

Army Science & Technology



NDIA Science Engineering & Technology Conference Command, Control, Communications, and Intelligence (C3I) Portfolio Overview



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DESIGN • DEVELOP • DELIVER • DOMINATE
SOLDIERS AS THE DECISIVE EDGE



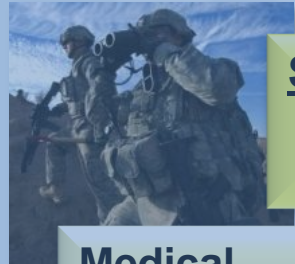
Army Enduring Challenges

- Greater **force protection (Soldier, vehicle, base)** to ensure survivability across all operations
- Ease **overburdened** Soldiers in Small Units
- Timely **mission command & tactical intelligence** to provide situation awareness and communications in all environments
- Reduce logistic burden of **storing, transporting, distributing** and **retrograde** of materials
- Create **operational overmatch** (enhanced lethality and accuracy)
- Achieve operational **maneuverability** in all environments and at **high operational tempo**
- Enable ability to **operate in CBRNE environment**
- Enable **early detection and improved outcomes for Traumatic Brain Injury (TBI) and Post Traumatic Stress Disorder (PTSD)**
- Improve **operational energy**
- Improve **individual & team training**
- **Reduce lifecycle cost** of future Army capabilities



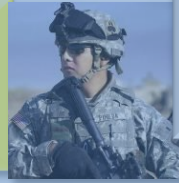
Army S&T Investments by Portfolio

PB15 FY15 6.1-6.3



Soldier/Squad

Soldier survivability equipment; human dimension/systems; power & energy; Soldier Weapons, training



Air

Advanced air vehicles; unmanned aerial systems; manned/unmanned teaming

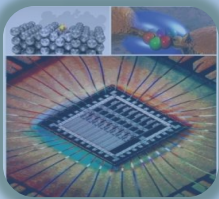


Medical

Combat Casualty Care, Infectious Disease mitigation, clinical/rehabilitative medicine

Innovation Enablers

High Performance Computing; Environmental Protection; Base Protection; Studies



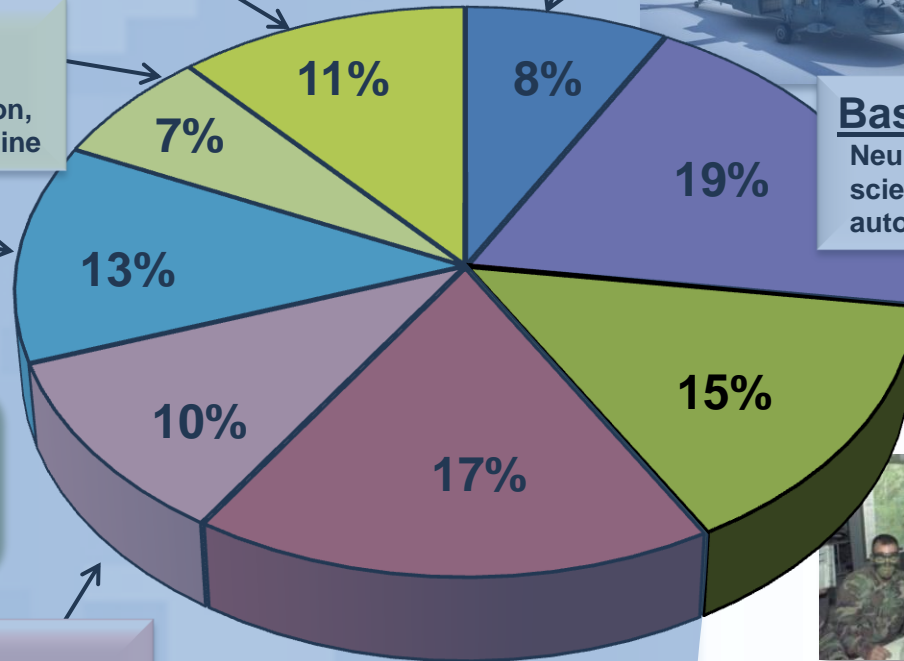
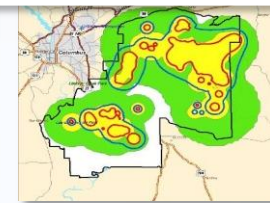
Basic Research

Neuroscience; network science, materials science; autonomy



C3I

Secure Comms-on-the-move; cyber/EW; sensors



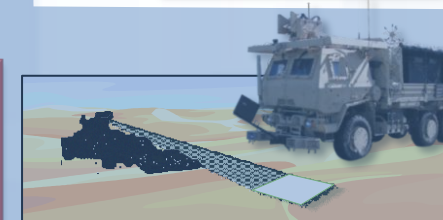
Lethality

Offensive/Defensive kinetic (guns, missiles) > 50 cal; Directed Energy (HEL) weapons



