



S&T Needs & Gaps – How Better to Communicate

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UNPARALLELED
**COMMITMENT
& SOLUTIONS**

Act like someone's life depends on what we do.



U.S. ARMY ARMAMENT
RESEARCH, DEVELOPMENT
& ENGINEERING CENTER



Anticipated Security Environment 2025-2040



Congested And Restricted Environs



Increased Speed Of Human Interactions



Potential For Overmatch



Spread Of Advanced Cyberspace And Counter-space Abilities



Proliferation Of Weapons Of Mass Destruction



Ref: US Army Operating Concept: Winning in a Complex World 2020-2040



Fulfilling Near And Far Term Goals



Near to Mid Term (2020-2025)

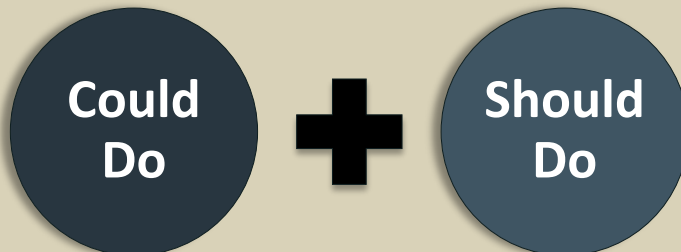


- *Mitigate new and emerging threat capabilities*
- *Enable new or extended military capabilities*
- *Address costs early in system development*
- *Create technology surprise*



Ref: Deputy Assistant of the Army for Research and Technology (DASA(R&T)) U.S. Army Science & Technology Handbook (Draft) (USA S&T HB)

Far Term (2025-2040)



- *Grow adaptive leaders*
- *Improve reliability*
- *Maintain overmatch*
- *Enhance expeditionary capabilities*
- *Upgrade, protect, simplify the network*

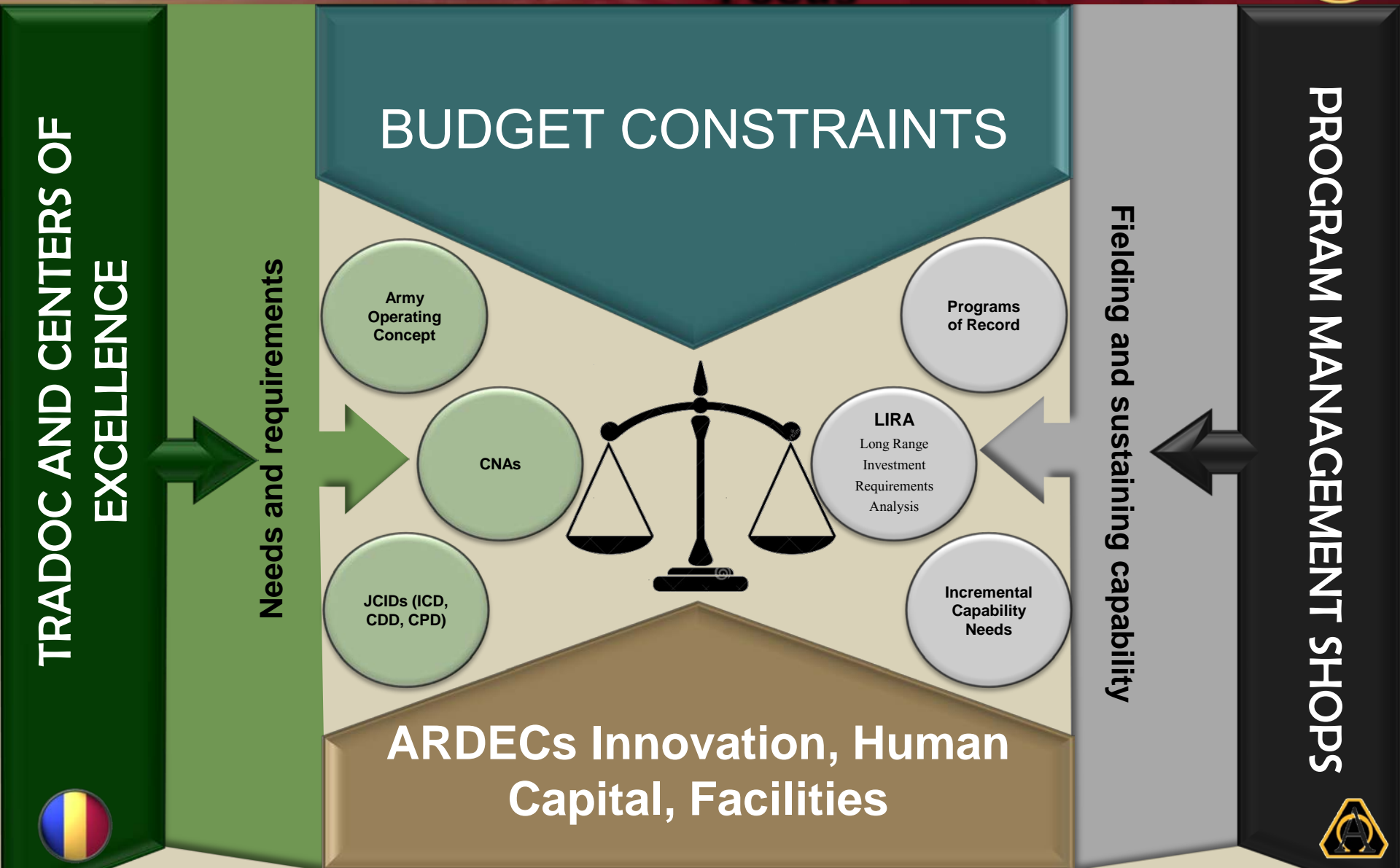


Ref: US Army RDECOM Strategic Plan for Fiscal Year (FY) 2015 to FY 2040



Ref: TRADOC Commanding General's September 2014 letter to the Assistant Secretary of the Army for Acquisition, Logistics and technology

