

# Enterprise Strategic Analysis and Transformation

## ESAT



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This guide has been revised to include facilitator experience and additional methodologies developed during the last five years of LAI Enterprise deployment events.

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## Introduction

Organizations operate today in a heightened competitive environment in which change is the only certainty. The adage of *when in doubt restructure* brought about by reengineering, and the turbulence of mergers, acquisitions, and divestitures, has resulted in organizations with often impenetrable functional silos. The challenges brought forth by globalization, schedule compression, cost constraints, time to market pressures, capability differentials in the supplier base, growing shortages of human capital and pressures from stockholders, requires organizations to take a more holistic approach to transformation. The Enterprise Strategic Analysis and Transformation (ESAT) methodology provides a means for the senior leadership team to understand their enterprise, create an actionable vision for the future, plan the transformation and govern the execution.

The principle focus on most western organizations is delivering increased shareholder value. This paradigm was challenged through a detailed study of the Toyota Production System by Womack and Jones in their book *The Machine That Changed the World*, and they advocated a singular focus on customer value. Murman et. al, in their book *Lean Enterprise Value*, extended the traditional focus of lean thinking on waste elimination for its own sake, to waste elimination with the goal of value creation. The research at the Lean Advancement Initiative (LAI) at MIT over the last five years on *enterprise thinking*, has led to get another paradigm shift, wherein an organizations focus is on delivering value to all of its key stakeholders. This emphasis on enterprise thinking, forces enterprises to transition from local lean efforts to Lean as an enterprise philosophy.

An organization today has to necessarily balance across the needs of its capital providers (including shareholders, institutional investors and debt holders), who expect to get a reasonable return on their investment; its employees, who expect to have their efforts recognized and rewarded, and long term job security; its suppliers who expect to on-time payment and growth in their business; the customers who expect to get a quality product that meets their needs at a reasonable price; the constant pressures of their competitors; the external factors (including society, government, and the impact on the environment) which need to be recognized and addressed. This stakeholder-centric approach to running an organization is fundamental to lean enterprise thinking. Each of these stakeholders contributes to the long-term sustainability of the enterprise, and ignoring any one of them in the long-run can result in the rapid demise of the enterprise.

The two dominant models of organization change are the top-down plan-driven approach and the organic bottom-up approach. Both of these approaches provide immediate benefits to the organization, however, a lack of a holistic approach that bridges these models, often results in islands of success at the local level that do not aggregate to long-term sustainable enterprise benefits. A case in point is the use of Kaizen or rapid improvement events in lean transformation efforts to create point solutions for improvement. These one-time efforts contradict the underlying philosophy of kaizen, which approximately translates to 'continuous improvement based on knowledge', as they are not coordinated to drive enterprise-level transformation. An indicator of such localized thinking is the loss of transformation momentum once the low hanging fruit are gathered.

The Enterprise Strategic Analysis and Transformation (ESAT) methodology presented in this guide serves as an integrated, analytical framework for diagnosing and improving overall enterprise performance. The emphasis of ESAT on understanding the enterprise value streams, the value flow between key stakeholders and the enterprise, and interactions both within and across the enterprise, enables the identification of enterprise wastes and opportunities for improvement. Using the quantitative and qualitative data gathered as part of executing the ESAT, the enterprise leadership team can then create a future state vision, an actionable transformation plan, and put into place a governance structure to support and drive enterprise transformation. Equally important is the shared mental model that the senior leadership team creates during the execution of the ESAT, as it ensures that there is sustained leadership buy-in for the long transformation journey ahead.

As a decision support tool for senior enterprise leaders, ESAT enables the

- Identification of barriers to the creation/delivery of value to key stakeholders
- Specification of a future lean enterprise vision
- Determination of signification gaps between the current and future states
- Prioritization of enterprise-level improvement opportunities
- Creation of an integrated transformation plan, and associated governance structure

What distinguishes ESAT from other approaches to transformation are:

- A focus on the total enterprise level
- An emphasis on enterprise-wide processes, rather than individual functions, programs or tasks
- An emphasis on value flows between the enterprise and its stakeholders
- Built upon well-tested well-understood methods

## ESAT in Context

The Lean Advancement Initiative (LAI) is a collaborative effort among industry and government organizations, MIT, and other academic institutions. LAI was renamed from Lean Aerospace Initiative in 2008 and was originally formed to identify and implement lean principles and practices throughout the aerospace industry. This was done to reflect the broad application of lean enterprise thinking to other industries ranging from healthcare, telecommunications, retail and others.

Effective implementation proved to be extremely challenging in this low-volume, high variety product environment. Consequently, a major effort was initiated to develop a “roadmap” for assisting and guiding aerospace firms in the implementation of lean. The resulting LAI product is called “Transitioning to a Lean Enterprise: A Guide for Leaders” (LAI, 2000), and is published as a three-volume set. This Guide presents a logical sequence of actions involved in transitioning an enterprise to a lean state. (The product may be downloaded from the LAI web site, <http://lean.mit.edu>.)

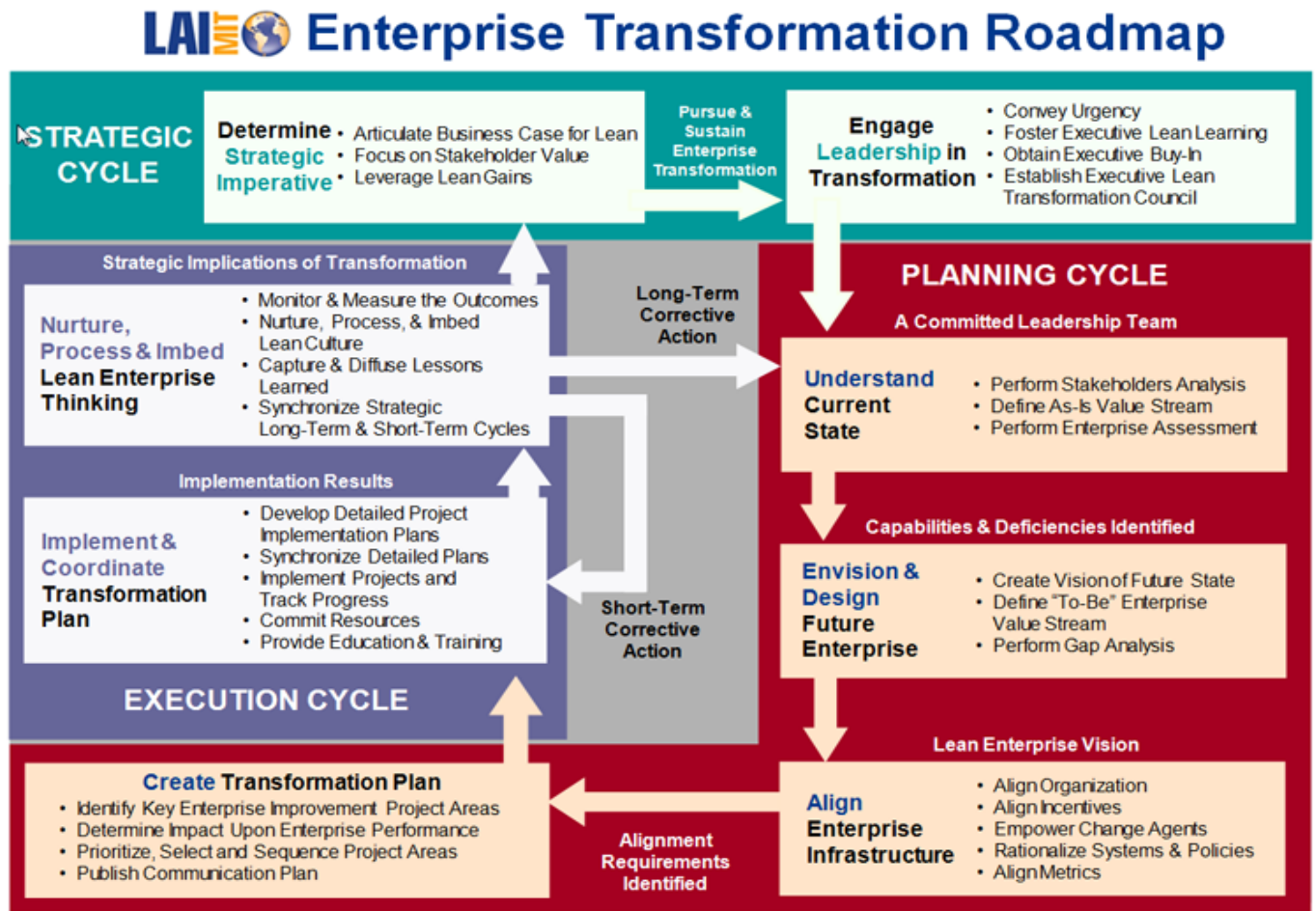


Figure 1. Enterprise Transformation Roadmap



Figure 1 presents a revised version of the overview Enterprise Transformation Roadmap. Prior to conducting any transformation it is imperative that the enterprise strategic goals and objectives are identified and leadership is engaged and committed to the transformation. The “Determine Strategic Imperative” - “Engage Leadership in Transformation” block outlines this process. The “Planning Cycle” highlighted within the red area presents critical activities associated with creating the current and future state enterprise analysis along with the creation of a prioritized transformation plan. The ESAT methodology is designed to support this step in the roadmap as part of a comprehensive transition-to-lean initiative. The output of ESAT is a transformation plan that forms the basis for the “Execution” phase of this roadmap.

### **Value Creation and Delivery**

Many organizations that have attempted to transform themselves to a lean enterprise have found Value Stream Mapping (VSM) to be a highly beneficial tool for developing current state and future state maps of their production and administrative systems (Rother and Shook, 1998). Current state VSMs expose sources of waste, thereby providing direction for increasing value to the customers of the products and services being produced.

While the traditional VSM approach is a “bottom-up” analysis of shop floor level activities associated with production operations, the ESAT approach developed here is intended as a “top-down” analysis of the total enterprise, of which production operations is only one of many elements. The comparison between traditional VSM and ESAT is characterized in **Error! Reference source not found.**Table 1.

Table 1. Product VSM and ESAT

Traditional Product VSM	Enterprise Strategic Analysis and Transformation
Focuses on delivering value to the customer	Focuses on delivering value to all stakeholders
Addresses product lifecycle processes	Addresses lifecycle, enabling, and leadership processes
Addresses one program or line of business	Addresses multiple programs or lines of business

Lean has traditional “connotations of taking away, particularly with respect to eliminating waste.” (Murman, et al., 2002) While reducing enterprise level waste is highly desirable, it is only part of the broader objective of creating and delivering greater value to all stakeholders.

“This means delivering what customers want and need; tangible returns on investments that shareholders rightly expect; and job satisfaction and lifetime learning that workers deserve. It means concrete sharing of the total benefits that suppliers need if they are to continue operating as full partners in good times and bad. It means delivering value to society that reflects its broader desires and outcomes.” (Murman, et al., 2002)

Every act of waste reduction should enhance value creation/delivery. “There should be a virtuous cycle whereby effective elimination of waste can increase the capability to identify and

deliver value, while value creation brings additional needed resources and motivation to tackle ever deeper forms of waste.” (Murman, et al., 2002)

## Defining “Enterprise”

An *enterprise* can be defined as “one or more organizations having related activities, unified operation, and a common business (business is used here generically to include any sector or combined sectors of the economy) purpose.” (*Black’s Law Dictionary*, 1999) This scalable term denotes varying scopes of organizational identity. In ESAT, the term enterprise may refer to a *program enterprise* (e.g., F-16, 777, or Delta IV) or to a *multi-program enterprise* (e.g., a line of business, business unit, division, or corporation). A line of business may be a collection of program enterprises, a business unit or division may be a collection of lines of business, and a corporation may consist of several divisions. Figure 2 illustrates this hierarchy of enterprise scopes. This concept can be extended to include government, healthcare, nonprofit, and other enterprises as well. A useful attribute of an enterprise is that the enterprise executive/leader has profit/loss accountability and program completion accountability for the particular products and services that are created and delivered to the customers of the enterprise.

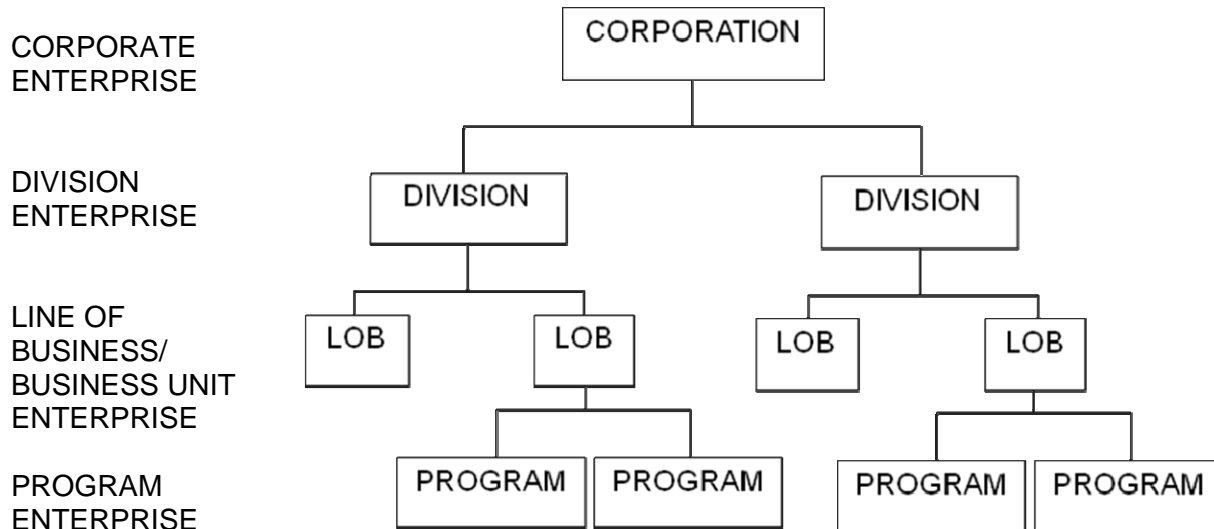


Figure 2. Hierarchy of Enterprise Scopes

## Lean Enterprise General Principles

The book *Lean Thinking* (Womack, 1996), proposed a generic framework for implementing lean in Western companies. This amounted to a restatement of the lean framework as practiced by Toyota, designed to be more compatible with Western practices and management approaches. Womack and Jones perceived that there are five general principles that underlie lean thinking:

- Specify value
- Identify the value stream
- Make value flow continuously
- Let customers pull value
- Pursue perfection

Efforts have been underway for over a decade within LAI to elevate lean thinking to the total enterprise level and to expand the consideration of customers to all enterprise stakeholders.

The general principles underlying lean thinking as expressed by Womack and Jones can be elevated to reflect total enterprise interests and expanded to include all stakeholders. The following *lean enterprise general principles* are analogous to Womack and Jones' general principles:

- Identify stakeholders and specify value
- Identify the enterprise value stream and the enterprise level processes
- Make value flow continuously across all enterprise processes
- Let stakeholders pull value and engage in value exchange
- Pursue perfection across the enterprise

They are described below, and summarized in comparison with the original *Lean Thinking* principles in Table 2.

### **Identify Stakeholders and Specify Value**

The important concept of *value as defined by the customer* has been written about extensively. Aggressive pursuit of this lean principle has resulted in dramatic changes in how many enterprises interact with their customers. While few would disagree that end customers are the most important consideration, the enterprise has several other stakeholders who also have needs or expectations, and who contribute to the enterprise. It is important to understand these needs and to consider how the enterprise can best deliver value to its several stakeholders.

It is also important to recognize that attempting to satisfy the needs of multiple stakeholders need not be a zero-sum game, i.e., what one stakeholder gains, other stakeholders lose in an equal amount. The goal for the enterprise should be to maximize value for the entire enterprise and all stakeholder groups.

### **Identify the Enterprise Value Stream and the Enterprise Level Processes**

A product value stream is defined as “the set of end-to-end and linked actions, processes and functions necessary to transform raw materials into a finished product delivered to the customer” (Womack, 1996). An enterprise value stream is defined at a higher level and is more general than a product value stream. It must encompass not only product life cycle processes, but also support and leadership/executive processes. It portrays the relationships of the enterprise to its external environment and the general ordering of the high-level internal enterprise processes. The enterprise value stream forms the basis of the business case for the enterprise.

A primary purpose of developing product value stream maps is to identify and eliminate sources of waste and identify opportunities for improving value creation, to increase value delivery to customers. Similarly, the enterprise value stream should be mapped and used in combination with other enterprise analysis tools to identify sources of waste and opportunities for value creation at the enterprise level. Enterprise level wastes may be less tangible and more difficult to identify than wastes in the product value stream. However, identification of improvements that benefit the entire enterprise will improve efficiency as well as the ability to deliver value to all stakeholders.

## **Make Value Flow Continuously Across All Enterprise Processes**

*Flow* is achieved in the product value stream: first, by discarding the batch-and-queue mentality prevalent in mass production and installing small-lot production, with single-unit batch size and zero inventory the ultimate goal; and second, by minimizing hand-offs, queues, work-in-progress, quality problems, rework, etc.

The batch-and-queue mentality also exists outside production operations. Administrative and managerial work often moves in batches through sequential operations that are organized along functional lines. Long cycle times for administrative/managerial processes are as detrimental and wasteful as those in production operations. The large number of hand-offs, approvals, etc., result in numerous errors, delays and rework. Many poor decisions are the result of outdated, inaccurate, or incomplete information. Impediments to smooth flow, throughout all enterprise processes, significantly degrade overall enterprise performance.

Information flow

When considering enterprise flow, value systems (stakeholder) are satisfied through efficient and effective processes satisfying the stakeholders value proposition(s). The enterprise flow is often dominated by strategic, high level, cross-functional activities decisions and interfaces involved in creating and delivering value to one or more enterprise stakeholders. Flows are knowledge and information rather than physical products. Process steps may overlap or involve planned iterations. Value added steps add or transform knowledge or reduce uncertainty.

## **Let Stakeholders Pull Value and Engage in Value Exchange**

A very important conceptual development in lean thinking is that of the customer *pulling* the product from the enterprise, rather than the enterprise pushing the product onto the customer. The concept of pull is readily cascaded upstream, from the customer into the organization and eventually to the supplier base. Each stage in the value stream is a customer to preceding stages. A production system operating in such a manner is organized according to the “just-in-time” principle.

At the enterprise level, involving multiple stakeholders, the concept of pull is more abstract, yet equally applicable and important. A prioritized list of values can be identified for each stakeholder. Several factors (which may conceivably change over time) contribute to overall value expected by each stakeholder. The performance of the enterprise relative to each of the stakeholders’ values can be assessed. Collectively, these assessments portray overall performance of the enterprise in responding to the pull of all stakeholders.

Additionally, each stakeholder is engaged in value exchange with the enterprise, and contributes to enterprise performance in exchange for receiving their defined value. Value exchange is an on-going, dynamic process. By modeling and tracking this process, the enterprise can maintain a stable balance among the value expectations of its several stakeholders.

## **Pursue Perfection Across the Enterprise**

An enterprise should expect to engage in a never-ending process of continual refinement and improvement in every aspect of its operation and management. Enterprise-level waste can be insidious and can never be considered forever eliminated. The pursuit of perfection is extremely challenging in any case and especially when considering an entire enterprise.

