

16.852J/ESD.61J
Team Assignment
Fall 2005

Overview

This is a team assignment to evaluate how an entire enterprise delivers value to its stakeholders (especially the end customer), from concept generation of the product/service to final product/service delivery and support to end customers. This will encompass analyzing and evaluating the current process flow in terms of resource requirements, people, budget allocation, time involved in each step/activity, etc. In addition, current information flows, tools, technologies and enterprise metrics employed will be identified. Sources of enterprise waste are to be identified and measured. Teams will be required to develop a Lean Vision for the enterprise that will deliver value to stakeholders in a more streamlined, waste-free manner. Finally, a transition plan will be developed which outlines the steps involved in migrating from the current state to the Lean Vision state. This will include prioritizing “lean” projects that the business unit should perform including key organizational, information and technology enablers.

It is assumed that appropriate organization personnel will be interviewed and that actual data will be utilized to represent times, resources, etc. Company confidential data may be disguised or normalized as required.

You are encouraged to work on a company or organization that you or one of your team members are involved in. The final presentation should be geared toward the enterprise leader of the organization that you have chosen. The presentation will be accompanied by a written report. The final report should be the culmination of the individual steps of the assignments due throughout the semester, as outlined in the following pages. Employ the Enterprise Value Stream Mapping and Analysis (EVSMA) document as a further guide to the completion of each of these steps.

EVSMA STEPS

STEP 1: Define the Enterprise

Part A: Enterprise Description (due Sept 26)

Choose a company/organization to analyze. If the enterprise which you are currently analyzing is too expansive, you may choose a specific product line on which you will work (please clear with Course Instructor). The enterprise you select to study, however, must span the product life cycles processes, i.e. customer requirement definition, product and process development, production, assembly, suppliers, distribution and support. It must also consider enabling support functions such as Finance, Human Resources and IT. Appropriate leadership processes should also be included. 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.

Write a team memo (a charter following the template provided in the guide is optional). Please be sure to include your team members' names and contact information. Also list the role of each team member as agreed upon by the team, including designating one person as a point of contact for your team.

Deliverables:

1. Two to three pages describing the enterprise you have selected and the requirements explained above. The description should include a specification of the boundaries of the enterprise and identification of its major processes.
2. A team memo as described above.

Part B: Strategic Goals/Objectives (due Sept 28)

Identify the major driving forces of the external environment in which your defined enterprise operates. Through interviews with company executives/managers, review of company literature (annual reports, etc.) and the general business literature, determine the major strategic issues facing your enterprise. Provide a summary of the strategic plan for your enterprise in terms of its mission, goals and objectives.

Deliverable:

Two to four pages describing the strategic issues of the organization and their current challenges. Describe their current strategic goals and objectives for addressing/meeting these issues.

Part C: Describe Stakeholders, Processes and Metrics (due Oct 3)

Identify Stakeholders, Processes and Metrics

In this step you will identify the key stakeholders, high level processes and metrics currently employed by the enterprise.

1) Stakeholders

Identify who are the end customer(s) and end user(s) of your enterprise. In addition, identify other stakeholders of your enterprise (partners, suppliers, employees, stockholders, leadership, society, and union (if necessary)). Explicitly list and group the major entities for each stakeholder category.

2) Processes

Identify the high level processes for your enterprise. Develop a high level map of product life cycle flow from concept generation of the product to final product delivery and support to the end customer (example: customer requirement definition, concept generation, product and process development, manufacturing, delivery and support). Develop the product value stream map as the enterprise currently operates, not as you perceive that it should operate. The product value stream map should include no more than 25 steps.

Overlay key enabling infrastructure processes (finance, human resources, etc.) and leadership processes. Refer to the lean enterprise process architecture.

3) Enterprise Metrics

Identify the metrics currently being used to monitor enterprise performance. What are the target values for these metrics?

Deliverables:

- List of stakeholders
- High level enterprise process value stream(s)
- Enterprise metrics
- Provide a brief discussion of any preliminary insights or observations you may have on these three areas.

STEP 2: COLLECT DATA (due Oct 12)

In preparation for Step 3 you will be collecting data on costs, stakeholders, processes, and metrics. You may want to collect the data in parallel, rather than independently, particularly if you are making a site visit and/or performing interviews. NOTE: LESAT assessment has been deferred until STEP 4.

1) Identify Enterprise Costs

What are the major sources of cost in the enterprise, e.g., direct labor, facilities, overhead, materials, etc. How much of the cost is coming from the supply chain?

Deliverable:

- ☐ Prepare a pie chart depicting information about the enterprise cost breakdown

2) Define the Value Exchange Between each Stakeholder

In this step you will specify the value exchange between each of the stakeholders identified in Step 2.1 above and the enterprise. For the customer/end user, think about what their needs (what do they really value?) and requirements are in terms of product or service, delivery lead times, price, quality, etc. Then take a look at your enterprise as it is today and describe the product/service it is providing in terms of the same performance factors.

