LESAT Facilitator’s Workshop
LESAT Overview

Tom Shields
March 27, 2003
Lean Transformation Requires an Enterprise Approach

Core Enterprise
- Direct Customers
- Direct Suppliers
- Partners
- Employees
- Shareholders
- Unions
- Corporate Functions
- Corporate Processes

Extended Enterprise
- Downstream Customers
- End-Use Customers
- Lifecycle Service and Support
- Society
- Academia

Upstream Supply Chain
What Is the Lean Enterprise Self-Assessment Tool (LESAT)?

- A tool for self-assessing the present state of “leanness” of an enterprise and its readiness to change
- Comprised of capability maturity model for assessing
  - (1) Enterprise leadership
  - (2) Life cycle and enabling processes
  - (3) Enabling infrastructure
- Supporting materials: (Facilitator’s Guide, Glossary, etc.)

Source: Lean Aerospace Initiative, MIT © 2001
Companies do well in assessing:

- **Financial Performance**
  - Sales Volume
  - Revenue
  - Operating Costs
  - Financial Ratios

- **Operations Performance**
  - Production Costs
  - Productivity
  - Quality
  - Schedule
Perspectives on Assessment

- Companies *do not* do well in tracking progress associated with broad change
  - Often expressed in terms difficult to measure, fuzzy or soft metrics, or even a “gut feeling”
  - “Good things to do” included without metrics
  - Long term improvement tasks – difficult assessing intermediate progress
  - Some improvement tasks dependent upon others
  - Failure to consider “soft” aspects of change; we focus on technical aspects, ignoring people and social interactions
Workshop Participants’ Views

Are there other reasons that companies do not do well in tracking progress associated with broad change?

1.

2.

3.

4.

5.
Perspectives on Assessment

• Most LAI members have launched “lean change initiatives”
• Many have used LAI’s TTL Roadmap
• Experience with TTL led early adopters to ask:
  • How lean are we?
  • How do we know how much progress we have made?
  • Where should we focus next?

LESAT is intended to address these questions
How Do We Assess Our Progress?

- Enterprise TTL application highlighted need for assessment tool
- Lean Enterprise Self-Assessment Tool (LESAT) developed by joint industry / government / MIT team in collaboration with UK LAI
- LESAT supports both
  - “As-Is” Analysis
  - “To-Be” Vision

Targeted at Enterprise Leadership Team (enterprise leader and direct reports)
LESAT Tool Requirements
(Survey of LAI Consortia Members)

• Simple, easy to use by enterprise leadership
• Focus on lean attributes
• Alignment with business performance planning (goals and results)
• Provide guidance for “next steps”
  • Gap analysis capability
• Ability to accommodate both single and aligned organizations (teaming, partnerships, suppliers) within an enterprise
LAI Process Architecture View of the Lean Enterprise

- Life Cycle Processes
- Enabling Infrastructure Processes
- Enterprise Leadership Processes

Source: Lean Aerospace Initiative, MIT © 2001
LESAT is Consistent with a Process Architecture View of the Lean Enterprise

LESAT Section II

Life Cycle Processes
(Source of Revenue)

Enabling Infrastructure Processes
(Supporting Role)

Enterprise Leadership Processes
(Transforming Enabler)

LESAT Section III

LESAT Section I

Source: Lean Aerospace Initiative, MIT © 2001
LESAT as a Leading Indicator of Improved Enterprise Value Delivery

State of Enterprise Leanness (LESAT - Leading Indicators)

Life Cycle Processes (LESAT Sec II)

Enabling Infrastructure Processes (LESAT Sec III)

Enterprise Leadership Processes (LESAT Section I)

Enterprise Performance Measures (Lagging Indicators)

Customer focus of Sec II creates

Customer Value

Reduced waste in Sec II & III cuts costs and creates

Financial Value

Lean in Sec I, II & III creates a more involved and empowered workforce

Employee Value

web.mit.edu/lean

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Proposed Causal Relations in Lean Enterprise Transformation