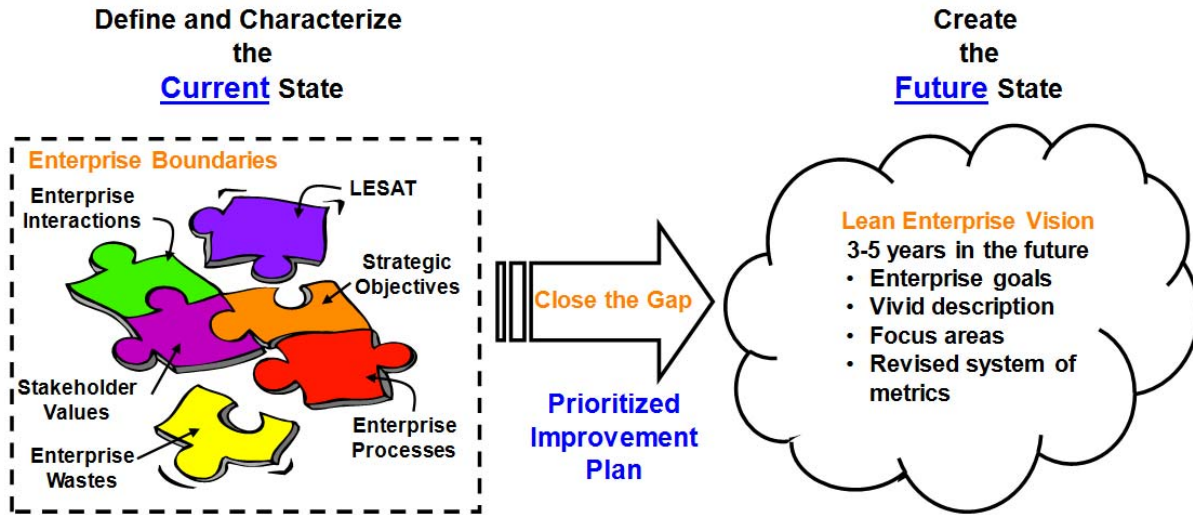
**Table 2. Lean Production and Lean Enterprise General Principles**

Lean Production General Principles*	Lean Enterprise General Principles
<p><b>Specify Value</b> Customer defines value in terms of specific products/services having specific capabilities for a defined price.</p>	<p><b>Identify Stakeholders and Specify Value for Each</b> Define value for each stakeholder in the enterprise. Strive for a win-win outcome, in which value creation and delivery is increased for all stakeholders.</p>
<p><b>Identify the Value Stream</b> A value stream is the set of all end-to-end and linked actions required to transform raw materials into a finished product delivered to the customer. Waste in the value stream is eliminated to the maximum extent possible.</p>	<p><b>Identify Enterprise Value Stream and Enterprise Level Processes</b> The enterprise value stream is the set of all end-to-end processes required to transform resources and materials into value delivered to enterprise customers and other stakeholders. Mapping the processes and showing their interactions makes sources of enterprise-level waste visible for elimination. It also identifies opportunities for value creation.</p>
<p><b>Make Value Flow</b> Discard large-lot production; strive for “one-piece flow”. Modify traditional functional organization; create and empower integrated product teams along the value stream.</p>	<p><b>Make Value Flow Continuously Across All Enterprise Processes</b> Identify and eliminate all impediments to smooth flow of executive/administrative actions, resource and material transactions and decisions, especially at process and organizational interfaces.</p>
<p><b>Let Customers Pull</b> The customer pulls products from the enterprise rather than the enterprise pushing products onto customers. This pulling action cascades backward through the value stream, stage by stage, all the way to the supply chain, thus creating a “just-in-time” production system.</p>	<p><b>Let Stakeholders Pull Value and Engage in Value Exchange</b> Each stakeholder pulls value from the enterprise value stream. Each stakeholder is engaged in an on-going value exchange with the enterprise. The enterprise strives to maintain a balance among the value expectations of its several stakeholders.</p>
<p><b>Pursue Perfection</b> A process is implemented to assure on-going reduction in cycle times, production times, errors/defects, costs and all other resource inputs.</p>	<p><b>Pursue Perfection Across the Enterprise</b> An on-going process is required to continuously search for opportunities to achieve ever-greater enterprise performance in value delivery to all stakeholders.</p>

\*Adapted from *Lean Thinking* (Womack, 1996)

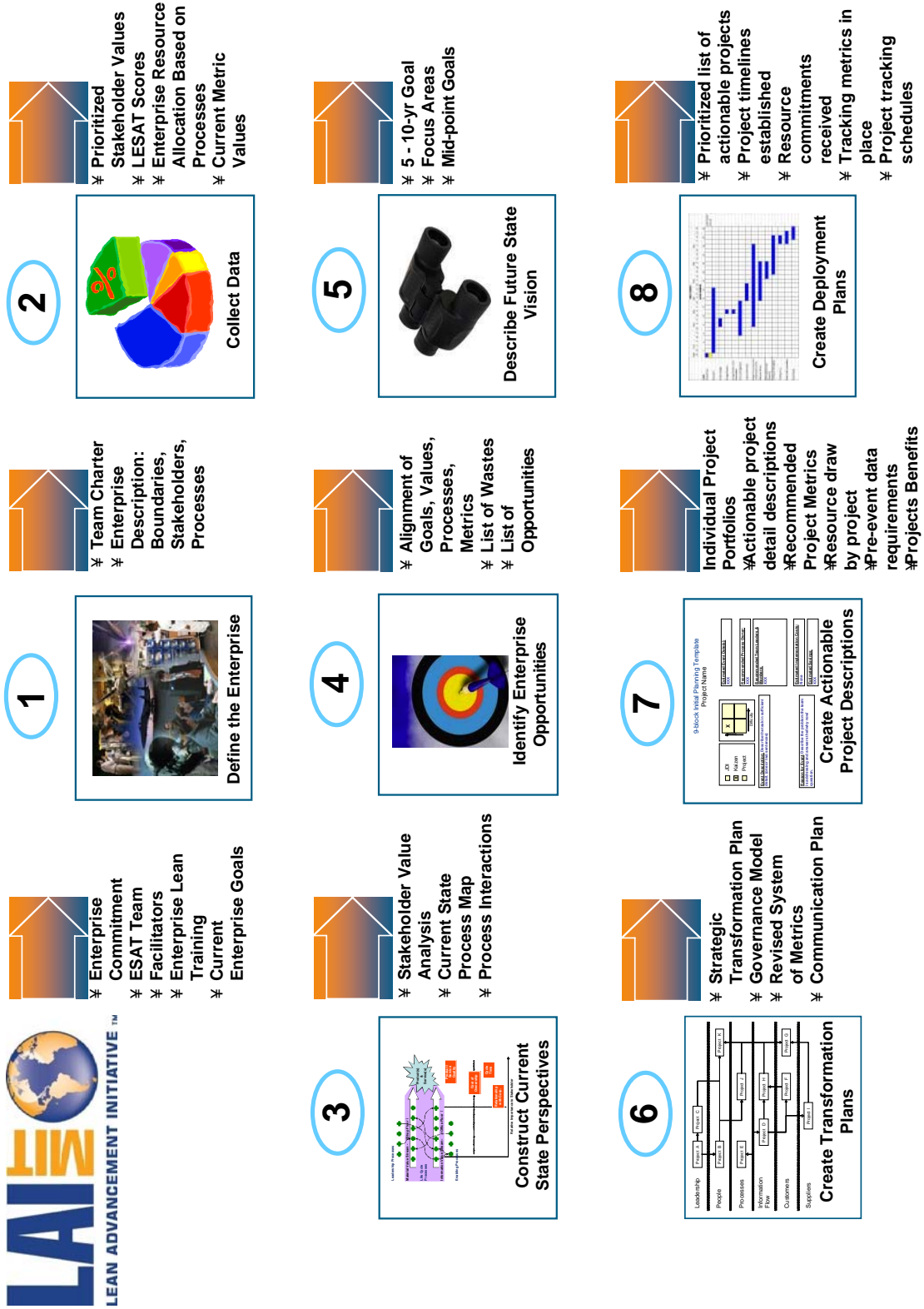
**ESAT Approach**

The ESAT methodology provides a mechanism to assist enterprise executives in their evaluation of how the entire enterprise creates and delivers value to its several stakeholders. A future state enterprise vision is developed which is designed to deliver maximum value to the several stakeholders in a more streamlined, waste-free manner. The methodology provides guidance in the development of a transformation plan for migrating the enterprise from its current state to the desired future state. The basic approach is illustrated in Figure 3.



**Figure 3. Enterprise Strategic Analysis and Transformation Approach**

A number of prerequisite actions should be taken to prepare the enterprise to execute ESAT. It is essential that the facilitator(s) fully understand the ESAT methodology and guide. It is also imperative that executive-level commitment be fully obtained, including a clear understanding of the resource investment required. ESAT is designed to be the data discovery and preliminary implementation phases of a total enterprise transformation and as such requires significant effort, time, and commitment. The ESAT deployment model is outlined in Appendix A – Flexible Deployment Model. The overall analysis should not be initiated until these important actions have been completed. The ESAT roadmap is shown in Figure 4. Each step is identified along with corresponding inputs and outputs.



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<http://lean.mit.edu>

Figure 4. ESAT Roadmap

## Using this Document

### **Organization**

This document contains a roadmap, checklist, and step-by-step description of the ESAT process. Each step contains relevant background material, some questions for thought, supporting material, and a short description of a template that may be useful in completing that step. The format is shown below.

#### **☐ Each step has a check box next to it**

A short description or any relevant background material is presented following the step it is related to.

- *Questions for thought are in italics*

Supporting material follows the appropriate question for thought.

Information on supporting templates that may be useful is placed inside a box. In general, these templates are used to electronically capture information that is generated in facilitated sessions. In some cases, the templates can be used to work through the ESAT process directly. A sample of each template is included in Appendix B – ESAT Templates.

### **Supporting Materials**

The following materials are available to help a team work through the ESAT process.

- Facilitator's Guide, rev 2.0, September 2008
- ESAT Knowledge Exchange Event materials (Instructional and facilitator modules Case Study and solution, Field Workbook, and various templates)
- Charter template
- Data collection templates (stakeholder values, processes, and metrics)
- Current state analysis templates (stakeholder value delivery, X-matrix, process interactions)
- Project planning/hand-off template



## ESAT Checklist

This checklist provides a summary of the ESAT process. This checklist provides an objective statement and shows the elements of each step. It will be useful to periodically refer to this checklist to determine where you are in the process, what you've already accomplished, and what's coming up next.

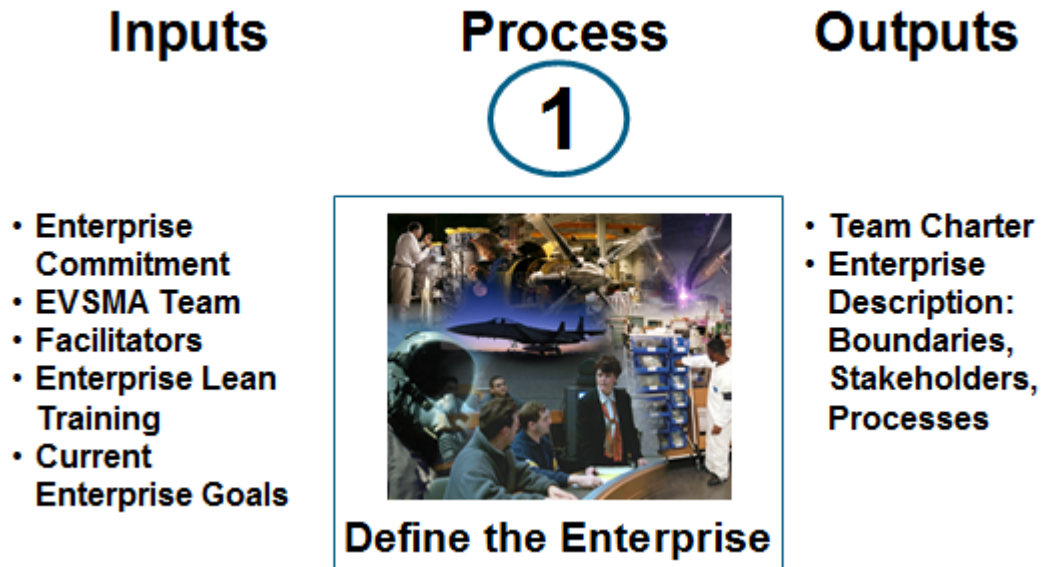
<b>Step 0: Leadership Engagement</b>	
Initiate and gain leadership engagement and commitment for the anticipated transformation. Leadership engagement is critical; without a clear understanding of the path ahead the ESAT expectations may not be achieved	<ul style="list-style-type: none"> <li>• Identify the most senior enterprise sponsor/champion for the transformation</li> <li>• Describe and gain concurrence for the transformation expectations and time-line from the enterprise leader and staff</li> <li>• Obtain unequivocal commitment from the enterprise leader for the time and resources necessary to conduct the enterprise transformation</li> <li>• Ensure the senior leadership is committed to a hands-on process, with no delegation of responsibility</li> </ul>
<b>Step 1: Define the Enterprise</b>	
Relate ESAT to the enterprise goals, provide motivation for the team, identify the scope of the analysis, and ensure the team is knowledgeable and prepared for the analysis in the following steps. Describe the enterprise and identify its stakeholders, processes, and high-level metrics.	<ul style="list-style-type: none"> <li>• Identify enterprise goals/strategic objectives and motivate change</li> <li>• Identify and empower ESAT participants</li> <li>• Create a team charter</li> <li>• Describe the enterprise</li> <li>• Identify key stakeholders</li> <li>• Identify major enterprise processes</li> <li>• Identify high-level metrics related to strategic objectives</li> <li>• Create a communication plan and initiate communication about the ESAT effort and its purpose (both internal and external)</li> <li>• Summarize insights and document progress</li> </ul>
<b>Step 2: Collect Data</b>	
Conduct external assessment of the enterprise by surveying stakeholders and collecting value proposition data. Conduct an internal assessment of the enterprise through the Lean Enterprise Self-Assessment Tool (LESAT). Collect process and enterprise performance data.	<ul style="list-style-type: none"> <li>• Identify enterprise costs</li> <li>• Define the value exchange between each stakeholder and the enterprise</li> <li>• Conduct LESAT</li> <li>• Collect enterprise process data</li> <li>• Collect enterprise performance data, based on the enterprise metrics</li> </ul>

<b>Step 3: Construct Current State Perspectives</b>	
Based on data collected, create the current state enterprise perspectives through analysis of stakeholder values, enterprise processes and their interactions, and high-level metrics within the enterprise.	<ul style="list-style-type: none"> <li>• Assess stakeholder value delivery</li> <li>• Analyze LESAT results</li> <li>• Review enterprise process data</li> <li>• Assess process interactions</li> <li>• Review current enterprise performance data, based on high-level metrics</li> <li>• Summarize insights and document progress</li> </ul>
<b>Step 4: Identify Enterprise Opportunities</b>	
Prepare for transition between defining the current state and creating the future state by assessing the alignment of processes, stakeholder values, strategic objectives, and metrics in the enterprise, identifying wastes at the enterprise level, and summarizing opportunities for improvement.	<ul style="list-style-type: none"> <li>• Assess the alignment of enterprise goals, metrics, processes, and stakeholder values</li> <li>• Identify enterprise-level wastes</li> <li>• Summarize opportunities for improvement</li> </ul>
<b>Step 5: Describe Future State Vision</b>	
Create a strategic enterprise goal with a 3-5 year time horizon. Create a strategic vision, based on achieving that goal, describing how the enterprise should look and behave three to five or more years in the future. The horizon selected for the ESAT is however dependent upon the product line of the enterprise and may be 10 years and beyond. Technology and competition may drive this.	<ul style="list-style-type: none"> <li>• Develop a Big Hairy Audacious Goal (BHAG) for the enterprise</li> <li>• Develop lean enterprise vision, including 3-5 year goal and future enterprise description</li> <li>• Develop future state metrics aligned with the Big Hairy Audacious Goal (BHAG)</li> <li>• Identify focus areas to move towards vision</li> <li>• Collect and analyze data on gaps between current state and future vision to make recommendations for prioritized improvements</li> </ul>
<b>Step 6: Create Transformation Plans</b>	
Prepare plans for closing the gaps that exist between the current and future states by prioritizing opportunities for improvement.	<ul style="list-style-type: none"> <li>• Develop a strategic transformation plan</li> <li>• Prepare hand-off package for subsequent improvement teams</li> <li>• Develop an on-going governance model</li> <li>• Update enterprise metrics</li> <li>• Provide input to a communication plan</li> </ul>

<b>Step 7: Create Actionable Projects</b>	
<p>Step 7 is the beginning of the actual work required to affect the transformation. It is also the point at which the ESAT team becomes the mentors and program managers for selected transformation project areas. This point in the process requires the formation of sub-teams for the implementation of the changes necessary to move the enterprise from its current state to the goal and vision of the future state.</p>	<ul style="list-style-type: none"> <li>• Develop individual actionable projects</li> <li>• Prepare project portfolios</li> <li>• Develop resource and project duration descriptions by project</li> <li>• Develop project metrics</li> <li>• Develop pre-event data collection matrix</li> <li>• Develop expected benefits matrix</li> <li>• Develop inputs to ongoing transformation communications plan</li> <li>• Develop <i>exit strategy</i> for each project proposed</li> </ul>
<b>Step 8: Create Deployment Plan</b>	
<p>Prepare the overarching deployment plan while taking into account the daily needs of the enterprise. Final timing and resource allocation needed for the projects is developed in this step along with the project metrics and schedule.</p>	<ul style="list-style-type: none"> <li>• Prioritize projects</li> <li>• Develop integrated timelines for prioritized project(s)</li> <li>• Establish time phased resource commitment</li> <li>• Finalize metrics for tracking projects to completion</li> <li>• Develop enterprise level governance for project mentoring and tracking</li> </ul>

## Step 1: Define the Enterprise

Relate ESAT to the enterprise goals, provide motivation for the team, identify the scope of the analysis, and ensure the team is knowledgeable and prepared for the analysis in the following steps. Describe the enterprise and identify its stakeholders, processes, and high-level metrics.



- 
- Identify enterprise goals/strategic objectives and motivate change
  - Identify and empower EVSMA participants
  - Create team charter
  - Describe enterprise
  - Identify key stakeholders
  - Identify major enterprise processes
  - Identify high-level metrics related to strategic objectives
  - Create communications plan and initiate communication about EVSMA effort and its purpose (internal/external)
  - Summarize insights and document progress

Figure 5. ESAT Step 1 IPO

### Identify Enterprise Goals/Strategic Objectives and Motivate Change

Performance improvements resulting from ESAT application are not merely one-time benefits. Resulting structural modifications to the enterprise are embedded within the enterprise's fundamental operating model, thereby contributing to achieving sustainable benefits. It is important to motivate the ESAT activity by conveying this to all participants.

- *What are the current strategic objectives or enterprise goals?*

With consideration to the external environment in which your enterprise operates, provide a summary of the strategic plan for your enterprise in terms of its mission, goals, and objectives. Identify the key strategic objectives (approximately 3-5), e.g., cost reduction, time to market, production lead-time, etc.

- *What is the strategic imperative to evaluate and improve the enterprise?*

Relate potential benefits of ESAT to a long-term strategic vision for the enterprise. The Enterprise Transformation Roadmap may be a useful reference for this.

- *Why are we doing this, and what's in it for me?*

Enterprise leadership must be directly involved in this activity. Everyone involved in ESAT should understand their contribution to the effort.

### **□ Identify and Empower ESAT Participants**

Experience with organizational improvement initiatives clearly shows that such initiatives must have the endorsement and active involvement of the top leadership of the enterprise. This is certainly the case for conducting ESAT. The enterprise leader and his/her direct reports must have a clear understanding of why this exercise is needed and what results may be expected from its successful completion.

- *Who is the champion/sponsor?*

While the enterprise leader should be designated as the champion/sponsor of the ESAT initiative, a high-level ESAT team will normally be designated to oversee the execution of the methodology.

- *Who is the ESAT team leader?*

A member of the enterprise leader's direct reports should be designated ESAT team leader. This individual is typically the most senior person on the team; where more than one organization is involved, co-leads may be appointed. In some cases, this person may also be the champion/sponsor.

- *Who are the ESAT facilitators?*

The ESAT exercise should be facilitated by at least two people who have received extensive education and training in the ESAT methodology, and are fully conversant with the lean paradigm at both the operations and enterprise levels. One facilitator will take a lead role in coordinating the activity with the team leader and champion/sponsor. Facilitators are not team members. Knowledge workers should also be designated to collect the data set generated during the workshops.

- *Who are the ESAT team members?*

The ESAT team itself should be composed of appropriate process owners and functional managers. In some cases, this may mean the direct reports of the champion/sponsor. The team should have approximately 10-12 members.

- *Is the entire team trained and prepared to execute ESAT?*

The team should have at least a general awareness of lean as well as an enterprise perspective. In addition to being familiar with basic lean principles and terminology, they should have a clear understanding of the roles and responsibilities involved with ESAT. Transformation of an enterprise is not a short-term project and in fact should take approximately one year to gain traction. As such, the ESAT team members should be selected with the long-term nature of the methodology considered. To ensure a continuum for the transformation, the ESAT team should be prepared to not only complete the ESAT methodology but also to become program managers for each of the focus area sub-project sets throughout the first year of the effort with reevaluation at the one year anniversary.

- *Has there been a kick-off session?*

Kick-off sessions are useful to pull team together and provide a charge, direction, and expected outcomes/outputs for ESAT.

#### **❑ Create a Team Charter**

A team charter is a useful document to ensure that all team members clearly understand why ESAT is being conducted (the “Case for Action”), who will participate, how frequently the team will meet, what the objectives of the analysis are, and what the mission of the team is. The charter is also a good communication tool.

- *Has the charter been shared with the champion?*

Getting initial buy-off of the direction for the ESAT team from the champion is an important step. The charter should also be signed by the champion and everyone directly connected to the ESAT. This document can then serve as the ESAT “contract for change”.