Specify the value needed and the value contributed for each of the other stakeholders of the enterprise, e.g., Suppliers/Partners, Employees, Shareholders, Society, Union (if any), and the Leadership

Deliverable:

- ☐ Completed Stakeholder Value Exchange Templates

3) Collect Individual Process Data

Ideally we would like to identify the approximate cycle time, headcount and cost associated with each process identified in Step 1.C.2 above. At a minimum obtain the approximate headcount associated with each process. If you encounter difficulty getting specific financial data, the numbers can be normalized (% instead of \$). Employ the EXCEL Spreadsheet provided or create your own to enter the data.

Deliverable:

- ☐ Spreadsheet with process data

4) Metrics

Collect the trend data for the metrics identified in Step 1.

Deliverable:

- a. Metric trend data

Step 3: Construct Current State Perspectives

In this step you will analyze the information you have collected on stakeholders, processes, and metrics.

Part A: Assess the Value Exchange Between Each Stakeholder and the Enterprise (due Oct 19)

Interview enterprise managers and individual stakeholders (if possible) and chart Relative Importance vs Current Performance for the several major factors contributing to value for each stakeholder identified in Step 2.

Also compare the relative importance to the enterprise of each stakeholder. Use the templates provided.

Deliverables:

- Completed Stakeholder Performance Templates and Stakeholder Value Comparison Templates.
- One to two pages discussing value delivery to the various stakeholders, highlighting discrepancies between current performance and relative importance of these values

Part B: Analyze Current Enterprise Process Performance (due Oct 24)

1) Individual Processes

Analyze the process data that you collected in Step 2.

Deliverables:

- One to two pages that identify any insights you have gleaned. For example, explain how the cycle times relate to the strategic timing requirements of the product/service. Are there any imbalances in the resources (headcount or costs)? What processes have the majority of the headcount associated with them? Identify any other issues that surface.

2) Process Interactions

Identify key flows of information, materials, and resources, including enabling support functions as well as life cycle functions. In analyzing the flows, consider the following factors: stability, timeliness, accuracy, completeness, format, accessibility, quantity, usefulness, redundancies, iterations, etc. Use the Interaction spreadsheet or another analysis method of your choosing.

Deliverables:

- Interaction spreadsheet
- Five to ten pages describing your analysis of the key interactions within the enterprise. Identify issues, insights, and opportunities for improvements

Part C: Analyze the Enterprise Metrics (due Oct 26)

Refer to the metrics currently being used at the enterprise level identified in Step 2. What are the trends over the past several periods (months, quarters, etc.)? How do the current values compare to the target metric values? Based on this information, how well is the enterprise achieving its strategic objectives? Compare the enterprise metrics employed to the criteria for good metrics presented in class. Do the enterprise metrics flow down to other parts of the organization in a logically consistent manner?

Deliverable: Three to five pages discussing the metrics issues outlined above. Include any new insights or observations you have made.

Part D: “X-Matrix” Evaluation of Process/Stakeholder/Metric/Strategic Objective Interrelationships (due Oct 31)

Using the “X-matrix” template perform an evaluation of the interrelationship of each of these key areas. How well do the enterprise metrics measure the strategic objectives? Do the enterprise processes have appropriate metrics? Are the strategic objectives aligned with delivering stakeholder value? Do the enterprise processes deliver value to the stakeholders? Refer to the EVSMA document for additional guidance.

Deliverables:

- X-Matrix
- Five to ten pages describing your analysis of the key interactions within the enterprise. Identify issues, insights, and opportunities for improvements.

STEP 4: Identify Enterprise Opportunities

Part A: LESAT Assessment (due Nov 7)

Conduct an organizational assessment of lean progress and “readiness to change” using the Lean Enterprise Self-Assessment Tool (LESAT). Use the LESAT Summary Sheets to record present and desired lean levels, focusing primarily on the “current” levels.

Deliverables: Three to five pages summarizing the LESAT evaluation results. Identify the issues for each of the three LESAT sections implied by the evaluation. How do these sets of issues relate? How do these issues compare to those you identified in previous steps?

Part B: Enterprise Waste (due Nov 9)

Identify sources of enterprise-level waste using the six categories identified in the EVSMA document. Consider all the previous analyses, including the results of your LESAT assessment to determine sources of waste. Based on your analyses, identify opportunities for improvement at the enterprise level.

Deliverables:

- Five pages summarizing the type and extent of enterprise level wastes.
- Identify opportunities for improvement. This should be a summary of all the opportunities for improvement identified from previous steps (but save the solutions for Step 5).

