



*One Lab Two Services*



*Air Force Research Laboratory &  
Mid Atlantic Regional Hub*

Richard Vaia

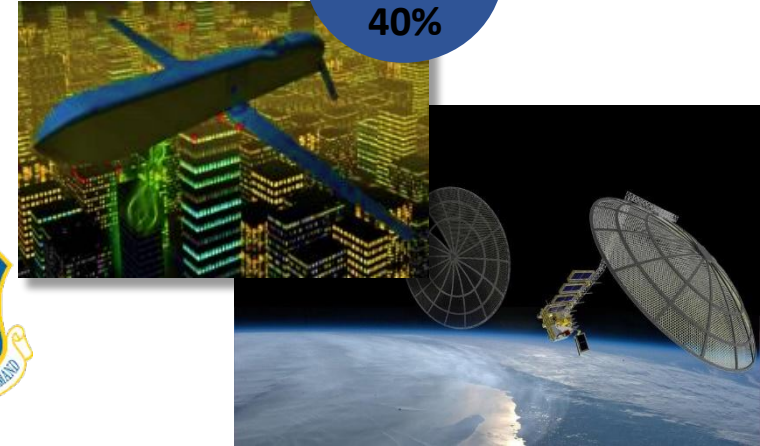
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***Leading*** the discovery, development, and integration of ***affordable warfighting technologies*** for our air, space, and cyberspace force

Products



### Resources

\$4.9 B (\$2.6B Core)  
6200 Employees (80% Adv. Dges)

### Technology Focus

- Human Performance & Health
- Materials & Manufacturing
- Directed Energy
- Space Vehicles
- Sensors
- Munitions
- Aerospace Systems
- Information

