Agenda

Compete.
Council on Competitiveness

900 17th Street, NW
Suite 700
Washington, D.C. 20006
T 202 682 4292
F 202 682 5150
Compete.org

Technology Leadership & Strategy Initiative Dialogue

June 29, 2023

Location:
Lockheed Martin Space Advanced Technology Center
3251 Hanover Street
Building 202
Palo Alto, CA 94304

8:30 a.m. **Registration – Continental Breakfast**

9:00 a.m. **Welcoming Remarks**

- The Hon. Deborah L. Wince-Smith, President & CEO, Council on Competitiveness
- Dr. Steven Walker, Vice President and Chief Technology Officer, Lockheed Martin; TLSI Co-Chair

9:20 a.m. **Framing Options for the TLSI 2023 Agenda – Shape of the Dialogue**

This session will review at a high level a set of potential TLSI project and engagement opportunities – summarized in the "ideas starter" paper shared prior to the Dialogue. Each idea presented in the paper will be discussed across the day.

- Mr. Chad Evans, Executive Vice President, Council on Competitiveness
- Dr. Steven Walker, Vice President and Chief Technology Officer, Lockheed Martin; TLSI Co-Chair
- Dr. Sally Morton, Executive Vice President, Knowledge Enterprise, Arizona State University; TLSI Co-Chair
- Dr. Patricia Falcone, Deputy Director of Science and Technology, Lawrence Livermore National Laboratory; TLSI Co-Chair

9:45 a.m. **Innovation & Competitiveness Partnerships – a New Defense Industrial Base for the 21st Century: IDEA - Develop an Adaptive and Agile Industrial Base to Meet U.S. Economic, National Security, Energy, and Sustainability Needs**

A host of emerging technologies are generating growing number of game-changing applications across the entire commercial sector, as well as in the broad defense, space, and energy sectors. Equally on the rise is demand for greater sustainability across the economy and society.

Increasingly, the defense and space industries are reaching into the commercial sector and the start-up ecosystem for technologies, innovations, and solutions. And on the flip side, many across the commercial sector are benefitting from advanced technologies originally developed to meet defense and space missions.

Yet, traditionally, many of these sectors have been treated as distinct, even as emerging technologies are increasingly dual-use, and flow back and forth across these sectors blurring their boundaries.

Discussion Questions – and Possible Guidance for TLSI Action:

- How can the United States overcome these traditional separations and boundaries to accelerate toward a more competitive, innovative, and integrated industrial base?
- What are the key challenges in adapting and aligning the defense, space, and commercial sectors to lever emerging technologies?
- What new or revised policies and regulatory frameworks could facilitate the flow of technologies and expertise across sectors, while ensuring national security and protecting intellectual property?
- How can the United States prioritize and allocate resources to support the development of an adaptive and agile industrial base that can quickly respond to evolving economic, national security, energy, and sustainability needs?

Confirmed Kick-off Discussant(s) to date:

- Dr. David Parekh, Chief Executive Officer, SRI International
- Mr. Justin Taylor, VP of Artificial Intelligence, Lockheed Martin

Moderator:

- Dr. Steven Walker, Vice President and Chief Technology Officer, Lockheed Martin; TLSI Co-Chair

10:45 a.m. **Coffee Break**

11:00 a.m. **Innovation & Competitiveness Partnerships – a New Defense Industrial Base for the 21st Century: IDEA – Optimizing the Growing Reliance on New Knowledge and Technology Developed in the Commercial Sector and Universities**

U.S. businesses and universities perform about a half trillion in U.S. R&D, generating new knowledge and technologies. Universities are also a major source of new high-tech start-ups.

The U.S. public sector in general, including the Department of Defense and its contractors, is reaching more frequently and deeply into these creators of new knowledge and technology for mission applications, and the commercial sector is reaching into universities for new knowledge, cutting-edge technology, and talent.

These connections will become more important with accelerating technological advancement, and in translating new generational U.S. investments in R&D, critical technologies, and clean energy into economic and national security impacts for the United States.

They also have the potential to undergird a new industrial base that integrates defense and commercial sectors to propel U.S. competitiveness, and national and energy security.

Discussion Questions – and Possible Guidance for TLSI Action:

- ↘ What strategies can foster, strengthen, reinforce, make more globally competitive a culture of collaboration and knowledge-sharing between technology users and creators, including the exchange of ideas, expertise, and research findings?
- ↘ What role can startups and small businesses play in driving innovation and integrating emerging technologies into the industrial base? How can they be effectively supported and incentivized?
- ↘ What measures can be taken to ensure a skilled workforce capable of adapting to and harnessing emerging technologies, particularly in sectors of incredible technology convergence (defense and space, bio, information tech, etc.)?

Confirmed Kick-off Discussant(s) to date:

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Moderator:

- Dr. Sally Morton, Executive Vice President, Knowledge Enterprise, Arizona State University; TLSI Co-Chair

11:45 **Innovation & Competitiveness Partnerships – a New Defense Industrial Base for the 21st Century: IDEA – Introduce Changes in the Department of Defense – Lowering DOD Cultural Barriers to Increased Use of Commercial Technologies, and Reforming Acquisitions to Speed Insertion of Cutting-Edge Tech**

DOD's increasing need for technologies developed by commercial companies for commercial markets is creating challenges including developing or modifying organizations and business models to access the technology, and adapting DOD culture to seek and apply technologies developed outside of DOD, the United States, and its traditional contractor base.

Experiences have shown that major cultural change and new model adoption are challenging in large, long-established organizations like DOD. How can we help introduce change?

Additionally, a long-standing challenge in accelerating defense fielding of new technologies and concepts has involved the acquisition process, the budgeting process, and system integrators, but there have not been serious changes to that system.

