

# 2011 Military Health System Conference

## Post-Traumatic Stress Innovations: U.S. Military Enterprise Analysis

*The Quadruple Aim: Working Together, Achieving Success*

Professor Deborah Nightingale

January 26, 2011



Lean Advancement Initiative (LAI)  
and MIT Collaborative Initiatives,  
Massachusetts Institute of Technology

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# A Collaborative Initiative



**Michael Dinneen, M.D.**  
Director, Office of Strategy Management



**Deborah Nightingale, Ph.D.,**  
Director

*Enabling complex enterprises to effectively, efficiently, and reliably create value in rapidly changing environments*



Massachusetts  
Institute of  
Technology



MIT COLLABORATIVE INITIATIVES

**Tenley E. Albright, M.D.,**  
Director

*Promoting a systems-based approach to solving deep-rooted societal issues by engaging experts from a broad range of disciplines both within and outside the scope of a problem.*

# What is the Opportunity

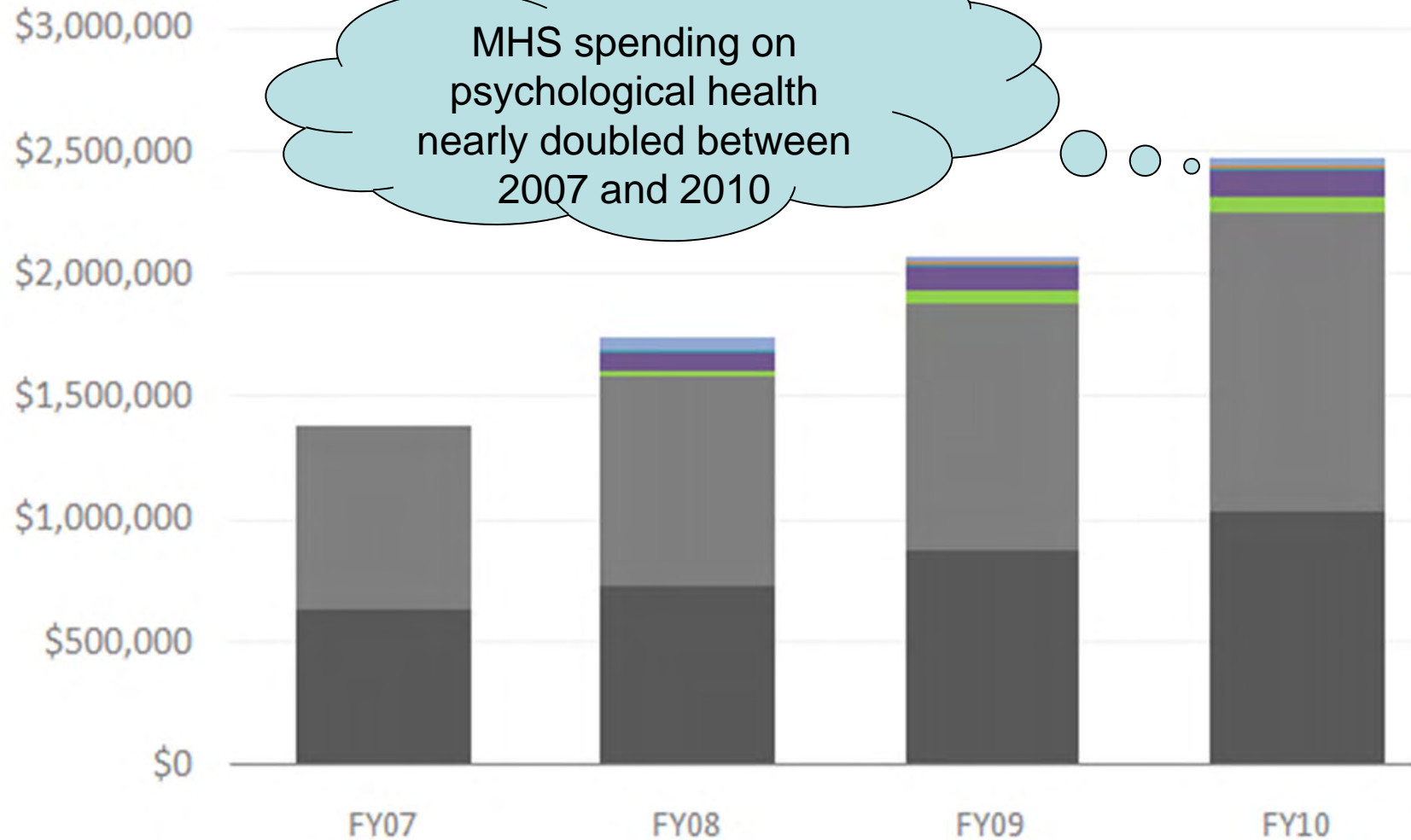


- Make sense of all psychological health activities
- Ensure that we are getting optimal value from our investment in psychological health initiatives
- Identify opportunities to improve the system of care by filling in gaps, strengthening connections and eliminating redundancy

But, how big is this opportunity?

# Total PH Cost By Category

(FY07-10 in \$000s)

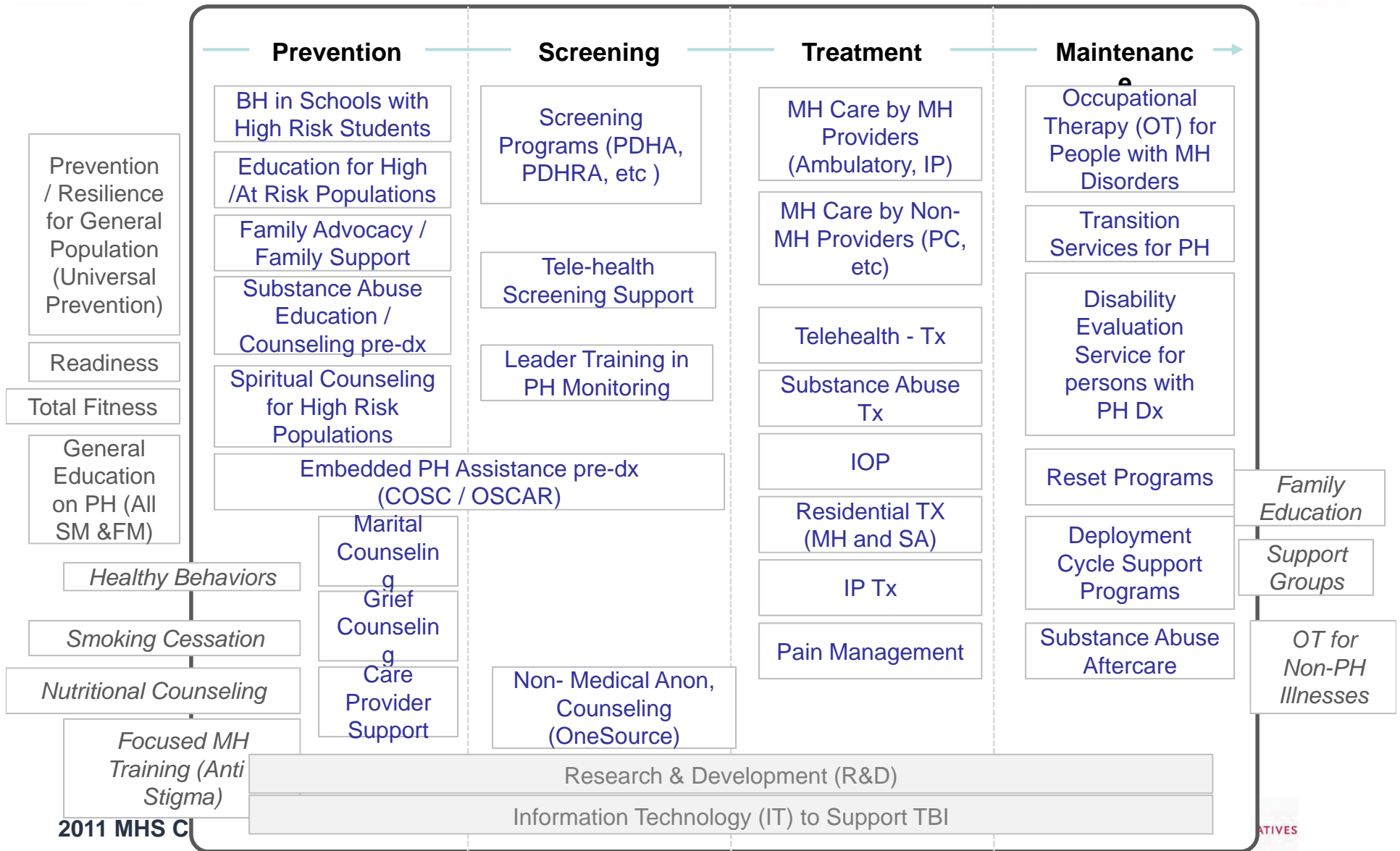


RVU/RWP Related (DC)
  RVU/RWP Related (PC)
  Treatment Non-RVU/RWV Related
  Prevention
  Screening
  Maintenance
  Program Support



**How complicated is the challenge to rationalize all of the activities related to the management of psychological health?**

# PH Activities by General Category – Draft List July 2010



# What do we need?



- A whole new way to understand systems, not just activities
- “I would not give a fig for the simplicity this side of complexity, but I would give my life for the simplicity on the other side of complexity.”