### Facilities

5 Major CONUS Locations  
4 OCONUS Locations  
Many Research Locations

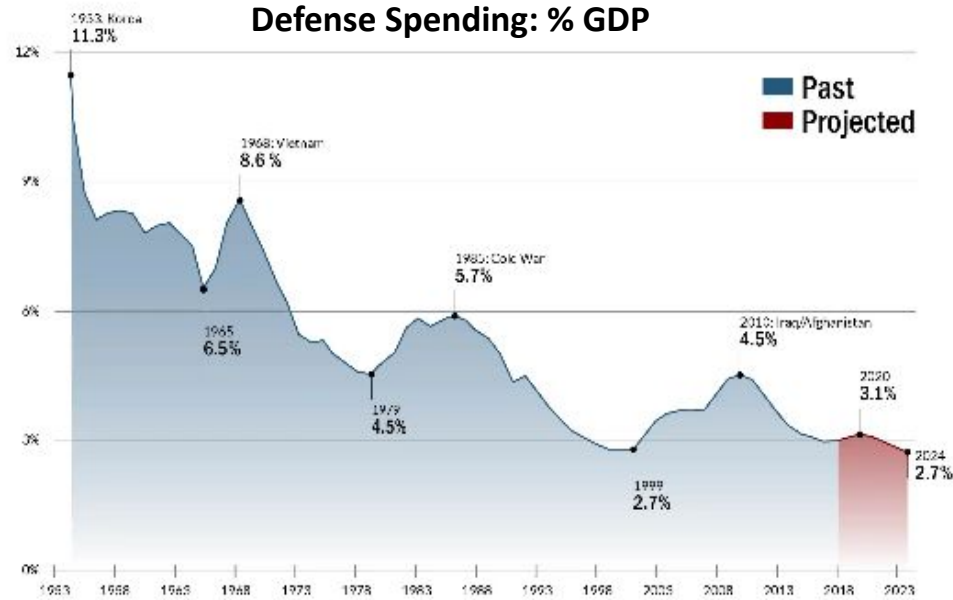
***Turning science into capability***



## Creating the Future Force



## Changing Economics



### Securing Defense-Critical Supply Chains

An action plan developed in response to President Biden's Executive Order 14017

February 2022



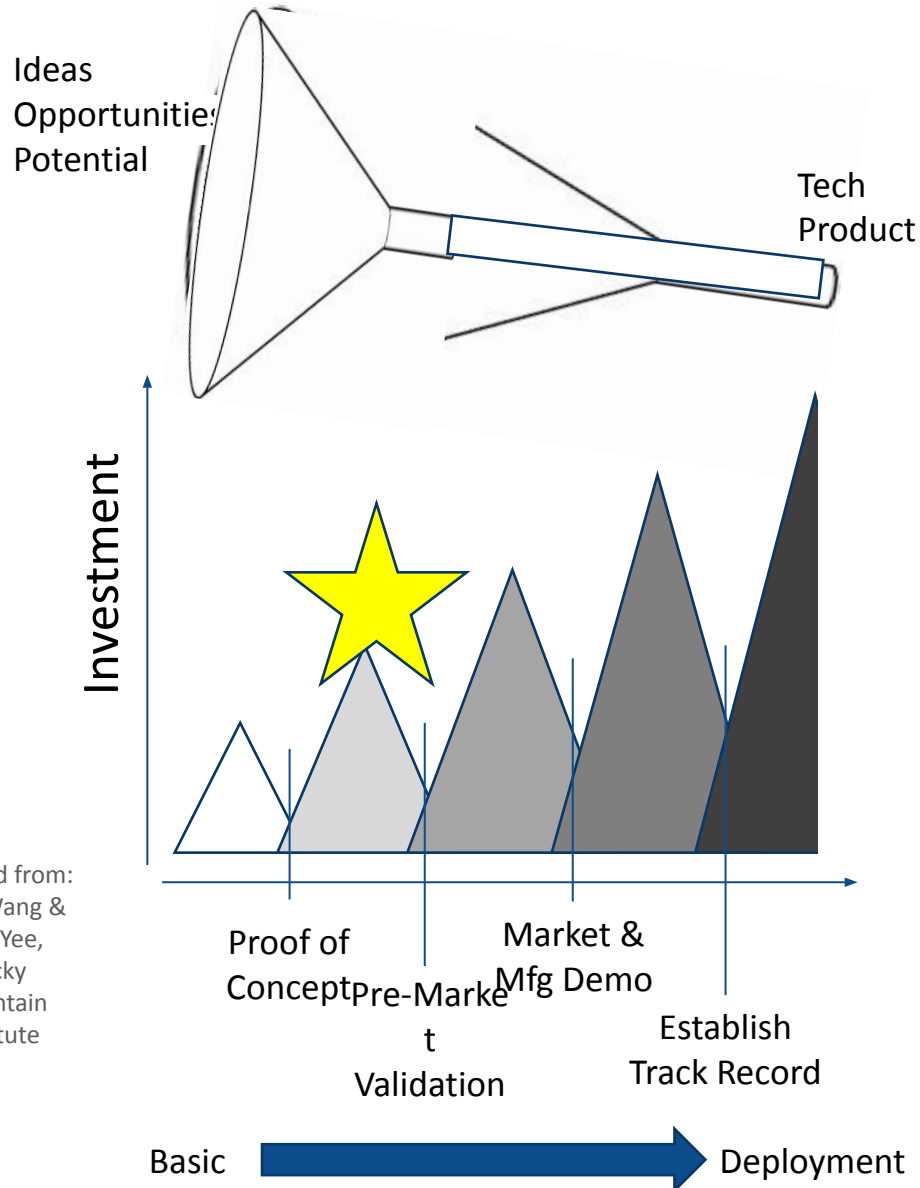
### Strategic Enablers

- Workforce
- Cyber posture
- Manufacturing
- Small Business

### Recommendations (partial)

- Build domestic capacity
- Aggregate demand
- Develop common standards
- Etc.

**Deterrence is based on cost-imposing technological superiority**



Adapted from:  
Hara Wang &  
Cyril Yee,  
Rocky  
Mountain  
Institute

## AFRL Regional Hub Pilot

### Accelerate *Translation* of DAF-relevant Innovations into Stable US Supply Chain(s)

Translation: Create Bridge(s) across Proof-of-Concept, Prototype, Pre-Market Validation

