Sustainability Strategies
When does it pay to be green?

Renato J. Orsato
Professor - Fundação Getúlio Vargas (FGV)
Academic Director - Centre for Sustainability Studies at (GVces)
renato.orsato@fgv.br

Positive proof of global warming.
Confused?

Alternative Energy
Alternative Powertrains
Bio-mimicry
Bio-fuels
Bio-polymers
Base of the Pyramid
CERES
Clean Development Mechanism
Cellulosic ethanol
Climate Clubs
Climate Labels
Down Jones Sustainability Index
Design for Disassembling
Design for the Environment
Environmental Management Systems
Eco-activism
Eco-industrial Parks
Eco-labels
Eco-branding

Emission Trading Schemes
End of Life Management
Food Miles
Forest Stewardship Council
Green Clubs
Global Reporting Initiative
Global Compact
Industrial Ecology
Industrial Symbiosis
ISO 14001 certification
Life-cycle Assessment
Product Declarations
Product Stewardship
Process Certification Clubs
Product Service Systems
Responsible Care
Rainforest Action Network
Reputational Value
Voluntary Environmental Initiatives
How can managers…

• Prioritize eco-investments?

• Align eco-investments with strategy?

• Create competitive advantages?

• Create new market spaces?
Practice
- Reference-company programme at Lund University, Sweden. Six-months of work/company in a total of 35 companies (2000-2004);

Theory

Method
Multi-case study and action-research.

Sponsors
Marie Curie Programme (2004-2007)
A quick test…

• Based on your personal experience:

• When choosing an hotel to stay for *working trip*, does your company check whether the hotel has good environmental credentials?
  • ISO 14001 certification
  • Subscribes to Global Compact

• When choosing an hotel for *holidays*, do you check for some of the above?
Why then …

• Eco-excellence of organizational process should generate competitive advantage?

• Can a ISO 14001 certification generate competitive advantage?

• Why?

• When?
Competitive Environmental Strategies

Lower costs

STRATEGY 1
Eco-Efficiency

STRATEGY 4
Environmental Cost Leadership

Differentiation

STRATEGY 2
Beyond Compliance Leadership

STRATEGY 3
Eco-Branding

Organizational Processes

Products and Services

Competitive Focus
Eco-investments

Alternative Energy
Alternative Powertrains
Bio-mimicry
Bio-fuels
Bio-polymers
Base of the Pyramid
CERES
Clean Development Mechanism
Cellulosic ethanol
Climate Clubs
Climate Labels
Down Jones Sustainability Index
Design for Disassembling
Design for the Environment
Environmental Management Systems
Eco-activism
Eco-industrial Parks
Eco-labels
Eco-branding

Emission Trading Schemes
End of Life Management
Food Miles
Forest Stewardship Council
Green Clubs
Global Reporting Initiative
Global Compact
Industrial Ecology
Industrial Symbiosis
ISO 14001 certification
Life-cycle Assessment
Product Declarations
Product Stewardship
Process Certification Clubs
Product Service Systems
Responsible Care
Rainforest Action Network
Reputational Value
Voluntary Environmental Initiatives

Alternative Energy
Alternative Powertrains
Bio-mimicry
Bio-fuels
Bio-polymers
Base of the Pyramid
CERES
Clean Development Mechanism
Cellulosic ethanol
Climate Clubs
Climate Labels
Down Jones Sustainability Index
Design for Disassembling
Design for the Environment
Environmental Management Systems
Eco-activism
Eco-industrial Parks
Eco-labels
Eco-branding
What Are Sustainability Strategies?

- *Sustainability Strategies* are *choices* available to managers to align environmental and social investments with the generic strategy of the company.
When does it Pay to be Green?

• **When**: a clear *time frame*, and the *context* in which the company operates

• **Pays**: *quantitative* and *qualitative* data, as well as the *tangible* and *intangible* value created by the eco-investment

• **Green**: a *clear definition* of the type eco-investment
Enhanced Reputation

Upstream Activity System

Cost Leadership
Market Entry

Lower Costs, Synergies
Carbon Credits

Synergies

Eco-investment

Downstream Activity System

Differentiation

Processes

Enhanced Reputation

Price-Premiums

Strategies:

- STRATEGY 1: Low Costs
- STRATEGY 2: Upstream Activity System
- STRATEGY 3: Differentiation
- STRATEGY 4: Cost Leadership
Sustainable Value Innovation

(new market spaces)
Sustainable Value Innovation

STRATEGY 5
Sustainable Value Innovation

- Economic Costs
- Environmental Impacts
- Value for Customers
- Contribution to Society
Competitive Environmental Strategies

Existing Markets

1
2

Sustainable Value Innovation Strategy

New Market Spaces

4
3

5

Sustainability Strategies
Global Population

October 2011
7 billion

Developing countries
Industrialized countries
4.6 billion people live with less than $3 a day
Global Trends

- Peak-oil: demand exceeds production
- Decarbonization of the economy
- Poverty alleviation
- Corporate Social responsibility
- Climate change mitigation and adaptation
Tools of Production

One of the principal reasons for this country's unique ability to produce lies in the mobility available to men and materials through transportation.