Oliver Wendell Holmes



# Enterprise as a System



- An enterprise requires the integration of
  - People
  - Processes
  - Organization
  - Information
  - Technology
  - Strategy
- Holistic view

## **An enterprise is...**

*“a complex, integrated, and interdependent system of people, processes, and technology that creates value as determined by its key stakeholders.*

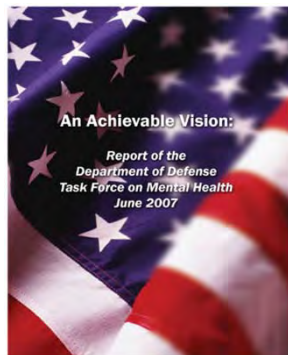
*An enterprise typically consists of **multiple organizations** (e.g., suppliers, partners, regulators) rather than a single corporation, division, or government unit.”*

Source: Nightingale and Srinivasan, “Beyond the Lean Revolution: Achieving Successful and Sustainable Enterprise Transformation”, AMACOM, In Press

# Psychological Health is an Enterprise Challenge



*“The current system is insufficient to meet the needs of today’s forces and their beneficiaries and will not be sufficient to meet the needs of the future.”*



- DoD Task Force on Mental Health, 2007



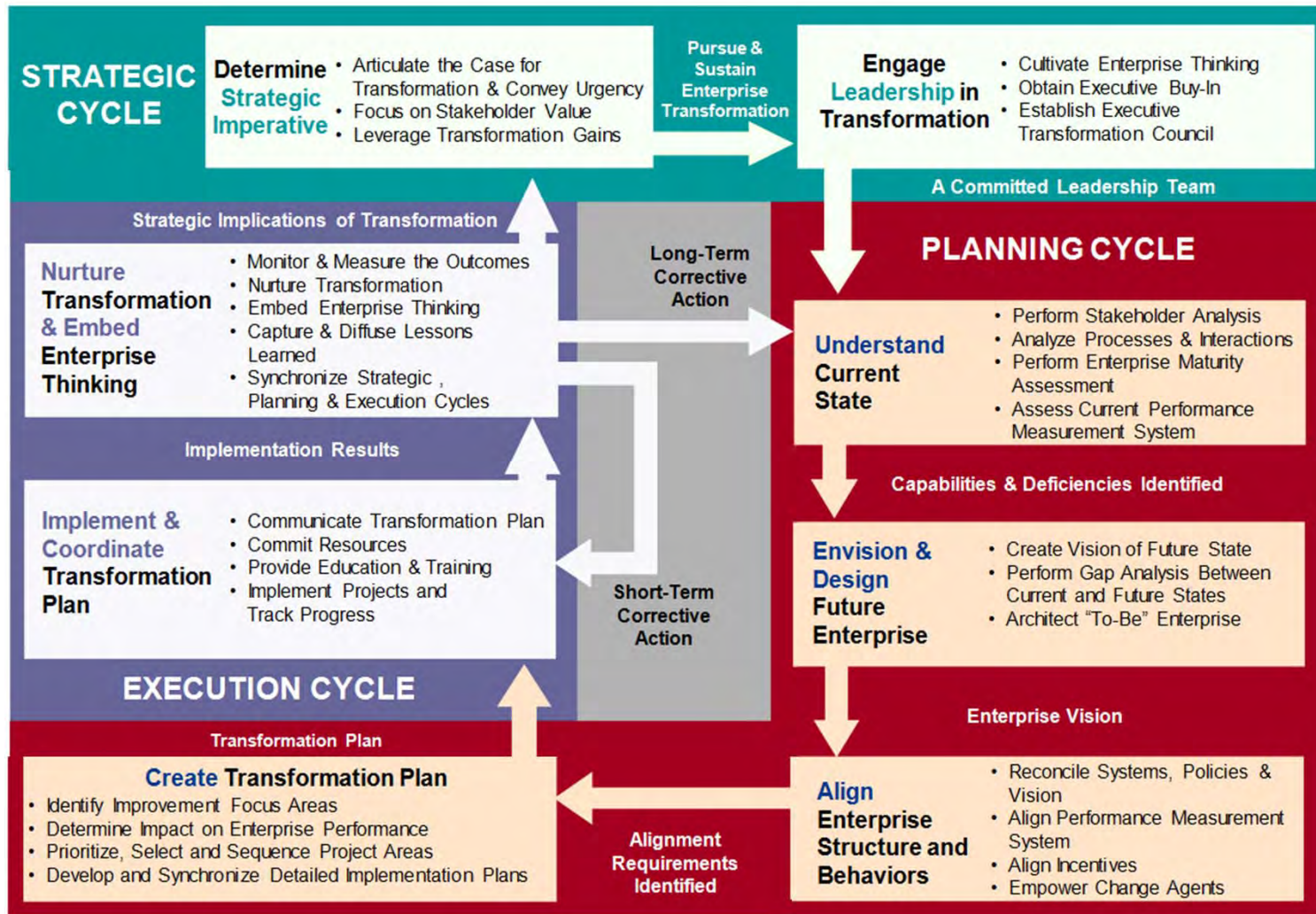
## The Chairman Speaks Out on Struggle with PTSD

*“This isn’t just a debt of gratitude. This is a debt that must be repaid because they have sacrificed so much. They have done exactly what this country has asked. They have fought and suffered and their lives have been affected forever.”*

