

Hypersonics Supply Chains: Securing the Path to the Future

Rebecca Wostenberg

Senior Director for Research
Emerging Technologies Institute
National Defense Industrial Association





GOAL

Assess the current state of hypersonics supply chains and provide actionable policy recommendations for their development, health, and resilience





Methodology & Overall Assessment

- Scope
- Partnership with University of Maryland Supply Chain Management Center
- Convened 8 working groups, comprised of 22 key stakeholders from industry, government, and academia.
- Conducted interview with representatives at all levels of hypersonics supply chains
- Compiled key findings from working groups, interviews, UMD research, and internal research into final report.
- Submitted report to a distinguished peer review committee and external reviewers prior to publication

Assessment:

Current hypersonics supply chains, including manufacturing base, supply of critical materials, testing infrastructure, and workforce are insufficient to affordably field hypersonic weapons at scale.

Key Findings

- Critical Raw Materials & Goods
- Manufacturing Base
- Testing
- Workforce
- Supply Chain Security & Vulnerabilities
- International Partnerships & Allied Nearshoring





Select Recommendations

- DoD must provide a clear, consistent demand signal to industry
- Further investment needed in high temperature materials such as carbon- carbon
- DoD should encourage venture capital to invest in areas where the hypersonics supply chains and growth of the space industry overlap
- Academia should be leveraged to educate mid-level hypersonic talent via the University Consortium for Applied Hypersonics (UCAH)
- DoD should increase the hypersonics flight test schedule



Select Recommendations (continued)

- DoD should conduct a study of the existing hypersonics workforce and share the results with industry to identify and address concrete shortfalls in order to scale up hypersonic production
- The defense industry should ensure that it has the traditional and additive manufacturing capabilities needed to produce hypersonics at scale
- OUSD A&S should ensure the acquisition workforce is adequately prepared for hypersonic procurement at scale through education and training
- U.S. government should look to Canada and Australia to diversify raw material supply and expand testing partnerships