Nova Scotia: Where have we been and where are we now?

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Circular Economy Summit

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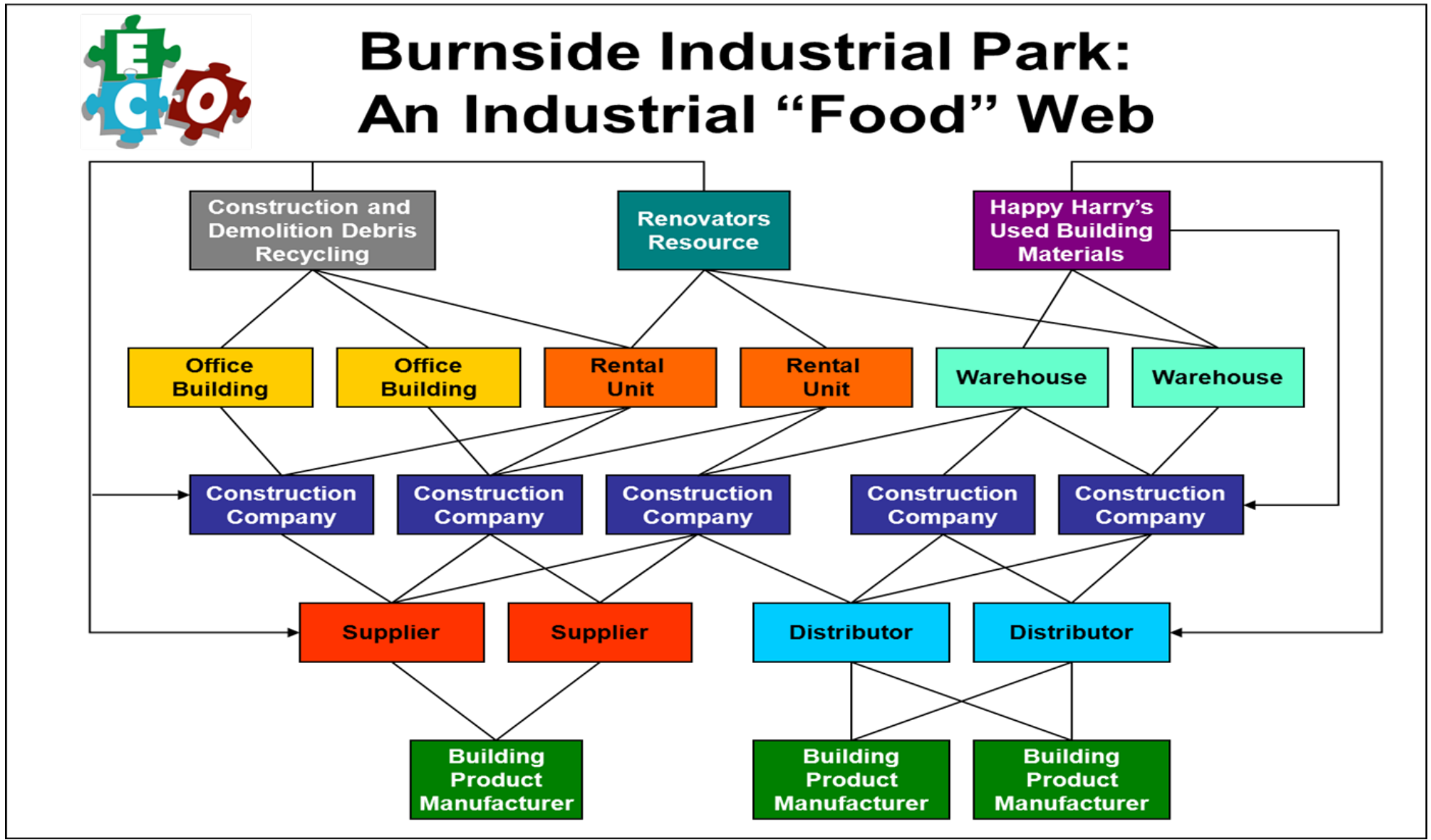
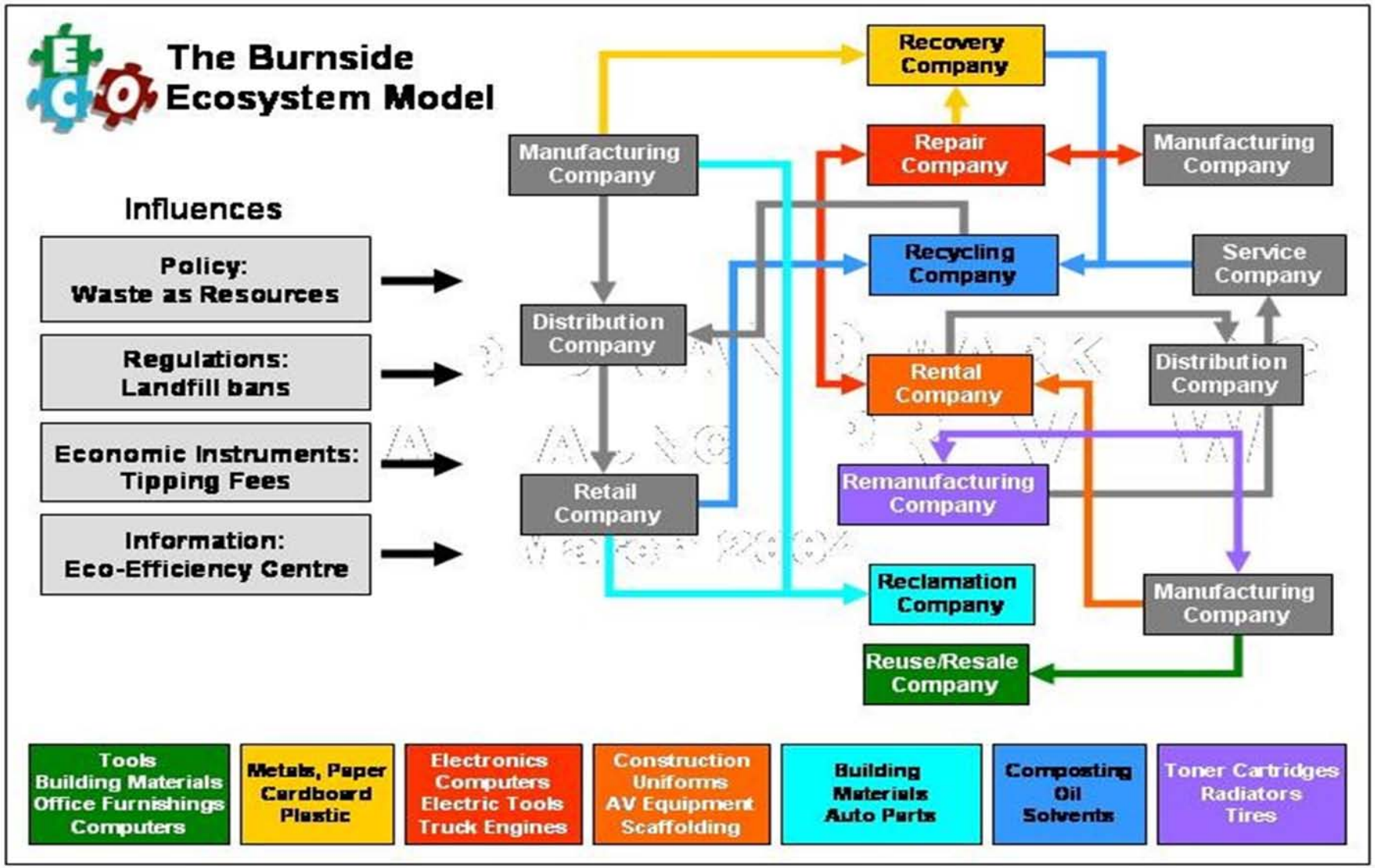
Industrial ecosystems