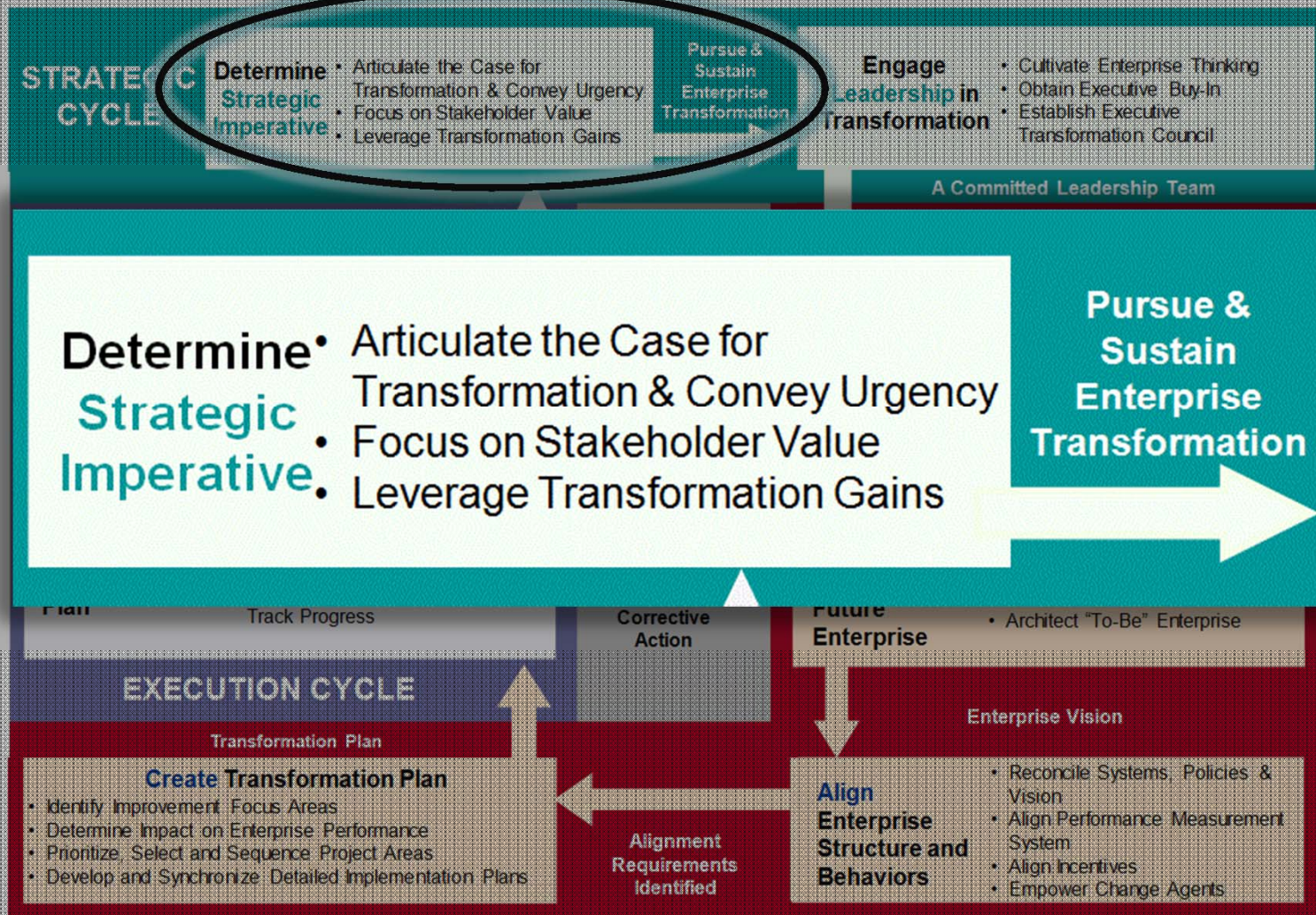


**Admiral Michael Mullen**  
Chairman of the  
Joint Chiefs of Staff  
*Army Times, 11-26-2008*

# LAI-MIT Transformation Roadmap



# LAI-MIT Transformation Roadmap



# PTSD: A Significant Pathology of War



5% to 20% prevalence

Over \$2 Billion Invested

Over 125 psychological health programs

- Challenges with access to and quality of care
- Challenges with culture and stigma
- Consideration of families

# Enterprise Systems Thinking is Needed for Effective Healthcare Services



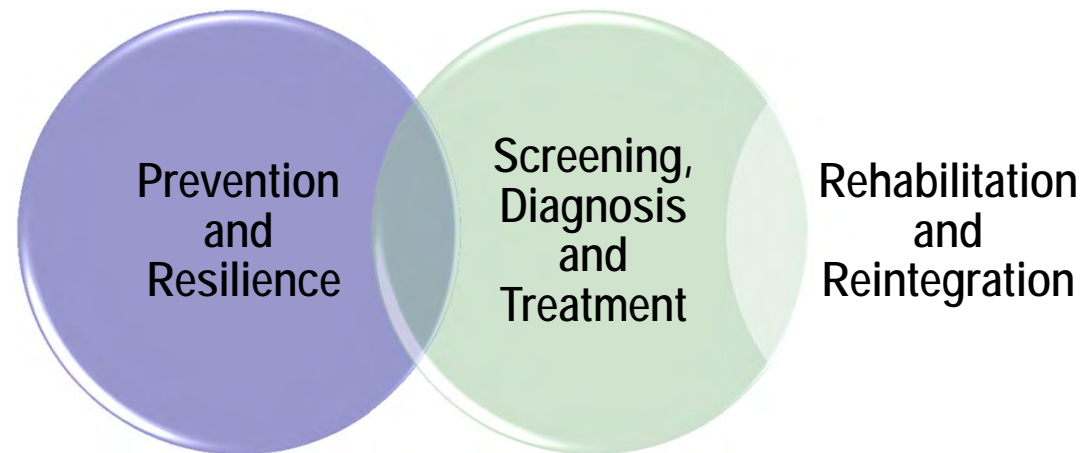
*“Systems engineering has had an enormous impact in any number of fields, but it is only beginning to be applied in healthcare.”*

*Part of the reason, I suspect, is that so many of the issues in healthcare are difficult to quantify societal questions, such as, should you spend the next marginal dollar on prevention, on research, or on treatment of the stricken?”*



**Norman Augustine**  
Retired Chairman & CEO  
Lockheed Martin Corporation

## PTSD prevention and care components for the full continuum of care



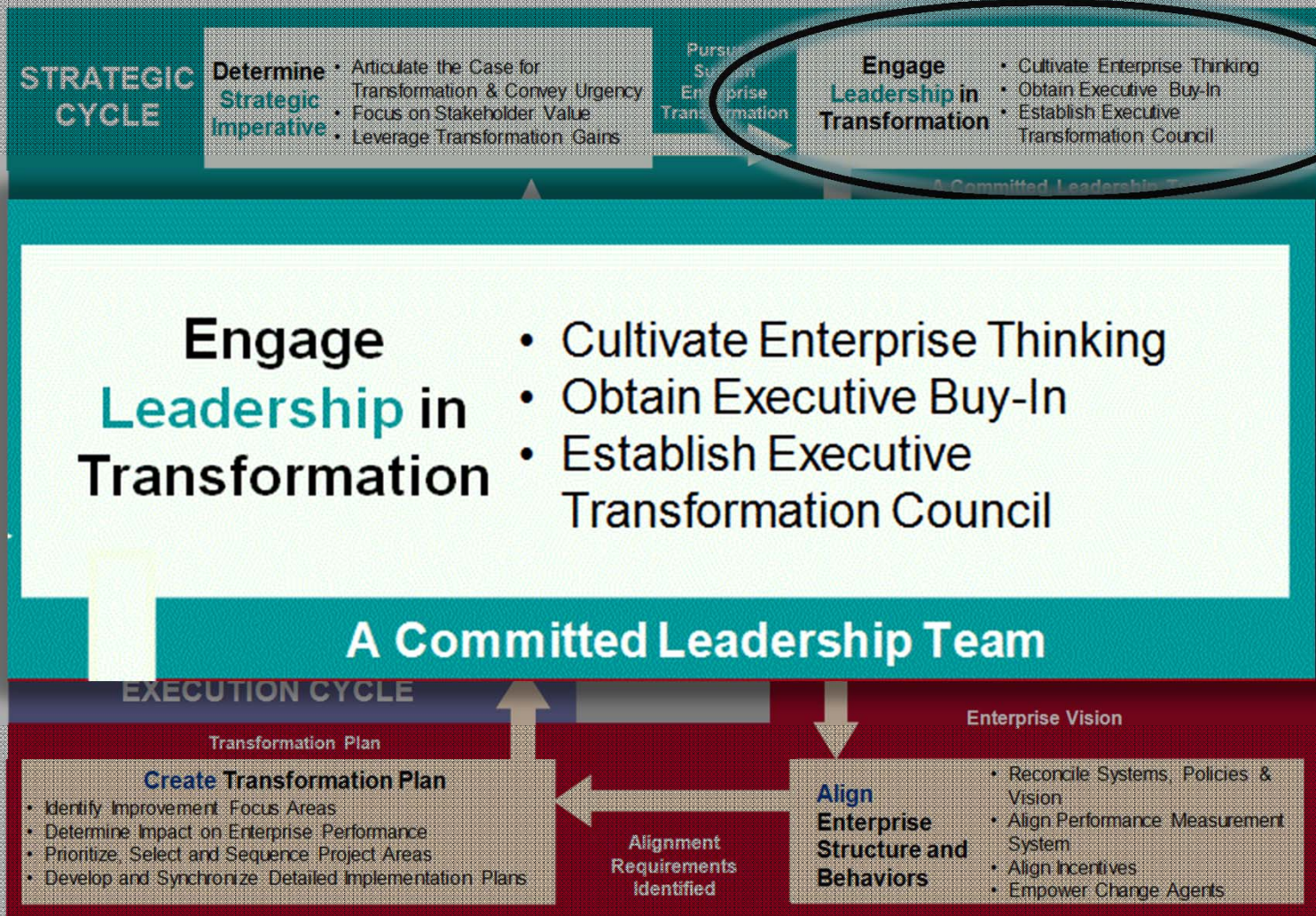
# Post Traumatic Stress Innovations: U.S. Military Enterprise Analysis



## Challenge:

Develop innovative recommendations for transforming the military enterprise to better manage post-traumatic stress, and related conditions, in support of our service members and their families

