



Exceptional service in the national interest

IMPROVING GLOBAL SECURITY, DETERRENCE AND DEFENSE

Cyber-Physical-Social Systems and Climate Change Nexus Perspectives

Rositza Homan PhD, Resilience and Regulatory Effects

Presented at CPSICC Nexus workshop

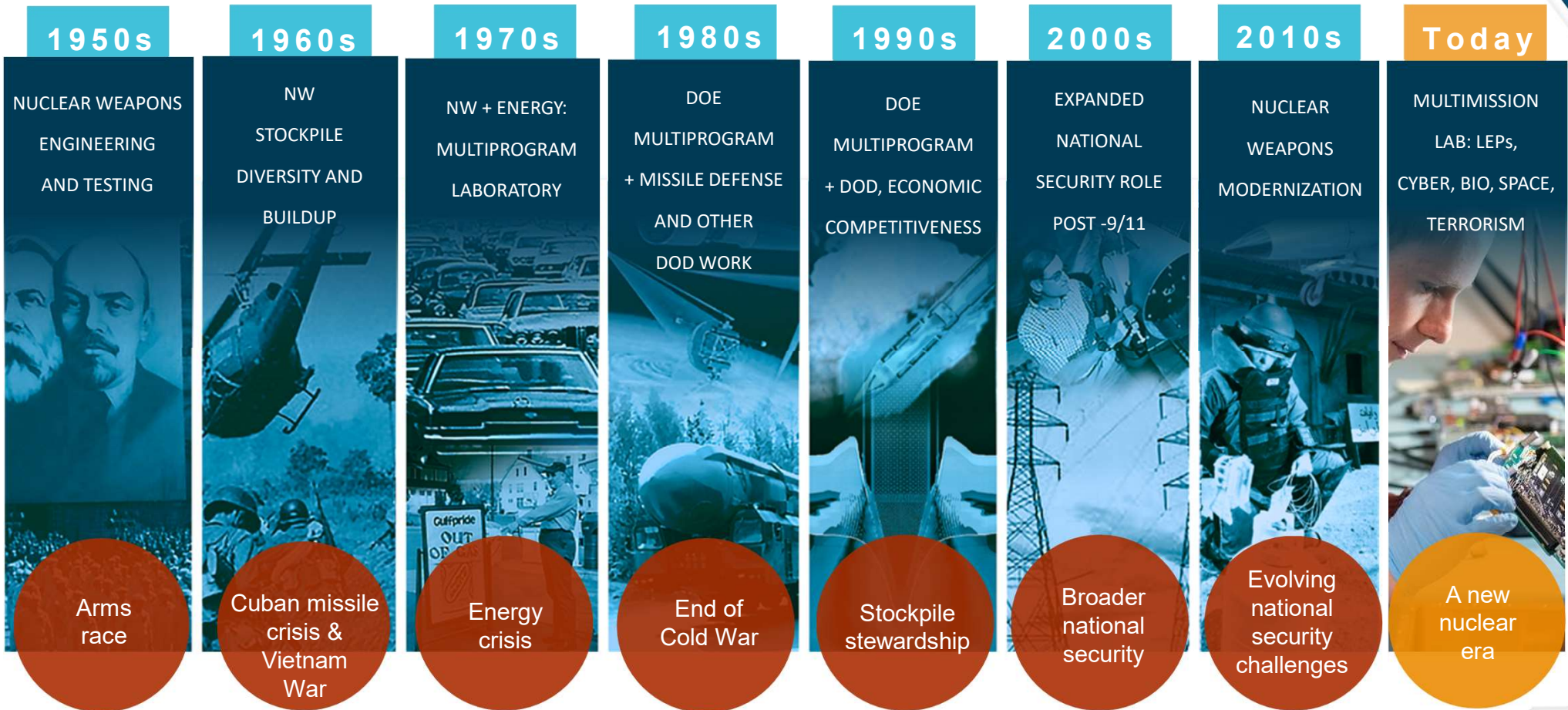
July 30, 2024



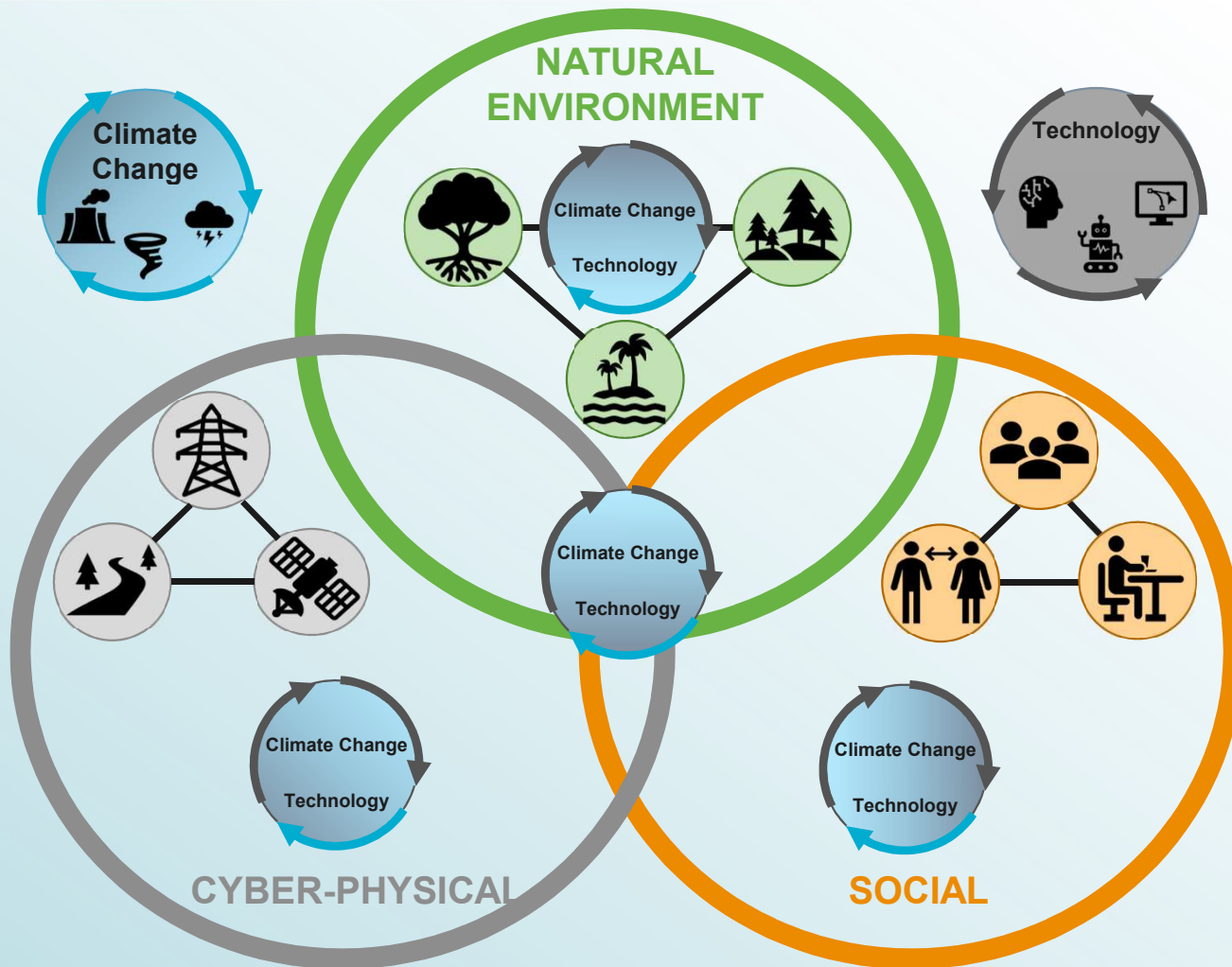
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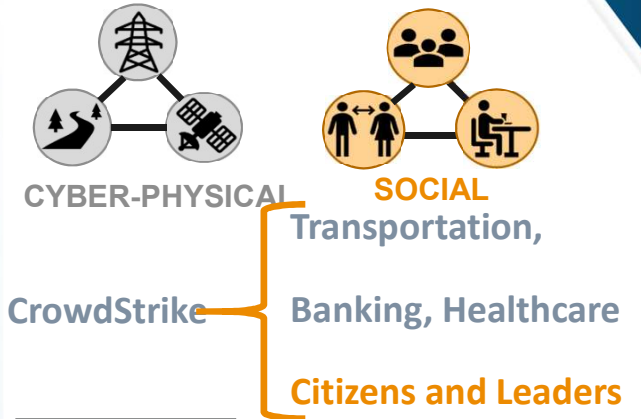
GLOBAL SECURITY, DETERRENCE, AND DEFENSE ENVIRONMENT EVOLUTION



