



Defense Technology Symposium

in conjunction with the AUSA Warfighter Summit & Exposition

July 26, 2022 * Fayetteville, NC

Defense Technology Symposium

Session – North Carolina: Frontline of the Future

Colonel (Ret) Denny Lewis, Director, North Carolina Defense Technology
Transition Office (DEFTECH)

Michael Cunningham, Chairman, North Carolina Board of Science,
Technology and Innovation

John Hardin, Executive Director, Office of Science, Technology &
Innovation, North Carolina Department of Commerce

Colonel (Ret) Denny Lewis, Director, North Carolina Defense Technology
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North Carolina Defense Technology Symposium

WHY?



North Carolina Defense Technology Symposium

Focus: Enabling our Nation's Defenders with game changing overmatch solutions: quicker and cheaper.

Today's Objectives:

- Connect, educate, collaborate
- Leverage & exploit our unique and collective capabilities to deliver capability to our warfighters

NC - Frontline of the Future

- 1. Thriving dual-use tech innovation ecosystem**
- 2. Deep DoD, industry, and academic partnerships**
- 3. Expansive commitment to national defense**

Innovating better when innovating together!

Warfighters in NC



Ft. Bragg

Seymour
Johnson
AFB

Navy Fleet
Readiness
Center-East



Camp Lejeune

Marine Air
Station
Cherry Point

Military
Ocean Terminal
Sunny Point

USCG Aviation
Logistics Center

NC Academia



Partnerships:

NSA

82d

XVIII Abn Corps

USASOC

Others

Nation's 3rd Highest
Share of Industry
Funded University
Research

53 Colleges & Universities

58 Community Colleges

10 HBCUs

> 29,000 STEM graduates and
160,000+ post secondary
degrees annually

> 200 COEs:

DOD

DOE

NSA

NSF

USAF

USA

USN

AI

Cyber

Autonomy

Power

Automotive

others

Industry

Largest Research Park
In North America

2 of the Nation's Top 5
Metros for Innovation

#1 Best State for
Business
4 years running

96% Patent Growth over
Recent 10 year period

#2 in the nation for the
% of women in the tech
workforce

Large Business
Small Businesses

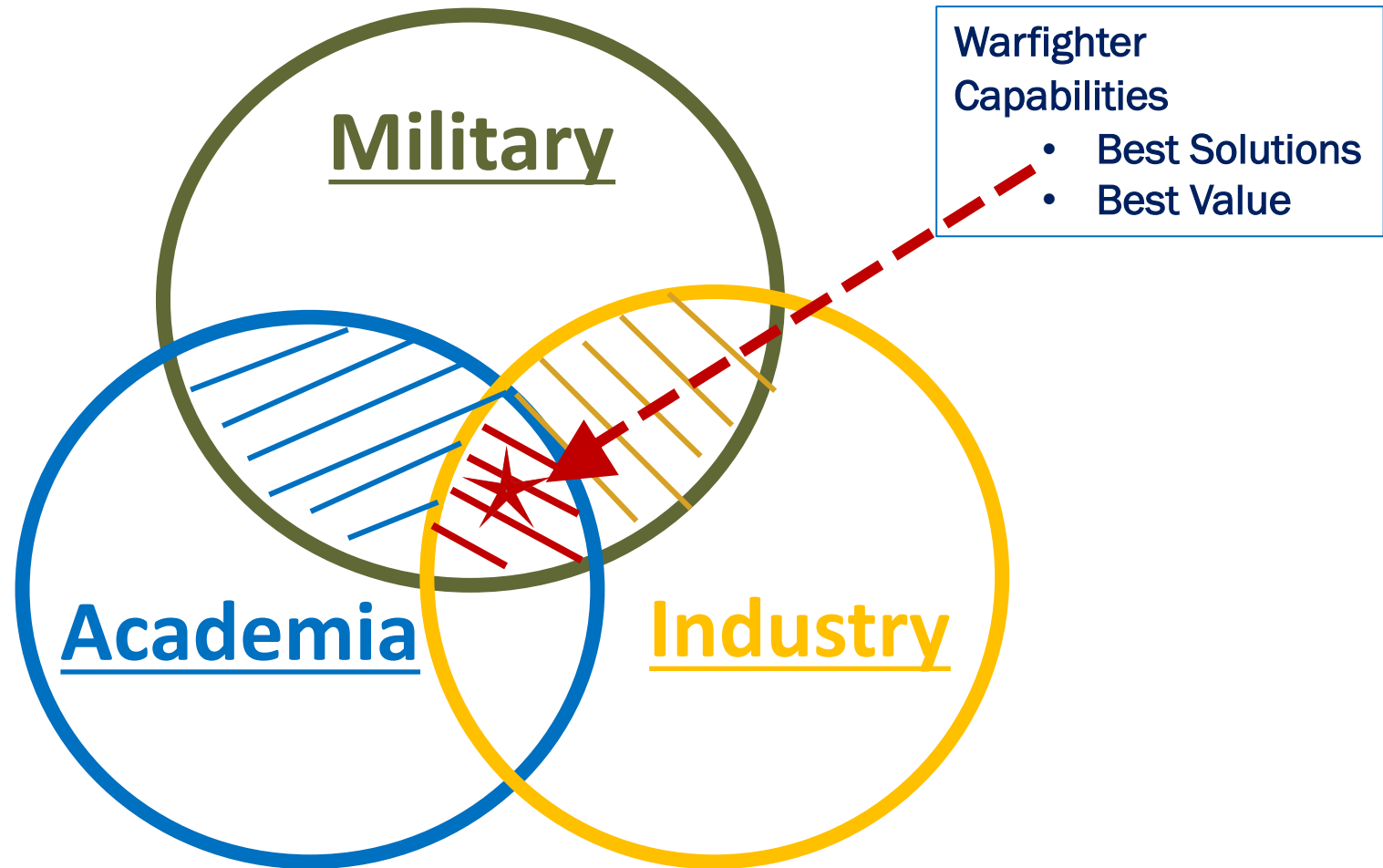
Dual Use Technologies

AI CYBER AUTONOMY BIG DATA
UAS CUAS IOT 5G NUTRITION
HUMAN PERFORMANCE
SENSORS POWER 3D
MATERIALS HYPERSONICS
MEDICAL BIOMED
QUANTUM