# LAI-MIT Transformation Roadmap





# Formal Project Kickoff: 9-28-2010



## NAVY



**Admiral Jonathan Greenert**  
Vice-Chief of Naval Operations  
*and*  
**VADM Adam Robinson**  
Navy Surgeon General



**Admiral Mike Mullen**  
Chairman of the  
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## ARMY



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## ADVISORS



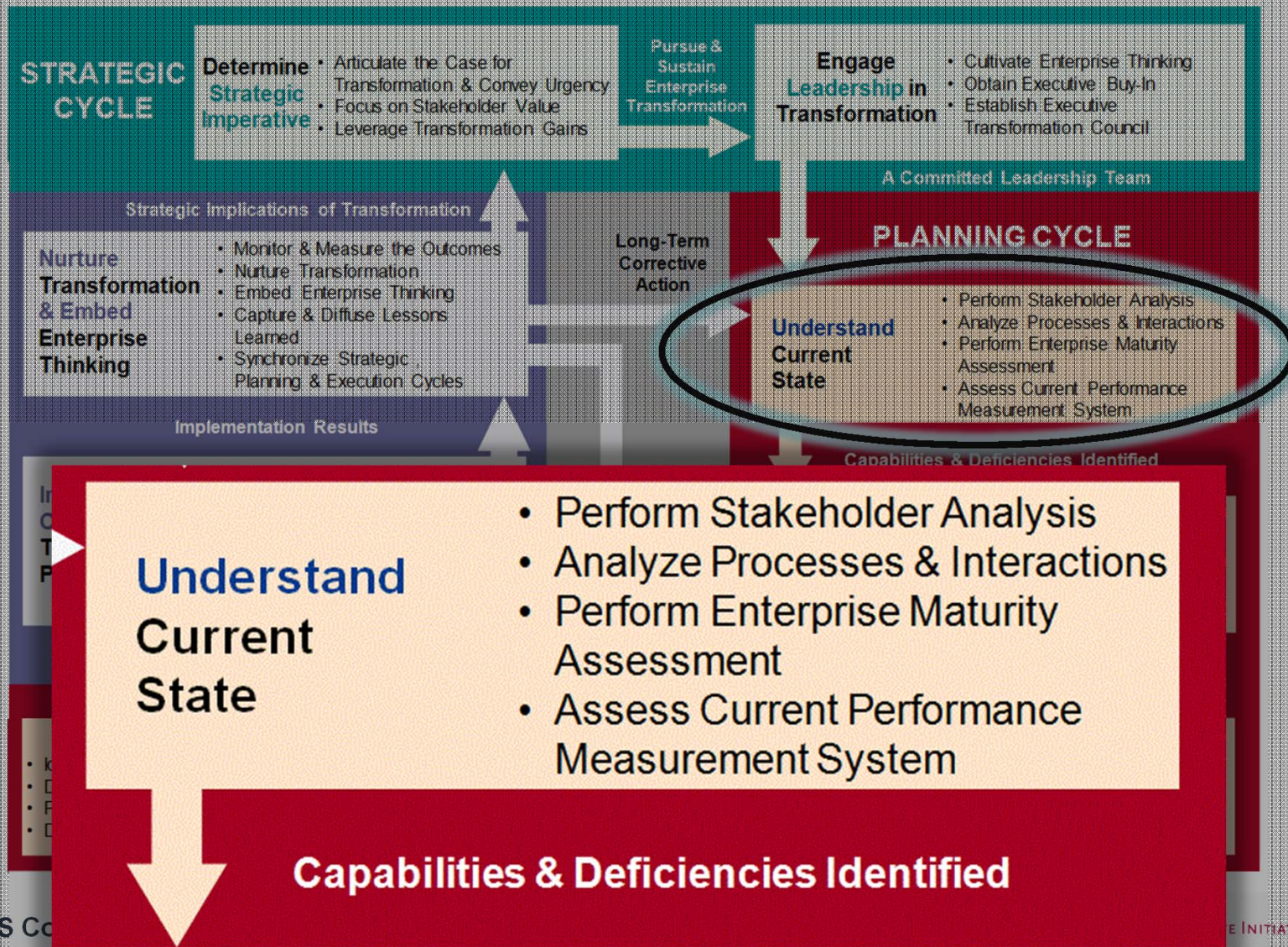
**Dr. James B. Peake Lt. Gen.(ret)**  
Fmr. Surgeon General of the Army &  
Fmr. Secretary of Veterans Affairs  
*and*  
**Honorable Togo West**  
Fmr. Secretary of the Army &  
Veterans Affairs

## MARINE CORPS



**General James Amos,**  
Commandant  
of the Marine Corps

# LAI-MIT Transformation Roadmap



# Post Traumatic Stress Innovations: U.S. Military Enterprise Analysis



**LAI will perform an enterprise analysis of the continuum of services in preventing and managing Post Traumatic Stress and related conditions.**

## **Three Phases:**

- 1. Current state analysis**
- 2. Model creation and validation**
- 3. Future scenario planning and recommendations**