Ground Maneuver

Combat/tactical ground platforms/survivability; unmanned ground systems; austere entry; power & energy



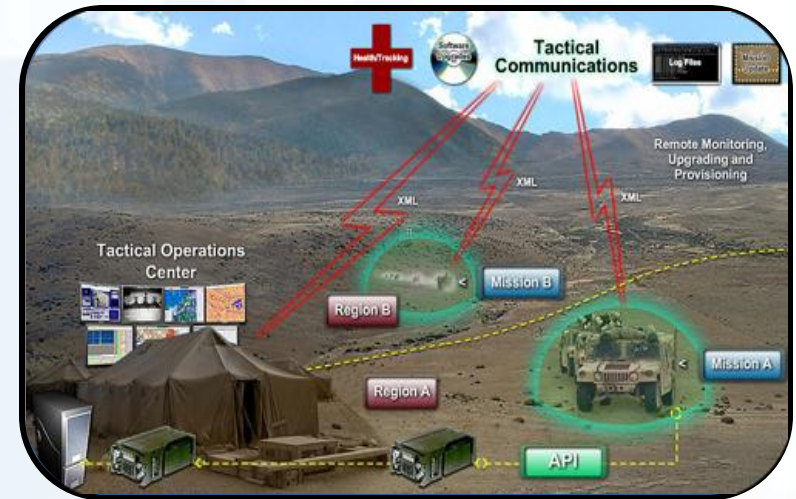
Note: Figures may not add due to rounding

MAINTAINING A LEADING EDGE IN TECHNOLOGY



Vision

Soldiers at the tactical edge have trusted and responsive sensors, communications, and information adaptable in dynamic, austere environments to support battlefield operations and non-kinetic warfare



Adapt - Adopt - Develop

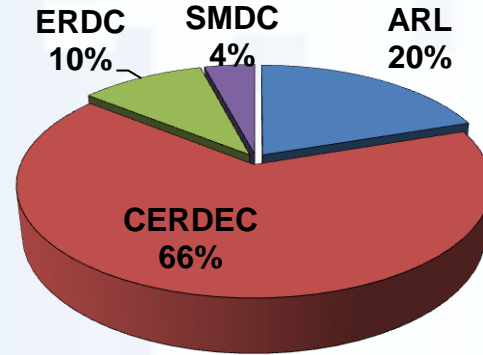




C3I Portfolio

C3I Portfolio 6.2 and 6.3 Funding

\$336M



Communications

\$67M

- Investment Areas
- Antennas
 - Mobile Networking
 - Network Protection
 - Space

Mission Command

\$89M

- Investment Areas
- Information Planning
 - Presentation/ Displays
 - Battlefield Environments

Sensors

\$129M

- Investment Areas
- Electro-Optical
 - Infrared
 - Non-Imaging
 - Radio Frequency
 - Counter Sensor/ Sensor Protection
 - Sensor Integration