- **Enterprise Leadership Processes** (LESAT Section I)
  - Leads, Enables
- **Enabling Infrastructure Processes** (LESAT Sec III)
  - Leads, Enables
- **Life Cycle Processes** (LESAT Sec II)
  - Enables
LESAT Structure is Consistent with Enterprise Architecture

Section I

Lean Transformation / Leadership

Section II

Life Cycle Processes

Section III

Enabling Infrastructure Processes

Life Cycle Processes

Enabling Infrastructure Processes

Enterprise Leadership Processes

Source: Lean Aerospace Initiative, MIT © 2001
## LESAT Sections

<table>
<thead>
<tr>
<th>Section I</th>
<th>Section II</th>
<th>Section III</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transformation / Leadership</strong></td>
<td><strong>Lifecycle Processes</strong></td>
<td><strong>Enabling Infrastructure</strong></td>
</tr>
<tr>
<td>The focus is on lean practices and processes that are developed and maintained at the top level of the enterprise to guide its lean activities.</td>
<td>These processes result in value delivery to the customer and stakeholders over the life of the product or service.</td>
<td>These enabling processes provide supporting services to other organizational units whom they serve as internal customers.</td>
</tr>
</tbody>
</table>
Lean Enterprise Practices

• There are 54 lean enterprise practices in the assessment, divided amongst the three major sections
  • Section 1 Leadership/Transformation (28 practices)
  • Section 2 Lifecycle Processes (18 Practices)
  • Section 3 Enabling Infrastructure (8 Practices)

• Each practice is assessed on a capability maturity scale of 1 to 5

• There is a practice maturity definition for every maturity level in every practice, provided on a maturity matrix assessment sheet
Generic Capability Maturity Levels
(Facilitator’s Guide, pp.13)

Level 5
Exceptional, well-defined, innovative approach is fully deployed across the extended enterprise (across internal and external value streams); recognized as best practice.

Level 4
On-going refinement and continuous improvement across the enterprise; improvement gains are sustained.

Level 3
A systematic approach/methodology deployed in varying stages across most areas; facilitated with metrics; good sustainment.

Level 2
General awareness; informal approach deployed in a few areas with varying degrees of effectiveness and sustainment.

Level 1
Some awareness of this practice; sporadic improvement activities may be underway in a few areas.

Maturity Level Definitions Simplified

- Level 1: Minimal Awareness → Traditional
- Level 2: General Awareness → Adopter
- Level 3: Systematic Approach → Performer
- Level 4: Continuous Improvement → Reformer
- Level 5: Recognized Best Practice → Transformer

World Class

Least Capable
### Generic LESAT Maturity Matrix Template

(Blue text changes for each practice, green text entered by assessor for each practice)

**Section, Group # and Group Name:**
Brief description of this Group number. In Section I, the Group is one of the Primary Activities from the Transition-to-Lean (TTL) Roadmap (blue)

<table>
<thead>
<tr>
<th>LP#</th>
<th>Lean Practices</th>
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<tr>
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</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>A specific lean practice associated with this Group Sound bit phrase (blue)</td>
<td>Statement describing little awareness of this lean practice (blue)</td>
</tr>
<tr>
<td></td>
<td>Lean Indicators</td>
<td>Outcomes and lean behaviors that an enterprise will exhibit as it proceeds on its Lean transformation (blue)</td>
</tr>
<tr>
<td></td>
<td>Evidence</td>
<td>Supporting data utilized in assessing the current capability level of the Enterprise on this lean practice (green)</td>
</tr>
<tr>
<td></td>
<td>Opportunities</td>
<td>Inputs to plans of action to leverage opportunities or to move to the desired level of capability (green)</td>
</tr>
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The focus is on lean practices and processes that are developed and maintained at the top level of the enterprise to guide its lean activities.