>1000 SB Innovators
200+ SBIR winners

IBM Red Hat
Pratt & Whitney
BAH, CISCO, SAS
EPIC Games
GE Aviation
Collins Aerospace
Honeywell
NG, GD, LM, BAE, DRS
Raytheon
GM Defense
NASCAR R&D Center
AWS, Google, Apple
MERK, Pfizer, Biogen

NC Innovation



NC's Expansive Commitment to National Defense

- State-funded and private organizations that work with DoD and state government to ensure that warfighters, their families, and the businesses that enable them are supported .
- Ongoing public-private partnerships responsive to DoD requirements
- Military retirement not taxed



NC DEPARTMENT
of COMMERCE
SCIENCE, TECHNOLOGY
& INNOVATION

NC Innovation



North Carolina
Biotechnology Center

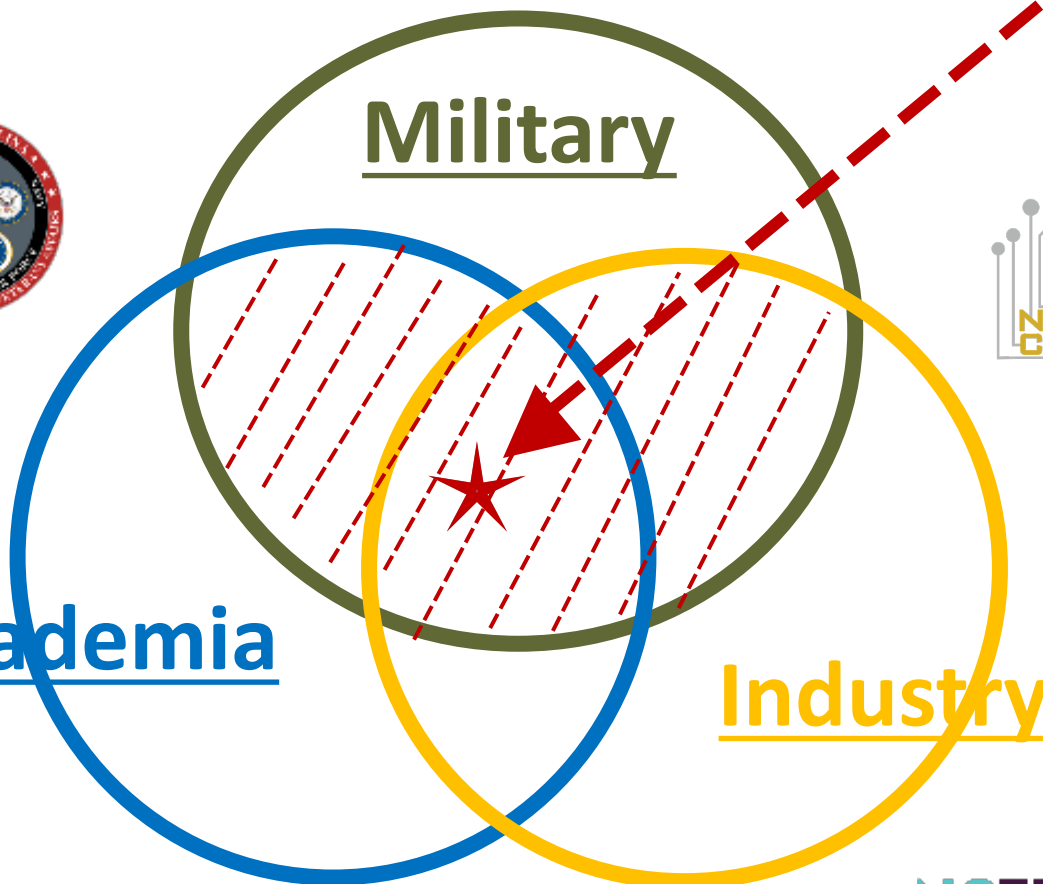
NSIN

NCMAC

ARL

NC-COMP

FFVC



INCREASE

Warfighter Capabilities

- More Submissions
- More Awareness
- Better Choices
- Best Solutions
- Best Value



DEFTECH

DANC
DEFENSE
ALLIANCE
OF NORTH
CAROLINA
SUPPORTING NC'S MILITARY BUSINESS
INNOVATION COMMUNITY



NC DEPARTMENT
of COMMERCE
SCIENCE, TECHNOLOGY
& INNOVATION

NCTECH
Association

RIOT

NC - Frontline of the Future

1. Thriving dual-use tech innovation ecosystem
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Innovating better when innovating together!

