
MIT-SDM 2010 Systems Thinking Conference
Professor Deborah J. Nightingale
Massachusetts Institute of Technology
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An enterprise requires the integration of:
- People
- Processes
- Organization
- Information
- Technology
- Strategy

Holistic view

Enterprise as a System

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.”
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

4-Star 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
Determine Strategic Imperative: Articulate the Case for Transformation & Convey Urgency
- Focus on Stakeholder Value
- Leverage Transformation Gains

Pursue & Sustain Enterprise Transformation
- Cultivate Enterprise Thinking
- Obtain Executive Buy-In
- Establish Executive Transformation Council

A Committed Leadership Team

PLANNING CYCLE

EXECUTION CYCLE

Transformation Plan
- Identify Improvement Focus Areas
- Determine Impact on Enterprise Performance
- Prioritize, Select and Sequence Project Areas
- Develop and Synchronize Detailed Implementation Plans

Enterprise Vision
- Reconcile Systems, Policies & Vision
- Align Performance Measurement System
- Align Incentives
- Empower Change Agents

Align Enterprise Structure and Behaviors

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PTSD: A Significant Pathology of War

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

Resources: RAND, 2008 Invisible Wounds of War
"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
Challenge:
Develop innovative recommendations for transforming the military enterprise to better manage post-traumatic stress, and related conditions, in support of our warriors and their families.
Engage Leadership in Transformation

- Cultivate Enterprise Thinking
- Obtain Executive Buy-In
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A Committed Leadership Team
Formal Project Kickoff:
Tuesday, September 28, 2010

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

**AIR FORCE**
- General Howie Chandler
  Vice Chief of U.S. Air Force
- LT. General Bruce Green
  Air Force Surgeon General

**ARMY**
- General Peter Chiarelli
  Vice-Chief of U.S. Army
- Lt. Gen. Eric B. Schoomaker
  Army Surgeon General

**ADVISORS**
- Dr. James B. Peake Lt. Gen.(ret)
  Former Secretary of Veterans Affairs
- Honorable Togo West
  Former Secretary of the Army

**MARINE CORPS**
- General James Amos,
  Assistant Commandant of the Marine Corps
Enterprise Transformation Roadmap

**STRATEGIC CYCLE**
- **Determine Strategic Imperative**
  - Articulate the Case for Transformation & Convey Urgency
  - Focus on Stakeholder Value
  - Leverage Transformation Gains

- **Pursue & Sustain Enterprise Transformation**

**PLANNING CYCLE**
- **Engage Leadership in Transformation**
  - Cultivate Enterprise Thinking
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- **A Committed Leadership Team**

- **Understand Current State**
  - Perform Stakeholder Analysis
  - Analyze Processes & Interactions
  - Perform Enterprise Maturity Assessment
  - Assess Current Performance

**Capabilities & Deficiencies Identified**
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
Current State Analysis

Four Areas of Interest
• Stakeholder analysis
• Enterprise organizations and processes
• Performance measurement systems
• Resources and outcomes

Research Activities

- Literature review
- Triangulation
- Interviews and site visits
- Gathering available data
Defining the Enterprise Boundary

Office of the Under Secretary of Defense for Personnel and Readiness
- Health Affairs
- Military Personnel Policy
- Military Community & Family Policy
- Wounded Warrior and Transition Policy (WWCTP)

MHS Component Organizations, including
- MHS Offices and Programs
- TRICARE
- Force, Health Protection and Readiness (FHP&R)
- Defense Centers of Excellence (DCoE)
- Office of the Chief Information Officer (CIO)

The Armed Services

ARMY, including
- Installation Management Command (IMCOM)
- Army Medicine (MEDCOM)

NAVY, including
- Bureau of Naval Personnel
- Bureau of Medicine and Surgery (Navy Medicine)
- Related Marine Corps Organizations

AIR FORCE, including
- Manpower and Personnel (A1)
- Logistics, Installations and Mission Support (A4/7)
- Air Force Medicine

JTF CAPMED

Veterans Affairs

Community Organizations
Key Stakeholder Groups

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

Operational
- Unit leaders
- Medics
- Chaplains

Direct Care
- MTF leadership
- Clinics
- Primary care physicians
- Specialists

Warriors Families Units

Service Leadership
- Surgeon Generals
- Installation management
- Intermediate commands

Congress

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

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

• Identify how performance measurement currently enables the enterprise to effectively translate strategy into action and drive continuous improvement

• Observations:
  • MHS balanced scorecard is used as the primary performance measurement system
  • 54 enterprise metrics currently being tracked (2 related to psychological health)
  • The performance measurement systems between TriCare and the services have not yet been integrated into a holistic system
  • Growing emphasis on alignment through collaborative development of enterprise metrics
Resources and Outcomes

• Compile and review existing data, models and resources to define the approach needed for dynamic enterprise modeling and analysis

• Observations
  • Large volumes of data are being collected and analyzed.
  • Current models take a data-intensive, statistical analysis approach.
  • Flexible systems dynamics and discrete-event simulation models are needed.
FY2010 U.S. Military Psychological Health Budget ($ millions)

Source: Military Health System, Strategic Planning Office
Envision & Design
Future Enterprise

- Create Vision of Future State
- Perform Gap Analysis Between Current and Future States
- Architect “To-Be” Enterprise

Enterprise Vision
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PTSD Prevention and Care Components for a Full Continuum of Care

Existing Models

- Quantitative modeling for treatment does exist
- These models capture the as-is baseline and need to be adapted to support evaluating architectural alternatives and policy development
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

Enterprise Architecting

- Strategy
- Policy
- Processes
- Products
- Services
- Knowledge
- Information
- Organization
Align
Enterprise Structure and Behaviors

- Reconcile Systems, Policies & Vision
- Align Performance Measurement System
- Align Incentives
- Empower Change Agents
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
X-Matrix as a Systems Tool for Enterprise Alignment
Create Transformation Plan
- Identify Improvement Focus Areas
- Determine Impact on Enterprise Performance
- Prioritize, Select and Sequence Project Areas
- Develop and Synchronize Detailed Implementation Plans
Anticipated Recommendations

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

Implement & Coordinate Transformation Plan

- Communicate Transformation Plan
- Commit Resources
- Provide Education & Training
- Implement Projects and Track Progress
Enterprise Transformation Roadmap

STRATEGIC CYCLE

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Strategic Implications of Transformation

Nurture Transformation & Embed Enterprise Thinking
- Monitor & Measure the Outcomes
- Nurture Transformation
- Embed Enterprise Thinking
- Capture & Diffuse Lessons Learned
- Synchronize Strategic, Planning & Execution Cycles
Enterprise Transformation Roadmap

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**PLANNING CYCLE**

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- Assess Current Performance Measurement System

**Capabilities & Deficiencies Identified**

**Envision & Design Future Enterprise**
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**Enterprise Vision**

**EXECUTION CYCLE**

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**Implementation Results**

**Implement & Coordinate Transformation Plan**
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**Long-Term Corrective Action**

**Short-Term Corrective Action**

**Alignment Requirements Identified**

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**Nurture Transformation & Embed Enterprise Thinking**
- Monitor & Measure the Outcomes
- Nurture Transformation
- Embed Enterprise Thinking
- Capture & Diffuse Lessons Learned
- Synchronize Strategic Planning & Execution Cycles
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 warriors and their families.

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

Three Phases:

1. Current state analysis
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**Anticipated 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
Thank you!

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