- I.A Enterprise Strategic Planning
- I.B Adopt the Lean Paradigm
- I.C Focus on the Value Stream
- I.D Develop Lean Structure and Behavior
- I.E Create and Refine Transformation Plan
- I.F Implement Lean Initiatives
- I.G Focus on Continuous Improvement
LESAT Section I

Section I: Lean Transformation/Leadership

- Practices directly linked to enterprise Transition to Lean Model (TTL)
- Assesses the following elements:
  - Strategic integration
  - Leadership and commitment
  - Value stream analysis and balancing
  - Change management
  - Structure and systems
  - Lean transformation planning, execution and monitoring
Enterprise Transition To Lean (TTL) Roadmap

Entry/Re-entry Cycle

I.B Adopt Lean Paradigm
Decision to Pursue Enterprise Transformation

I.A Enterprise Strategic Planning

Long Term Cycle

I.C Focus on the Value Stream
Initial Lean Vision

I.D Develop Lean Structure & Behavior
Detailed Lean Vision

Short Term Cycle

I.G Focus on Continuous Improvement
Environmental Corrective Action Indicators

I.F Implement Lean Initiatives
Outcomes on Enterprise Metrics

I.E Create & Refine Transformation Plan
Detailed Corrective Action Indicators

Leak Transformation Framework

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Enterprise Level Roadmap

**Entry/Re-entry Cycle**

**I.B** Adopt Lean Paradigm
- Build Vision
- Convey Urgency
- Foster Lean Learning
- Make the Commitment
- Obtain Senior Mgmt. Buy-in

**I.A** Enterprise Strategic Planning

**I.C** Focus on the Value Stream
- Map Value Stream
- Internalize Vision
- Set Goals & Metrics
- Identify & Involve Key Stakeholders

**I.D** Develop Lean Structure & Behavior
- Organize for Lean Implementation
- Identify & Empower Change Agents
- Align Incentives
- Adapt Structure & Systems

**I.E** Create & Refine Transformation Plan
- Identify & Prioritize Activities
- Commit Resources
- Provide Education & Training

**I.F** Implement Lean Initiatives
- Develop Detailed Plans
- Implement Lean Activities

**I.G** Focus on Continuous Improvement
- Monitor Lean Progress
- Nurture the Process
- Refine the Plan
- Capture & Adopt New Knowledge

**Short Term Cycle**

**Long Term Cycle**

**Environmental Corrective Action Indicators**

**Detailed Corrective Action Indicators**

**Detailed Lean Vision**

**Lean Transformation Framework**

**Decision to Pursue Enterprise Transformation**

Outcomes on Enterprise Metrics

+ +
LESAT Section I - 28 Lean Practices

I.A. Enterprise Strategic Planning
   I.A.1 Integration of Lean in strategic planning process
   I.A.2 Focus on customer value
   I.A.3 Leveraging the extended enterprise

I.B. Adopt Lean Paradigm
   I.B.1 Learning and education in “Lean” for enterprise leaders
   I.B.2 Senior management commitment
   I.B.3 Lean enterprise vision
   I.B.4 A sense of urgency

I.C. Focus on the Value Stream
   I.C.1 Understanding current value stream
   I.C.2 Enterprise flow
   I.C.3 Designing future value stream
   I.C.4 Performance measures

I.D Develop Lean Structure and Behavior
   I.D.1 Enterprise organizational orientation
   I.D.2 Relationships based on mutual trust
   I.D.3 Open and timely communications
   I.D.4 Employee empowerment
   I.D.5 Incentive alignment
   I.D.6 Innovation encouragement
   I.D.7 Lean change agents

I.E. Create & Refine Transformation Plan
   I.E.1 Enterprise-level Lean transformation plan
   I.E.2 Commit resources for Lean improvements
   I.E.3 Provide education and training

I.F. Implement Lean Initiatives
   I.F.1 Development of detailed plans based on enterprise plan
   I.F.2 Tracking detailed implementation

I.G. Focus on Continuous Improvement
   I.G.1 Structured continuous improvement processes
   I.G.2 Monitoring lean progress
   I.G.3 Nurturing the process
   I.G.4 Capturing lessons learned
   I.G.5 Impacting enterprise strategic planning
I.B. Adopt Lean Paradigm - Transitioning to lean requires a significant modification to the business model of the enterprise. It is imperative that the enterprise leadership understands and buys into the lean paradigm since they will be required to create a vision for doing business, behaving and seeing value in fundamentally different ways.

