



Innovating for Sustainability

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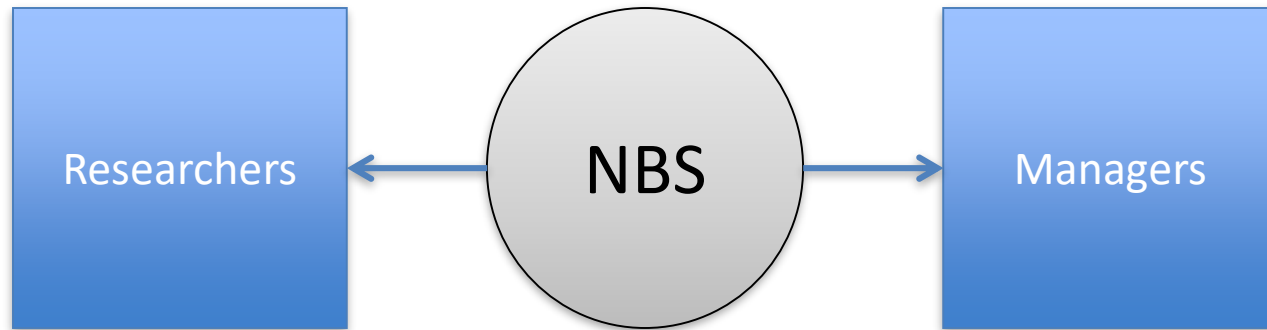
Network for
Business Sustainability

Business. Thinking. Ahead.

nbs.net



Our Mission: Change Business Practice by Bridging the Gap between Industry and Academia



- Network of 3,500 subscribers
- World-class academic thinkers
- Global cross-sector sustainability business leaders
- Produce rigorous, academic, executive-friendly tools and resources on critical sustainability topics



Anthea Rowe



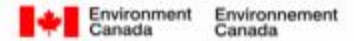
Business Leaders

17 Leadership Companies

13 Small/Med Companies

12 Industry Associations
(30,000 businesses)

1,800 Individual Subscribers



NBS Leadership Council



Innovating for Sustainability

Dr. Richard Adams
University of Exeter
May 8, 2013

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Research Question

What innovation activities do firms engage in to become sustainable?

Research team: Richard Adams, Sally Jeanrenaud, John Bessant,, Hannah Metcalfe, University of Exeter and David Denyer, Cranfield University School of Management

Advisors: Stuart Hart (Cornell University), Dan Burt (Suncor), Scott MacDougall (Suncor), Wendy Perkins (RIM), Matt McCulloch (Pembina Institute), Luc Robitaille (Holcim) and Georgina Wainwright-Kemdirim (Industry Canada).

Read the Report: nbs.net/innovation



Sustainability-Oriented Innovation (SOI)

- SOI Defined
 - Deliberate changes
 - To products, processes, services, organizations or wider systems
 - Delivers environmental and social as well as economic value.



The Business Case for SOI

- Compliance
- Bottom line impact
- First mover advantage
- Stakeholder pressure
- Social legitimacy/Licence to operate
- Doing the right thing



Sustainability-Oriented Innovation (SOI)

“Sustainability is becoming an integral part of the business strategy...because, quite frankly, it’s good for business.

Conserving resources...produces cost savings today while also helping to make sure the communities in which we operate are strong and successful markets well into the

future”