Defense Technology Symposium

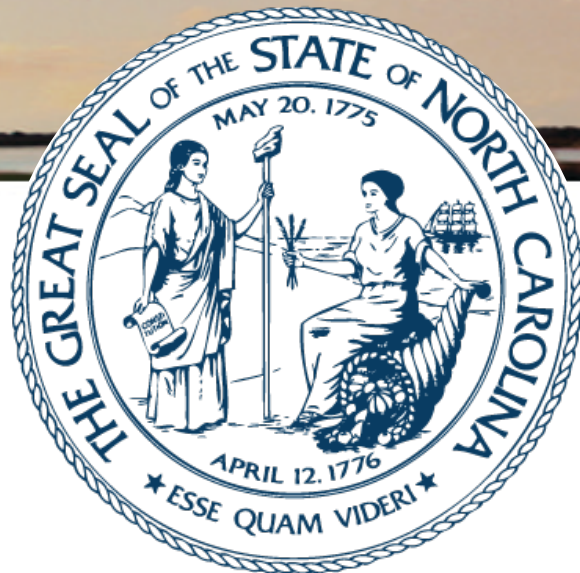
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www.nccommerce.com/sti

NC DEFENSE TECHNOLOGY SYMPOSIUM, JULY 26, 2022

NORTH CAROLINA: FRONTLINE OF THE FUTURE

MICHAEL CUNNINGHAM, CHAIRMAN
NC BOARD OF SCIENCE, TECHNOLOGY & INNOVATION

JOHN HARDIN, EXECUTIVE DIRECTOR
OFFICE OF SCIENCE, TECHNOLOGY & INNOVATION
NC DEPARTMENT OF COMMERCE



NC Board of Science, Technology & Innovation

- A **long-standing statutory board** of the great state of North Carolina (since 1963)
- 25-Members (including Scott Dorney) that are **experts on science, technology and innovation**, supported by expert, professional staff from NC Department of Commerce
- **Our Mission:** To improve the economic well being and quality of life of all North Carolinians through **advancing science, technology, and innovation**
- **Current Major & Strategic Focus:** Improving North Carolina's **defense innovation economy**, which we believe is materially underperforming—more on this to come
- We also run the **One NC Small Business Program**, providing non-dilutive grants to early-stage, innovative small businesses. And now a few words on this program that gives away cash!



NC Board of Science, Technology & Innovation

One NC Small Business Program

- Long-standing program, operational since 2006
- Three main elements:
 1. Non-dilutive **State Incentive Grants** to increase number & quality of NC entrepreneurs' applications for highly competitive Federal SBIR and STTR contracts/grants—the largest source of early-stage, non-dilutive capital for small business tech development
 2. Non-dilutive **State Matching grants** to recipients of SBIR/STTR contracts/grants, with far fewer restrictions on use than SBIR and STTR grants
 3. **Education & Outreach programs**



one north carolina
Small Business Program



NORTH CAROLINA
BOARD OF SCIENCE, TECHNOLOGY
& INNOVATION

NC Board of Science, Technology & Innovation

One NC Small Business Program

- Since 2006, awarded over 600 grants, totaling over \$32M, to over 340 small businesses throughout NC
- **Outcomes:**
 - Created/retained over 1,500 jobs
 - Spurred over \$3B in follow-on funding
 - 60% of recipients of state match have won Phase II grants (well above U.S. rate)
 - Fostered hundreds of intellectual property assets (patents, copyrights, trademarks, etc.)
 - Supported hundreds of business-university collaborations across NC
 - Generated hundreds of millions in annual sales
 - ROI on this State funding is more than 90x



one north carolina
Small Business Program



NORTH CAROLINA
BOARD OF SCIENCE, TECHNOLOGY
& INNOVATION

NC Board of Science, Technology & Innovation

One NC Small Business Program

- **Broad & Diverse Range of Funded R&D:**
 - Supports projects funded by 11 U.S. agencies, including Agriculture, Commerce, Defense, DHHS (bio), Education, Energy, Environment, Homeland Security, National Science Foundation (NSF), NASA, Transportation
- Board want to increase awards in NC to small businesses supporting (i) **DoD** and in (ii) economically distressed counties; (ii) increase diversity of entrepreneurs
- For more info or help on this program: jhardin@commerce.nc.gov or www.nccommerce.com/sti



NC Board of Science, Technology & Innovation

Defense Innovation Focus

- **Pre-2019-2021:** Board's Innovation Programs Committee identified the seemingly significant underperformance of DoD-associated SBIR and STTR grants in NC and conducts preliminary research. Preliminary research support basis for concern.
- **2021-2022:** Board convened blue-ribbon task force of 14 defense experts to define current overall economic opportunity & impact and develop an actionable strategy, including key performance measures and timelines
- Based on detailed empirical research, survey of NC-based support organizations, and interviews with support organizations in other states that perform well in DoD funding
- Released *Advancing Defense Innovation* report in April 2022



NC Board of Science, Technology & Innovation

Defense Innovation Findings

- NC has **major opportunity to materially increase DoD funding** for the state's defense innovation economy
- **NC is under-coordinated and under-resourced in these efforts**, despite having numerous highly productive, State, private, and academia-based innovation assets and resources focused on defense R&D and innovation
- Current efforts are **underperforming due primarily to a lack of strategic leadership and operational coordination**, but contributing factors include lack of effective communications and funding
- Failure to take definitive and decisive action to grow defense innovation has resulted in **substantial unrealized potential to expand the innovation ecosystem—and to create jobs**
- **Requires high-level State ownership** and a strategic, resourced, sustained, and effectively coordinated effort led by a champion at the highest level of State government



NC Board of Science, Technology & Innovation

Defense Innovation Task Force: Strategic Recommendations

- Governor and Legislature should designate a member of the Council of State as State Champion, tasked to lead a funded, multi-year initiative to expand NC's defense innovation and broader defense economy
- Governor, General Assembly & State Champion should establish/appoint an infrastructure to conduct coordinated strategic & tactical activities that grow defense innovation
- Governor and General Assembly should appropriately resource a 5-year initiative (anticipate \$2-4 million/year annual budget)



