

Sustainable Development and the Business Value Chain

The Business Case for Sustainable Development

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Presentation Outline

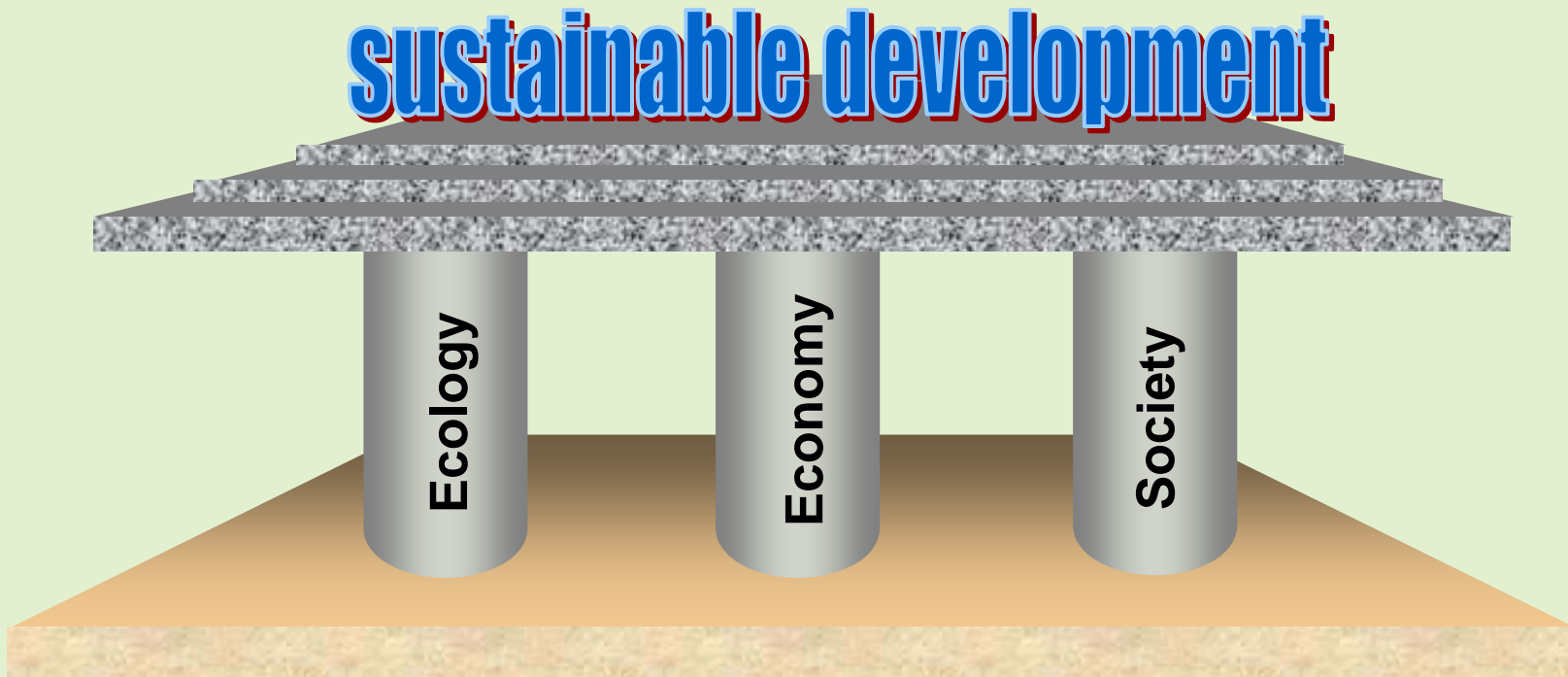
- Attitudes on Sustainable Development
- Sustainability and the Value Chain
- Case Study Examples
- Putting a Dollar Value to Sustainability



The three “pillars” of sustainable development

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Sustainable Development is the balance of economic success with environmental protection and social responsibility

What Do You See?