Intelligence / Electronic Warfare

\$50M

- Investment Areas
- Information Fusion
 - Electronic Warfare



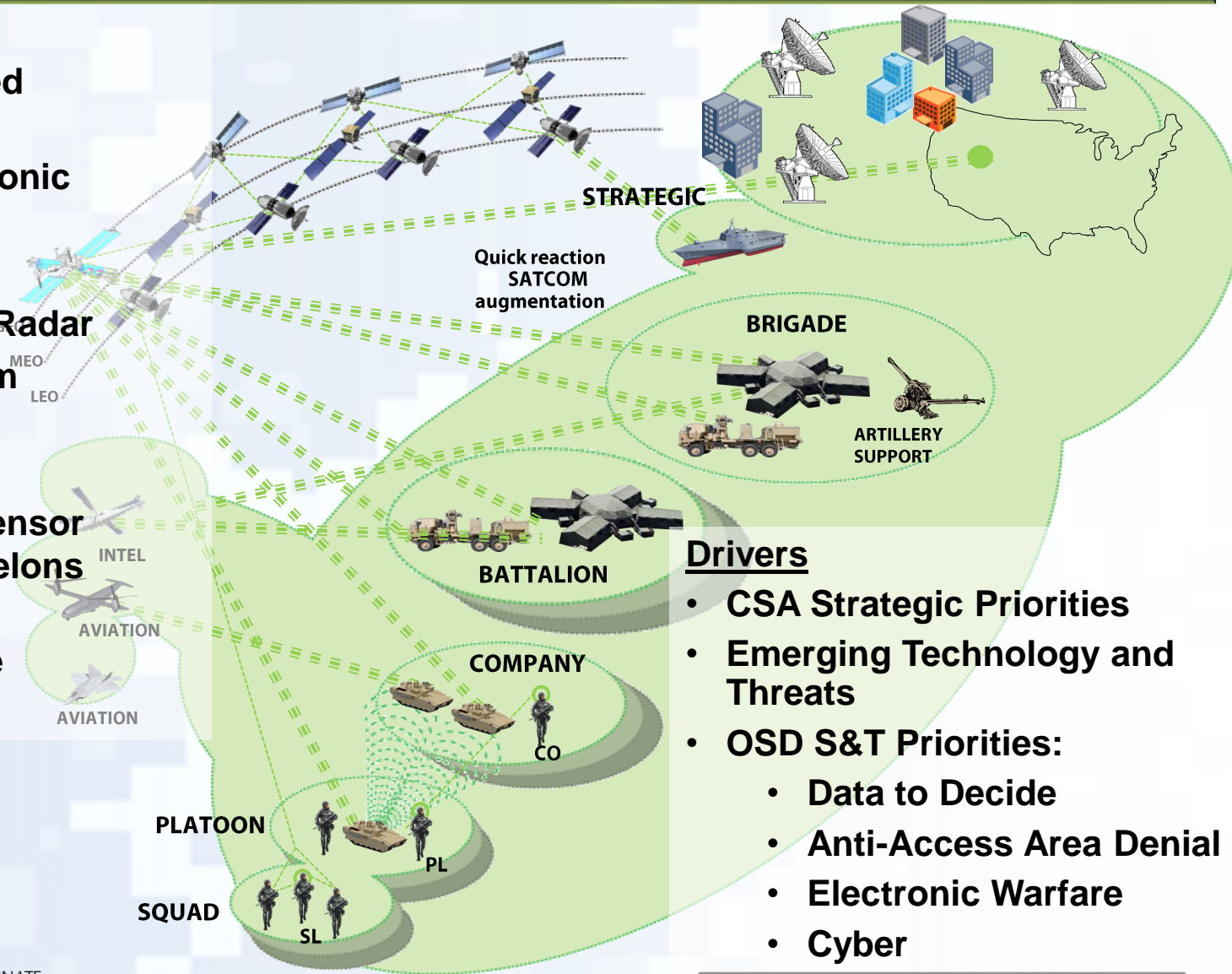
Command Control Communications & Intelligence S&T Strategy



Goal: Increase sensing, EW, communications and mission command effectiveness

Key Research Areas

- **Common Integrated Architectures**
 - Comms/Electronic Warfare (EW)
 - EW/Cyber
 - Multifunction Radar
- Improved spectrum management
- Cyber security
- Intelligence and sensor fusion across echelons
- Radio Frequency hardware/software convergence



Drivers

- CSA Strategic Priorities
- Emerging Technology and Threats
- OSD S&T Priorities:
 - Data to Decide
 - Anti-Access Area Denial
 - Electronic Warfare
 - Cyber



Command Control Communications & Intelligence Major Efforts



Assured Position, Navigation and Timing



Goal: Provide assured position navigation and timing (PNT) in a contested environments.

High Definition (HD) Multifunction Sensors



Goal: Next generation integrated HD sensors to provide situational awareness for target identification, weapons cuing and platform protection against a wide spectrum of threats.

Radio Frequency (Comms/EW/PNT) Common Operating Environment



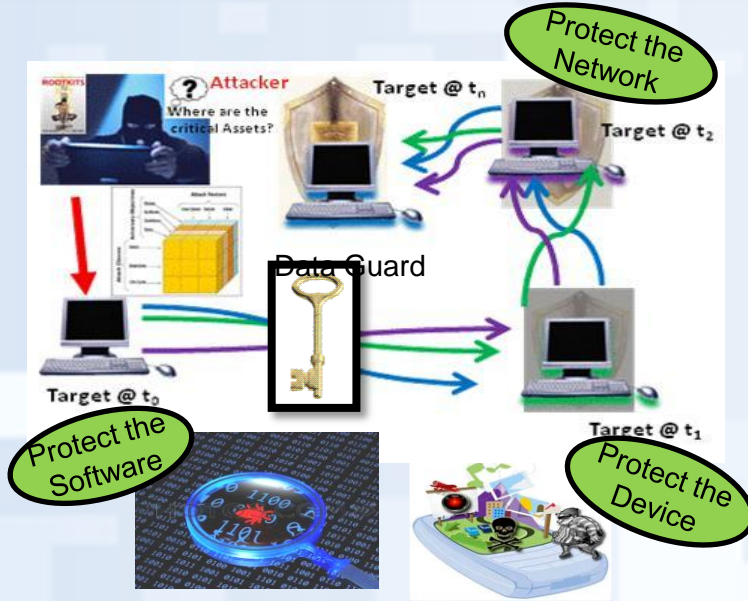
Goal: Increasingly integrate and converge communications, electronic warfare & signal intelligence with the goal of full interoperability.