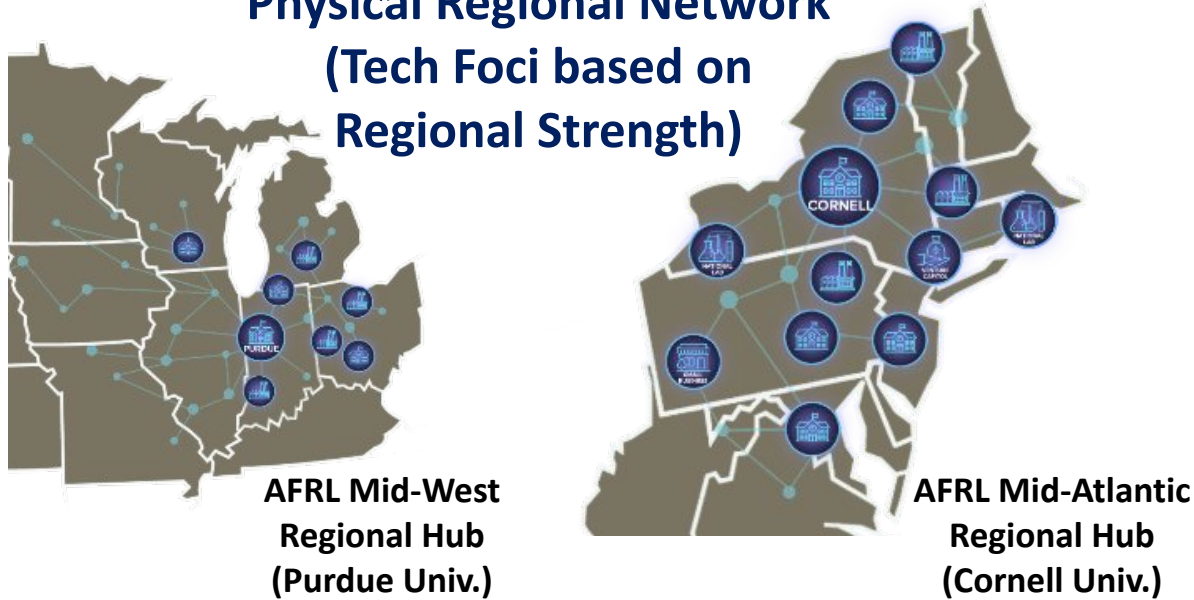
- Leverage regional hot-spots <sup>via</sup> of innovation & growth
- Non-traditional teams with access to S&Es / facilities across AFRL, Gov Labs, Academia, Industry
- Market-based project management & investment that leverages gov't programs & private resources



Innovators (academia, gov't labs, corp labs)  
Small Business (entrepreneurs, suppliers)  
Financiers (gov, industry, venture, regional)  
Market Demands (DoD, industry, supply chains)



## Physical Regional Network (Tech Foci based on Regional Strength)



20+ founding member nodes (academia, industry, national labs)

- **Network of Nodes** (acad., ind., non-trad., nat. labs, VCs, AFRL)
- **Consortium Model** (dynamic teams & topics, cost-share, facility-share)
- **AFRL – University “Co”-Managed**
- **AFRL S&E Physically within Nodes**
- **Leverage AFRL Transition Pgms** (Ag’mnts, PIAs, AFWERX, facilities, etc.)

Q1 CY22: Cooperative Agreement

Q2/Q3 CY22: Standup & Membership

Q4 CY22: Technology Investment & Operations

AFRL Investment per Hub: 3 + 2 yrs; 9M + 10M

### Advance the Ecosystem for Innovators

- Joint Road-Mapping (Innovators-2-Users)
- Collaboration & Networks
- Accepted Resources (Databases & Standards)

### Workforce Development

- Recruiting & Assessing
- Experiential (hands on experience of stakeholders)

### Pre-Competitive Risk Reduction & Assessment

- Shared Techniques, Approaches, Tools
- Shared Product Exploration
- Joint Supply Chain Development

