

NSRDEC Research and Technology Development

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Soldier Systems Integration Domain
11 May 2011



Mission:

- RD&E To Maximize the Warfighter’s Survivability, Sustainability, Mobility, Combat Effectiveness and Field Quality of Life by Treating the Warfighter as a System

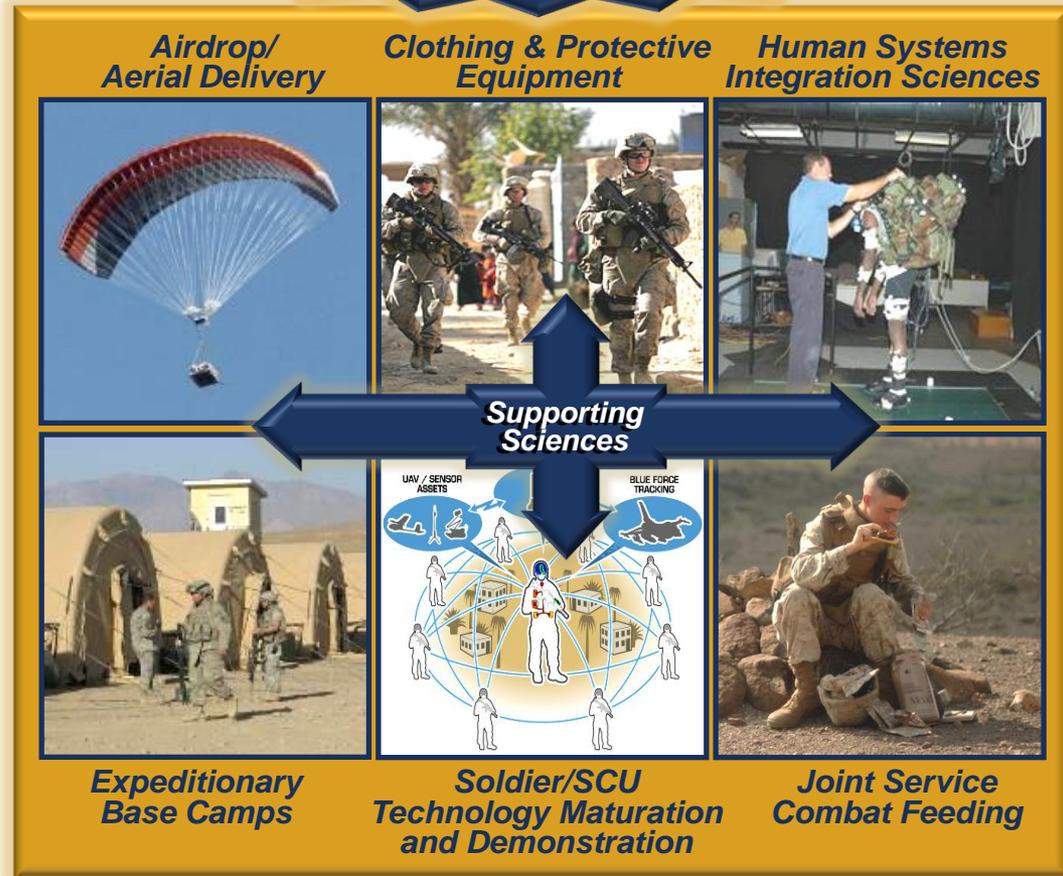
– Adding Value Through:

- Basic Science
- Technology Generation, Application, and Transition Enabling Rapid Fielding of the Right Equipment
- Soldier Systems Technology Integration and Transition
- Solving Field Problems Rapidly

Vision:

- To be the Recognized Center for Warfighter and Homeland Defender Related Research, Technologies and Systems

Transformation to the Future Force and Supporting the Current Fight with the Warfighter as the Centerpiece of the Formation



Soldier SID is focused on Tactical Small Units (TSU) and Individual Soldiers

The SSID forms Communities of Practice and sets up multi-disciplinary, task-organized teams to understand challenges, identify solution sets, and pursue the correct technology-enabled solutions across the Enterprise.



Top Soldier / TSU S&T Priorities:

- Soldier Load
- Contingency Basing
- Force Application for the Tactical Small Unit
- Soldier Situational Awareness & Human Dimension
- Manned-Unmanned Teaming

