Making Sense of Sustainability
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What are we going to talk about?

• Understanding the theme of this conference
• What is sustainability?
• SCOR and sustainability
• Understanding the Seven Senses of sustainability
• Explore the realities and complexities of sustainability
• Applied sustainability in supply chain management
• Questions and Answers
Sustainability - A Choice or a Business Imperative?

What is Sustainability?
Is there a compelling business case for sustainability?

$\textdollar\textdollar\textdollar\textdollar\textdollar$

or

??????

To have a *compelling* business case,

- Valid
- Feasible
- Defensible
- Acceptable
Business cases can be built at different levels:
• Required to do
• Cost savings
• Cost avoidance
• Revenue generation/strategic advantage
• Business cases recognize both economic and social factors.

Sustainability – the Seven Senses
Today’s Reality

- If you sell, be prepared to deal with sustainability issues
- Reality of environmental regulations
  - Growing exponentially
  - Often inconsistent
    - Internally
    - Externally (EPA Focus Group)
  - Dynamic
  - Politically driven
  - National and cultural disparities
  - Compliance is not enough!
- Internationally, which standard to use?
In other words, sustainability makes *Legal* sense!

**Legal**

What is interesting about this picture?
Yet....

• The problem with focusing on the legal sense

• We do enough to follow the letter of the law, not the spirit

• Sustainability considered a constraint, not an opportunity

• Yet, there is another issue to look at ...

Why Sustainability Now?!?
Rare Earth Elements (Conflict Minerals)

<table>
<thead>
<tr>
<th>Rare Earth Element</th>
<th>Uses</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum</td>
<td>Catalytic converters, Fuel cells</td>
<td>&lt;15 years No alternatives</td>
</tr>
<tr>
<td>Indium</td>
<td>LCDs</td>
<td>&lt;10 years</td>
</tr>
<tr>
<td>Gallium</td>
<td>Critical input into next generation of solar cells</td>
<td>? &lt; 1% of all future cells</td>
</tr>
<tr>
<td>Tantalum</td>
<td>Cellphones, Smartphones</td>
<td>?</td>
</tr>
<tr>
<td>Uranium, zinc, copper, nickel, phosphorous</td>
<td>Electronics, Agricultural applications</td>
<td>Zinc to run out by 2037</td>
</tr>
<tr>
<td>Antium</td>
<td>Flame retardant materials</td>
<td>&lt; 15 years</td>
</tr>
</tbody>
</table>

Why Sustainability Now?!?

- Challenge of Clean Fresh Water
- Less available
- Greater demand
- Widely believed to be basis for next world war

— Levi Strauss
3000+ liters to make one pair of 501 jeans
Why Sustainability Now?!?

• Greater competition for existing resources
  – Demand from consumption in developing countries/areas:
    • Vietnam
    • China
    • Africa

• Resources needed for both end products and infrastructure

• Over the last 10 years, China’s average 15% annual growth now accounts for over 40% global demand for steel

• Similar trends for concrete

The Results

• Demand far exceeds supply

• To succeed, we need to change demand and/or increase supply!
What is needed is a different way of thinking about things!

- Insanity: doing the same thing over and over again and expecting different results.

In other words, sustainability makes Resource sense!
Something to think about

- Legal + Resource = WE HAVE TO DO IT!

- Is there another sense?

Question

- In most firms, what is the ratio of value-adding to non-value-adding activities (measured in time, cost)?

A. 1: 10
B. 1: 100
C. 1: 200
D. 1: 1000
Premier Brands with Masco Revenue Greater than $500mm+

Impact of Waste

• Over 300 projects, what do you think the average return on investments was?
  • > 630%

• During the last cohort, over 25 projects, what was the total payback?
  – In excess of $10,000,000 USD
Because pollution is simply another form of waste.

Something to think about?

Anything that does not add value is ultimately waste!

Henry Ford
The Model T Ford and Waste

Seven Forms of Waste (thanks to Lean)

- Waste from overproduction
- Waste from waiting times
- Transportation waste
- Process Waste
- Inventory Waste
- Waste of motion
- Waste from product defects
Eighth Form of Waste

Waste of Human Knowledge and Capability

In other words, sustainability makes *Economic/Cost* sense!
You are not alone....

Increasing importance of the supply chain
- New reality of competition
- Capabilities and capacities of the supply chain.
- Expertise of the supplier base
- Reputation of the supplier base
- Develop closer relationships with your supply chain partners
- Ability to reduce lead times, costs, improve costs.
- YET
  - You are no better than your supply chain!
Examples

- Visibility in the supply chain
  - Expansion to C-TPAT, PIP
- Impact of developments such as FairTrade
- Supplier development more important
- Measurement, Reward, Problem Solving
- Managing the trade-offs
Which is more environmentally responsible?

The Integrated Supply Chain

Source: Supply Chain Faculty, Michigan State University
SBM Elements

1. Management of Major Suppliers

2. Management of Minor Suppliers

3. Scouting

4. Transition Management

Other Issues

• What environmental standard to use?

• The Challenge of *credibility*
In other words, sustainability makes *Supply Chain* sense!

Three Levels of Sustainability

1. Sustainability as Public Relations
2. Sustainability as Waste Minimization
3. Sustainability as Business Model
The Business Model

Changing Realities

• 1990s
  – Company against company

• 2000
  – Supply chain against supply chain

• 2013
  – Business model against business model
Interesting Insight

There is a fundamental difference between being **OUTPUT DRIVEN** and being **OUTCOME-DRIVEN**.

Output driven specifies both:

- Desired outcome
- Method of achieving the outcome

Outcome-driven specifies only the outcome

- Allow more freedom for the supply chain
Outcome-driven Options

Six Major Outcomes:

- Cost
- Responsiveness
- Security
- Sustainability
- Resiliency
- Innovation

In other words, sustainability makes *Business* sense!
• When we combine Cost, Supply Chain, and Business Model Senses, we get...

WE WANT TO!

A Tale of Spice and India and An American Firm
In other words, sustainability makes *Social* sense!

![Diagram showing sustainability as a central node connected to Legal, Resource, Social, Economic/Cost, Business Model, and Supply Chain]

**New Realities of Sustainability**

- Sustainability is dynamic.
- Sustainability involves trade-offs.
- You cannot be all things to all people.
- You have to decide what sense of sustainability you want to focus on.
- You have to do sustainability in a way that *fits* you.

*Common sense plays a great role in sustainability*
In other words, sustainability makes *Common* sense!

What happens when we add Social and Common?

- We get
  - *We should*
  - *We will*
Firms now emphasizing Sustainability

Sustainability – Constraint or Opportunity?

- *Sustainability gives you the chance to rethink everything that you have done in the past*

  *Culture plays a big role*
A Checklist...

- Why are you thinking about sustainability?
- How important is sustainability and why?
- Do you have the necessary infrastructure in place?
- Are you prepared to be committed?
- Are you willing to take the necessary steps:
  - Reward
  - Punish
- Do you have the necessary support to ensure impact and consistency?

Foundations of Sustainability

1. Business Model
2. Metrics
3. Processes
4. Culture
5. Time orientation
6. Recognition of fit
Some Final Thoughts

- Sustainability is a mixed message.
- Yet, there is strong evidence that sustainability is no longer a fad.
- And it represents an opportunity for firms.
- It is no longer a choice but a business imperative!
- It can be done well; it can be done poorly; the decision is up to you!

The Lessons of Henry Ford

Embrace Balance

People

Bearable
Equitable
Sustainability

Planet

Viable

Profit
Questions