Sanjeev Chadha

President, PepsiCo Middle East & Africa



PEPSICO

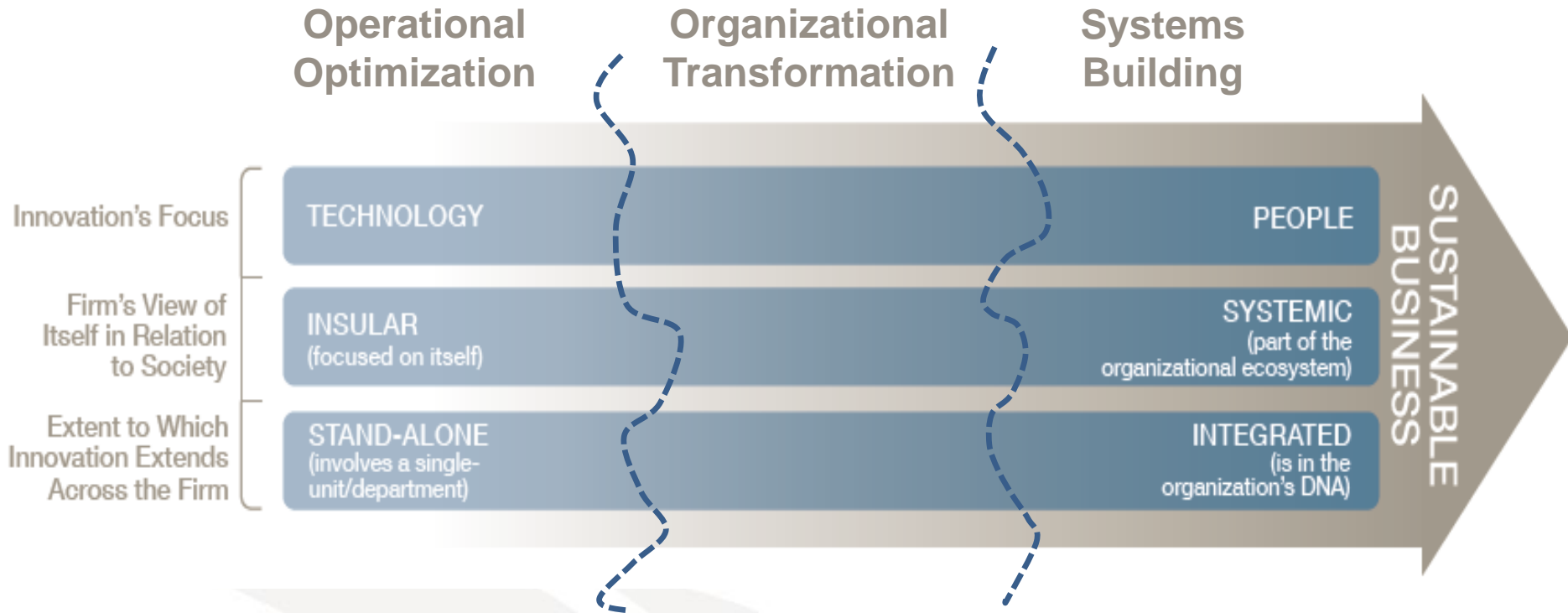


Tropicana





Dimensions of SOI



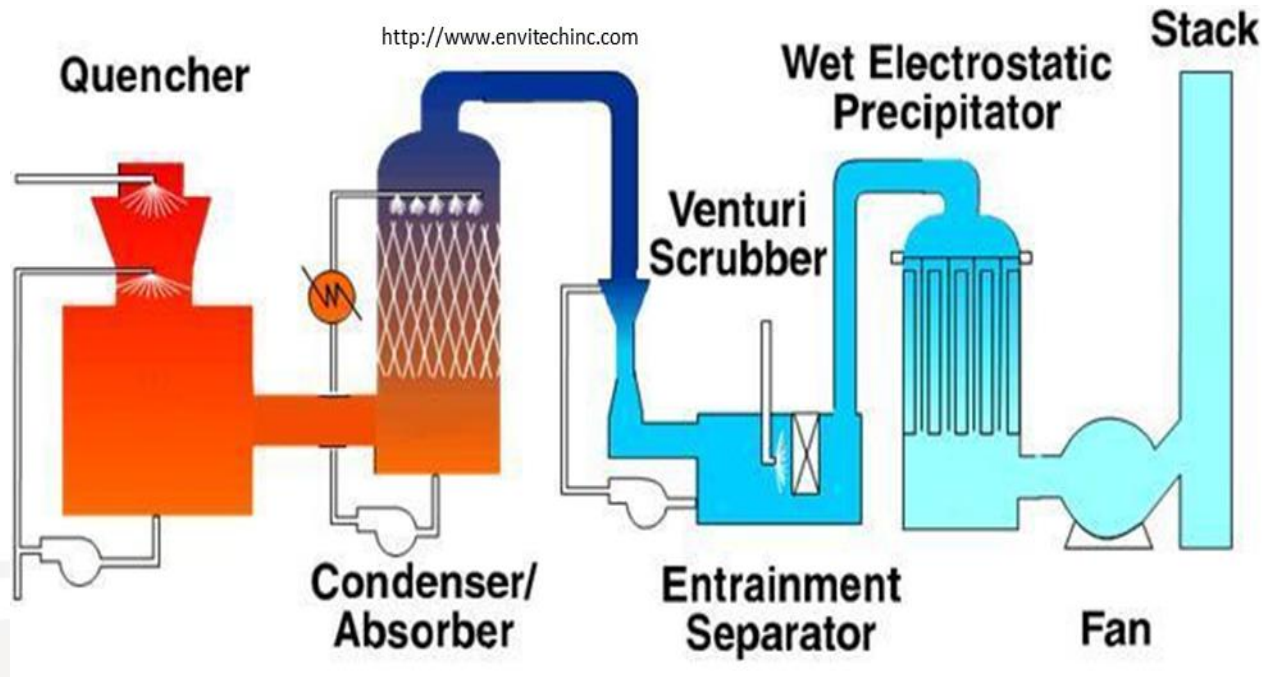


Model of SOI – Operational Optimization





SOI for Eco-Efficiency



Compliance: e.g. reduction and minimisation of pollution



SOI – Design for sustainability

- Are components derived from scarce resources?
- What is the content of recycled material?
- What levels of waste or pollution are generated in production?
- Could the production process use less energy or water?
- At end of life, can product components be recycled, re-used, disassembled?
- Is packaging and distribution optimised for sustainability?