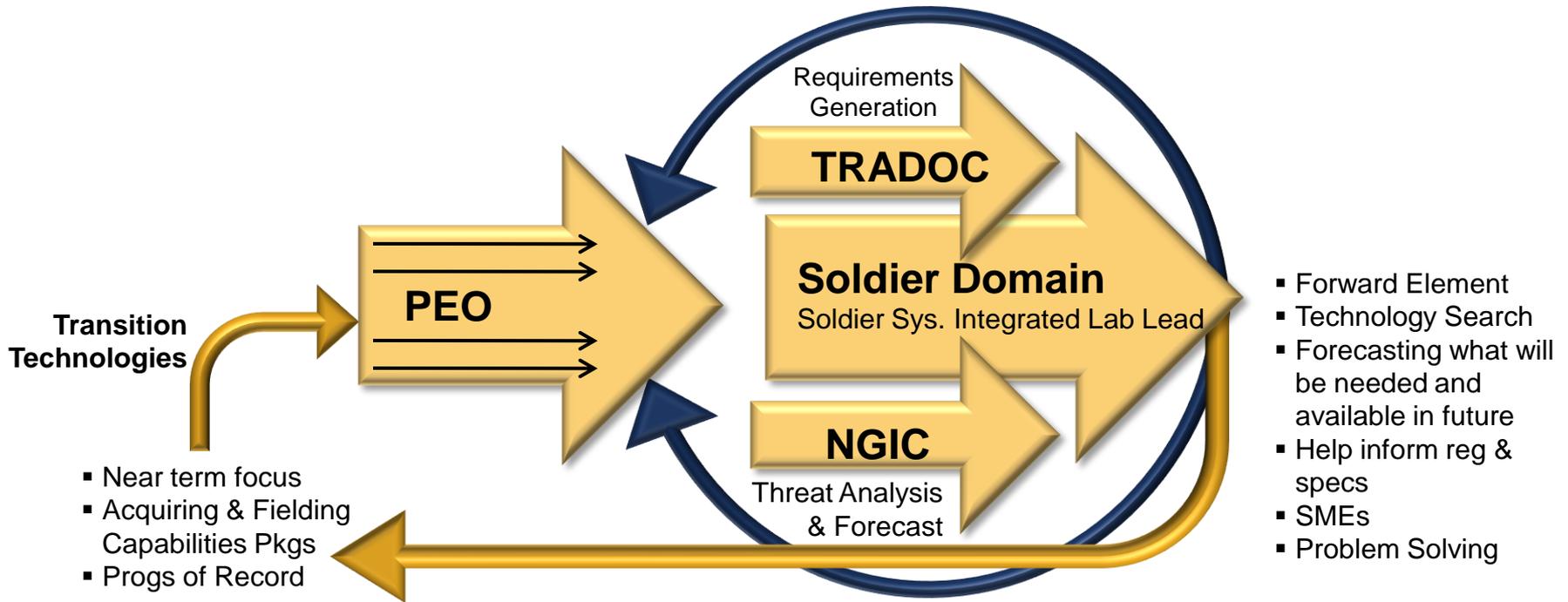
From:
TRADOC
Requirements, Program
Manager Technology
Requirements & Soldier
needs from theater