Interim Presentation (due Nov 14)

Step 4 marks the transition from considering as-is state of the enterprise to developing a future state. This is a natural point for a review of progress made thus far.

Deliverables: A ten-minute presentation followed by a five-minute question period. The presentation should provide a brief overview of the enterprise and then discuss its current state using the information collected in steps 1-4.

STEP 5: Describe Future State Vision (due Nov 21)

Steps 1 and 2 of the Team Assignment had you describe/characterize the particular enterprise that you chose to analyze and to define “value” to the end customer and to the other key enterprise stakeholders. Steps 3-4 had you dig deeply into the enterprise as it is currently constituted. You have analyzed the customer and strategic requirements, metrics employed, cycle times, resource utilization, interactions, and sources of waste. This analysis provides a measure of the degree of “leanness” of your enterprise. Now in Step 5 of the Team Assignment, you will have the opportunity to create and describe a “Lean Enterprise Vision” for your organization.

Define the future state of your enterprise as you believe it should look approximately five years out. Create a clear vision of the characteristics of your enterprise based on what you have learned from course lectures, readings, and your own imagination as to what might be possible.

If appropriate, develop a new Value Stream Map of your future enterprise, considering the same elements as in your analysis in Step 3. Contrast this to your enterprise’s current Value Stream Map. How would the cycle times be different? What would be the resource requirements? How would information now flow? To what extent has waste been eliminated?

Give consideration to all the stakeholders. What will the customer relationships and satisfaction metrics look like in your new enterprise? How about interactions/relationships with suppliers/partners? What kind of working environment will your employees have? What will be the characteristics of your enterprise leadership? What kind of organizational structure will you need to support this new value stream? What will your stockholders have to say about this lean enterprise? What view will the Union (if any) have? Will the new enterprise have a different impact on society?

Review the key issues you identified earlier. Then perform a gap analysis between your “As is” state and your envisioned “To be” state. What are the key differences? What are the critical processes/functional areas that require significant focus to achieve your future vision and to satisfy your strategic objectives? Where are the significant technology/information gaps?

How will you know when you have achieved your vision? Identify the metrics you would 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. How will the metrics flow down to other parts of the organization?

Deliverable: Utilize the number of pages you feel is required to convey your new enterprise vision.

Step 6: Create Transformation Plan (due Nov 28)

In this section you will describe how to get from your current state (Step 4) to your enterprise's new enterprise vision (Step 5). You will be making recommendations to your senior executives on how to transform your enterprise to a lean one.

First, identify potential opportunities for significant improvement and prioritize areas of focus. For example, where would you recommend that your enterprise leader start? Shop floor? Product development? Suppliers? Some combination of the above? Identify key high-level projects that should be undertaken to achieve the desired transformation and prioritize these on the basis of relative importance using the Improvement Idea Prioritization Template.

Map out a high-level transition plan. Use a chart to display the key elements noting the time frame for each. Specify any precedence relationships among the opportunities and any enabling activities.

This transition plan should take into consideration information and technology enablers, recommendations on new process initiatives (e.g., IPPD) and potential alternative organizational structures. What are the training requirements? What other recommendations might you have for your executives on transformation requirements?

Finally, identify any barriers that you perceive to making this transition. What mitigating strategies might you suggest?

Deliverable: Utilize whatever numbers of pages you feel are required to convey your plan.

FINAL REPORT AND PRESENTATION

Final Report (due Dec 14)

The final report will be the culmination of Steps 1-6. You can assemble each of the sections that you prepared previously into a single document if you like. The following two additions are required: First, add another section to Steps 3-6 that summarizes all the key issues that you gleaned from your analysis. What are the critical dimensions of your enterprise that need enhancement? Second, add a one to two page Executive Summary at the front of your report

Presentation (due Dec 7, 12 or Dec 14 as assigned)

The final presentations will be held in the first week of December. Gear your presentation to your enterprise executive. Assume that you are presenting your management with an assessment of the current lean state of your company (Steps 3 and 4), a portrayal of what your future lean enterprise could be (Step 5), and your recommendations on what will be required to get there (Step 6). Use your value stream maps (before and after) to illustrate the different states. A prioritized transition plan should be included. The presentation should consider all the dimensions of the enterprise – people, processes, technology, and information. It should also include your recommendation of an appropriate Value Proposition for the enterprise relative to your proposal.

You will have a maximum of 20 minutes to give your presentation. This will be followed by a period of questions/discussion for approximately 10 minutes. Times will be strictly adhered to. You may use any number of different presenters from your team that you desire.

Deliverables: Please submit both your report and presentation. At the time of your final presentation, please bring four paper copies of the presentation. Please bring two copies of your final report to the last day of classes on December 14.