- Do suppliers subscribe to your sustainability principles
- Is the workforce assured a safe and healthy work environment?
- Are workers in the supply chain equally assured?



One Result of Asking Sustainability Questions...

- 150 million lbs of packaging waste from Food and Consumer Products lines (2005-2010)
- The Packaging Eco-Calculator™



Read the Report: nbs.net/innovation

Another Result of Asking Sustainability Questions...



Solid Ink



Laser



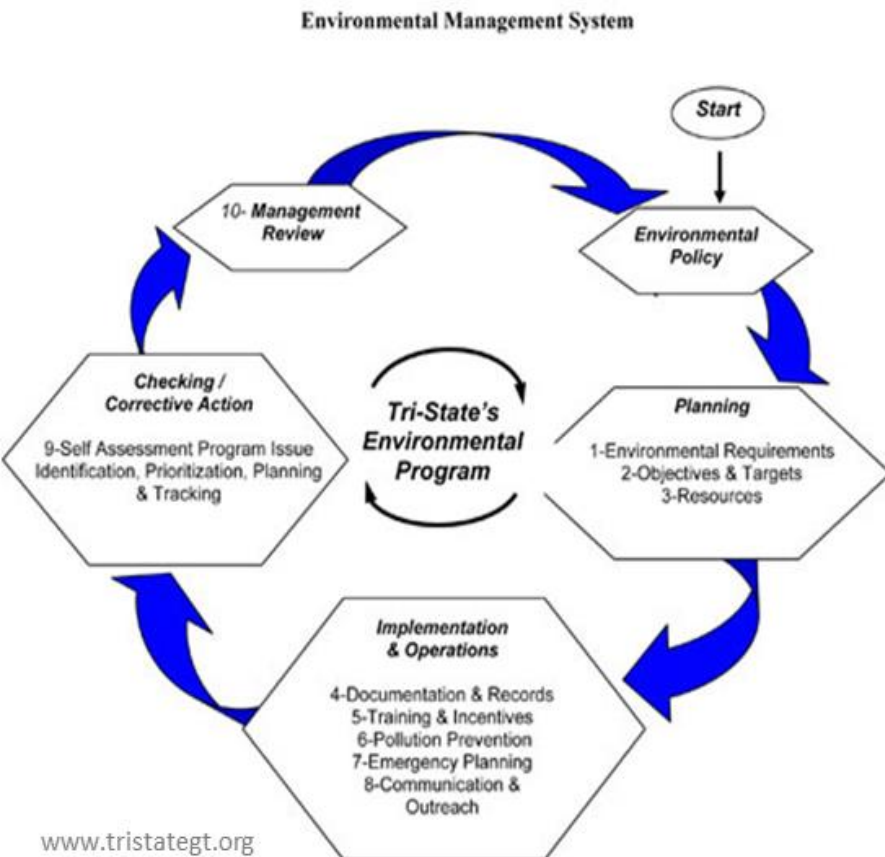
- Xerox's cartridge-free ink
- 90% less printing waste
- Recycled and recyclable packaging
- No metal toner cartridges, no plastic casings, no fusing subsystem, no messy toner particulates