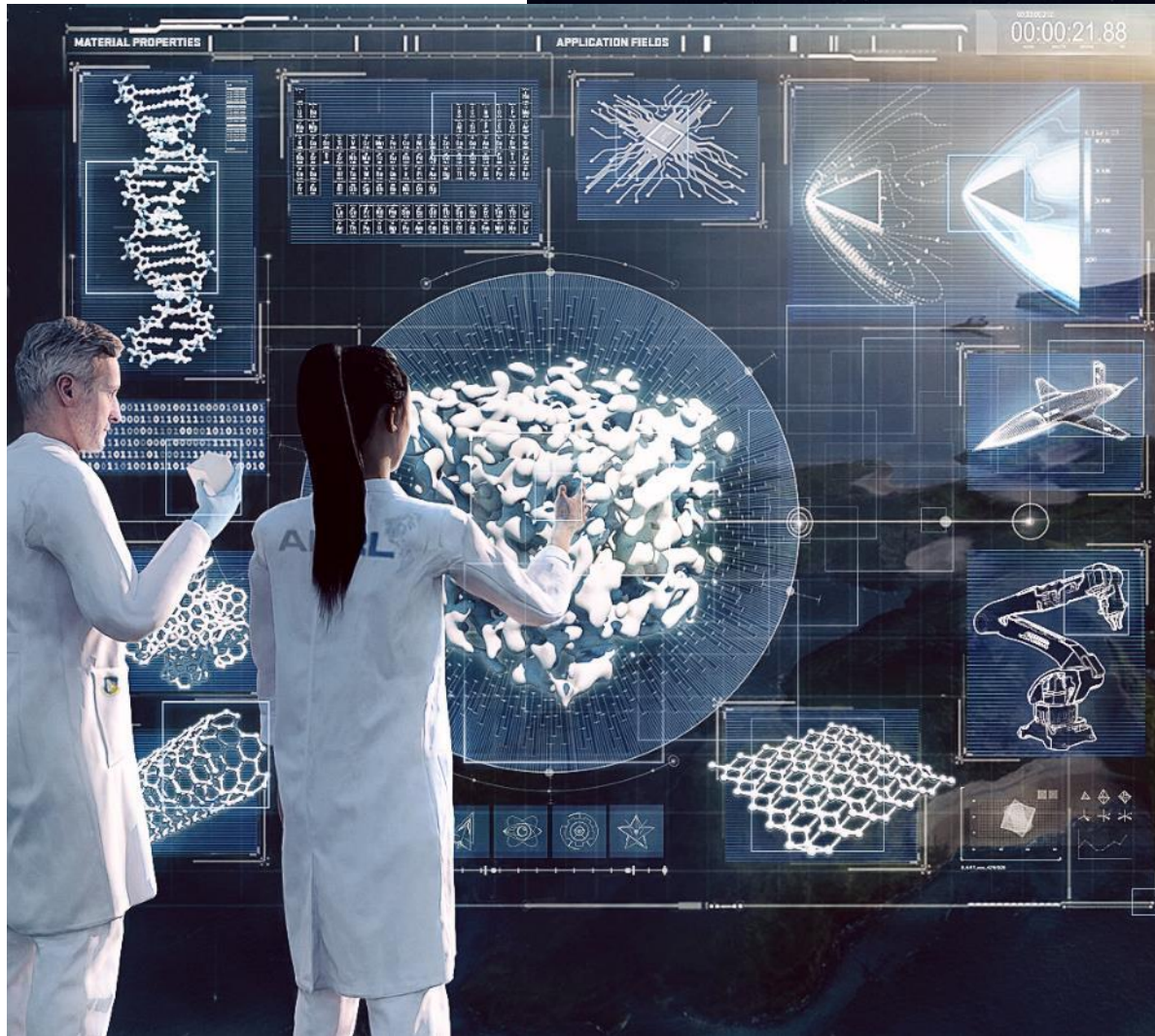
### Market Translation

- Spin-out Innovation (Gov and Corp Labs)
- Joint Risk Reduction and Assessment

### DoD Transition (“Dual Utilization”)

- Developing National Databases of Tech Suppliers
- Tools to Help Small Businesses
- Joint Risk Reduction and Assessment

Outcome for Members



**Public-Private Partnerships for R&D are  
Crucial for Future Force**

## Mid Atlantic Regional Hub

**2023 Foci:**

Validated Component Technologies for Extreme  
Environments

Technologies Using Complex Network  
Innovations

**Future:**

Workforce development via experiential  
learning

Opportunities & Market Assessment  
(DAF & Commercial)

New Tech Foci

***Cost-Imposing Technological Superiority Begins with Convergence & Translation***