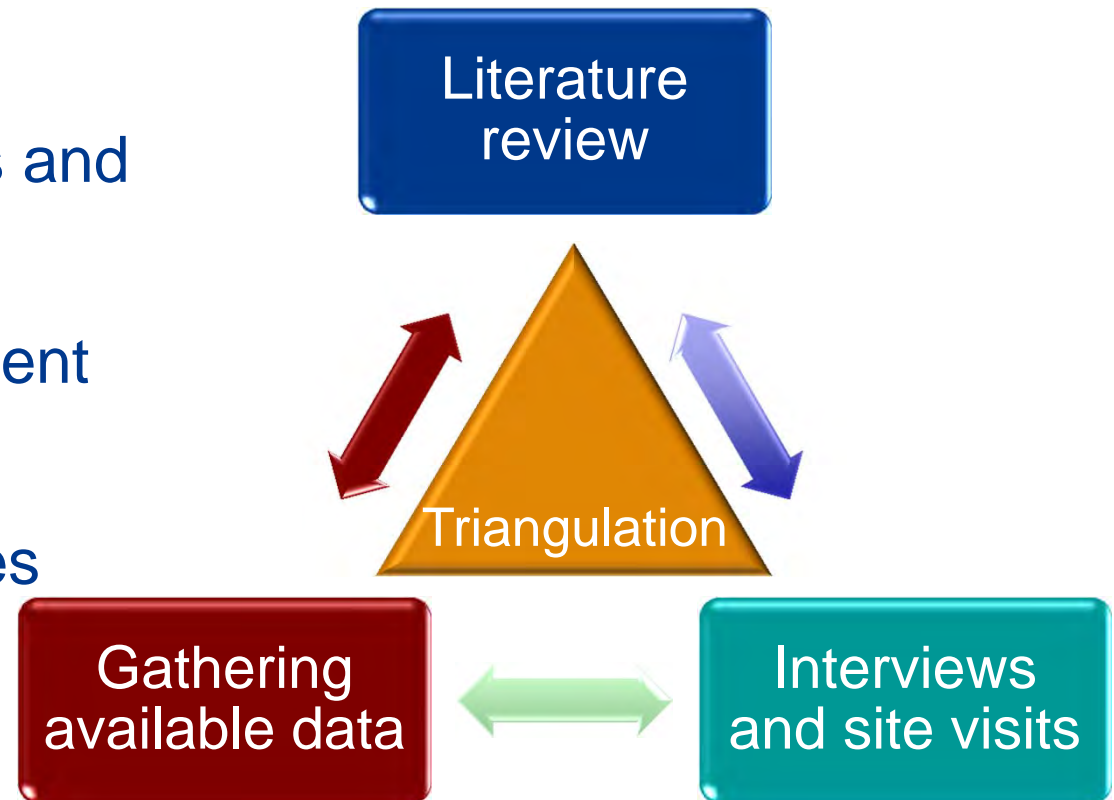
# Current Stakeholder Analysis



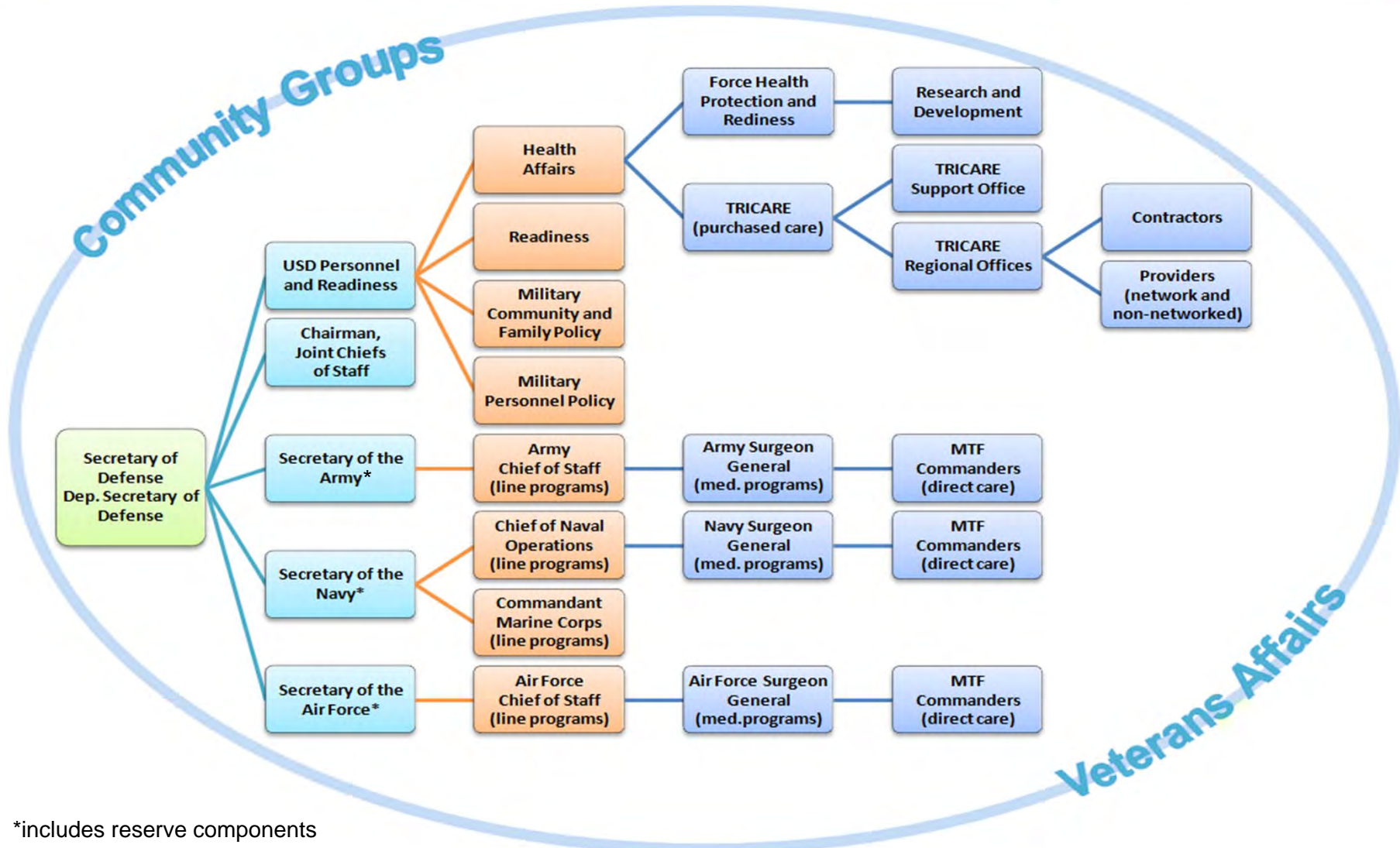
## Four Areas of Interest

- Stakeholder analysis
- Enterprise organizations and processes
- Performance measurement systems
- Resources and outcomes

## Research Activities



# Defining the Enterprise Boundary



\*includes reserve components



# Key Stakeholder Groups

## OSD Leadership

### MHS Leadership

- Military Health System Executive Review members (MHSER)
- Senior Military Medical Advisory Council members (SMMAC)
- Integration Councils/IPTs/Workgroups

### Service Leadership

- Line Leadership
- Surgeon Generals
- Installation management
- Intermediate commands

## Operational

- Unit leaders
- Medics
- Chaplains

## Direct Care

- MTF leadership
- Clinics
- Primary care physicians
- Specialists

## Purchased Care

- TRICARE regional office
- Managed care contractor
- Individual service provider
  - Doctors
  - Social workers
  - Nurses

