

16.682 The Aerospace Industry

March 30 Class

Special Guest:

Prof. Debbie Nightingale

Plan for the Class

- 3:05-3:10 Announcements and Introductions
- 3:10-3:55 Lean Enterprises Discussion (Ch 6)
- 3:55-4:05 Break
- 4:05-4:50 Av Week Article Discussion
- 4:50-4:55 Muddy cards
- 4:55 Adjourn

VISION 2016

*People working together
as a global enterprise
for aerospace leadership**

*Boeing N Forever New Frontiers**

Core competencies

Detailed customer knowledge and focus

We will seek to understand, anticipate and be responsive to our customers' needs.

Large-scale systems integration

We will continuously develop, advance and protect the technical excellence that allows us to integrate effectively the systems we design and produce.

Lean Enterprise *

Our entire enterprise will be a Lean operation, characterized by the efficient use of assets, high inventory turns, excellent supplier management, short cycle times, high quality and low transaction costs.

Values

Leadership

Integrity

Quality

Customer satisfaction

People working together

A diverse and involved team

Good corporate citizenship

Enhancing shareholder value

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*updated as of January 2001

Lean Enterprises

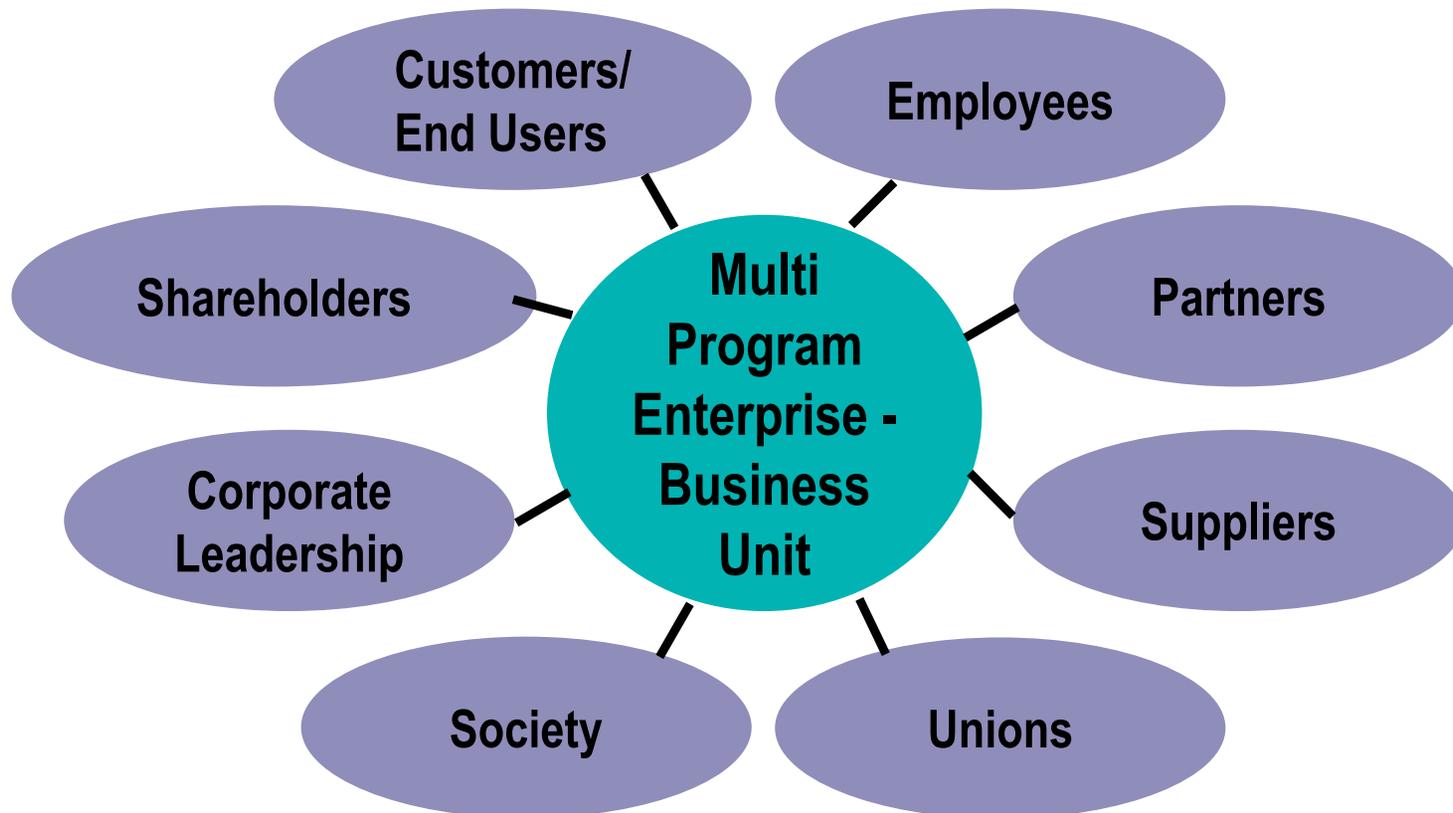
“A lean enterprise is an integrated entity that efficiently creates value for the multiple stakeholders by employing lean principles and practices.”