Automobiles, trucks, buses, highway trailers and railroad trains are just as essential tools of production as looms and presses.

They take materials where they are. They deliver materials that keep machines humming.

The transportation feet of the railways are justly famous; feet in which The Budd Company has had an important part.

Equally significant are the accomplishments of the automobile industry, which has made universal ownership of cars possible in this country alone.

The all-steel automobile body, originated by The Budd Company, has been a major contribution to this development. So are Budd steel wheels for highway vehicles of all kinds. And the tools, processes and methods which bring them into being. The Budd Company, Philadelphia, Detroit, Gray.

Pioneers in Better Transportation
The Global Car Industry

- Global production around 70 million cars and small trucks in 2007
  - 50% of the world’s oil consumption
  - 50% of the output of rubber
  - 25% of glass
  - 15% of steel
  - 10% of the GDP in rich countries

- By 2020 auto industrialists expect that six world companies will be producing 100 million cars per year.
Manufacturers manage to capture only a small share of the automotive value chain.

- Suppliers: 20%
- Car manufacturers: 18%
- Dealers: 5%
- Aftersales: 57%
Today

• The auto industry is under increasing pressure:

  • Economic
    • the industry is immersed in a read ocean of competition, stagnant markets, and increasingly lower margins

  • Environmental
    • as global warming gets into the policy agenda, the industry needs to find solutions for CO2 reduction

  • Social
    • cars have historically privileged classes A and B. Crescent pressure to find sustainable mobility solutions for classes C and D.
Tomorrow

• The pressure will only get worse!

  • Economic
    • Competition from China and India will only make red oceans even ‘bloodier’

  • Environmental
    • EU regulation: Max 130g/Km of CO2
    • 100 million cars/year in a carbon constrained world?
    • Urban congestion

  • Social
    • 7.5 Billion people by 2020
    • Bio-fuels: Less than 3% of the land available to grow commodity crops
How can the industry increase its profitability with:
  • Increased value for customers and its contribution to society
  • Reduced environmental impact?

How can automakers generate:
  • Blue Ocean Strategies?
  • Sustainable *Value Innovation*?
Solution 1

Smaller cars
Solution 2

Bio-fuels

NO, BUT I CAN OFFER YOU A GALLON OF ETHANOL!
Solution 3

Hybrid Vehicles
Solution 4

Electric vehicles
EVs
- What’s the problem with them?
- Do they have a chance now?
Frankfurt Auto Show 2009
90% of the journeys < 70Km

10% journeys > 70Km
Renault-Nissan

Better Place

Insert Video – Swap Station
A Internet da Energia
Problem Solved with EVs?
Questions

- How many hours per day (24h) are cars parked?
- How many people occupy the cars on the roads?
- Out of 50 litres of fuel, how many litres transport you (and not the mass of the car)?
Market Spaces in Terrestrial Mobility

OWNERSHIP

Private

Individual

Collective

PRIVATE CARS

Internal Combustion Engines

Clean fuels
Alternative Powertrains

PRIVATE CARS

Taxis

Rental cars

Car-sharing

Mobility Operators

PUBLIC TRANSPORT

Busses, Trains

Light rail, metro

PUBLIC TRANSPORT

Station Bikes

Station Cars

Station Bikes

Station Cars

Station Bikes

Station Cars
Who’s behind Velib

• 1800 stations – one every 300 meters
• 21,000 bikes
• “Urban Furniture”
• It’s a contract between the prefecture of Paris and JC Decaux, an advertising company
• Solutions for the city for publicity space
• Main Innovation?
350 hours a year having sex
420 looking for parking

Drive Zipcars from $9.50/hour
$50 FREE DRIVING

Reserve Phoenix
Name: Phoenix
Model: Toyota Prius
Hourly Rate: $9.25

San Francisco
Beale St/Howard St
7 vehicles available

San Francisco
Veículos adaptados a tarefa!
• Founded in 2000
• Growth: 30%/year
• 500,000 members
• Revenues in 2010: €200,000,000
• IPO in April 2011 raised the value of the company to $1.5 billion
Vehicles adapted to the ‘job’
Why Car sharing is an SVI

• Economic benefits
  • CSO Supplier: Revenues alongside the use of vehicles
  • Customers: ex-car owners save €600/month

• Environmental benefits
  • Strategies for CO2-constrained world: Co2 emissions cut in 50%/user
  • Vehicles adapted to the job result in higher levels of efficiency

• Social Benefits
  • Access: Access to motorization to classes C and D (*)
  • Technology recombination in mobility will result in more liveable cities
New Value Propositions
Higher value for customers and contribution to society

Lower economic costs and Environmental impacts

New Business Models

Costs

SVI

New customers and markets

Value

Higher value for customers and contribution to society

New Value Propositions
Thank You!

renato.orsato@fgv.br
www.sustainability-strategies.eu