The charter template is provided as a PowerPoint file. It is a single page. It helps if all of the team is “on the same page” and this charter is literally that page. The entire team needs to understand and buy into the information on the charter. The boxes on the left side of the page represent what the ESAT effort is, why it is being done, and what the scope of the analysis is. The boxes on the right side of the page are a bit more administrative, listing kick-off and meeting dates, team members, the ESAT sponsor, facilitators, and the expected results, so the team knows when they are done with the ESAT effort. All templates are found in Appendix B – ESAT Templates

## ESAT Team Charter Template

<p><b>Description/Mission:</b> One or two sentences that describe the team's task.</p>	<p><b>Kick-Off:</b> Date of event  <b>Workshop #1:</b>  <b>Workshop #2:</b>  <b>Workshop #3:</b></p>
<p><b>Case For Action:</b> One or two sentences that describe the problem the team is addressing and answers the "Why ESAT, why now?" question.</p>	<p><b>Team Leader(s):</b>  <b>Team Members:</b></p>
<p><b>Enterprise Description:</b> Statement describing the enterprise including:                  -Enterprise boundaries (What is considered internal and external to the enterprise?)                  -Products/services delivered by the enterprise                  -Market segments targeted and current market position                  -Major competitors                  -Enterprise sales volume and workforce make-up and size                  -Enterprise cost breakout (e.g. pie chart of major costs)</p>	<p><b>Champion:</b> Sponsor; usually enterprise leader</p> <p><b>Facilitators:</b></p> <p><b>Expected Outcomes:</b> The outcomes that the sponsor desires from the project. Usually two to three measurable objectives are included.</p>

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### ❑ Describe the Enterprise

It is essential to clearly define the target enterprise to which a particular ESAT exercise is addressed. The target enterprise is context-specific. It may be a particular program, a group of programs that constitute a line of business (LOB), a group of LOBs that constitute a division, or a set of divisions that constitute a corporation. To conduct a meaningful ESAT exercise, the boundaries of the target enterprise should be such that the enterprise leader has profit/loss accountability and program completion accountability for the particular products and services that are produced and delivered to the customers of the enterprise. This accountability requirement can be met at any of the enterprise entities (program, LOB, division, corporation) mentioned above. In addition to enterprise boundaries, important enterprise attributes (product lines, sales volumes, workforce size, etc.) should be described.

- *What are the enterprise boundaries?*

Your description should provide the context for what the team considers internal and external to the enterprise.

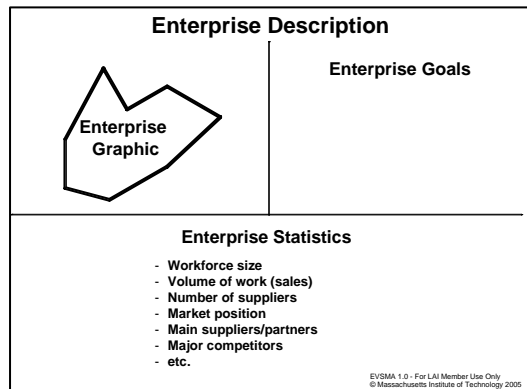
- *What are other pertinent enterprise attributes?*

Your description should include product/service lines, market segments targeted, major competitors, market position, sales volume (for this particular enterprise) and workforce make-up and size.

- *What is the major cost breakout for the enterprise?*

What are the major sources of cost in the enterprise, e.g., direct labor, facilities, overhead, etc.? How are enterprise costs distributed between these categories? It is also helpful to consider how enterprise costs are allocated between various product lines, if appropriate. Creating pie charts of enterprise cost breakouts is a helpful way to visualize this information.

The enterprise description template is a PowerPoint file. It is a single page, divided into three sections, a graphic representation of the enterprise, a list of current enterprise statistics/attributes, and enterprise goals. This page can be used as a communication tool and should help scope the ESAT effort by clearly identifying the boundaries of analysis. It is important to ensure that all of the information described in this template is collected and summarized. A graphic may have to be created, and while it does not have to be fancy, it should represent the enterprise. Remember, a picture is worth a thousand words.



### ***Characterizing an Enterprise***

Figure 6 illustrates the notional relationship between metrics, processes, stakeholders, and strategy in an enterprise. Stakeholder demand and influence drive the strategic objectives of the enterprise. The enterprise creates a strategy to identify how best to capitalize on the demand, deriving additional profit and influence. The enterprise uses metrics to track its utilization of resources and capabilities to deliver value to the stakeholders through the processes it follows. At the same time, stakeholders contribute resources to the enterprise in return for the value delivered. It is important to keep in mind that the needs and desires of the customer stakeholders create the demand and market for what the enterprise delivers. Each of the stakeholders also has some degree of influence over the enterprise. These fundamental relationships form the premise of much of the ESAT methodology.



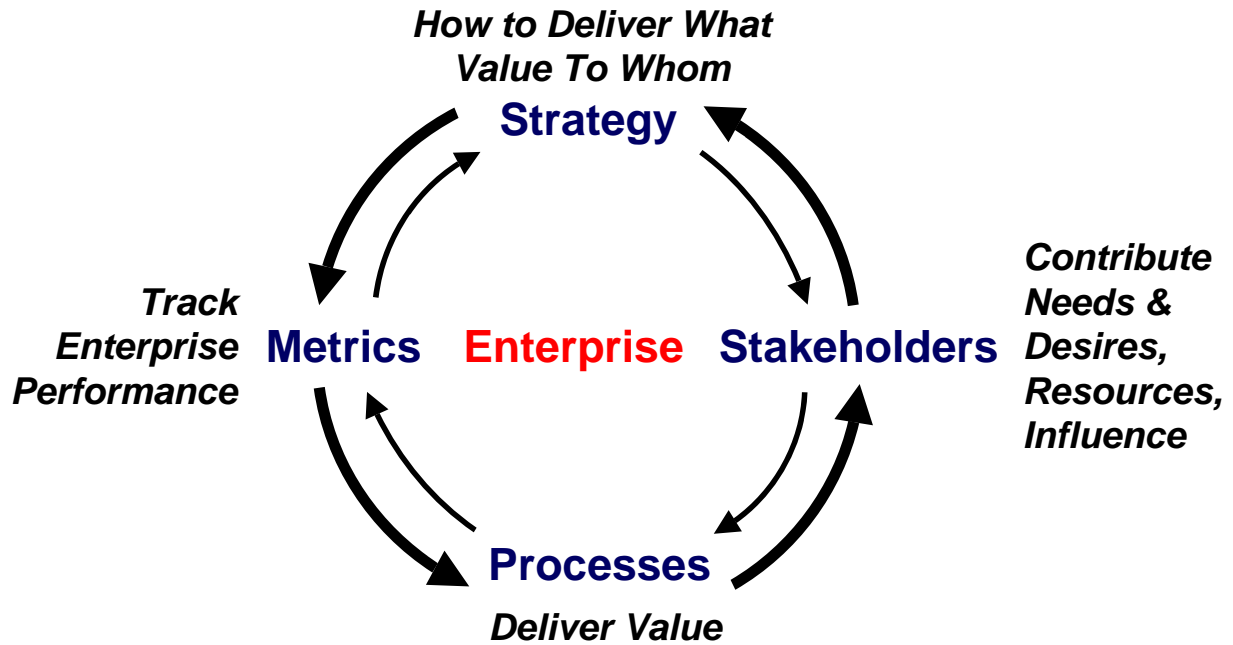


Figure 6. Conceptual Relationships in an Enterprise

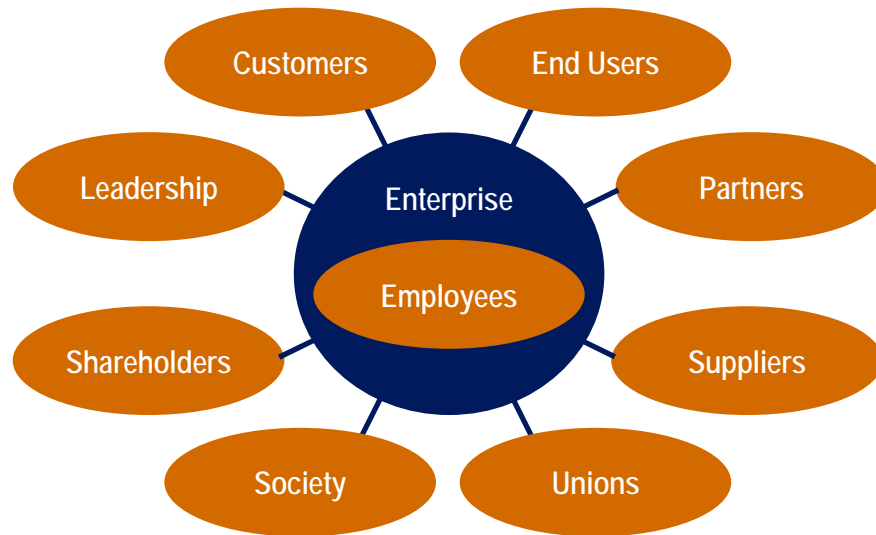
**Stakeholders**

The ESAT methodology is designed to identify means of increasing the value delivered to the various stakeholders of an enterprise. While recognizing that the fundamental purpose of any organization is to deliver value to its customers, the ESAT methodology explicitly addresses other stakeholders of the enterprise, i.e. employees, suppliers, union, shareholders, and society. In general *stakeholders* are defined as “any group or individual who can affect or is affected by the achievements of the organization’s objective.” (Freeman, 1984)

Enterprise actions, policies, or decisions intended to enhance value delivery to one stakeholder may inadvertently diminish value delivery to one or more of the other stakeholders. The ESAT methodology includes a means of assessing the enterprise’s performance in delivering value to each stakeholder and of identifying possible adverse impacts of major enterprise actions and decisions.

Most published literature pertaining to lean manufacturing, or more broadly to lean thinking, places great emphasis on customer value (Womack, 1996). Focusing on delivering value to customers is very important in the lean paradigm. However, other stakeholders are also important to enterprises. In lean enterprises, managers must continuously strive to strike a balance between the competing priorities of all their stakeholders. In *The Value Enterprise* (Donovan, Tully and Wortman, 1998), the authors propose an “Enterprise Value Scoreboard” that attempts to guide an organization to decisions which achieve an optimal balance among three stakeholders: customers, shareholders, and employees. The purpose of this approach is to balance tradeoffs enterprise-wide, such that cross-organizational impacts are considered.

In ESAT, potential stakeholder groups include the following:



**Figure 7. Stakeholders in Multi-Program Enterprises**

**□ Identify Key Stakeholders**

For the groups of stakeholders shown above, a short definition is provided to help you think about whom the stakeholders are in your enterprise.

*Customers* specify requirements and pay money in return for products and services delivered.

*End Users* specify requirements based on actual use or consumption of products and services delivered. They may or may not be the customers. For example, with a private automobile or a toaster, the customer is also likely to be the end user. For an airplane, the owner or airline (i.e., customer) may not be the pilot or passengers (end users).

*Suppliers* deliver products and services based on requirements specified by the enterprise in exchange for money.

*Partners* are suppliers with whom the enterprise has a closer relationship, often involving risk and reward sharing, long-term interaction, and co-dependency.

*Employees* include all people who work for the enterprise, either directly or on site as a contract employee. This includes employees represented by unions.

*Unions* are groups who represent individual interests in employment situations.

*Leadership* external to the enterprise provides strategic direction and allocates resources to be used by the enterprise. In some cases, leadership may include a larger organizational unit (e.g., corporation).

*Society* includes the local communities where the enterprise exists and does business in. They often have government representatives working at various levels.

*Shareholders* provide financial support for an enterprise with the expectation of a return on investment.

- *Who are the customers/end users of enterprise products or services?*

Customers/end users are the principal stakeholders of an enterprise; the enterprise exists first and foremost to provide customer satisfaction, meeting their needs and desires. It is important to always keep a customer focus as part of any improvement effort.

- *Who are the other stakeholders of the enterprise?*

Customer satisfaction alone is insufficient to guarantee long-term success of the enterprise, as any one or more of the other stakeholders also influence the enterprise's success or failure. Customer focus must be balanced by identifying all stakeholders, internal and external, who provide unique contributions and have unique values. (See Figure 7 for suggested groups of stakeholders.)

### ***Enterprise Processes***

The term *process*, much like the term *system*, is contextual in nature. It is used to denote a series of actions, events, etc., at several possible levels of detail. To provide a clearer meaning of the term, the following definitions are offered:

*Work Processes* are a set of specific actions/operations involved in accomplishing a defined scope of work by a defined set of employees (e.g., "assemble sub-assembly A from 2 units of Part X1 and 3 units of Part Y14").

*Business Processes* are a sequence of events, decisions or activities involved in processing a transaction (e.g., "receipt of customer order").

*Enterprise Processes* are a set of strategic, high-level, cross-functional activities, decisions, and interfaces involved in creating and delivering value to one or more enterprise stakeholder (e.g. "design product").

ESAT deals primarily with enterprise processes. When one constructs enterprise processes there are characteristics that are common:

- Interdependencies are normal – Process steps depend on each other for completion
- Complex products with high performance requirements often can't avoid coupled functions and forms
- Information flows instead of material
- Uncertainties are inevitable – process(es) are not fully documented
- Interfaces and disconnects often dominate enterprise processes

The ESAT process mapping (the enterprise VSM and its interfaces) which comprises approximately 25% of the ESAT effort is designed to take these characteristics into account when developing the enterprise current and future states

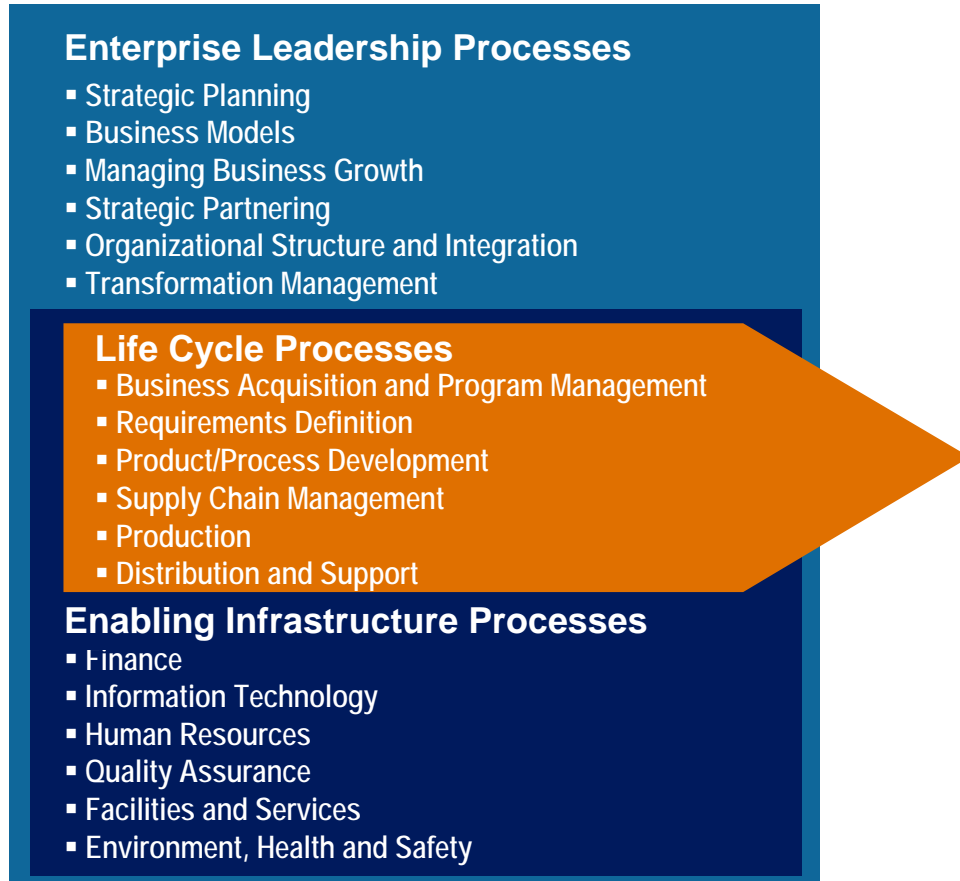
## Lean Enterprise Architecture

A useful way to consider enterprise processes is by using a process architecture (LAI, 2001). The lean enterprise process architecture is shown in Figure 8. The architecture is organized into three basic groups, each consisting of a number of enterprise level processes. All of these processes must be transformed to achieve a lean enterprise. These three groups will become the reference point for any subsequent discussion of process.

*Enterprise Leadership Processes* are developed and maintained by leadership to guide the activities of the enterprise. They cut across all entities that make up the enterprise. Enterprise leadership provides the direction and resources to break down barriers among and within *life cycle processes* that result in wasted resources and reduced value to customers and stakeholders. They align and coordinate the work at various enterprise programs, and also provide the leadership to transform the *enabling processes* to eliminate waste and improve responsiveness to the rest of the enterprise.

*Life Cycle Processes* define the product/service life cycle, from initial conception through operational support and ultimate disposal. They directly determine the value provided to customers and other stakeholders alike. The degree to which an enterprise is successful in making these processes lean is a primary measure of its effectiveness and efficiency in delivering value to the customer and the other stakeholders.

*Enabling Infrastructure Processes* support the execution of *enterprise leadership* and *life cycle processes*. The enabling processes provide supporting services to other organizational units whom they serve as internal customers. Since they enable rather than directly result in enterprise success, they can be easily overlooked as sources of waste within the value stream. However, waste inherent in these processes can negatively impact the enterprise as a whole and seriously impede value creation and delivery to all stakeholders.



**Figure 8. General Lean Enterprise Process Architecture**

### □ Identify Major Enterprise Processes

The ESAT methodology is adaptable to varying designations of enterprise processes. The term process in the present context refers to a sequence of major enterprise-level actions. Collectively, these processes define how the enterprise does business. Most enterprises have a small number of major enterprise processes. Each enterprise process may be decomposed into ever-more detailed sub-processes that ultimately reflect every activity or transaction that occurs at the workplace. However, ESAT does not involve decomposing the enterprise processes to extremely detailed levels.

- *What are the products/services our enterprise delivers?*

If possible, think of logical groupings of these products and services that may relate to the value streams that deliver them. How many value streams are in the enterprise?

- *What are the processes in our enterprise?*

Identify the processes start to finish that are part of each value stream. Think about how these value streams are similar to or different from each other. Develop a high-level map of the product/service life cycle process from concept generation to final product delivery and support (example: customer requirement definition leads to concept generation, which leads to product

development, which leads to manufacturing, which leads to delivery and support). This map should be general enough to capture all value streams in the enterprise, but specific enough to be a relevant depiction of how the enterprise operates. Develop the product/service lifecycle map as the enterprise currently operates, not as you perceive that it should operate. Overlay key enabling infrastructure processes (finance, human resources, etc.) and leadership processes. There should be approximately 10 or fewer of each set of processes (life cycle, enabling, and leadership).

### **□ Identify High-Level Metrics Related to Strategic Objectives**

There should be a few (no more than a dozen) metrics that are reported on a frequent basis and are used to help manage the enterprise. This should not be a collection of every metric tracked in the enterprise, but rather the few key metrics that measure enterprise performance towards the strategic objectives. The metrics may measure efficiency or effectiveness (or both) of enterprise processes, they may also track stakeholder values like customer satisfaction or employee involvement. These top-level metrics may represent a “roll-up” of several lower-level metrics in the enterprise. Upon creation of the goals and vision for the future state, the team may develop a revised set of metrics that track the enterprise to the new enterprise goal(s) and vision(s).

- *What metric is used to measure each strategic objective?*

Identify the metrics currently used at the enterprise level. Also identify the target values for each metric, and the trend of performance.

### **□ Create a Communication Plan and Initiate Communication About the ESAT Effort and its Purpose**

Early in the ESAT process it is important to communicate with the entire enterprise about the analysis process, the team conducting it, and the anticipated outcomes of the analysis. The timing and methods of communicating, the reasons for the ESAT; what it is, what it is not and its expectations must be discussed at the outset with senior leadership long before the ESAT is begun. It may be helpful to have a communication specialist observing the ESAT process who can relate the activity to various audiences. The communications plan is critical to the success of the effort. By having the enterprise public affairs individual embedded in the entire transformation effort, from start to finish, the team is relieved from the constant input to the enterprise updates. The public affairs individual will have the knowledge to write up to date, meaningful reports that should require only minor adjustments by the team and team leader. Put yourself in the place of the employees; all they know at this time is that there is a major effort underway with all the senior leadership sequestered for days at a time doing something called ESAT. They may wonder if they will have a job, they may have heard of company X who lay off 1/3 of their workforce after doing something called lean (may be only a rumor). For the transformation to be successful the support of the entire workforce is needed, they must trust what is happening and be able to relate directly to the goal of the effort. For example, for the government, it may be “mission effectiveness”, or direct support to the “warfighter”, in the civilian world it may be to “grow the business” or “delight our customers”. As the ESAT progresses, all VPs and department managers must be encouraged to brief the progress and walk the wall with their department membership. One successful effort required the union president to brief out the stewards in the event room on a continuing basis. Each deployment is different with varying cultures, but...communicating the reason for the transformation and its progress and results is critical. Employee feedback from these sessions should be filtered back into the ESAT team as it is generated.

- *Who owns the communication plan for ESAT?* Experience has shown that the ESAT team leader should manage the communication plan, however enterprise communications are best delivered by the enterprise leader.