NC Board of Science, Technology & Innovation

Defense Innovation Call to Arms

- **Board is forming its team/coalition** to advocate for materially improving NC's defense innovation economy and NC's share of DoD-associated grants and contracts in this space with state officials
- **Come join us in the effort** – we need a strong clear and unified voice to overcome any noise or lack of foresight
- **Act today!**
 - **If you or an organization want to join this consortium, please come up, get an information sheet and join the sign-up list**
 - **Or contact** Denny Lewis (lewisd@ncmbc.us); Scott Dorney (scott@ncmbc.us), Rick Webb (rick@rickwebbassociates.com) or Michael Cunningham (michael.cunningham@trailingseas.com)



NORTH CAROLINA
BOARD OF SCIENCE, TECHNOLOGY
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NORTH CAROLINA MILITARY BUSINESS CENTER & NC DEFENSE TECHNOLOGY TRANSITION OFFICE

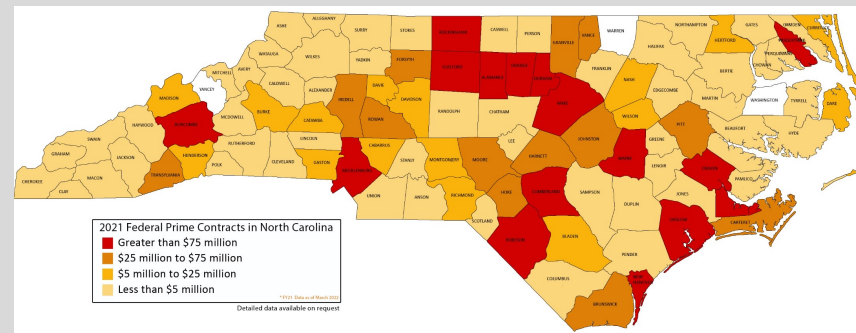
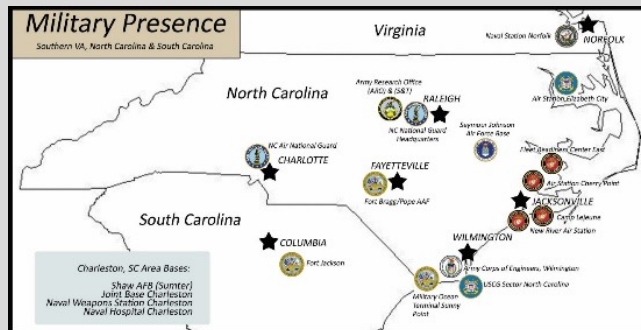
OVERVIEW

Bottom Line: How We Serve You

- Engage businesses to work for the military – provide market intel, business development, training, tech assistance, teaming, etc.
- Source requirements – through BD team statewide, dbase, MatchForce
- Drive up submissions/proposals, and competition; drive down costs
- Scour state for technologies with defense applications, connect with DoD SBIR, STTR, Rapid Prototyping (DEFTECH)
- Promote small business/community relations: host webinars, events
- Support workforce needs – keep transitioning military in NC

Why it matters

- Defense, 2nd largest economic sector: \$66 billion, 12.8% GDP
- Military presence: 3rd highest in US, 6 major bases, 130k military
- Business opportunity: \$7.6 billion contracts (2021), 97/100 counties
- Workforce: 18,000 military transitions annually in NC
- Innovation ecosystem: diverse, applicable to defense, nurtured
- Business infrastructure: best in US, including NCMBC



Who We Are

- The NCMBC is a statewide, **business development** and **technology transition** asset of the State, embedded in community colleges and headquartered at FTCC
- Totally State-funded, the NCMBC is the **only statewide, military-focused economic development entity** in the US, and the only NC entity solely focused on growing the defense economy through existing industry

Mission, Goals and Outcomes

Mission: To leverage military and federal business opportunities to expand the economy, grow jobs and improve quality of life

Goals and Operations:

- 1 - Increase federal **revenues** for businesses
- 2 - Support **technology** transition to federal agencies
- 3 - Support defense-related business **recruitment**
- 4 - Support integration of military into **workforce**

Outcomes:	4,410 Contract Wins	\$17.0 billion, min. revenues
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North Carolina Military Business Center