Discussion Questions – and Possible Guidance for TLSI Action:

- ↘ What new strategies or initiatives could promote a cultural shift within the DOD that values and actively seeks out technologies developed outside of its traditional contractor base – and how do we encourage implementation?
- ↘ What are the key factors and stakeholders impeding reforms in the defense acquisition process to acquire new technologies?
- ↘ What role can Congress or the White House/Administration play in driving changes in the defense acquisition process? What specific statutes or regulations need to be amended or created to allow for new business models and the inclusion of non-traditional partners?
- ↘ What are the barriers that prevent non-traditional partners and start-ups with innovative technologies from effectively contributing to meeting the DOD needs? How can these barriers be overcome?

Confirmed Kick-off Discussant(s) to date:

- Mr. Rob McHenry, Deputy Director, Defense Advanced Research Projects Agency (DARPA)
- Dr. Dinesh Verma, Professor and Executive Director, School of Systems and Enterprises, Stevens Institute of Technology

Moderator:

- Dr. Patricia Falcone, Deputy Director of Science and Technology, Lawrence Livermore National Laboratory; TLSI Co-Chair

12:30 p.m. **Lunch & Keynote**

- Dr. Nelson Pedreiro, Vice President, Lockheed Martin Advanced Technology Center, Lockheed Martin

1:30 p.m. **Innovation & Competitiveness Partnerships** – a **New Defense Industrial Base for the 21st Century**: **IDEA – An Emerging Parallel System for Defense Innovation**

A parallel DOD innovation ecosystem is emerging, driven by the need to access technology from non-traditional sources, and accelerate technology development and acquisition. DOD and its services branches have established a range of initiatives to this end. For example: DOD established the Defense Innovation Unit, and increasingly uses other transaction (OTA) authorities and limits R&D competitions to OTA consortia. Some efforts to acquire defense systems are based on desired product or system capabilities rather than traditional acquisition specifications. The Army established an Army Venture Capital Corporation, and Army Futures Command/Army Applications Lab, organized around eight broad cross functional teams. The Air Force established AFWERX as the Air Force's innovation arm, and Space Force set up SpaceWerx as its innovation arm. Some of these new innovation operations have outposts in U.S. high-tech hubs, and are working to making it easier for companies to bring their technologies to DOD.

Discussion Questions:

- ↘ What lessons can be learned from the initiatives within the DOD's emerging innovation ecosystem that can be applied to moving technologies with commercial potential from universities, small businesses, and start-ups through the "valley of death" and towards scaling up for defense applications?
- ↘ What is the significance of establishing outposts in U.S. high-tech hubs for these innovation operations? How does this geographical presence contribute to making it easier for companies to bring their technologies to the DOD?

- What challenges and barriers exist in scaling up technologies from universities, small businesses, and start-ups for defense applications? How can the emerging innovation ecosystem address these challenges and facilitate the successful transition of technologies across the "valley of death"?
- What collaborative opportunities exist between the DOD's emerging innovation ecosystem and other stakeholders, such as universities, research institutions, and industry, to foster a more robust and inclusive innovation ecosystem?

Confirmed Kick-off Discussant(s) to date:

- Mr. Chris Moran, Vice President, GM LM Venture, Lockheed Martin

Moderator:

- Dr. Steven Walker, Vice President and Chief Technology Officer, Lockheed Martin; TLSI Co-Chair

2:00 p.m. **Deploying Technology Statecraft with Strategic Allies**

How do we ignite a transformational technology and pro-innovation statecraft with strategic allies and partners (AUS, UK, AUSUK, Japan, EU, transatlantic, etc.)? For example, the CHIPS Act includes $500 million in funding for an International Technology Security and Innovation Fund to provide for international information and communications technology security and semiconductor supply chain activities, including support for the development of secure and trusted telecommunications technologies and semiconductors. In addition, the new U.S.-EU Trade and Technology Council is providing a platform for the U.S.-EU to advance cooperation and democratic approaches to trade, technology, and security.

Discussion Questions:

- How do we deploy a statecraft that advances U.S. domestic interests, advances liberal market principles globally, and counterbalances the technology statecraft China is attempting to deploy around the world?
- Can the AUKUS agreement be used as an exemplar of a new statecraft at least where the US, UK and AUS are concerned?
- Can we re-start the US-AUS CTO dialogue? Other options (UK, Japan, India)?

Confirmed Kick-off Discussant(s) to date:

- Dr. Tony Lindsay, Director, Science Technology Engineering Leadership and Research Laboratory (STELaRLab), Lockheed Martin

Moderator:

- The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; *National Commission Co-Chair*

2:30 p.m. **Final Discussion, Summary Remarks, and Next Steps**

- Mr. Chad Evans, Executive Vice-President, Council on Competitiveness
- Dr. Sally Morton, Executive Vice President, Knowledge Enterprise, Arizona State University; TLSI Co-Chair
- Dr. Patricia Falcone, Deputy Director of Science and Technology, Lawrence Livermore

National Laboratory; TLSI Co-Chair

- Dr. Steven Walker, Vice President and Chief Technology Officer, Lockheed Martin; TLSI Co-Chair
- The Hon. Deborah L. Wince-Smith, President and CEO, Council on Competitiveness

3:00 p.m. **Exploring the Advanced Space Tech Center – a set of onsite visits**

Participants will divide into two groups. Two tours will be offered concurrently - the first group will start with the Space Sciences Lab Tour and finish with the AI Lab Tour; the second group with start with the AI Lab Tour and finish with the Space Sciences Lab Tour. Each tour will be about 50min long.

- **Space Sciences Lab Tour**
  Guide: Dr. Alison Nordt
- **The AI Lab Tour**
  Guide: Dr. Eric Smith

5:00 p.m. **Dialogue Adjourns**