**☐ Summarize Insights and Document Progress**

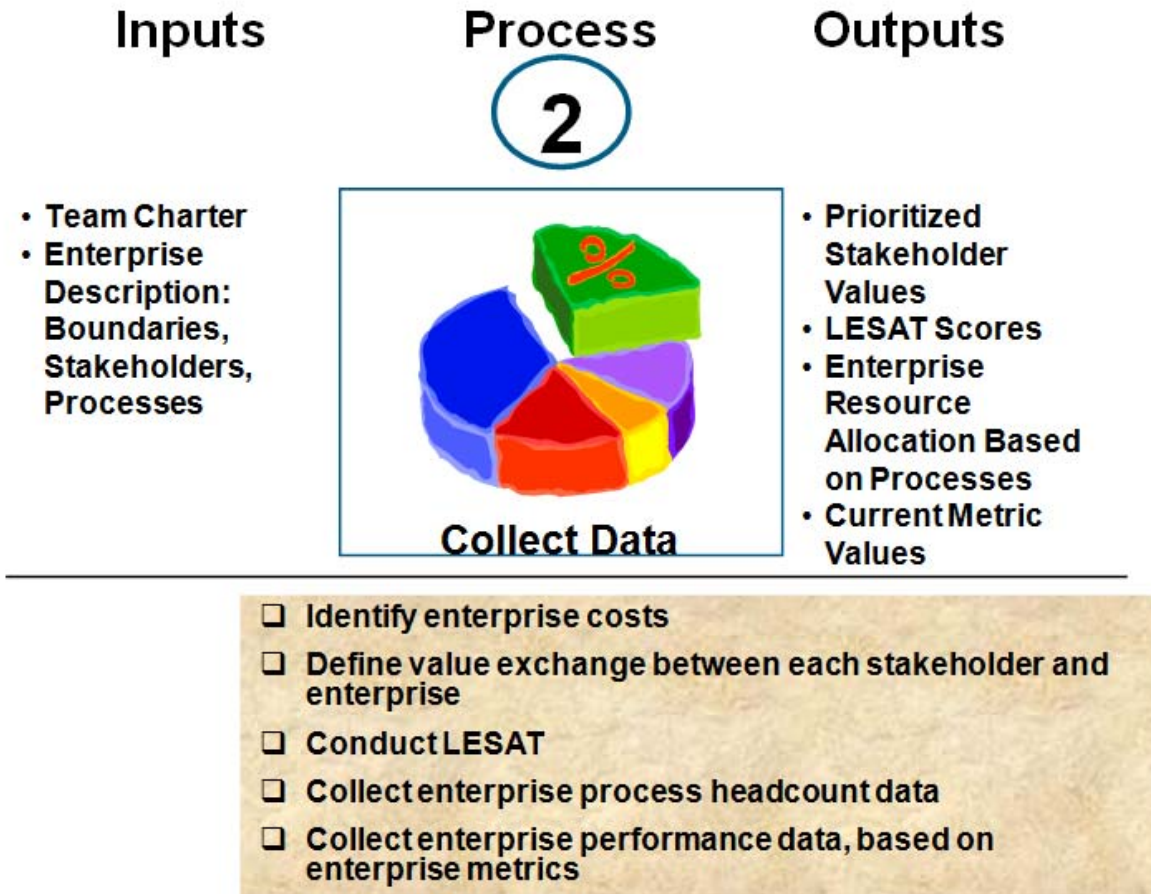
To capture this step appropriately, it is important to create a list of insights, “ah-has”, issues, and opportunities identified.

- *What have we learned from this step?*

To make this information useful and relevant for future steps, it is helpful to capture this information in a complete sentence. Capturing the data in prose format preserves the context of the data that will be needed at project turnover to sub-teams. The more specific the recording of the progress made during this step, the more useful the information will be.

## Step 2: Collect Data

Conduct external assessment of the enterprise by surveying stakeholders and collecting value proposition data. Conduct an internal assessment of the enterprise through the Lean Enterprise Self-Assessment Tool (LESAT). Collect process and enterprise performance data.



**Figure 9. ESAT Step 2 IPO**

In this section, the type of data that should be collected is outlined. This is the bridge between identifying various aspects of the enterprise (stakeholders, processes, strategies, and metrics) and analyzing data about each to gain an understanding of the current state of the enterprise. It is important that all data initially identified be collected before the next step begins, initial estimates should be collected, at the least. The initial data and any future data can be refined as necessary during the analysis. For each step, there is a template that can be used which helps specify the type of data required.

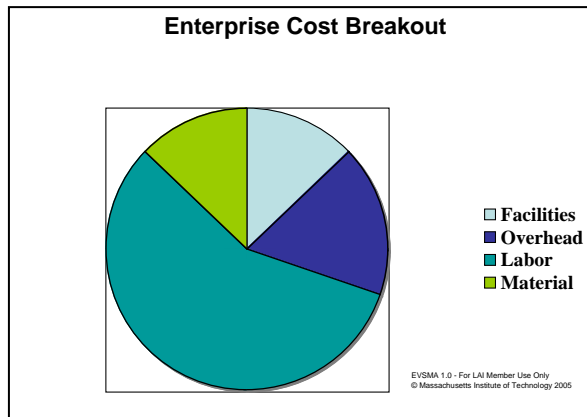


## ❑ Identify the Enterprise Costs

- *What is the major cost breakout for the enterprise?*

What are the major sources of cost in the enterprise, e.g. direct labor, facilities, overhead, etc.? How are enterprise costs distributed between these categories? It is also helpful to consider how enterprise costs are allocated between various product lines, if appropriate. Creating pie charts of enterprise cost breakouts is the most helpful way to visualize this information.

The enterprise costs template is a PowerPoint file. On a single page, you should be able to represent the enterprise cost breakout as a pie chart, providing a quick glance visualization of where enterprise resources are allocated. A simple Excel file is embedded in the template to generate the pie chart quickly.



## ❑ Define the Value Exchange Between Each Stakeholder and the Enterprise

Each stakeholder has a different view of the enterprise and many times different expectations from the enterprise, which may or may not be aligned. The enterprise has multiple stakeholders and each expects to receive “value” (i.e., worth, utility, reward, or other benefit) in exchange for their contributions to the enterprise. For example, shareholders provide capital and expect a positive return on their investment, employees contribute effort and knowledge in return for fair compensation and other benefits, suppliers provide materials and components and expect accurate requirements definition and timely payments, and society provides infrastructure in return for jobs, taxes, and “good citizenship” by the enterprise.

- *What do the customers/end users of your enterprise value?*

Thinking in terms of their needs and requirements may be helpful. Customer and end user needs and requirements may be specified in terms of product or service characteristics, delivery lead times, price, quality, etc.

- What constitutes value for each stakeholder?

Specify value for each of the other stakeholders of the enterprise, i.e., suppliers/partners, employees, shareholders, society, labor unions, and leadership. What does each stakeholder expect to receive from the enterprise?

The stakeholder value data collection template is a Word document. It can be used to help facilitate a conversation with representatives of the various stakeholder groups. Talking to these representatives directly is the best way to understand what they value. The information collected in this template will be used in the analysis, and some of it can be transferred to the value exchange templates. The stakeholder value exchange templates are presented in a PowerPoint file. There is one page for each stakeholder group, as identified in Figure 7. The specific names of various stakeholders identified in step 2 should be transferred into these templates. The left column is for value expected from the enterprise. This is information you should collect from the stakeholders. The center column is for the names of the various stakeholders, and the right column is for value contributed to the enterprise. A list to get you started is there for the value contributed.

Stakeholder Value Data Collection Template

The best way to understand what stakeholders' value is to contact representatives of the stakeholder group and ask them directly. Alternatively, you can brainstorm potential stakeholder values and then check them with actual stakeholders. Having a personal conversation with the stakeholder representatives is the most effective way to collect this data. Electronic correspondence will work as an alternative.

Stakeholder Group: \_\_\_\_\_

Stakeholder Name: \_\_\_\_\_

Ask the stakeholder what they value. What do they expect to get from their involvement with your enterprise? What are the things that would make your enterprise highly thought of by them?	On a scale of 1 to 5 how important is this value to the stakeholder?	On a scale of 1 to 5 how well is the enterprise delivering this value?

Customer Value Exchange

Value Expected from the Enterprise	Stakeholders	Value Contributed to the Enterprise
¥ List the data collected about value expected here	<p style="text-align: center; font-weight: bold;">Customers</p> ¥ List the enterprise customers here	<p style="text-align: center;">This list is a starting place, tailor it as appropriate.</p> ¥ Needs and requirements ¥ Money (for products/services)

**☐ Conduct LESAT**

LESAT is a tool for executive self-assessment of the present state of “leanness” of an enterprise and its readiness to change. The Lean Enterprise Self Assessment Tool (LESAT) “facilitates self-assessment of an organization at the enterprise level and is intended to highlight key integrative practices at the uppermost levels of an enterprise.” (LESAT, 2001) The format of this tool is based on a five-level maturity model. LESAT contains three sections aligning with the general enterprise process architecture (refer to Figure 8). Each section is divided into a number of practices (54 in all). For each practice, there are diagnostic questions and lean indicators that provide additional description of the practice for the assessors. Also for each practice, the assessment is done by indicating which of the five maturity levels most closely describes the current enterprise. The five levels are specifically described relative to each practice, but they are anchored on the basic description of each level shown as follows:..

*Level 1:* Some awareness; sporadic improvement activities may be underway in a few areas

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

- Level 3:** A systematic approach/methodology deployed in varying stages across most areas; facilitated with metrics; good sustainment
- Level 4:** On-going refinement and continuous improvement across the enterprise; improvement gains are sustained
- Level 5:** Exceptional, well-defined, innovative approach is fully deployed across the extended enterprise (across internal and external value streams); recognized as a best practice

LESAT should be completed by the entire enterprise leadership (not just the ESAT team). It requires about an hour and a half to conduct the assessment, followed by time to tabulate and analyze the data.

- *Has a LESAT assessment been completed recently?*

Conduct an organizational assessment of lean progress and “readiness to change” using the LESAT. Refer to *LESAT User’s Guide* for additional information.

The LESAT maturity model can be found on the LAI web site <http://lean.mit.edu>. It is downloadable in an Adobe Acrobat (i.e., .pdf) file. This document can be used for each individual to score their assessment. The data should then be transferred to the LESAT calculator (Excel spreadsheet). This calculator spreadsheet provides the summary graphs and statistics that will be used in analysis of the data. The first worksheet of the calculator spreadsheet is the data entry sheet. The remaining worksheets are set to update themselves with the appropriate data. The worksheet is capable of supporting up to 30 individuals at a time.

LP#	LEAN PRACTICES	CAPABILITY LEVELS			SECTION 1 - LEAN TRANSFORMATION/LEADERSHIP																																																																																																																																																																																			
		Level 1	Level 2	Level 3	RESPONDENT																																																																																																																																																																																			
	<b>Integration of Lean in Strategic Planning Process</b> <i>Lean impacts growth, profitability and market penetration</i>	Concepts and benefits of lean principles and practices are not evident in culture or business plans.	Lean is recognized, but relegated to lower levels of the enterprise and application is fragmented.	The growth implications of lean are understood and lean implementation plans are formulated, but not integrated into the strategic plan.																																																																																																																																																																																				
	Lean Indicators (Examples)	* Lean implementation is included explicitly in the enterprise strategic plan. * Strategic planning makes allowance for anticipated gains from lean improvements.																																																																																																																																																																																						
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<small>© Copyright 2008 Massachusetts Institute of Technology and University of Warwick, 2001. Copyright permission granted only for the right to use on documents submitted. All other rights are reserved. (Supported jointly by the U.K. Lean Aerospace Initiative and the U.S. Lean Aerospace Initiative) Page 37 of 166</small>																																																																																																																																																																																								
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**❑ Collect Enterprise Process Data**

Organizations differ greatly in the degree to which they document and measure their enterprise processes. Some enterprises may have metrics to track actual resources consumed and value delivered for each of their processes, or they may not have any actual data on their processes. Therefore, the time and effort required to collect this data will vary accordingly. If no headcount data is available by process, the ESAT team should create and verify initial rough estimates. Remember, these data should represent the headcount by process, not according to organizational grouping.

- *What is the headcount associated with each enterprise process?*

Headcount should capture actual equivalent positions currently required to do the process. Administrative and support personnel can be spread over the processes they support. The total headcount for all processes should be roughly equivalent to the total headcount for the enterprise.

It is up to the team and the facilitators to decide if additional process data would be useful. For some organizations, additional data about the enterprises processes will be available and should be collected for this analysis. Cost and cycle time data are both useful measures of enterprise processes. This data will establish a baseline for the current enterprise from which improvements can be measured.

- *What is the cycle time associated with each enterprise process?*

Each enterprise process has inputs and outputs. A definition of the inputs and outputs for each process may help identify how to measure cycle time. Cycle time is the total time for the process, from when the first input arrives until the last output is delivered. It includes all value and non-value added time within the process. It does not include queue time between processes.

- *What is the cost associated with each enterprise process?*

Cost data should take into account both operating expenses (labor and non-labor expenses) and money used to procure products and services. Consider what actual data is available and what data should be estimated.

The process data collection template is an Excel spreadsheet. It contains many blank cells for data entry. To begin, the value stream names and process names should be entered into the appropriate spaces. If there are not enough, or there are too many spaces in the template, more can be inserted or extras can be deleted to clean up the spreadsheet. The headcount data can then be entered into the data sheet. The (sub)total columns and rows are set to calculate and update automatically.

	A	B	C	D	E	F
1	<b>DATA ENTRY FORM</b>					
2			Process Name	Process Name	Process Name	Process N
3	Value Stream 1	Total Cost				
4		Headcount				
5		Cycle Time				
6	Value Stream 2	Total Cost				
7		Personnel Assigned				
8		Cycle Time				
9	Value Stream 3	Total Cost				
10		Personnel Assigned				
11		Cycle Time				
12	Value Stream 4	Total Cost				
13		Personnel Assigned				
14		Cycle Time				
15	Value Stream 5	Total Cost				
16		Personnel Assigned				
17		Cycle Time				
18	Value Stream 6	Total Cost				
19		Personnel Assigned				
20		Cycle Time				
21	Value Stream 7	Total Cost				
22		Personnel Assigned				
23		Cycle Time				



### Step 3. Construct Current State Perspectives

Based on data collected, create the current state enterprise perspectives through analysis of stakeholder values, enterprise processes and their interactions, and high-level metrics within the enterprise.

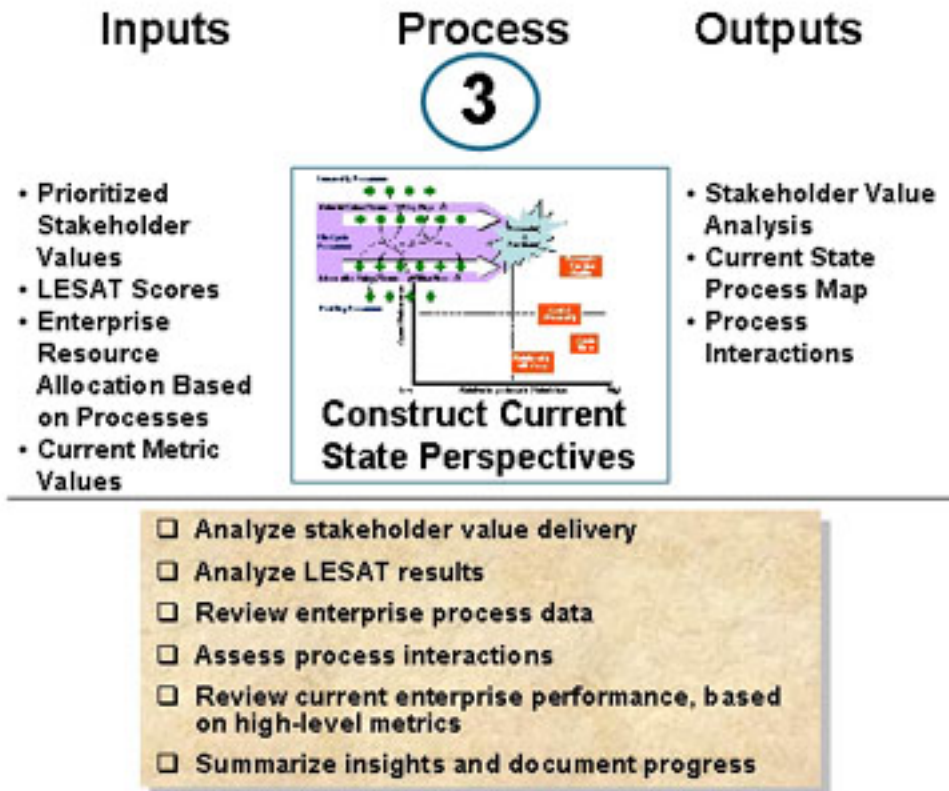
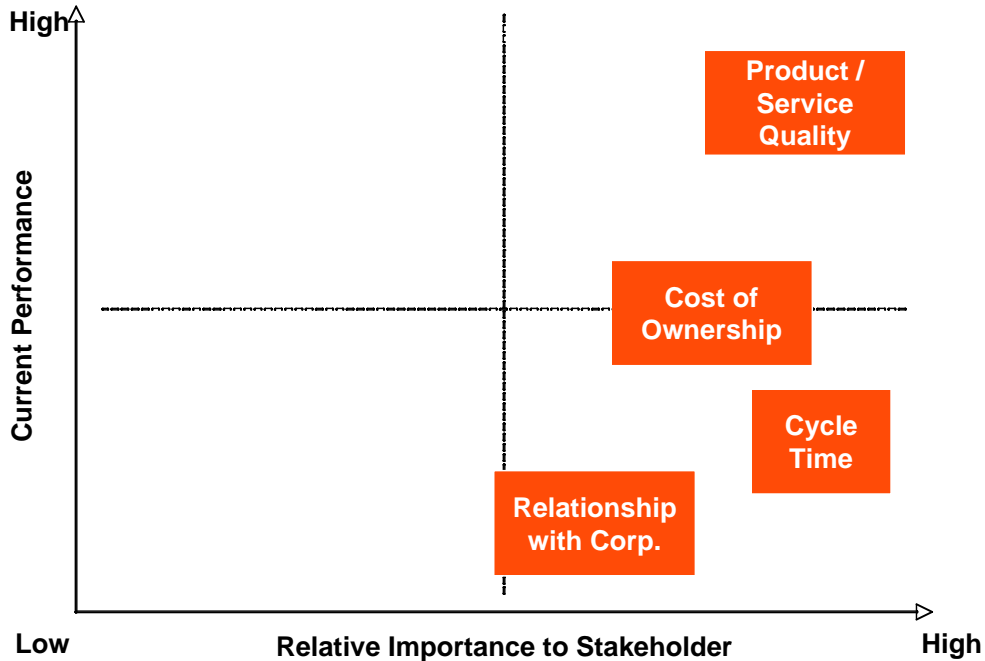


Figure 10. ESAT Step 3 IPO

**□ Assess Stakeholder Value Delivery**

A means to analyze how an organization is performing relative to the values desired by all stakeholders (part of the data collected) is presented below. The horizontal axis of the quad chart maps the “Relative Importance” of each stakeholder value showing the priority of values for the stakeholder and the vertical axis maps “Current Performance” of how the enterprise is delivering on a particular stakeholder value. Figure 11 shows a hypothetical example for the customer stakeholder who values cost of ownership, product/service quality, cycle time, and relationship with the corporation.



**Figure 11. Hypothetical Example of Customer Value Delivery Assessment**

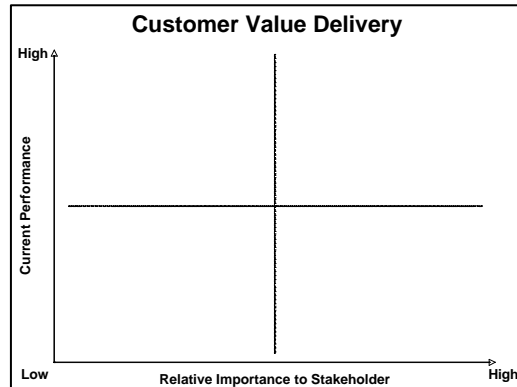
- *Which values are most important to each stakeholder?*

For each stakeholder group, where would each value belong on the horizontal axis based on its relative importance to the stakeholder? Approximately the top five to ten values should be mapped on the quad chart.

- *How is the enterprise delivering on each stakeholder value?*

For each stakeholder group, where would each value belong on the vertical axis based on how the enterprise is delivering this value to the stakeholder?

The stakeholder value delivery charts are in a PowerPoint file. An example is shown above in Figure 11. There is one page for each stakeholder group, as identified in Figure 7. You should transfer the top five to ten stakeholder values from the data collected into this template. **Do not** complete the stakeholder analysis using your own ESAT team knowledge. The stakeholder analysis should be conducted via a carefully crafted interview process. The more information the ESAT team can garner from key stakeholders the more effective the analysis.