Organizational Chart

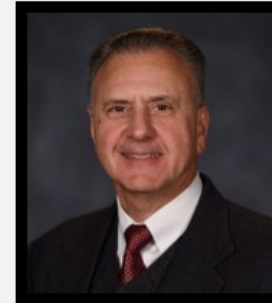
Leadership Team



Courtney Smedick
Director of Operations



Scott Dorney
Executive Director



Denny Lewis
Director of Economic and
Technology Development

Defense Technology Transition (DEFTECH) Team



Bob Burton
Senior Manager



Rob Robinson
Artificial Intelligence



Kim Kotlar
Information Security

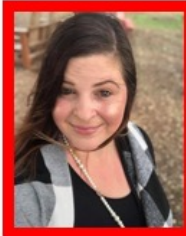
Headquarters Team



Tim Malone
Data Admin



Teresa Earl
Admin & Logistics



Rachel Rocker
Research Analyst

Business Development Team



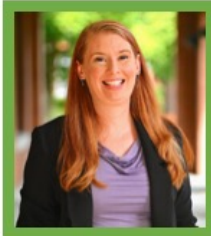
Fran Perez-WilHITE
Charlotte



Joe Tew
Flat Rock



Rick Gilmore
Greensboro



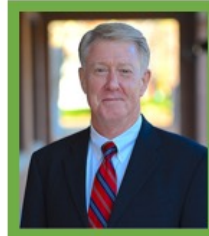
Heather Port
Fayetteville



Bill Simons
Goldsboro



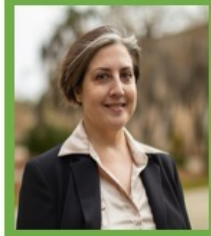
Laura Rodgers
Raleigh



TJ Gilroy
Triangle



Darleen Stein
Elizabeth City



Erin Ananian-Gentile
New Bern



Donna Walton
Jacksonville



Donna Warren
Wilmington



Randy Chandler
Morehead City



Diane Cherry
Raleigh



Lee Moritz
Hickory

Strategic Industry Team



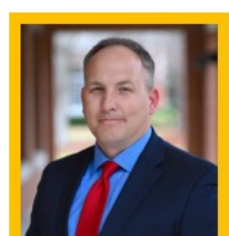
Sue Kranes
Infrastructure



Paulanne Page
Infrastructure



John Cassani
Textiles & Warfighter Systems



Jimmy Hendrix
DoD Industrial Operations

Operations: Business Development

Operations at Colleges	Future Opportunities	Current Opportunities
Recruit to market	Identify, analyze	ID, analyze most lucrative
Engage in market	Connect to businesses	Connect to businesses
Training, webinars	Market intelligence	Solicitation support
Counseling, 1-on-1	Pre-positioning	Proposal support
Events, statewide	Teaming, subcontracting	Contract execution

CY2005 - CY2022	Opps distributed: 47,738	Connections: 40.2 million
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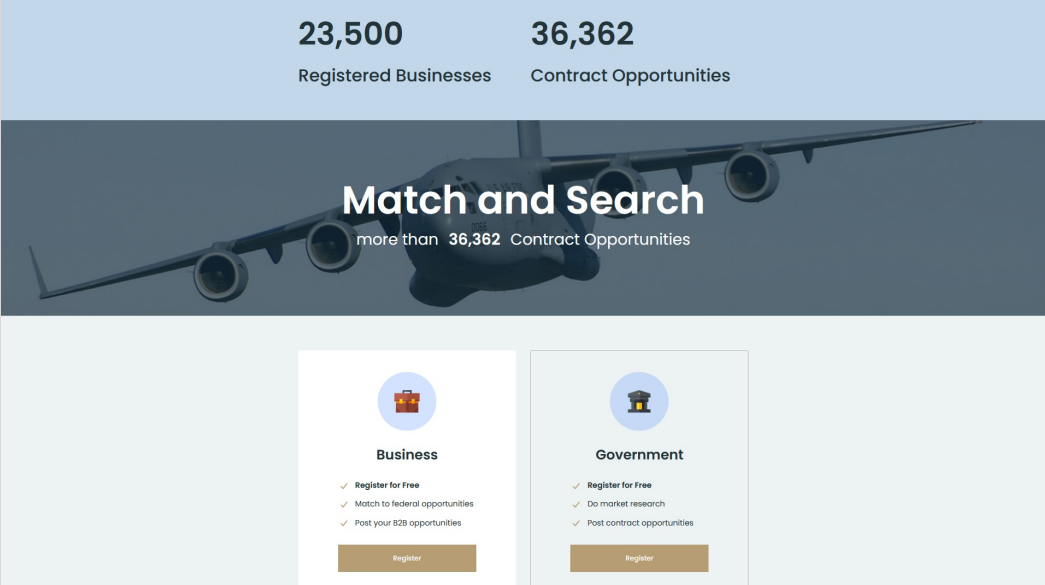
Operations: MatchForce.org

MatchForce Next Generation Matches:

NC businesses to federal opportunities

Contracting staff to NC businesses

Prime contractors to NC subcontractors



The screenshot shows the MatchForce.org homepage. At the top, two statistics are displayed: 23,500 Registered Businesses and 36,362 Contract Opportunities. Below this is a large banner with an image of a military aircraft and the text 'Match and Search' followed by 'more than 36,362 Contract Opportunities'. The page is divided into two main sections: 'Business' and 'Government'. The 'Business' section includes a brief description, a list of benefits (Register for Free, Match to federal opportunities, Post your 828 opportunities), and a 'Register' button. The 'Government' section includes a brief description, a list of benefits (Register for Free, Do market research, Post contract opportunities), and a 'Register' button.

Category	Count
Registered Businesses	23,500
Contract Opportunities	36,362

Match and Search

more than 36,362 Contract Opportunities

Business

- ✓ Register for Free
- ✓ Match to federal opportunities
- ✓ Post your 828 opportunities

[Register](#)

Government

- ✓ Register for Free
- ✓ Do market research
- ✓ Post contract opportunities

[Register](#)