Model of SOI – Organizational Transformation





Using Tools to Routinise and Embed SOI



Use of tools raises a set of questions

- Which tool?
- What to target?
- Where to apply – damaging, singly, whole, new?
- Integrate into existing processes



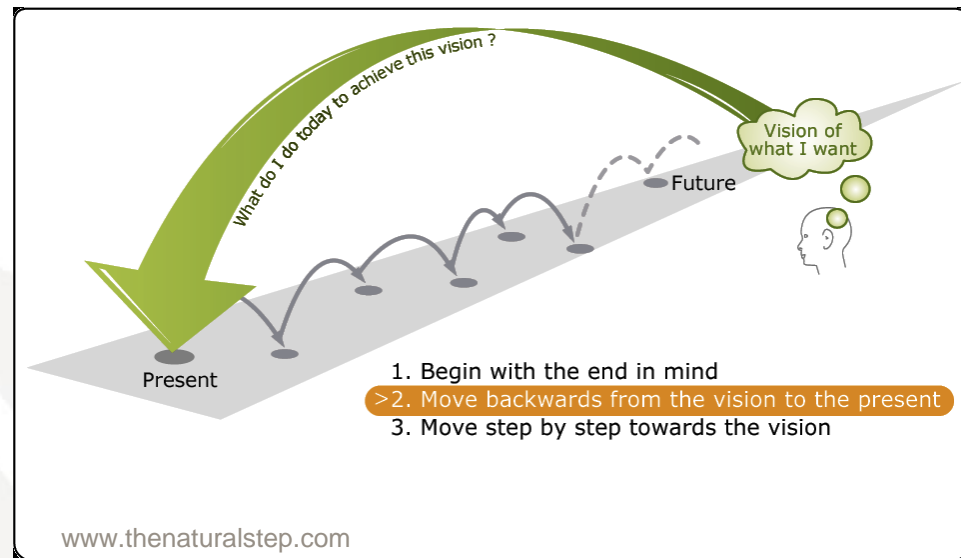
Inspiration from New Sources for Radical SOI