Source: *Lean Enterprise Value*, Ch 6

- Can we consider Course 16 as an Enterprise, and if so, what kind of enterprise is it?
- Who are the stakeholders for course 16 and what are their value expectations?
- How to the Lean Enterprise Model principles and practices apply to Course 16 activities?

Enterprise Stakeholders:

A corporate example



“Any group or individual who can affect or is affected by the achievement of the organization’s objective”

Points Captured from Class Discussion

Course 16 Stakeholders

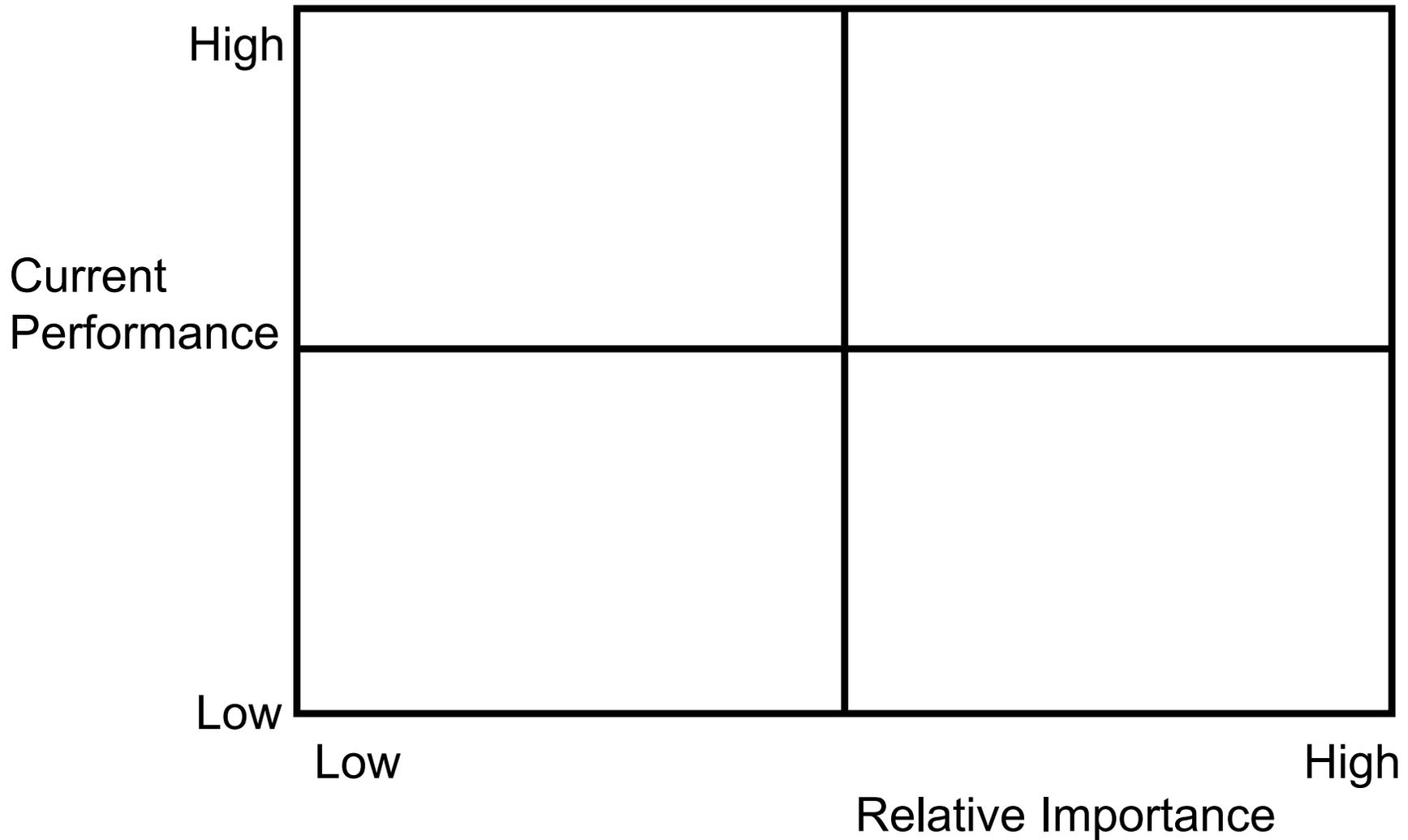
- Students
- Professors
- Corporate sponsors
 - Hiring jobs
 - Research funds
- MIT
- Government sponsors
 - Hiring jobs
 - Research funds
- Staff
- Parents
- Alumni
- Other universities
- Professional societies
- Nation as a whole