CY2005 - CY2022

Opps distributed: over 2.0 million

Connections: over 400 million

NC Industry Challenge

suspicion

IP

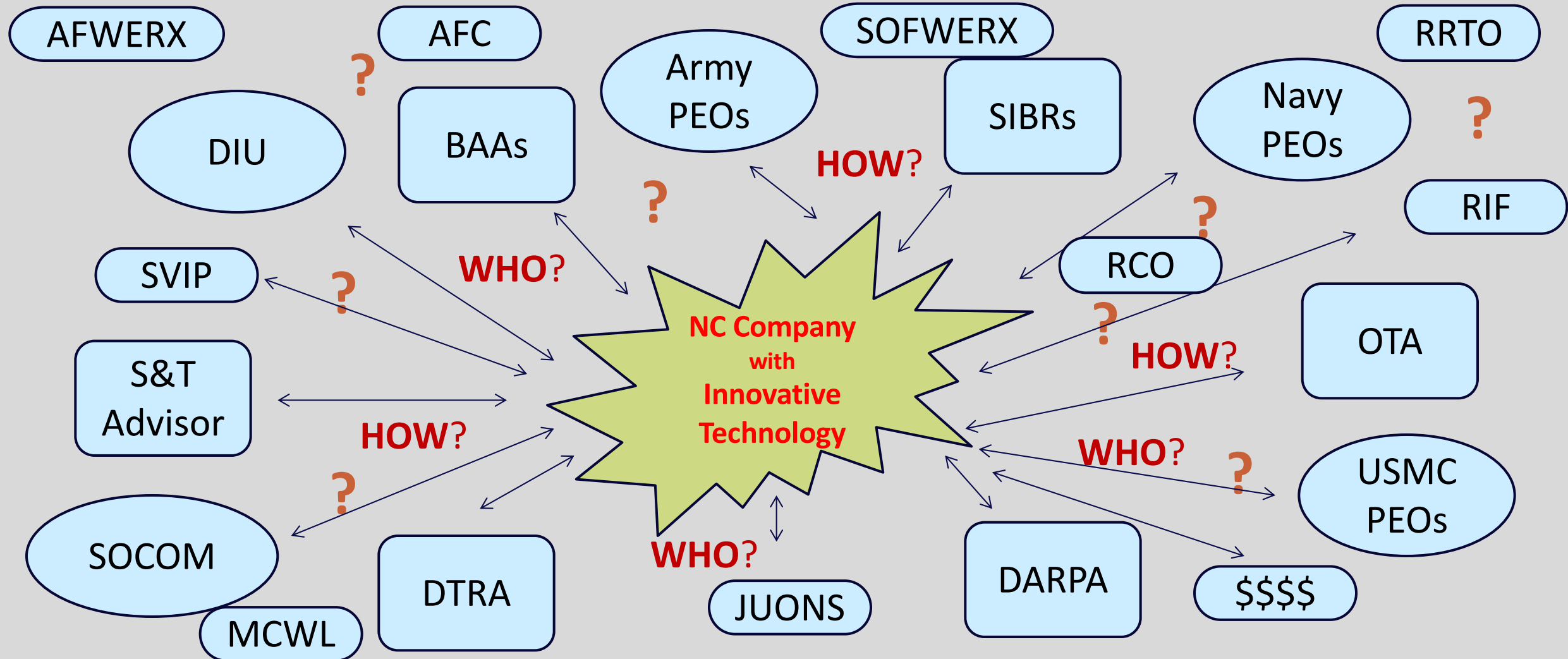
cost to pursue

distrust

time

ROI

Pwin



Rapid Prototyping

Other Trans Auth (OTA)