Diagnostic Questions
- Do enterprise leaders and senior managers understand the lean paradigm at the enterprise level?
- Do all senior leaders and management enthusiastically support a transformation to lean?
- Has a common vision of lean been communicated throughout the enterprise and within the extended enterprise?
- Has a compelling case been developed for the Lean transformation?

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<td>I.B.3</td>
<td>Senior leaders have varying vision of lean, from none to well-defined.</td>
<td>C</td>
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<tr>
<td></td>
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### Diagnostic Questions for I.B - Adopt the Lean Paradigm

I.B. Adopt Lean Paradigm - Transitioning to lean requires a significant modification to the business model of the enterprise. It is imperative that the enterprise leadership understands and buys into the lean paradigm since they will be required to create a vision for doing business, behaving and seeing value in fundamentally different ways.

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**Lean Indicators**

- The role that lean plays in achieving the vision is clearly defined.
- The vision has been communicated to all levels and has extensive buy-in by most employees.
- The vision incorporates a new mental model of how the company would act and behave according to lean principles and practices.

**Lean Practices**

- **I.B.3. Lean Enterprise Vision**
  - New mental model of the enterprise

- **Capability Levels**
  - Level 1: Senior leaders have varying vision of lean, from none to well-defined.
  - Level 2: Senior leaders adopt common vision of lean.
  - Level 3: Lean vision has been communicated and is understood by most employees.
  - Level 4: Common vision of lean is shared by the extended enterprise.
  - Level 5: Stakeholders have internalized the lean vision and are an active part of achieving it.

**Evidence**

(Space for evidence and opportunities)

Diagnostic Questions for I.B - Adopt the Lean Paradigm

• Do enterprise leader and senior managers understand the lean paradigm at the enterprise level?
• Have all senior managers made a commitment to enthusiastically support a transformation to lean?
• Has a common vision of lean been communicated throughout the enterprise and within the extended enterprise?
• Has a compelling case been developed for the lean transformation?
# Maturity Definitions for Practice

## I.B.3 - Lean Enterprise Vision

I.B. Adopt Lean Paradigm - Transitioning to lean requires a significant modification to the business model of the enterprise. It is imperative that the enterprise leadership understands and buys into the lean paradigm since they will be required to create a vision for doing business, behaving and seeing value in fundamentally different ways.

### Diagnostic Questions
- Do enterprise leaders and senior managers understand the lean paradigm at the enterprise level?
- Do all senior leaders and management enthusiastically support a transformation to lean?
- Has a common vision of lean been communicated throughout the enterprise and within the extended enterprise?
- Has a compelling case been developed for the Lean transformation?

### Lean Practices

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<td><strong>New mental model of the enterprise</strong></td>
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<td>D</td>
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### Lean Indicators
- The role that lean plays in achieving the vision is clearly defined
- The vision has been communicated to all levels and has extensive buy-in by most employees.
- The vision incorporates a new mental model of how the company would act and behave according to lean principles and practices
I.B.3 Lean Enterprise Vision - new mental model of the enterprise

**Level 5**
Stakeholders have internalized the lean vision & are an active part of achieving it

**Level 4**
Common vision of lean is shared by the extended enterprise

**Level 3**
Lean vision has been communicated and is understood by most employees

**Level 2**
Senior leaders adopt common vision of lean

**Level 1**
Senior leaders have varying visions of lean, from none to well-defined

## Lean Indicators for Practice

### I.B.3 - Lean Enterprise Vision

**I.B. Adopt Lean Paradigm** - Transitioning to lean requires a significant modification to the business model of the enterprise. It is imperative that the enterprise leadership understands and buys into the lean paradigm since they will be required to create a vision for doing business, behaving and seeing value in fundamentally different ways.