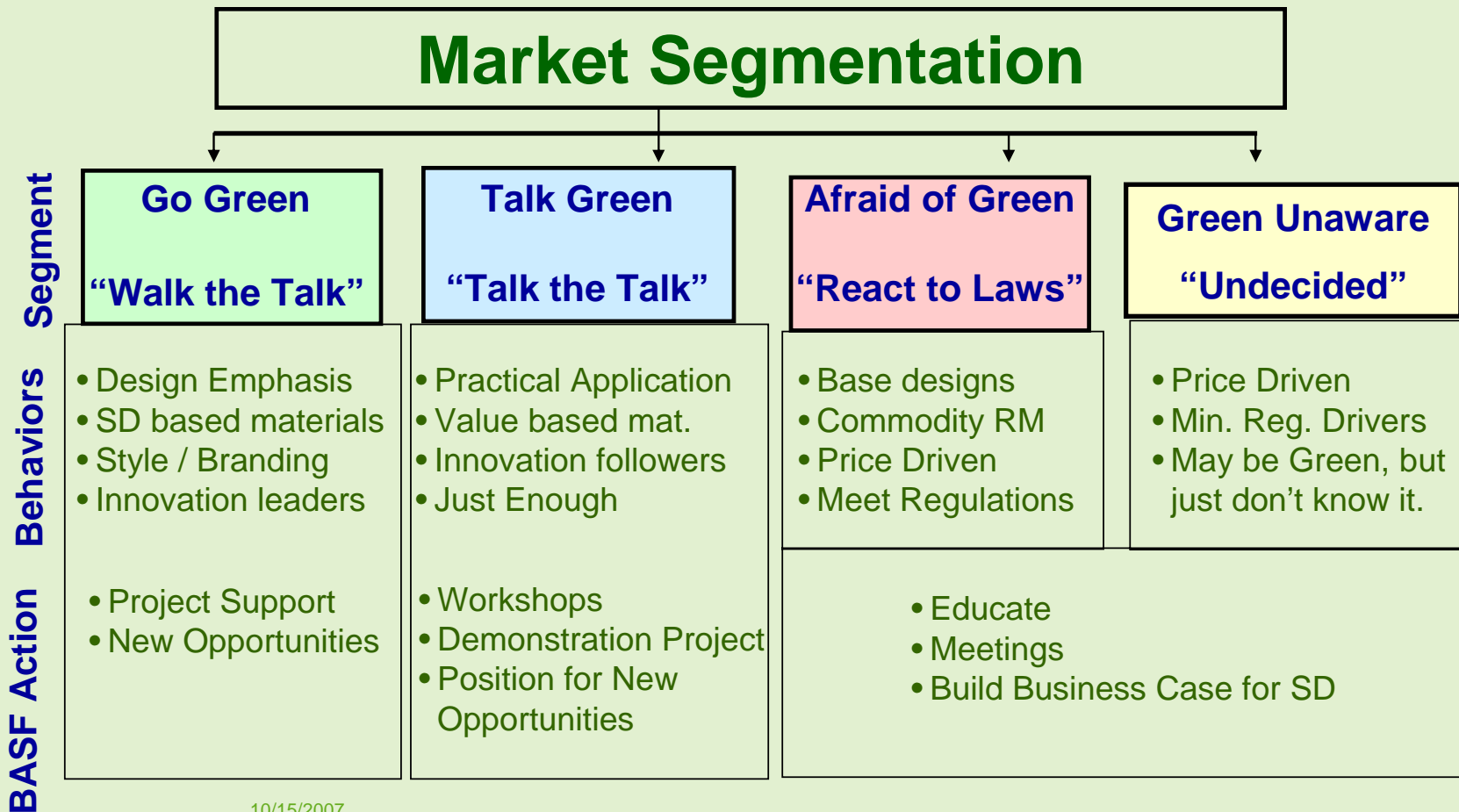


- a) Garbage
- b) Source of environmental contamination
- c) Misallocation of corporate resources
- d) Technical nutrients

