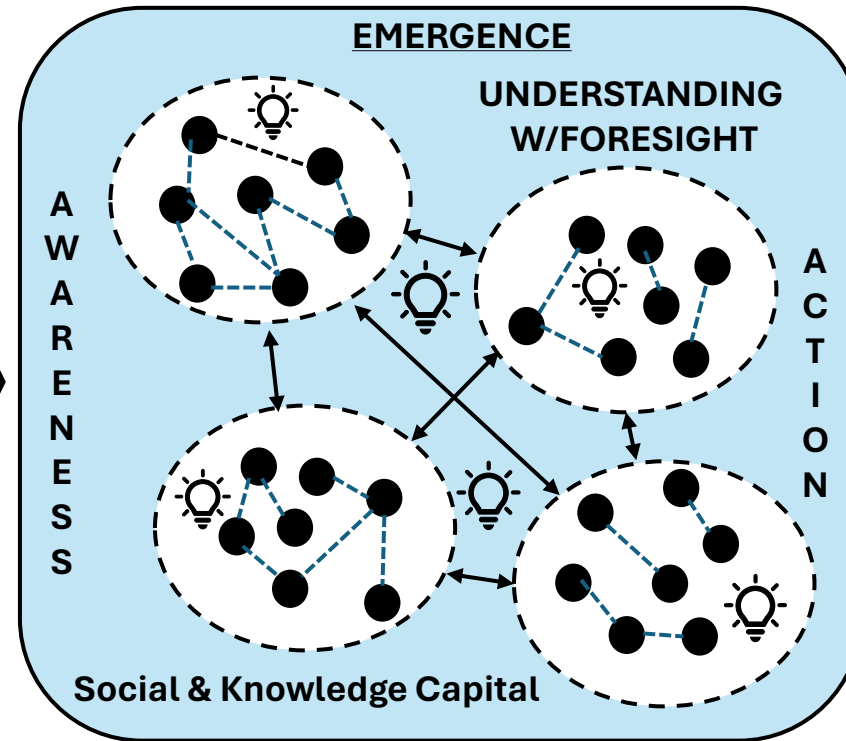
# Complex Adaptive and Anticipatory System (CAAS) Conceptual Model

Broadly Applicable to Teams & Across Organizations, Enterprises and Ecosystems...