Biomimicry

Backcasting

Peripheral vision





Sustainable Supply Chain Management, Networks and Collaborations



<http://sclinsights.com>

Extending beyond the boundaries of the firm

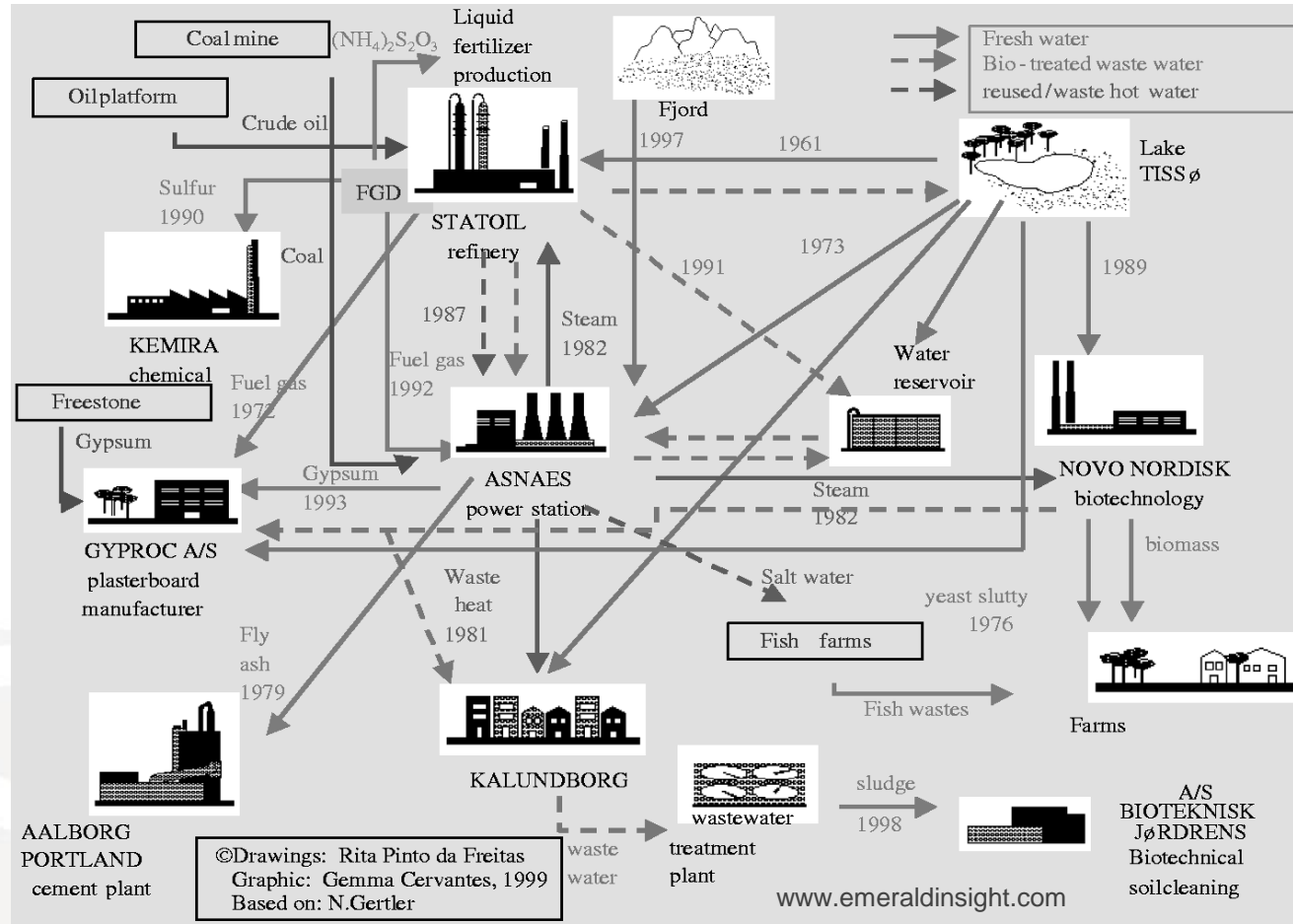


www.msc.org



<https://uk.fsc.org/>

Industrial Symbiosis – the Kalundborg Example



Interactions and alliances between industry and stakeholders



National Industrial Symbiosis Programme

- To enable companies to identify their waste streams and redirect as a resource for other organisations
- After two years:
 - New markets worth £99m
 - Industry cost savings £71m
 - 1.8m tonnes landfill saved
 - 2m tonnes CO2 avoided
 - 5.4m tonnes raw material and 2.5m tonnes water saved
 - 1,200 jobs secured