Evolution of Attitudes

- **1970's Thinking - Garbage**
 - Landfill is lowest cost option with no incentive to do otherwise.
- **1980's Thinking – Source of Contamination**
 - Regulations adopted to control amount, and types, of waste to landfill.
 - Costs for landfill begin to rise.
 - EU more aggressive due to limited space.
- **1990's Thinking – Misallocation of Corporate Resources**
 - Waste minimization programs become common to business.
 - Drivers – Regulatory burden and costs savings needed to improve margins (i.e. lean business model).
- **2000's Thinking – Technical Nutrient**
 - Goal of zero emissions – use waste as raw material (nutrient) in another process.

Attitudes on Sustainable Development



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What is Business Value?

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■ Business Value

- Those activities that increase the competitive strength of a business.
- The strategy of the business group determines what activities are valuable.



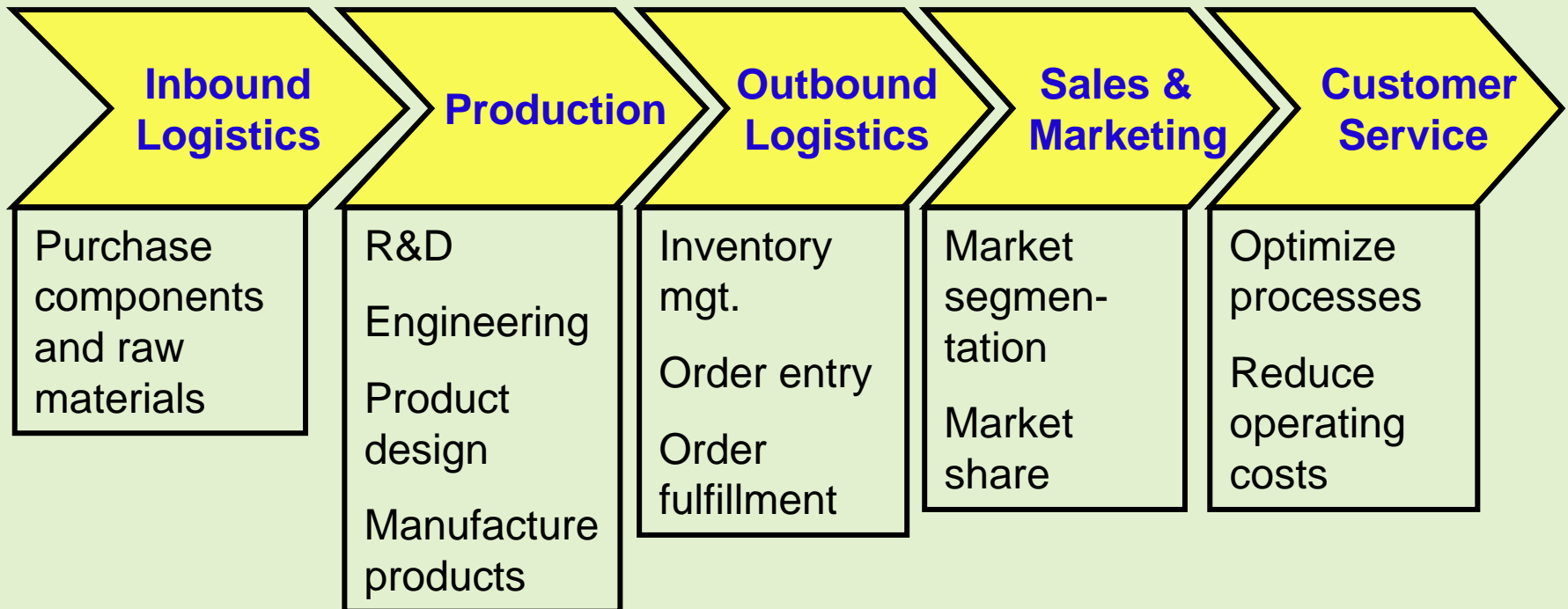
Business Strategy

- "Strategy is the direction and scope of an organization over the long-term: which achieves advantage for the organization through its configuration of resources within a challenging environment, to meet the needs of markets and to fulfill stakeholder expectations". Johnson and Scholes (2004)