EMPOWER

UNBURDEN

PROTECT

Changing the Paradigm: S&T as “forward element” for PEO

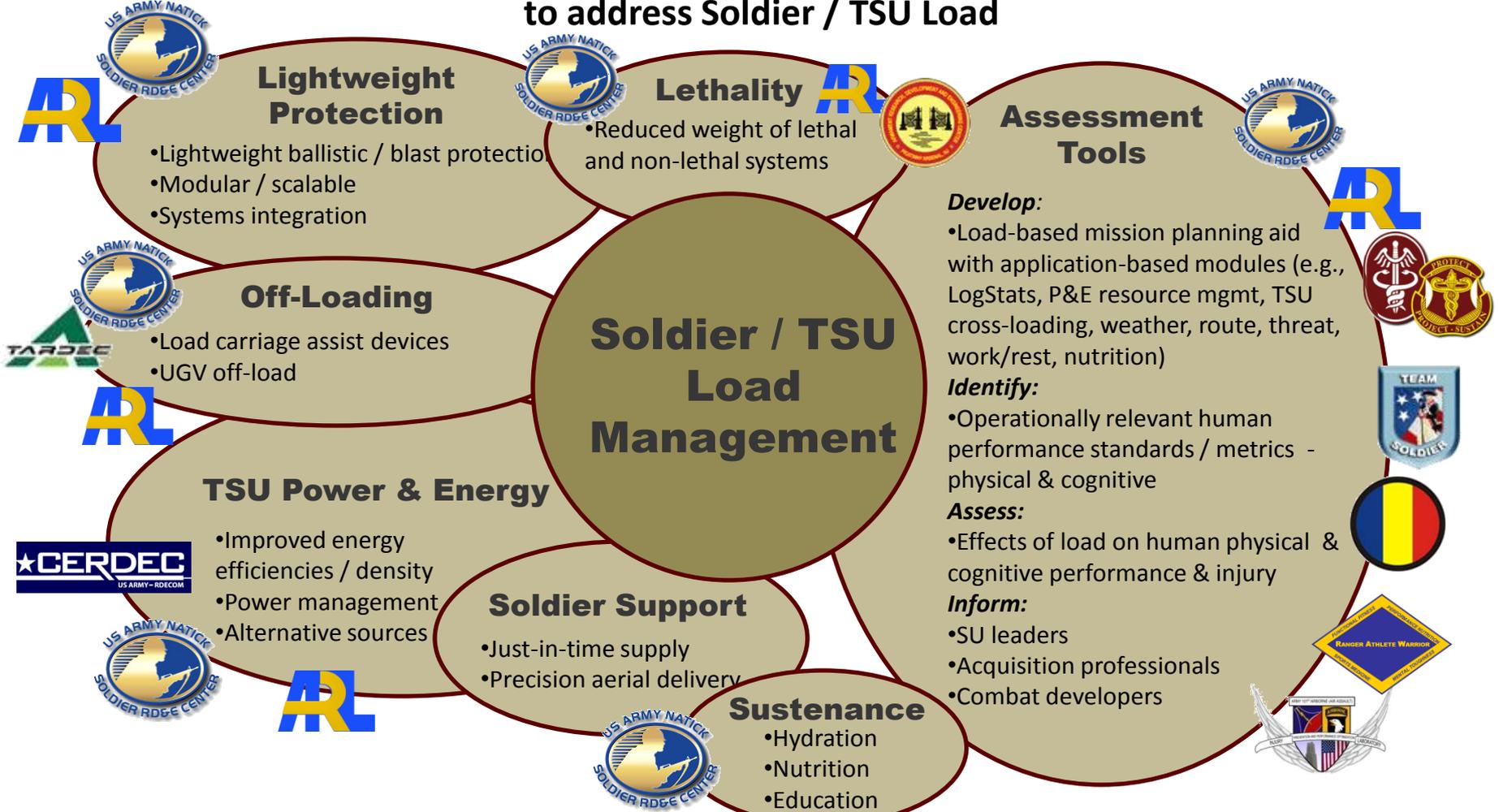


Enabled by Enterprise Behavior

Soldier / Small Unit Load Management

UNCLASSIFIED

GOAL: Implement a multi-faceted approach using all the elements of DOTMLPF to address Soldier / TSU Load

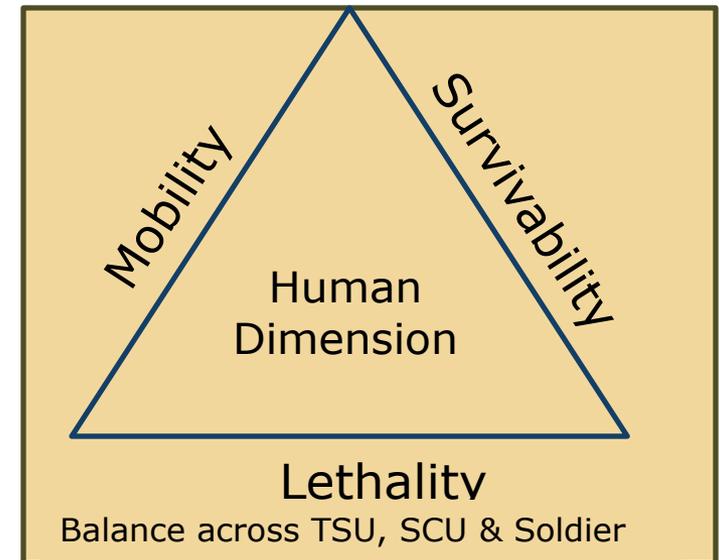


OUTPUT = (a) Soldier / small unit load optimization; (b) Mission planning enhancement; (c) Human performance estimation & augmentation

- Soldiers decide what to carry and manage load by configuration (forcing them to make tradeoffs):
 - Increasing risk of injury (size/volume)
 - Losing power for equipment (less capability)
 - Running out of supplies (food/water)

