



# “THE NEED FOR SPEED”

PAUL LONGSWORTH

ANWA Deterrence Forum - April 30, 2024

“U.S. strategic nuclear deterrence readiness: Are we equipped and are we moving fast enough?”

# INTRODUCTION / OUTLINE

1. Speed is one of our greatest national security challenges – We need to move faster, be more more nimble and more adaptive
2. We need to accelerate prototyping-to-deployment timeline
3. Nuclear deterrent programs must adapt to new threats and changes to warfighting environments
4. DOE/NNSA national labs are essential participants in both deterrence and broader U.S. national security objectives

# I. SPEED IS A NATIONAL SECURITY RISK

- Speed is one of our greatest national security challenges
  - Time allows our adversaries to advance and counter our capabilities
  - Time costs us money and intellectual capital
- We need to be faster and more nimble:
  - Decision-making & program execution
  - Prototyping and operational deployment
  - Capability & capacity – people, programs, our creativity, our ability to imagine and counter adversaries' moves`
  - Flexibility – infrastructure and weapons

"Following decades of investments and efforts by multiple countries that have increased their technological capability, US leadership in emerging technologies is increasingly challenged, primarily by China. We anticipate that with a more level playing field, new technological developments will increasingly emerge from multiple countries and with less warning."

Annual Threat Assessment of the U.S. Intelligence Community, 2021

# I. SPEED IS A NATIONAL SECURITY RISK (CONT.)

The threats are real:

- China and Russia both pursuing asymmetric offset strategies
- China:
  - Rapid nuclear weapons buildup (warheads & delivery systems)
  - Shipbuilding & aircraft production outpacing the West
  - Increased focus on space / lunar domain dominance
  - Hypersonic systems
  - Significant offensive cyber
- Russia:
  - Hypersonic systems
  - Significant offensive cyber
  - Theater nuclear systems
- Iran / North Korea / Others
  - Proxies and asymmetric strategies

# I. SPEED IS A NATIONAL SECURITY RISK (CONT.)

- We have a proven track record of moving quickly:
  - Manhattan Project – Concept to military use in ~3 years
  - Polaris Program – Concept to full deployment in ~4 years
  - Minuteman – Approval to activation in ~4 years
  - Predator (RQ-1) – Contract award to deployment ~18 months
- All of these programs drew upon available scientific/technical knowledge and rapidly established an industrial base capable of delivering operational systems

“New technologies, rapidly diffusing around the world, put increasingly sophisticated capabilities in the hands of small groups and individuals as well as enhancing the capabilities of nation states. While democratization of technology can be beneficial, it can also be economically, militarily, and socially destabilizing. For this reason, advances in technologies such as computing, biotechnology, artificial intelligence, and manufacturing warrant extra attention to anticipate the trajectories of emerging technologies and understand their implications for security.”

Annual Threat Assessment of the U.S. Intelligence Community, 2021

## 2. ACCELERATE PROTOTYPING-TO-DEPLOYMENT TIMELINE

- Continue reforms initiated by former Secretaries of Defense Ash Carter & James Mattis, and JCS Chair General Dunford, with the following goals:
  - Ensure U.S. decision-making and actions are relevant to and outpace evolving threats
  - Fundamentally change the decision-making culture within the Department of Defense and the extended national security community

## 2. ACCELERATE PROTOTYPING-TO-DEPLOYMENT TIMELINE (CONT.)

- What else can we do?
  - Maintain elevated funding for DARPA, NNSA Labs (LDRD), Defense innovation accounts (Strategic Capabilities Office, Defense Innovation Unit Experimental, Navy Disruptive Capabilities Office, etc.)
  - Streamline decision-making and budget process; Create MORE flexible funding accounts
  - Reward innovation, but don't punish failure
  - Improve partnerships with universities, industry, and global partners
  - Creative thinking:
    - Think like an adversary and be prepared to counter asymmetric challenges (AI, genetics, space, etc.)
    - Think beyond technology; consider operational and doctrinal impacts of new technology from an offensive and defensive lens
  - Ensure the next NPR expressly addresses new threats and new warfighting assumptions
  - Continue to use “soft-power” to undermine validity of adversaries purpose and narrow the support they might garner with international partners

### 3. SPEED IS CRITICAL TO THE U.S. DETERRENT

- An adaptive offense will always overcome a static defense; We need an adaptive defense and offence
- Need to look over-the-horizon, but also need to continue current efforts:
  - Modernization, LEPs and capital uplift
  - Domestic uranium enrichment capability, un-encumbered by treaty restrictions
  - Plutonium pit production
  - AUKUS
  - Columbia/Ford Class, SLCM, ICBM modernization

“The Commission recommends that this urgent expansion of the capacity of the U.S. nuclear weapons defense industrial base and the DOE/NNSA nuclear security enterprise include the flexibility to respond to emerging requirements in a timely fashion.”

U.S. Strategic Posture Commission, 2023



### 3. SPEED IS CRITICAL TO THE U.S. DETERRENT (CONT)

- NNSA needs to develop nuclear & conventional capabilities that can survive and counter new threats
  - Hypersonic systems
  - Space-based threats
    - Adversaries are weaponizing space, by exploiting the “grey zones” around treaty obligations that expressly prohibit such activities
    - Contemplate and plan for new nuclear domains such as space and extra-terrestrial (Lunar, Mars)
  - Cyber resiliency
- Develop more thought leaders on nuclear force structure and use
- Move faster on infrastructure investments and capabilities
  - Use Other Transactions Authority or other innovative tools to accelerate program milestones

## 4. NATIONAL LABS SHOULD INCREASE THEIR ROLE IN BROADER U.S. NATIONAL SECURITY PROGRAMS

Multi-disciplinary nature of U.S. National Labs can serve as an important catalyst for innovation:

- Increase lab-to-lab cooperation with allies
- Increase Government-University partnerships
- Expand interagency and international cooperation and integration
  - Interagency teams on specific topical areas (identify over-the-horizon threats, counter-threats, and facilitate transformative capabilities)
  - Senior White House / Interagency Group to break down bureaucratic barriers and facilitate agency-to-agency cooperation and international partnerships