LEAN ADVANCEMENT INITIATIVE







The Lean Advancement Initiative (LAI) at MIT enables enterprises to effectively, efficiently, and reliably create value in complex and rapidly changing environments.



LAI enables the focused and accelerated transformation of complex enterprises through collaborative stakeholder engagement in developing and institutionalizing principles, processes, behaviors, and tools for enterprise excellence.



LAI Members Share a Common Goal: **Enterprise Excellence**















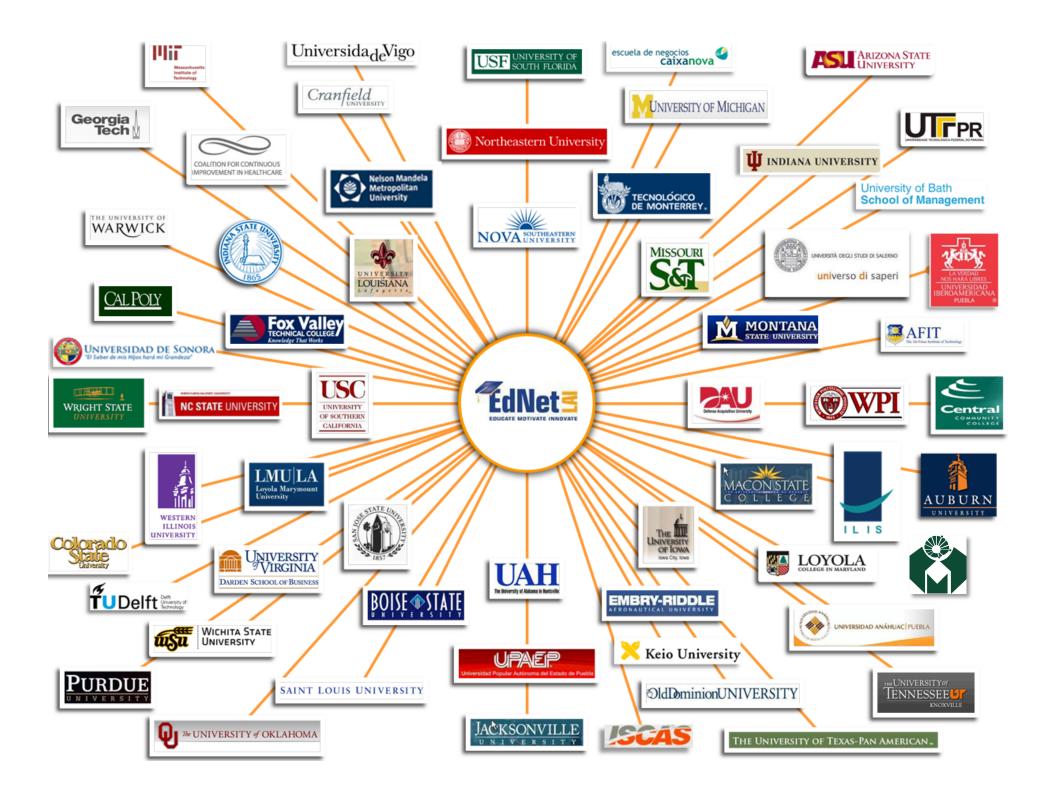














LAI Operating Model



- Enable transformation
- Exchange knowledge
- Measure value

- Accelerate deployment
- Engage all stakeholders
- Collaborate to transform

Enable Enterprise Excellence Conduct enterprise research

Develop transformation products



Create Knowledge



Co-Evolving Research, Products and Tools









Supplier

Networks Desk

Reference



Lean Enterprise Product

Development Simulation

Enterprise



LAI Enterprise Self-Assessment Tool 2.0 (LESAT 2.0)

Book: "Beyond the

Lean Revolution"



LAI Enterprise Self-Assessment Tool 2.0 (LESAT 2.0) **Facilitator Guide** and Calculator



Enterprise Transformation **Short Course**



Development Self-Assessment Tool (PDSAT)



Book: "Lean Enterprise Value"



Lean Enterprise Self-

Assessment Tool (LESAT)

Facilitator Guide and

Calculator

Lean Enterprise Self-Assessment Tool (LESAT)



Lean Product

Supplier Networks

Roadmap

Lean Enterprise Value (LEV) Simulation

Lean

Facilitator







LAI **Facilitator** Enterprise. Healthcare. and Product Development





Enterprise Architecting



Systems Engineering Leading Indicators V2



Production Operations Transition to Lean (POTTL)



Lean Enterprise Model (LEM)

99



Transition to

Lean (TTL)

Lean Now

Workshop

Lean Guides



Value Short Course

Lean Enterprise



LAIS Lean Enterprise Transformation Roadmap

STRATEGIC CYCLE

Strategic

Determine Articulate the Case for Transformation & Convey Urgency · Focus on Stakeholder Value Imperative. Leverage Transformation Gains