Model of SOI – Systems Building





Reframing the Business for Sustainability

INTEGRATED REPORTING <IR>



2012
Annual Report

B Corps
Redefine Success
in Business



CARBON
DISCLOSURE
PROJECT



Dow Jones
Sustainability Indexes



Servitization





Novel Innovation Platforms

- Cradle-to-cradle innovation; closed loop production; circular economy principles; net positive contributor
- Cradle-to-cradle principles
 - Signal intentions and commit to the new paradigm
 - Strive for good growth rather than just economic growth
 - Innovate more: don't optimise, aim to perfect
 - Prepare to learn: be adaptable and flexible to permit new ways to grow
 - Exert intergenerational responsibility

McDonough, W. & Braungart, M. (2002). Cradle to cradle: remaking the way we make things. London: North Point Press.



SOI and the Bottom of the Pyramid



Delivering products and services to the under-served populations of less-developed economies through:

- Frugal innovation
- Resource constrained innovation
- Jugaad innovation
- Reverse innovation



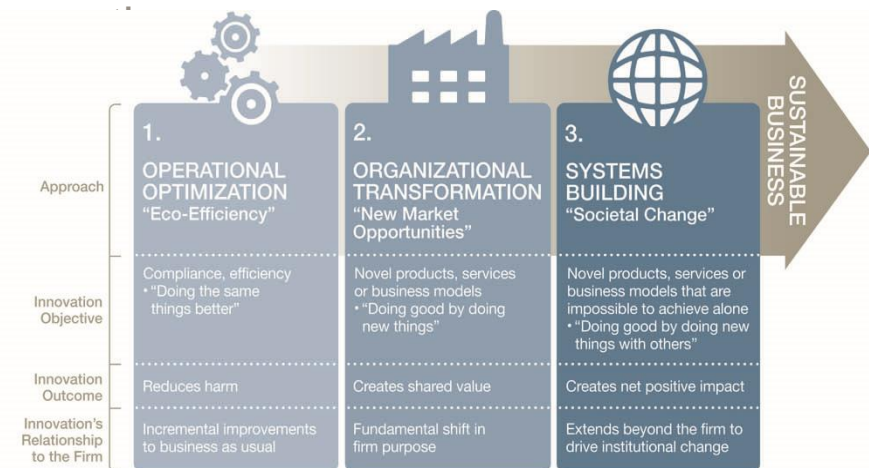
The Practices of SOI

	Operational Optimization	Organizational Transformation	Systems Building
Product innovation	Efficiencies...Dematerialisation...Renewables...Recyclables...New platforms...Servitisation		
Innovation process	Existing innovation processes...Use tools like LCA to understand and reduce product impacts... Experiment with new innovation platforms (EMS, biomimicry, frugal/reverse innovation, industrial symbiosis)...Cradle-to-cradle and Closed-loop		
Institutional innovation	Work with regulators for product/process innovation.....SOI at core of organisational vision.....Broaden networks to include NGOs, IAs, lobby groups etc.		
What will change	Emissions...Processes...Product...Product lifecycle...Supply chain...Servitisation... Business models.....Wider systems		
Involving whom	Production line.....R&D.....Cross-functional.....TMT.....Immediate stakeholders...Customers...Wider socio-technical- Institutional- Community- Environmental- Ecosystems		
Extent of ambition	Easy wins.....Experimentation.....Radical solutions		
Opportunity identification	Regulations.....Efficiencies.....Competitive advantage.....Lifecycle analysis.....Knowledge networks.....Biomimicry.....Bricoleurs.....BoP		
Targets and guidelines	Set efficiency targets and policies (reduce waste/energy use by 20%).....Set audacious goals: zero waste, net positive energy.....Change systems behaviour		
Collaborations	Instil SOI internally.....Extend into organisational ecosystem.....Forge systemic partnerships		

Using the Model

“Of everything that we could be doing, what might we be doing and how well do we manage that?”