- **Elements of Business Strategy**
 - Long-term direction
 - Selection of which markets in which to compete
 - Advantages over competition
 - Required resources (skills, assets, finance, relationships, technical competence, facilities)
 - Factors that affect the ability to compete (business environment)
 - Values and expectations of stakeholders

Business Value Chain

- Activities a business undertakes to implement it's strategy.



Strategic Value of Sustainable Development

■ Value Case

- Companies have a role in safeguarding the environment and improving quality of life for all.

■ Protecting the Business

- Reducing risk – exposures of physical, human and intangible assets.
- Strengthen license to operate – reduce political risk and improve degree of acceptance.
- Increase brand value and reputation.

Tactical Value of Sustainable Development

- Reduce costs – direct and indirect
- Improve productivity
- Help form the best team in the industry
- Manage change and nurture knowledge sharing
- Improve access to cost of capital
- Promote revenue growth
- Increase market access
- Stimulate innovation

New Opportunities in Financial Markets

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- Business in accordance with SD is attractive to investors because it aims to increase long-term shareholder value
- Sustainability is considered a catalyst for enlightened and disciplined management, and, thus, a crucial success factor
- Sustainability performance can now be financially quantified

Value Drivers for Sustainability

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- Reduce Operating Costs
 - Brings to light “hidden” costs and helps optimize manufacturing.
- Value-based Pricing
 - Set pricing with an understanding of total costs.
- Customer Service
 - Identify production efficiency improvements that result in higher output.
- Research and Development
 - Prioritize research projects and support gate decisions.



Value of Sustainable Development From Secondary Issue to Business Case

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- Dow Jones Sustainability Indexes (DJSI)
- Launched in 1999, they are global indices that track the **Financial Performance** of leading Sustainability-Driven companies worldwide.

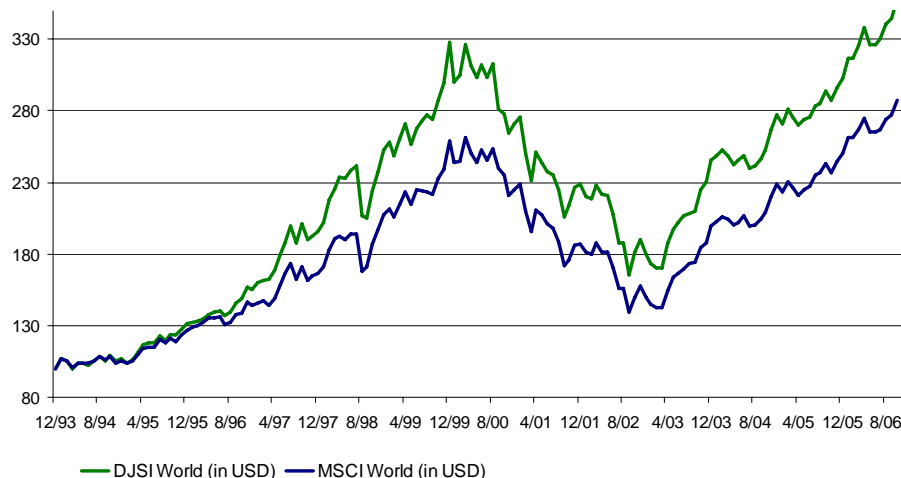
DJSI World – USD Performance and Risk (I)

December 1993 - October 2006, USD, Total Return Index

DJSI World / MSCI World:

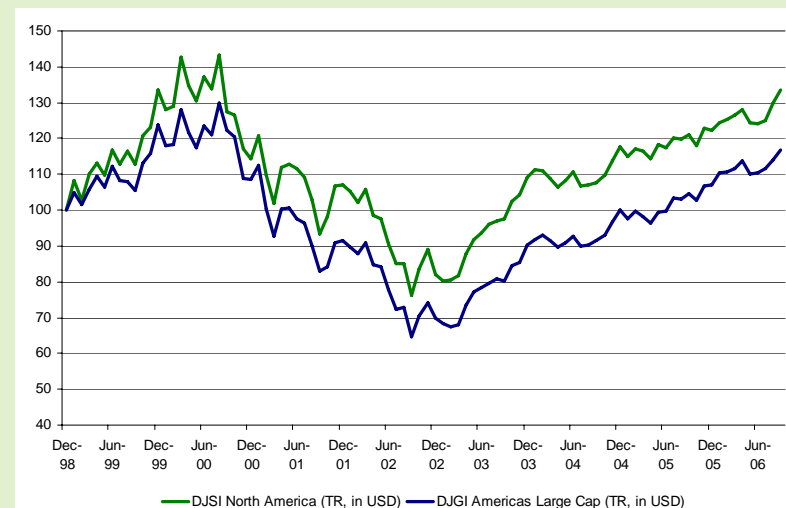
Correlation: 0.9769 Tracking Error: 3.31%

DJSI Volatility: 14.82% MSCI Volatility: 13.52%



DJSI North America – Performance (II)

as of October 31, 2006



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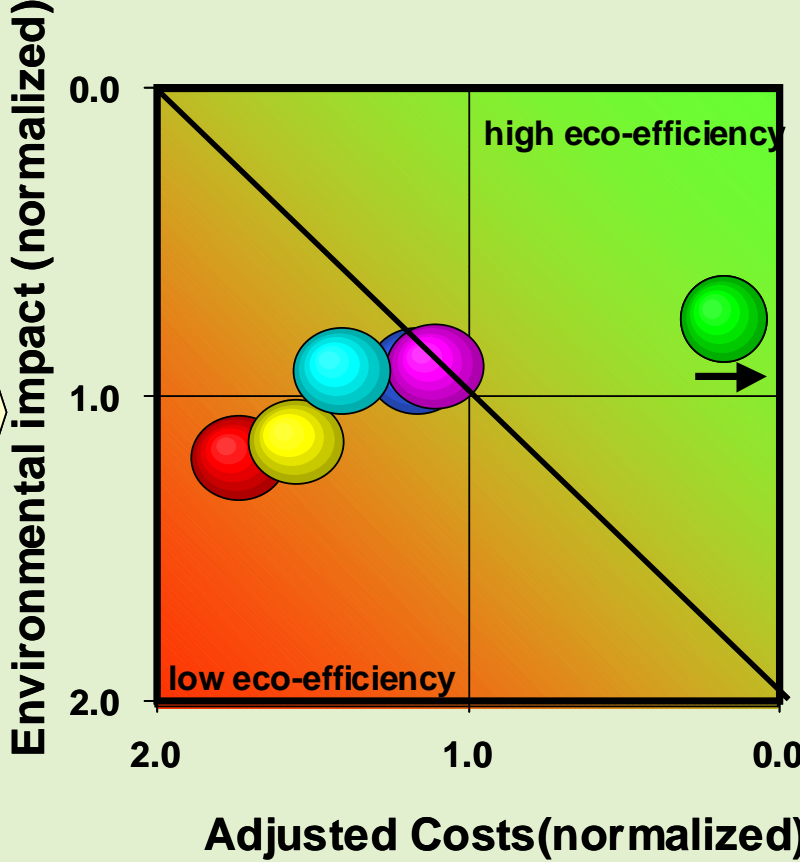


UV-Curable, Low-VOC Automotive Primer

2005 Presidential Green Chemistry Award Winner

■ Environmental Results

•Application of primer to 1m² of a car body, for lifetime use of 200,000 miles at 20mpg.



- 1K UV-Cure
- 2K Urethane - Thermal
- Epoxy- Thermal
- 2K Urethane - IR
- Epoxy- IR
- 1K UV-Cure- Aerosol

The UV- cured coating in cans is the most eco-efficient.