### Diagnostic Questions

- Do enterprise leaders and senior managers understand the lean paradigm at the enterprise level?
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*New mental model of the enterprise* | Senior leaders have varying vision of lean, from none to well-defined. | Senior leaders adopt common vision of lean. | Lean vision has been communicated and is understood by most employees. | Common vision of lean is shared by the extended enterprise. | Stakeholders have internalized the lean vision and are an active part of achieving it. |

### Lean Indicators

- The role that lean plays in achieving the vision is clearly defined
- The vision has been communicated to all levels and has extensive buy-in by most employees.
- The vision incorporates a new mental model of how the company would act and behave according to lean principles and practices

**Source:** U.S. and U.K. Lean Aerospace Initiative, © 2001

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Lean Indicators for Practice
I.B.3 - Lean Enterprise Vision

- The role that lean plays in achieving the vision is clearly defined
- The vision has been communicated to all levels and has extensive buy-in by most employees
- The vision incorporates a new mental model of how the company would act and behave according to lean principles and practices
The focus is on lean practices and processes that are developed and maintained at the top level of the enterprise to guide its lean activities.

These processes result in value delivery to the customer and stakeholders over the life of the product or service.

- II.A Business Acquisition and Program Management
- II.B Requirements Definition
- II.C Develop Product and Processes
- II.D. Manage Supply Chain
- II.E Produce Product
- II.F Distribute and Service Product
Section II: Life Cycle Processes

Assess:

• Enterprise level core processes
  • Acquisition
  • Program Management
  • Requirements Definition
  • Product/Process Development
  • Supply Chain Management
  • Production
  • Distribution and Support
• Key integrative practices
Life Cycle Processes Support Value Delivery

Generic Product Value Stream

- Acquire Business
- Develop Product
- Produce Product
- Service Product
- Dispose/Update Product

II. A Business Acquisition & Program Management

II. B Requirements Definition

II. C Develop Product and Process

II. D Supply Chain Management

II. E Produce Product

II. F Distribute & Service Product
LESAT Section II - 18 Lean Practices

- **II.A. Business Acquisition and Program Management**
  - II.A.1 Leverage Lean capability for business growth
  - II.A.2 Optimize the capability and utilization of assets
  - II.A.3 Provide capability to manage risk, cost, schedule and performance
  - II.A.4 Allocate resources for program development efforts

- **II.B. Requirements Definition**
  - II.B.1 Establish a requirements definition process to optimize lifecycle value
  - II.B.2 Utilize data from the extended enterprise to optimize future requirement definitions

- **II.C. Develop Product and Process**
  - II.C.1 Incorporate customer value into design of products and processes
  - II.C.2 Incorporate downstream stakeholder values into products and processes
  - II.C.3 Integrate product and process development

- **II.D. Manage Supply Chain**
  - II.D.1 Define and develop supplier network
  - II.D.2 Optimize network-wide performance
  - II.D.3 Foster Innovation and knowledge sharing throughout the supplier network

- **II.E. Produce Product**
  - II.E.1 Utilize production knowledge and capabilities
  - II.E.2 Establish and maintain a lean production system

- **II.F. Distribute and Service Product**
  - II.F.1 Align sales and marketing to production
  - II.F.2 Distribute product in a lean fashion
  - II.F.3 Enhance value of delivered products and services to customers and the enterprise
  - II.F.4 Provide post-delivery service, support, and sustainability
## Example LESAT Practice

### - II.C Develop Product and Process -

**II. C. Develop Product and Process** - Product and process design decisions must be based upon value quantifications and tradeoffs that incorporate inputs from affected stakeholders.

<table>
<thead>
<tr>
<th>Diagnostic Questions</th>
<th>Is the product development process formalized and understood?</th>
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<td>Are customers and other lifecycle stakeholders regularly involved in product and process development?</td>
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<td>Are downstream stakeholder issues in design and development considered and incorporated as early as possible in the process?</td>
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<td></td>
<td>Have most of the unnecessary iterations in the development cycle been removed?</td>
</tr>
<tr>
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<td>Has the development cycle been simplified and aligned to the critical path?</td>
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<td>Are products and processes being developed concurrently?</td>
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### Capability Levels

