

Green Supply Chain Management: A Canadian Shipper Perspective



Presentation Overview

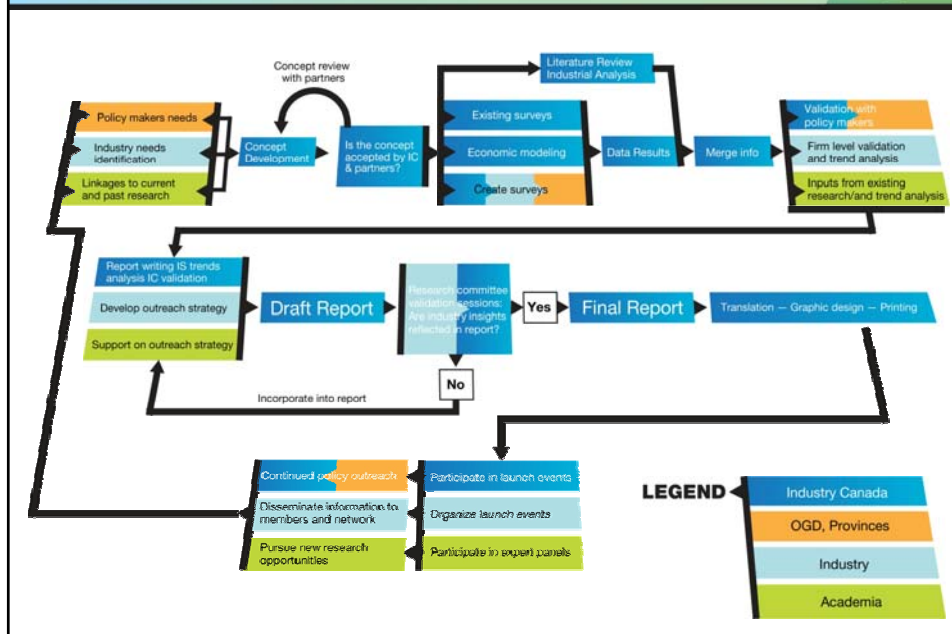


- **Project Objectives**
- **Research Framework**
- **Concepts**
- **Key Research Findings**
- **Panel Discussion**

Project Objectives/Expected Outcomes

- Provide industry with the latest key performance indicators (KPI), productivity and competitiveness analysis, best practices and future trends on Green Supply Chain Management (GSCM) in distribution activities
- Provide policy makers with industry perspectives for developing policies that better respond to current and future industry needs

The iterative framework is a collaborative approach with a broad involvement of stakeholders



Concepts: GSCM in Distribution Activities

GSCM practices involve integrating environmental thinking into distribution practices

GSCM practices include:

- ✓ Energy efficiency
- ✓ Reduction of GHG air emissions
- ✓ Water conservation or processing
- ✓ Waste reduction
- ✓ Reduced packaging/increased use of bio-degradable packaging
- ✓ Product and packaging recycling/re-use
- ✓ Green procurement practices

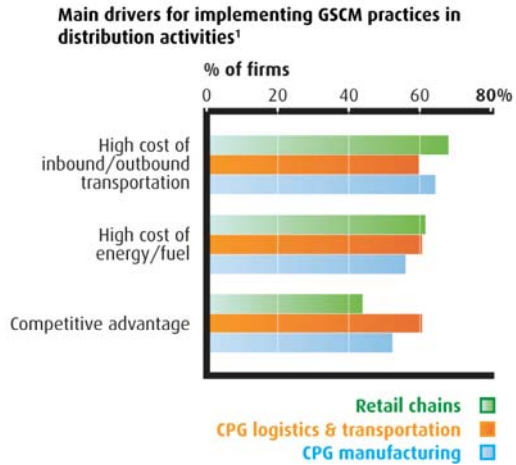


GSCM Key Research Findings



Costs coupled with the need for competitiveness advantages are the main GSCM drivers across supply chains

- Energy costs can amount to 55% of air transportation costs and 29% of truck transportation costs
- Logistics and transportation firms value GSCM as a service differentiator in a highly commoditized market



Logistics and transportation (L&T) companies are leading the use of GSCM practices compared with manufacturing and retail firms

- Logistics and transportation service providers own more transportation assets than manufacturing and retail firms
- Retail chains GSCM opportunities are more complex due to multiple store locations and franchise business models



Firm size may no longer impact whether GSCM activities are pursued

- In the past, more large- and medium-scale Canadian businesses were engaged in GSCM practices
- Many GSCM practices:
 - Require limited investment
 - Are low risk
 - Offer short-term return-on-investment periods
- Businesses of all sizes are able to engage in these activities