*Which stakeholder values are most important to the enterprise?*

As previously noted, each stakeholder has different expectations from the enterprise. Additionally each stakeholder will have different values and contributions to the enterprise. During the ESAT process, stakeholder expectations, values and contributions to the enterprise must be determined. When the team proceeds with the ESAT and the stakeholder analysis it must also be concerned with prioritizing the stakeholders. There are three attributes that can be used to prioritize stakeholders (Grossi, Ignacio, “Stakeholder Analysis In The Context Of The Lean Enterprise”, March 2003):

- Power – to influence the enterprise
- Legitimacy – of the relationship or the stake
- Criticality – for the claim on the enterprise

Stakeholder salience can be defined by the cumulative number and intensity of the power, legitimacy, and criticality attributes.

As the stakeholder universe is developed, these attributes serve as guides in determining the priority of each stakeholder and their effect on the enterprise.



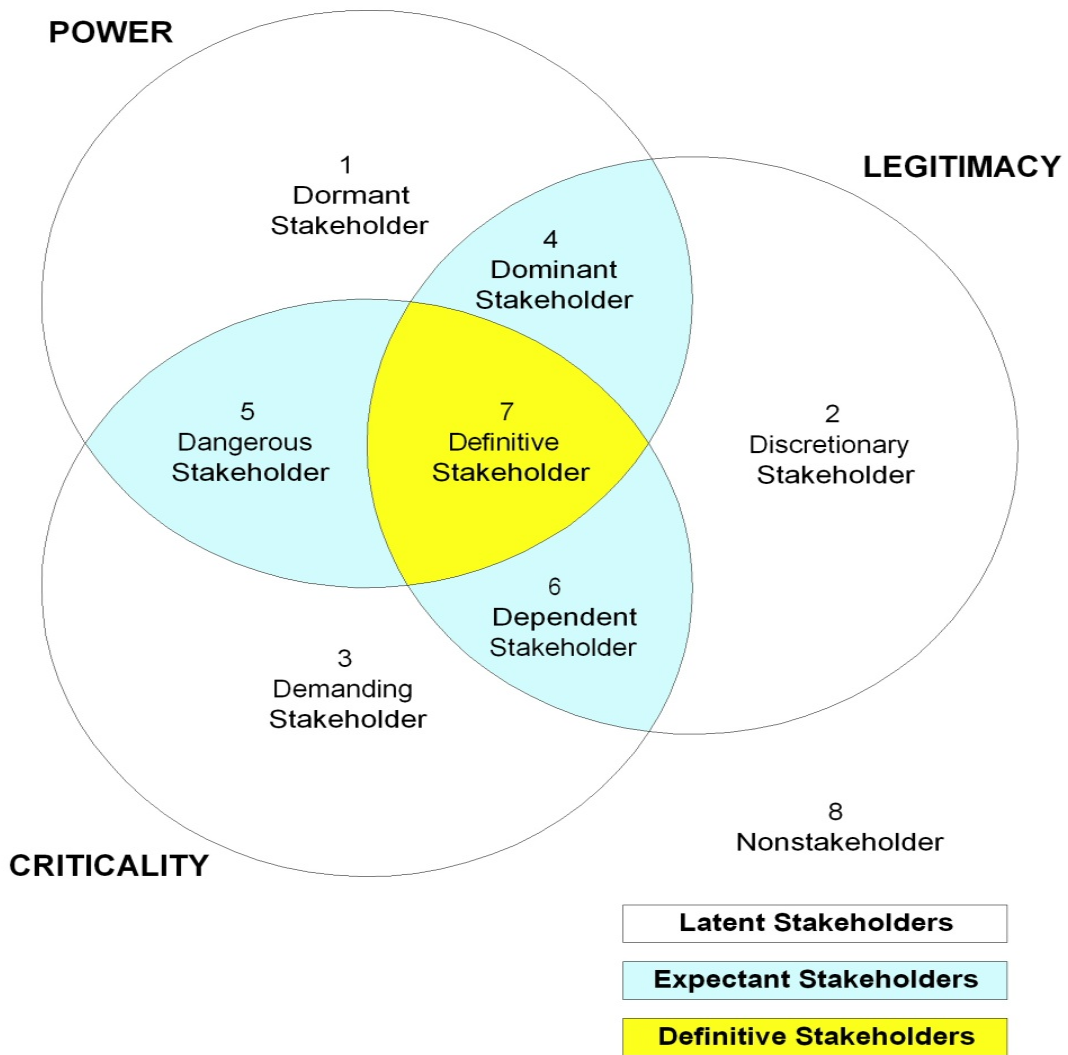
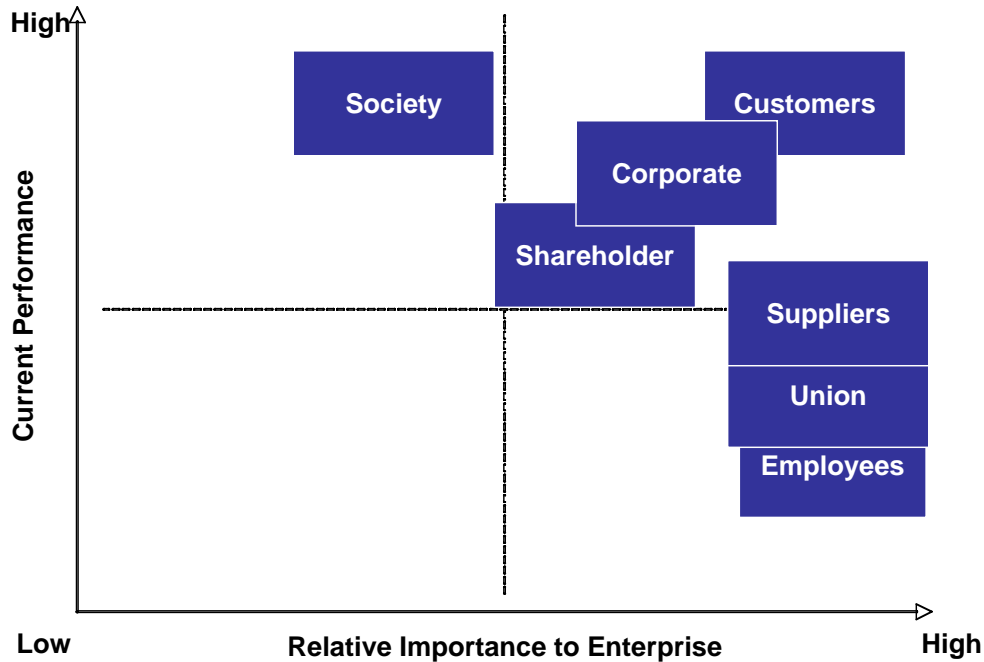


Figure 12 Stakeholder Attributes

In considering stakeholder value priority, consider the following questions: Are stakeholder contributions directly essential to enterprise success? Is the stakeholder a major customer or supplier? Does the stakeholder have a significant influence regarding the success and/or future success of the enterprise? A hypothetical example is shown in Figure 13 Hypothetical Example of Stakeholder Prioritization.



**Figure 13 Hypothetical Example of Stakeholder Prioritization**

**❑ Analyze LESAT Results**

The results provide an internal assessment of the enterprise. They also start to identify a direction for the future vision.

- *How do the enabling processes support the life cycle processes?*

Maturity in enabling processes is correlated with maturity in the value-delivering life cycle processes (Hallam, 2003). How mature are the enabling processes in your enterprise? What does this say about the maturity of your lifecycle process in the current or desired scores?

- *How well has the enterprise leadership team created an environment for enterprise transformation?*

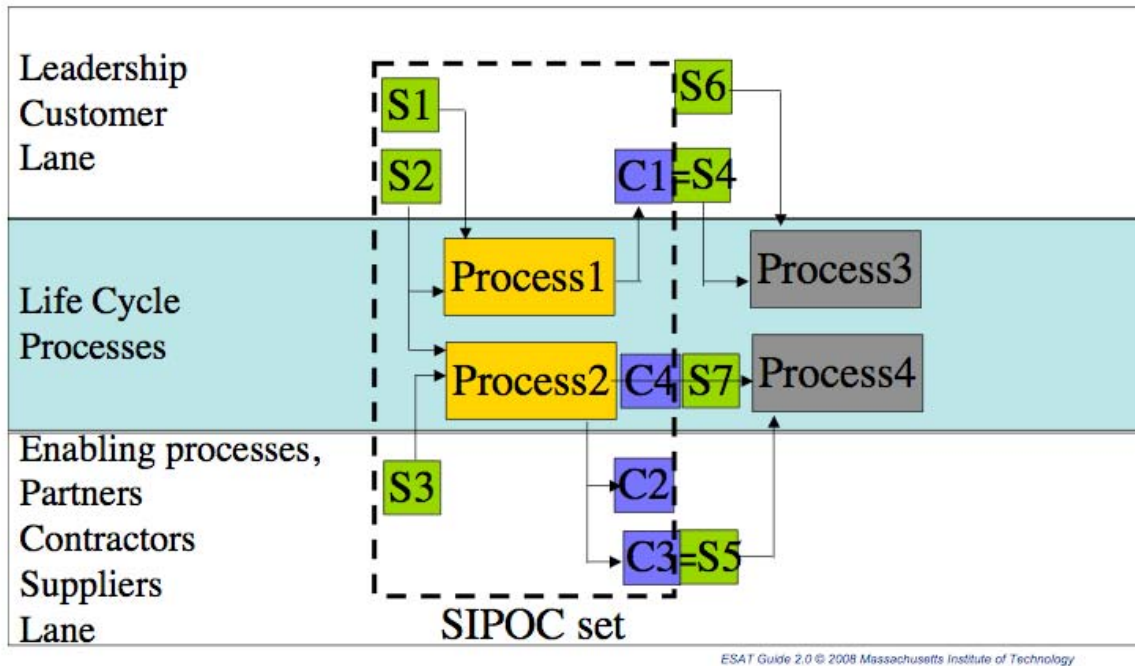
Maturity in the leadership processes is also correlated with maturity in the value-delivering life cycle process as well as the enabling processes (Hallam, 2003). Maturing in the leadership processes is a leading indicator of maturity and ability to increase maturity in the rest of the enterprise. How well is the enterprise poised for transformation based on the maturity of the leadership processes?

- What do the LESAT results indicate about stakeholder value delivery and enterprise performance?

How do the LESAT results compare to previous analyses done to this point? Keeping in mind the enterprise stakeholder values, where do the LESAT results suggest there is a gap between current performance and stakeholder expectation? Do they support feedback from the stakeholders? How do these gaps relate to current enterprise processes?

❑ Review Enterprise Process Data

### Simple Process Map



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**Figure 14 Notional Enterprise Map**

In general, enterprises resist detailed mapping because there simply is too much information and too many dimensions. An enterprise value stream map should present only the high level tasks, all of which are, typically, value added. In general the relationships between the process steps are linked together in the enterprise, and the interfaces and disconnects more likely dominate the enterprise value stream map characteristics. Figure 14 presents a notional enterprise map. Each major swim lane, shown in figure 14, includes process steps for that process area (here only life cycle processes are shown for clarity). In developing the process map there may be more than 5-10 process steps needed for context and clarity. In this construct, however, once the process steps are depicted the team must evaluate those process steps and identify the “key” process steps that will be used for the interaction evaluation. Having populated the map with the needed process steps the team should then determine the process pathologies for each key process step:

- Process Description (Describe Process Step)
- What triggers the step?
- What are the inputs to the process step?
- Where do the inputs come from?
- What actions are taken in the step?
- How will the actions be completed?
- What resources are required?
- Timing/Dependencies
- What are the outputs?
- Where do the outputs go?
- What are the current process step metrics?

A useful tool that has allowed ESAT teams to develop the necessary process detail has been the SIPOC (Supplier, Input, Process, Output, Customer), figure 15.



<b>Process:</b> <b>Process Step:</b>
---

<b>Suppliers</b> <small>Originated from</small>	<b>Inputs</b> <small>What</small>	<b>Process</b> <small>Description</small>	<b>Outputs</b> <small>What</small>	<b>Customers</b> <small>Where to</small>
<b>Process Data</b>				
<b>Outcome Metrics</b>				

**Figure 15 Process Map SIPOC Template**

- *Figure 15 Process Map SIPOC Template*

The SIPOC template is completed for each key process step. Through the use of the SIPOC template, enterprise process steps can be evaluated and the necessary data generated for analyzing the enterprise interactions and their efficacy. It should be remembered that for an enterprise evaluation the interfaces and how well they are working might point to significant areas of opportunities for enterprise transformation.

- *Are resources highly concentrated in specific processes?*

This analysis is intended to focus the team on areas of opportunity based on leverage across the enterprise. One way to make a visible enterprise impact is to attack an area where many resources are being consumed, or where there is a big opportunity for cycle time reduction.

**□ Assess Process Interactions**

A key factor in the success of an enterprise is its ability to look beyond functional activities and discover the series of key enterprise processes that create and deliver value to stakeholders. Decisions and/or actions taken within a particular process have impacts upon other subsequent processes throughout the value stream. Traditionally, such impacts surface only when a particular decision causes great harm elsewhere. It is important to systematically and explicitly search for such potential impacts and consider them prior to making a decision or taking an action. Key interface points between the several enterprise processes must be identified and characterized. As mentioned previously in the introduction, the enterprise value stream constitutes the business case for the enterprise. This is most closely related to life cycle processes of the product or service the enterprise delivers, supported by the enabling and leadership processes. For this reason, the ESAT approach considers the enabling and leadership processes with respect to how well they support the life cycle processes.

- *What are the interactions among the processes?*

Having completed the enterprise map and the key process SIPOCs it is now possible to identify the interactions between the enterprise processes. What flows through these interactions (e.g., information, material, resources)? For each interaction or flow identified, an evaluation of this interaction should also be done, i.e., how well does the interaction work in terms of quality, stability, timeliness, and accuracy? Often, there are important interactions with stakeholders outside the enterprise. If this is the case, these interactions can be mapped and analyzed as well.

- *Which processes are critical for our enterprise?*

Based on the previous characterization of the enterprise, identify which stakeholders and processes most impact the ability of the enterprise to achieve its strategic objectives or deliver value to its stakeholders.



## Step 4: Identify Enterprise Opportunities

Prepare for transition between defining the current state and creating the future state by assessing the alignment of processes, stakeholder values, strategic objectives, and metrics in the enterprise, identifying wastes at the enterprise level, and summarizing opportunities for improvement.

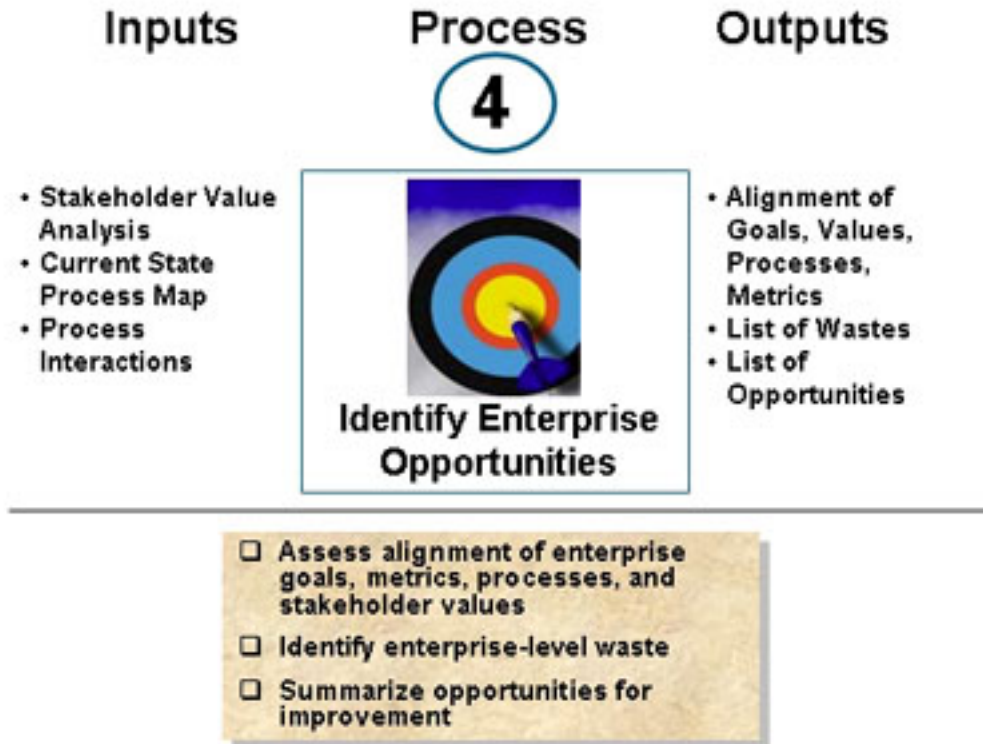


Figure 16. ESAT Step 4 IPO

- Do we have the correct enterprise structure to deliver value to our stakeholders? Is our enterprise aligned? The X-matrix, presented below, provides a tool to assess the alignment of enterprise:
  - Goals
  - Metrics
  - Processes and
  - Stakeholder values

Through the X-Matrix the potential interaction can be assessed between the above attributes.

**□ Assess the Alignment of Current Enterprise Goals, Metrics, Processes, and Stakeholder Values**

- *Do the existing strategic objectives align to the metrics employed? For example, misalignment may show that metrics are not in place to track how well the enterprise is meeting strategic objectives.*

What is the relationship between the metrics and the strategic objectives? Do the metrics accurately evaluate enterprise performance and achievement of strategic objectives?

- *Do the current enterprise metrics measure the performance of the enterprise processes?*

What is the relationship between the metrics and the processes? Do the metrics flow down through the organization in a logical manner to measure process performance?

- *Do the existing enterprise processes deliver the stakeholder values for the enterprise? For example there may be only one or no key process that supports an important metric tied to a strategic objective*

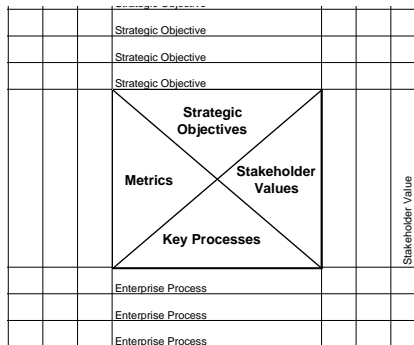
How well do the enterprise processes deliver value to the stakeholders? Which processes deliver the most value, and which deliver the least?

- *Are the stakeholder values, as determined by stakeholder value data analysis, represented by the strategic objectives?*

Are the strategic objectives well aligned with the stakeholder values? How many stakeholder perspectives are represented by the strategic objectives?

The X-matrix template is an Excel file. The grids in each corner of the matrix represent potential interaction between the row and column they connect (strategic objectives, enterprise metrics, enterprise processes, and stakeholder values). Starting in the upper left quadrant and moving around the matrix in a counter-clockwise direction, the following questions will help fill in the matrix with either strong, weak, or no interaction.

- Is this strategic objective measured by this metric?
- Does this metric measure performance of this process?
- Does this process contribute to delivering this stakeholder value?
- Is this stakeholder value represented by this strategic objective?





**Enterprise Level Wastes**

The elimination of *waste* is one of the fundamental tenets of lean thinking. Waste may be defined as “any action, process or activity that consumes resources and does not directly add value for a stakeholder”. (Womack, 1996)

To provide a framework for thinking about sources of waste, the following categories are useful:

**Table 3. Enterprise Waste Categories and Examples**

<b>Category</b>	<b>Examples of Wastes</b>
Customers	Opportunity costs from lack of cooperation and coordination Excessive mandated requirements creating lack of flexibility
Suppliers	Inventory Inadequate metrics for efficient performance assessment
Information Flow	Over-processing information (e.g., excessive reporting) Unavailable or untimely information Fractured information systems
Processes	Structural inefficiencies in the enterprise process model
Leadership	Opportunity costs of untapped talent Enterprise monuments Inefficient use of metrics for managing the enterprise Poor metrics definition and structure Excessive layers of management
People	Inefficient organizational structure Opportunity costs of untapped talent Lack of balance between functional silos and program/project organizations

**☐ Identify Enterprise Level Waste**

Using the categories defined above, think about the previous analyses and identify sources of enterprise level wastes.

- *Is there waste in enterprise performance?*

Refer to the stakeholder analysis and the analysis of current enterprise performance. Are there any obvious disconnects you can identify, e.g., are you out-performing your objectives by focusing too much in a single area? Are areas of strategic importance being neglected? Identify what the root cause of these disconnects may be to find potential sources of waste.

- *Are there sources of waste within enterprise processes?*

Use the current enterprise process maps and the process resource allocation. Do the allocations align with the actual or estimated performance, if not, why not? This may provide some insight into a potential source of waste in the enterprise.

- *Are there sources of waste in the enterprise interactions among the processes and stakeholders?*

Look for sources of enterprise waste in the interactions. Does information flow through the enterprise seamlessly? Are common tools used? Are they effective?