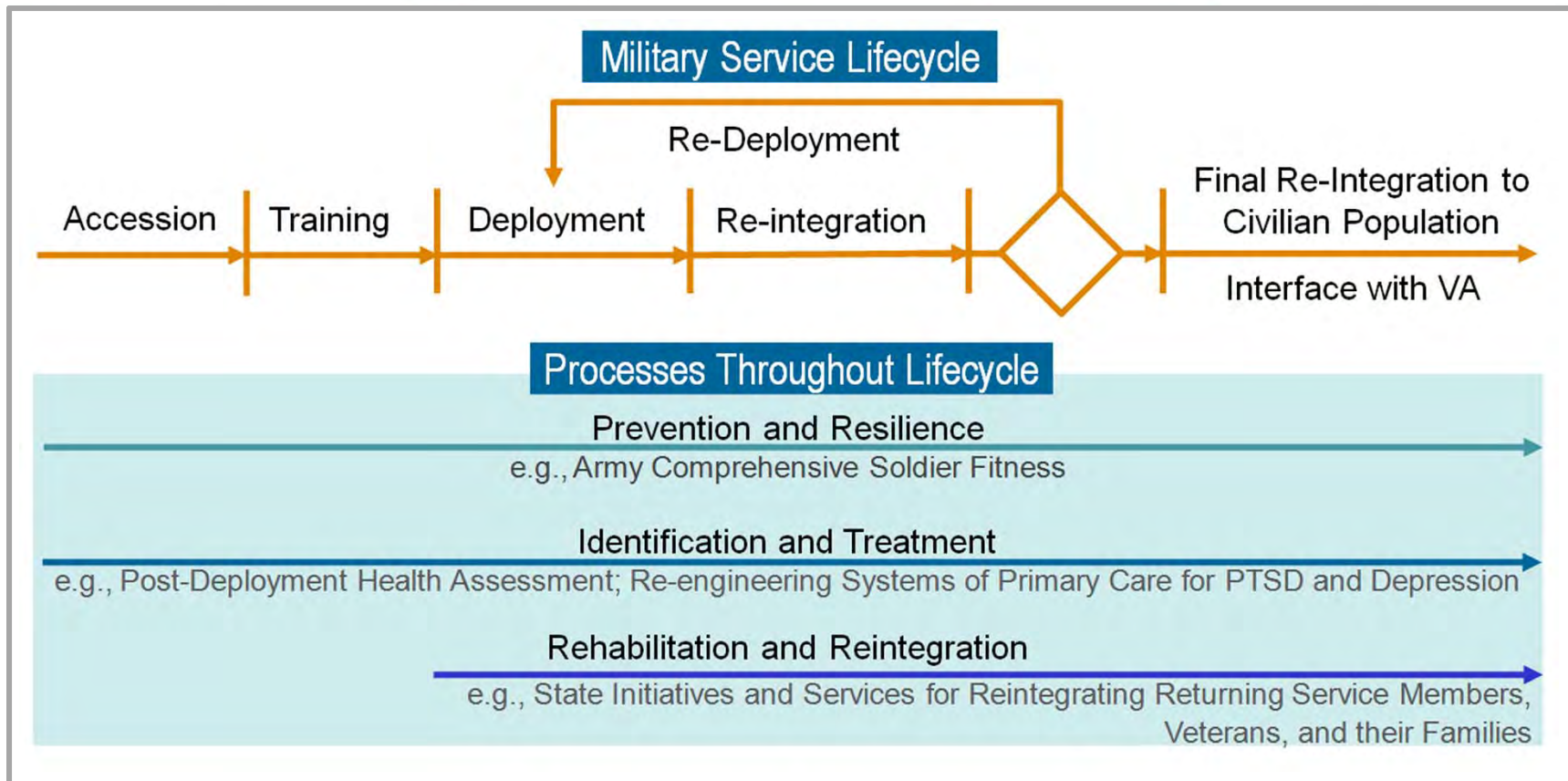
Service  
Members  
Families  
Units

President

Congress

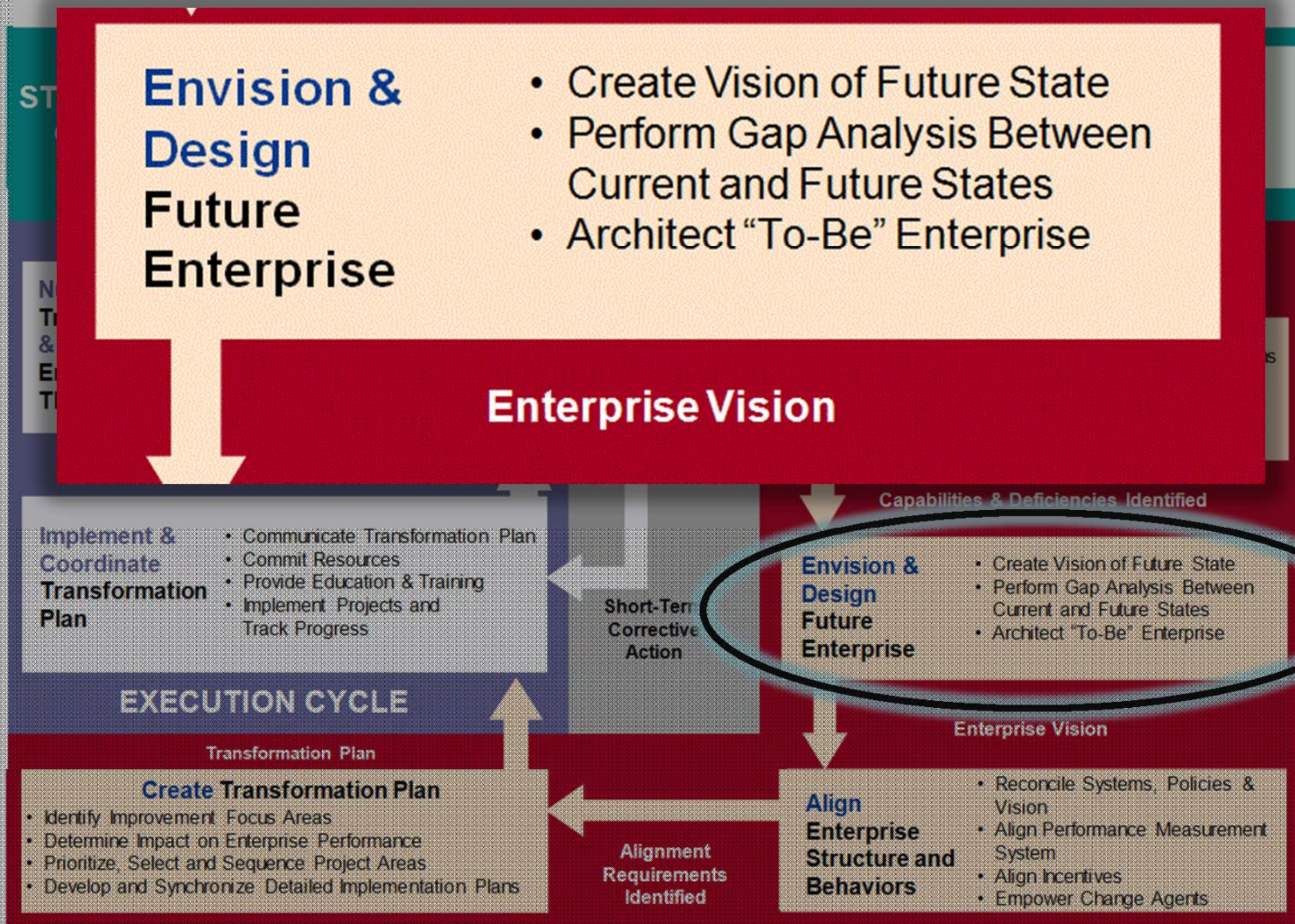
Media

# Enterprise Process: A Service Member-Centric View



Holistic approach to the observation of occupational stress-related processes cross the military service lifecycle that relate both to service members and their families

# LAI-MIT Transformation Roadmap





# Post Traumatic Stress Innovations: U.S. Military Enterprise Analysis



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# Planned and Existing Models

## PTSD Prevention and Care Components for a Full Continuum of Care

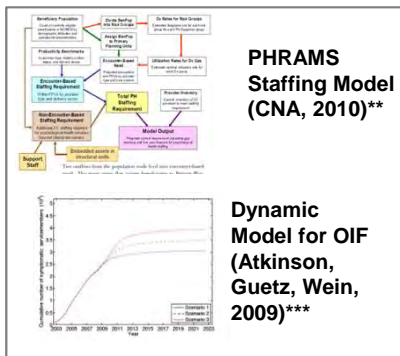
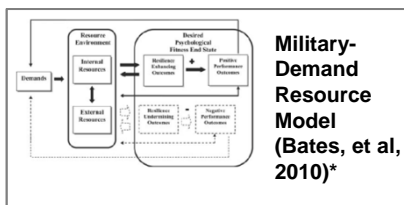
Prevention and Resilience (Active Duty)

Identification and Treatment (Active Duty)

Rehabilitation and Reintegration (Active Duty)

Identification and Treatment (Veterans)

Rehabilitation and Reintegration (Veterans)



- Intent is to build from planned and existing models to develop enterprise-level models for evaluating architectural alternatives and policy development