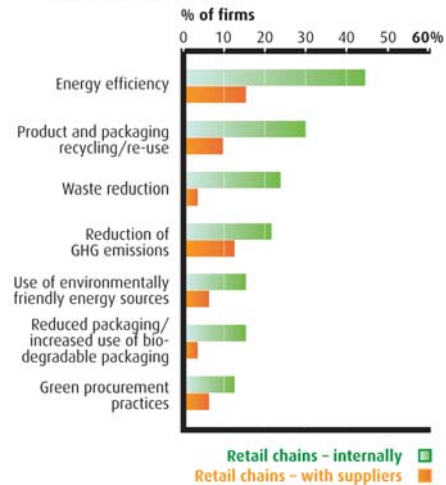
Use of GSCM practices in distribution activities - Business size¹



Retail chains GSCM mandates* encourage suppliers to become greener

- Initial retail chains GSCM practices are within organizations
- Second generation GSCM practices include GSCM mandates with suppliers at both services (transportation and logistics) and manufacturers

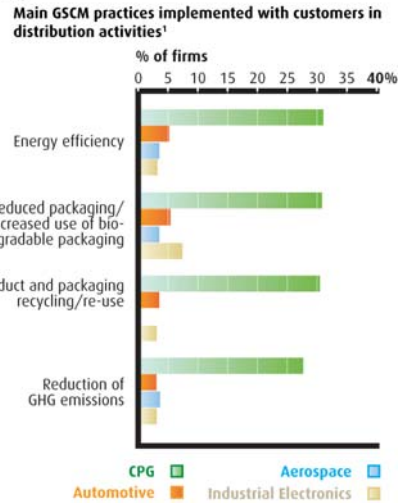
Main GSCM practices implemented in distribution activities¹



*Supply chain compliance mandates (SCCM) refers to systems or departments at corporations which ensure that supply chain participants are aware of and take steps to comply with a specification and/or standard that has been clearly defined.

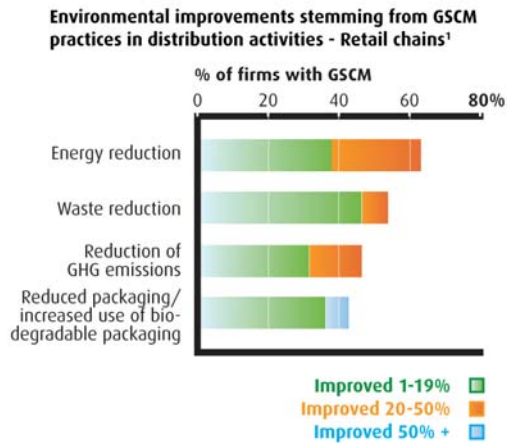
As a result of the retailers GSCM mandates, many CPG manufacturers have implemented GSCM practices

- Close to 6 times as many CPG manufacturers have engaged in GSCM practices with their customers (retail firms) in comparison to automotive, aerospace, and industrial electronics manufacturers
- It is expected that other sectors original equipment manufacturers (OEM) initiate GSCM mandates with their suppliers in the coming years



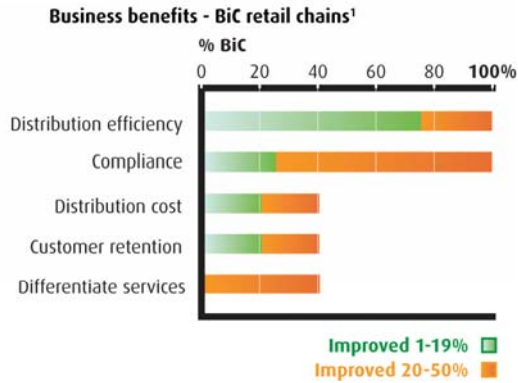
GSCM practices translate into reduced energy consumption and waste in distribution, decreased GHG emissions, and less packaging

- Retail chains have an opportunity to have access to carbon credits and decrease harmful air emissions and waste
- Transportation services have an opportunity to reduce their 26% global industry carbon emission footprint



Best-in-Class (BiC)* retail chains are increasingly more efficient in their operations and have enhanced compliance processes

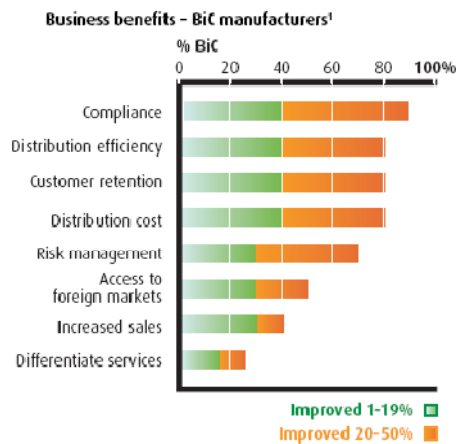
- Retailers' compliance refers to their conformity to recycling and packaging regulations, as well as to how they meet and respond to corporate objectives
- Retail chains that have implemented GSCM mandates with their suppliers are achieving a performance that is at least 20% higher than that of retail chains without GSCM mandates



* Best-in-Class (BiC) firms are defined as businesses that achieved positive environmental advantages in the two main sector-specific practices.