- *What does the LESAT analysis indicate relative to enterprise waste?*

Review the LESAT scores and identify areas where lack of process maturity in leadership, life cycle, and enabling processes contribute to enterprise level wastes.

#### **☐ Summarize Opportunities for Improvement**

At this point in the methodology we begin the transition to the future state analysis. This analysis is dependent on and provides for a summary of all previous ESAT work to date and will serve to document the current insights and opportunities. This exercise is designed to focus the team on the enterprise future state. Conducting this exercise will begin to direct the team to future state considerations and aid in constructing the vivid descriptions for the enterprise future state. To capture this step appropriately, it is important to create a list of insights, "ah-has", issues, and opportunities identified. For this step, opportunities should be collected using the same categories used for waste identification previously: customers, suppliers, information flow, processes, leadership, and people.

- *What insights have we already gained from this process?*

At this point in the ESAT process, it is a good idea to refer to the documentation and analysis done in this and previous steps. Undoubtedly, numerous insights, observations, problems, and opportunities have been identified. It is a good idea to collect this information in a single place, review it to make sure it is clear, and to look for consistent themes that may emerge.

- *What opportunities do we want to address in our future state vision?*

Create a list of opportunities for your future state based on what you have learned so far. Make sure this list captures the insights you have gained, addresses concerns that have arisen, and better prepares the enterprise to deliver value to its stakeholders and achieve its goals. Again, in documenting these data, the team should write complete sentences for each opportunity in order to capture the context of the opportunities. Thinking of strengths and weaknesses of the enterprise that have become apparent may be a helpful way to get started.

## Step 5: Describe Future State Vision

Create a strategic goal and vision for how the enterprise should look and behave five to ten or more years in the future.

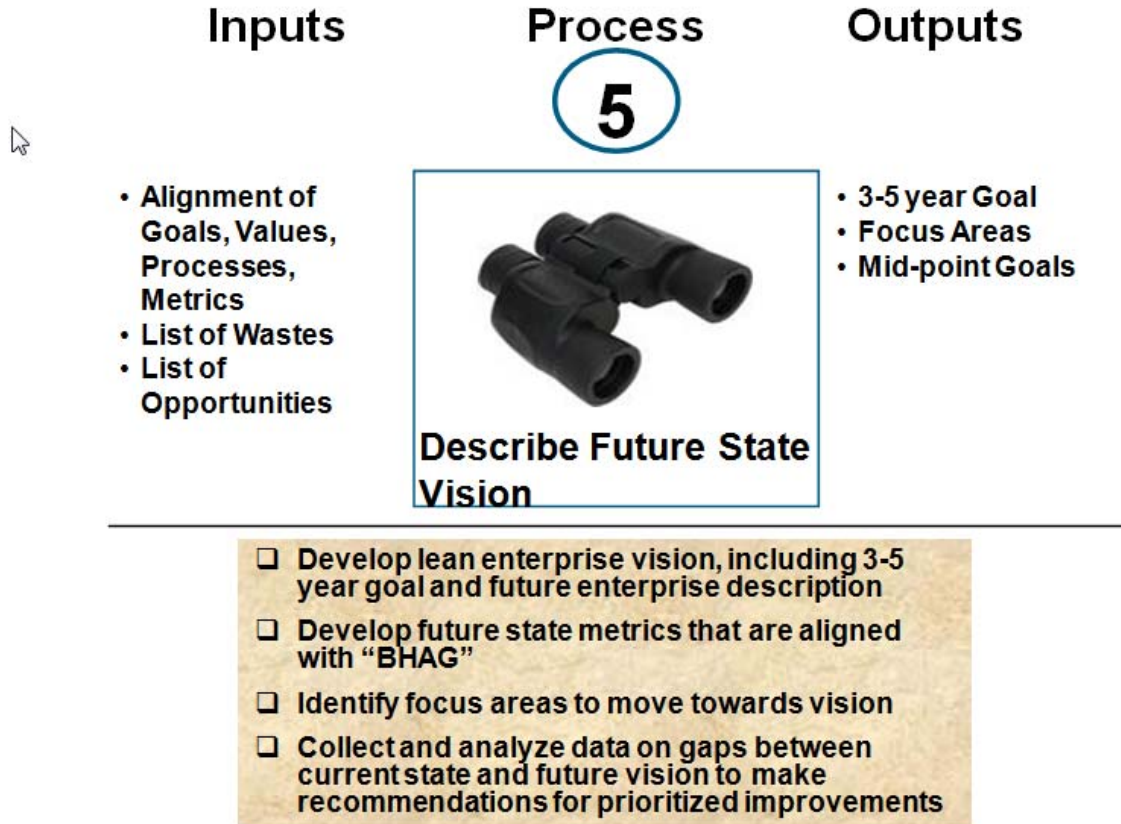


Figure 17. ESAT Step 5 IPO

### ***Future State Visioning***

At this point in the analysis, the ESAT team should have a clear understanding of how well the enterprise is performing in its current environment, how well its enterprise processes are functioning (both individually and as a total system of processes), and how well it is meeting the value expectations of its stakeholders. While performing the analyses required in the preceding steps, the ESAT team will have surfaced, identified and defined numerous opportunities for improving enterprise performance.

As explained in the Executive Summary, the ESAT methodology is not intended as a tool for identifying and solving near-term localized problems and inefficiencies. Nor is it a tool to develop business strategy. Rather, ESAT is intended as a cohesive methodology and framework for identifying opportunities to enhance the overall effectiveness of the entire enterprise through modifications to its structure, policies, and behavior. In short, ESAT should lead to all enterprise processes operating together in a more effective manner to increase stakeholder value, achieve strategic objectives, and return value to the enterprise.

## □ Develop Lean Enterprise Vision

- *How has the team prepared to transition from current state analysis to future visioning?*

To get started thinking about all of the possibilities for the future vision, a visioning exercise or reviewing some examples of other enterprise future visions may be helpful.

A common misconception is for a corporate entity to look at where they are and noting that they have been successful in the past...recreate the actions of the past. "If we do what we did a few years ago we will be fine". The obvious problem is that the world has changed, customers are demanding more, technology has marched on and competition has changed. So how does one structure the business unit to compete and deliver stakeholder value in order to survive? In describing the enterprise future state, both core values and a purpose should be described. Normally the core purpose is not tied directly to the product line but to a greater calling that will guide the enterprise to new and greater heights.

As you start thinking about the enterprise future state, it may be helpful to think about a pull system. One way to think about the ideal state for an enterprise is based on a pull system. Starting with the end users and customer, identify what value has to be delivered in order to satisfy this stakeholder (e.g., product quality, delivery time, cost, etc.). Working backwards through the enterprise life cycle processes and into the enabling and leadership processes, trace the flow of value back through the enterprise determining at each point, what must be pulled from an upstream process in order for the enterprise to perform. For each process, identify the characteristics of how the process must perform to meet the pull from a downstream process. This should result in many of the characteristics of the future enterprise based upon an idealistic goal of perfection.

- *What is the long-term goal for the enterprise?*

The team should work together to create a single goal statement for five to ten or more years in the future. After agreeing on the appropriate time frame, the team should start thinking about what they want to have accomplished as an enterprise by then. The goal statement should be something that the entire enterprise can rally around, something that is difficult enough to achieve that it won't happen accidentally, yet something that is not so unreachable that no one is motivated to work towards it. One rule of thumb is to write the goal statement so that it has a 50 to 70 percent probability of being achieved. Jim Collins (Collins and Porras, 2000) calls this a Big Hairy Audacious Goal (BHAG, pronounced "bee hag").

- *What does the enterprise look and feel like when this goal has been accomplished?*

When constructing an enterprise vision, the team should consider how this vision would become part of the DNA of the enterprise. It is not enough to build a vision, but must be put in place so that all personnel, at every level of the enterprise knows what the vision is and can directly relate that vision to what they do on a daily basis. The vision should reflect the BHAG and what it would look and feel like to have achieved that goal, having solved the issues described in the waste exercise, and reaching the opportunities described in that exercise.

A good way to describe the enterprise is to imagine you are a reporter writing about your enterprise after your goal and its vision have been reached. What would you write about the way you do business? What kinds of evidence are there that the enterprise has reached its goal? Using the six categories used for waste and opportunity identification (customers, suppliers, information flow, processes, leadership, and people), create a vivid description of the enterprise in its future state by writing roughly a paragraph that describes what the particular aspect of enterprise you are working with is like. Be sure to incorporate the opportunities identified for each area.

**Table 4. Future Vision Considerations**

<b>Category</b>	<b>Considerations</b>
Customers	What will the customer relationships look like in your new enterprise?
Suppliers	How will you interact with suppliers/partners?
Information Flow	How will information be processed, how will be it made available?
Processes	What will the new process model look like? How do processes interact with value streams?
Leadership	What will be the characteristics of your enterprise leadership? How will the enterprise performance be measured?
People	What kind of working environment will your employees have? What kind of organizational structure will you need to support this new value stream? What view will the labor union have?

- *What are the mid-term goals of the enterprise to make progress?*

Based on the goal and the vivid description, consider the following areas: people, processes, customer and stakeholders, and resources. In each of these areas, what needs to be accomplished to direct the enterprise towards the long-term goal? Can a mid-term goal statement be written that is approximately half way to the long-term goal (or at a different time based on the cycle time of the business)? Start by thinking about what needs to change from the current state to show progress towards the goal.

- *What are the implications if the future vision is achieved?*

How will the vision affect the leadership and employees of the enterprise? Does the new vision maximize the strengths and minimize the weaknesses of the enterprise? Does the new vision challenge the current organizational culture or support it? How will the envisioned enterprise respond to current and future opportunities and threats? How will the envisioned enterprise compete internally within the corporation (i.e., what will the response be from other divisions)?

**☐ Identify Future State Metrics Aligned with the BHAG**

- *What are the high-level metrics associated with the BHAG?*

How will you know when you have achieved your vision? Identify the metrics you'd use at the enterprise level to measure progress toward attaining the vision. Identify the key strategic issues of your future enterprise and make sure that the metrics employed map against those strategic issues (no more than 10-12 metrics here).

## □ Identify Focus Areas to Move Towards Vision

A comparison of the current state and the future vision will identify the more important processes and functional areas needing attention to achieve short-term goals, directing the enterprise towards achievement of the long-term goal.

- *Based on what you know about the current state of the enterprise, why isn't the future state currently achieved?*

Identify issues by considering the following questions. Are there disconnects between the importance of stakeholder value and the delivery of this value by the enterprise? Do the enterprise strategic objectives align with value being pulled through the enterprise by its stakeholders? How do the metrics measure enterprise performance? What wastes are evident in the enterprise that can be eliminated? How can interactions in the enterprise be streamlined? How does our future vision compare to our current state? What are the imperatives to get from our current state to our future state? What are the top five to six that are high priority, high impact areas? Does the new vision require additional resources, skills, competencies, or technologies? What is a realistic time frame to achieve these?

- *Are there synergies between improvement ideas?*

Based on the lean enterprise vision created and the gap analysis, revisit the list of opportunities generated; create affinity groups based on common characteristics.

## Step 6: Create Transformation Plans

Prepare plans for closing the gaps that exist between the current and future states by prioritizing opportunities for improvement.

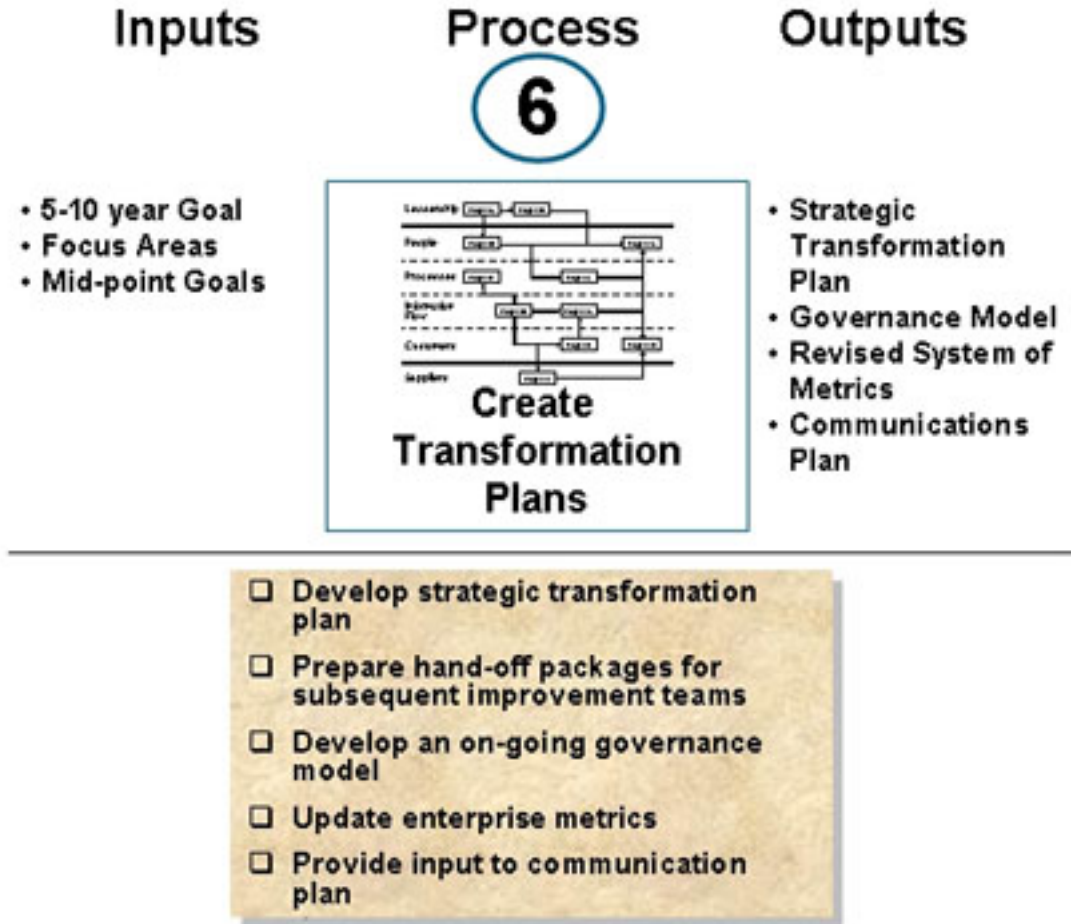


Figure 18. ESAT Step 6 IPO

### ***Transformation Plan***

The preceding steps of the ESAT methodology have identified areas in which opportunities exist to move the enterprise toward the defined future state. This step of the ESAT methodology provides input to the Enterprise Transformation Roadmap block, “Create Transformation Plan”, as shown in Figure 12.

# LAI MIT Enterprise Transformation Roadmap

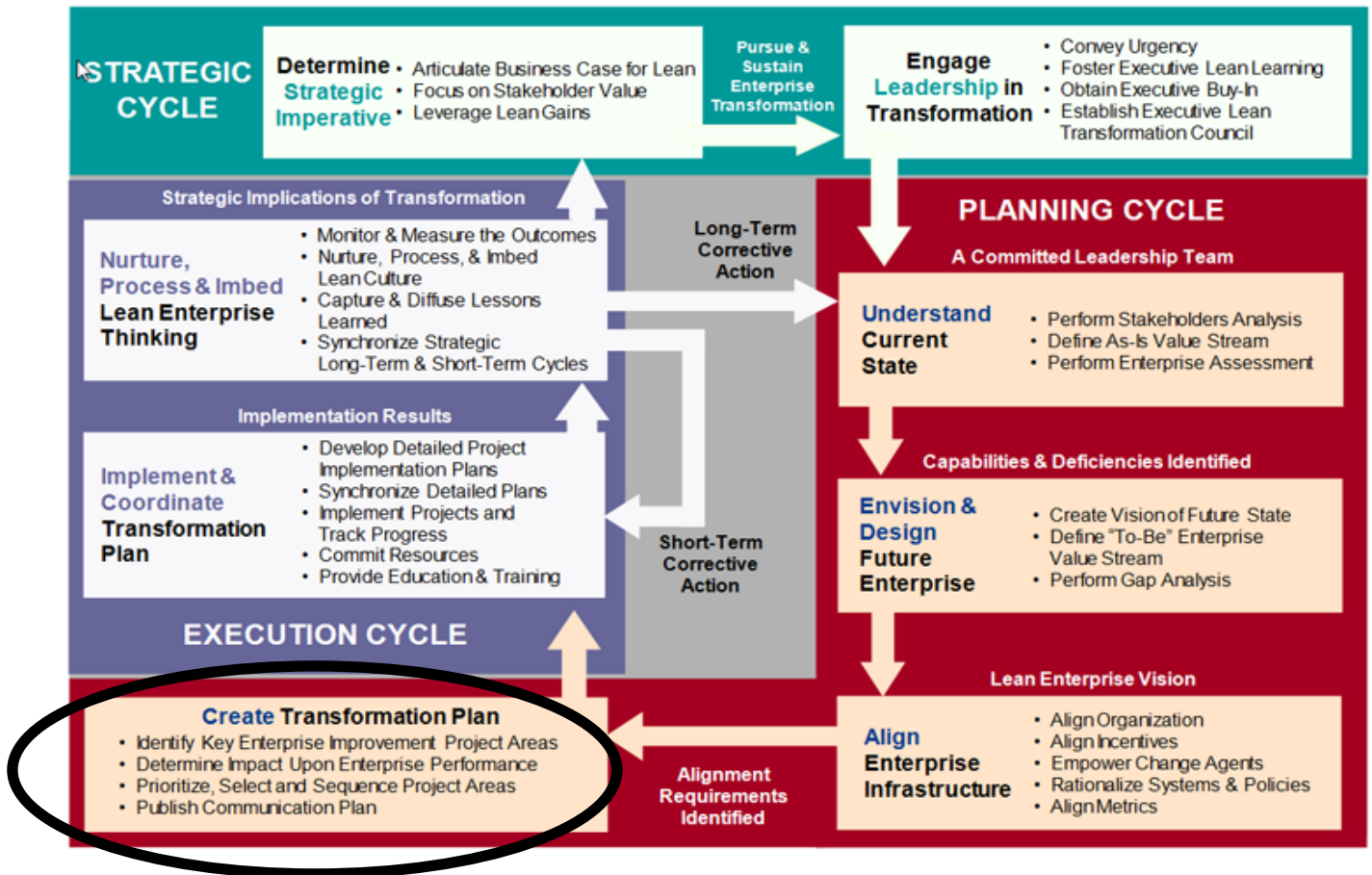


Figure 12. Enterprise Transformation Roadmap

## ❑ Develop a Strategic Transformation Plan

Based on the long-term goal and enterprise description developed as part of the future state vision, a long-term strategic transformation plan should be developed that supports the enterprise long-term goal and vision. Ultimately, this should tie into the enterprise strategic plan that is reviewed on a regular basis, and remains flexible enough to accommodate updates in direction, but in general is fairly static over the envisioned time frame. Refer to the TTL guides for additional information. By comparing the current state to the future vision it is possible to determine the key processes and functional areas needed to achieve short-term goals, and directing the enterprise towards achievement of the long-term goals

- *Do the focus areas require refinement?*

Define the high-level projects for each focus area. This should normally include the top two to four key project steps to accomplish the focus area objective. Define key inputs, outputs, and critical precedence relationships. At this point the team should have identified approximately 15-20 major projects.

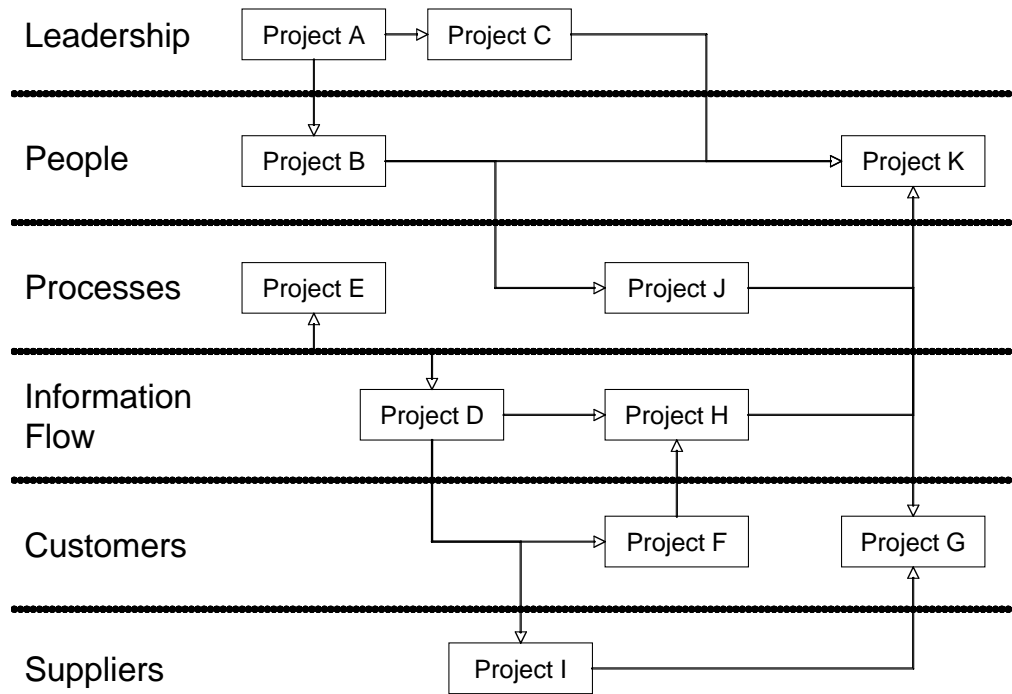


- *Should these projects be performed sequentially or can some be done in parallel?*
- *What is the approximate duration of each project (range)?*
- *What other focus areas do they depend on for inputs?*
- *Do these projects influence other focus areas?*
- *Are they key enablers?*
- *What are the interdependencies between focus area projects?*

Create an integrated enterprise plan by sequencing all focus area transformation projects, giving consideration to precedence, timing and resource constructs.