DIU

AFWERX

SOFWERX

VULCAN

XTECH SEARCH AFC

NAVALX

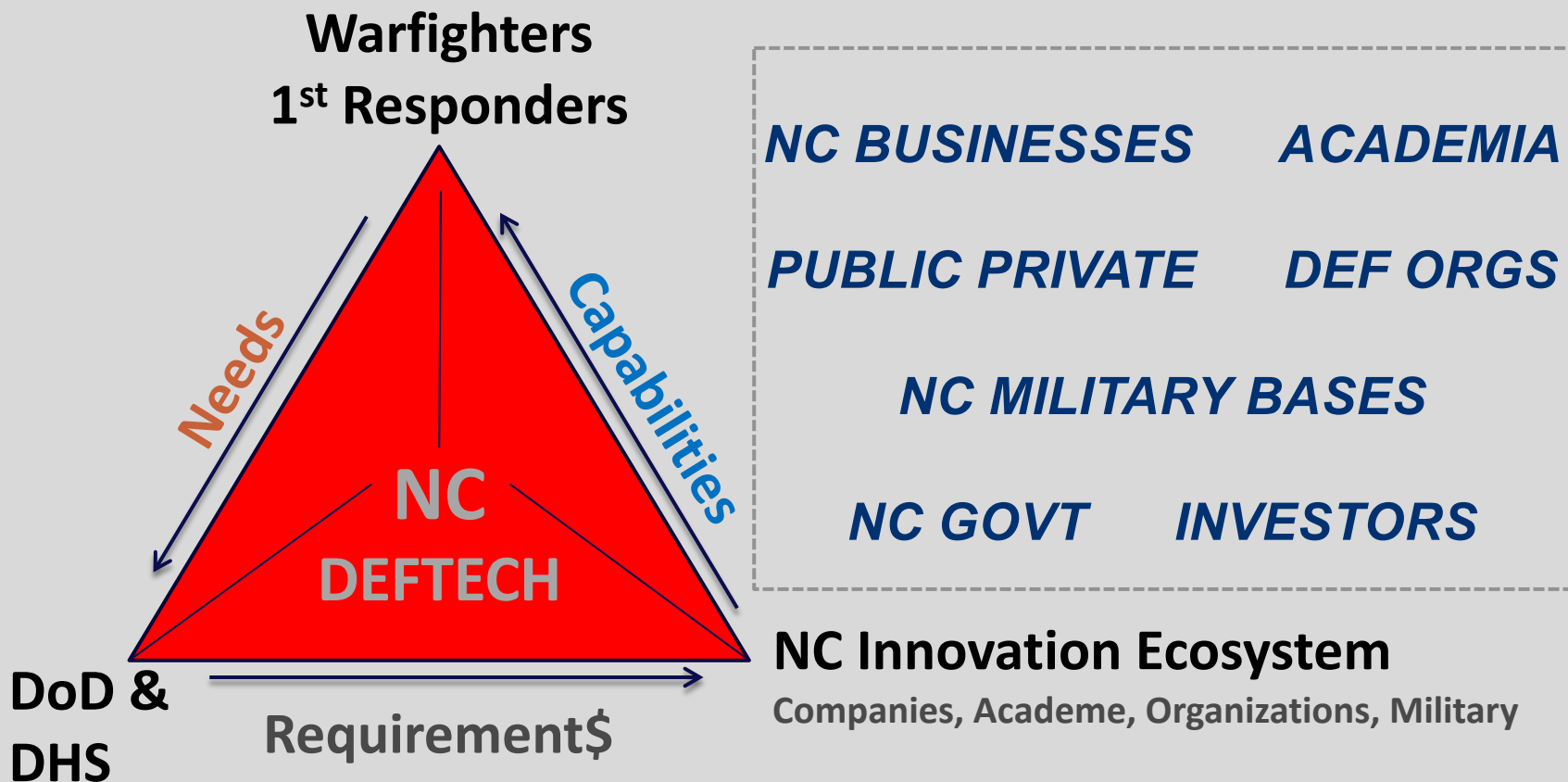
MCWL

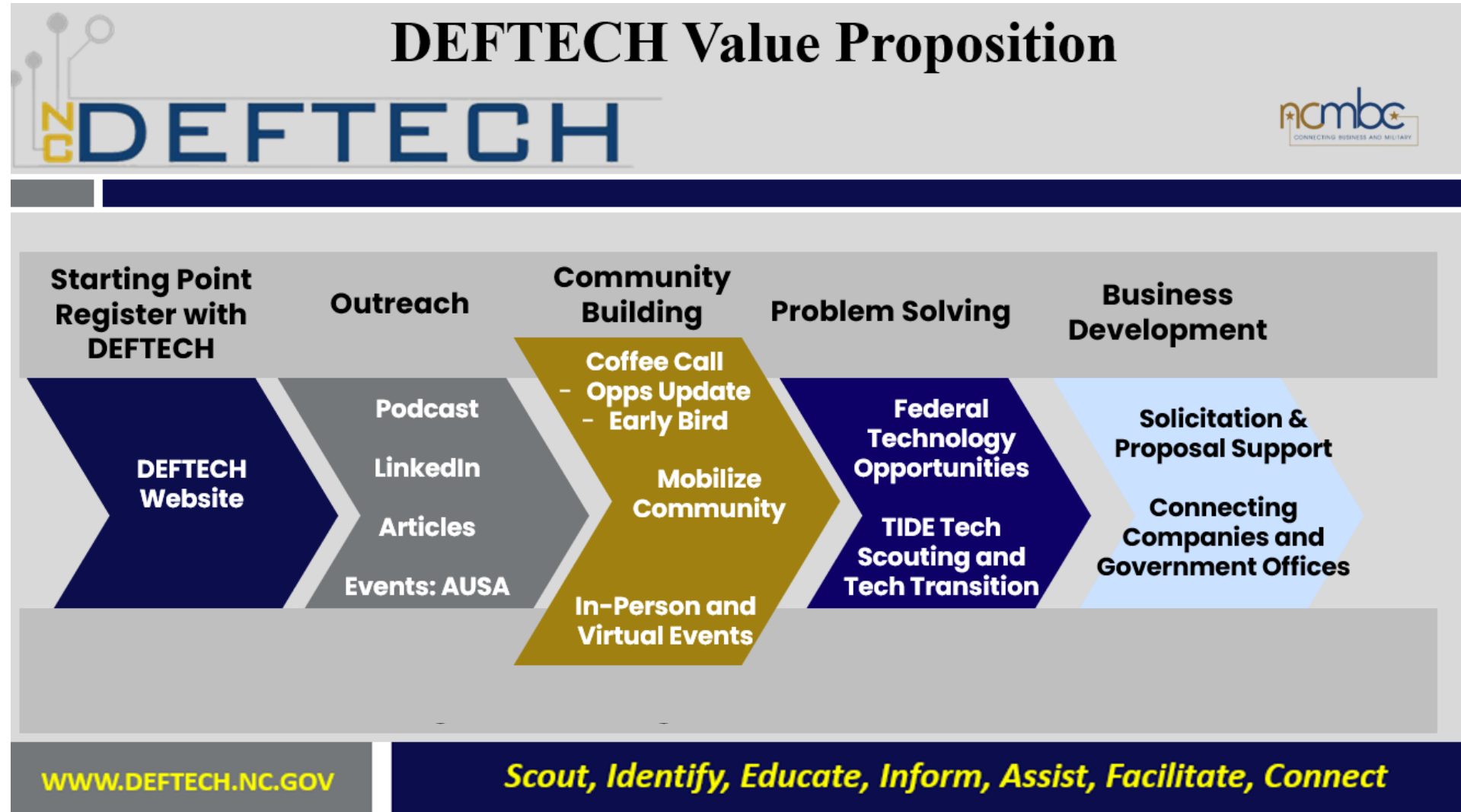
NASA DOE DHS SVIP

Service LABS DARPA

11 Department

SBIR Offices





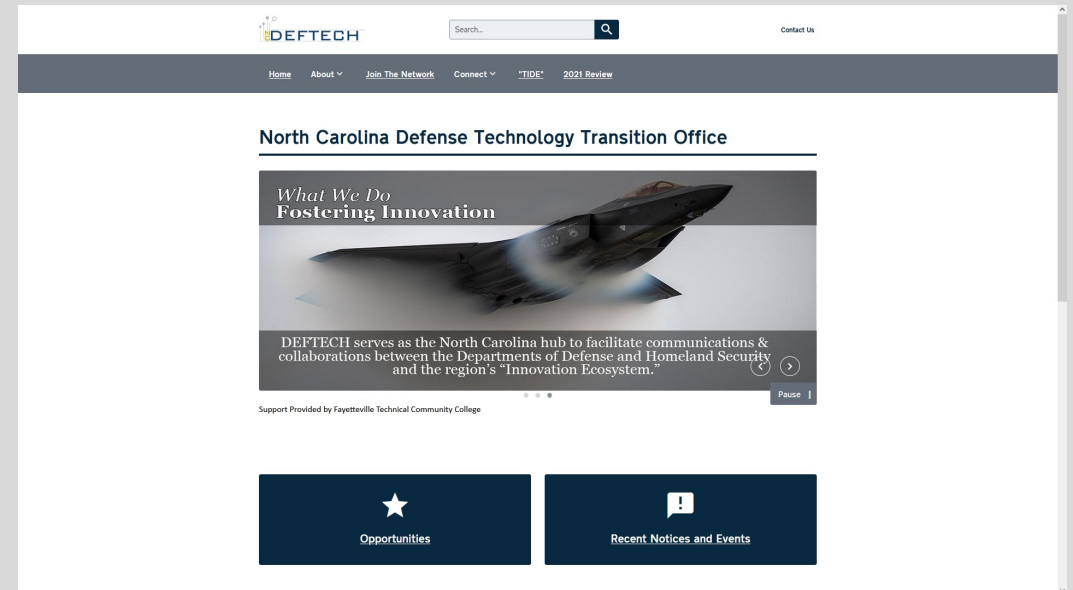
Operations: Tech Transition (DEFTECH)

Leads State, growing defense innovation

Sources DoD tech needs to ecosystem

