



Alliance of the Ports of Canada, the Caribbean,
Latin America and the United States

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Social Dimensions of Sustainable Development for Ports

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Sustainable Growth and Development & Social Dimensions:



4 or 5 Legged Stools

- 4th leg: is SECURITY: particularly after the crises of 9-11: security became a bigger and more visible player in the sustainability equation.
- Some have even argued that the 5th leg: is EDUCATION

Sustainable Development:

- **There are widely known Definitions: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.**

Global Journey In Sustainability Has Societal Roots:

- Since the 1987 United Nations Conference on the Environment and Development that defined sustainability as meeting current needs without compromising the needs of future generations, many European countries like Holland, Sweden and Norway have integrated sustainability into their longstanding practices of comprehensive planning at national, regional and local levels.

Global Journey In Sustainability...Continued:

- Hundreds of cities around the world used the language of sustainability to introduce the environment into their urban plans in new ways. Following the 1992 Earth Summit in Rio, hundreds of municipalities around the world launched “Agenda 21” initiatives that established sustainability principles and policies for the 21st century.

US Journey In Sustainability

- Unfortunately, cities in the United States have had to address sustainability issues on their own given the void in leadership in both urban and environmental policy at the national level. Very few U.S. cities launched Agenda 21 initiatives.....ports formally began their journey in late 2000s, debuted in Vancouver B.C

Sustainability Indicators:

- Greenhouse gas
- Carbon Efficiency
- Ozone layer
- Air quality
- De-forestation
- Desertification
- Agriculture
- Bio-diversity
- Toxic chemicals
- Non-renewable material
- Hazardous waste
- Waste volume
- Water

United Nations Indicators of “Sustainability” Continued:

- Poverty
- Gender equality
- Nutrition
- Child mortality
- Sanitation
- Health
- Education
- Housing
- Crime
- Population
- (Employment)
- Environmental

The Pursuit of Sustainable Development Requires:

- **Political system that secures effective citizen participation in decision making.**
- **An economic system that is able to generate surpluses and technical knowledge on a self-reliant and sustained basis patterns of trade and finance, and an administrative system that is flexible and has the capacity for self-correction.**

The Pursuit of Sustainable Development Requires:

- A strong social component system that provides for solutions for the following
- tensions arising from disharmonious and unsustainable development.
- A production system that respects the obligation to preserve the ecological base for development,
- A technological system that can search continuously for new solutions,
- An international system that fosters sustainable
- A development that pays back to its communities

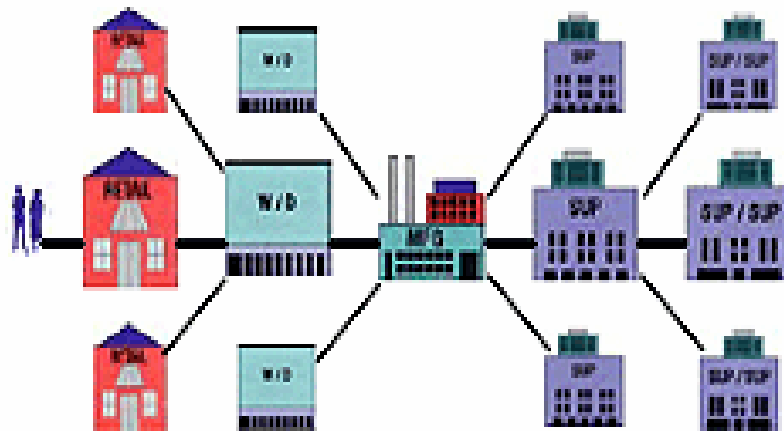
**Supply Chain Management: The Science of
Better,
Faster, Cheaper – until recently mostly
without a social dimension**

- **The supply chain is made up of many interrelated**
 - **Shippers, ports**
 - **firms**
 - **parts suppliers**
 - **component suppliers**
 - **And subassembly suppliers.**