Business benefits differ within specific manufacturing industries

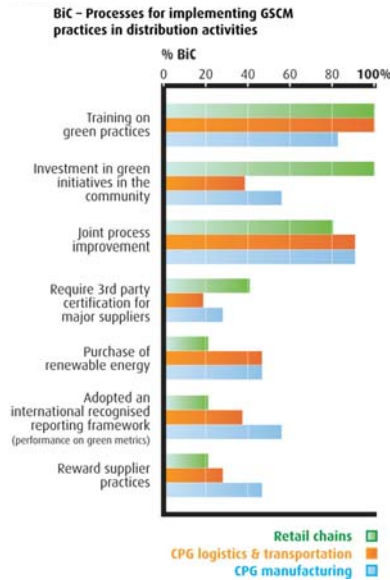
- BiC aerospace manufacturers, the most commonly reported improvement was in access to foreign markets, and for industrial electronic manufacturers it was in customer retention.
- For CPG manufacturers, it was in compliance processes.



BiC are using a mix of corporate and operational level practices



- Training is aimed at all levels of employees within an organization (from management to the technology and operations departments) and focuses on green benefits, implementation, and integration
- BiC L&T service providers are adopting an internationally recognized reporting framework for performance on green parameters and rewarding their suppliers for green practices



BiC retail chains require their suppliers to flow their goods through their distribution centres (DC)

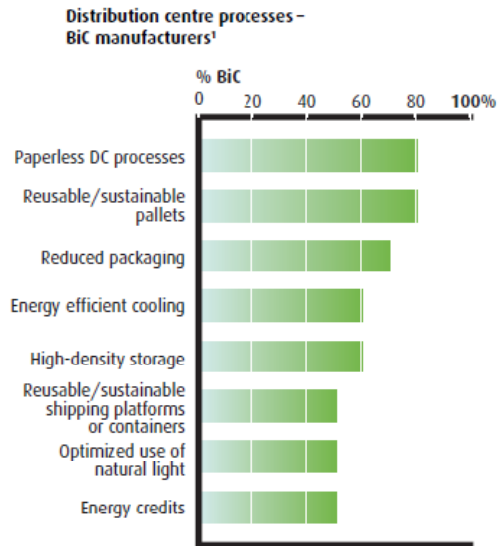


- Flowing good through retail chains DCs can lower operational costs while shrinking the company's environment footprint



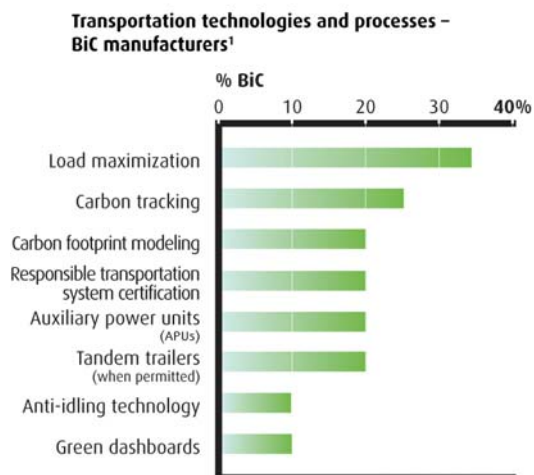
BiC distribution centre processes differ by industry

- Retail chains are creating customized pallets of mixed products through complex product sorting, slotting, and picking methods
- CPG manufacturers usually ship single/low number-product pallets to retail chains' DCs



BiC manufacturers rely less on transportation process and technology

- 80% of Canadian manufacturers inbound and outbound transportation volume is outsourced to service providers
- Carbon tracking and footprint modeling are key BiC processes and technologies for manufacturers



Overall Key Findings



- Main GSCM business drivers include the high cost of energy and a desire to have a competitive advantage over other firms
- Since many GSCM practices require limited investment, are low-risk, and offer short-term return-on-investment periods, businesses of all sizes are able to engage in these activities
- Despite the large number of businesses that understand the importance of GSCM, the number of firms that actually engage in such practices is significantly lower

Overall Key Findings



- Retail chain GSCM mandates bring business and environmental benefits to the entire consumer products supply chain.
- Most Best-in-Class (BiC) businesses are able to better differentiate their distribution services, improve risk management, increase sales, and increase access to foreign markets, all while reducing distribution costs

Thank you!



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