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<td>C</td>
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<table>
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<tr>
<th>Lean Practices</th>
<th>Incorporate Downstream Stakeholder Values (Manufacturing, Support, etc.) into Products and Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Understanding downstream stakeholders allows value to flow seamlessly to customer</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Manufacturing issues are considered late in design.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Manufacturing and assembly issues are considered earlier in projects, but in ad hoc manner. Supplier and cost considerations are limited.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Multi-functional teams include some downstream disciplines and key suppliers.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Priorities of downstream stakeholders are quantified as early as possible in design, and used for process evaluation and improvement.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Downstream stakeholders’ values in the extended enterprise are quantified and balanced via tradeoffs, as a continuous part of the process.</strong></td>
<td></td>
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</tbody>
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### Lean Indicators (Examples)

- There is early consideration and incorporation of downstream stakeholders issues throughout design development
- The scope of considerations integrated into designs has been extended to include manufacturing, assembly, serviceability and cost implications
- Products are easier to produce and have lower life-cycle costs

### Evidence

### Opportunities
**Diagnostic Questions for II.C - Develop Product and Process**

**II. C. Develop Product and Process - Product and process design decisions must be based upon value quantifications and tradeoffs that incorporate inputs from affected stakeholders.**

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**II.C.2 Incorporate Downstream Stakeholder Values (Manufacturing, Support, etc.) into Products and Processes**

**Understanding downstream stakeholders allows value to flow seamlessly to customer**

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**Lean Indicators (Examples)**

- There is early consideration and incorporation of downstream stakeholders issues throughout design development
- The scope of considerations integrated into designs has been extended to include manufacturing, assembly, serviceability and cost implications
- Products are easier to produce and have lower life-cycle costs

**Evidence**

**Opportunities**

Diagnostic Questions for II.C - Develop Product and Process

- Is the product development process formalized and understood?
- Are customers and other lifecycle stakeholders regularly involved in product and process development?
- Are downstream stakeholder issues in design and development considered and incorporated as early as possible in the process?
- Have most of the unnecessary iterations in the development cycle been removed?
- Has the development cycle been simplified and aligned to the critical path?
- Are products and processes being developed concurrently?
## Maturity Definitions for Practice II.C.2 - Incorporate Downstream Stakeholder Values

### II. C. Develop Product and Process - Product and process design decisions must be based upon value quantifications and tradeoffs that incorporate inputs from affected stakeholders.

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### Lean Indicators (Examples)

- **Manufacturing issues are considered late in design.**
- **Manufacturing and assembly issues are considered earlier in projects, but in ad hoc manner. Supplier and cost considerations are limited.**
- **Multi-functional teams include some downstream disciplines and key suppliers.**
- **Priorities of downstream stakeholders are quantified as early as possible in design, and used for process evaluation and improvement.**
- **Downstream stakeholders’ values in the extended enterprise are quantified and balanced via tradeoffs, as a continuous part of the process.**

- **There is early consideration and incorporation of downstream stakeholders issues throughout design development**
- **The scope of considerations integrated into designs has been extended to include manufacturing, assembly, serviceability and cost implications**
- **Products are easier to produce and have lower life-cycle costs**

### Evidence

### Opportunities

Maturity Definitions for Practice II.C.2 - Incorporate Downstream Stakeholder Values

II.C.2 Incorporate *Downstream Stakeholder Values* (Manufacturing, Support, etc.) into Products & Processes - *Understanding downstream stakeholders allows value to flow seamlessly to customer*

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©Massachusetts Institute of Technology Shields- 032703 40
## Lean Indicators for Practice II.C.2 - Incorporate Downstream Stakeholder Values

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### Lean Practices

**II.C.2 Incorporate Downstream Stakeholder Values** (Manufacturing, Support, etc.) into Products and Processes

- **Understanding downstream stakeholders allows value to flow seamlessly to customer**

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**Lean Indicators (Examples)**

- **There is early consideration and incorporation of downstream stakeholders issues throughout design development**
- **The scope of considerations integrated into designs has been extended to include manufacturing, assembly, serviceability and cost implications**
- **Products are easier to produce and have lower life-cycle costs**