Pursue & Sustain **Enterprise Transformation**

Long-Term

Corrective

Action

Engage

Leadership in **Transformation**

Obtain Executive Buy-In

Cultivate Enterprise Thinking

Establish Executive Transformation Council

Strategic Implications of Transformation

Nurture

- Monitor Transformation Progress
- Nurture Transformation
- Transformation Embed Enterprise Thinking
- & Embed
- **Enterprise Thinking**

 Capture & Diffuse Lessons Learned

 Adjust and Align Planning & Execution Cycles

Implementation Results

Implement & Coordinate

Transformation Plan

- Develop Detailed Project Implementation Plans
- Synchronize Detailed Plans
- Commit Resources
- Provide Education & Training
- · Implement Projects and Track Progress

Short-Term Corrective Action

PLANNING CYCLE

A Committed Leadership Team

Understand

Current State

- Perform Stakeholder Analysis
- Analyze Processes & Interactions
- Perform Enterprise Maturity Assessment
- Assess Current Performance Measurement System

Capabilities & Deficiencies Identified

Envision & Design

Future Enterprise

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

EXECUTION CYCLE

Transformation Plan

Create Transformation Plan

- · Identify Improvement Focus Areas
- Determine Impact on Enterprise Performance
- · Prioritize, Select and Sequence Project Areas
- · Communicate transformation plan

Alignment Requirements Identified

Enterprise Vision

Align

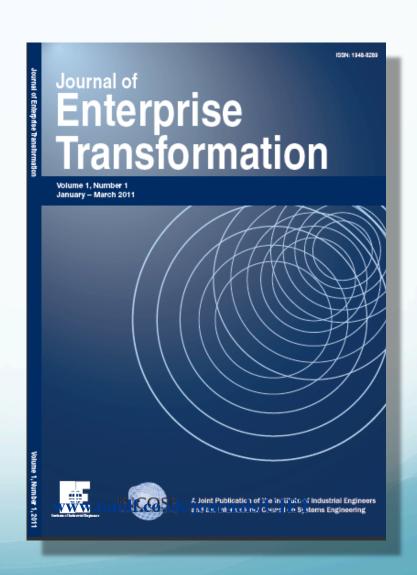
Enterprise Structure and **Behaviors**

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



Journal of Enterprise Transformation (JET)

- Quarterly international publication launched in 2011
- First four issues focused on:
 - Intellectual agenda of enterprise transformation
 - Enterprise change and continuity
 - Enterprise modeling
 - Enterprise transformation in action
- Collaboration w/Institute of Industrial Engineers and International Council on Systems Engineering
- Editors-in-Chief Deborah Nightingale, LAI,
 and Ricardo Valerdi, University of Arizona
- Managing Editor Nicolene Hengen, LAI



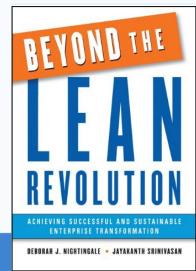


Codifying LAI Knowledge: Book Released August 2011

Prof. Deborah Nightingale and Dr. Jayakanth Srinivasan AMACOM Press

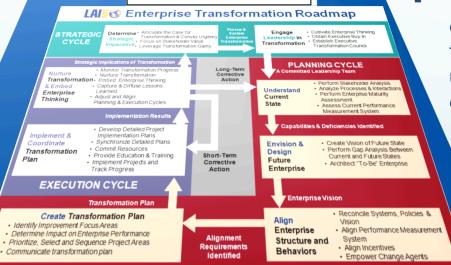
Structure

- Strategic Context (4 chapters)
- Lenses of Current State Analysis (5 chapters)
- Achieving Transformation (3 chapters)



 Designed for senior leadership, middle management, and graduate students

 Emphasis on the doing of transformation using LAI's enterprise roadmap





Evidence of LAI Impact on Enterprise Transformation

- Rockwell Collins is an enterprise that has translated "islands of success" into holistic enterprise transformation supported by LAI Knowledge and tools.
- Consistently ranked as the best avionics company by Aviation Week
- ROIC of 30+% is best in class in the aerospace and defense sector

"We see great value in belonging to organizations such as LAI, to network, identify better practice, and as a thought partner. Some of our best ideas were derived from other people who were struggling with their own Lean journey as we were and who were graciously willing to share their successes and their failures."



Clayton Jones, CEO Rockwell Collins "Textron Systems' lean transformation is a journey, and one that has benefited enormously from the resources and assistance provided by the Lean Aerospace Initiative. LAI has offered Textron Systems an important connection among academia, industry, and government that has given our company insight into lean research, practices, tools, and products that we would not have had access to otherwise. Our ongoing journey, though challenging, has been made easier by LAI's one-stop shop for lean research, colleague interaction, and product application."



Richard Millman President (Ret.) Textron Systems "Pratt & Whitney and UTC have been associated with LAI for over 15 years. The research and technologies of this organization will continue to be sought out as guides for the future development path of both industry and the services associated with aerospace."



Thomas Farmer President (Ret.) Pratt & Whitney



Membership Benefits

Early access to research results

Email event announcements

- Opportunity to participate in communities of practice
- Periodic LAI Research Highlights

- Opportunity to hire highly trained graduate students
- Monthly executive board reports

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