Value

- “How various stakeholders find particular worth, utility, benefit or reward in exchange for their respective contributions to the enterprise”

Stakeholder: _____

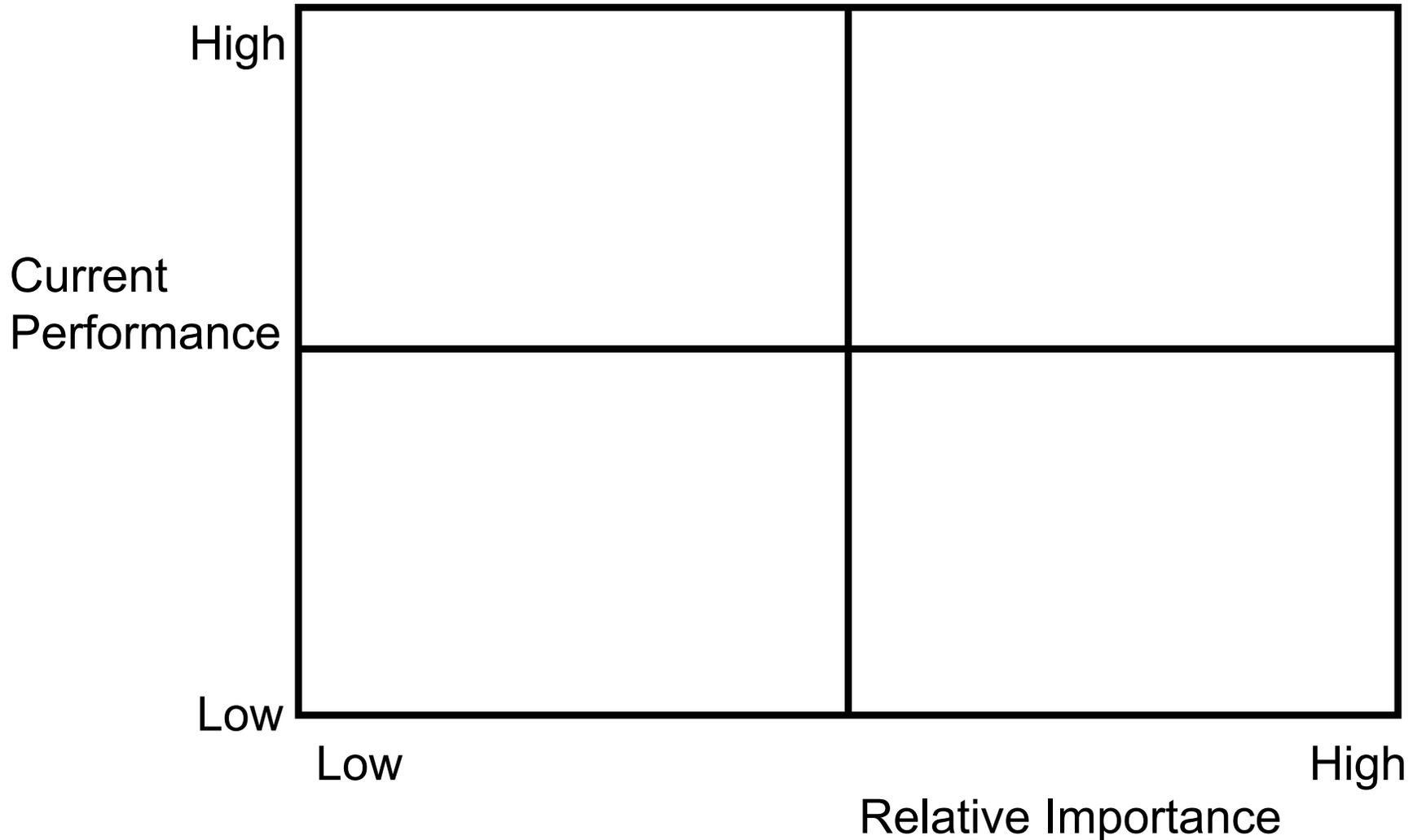
Major Factors Contributing to Stakeholder Value:



Stakeholder: Customer

Major Factors Contributing to Customer Value:

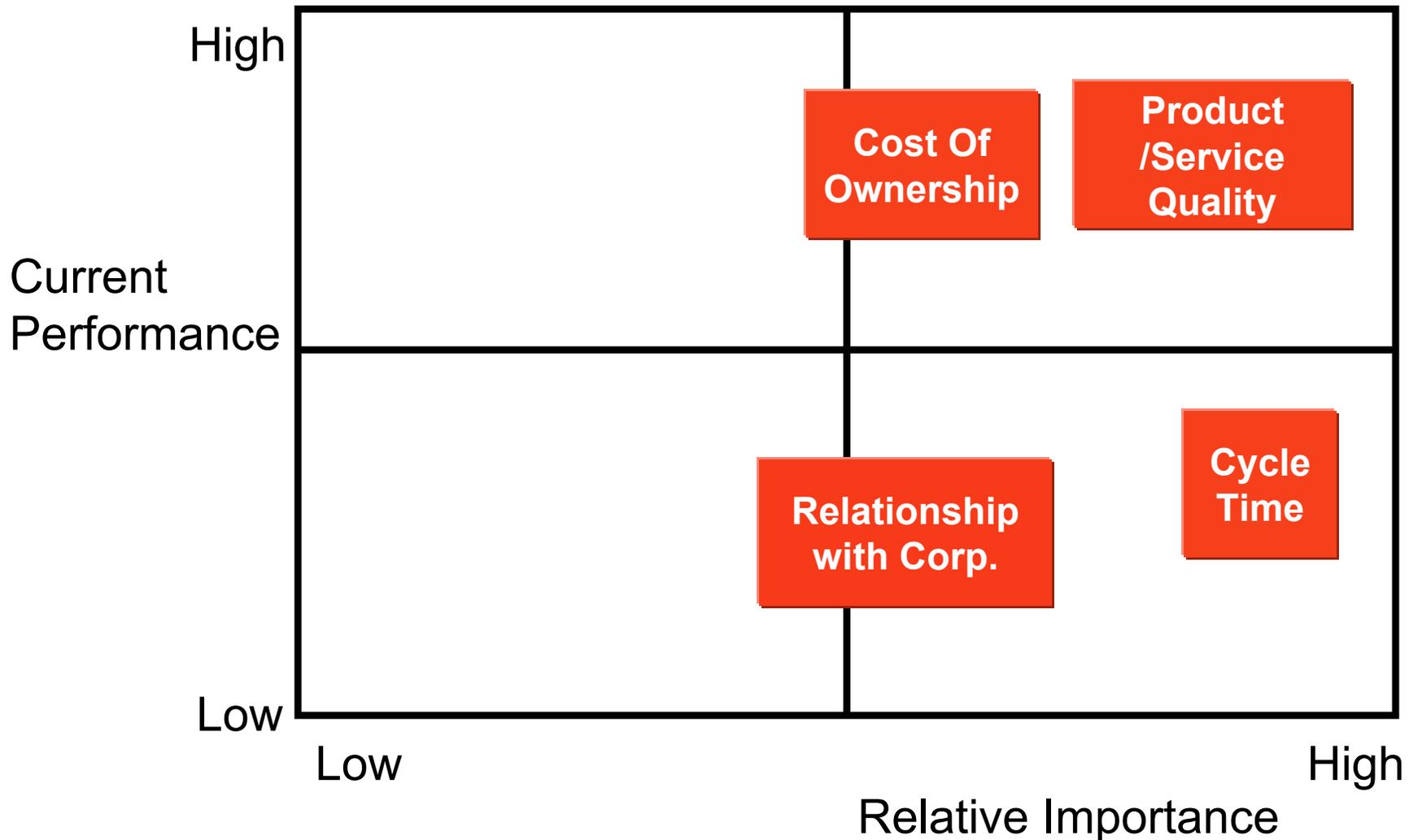
- **Product/Service Quality**
- **Relationship with Corporation**
- **Cost of Ownership**
- **Cycle Time**



Stakeholder: Customer

Major Factors Contributing to Customer Value:

- Product/Service Quality
- Relationship with Corporation
- Cost of Ownership
- Cycle Time



LEM Architecture and Overarching Practices

Meta-Principles/Enterprise Principles

Enterprise Level Metrics

Overarching Practices

**Identify & Optimize
Enterprise Flow**

**Assure Seamless
Information Flow**

**Optimize Capability &
Utilization of People**

**Make Decisions at
Lowest Possible Level**

**Implement Integrated
Product & Process
Development**

**Develop Relationships
Based on Mutual Trust &
Commitment**

**Continuously Focus on
the Customer**

**Promote Lean
Leadership at all Levels**

**Maintain Challenge of
Existing Processes**

**Nurture a Learning
Environment**

**Ensure Process
Capability and
Maturation**

**Maximize Stability in a
Changing Environment**

Metrics -Data - Barriers - Interactions

Enabling Practices (~ 60)

Metrics -Data - Barriers - Interactions

Supporting Practices(~300)

AvWeek Discussion

- In addition to your prompting questions for each article, consider:

Are the principles of Lean Thinking relevant to this article, and why or why not?