- *What projects can be performed in parallel?*
- What are the interdependencies across projects?

Connect the projects to note the precedence and interrelationships as shown in the example in Figure 20.



**Figure 13. Notional Precedence and Interdependency Mapping of Focus Area Projects**

**□ Prepare Hand-off Packages for Subsequent Improvement Teams**

Each focus area/improvement project will have a sub-team working on it. These teams will have members who were not involved with the entire ESAT process. It is important to prepare a hand-off package to capture the information collected and developed throughout ESAT so anyone continuing this effort is able to incorporate it in their work.

- *What is the justification for each improvement idea?*

What are the expected benefits? What are the expected costs? What metrics are required to ensure this opportunity is fully realized?

- *What impact will each improvement have on the stakeholders and the ability of the enterprise to achieve its strategic objectives?*

How is each stakeholder and strategic objective affected? Can the benefits and/or detriments be quantified?

- *What data have been collected as part of the ESAT effort that would be helpful as a starting point for an improvement team?*

From each step of ESAT, information and insights have been collected and created which will be useful for subsequent improvement project teams. This information should be consolidated, filtered, and sorted for each team to use as a starting point.

- *What additional data need to be collected?*

If data collected as part of the ESAT effort is insufficient to start the project team, it may be helpful to collect more detailed data in specific areas. Additional data may be needed to create a baseline for the improvement team.

- *What barriers have the team identified that the improvement team may encounter?*

The ESAT analysis has identified potential barriers for improvement efforts. Which of these are likely to be encountered by the improvement project team? How can these barriers be mitigated?

- *What resources are required?*

For each project proposed, consider time, headcount, facilities, technology, etc. Create a resource commitment plan that can be proposed.


- *What is the expected schedule for the improvement team?*

What are the first significant milestones for the improvement team? A date should be set for when the team should be identified, when the kick-off should be held by, and when the first report out should be conducted. This provides the improvement team with their near-term expectations and deliverables.

- *Has a charter for the improvement team been created with clear expectations?*

A simple way to communicate information between the ESAT team and the implementation teams is through a Project Planning Template for the improvement projects. This should include a description of the project, initial timeline, team members, champion, facilitators, expected outcomes, and other information pulled together as part of the hand-off package.

The project-planning template is provided as a PowerPoint file. It is a single page. It collects useful information into a single location to help the project teams get started. Additional information may (and likely should) be provided to the project teams, as part of the hand-off, but this will get the team started thinking about the sort of information the team will need. The template includes a short description of the project, and a space for the impact of the project. The impact section should provide some justification for why this project has been selected for enterprise focus. There is another block for resources required; the team can include here any resources that have already been identified for this project. The template also includes space for the expected outcomes, a timeline, and the buy-in required as well as space for the sponsor or champion's name.

Improvement Opportunity Description	
<p><b>Description:</b> A short overview of the opportunity.</p>	<p><b>Resources Required:</b> Estimate the resources required to further investigate and implement this opportunity. What time, money, people, etc. is required?</p>
<p><b>Impact</b>  <b>On Stakeholders:</b> What is the impact on current and future enterprise stakeholders? What are the benefits and detriments to each of the stakeholder groups?</p>	<p><b>Expected Outcomes:</b> What are the expected benefits to the enterprise after implementing this improvement? This should include target values for measurable outcomes.</p>
<p><b>On Strategic Objectives:</b> What is the impact on achieving the enterprise strategic objectives? How does this opportunity affect future enterprise strategy?</p>	<p><b>Timeline:</b> What is the timeline for further investigation and implementation? What is the start date and the duration?</p> <p style="text-align: center;">                       Start                 </p>
<p><b>On Current Processes:</b> What is the impact of this opportunity on current processes? Are new processes required? What is the impact on the interactions among the current processes?</p>	<p><b>Buy-in Required:</b> Who will support investigation and implementation of this improvement? Who has responsibility, accountability, and authority to ensure follow-through? Who will participate in the work?</p> <p><b>Owner:</b></p> <p><b>Sponsor (if required):</b></p>

### ❑ Project hand-off

As the ESAT team prepares the initial project portfolios, consideration should be given to assignment of program managers for each of the focus areas and their portfolio of sub-projects. ESAT team members are in the best position to act as those program managers and should be assigned to focus areas in which they have discipline knowledge. This assignment will provide high-level impetus to the projects needed to prosecute the transformation and also provide leadership and visibility for the projects.

### ❑ Develop an On-going Governance Model

One of the most important responsibilities of the leadership team is the creation of a governance model for implementing and monitoring transformation projects. The effectiveness of this phase determines both the success and speed of achieving the enterprise vision. The lack of an effective governance model is one the most common reasons why transformations fail.

There are several key attributes of a successful leadership model:

- *How will you monitor project implementation?*

Personally champion/sponsor focus area projects. Manage these projects as you would a major product program, assigning specific responsibilities, deadlines, etc. Provide motivation, direction, and guidance to implementation teams.

- *How will you maintain transformation focus?*

Make this a key part of executive staff meetings. It should be an integral part of the ongoing enterprise management process, not a separate initiative. Lean transformation activities should be a major part of how you operate, with ongoing status reporting and progress monitoring.

- *How will you mitigate barriers?*

A key role of the leadership team is to remove barriers that impede project success. This includes providing adequate resources, training and education, and political capital to overcome roadblocks. It will be necessary to create an environment of trust and non-attribution to effectively uncover and mitigate barriers. The ESAT team should continue to meet as a team as the transformation projects unfold to ensure barriers encountered are mitigated in an expeditious manner.

- *How will you celebrate successes?*

Communicate accomplishments to the appropriate audiences both internal and external to the enterprise and reward successes. This communication can be in organizational news, town-hall style meetings, or staff meetings, to name a few venues, and should be consistent with your master communication plan. Both individual and team rewards should be employed.

- *How will you learn from both successes and failures?*

Document and share successes so that they can be replicated elsewhere in the organization. Learning organizations are much better positioned for both sustaining and accelerating the enterprise change process.

Learn too from your failures (there will be some as your organization learns about transformation!). Are there systemic reasons for failure? Lack of appropriate team leaders? Not enough or the right type of resources? Mismatch of project requirements with enabling infrastructure (IT, etc.)? Examine these reasons for failure and develop mitigating strategies and corrective actions.

- *What revisions to the transformation plan are required?*

Inevitably, there will need to be some adjustments to the master transformation plan. Some projects may take longer than was originally planned. Some enabling projects may need to be accelerated to support other key projects, etc. It is highly likely that at least some revisions will need to be made. It is the leadership team's responsibility to periodically review the master transformation plan; making sure projects are aligned and integrated across focus areas.

## □ Update Enterprise Metrics

A system of metrics should be designed such that it supports the strategic intentions of the enterprise. The set should drive desired behaviors at all levels, as opposed to behavior devised purely to meet expectations. Ultimately, metrics should drive behavior that results in the delivery of expected value to all stakeholders.

There are several key attributes of an appropriate balanced and cascading system of metrics:

- *How many top-level metrics are reported and tracked?*

When it comes to enterprise-level metrics, fewer are better (striving for 10-12 metrics should be your goal). Fewer metrics at the enterprise level allows for ease of reporting and ease of problem solving. Most enterprises in today's world are burdened with many, many metrics that in many cases are tracked at the highest level. This situation often reduces the leadership to attempting to monitor far too many metrics that most likely are not tracking key enterprise metrics, but instead are looking at a myriad of measurements. Furthermore, many in middle management are burdened with compiling all these data and providing it in a format that may not fit in automated systems, therefore reducing many managers to clerk status, with little time to actually run their business. It is therefore, very important, to develop a very limited set of key enterprise metrics that reflect the goals and vision of the enterprise and track progress towards those goals and metrics. In a best case, these metrics should be generated through the existing IT systems with no manual input required.

- *Does everyone throughout the enterprise understand the metrics in place?*

It is important that everyone involved in collection of any data should understand the rationale behind the metrics selected. This understanding of the rationale for metrics will establish a sense of buy-in from all employees. Also, if people recognize and respect the justification and motivation for each measure, and keep this balanced with how they are going to be held accountable for data collection and results, they may see a reduced incentive to "game the system" or manipulate data so that they look good or avoid censure.

- *How are metrics being used to drive behavior?*

Enterprise-level metrics should be used to drive behavior that is compatible and aligned with the new strategic goals of the enterprise. If metrics are used just to "check-up" on people or illuminate problems, resistance will be encountered.

- *How will you develop this system?*

It is recommended that one of the initial sub-project teams be formed at a very high level in the enterprise to develop the final set of metrics. This team can be assembled to review the possibilities and then select the appropriate model, followed by adapting the model to the specific situation. The team should strive to choose a system that measures all value streams and processes (including lifecycle processes, enabling infrastructure processes, and leadership processes) according to quality, cost, delivery, and overall financial health. However, the need for this information (from many organizations, disparate information systems, and levels of the enterprise) must be balanced with the need for simplicity and lack of complexity.

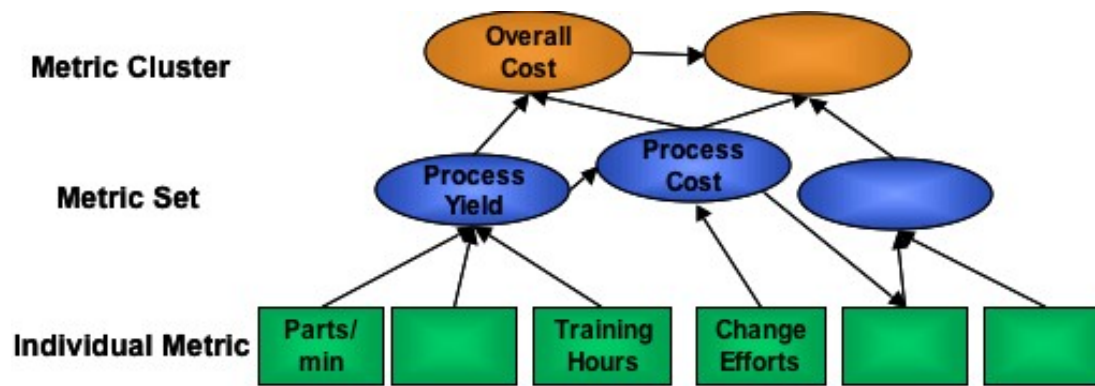


Figure 14. Conceptual design and hypothetical example for the Lean Enterprise Performance Measurement System (Mahidhar, 2005)

### □ Provide Input to a Communication Plan

The ESAT process results in strategic direction for enterprise transformation. As the transformation effort moves forward and aligns with this direction, it is essential to communicate with the entire enterprise the results of ESAT, how on-going initiatives align with the results, and the role everyone will play in the total transformation effort. Communication can be accomplished through several types of media: it can be verbal, non-verbal, written, or visual. It is important to remember the old adage that “actions speak louder than words”. It is also important that the message conveyed show support and commitment for transformation and improvement efforts from the enterprise leadership.

Getting the information out early and, in a form that anyone can access is important. Just think for a moment what the enterprise employees could perceive in general:

“All senior managers are tied up in some high level meeting, should we be looking for a new Job?”

It is therefore imperative that the team gets the word out early and often in the ESAT process. When the ESAT process is concluded, the entire enterprise will be watching the team that participated in the ESAT effort to see what has actually changed about their behavior, attitudes, approaches, etc. The importance of communication cannot be overemphasized.

- *Who are the audiences with whom you are trying to communicate?*

The message should be tailored based on what is appropriate for each audience. Consideration should also be given as to what the best type of media to reach this audience is. For example email may work for white-collar workers (assuming they all have access to a computer), but most likely not the blue-collar workers who traditionally do not have computer access. The team must determine what they are trying to get across, and describe the scope of the ESAT. How does the ESAT team describe the need for the team and what they are trying to do (“growing the business”)?

- *How many different ways is the message being communicated?*

Communication often requires reinforcement. Consistently repeating a message shows commitment and gives a sense of priority to the message.

- *What is being done to share this message in active ways?*

Do people in the enterprise have an opportunity to get involved with the improvement effort? How are people going to see, feel, and experience the differences resulting from ESAT? If this effort is intended to change people's mindsets or behaviors, how are they expected to demonstrate this? One effective way is to start by modeling the expected difference with the enterprise leadership.

## Step 7: Create Actionable Project Descriptions

This step along with step 8 provides input to the execution cycle shown in the Enterprise Transformation Roadmap block “Implement & Coordinate Transformation Plan”.

Prepare detailed project portfolios and hand-off to transformation sub-teams.

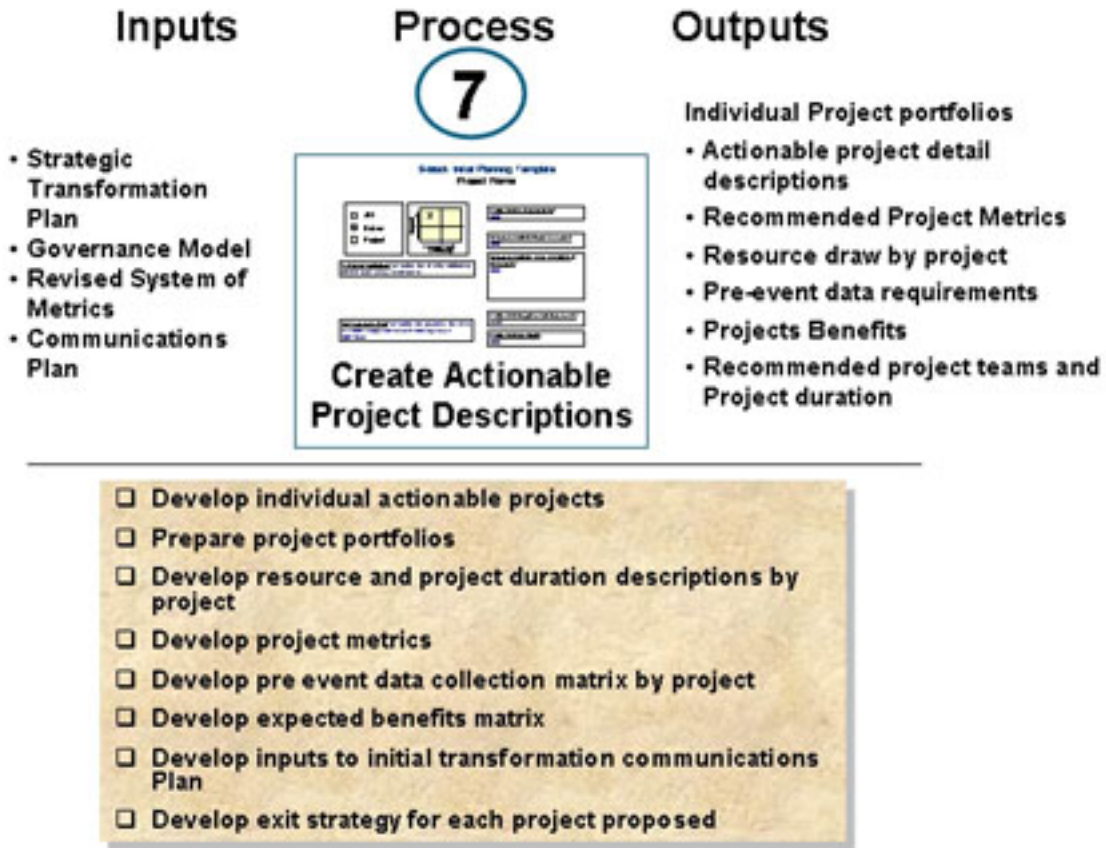


Figure 15 ESAT Step 7 IPO

At this stage the ESAT team has established the strategic areas for transformation to pass to the program managers and implementation teams. This step begins a major change in the journey for change - the ESAT team will now be transferring the work to sub-teams and managed by ESAT designated program managers.

The ESAT team must now transform their function into one of support and management and this is the reason for requesting that each member of the ESAT team be committed to at least the first year. Each focus/project area should have an ESAT team program manager and at least two change agents assigned to the area. The program manager assisted by the change agents recruits and briefs the respective implementation team(s) prior to kicking-off the projects. The implementation team(s) then begin the process of developing the actionable project plans



### **❑ Develop Individual Actionable Projects**

The sub-teams under the mentorship and guidance of the ESAT team member program manager begin to prepare individual projects that collectively represent their assigned focus area.

- *What data are needed to support the individual project?*

The program manager should brief the sub-team on all the data from the ESAT and its context. From these data the sub-team should be able to establish the initial data collection matrix. Some of these data may be available from the ESAT albeit at a high level. The Sub-team will want to delve into more detail to properly structure the new project.

### **❑ Prepare Project Portfolios**

A complete project portfolio will allow the sub-team to begin the project from a knowledge position.

- *What information constitutes a complete project portfolio?*

The ESAT team has, at this point, completed a process improvement project template that describes the focus area at a high level. They have established the focus area impact, resource requirements, expected outcomes, timelines, buy-in required, and owner and sponsor. At this point the team needs to step back and look at what it will take to implement the changes delineated by this project. It may be necessary to adjust the focus area and the improvement project as additional detailed data is gathered. This requires a close relationship with the program manager who can take any recommended changes to the ESAT team, if necessary and keep everyone up to speed as the project is more clearly defined prior to kickoff.

### **❑ Develop Resource And Project Duration Descriptions By Project**

Based upon additional data gathered, the Sub-team can now turn to the task of realistic resource estimation and begin to develop a more detailed project timeline for the project(s)

- *What resources will be required to conduct and successfully deploy this project?  
What are the key milestones and their timing?*

Key to the successful deployment will be the dedication of resources to complete the projects in a timely manner. This is where the leadership commitment will be tested. The individuals assigned to the transformation projects will be the key to their success or failure. Additionally, at this point in the process, the general employee population has been informed on the breadth

and goals of the transformation. They will expect to see results rather quickly, as so will senior enterprise management. The assignment of the individuals to prosecute these projects and their management's support is critical to both the short term and long term success of the transformation. There are also tradeoffs here that must be considered. The personnel assigned to these projects will undoubtedly be the leaders in each of the disciplines necessary to run each project. The enterprise must weigh their assignment against the day-to-day requirements of the enterprise. At some point management will need to "bite the bullet" and ensure the right individuals are assigned to the projects. The Sub-team should also be able to realistically estimate the project duration so that resource commitments can be made and realistic goals for success timelines can be established. Depending on the complexity and the priority of each project the timeline should be set that has a realistic chance of completing in the allotted time.

**❑ Develop Project Metrics**

These metrics are needed to keep track of the project and to score its completion

- *What metrics are needed to support the individual project?*

The team should develop a set of metrics that will be used to report on the project's progress and ultimate success.

**❑ Develop Pre-Event Data Collection Matrix By Project**

In order to ensure a successful project start the sub-team should develop a data matrix that can be completed prior to initial project kick-off. This will ensure the needed data are available for the team at project start-up. The more up-front work that can be accomplished the more effective the team will be in developing a winning project.

- *What data are needed to support the individual project?*

What data will be needed, who will collect the data and when will an initial data review be conducted to ensure the content fits the project. Are there any areas that are missing data or in need of additional time to gather needed data?

**❑ Develop Expected Benefits Matrix**

At this point the ESAT team has detailed the expected outcomes in the Process Improvement Project template. The sub-team's task is to quantify these outcomes in order to allow enterprise management to set the project priorities

- *What are the specific expected benefits of the project and how will they be tracked?*

The project benefits should be directly tied to the overall ESAT goals and vision and scored as to how well they influence the current state in the journey to the future state.

**☐ Provide Ongoing Inputs To The Enterprise Transformation Communications Plan**

Each project is a piece of the greater transformation effort.

- *What information should be published to the enterprise?*

The communications team should be providing updates to the progress of the transformation on a continuing basis. The project sub-team must develop a means of providing updated data to the communications team on a routine basis.

**☐ Develop Exit Strategy For Each Project Proposed**

- *How will the project be closed out and what are the criteria for project closeout?*
- *When does the ESAT team declare victory and release the project team?*

The goal of the transformation is to embed lean methodologies into the enterprise DNA and establish processes that will drive the enterprise to the future goal and vision.