\* Planned

\*\* Existing - planned upgrades

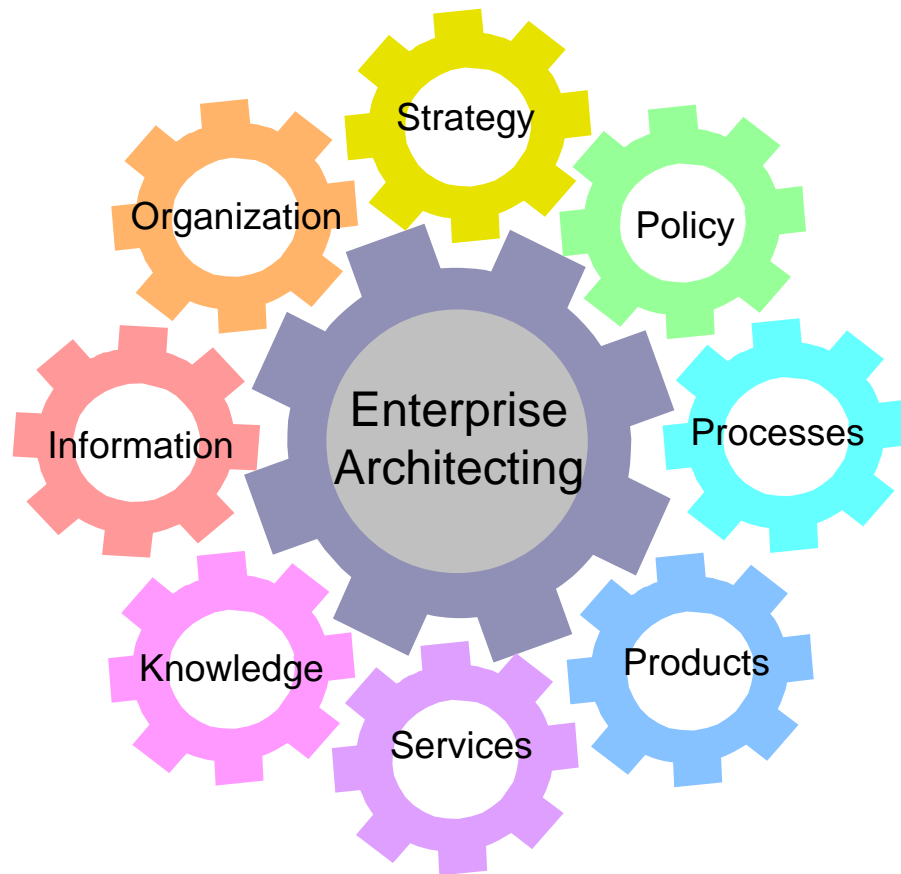
\*\*\* Existing – no planned upgrades

# Motivation for Enterprise Architecting



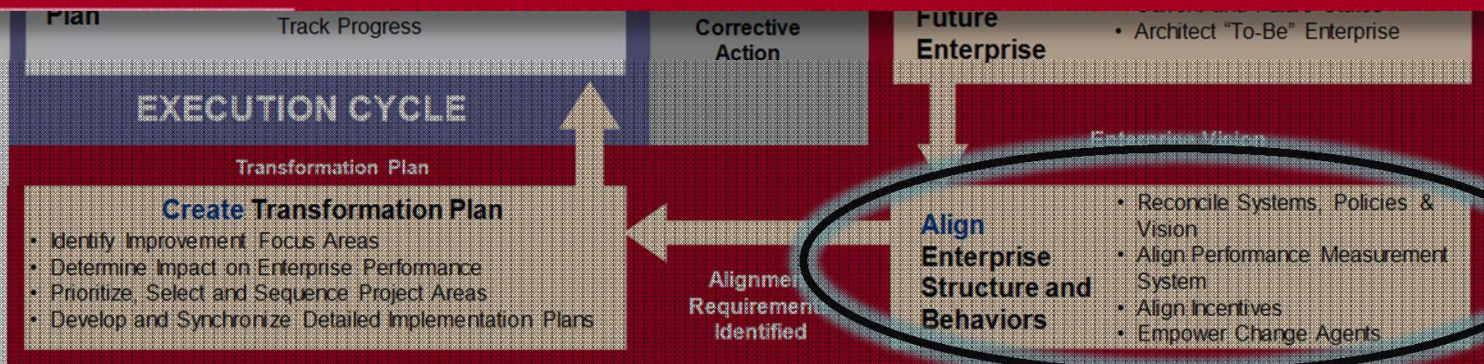
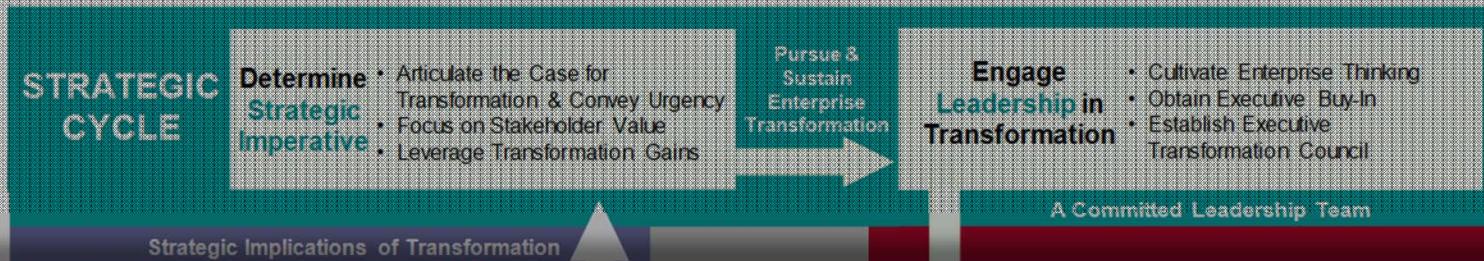
- In order to transform an enterprise we need to know not only where we are, but more importantly where we want to be (future state)
- In enterprise value analysis how do we define the “future state” of the enterprise?
- Once we define the future “vision” how do we design the enterprise?
- How do we incorporate the multiple dimensions or “views” at the enterprise level?

# Enterprise Architecting Enables Greater Efficiency and Effectiveness



- Effective integration – managing complex interdependencies
- System optimization, not local optimization
- Knowledge-based enterprise capabilities
- Achieving desired future state characteristics
  - Agility
  - Flexibility
  - Reconfigurability

# LAI-MIT Transformation Roadmap



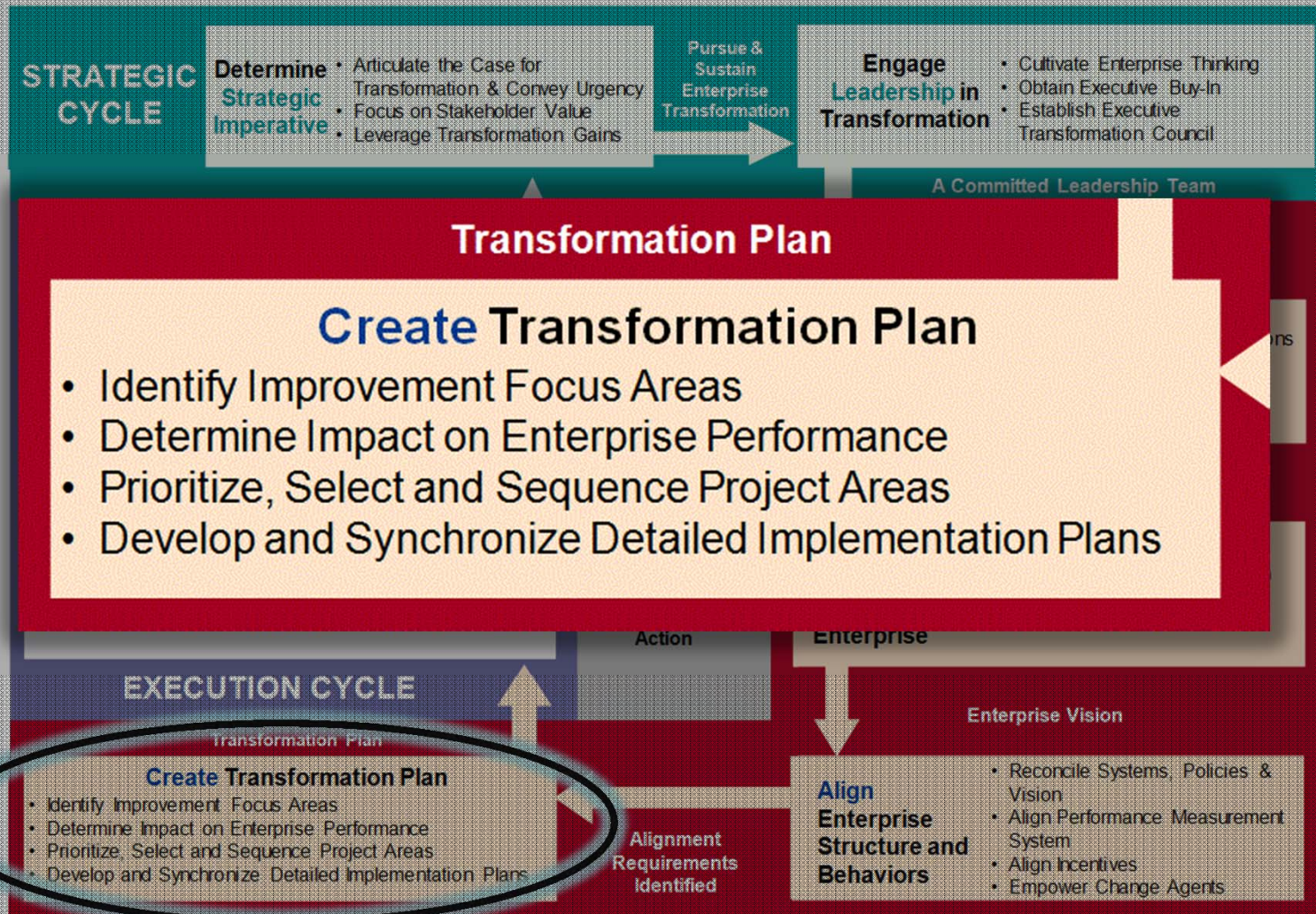
# Align the PTSI Enterprise



- Match resource allocation to enterprise needs
  - Availability of treatment facilities
  - Adequacy of research and development efforts
  - Accessibility of health care providers
- Align incentives and behaviors
- Holistic alignment of strategic objectives, stakeholder values, enterprise processes and performance measures