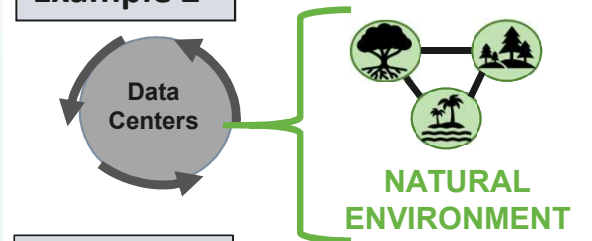
THE NEXUS AND REAL-WORLD EXAMPLES



Example 1



Example 2



Example 3



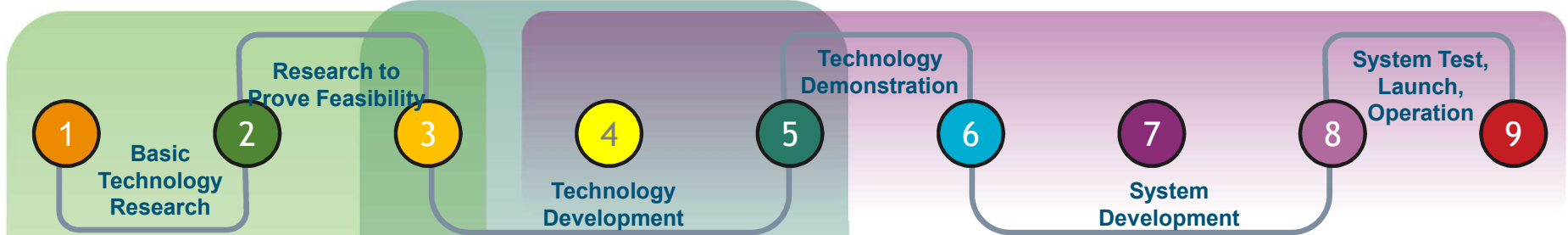
FROM R&D TO REAL-WORLD IMPACTS



Fundamental Research Investments

Research Maturation Investments

Mission/Operational Investments



Evolution of Technology Readiness Levels (TRL) and Partnerships



S&T



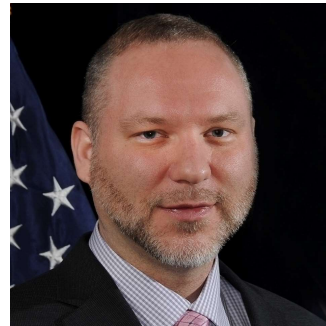
U.S. Department of Defense



Industry



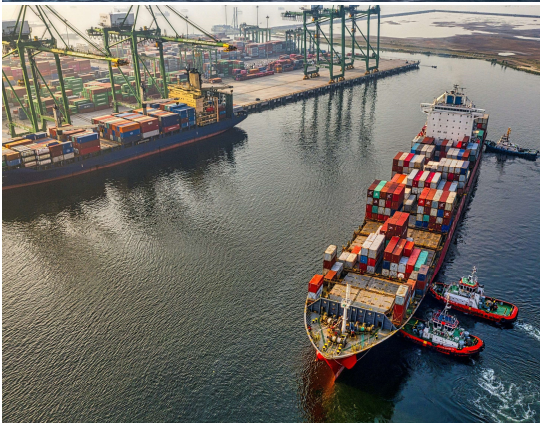
EMBRACE NEW THINKING AND COLLABORATIONS ACROSS THE NEXUS



David Alexander, U.S.
Department of Homeland
Security S&T



Eyüp Turmuş, NATO Innovation,
Hybrid, and Cyber Division



Marthie Grobler, CSIRO



Matthew Huber, Purdue
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Nexus capabilities will inform improved security, deterrence, and defense for individual nations AND for NATO's alliance