Scavengers and decomposers



Opportunities: Filling in the gaps

- Rick’s Pallets Recycling Inc.
- ReStore – Habitat for Humanity
- Dan-X Recycling Ltd.

Nova Scotia 1996

The Waste Resource Management Strategy and Regulations

- Recognizes wastes as resources
- Bans selected resources from landfill
- Encourages recycling and product stewardship
- Endorses composting of organic waste
- Creates the Resource Recovery Fund Board (now DivertNS)

Environmental Goals and Sustainable Prosperity Act

World leadership in legislation

“Long term objective is to fully integrate environmental sustainability and economic prosperity”

“innovative solutions are necessary to mutually reinforce the environment and the economy”

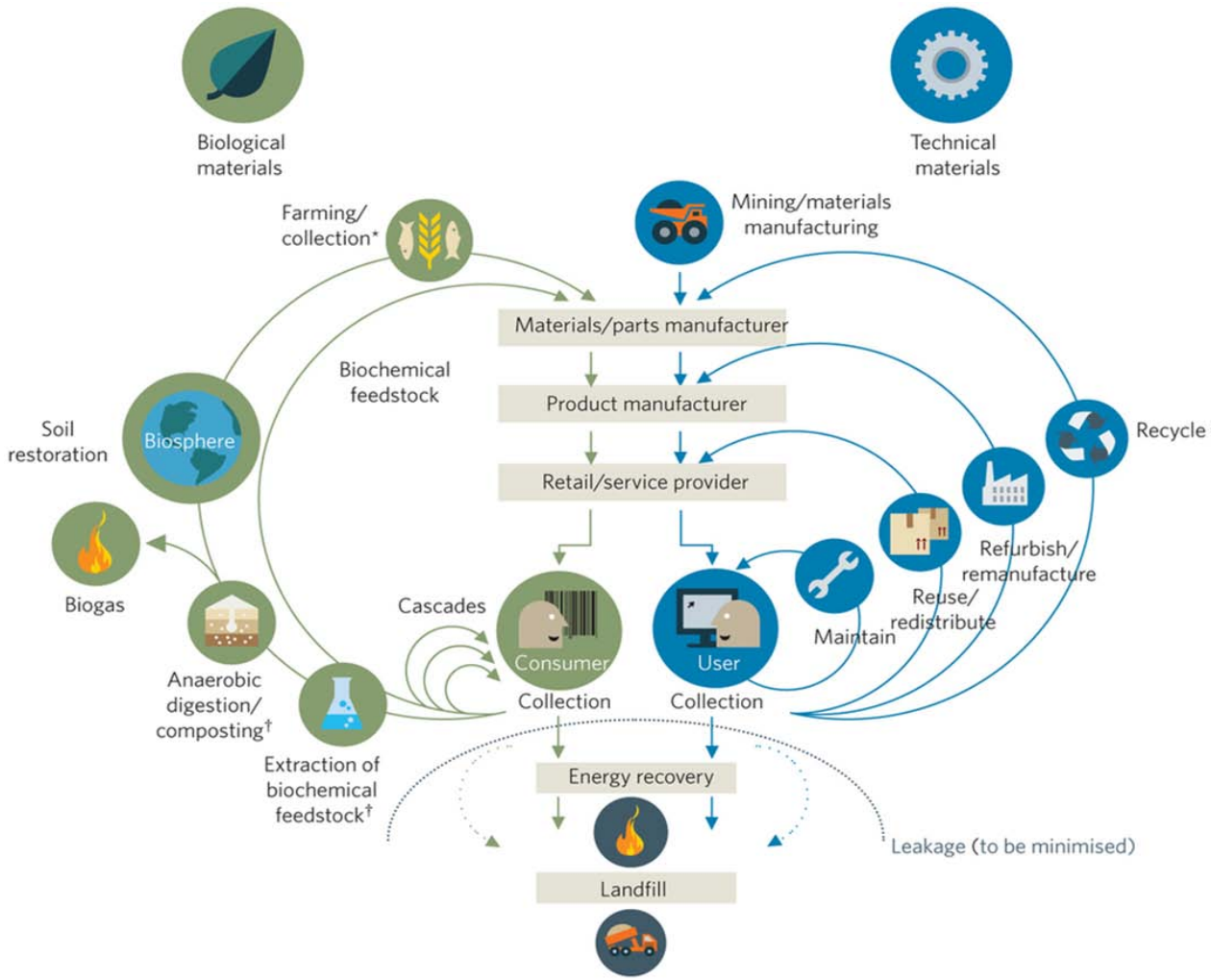
“long term approach to planning and decision-making is necessary to harmonize the Province’s goals of economic prosperity and environmental sustainability” EGSPA, 2007

Goal: a solid waste disposal rate of 300 kgs/person/year by 2015

Waste as resources

- It isn’t just about managing wastes at the end of the consumption chain.
- We need to think about all types of wastes, including wasted energy, generated throughout the supply chain.
- And think about ways to reduce those and create loops or cycles, rather than linear chains, to make use of those resources.

The circular economy



Divert NS and Value Added Manufacturing

- Mobile pellet maker purchase to divert scrap wood and sawdust from landfill.
- Waste drywall and wood fiber into bedding for dairy cattle.
- Diversion of Expanded Polystyrene through densification.
- Separation of grit from paper in asphalt shingles for reuse.
- Converion of waste medium density fiberboard into pellets.

Research and Development supported by Divert NS

- High value protein feeds and fertilizer from pre-consumer vegetable waste.
- Investigation of opportunities to divert textiles that cannot be reused, ragged or shredded.
- Diversion of coffee grounds per year into solid surface materials.
- Options for recovering and recycling waste carpet.
- Industrial waste glass as a concrete additive.
- Design and characterization of waste plastics and plastic based waste materials as supplementary fuel for cement kilns

Circular economy strategies

- Collectors eg *Enviro Depots*
- Recycling eg *Miller Waste Composting*
- Reuse or resale eg. *Value Village, ReStore*
- Rental eg *MacFarlands Rental*
- Parts harvesting and component reuse eg. *Covey's Auto Recyclers*
- Product repair eg. *Quinpool Shoe Repair*
- Remanufacturing eg *Miller Tire retreading*
- Selling or leasing services /products eg *Interface*
- Industrial symbiosis eg *Kalundborg*
- Reverse logistics eg. *DHL*

Components of the circular economy in NS

- Businesses, organizations and communities involved in the REs: repair, recovery, disassembly, reuse, remanufacturing, refurbishing, restoration and recycling
- Likely to be 100s of businesses, 1000s of employees and volunteers, and 1,000,000s in revenues.

What should we do?

1. It would be useful to understand the full economic and employment impacts of Nova Scotia's existing circular economy.
2. The economic impacts should include the avoided resource inputs that would otherwise result in more money being shipped out of the province.
3. It would also be helpful to understand the environmental benefits of a circular economy including avoided landfilling and greenhouse gas reduction.
4. Finally, a thorough analysis might identify some business opportunities across the province by filling gaps.