UV-Curable, Low-VOC Automotive Primer

2005 Presidential Green Chemistry Award Winner

- What is total cost to prime 16” x 16” of surface area?
- Purchase price for primer (\$/gal).
 - 1K UV-cure: \$485.40
 - 2K Urethane thermal: \$113.22
 - Epoxy thermal: \$100.64

	<u>Technologies</u>		
	<u>1K UV-Cure</u>	<u>2K-Urethane Thermal</u>	<u>Epoxy-Thermal</u>
Material (\$/job)	\$15.29	\$7.47	\$6.64
Labor (\$/job)	\$9.66	\$13.62	\$13.62
Energy (\$/job)	\$0.02	\$3.69	\$2.11
Waste (\$/job)	\$0.35	\$2.19	\$2.12
Total Cost (\$/job)	\$25.32	\$26.97	\$24.49

Case Study Example

Sales/Marketing – TCO/EEA Managers

- Direct With Customer Sales Tool
 - Excel®-based program that is taken to customer
 - Allows site-specific inputs.
 - Available on internet

Microsoft Excel - UV_EBA_Manager_ver1.2.xls

File Edit View Insert Format Tools Data Window Live Meeting Help

Arial 10 B I U

M20 =

Economic Benefit Analysis ver 1.1

Automotive Refinish Primers

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Input & Results Worksheet

Introduction:
Today body shops are using a lower cost but inferior primer product that in the long run is costing them more in terms of longer cycle times, rework and lost revenue opportunities. This case compares different primer technologies and demonstrates how reductions in curing time provides our customers with real business value.

Background:
The purpose of this tool is to evaluate the total cost of using automotive refinish primers, including costs for raw materials, labor and energy. Also, this assessment estimates increased revenues for using UV cured primers, which results from increased productivity due to reduced cycle-times.

User Inputs:

1K - UV Cure	1K-UV Cure
2K Urethane - Therm.	Alternative Technology
\$ 456.20	Price 1K-UV Cure (\$/gal)
\$ 113.22	Price Alt. Technology (\$/gal)
\$ 0.10	Electricity Price (\$/kWh)
\$ 5.00	Natural Gas Price (\$/1000ft3)
\$ 19.00	Labor rate (\$/hr)
\$ 200.00	Revenue per single panel repair (\$/repair)
5	Single panel repairs per day (#/day)

Restore Defaults

Refinish Primer Cost Assessment

TCO Analysis:

Technology	Costs	
	1K UV-Cure	Urethane - Thermal
Material Cost (\$/job)	\$ 3.83	\$ 2.45
Appl., Curing and Cleanup Cost (\$/job)	\$ 6.21	\$ 20.23
Total Cost Per Job	\$ 10.04	\$ 22.67

Technology	Revenue	
	1K UV-Cure	Urethane - Thermal
Total Time (min/job)	25	71
Capacity Increase (Jobs/yr)	500	-
Total Annual Revenue Increase	\$100,000	\$ -