Command Control Communications & Intelligence Major Efforts

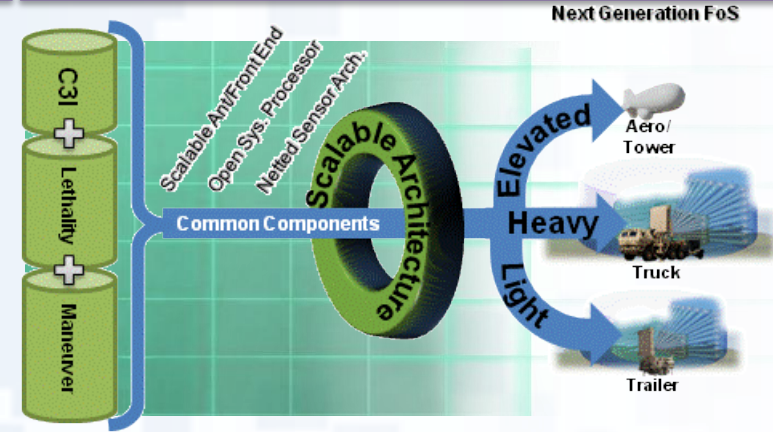


Cyber Protection



Goal: Protect the Network, prevent adversaries from scouting, mapping and exploiting the network, identify and respond to zero day attacks, generate and distribute situational awareness of the state of the network.

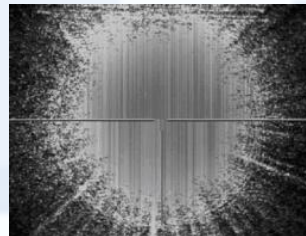
Multi function Radars



Goal: Architectures, processing and components necessary to deliver next generation capability, flexibility and supportability to the fires family of radar systems in time to deliver next generation tech demo in 2023 time frame.

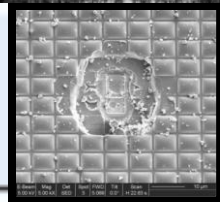
Sensor Protection

Threats

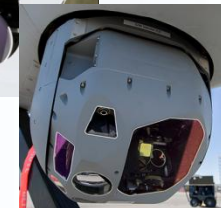


Goal: Provide Protection of existing and emerging sensors from a variety of countermeasures.

Effects



Sensor Systems



Defense Innovation Marketplace

(www.DefenseInnovationMarketplace.mil)



DEFENSE INNOVATION MARKETPLACE

And Other DoD Agencies

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CONNECTING INDUSTRY & DoD

The Defense Innovation Marketplace is a centralized resource for market research:

For Industry, to learn about Department of Defense (DoD) S&T/R&D investment priorities, capability needs and technology interchanges.

For Government, to [access search tools](#) to assess and then leverage industry IR&D projects for current and future programs.

"We also have the Defense Marketplace, which is a website that we allow industry to identify IR&D opportunities... that we can then leverage."
Mary Miller, Deputy Assistant Secretary of the Army for Research & Technology

Featured Document

USMC Expeditionary Forces 21
This document provides guidance for how the Marine Corps will be postured, organized, trained, and equipped to fulfill assigned public law and national policy responsibilities.

NEW IN THE MARKETPLACE

Strategic Documents	Doing Business with DoD	News & Events
<ul style="list-style-type: none">Systems Engineering 2013 Annual Report **NEW**DoD's FY15 S&T TestimonyChairman's 2nd Term Strategic DirectionExpeditionary Forces Capstone ConceptReliance 21 Operating Principles <p>More...</p>	<ul style="list-style-type: none">DARPA Hand & Touch Interfaces (HAPTIX) Proposer's Day **NEW**DARPA Upward Falling Payloads **NEW**Navy Optical Telescope Assembly BAA **NEW**DARPA Tactical Boost Glide BAA <p>More...</p>	<ul style="list-style-type: none">Aerospace Enterprise Dialogue with IndustryWright Dialogue with IndustryDAU March NewsletterTop Downloads FebruaryArmy Technology MagazineDefense AT&L Magazine <p>More...</p>

Updated 3/31/14

INNOVATION OPPORTUNITIES

- Resources for Industry**
DoD Info for Business & Program Planning
- Submit IR&D Data**
Share projects with DoD Customers
- Resources for DoD**
DoD employee access of IR&D Search tool

FEEDBACK

- Search Trends**
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Top Marketplace pages and downloads.

TECHNOLOGY INTERCHANGES

- Aeronautical**
Dialogue with Industry and IR&D Interchange

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