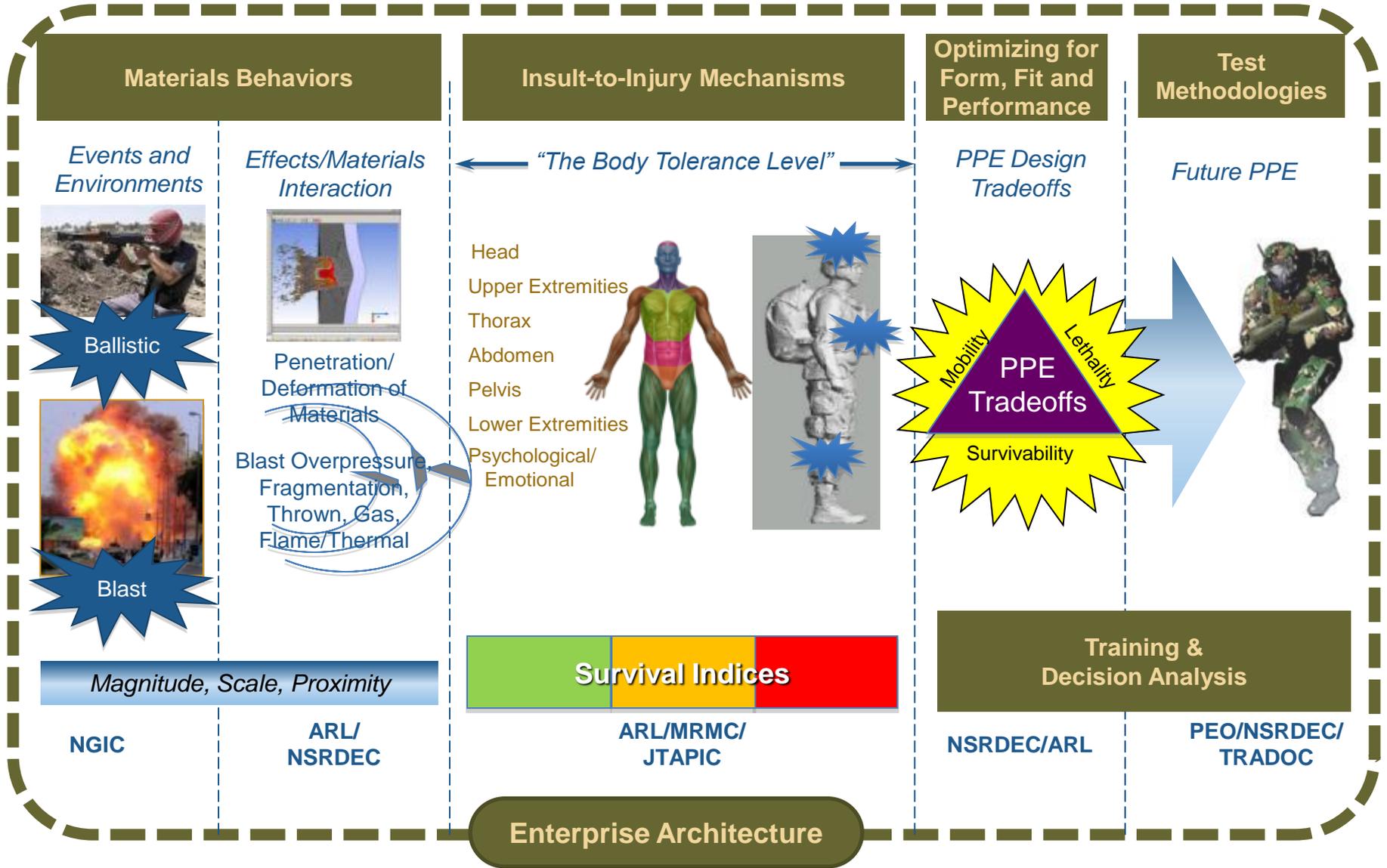
- Configurable loads provide flexibility for tactical level decision making, but cannot remain the only solution to the Soldier load issue

- Potential areas of interest:
 - Lightweight Protection
 - Personal protection and equipment
 - Modular/configurable/tailored to Soldier
 - Concealment/camouflage
 - Off-loading
 - Robotics Unmanned
 - Wearable robotics/Exoskeleton
 - Power for the Small Combat Unit (SCU)
 - Sink/Storage/management
 - Generation and resupply



- Form an individual Ballistic and Blast Community of Practice that includes RDECOM, MRMC, JTAPIC, NGIC, PEO Soldier, TRADOC, other Army and DoD
- Derives from Soldier Systems Integration Domain
- Objectives:
 - Develop analytically-based S&T investment synchronized with acquisition programs
 - Facilitate collaboration across organizations
- Short Term - Advance Soldier performance given material limitations
- Long Term - Position Community of Practice for future material advances to further enhance Soldier performance





Soldier Systems Integrated Domain

Soldier SID Enterprise Model - Understand, communicate and partner to task organize and solve problems, prioritizes Soldier S&T capability needs to achieve a balanced Soldier S&T portfolio

Communities of Practice - Multi-disciplinary, task-organized teams to understand challenges, identify solution sets, and pursue the correct technology-enabled solutions across the Enterprise

Integrated Soldier Load & Ballistic S&T Strategy – Multi-faceted approach using all the elements of DOTMLPF to address Soldier / TSU Load & fully consider survivability in relation to mobility, lethality, and the human dimension

Objectives:

- Individual ballistic and blast protection that fully considers survivability in relation to mobility, lethality, and the human dimension
- Soldier / small unit load optimization
- Mission planning enhancement
- Human performance estimation & augmentation