Scours state, tech w/defense application

Helps navigate agencies and processes



CY2020 - 2022

Opps distro: 961

Innovation events: 60+

Podcasts: 40+

2021: at least 12 winners

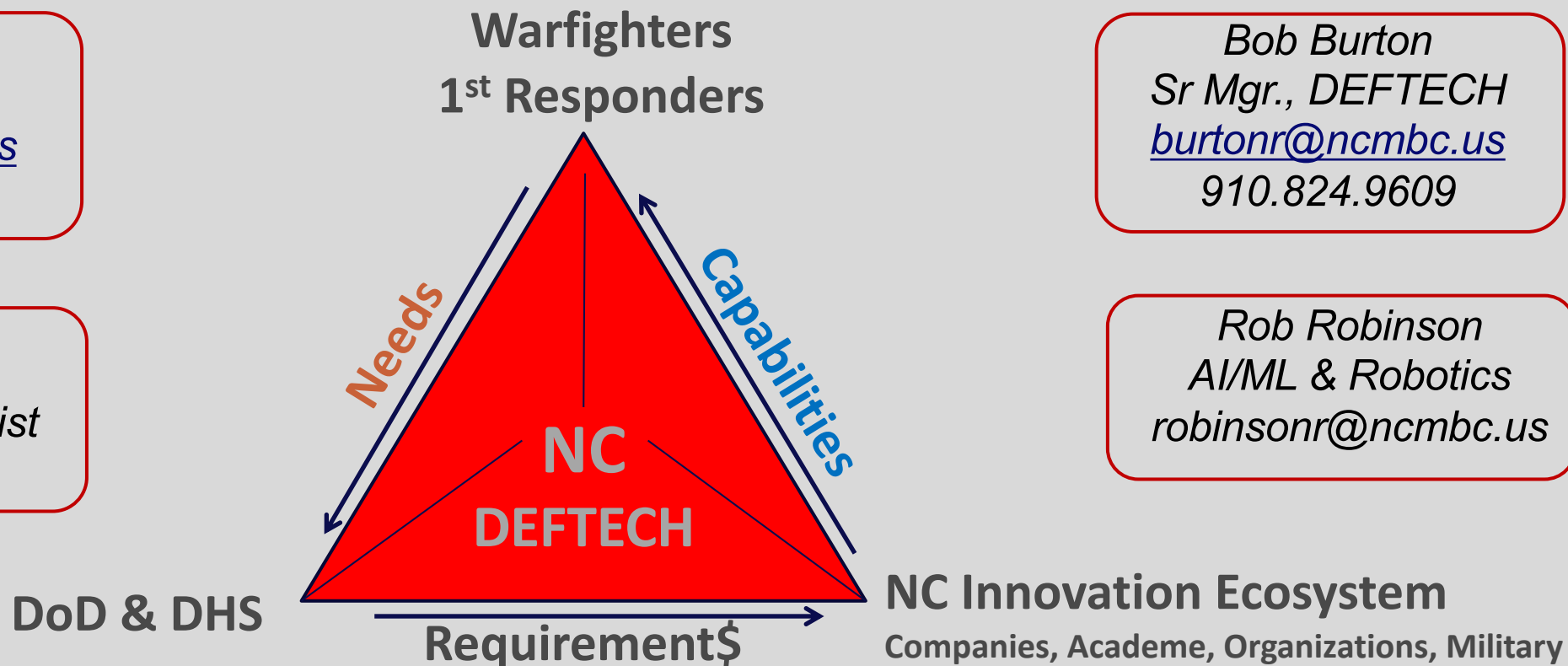
2021 Value: over \$10 million

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SCOTT DORNEY



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