**Evidence**

**Opportunities**

**Source:** U.S. and U.K. Lean Aerospace Initiative, © 2001
• There is early consideration and incorporation of downstream stakeholder issues throughout design development
• The scope of considerations integrated into designs has been extended to include manufacturing, assembly, serviceability and cost considerations
• Products are easier to produce and have lower life-cycle costs
The focus is on lean practices and processes that are developed and maintained at the top level of the enterprise to guide its lean activities. These processes result in value delivery to the customer and stakeholders over the life of the product or service. These enabling processes provide supporting services to other organizational units whom they serve as internal customers.
Section III: Enabling Infrastructure

Assess critical supporting processes

- Finance
- Information Technology
- Human Resources
- Environmental Health & Safety
III.A. Lean Organizational Enablers
  III.A.1 Financial system supports Lean transformation
  III.A.2 Enterprise stakeholders pull required financial information
  III.A.3 Promulgate the Learning Organization
  III.A.4 Enable the Lean enterprise with information systems and tools
  III.A.5 Integration of environmental protection, health and safety into the business

III.B. Lean Process Enablers
  III.B.1 Process standardization
  III.B.2 Common tools and systems
  III.B.3 Variation reduction
Example LESAT Practice

III.A - Lean Organizational Enablers

III.A. Lean Organization Enablers - The support units of an enterprise infrastructure must support the implementation of lean principles, practices and behavior.

Diagnostic Questions

- Do the finance and accounting measures support the implementation of lean?
- How well have the financial and accounting systems been integrated with non-financial measures of value creation?
- Can stakeholders retrieve financial information as required?
- Are human resource practices reviewed to assure that intellectual capital matches process needs?
- Are the information technology systems compatible with stakeholder communications and analysis needs?
- Do processes created the least amount of environmental hazards practical?

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Lean Indicators

- Financial measures that conflict with lean activity are no longer used to measure progress and performance.
- The financial system handles a balanced set of financial and non-financial measures to assist decision-making.
- The financial system has been overhauled to ensure fast and efficient processing of information as required.

Evidence

Opportunities

### Diagnostic Questions for III.A - Lean Organizational Enablers

#### III.A. Lean Organization Enablers - The support units of an enterprise infrastructure must support the implementation of lean principles, practices and behavior.

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Diagnostic Questions for II.A - Lean Organizational Enablers

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# Maturity Definitions for Practice
## III.A - Lean Organizational Enablers

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#### Evidence

#### Opportunities

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Financial system supports lean transformation - *Lean requires accurate assessment of value stream activities*

**Level 5**
Financial systems provide seamless information exchange across the extended enterprise, with emphasis on value creation for all stakeholders.

**Level 4**
Financial system scope is expanded to integrate with non-traditional measures of value creation (e.g., intellectual capital, balanced scorecard, etc.).

**Level 3**
Finance system is overhauled to provide data and financial information to support and enable a lean transformation at any level.

**Level 2**
Initial efforts are underway to adapt or modify systems to compensate for the inadequacies of the formal financial system.

**Level 1**
Finance system provides basic balance sheet and cost accounting data; there is little awareness and exploration of broader support roles for finance.
Lean Indicators for Practice
III.A - Lean Organizational Enablers

III.A. Lean Organization Enablers - The support units of an enterprise infrastructure must support the implementation of lean principles, practices and behavior.

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Evidence

Opportunities
• Financial measures that conflict with lean activity are no longer used to measure progress and performance.
• The financial system handles a balanced set of financial and non-financial measures to assist decision-making.
• The financial system has been overhauled to ensure fast and efficient processing of information as required.
• Financial and performance measurement data can be accessed as needed in user-defined format.
• Financial information can be extrapolated to forecast outcomes.
• System provides up to date information on request and rationalizes information no longer used.
Review Other LESAT Practices?

- As a LESAT facilitator you will be asked to clarify some of the practices to assessors

Are there any other practices that you would like clarification on now?
Participants Should be Able to...

• Understand role of assessment
• Understand “process architecture view of Lean Enterprise”
• Understand that assessment, even of core processes and infrastructure processes is at enterprise level
• Understand the LESAT Maturity Matrix Format and how matrices are completed
• Obtain Enterprise Leader’s commitment to personally sponsor & participate in assessment