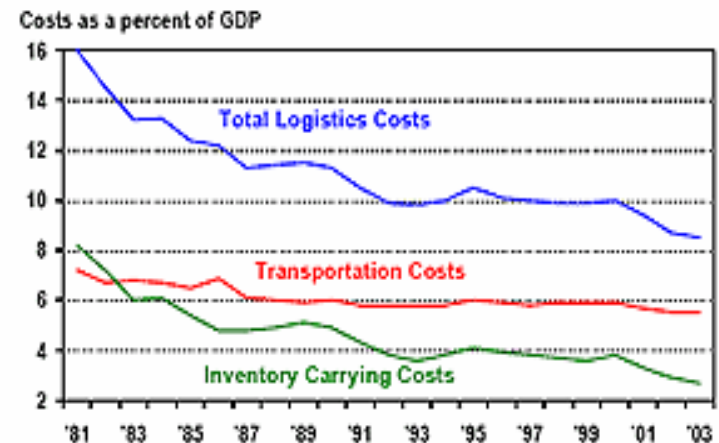
Supply Chain Management: The science of better, faster, cheaper

Getting the **Right Things**
to the **Right Places**
at the **Right Times**,
for **Profit**.

The Supply Chain



Logistics Costs Continue to Fall



Social Dimensions of Sustainability Applicable to Ports/Maritime

- How do social dimensions of sustainability affect and apply to ports?
- Formal port Sustainability policy: corporate commitment
- Formal Sustainability Program development

Ports and Social Dimensions of Sustainability:

- Cradle of port planning:
 - Incorporate into Port Master Planning
 - Applying sustainable principles in the permitting process from day one:
 - NEPA Reporting
 - Associated Permitting

Environmental Justice and Social Dimensions of Sustainability for Ports

- Environmental Justice (EJ): in US challenges a port development that does not ensure the sharing of environmental cost and benefits equitably.
- Began in 1990s to become a main stream issue affecting development and its impact to socioeconomically disadvantage communities surrounding ports

EJ and Social Dimensions of Sustainability

- Port should plan port development and expansion within the construct of social, political and economic realities
- Project Permitting: NEPA: EIS report
- Port sustainable engineering design and construction

Green Building Organizations and Standards:

- CASBEE : The Comprehensive Assessment System for Building Environmental Efficiency
- BREEAM: Building Research Establishment Environmental Assessment Method in the UK,
- LEED: Leadership in Energy and Environment Design in US

CASBEE

- The oldest form of environmental assessment of buildings in Japan is the performance assessment of building environments, mainly indoor environments, which is basically aimed at improving living amenities or enhancing convenience for occupants
- CASBEE is a assessment tool based on the environmental performance of buildings.