- Common practices and leading practices
- Baseline measure
 - What have we got, what are we doing?
 - Audit existing practice
 - Benchmark against other firms
- Identifying opportunities
 - For quick wins
 - Greatest need
 - Planning the journey
- Discussion and debate – starting and continuing the conversation





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Cup to Tray Recycling Program Innovation

In my past life,
I used to be a cup.



Tim Hortons. Cup to Tray
RECYCLING PROGRAM



© Tim Hortons, 2011

Tim Hortons®

It's Time for
Tim's!

Tim Hortons - A Long and Proven History



49-year
history:

6 years as a
publicly-traded
company



Generally long
and healthy
relationships
with
franchisees,
suppliers and
partners



Financial
performance
among leaders
in the North
American
restaurant
sector.



Iconic brand
and market
leadership in
Canada with
unparalleled
guest loyalty



Tim Hortons

It's Time for
Tims!

Why is it Important for Tim Hortons to Recycle Coffee Cups?



Tim Hortons

It's Time for
Tims!

Source: NPD Crest

Proven Leadership - Cup Innovations Timeline



Since opening, China mugs available for dine-in guests



First cup diversion program launched on Prince Edward Island



Recycling facility tours and mill tours and trials



Continued collaboration, mill tours and market development and 850 restaurant locations diverting coffee cups

1964

1978

2000

2006

2008

2010

2011

2012

Travel Mugs introduce – 1st cup free and discounts followed



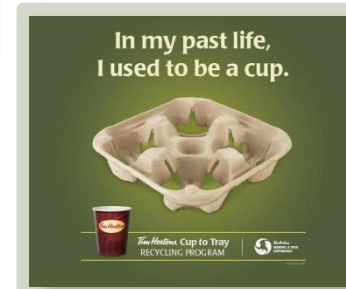
Multi-stream recycling units developed



Cups and other paper packaging diverted from over 650 restaurant locations



Cup to Tray program launched in Nova Scotia



Cup to Tray Recycling Program

- Launched October 20, 2011 in Nova Scotia
- First implementation of “closed loop” recycling for our industry
- First opportunity to communicate to our guests across a province
- Scalable and repeatable



Tim Hortons

It's Time for
Tim's!



Cup to Tray Recycling Program Process



How we did it

Targets and Guidelines

- Sustainability & Responsibility (SR) Commitments and Goals
- Reduce waste from all aspect of our business

Internal Collaboration

- Strong cross-collaboration between internal departments
- Collaboration with restaurant owners and team members

External Collaboration

- Consumer insights and feedback
- Vendor, waste haulers, recycling professionals, municipalities

Supply Chain Management

- Long-term supplier relationship

Organizational Structures

- Unlearning outdated knowledge
- Tracking use and looking to expansion
- Part of overall tracking of diversion programs for SR reporting

Knowledge Management

- Team member and guest education
- Feedback from waste haulers and recycling processors

Tools

- Closed Loop recycling program
- Learning from local industry professionals

Measuring Success

- Restaurant owner and team member feedback
- Community and guest engagement
- Cost neutral program
- Media coverage
- Expansion opportunities

When is a coffee cup not a coffee cup?

October 20, 2011 - 5:57pm By COLLEEN COSGROVE Business Reporter
Tim Hortons disposable cups recycled into takeout trays



Tim Hortons

environmental
LEADER
Environmental & Energy Management News

Starbucks Eyes Up Tim Hortons' Cup-to-Tray Technology



It's Time for
Tims!

Lessons Learned

- Include all stakeholders even if you feel they may not be supportive
- Proceed slowly and methodically
- Push limits of current practices
- Don't be afraid to fail



Thank you!

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Contact Us!

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