# LAI-MIT Transformation Roadmap



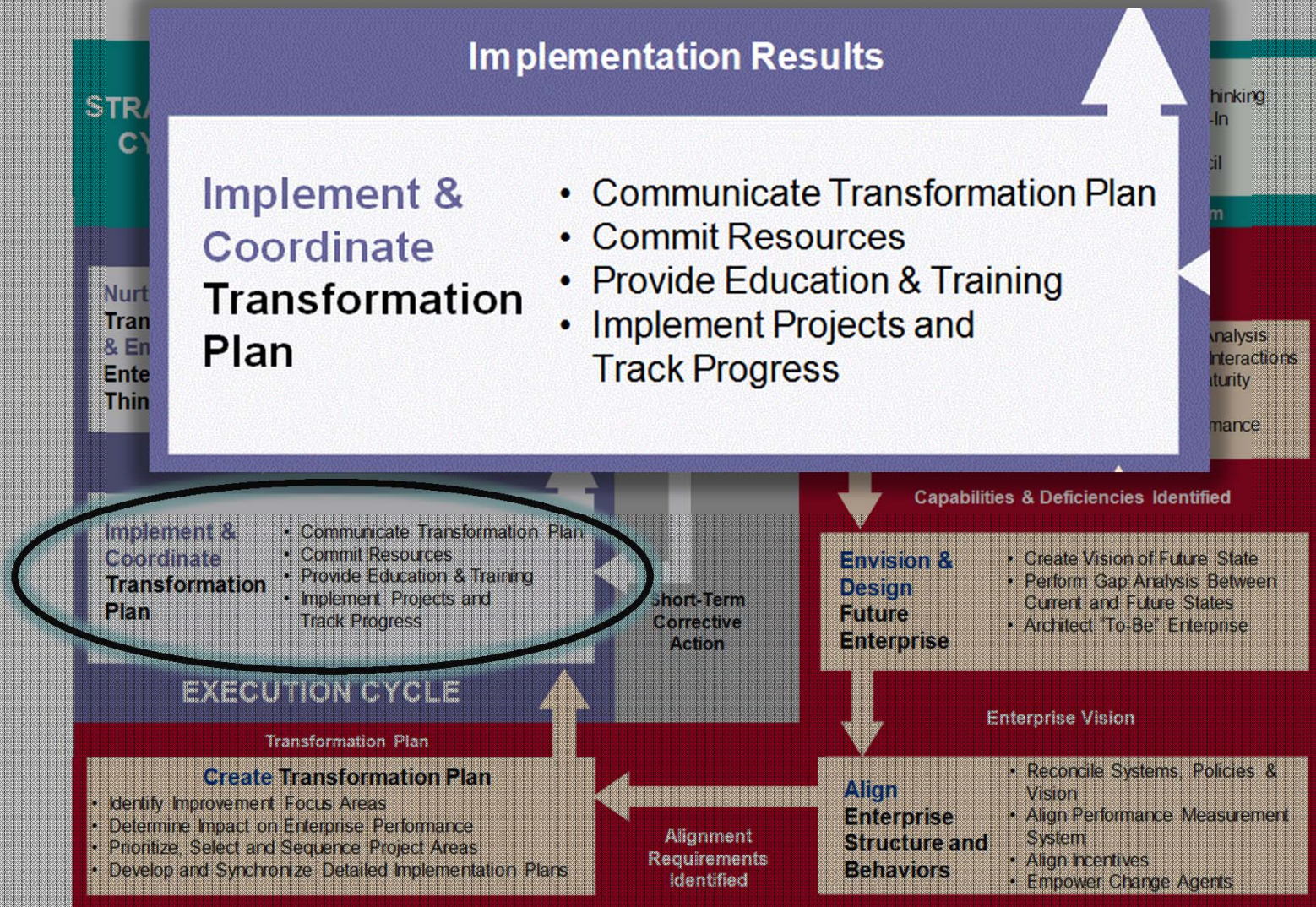


# Potential Focus Areas for Improvement



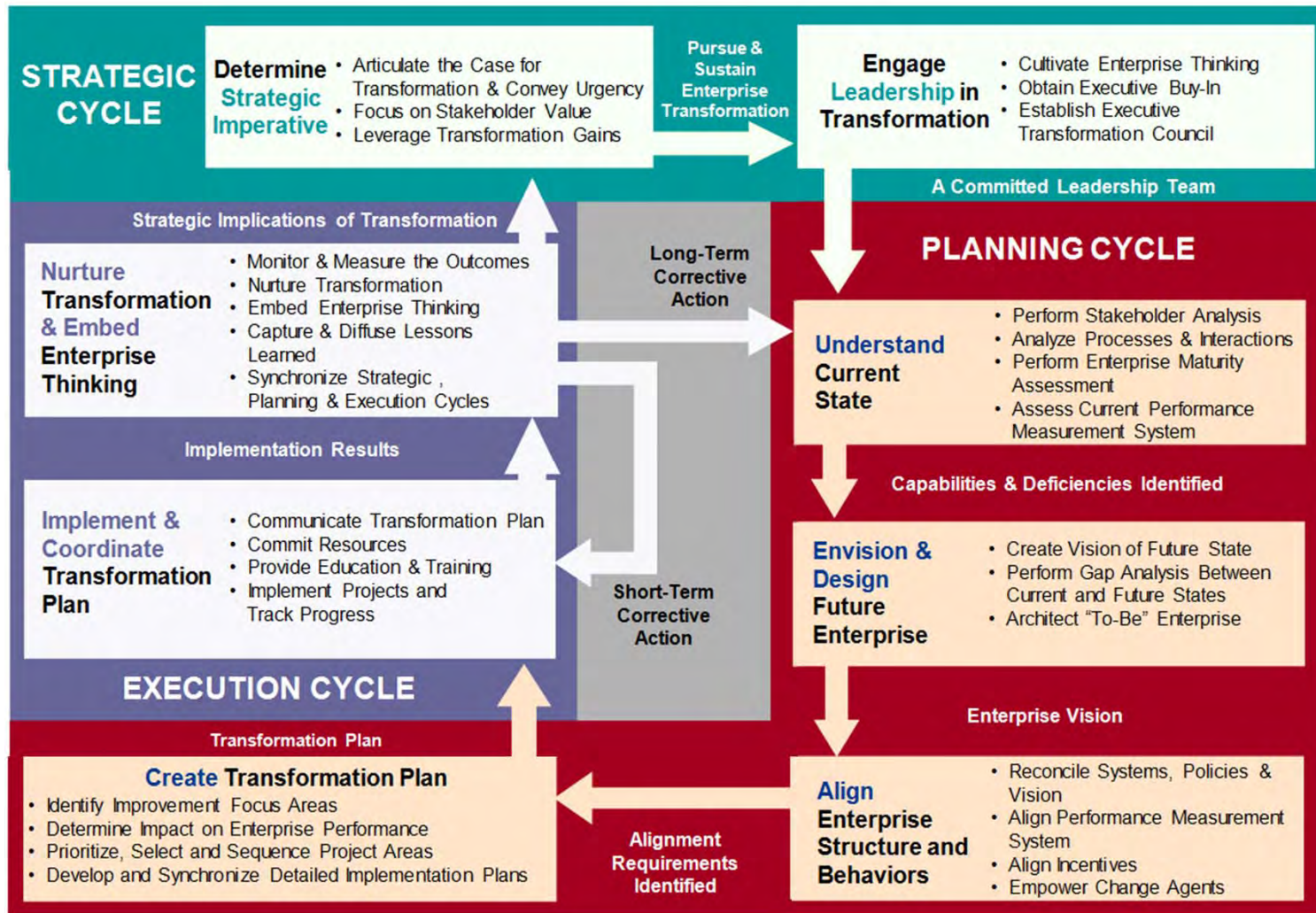
- Refine the value proposition centered around service members and their families
- Determine high-leverage opportunities for improving the continuum of care
- Revise policies and procedures to enhance system performance

# LAI-MIT Transformation Roadmap





# LAI-MIT Transformation Roadmap



# Post Traumatic Stress Innovations: U.S. Military Enterprise Analysis



## Challenge:

Develop innovative recommendations for transforming the military enterprise to better manage post-traumatic stress, and related conditions, in support of our service members and their families

## LAI will perform an enterprise analysis of the PTSD process.

Three Phases:

1. Current state analysis
2. Model creation and validation
3. Future scenario planning and recommendations

## Potential Outcomes:

- Increased understanding of the total system, including stakeholders and system performance
- Determination of high-leverage opportunities for improving the total systems
- Examination of policy and treatment implications



## MIT Lean Advancement Initiative Research Team

Prof. Deborah Nightingale  
Dr. Wiljeana Glover  
Dr. C. Robert Kenley  
Dr. Eitan Naveh  
Dr. Jayakanth Srinivasan  
Ms. Nicolene Hengen  
Mr. Ronald Rezek  
Mr. John Hess  
Mr. Cody Kamin  
Ms. Andrea Ippolito  
Ms. Ariadne Smith  
Ms. Judy Wang

Principal Investigator  
Postdoctoral Associate  
Research Associate  
Visiting Scholar  
Research Scientist  
Communications and Membership Director  
Research Affiliate  
Research Assistant  
Research Assistant  
Research Assistant  
Research Assistant  
Research Assistant

## MIT Collaborative Initiatives Team

Dr. Tenley E. Albright  
Mr. Kenneth Kaplan  
Ms. Eleanor Carlough

Director  
Associate Director  
Assistant Director



# Thank you!

**Professor Deborah Nightingale**  
Massachusetts Institute of Technology  
Room 33-312  
Cambridge, Massachusetts 02139

USA

617-253-7339

[dnight@mit.edu](mailto:dnight@mit.edu)

<http://lean.mit.edu>