**Strategic Environmental  
Assessment for  
Contextual Intelligence**



**Sensing, Making Sense, Giving Meaning  
for Understanding in Context and  
Meaningful Adaptation**



**Collective Leadership  
@ all Levels**

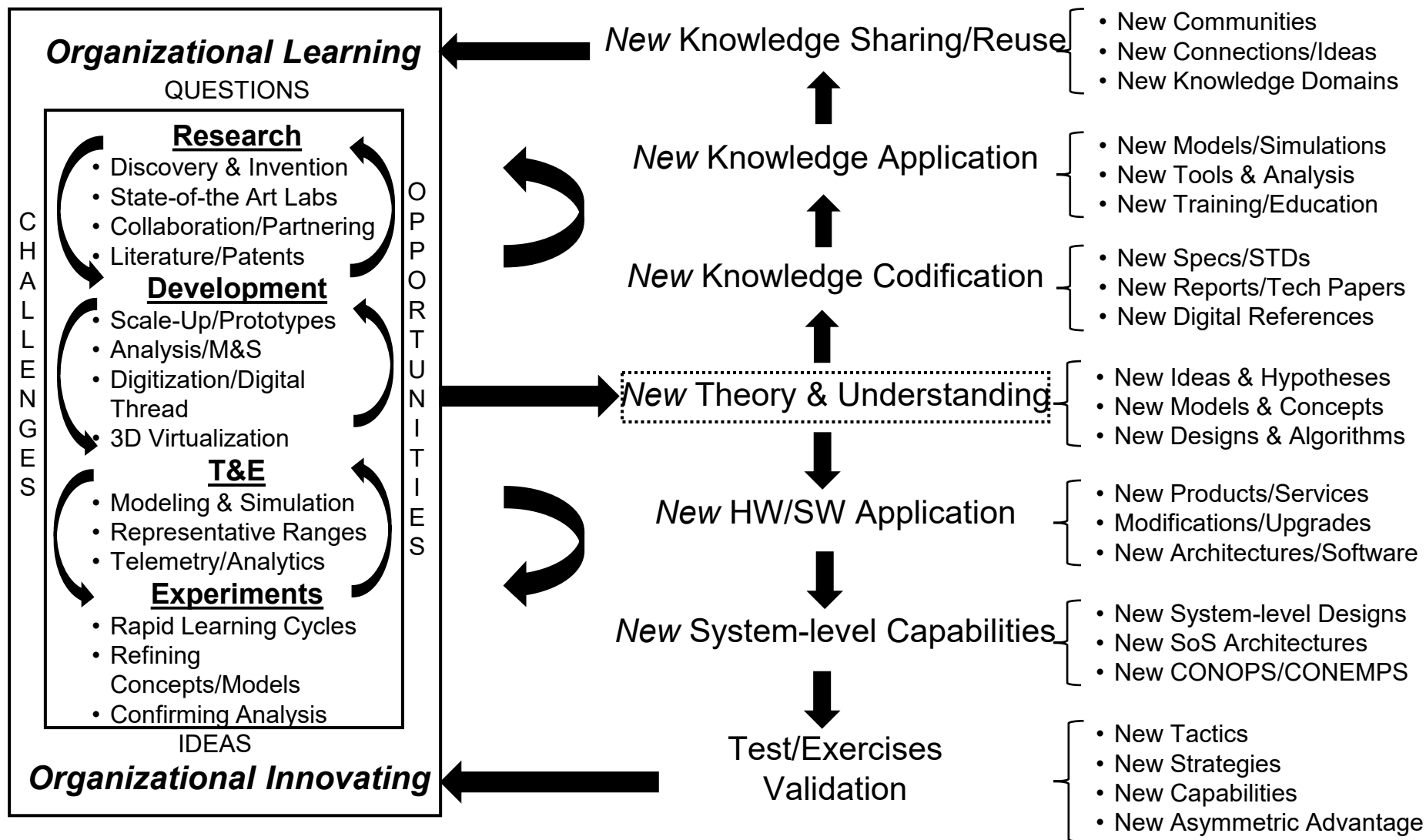


Seamless Collaboration & Synergy = Unleashed Latent Innovative Potential

Continuum of Accelerated Awareness, Learning & Understanding via Social Networks



# Catalyzing New Knowledge Creation & Innovative Capabilities





# Summary

- The Imperative for DoD Innovation Ecosystem Change is Here
  - Emergence of Peer Adversaries and Complex Asymmetric Threats
  - Growing Economic and Workforce Challenges
  - Disruptive Innovations and the Democratization of Technologies & its Rapid Diffusion
  - Exponential Technology Accelerations & Convergence @ Scale
- Findings for Sustaining DoD Innovation Ecosystem Competitiveness:
  - Reimagining & Transforming the DoD Innovation Ecosystem for the E-VUCA Future
  - Unleash Human Ingenuity and Potential - Campaigns of Learning and Innovation
  - Promote New Social Interactions, Collisions and Relationships
    - Intra- and Inter-Enterprise Interactions and Synergy
  - Leverage Open Strategies to Promote Learning, Change and Transformation
  - Lead Cultures and Ecologies of Learning, Empowerment and Innovation
  - Continuously Leverage and Integrate the Latest Research, Theory and Practice
  - Leverage and Deploy Exponential, Emerging & Platform Technologies @ Scale
  - Support Leadership at all Levels for Ideation & Innovation as a Cultural Norm/Paradigm



Thank You!

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