Input & Results EBA Calculation Parameters Background

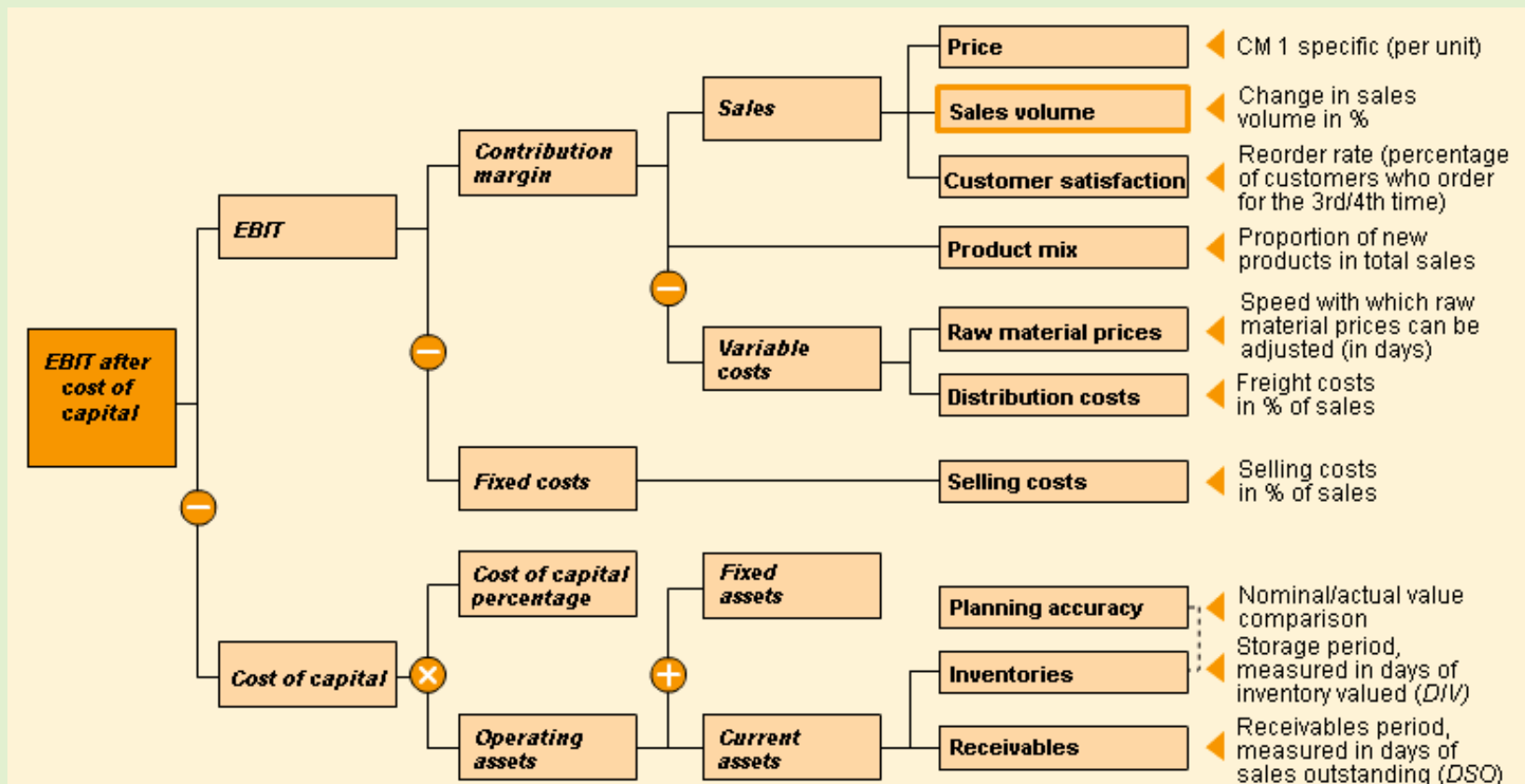
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Putting a Dollar Value to Sustainable Development

- BASF Group has set EBIT after Cost of Capital as its value metric.
 - “Value drivers” are activities that have a positive effect on EBIT-COC.



How to Value Sustainable Development Activity

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- Demonstrate how service had a positive effect on EBIT-COC.
- Often dollar value is in terms of Contribution Margin.
- Value drivers that are often impacted, include:
 - value pricing
 - Understand customer
 - Response time sales
 - Grow business
 - Time-to-market
 - Customer process optimization

Summary

- Attitudes on Sustainable Development have changed over time.
 - From: Green just means it more expensive.
 - To: A business case – strategic and tactical value
- Sustainable development can positively impact entire business value chain.
- A dollar value can be determine for sustainability.
- Like all other aspect of running a business, being sustainable takes effort.....



"It Isn't Easy Being Green!"

— Kermit the Frog