- *What criteria will be used to declare the project complete and the processes firmly institutionalized?*

On the other side of the equation, not all projects will result in success. A few projects may just not work within the enterprise construct and should be terminated. What will be the criteria for extracting the team from a non-performing project (one which is not projected to achieve the desired results)?

## Step 8: Create Deployment Plan

Complete final project planning, coordination and prioritization for kickoff of transformation projects.

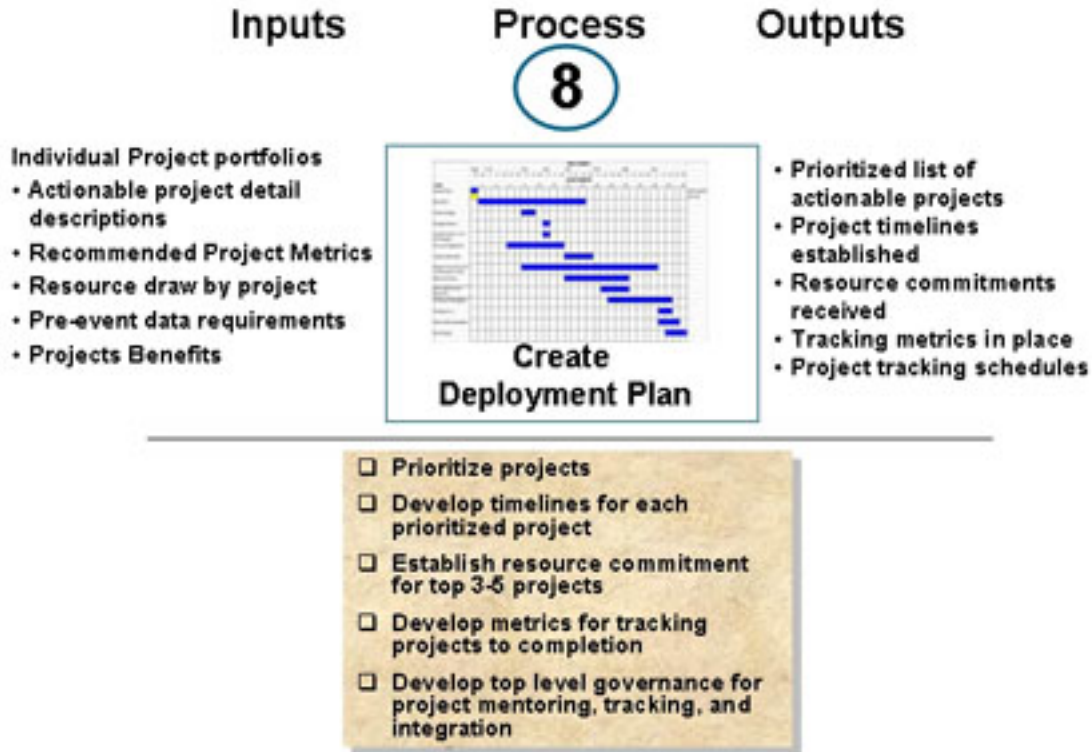


Figure 23 ESAT Step 8 IPO

### Prioritize Projects

This step is the true test of leadership commitment for the transformation effort. At this point in the process the projects should be well defined, the required cost/resources specified and the benefit of the projects delineated. Project prioritization will depend on the project flows considered in step 6 and the availability of the teams and funding to conduct the projects, It will be best to select some “quick hits” along with projects of longer duration. The key here is to ensure all the resources are available to complete the initial set of projects selected for immediate implementation.

- *What are the criteria for prioritizing the projects, where are the key leverage points that exist in the enterprise?*

Define the benefit of each potential project and align that against the goals and vision. Also selecting projects with high leverage will assure a faster transformation as the benefits are flowed throughout the enterprise in an expeditious manner.

#### **Develop timelines for each prioritized project**

Once the suite of initial projects are selected, project timelines can be finalized based on the precedence and flow of the projects created in step 6 and updated as the implementation planning work continues with the sub-teams

- *What precedence requirements are driving the selection and alignment of the projects?*

Some projects will need the data from previous projects in order to begin.

#### **Establish resource commitment for the top 3-5 projects**

The ESAT program managers will all be faced with a host of projects that they desire to begin. Resource requirements and priority will however drive which ones begin on day one.

- *What are the criteria for beginning a project?*

The ESAT team based upon their acquired broad knowledge of the enterprise processes must select the initial projects based upon enterprise strategic priorities and stakeholder needs.

#### **Finalize metrics for tracking projects to completion**

Project metrics should be designed so that they may be reviewed at the highest level in the enterprise; no new systems here. Normally reviewed at the enterprise staff meeting (as a mandatory and continuous agenda item) attended by the ESAT team members who will be the briefer.

- *What metrics fit within the enterprise construct and will reflect tracking toward the BHAG and vision?*

Define the tracking metrics so that project progress can be tracked easily and within the existing enterprise systems

**❑ Implement top level governance for mentoring, tracking, and integration of transformation effort**

The governance model, developed in step 6, is now implemented. The projects will need to be heavily mentored and guided at the outset, (remember the sub-teams were not part of the ESAT). This is where the importance of the ESAT program manager and mentor will come into play.

- *What top level (at the enterprise level) governance will be in place to track the work of the ESAT program managers and their sub-teams?*

The project tracking will need to be simple and direct for leadership

- *How will each ESAT program manager ensure the mentorship of the sub-teams?*

Initial mentorship should include transferring all the data from the ESAT to the sub-team so they have the context of their project; has this been done?

**❑ Program integration**

Step 6 through step 8 provide the method to develop the sub-projects necessary to begin the enterprise transformation. Steps 6-8 form a continuum that provides a total integration of all sub-projects across the entire spectrum of the enterprise. During Step 6 “Create Transformation Plans”, the ESAT team developed a matrix of focus areas that defined the enterprise transformation project areas. During Step 7, “Creating Actionable Projects” activity, each ESAT program manager (ESAT team members) has worked with individual teams to develop their assigned focus area sub-projects. In Step 8 “integrated Deployment Planning, all ESAT program managers must come together to integrate, prioritize, set timing and assign resources necessary to prosecute their projects as a totally integrated and managed program.

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## Appendix A – Flexible Deployment Model

The suggested execution for ESAT is a series of workshops in which the leadership team and ESAT facilitators work through the various steps of the methodology. The standard sequence of workshops and activities is detailed below. Note: The times indicated are for reference only. Event span times noted are the minimum that has been experienced for any given event point. Depending on the team, each event may take significantly longer and should be planned. The purpose is not to “do it fast” but to do it right. Stakeholder, process and future state analyses are critical to a successful ESAT. As such the time allotted for each of them must be set as a function of the enterprise complexity.

Event	Duration	Attendees	Objectives
Step 0 Enterprise lead Buy-in/commitment	2 hours	Enterprise leader and others as necessary (senior staff?). ESAT lead facilitator, Leadership team lead(s) and the ESAT champion(s)*	Discussion of enterprise commitments required and leadership commitment in time and resources
Pre-meeting	4 hours	ESAT lead facilitator, Leadership team lead(s) and the ESAT champion(s)	<ul style="list-style-type: none"> <li>• Determine goals for learning and analysis</li> <li>• Determine enterprise context</li> <li>• Identify team members</li> <li>• Determine workshop format and prerequisites</li> <li>• Conduct ESAT tailoring as necessary</li> <li>• Develop initial high level workshop agendas</li> </ul>
Facilitator Coordination Meeting	1/2 day	ESAT facilitators (including observers and coaches)	<ul style="list-style-type: none"> <li>• Develop detailed hour-by-hour workshop agendas, and output by AM/PM, day and workshop #.</li> <li>• Finalize roles and responsibilities</li> <li>• Define modified approaches to methodology where required for the specific enterprise application. Caution here: No ESAT step can be eliminated. How the step is approached and what is considered a completed step may be modified due to the maturity or lack of maturity of the enterprise.</li> </ul>



ESAT 2.0

ESAT Kick-off (can be combined with workshop #1)	1 day	Leadership team and ESAT facilitators ESAT enterprise leader for opening remarks	<ul style="list-style-type: none"> <li>• Provide lean enterprise training</li> <li>• Create team charter</li> <li>• Define enterprise boundaries</li> </ul>
ESAT Workshop #1	2 days	Leadership team and ESAT facilitators ESAT champion for outbrief at the end of the workshop	<p>Detail enterprise description</p> <p>Identify stakeholders</p> <p>Identify enterprise process architecture</p> <p>Review enterprise objectives and metrics</p>
Homework	1 month	Leadership and ESAT team	<p>Collect enterprise cost data</p> <p>Collect data on stakeholder values</p> <p>Conduct LESAT</p> <p>Collect data on enterprise performance (against metrics)</p> <p>Collect data on enterprise processes</p>
Data Update	2 hour	Leadership team lead ESAT team lead and team and ESAT facilitators	<p>Status check to review team's progress in data collection efforts and redirect as necessary</p> <p>Identify any issues to be resolved before workshop #2</p>
ESAT Workshop #2	4-5 days	Leadership, ESAT team and ESAT facilitators ESAT champion for outbrief at the end of the workshop	<p>Stakeholder value assessment</p> <p>Process interactions assessment</p> <p>Enterprise alignment assessment</p> <p>Enterprise waste assessment</p> <p>Enterprise opportunities assessment</p> <p>Future state visioning and project identification</p>
Reflection Period	> 1 week but < Month	ESAT champion and Leadership team	Identify potential project resources
ESAT Workshop #3	2-3 days (may be broken into two workshops depending on data collection)	Leadership, ESAT team and ESAT facilitators ESAT champion for outbrief at the end of the workshop	<p>Project planning and integration with enterprise transformation plan</p> <p>Develop actionable projects</p> <p>Prepare Integrated deployment plan</p> <p>Identify change management approach and governance</p> <p>Initiate communication effort</p>
ESAT Summary	Within 30 days of the end of workshop #3	ESAT support, facilitators, and LAI	Provide summary presentation, data and feedback on methodology to LAI for on-going research and development of ESAT

### **Workshop #3 Note:**

This portion of the ESAT process completes the detailed transformation planning and puts in place the mechanism for ensuring the successful transformation of the enterprise. This is also a turning point for the ESAT team from one of discovery to one of program management, mentoring and sub-team formation and tracking. Each ESAT program manager must be held responsible for the success or failure of the focus area projects within his/her assigned area. This is “the enterprise transformation”!

Appendix B – ESAT Templates

**Charter Template**

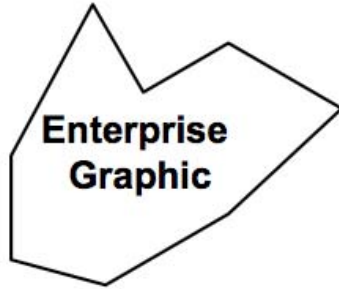
## ESAT Team Charter Template

<p><b>Description/Mission:</b> One or two sentences that describe the team's task.</p>	<p><b>Kick-Off:</b> Date of event <b>Workshop #1:</b> <b>Workshop #2:</b> <b>Workshop #3:</b></p>
<p><b>Case For Action:</b> One or two sentences that describe the problem the team is addressing and answers the "Why ESAT, why now?" question.</p>	<p><b>Team Leader(s):</b> <b>Team Members:</b></p>
<p><b>Enterprise Description:</b> Statement describing the enterprise including: -Enterprise boundaries (What is considered internal and external to the enterprise?) -Products/services delivered by the enterprise -Market segments targeted and current market position -Major competitors -Enterprise sales volume and workforce make-up and size -Enterprise cost breakout (e.g. pie chart of major costs)</p>	<p><b>Champion:</b> Sponsor; usually enterprise leader</p> <p><b>Facilitators:</b></p> <p><b>Expected Outcomes:</b> The outcomes that the sponsor desires from the project. Usually two to three measurable objectives are included.</p>

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## Enterprise Description Template

### Enterprise Description



### Enterprise Goals

---

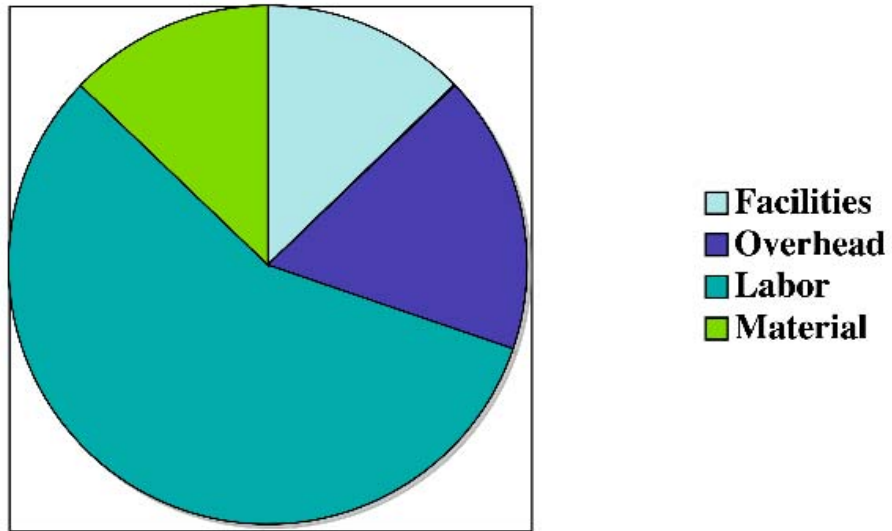
### Enterprise Statistics

- Workforce size
- Volume of work (sales)
- Number of suppliers
- Market position
- Main suppliers/partners
- Major competitors
- etc.

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## Enterprise Cost Template

### Enterprise Cost Breakout



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## Customer Value Exchange

Value Expected from the Enterprise	Stakeholders	Value Contributed to the Enterprise
<ul style="list-style-type: none"> <li>• List the data collected about value expected here</li> </ul>	<p style="text-align: center;"><b>Customers</b></p> <ul style="list-style-type: none"> <li>• List the enterprise customers here</li> </ul>	<p>This list is a starting place, tailor it as appropriate.</p> <ul style="list-style-type: none"> <li>• Needs and requirements</li> <li>• Money (for products/services)</li> </ul>

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## LESAT Template

SECTION 1 - LEAN TRANSFORMATION/LEADERSHIP											
TTL LINK	Lean Practice		RESPC								
			1	2	3	4	5	6	7	8	9
I.A Enterprise strategic planning	I.A.1. Integration of lean in strategic planning process	Current									
		Desired									
	I.A.2. Focus on customer value	Current									
		Desired									
	I.A.3. Leveraging the extended enterprise	Current									
		Desired									
I.B Adopt Lean Paradigm	I.B.1. Learning and education in 'lean' for enterprise leaders	Current									
		Desired									
	I.B.2. Senior management commitment	Current									
		Desired									
	I.B.3 Lean Enterprise Vision	Current									
		Desired									
	I.B.4. A sense of urgency	Current									
		Desired									
I.C Focus on the Value Stream	I.C.1. Understanding the current value stream	Current									
		Desired									
	I.C.2. Enterprise flow	Current									
		Desired									
	I.C.3. Designing the future value stream	Current									
		Desired									
	I.C.4. Performance measures	Current									
		Desired									

## Process Data Collection Template

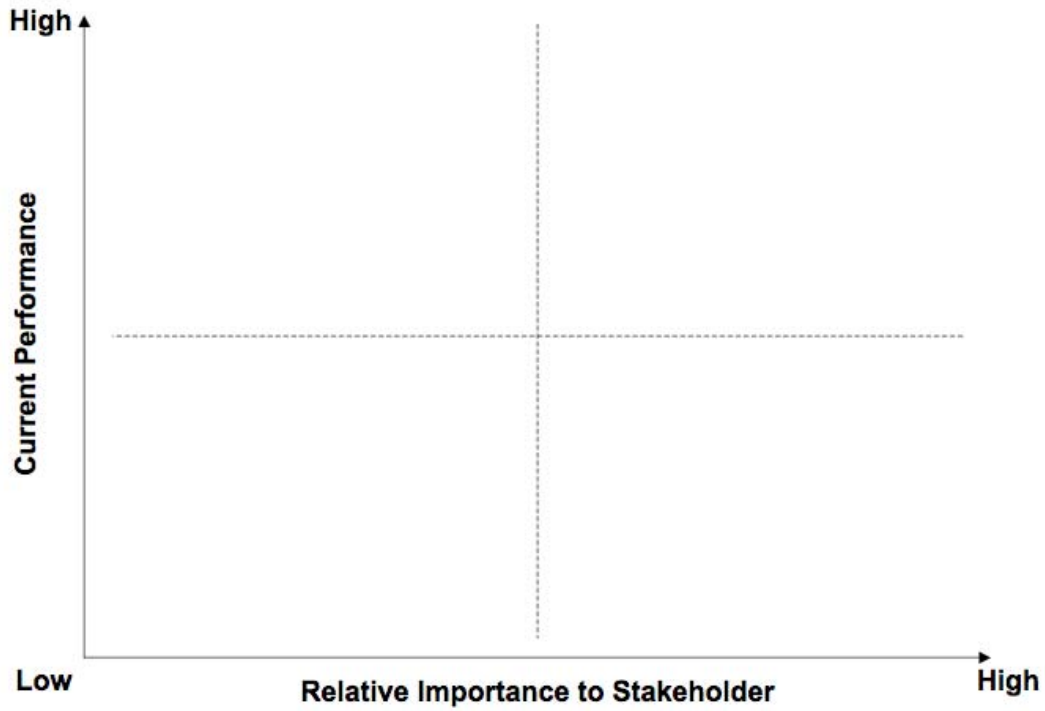
	A	B	C	D	E	F	G	H	I	J
1	EVBMA 1.0 - For LAI Member Use Only © Massachusetts Institute of Technology 2005									
2										
3	<b>DATA ENTRY FORM</b>		<b>Lifecycle Processes</b>							
4			Process Name	Process Name	Process Name	Process Name	Process Name	Process Name	Process Name	Process Name
5	Value Stream 1	Total Cost								
6		Headcount								
7		Cycle Time								
8	Value Stream 2	Total Cost								
9		Personnel Assigned								
10		Cycle Time								
11	Value Stream 3	Total Cost								
12		Personnel Assigned								
13		Cycle Time								
14	Value Stream 4	Total Cost								
15		Personnel Assigned								
16		Cycle Time								
17	Value Stream 5	Total Cost								
18		Personnel Assigned								
19		Cycle Time								
20	Value Stream 6	Total Cost								
21		Personnel Assigned								
22		Cycle Time								
23	Value Stream 7	Total Cost								
24		Personnel Assigned								
25		Cycle Time								
26										
27										
28										
29										
30										
31										
32										
33	Total	Total Cost	\$	\$	\$	\$	\$	\$	\$	\$
34		Personnel Assigned	0	0	0	0	0	0	0	0
35		Cycle Time	0	0	0	0	0	0	0	0

**Enterprise Performance/Metrics Data Collection Template**

Enterprise Metric	What is measured	Target Value	Current Value	Trend	Status

## Stakeholder Value Delivery Analysis Template

### Customer Value Delivery




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## Project Planning/Hand-off Template

### Improvement Opportunity Description

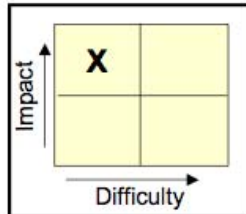
<p><b>Description:</b> A short overview of the opportunity.</p>	<p><b>Resources Required:</b> Estimate the resources required to further investigate and implement this opportunity. What time, money, people, etc. is required?</p>
<p><b>Impact</b></p> <p><b>On Stakeholders:</b> What is the impact on current and future enterprise stakeholders? What are the benefits and detriments to each of the stakeholder groups?</p> <p><b>On Strategic Objectives:</b> What is the impact on achieving the enterprise strategic objectives? How does this opportunity affect future enterprise strategy?</p> <p><b>On Current Processes:</b> What is the impact of this opportunity on current processes? Are new processes required? What is the impact on the interactions among the current processes?</p>	<p><b>Expected Outcomes:</b> What are the expected benefits to the enterprise after implementing this improvement? This should include target values for measurable outcomes.</p> <p><b>Timeline:</b> What is the timeline for further investigation and implementation? What is the start date and the duration?</p>  <p><b>Buy-in Required:</b> Who will support investigation and implementation of this improvement? Who has responsibility, accountability, and authority to ensure follow-through? Who will participate in the work?</p> <p><b>Owner:</b></p> <p><b>Sponsor (if required):</b></p>

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## 9-Block Template

**Project Title**

<input type="checkbox"/> JDI
<input type="checkbox"/> Kaizen
<input checked="" type="checkbox"/> Project



**Event Description:** Describe the task in sufficient detail. (one or two sentences)

**Reason for Event:** Describe the problem the team is addressing and answers the "why now" question.

**Estimated Event Date(s):**  
XXX

**Recommended Process Owner:**  
XXX

**Recommended Team Leader & Members:**  
XXX

**Estimated Implementation Costs:**  
XXX

**Estimated Savings:**  
XXX

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