Influencers Affecting ARDECs S&T Focus



TRADOC AND CENTERS OF EXCELLENCE

Needs and requirements

BUDGET CONSTRAINTS

Army Operating Concept

CNAs

JCIDs (ICD, CDD, CPD)

Programs of Record

LIRA
Long Range Investment Requirements Analysis

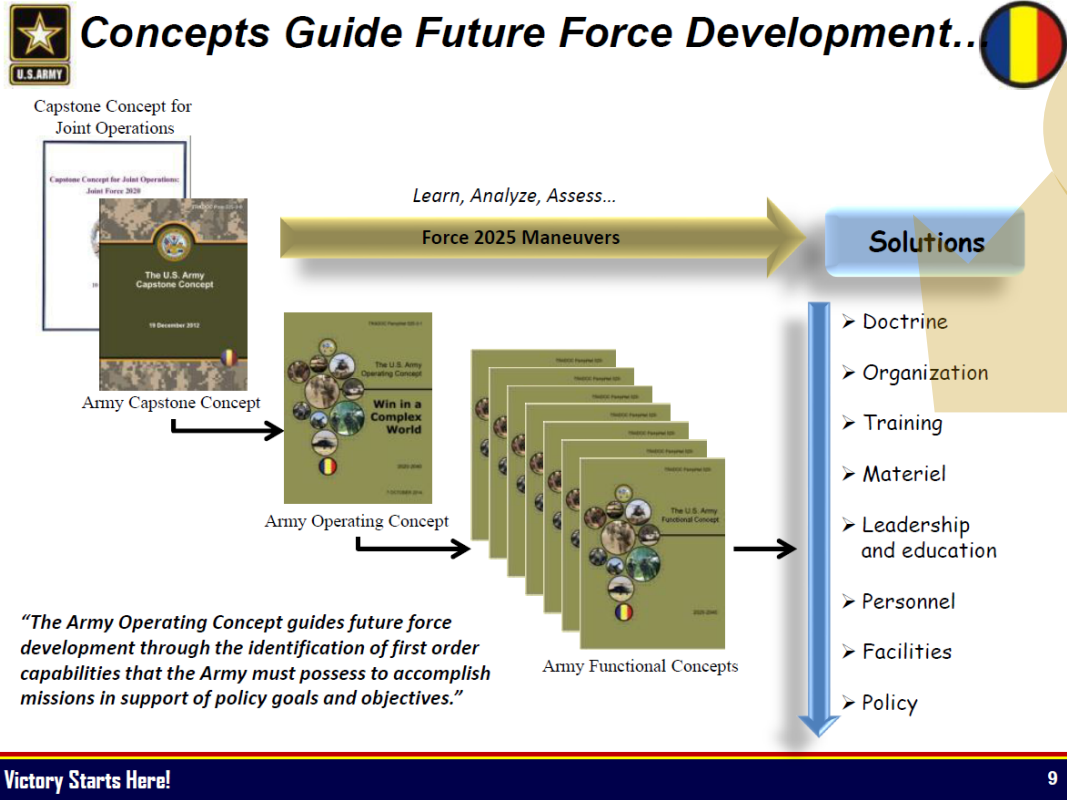
Incremental Capability Needs

Fielding and sustaining capability

ARDECs Innovation, Human Capital, Facilities

PROGRAM MANAGEMENT SHOPS

Stakeholder Needs To Be Addressed By ARDEC S&T



Capability Needs Analysis (CNA)

- > Assesses Army's ability to meet Required Capabilities
- > Results in Warfighter prioritized CNA gaps
- > Leads to reqs development (JCIDS)

Source Needs Documents

- FY15 CNA Gaps List – 768 Gaps with 245 Unacceptable Risk Gaps
- MCoE S&T Day Gaps / Focus Areas
- JCIDS Documents – Over 20 ARDEC relevant DRAFT CDDs across CoEs
- PEO AMMO Priorities
- PEO Soldier Priorities
- PEO GCS Needs
- PEO CS&CSS Needs
- PEO Aviation Gaps

- Stakeholder Needs Released 9 Mar. 2016
 - Release restructured/aligned by FY15 CNAs
 - Additional source documents continue to be identified/assessed/incorporated
 - Prioritization efforts ongoing, led by Systems Engineering Systems Analysis Division
 - Continued efforts/communication enable Better Buying Power initiatives
- Distribution A: Approved for Public Release; Distribution is unlimited

ARDEC S&T Needs & Investment Analysis Process



Needs/Source Documents

DoD/DA



- CSA 2025
- Army Operating Concept
- ASA(ALT) POM Guidance

PEOs



- PEO Priorities
- PEO Roadmaps
- PM Priorities

TRADOC



- MCoE
- FCoE
- MSCoE
- ACoE
- SCoE
- TCM-ABCT
- TCM-SBCT
- TCM-IBCT
- Capability
- Needs Analysis (CNAs)
- Warfighter Outcomes (WFOs)
- JCIDS Docs

ARDEC S&T Portfolio



Lethality S&T Opportunities



- Identification, coordination, organization of individual "Source Documents" needs/gaps/priorities into one list.
- Collected from multiple lethality stakeholders

- Sets priorities for future investments (POM)
- Enables adjustments to on-going efforts
- Details/communicates opportunities to Service labs, industry, academia, international

- Utilized by ARDEC Scientists and Engineers to marry innovation to needs
- Made available to industry partners to facilitate cooperative long term planning to include IR&D investment

Analysis...Exchange Information...Communication...Planning...Prioritization