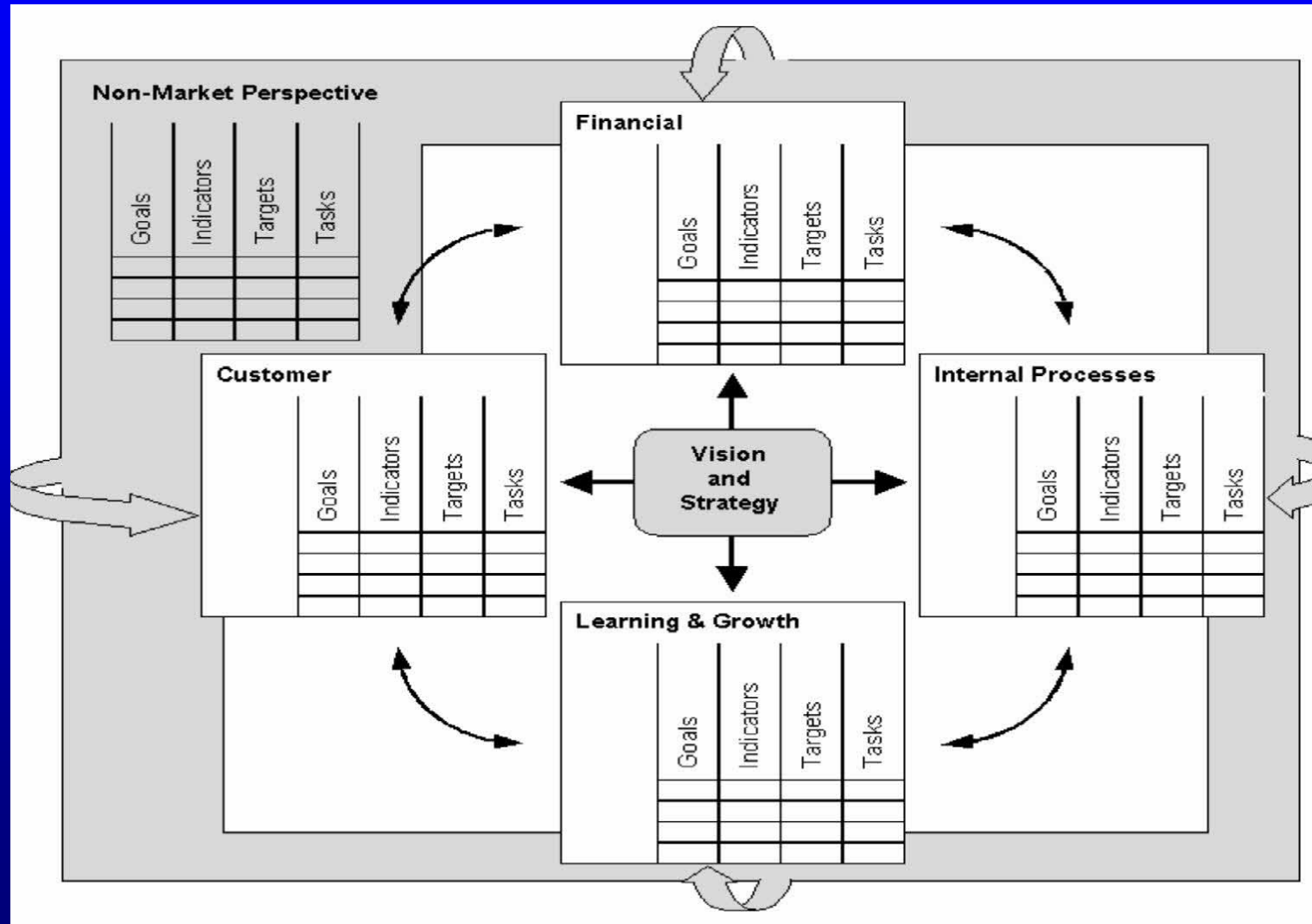
BREEAM

- **BREEAM:** is the leading and most widely used environmental assessment method for buildings. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance
- **BREEAM:** provides a holistic approach to sustainability for new and existing buildings, as well as community-scale developments. It provides a highly robust methodology to benchmark and improve the sustainability of the built environment

BREEAM

- **Provides clients, developers, designers and others with:**
- market recognition for low environmental impact buildings
- Assurance that best environmental practice is incorporated into a building
- Inspiration to find innovative solutions that minimize the environmental impact
- A benchmark that is higher than regulation
- A tool to help reduce running costs, improve working and living environments

Social Dimensions of a Balanced Score Card



Balanced Score Card:

Financial Perspective

Measures the ultimate results that the business provides to its shareholders

Customer Perspective

Focuses on customer needs and satisfaction as well as market share

Internal Perspective

Focuses attention on the performance of the key internal processes that drive the business

Organization Learning

Directs attention to the basis of all future success – The organization's people and infrastructure

Source: **Figure 1** The four perspectives of the balanced scorecard. *Source:* Kaplan and Norton 1996.

What are the Solutions For Ports?

- Grow and expand in a sustainable way across the board:
- Green and sustainable dredging practices
- Carbon efficient/Carbon neutral marine cargo handling facilities & infrastructure
- Green and carbon efficient buildings
- Sustainable methods to manage construction projects

Conclusions and Challenges:

- Social dimensions of Sustainability are critical to the success of sustainability programs for ports and maritime.
- Sustainability: becomes a passport for the Ports to grow and expand.....
- A socially sustainable port is successful in gaining the full support of its stakeholders: Local and global communities, customers, tenants, etc

Challenges:

- Social dimensions are not as tangible as other sustainability legs of stool
- Educating and empowering stakeholders to understand sustainability so they can become a proponent of port development in a sustainable way.
- Educate the “Nay Sayers”

Challenges:

- Need for developing port and maritime specific GREEN standards for:
- Port's cargo handling terminals
- LEED, CASBEE, etc are for buildings.....
- Need for continuing education