



GTA Partners in Project Green: A Pearson Eco-Business Network

Stakeholder Workshop #1
Dec 11 07



Presentation prepared by Eco-Industrial Solutions, Ltd.



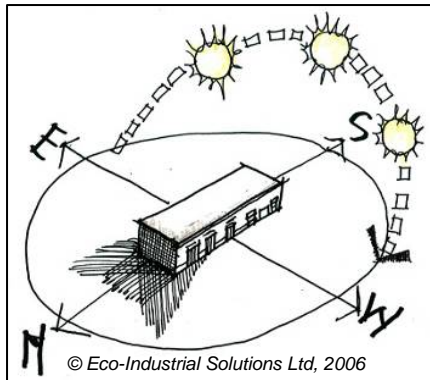
Presentation Outline

- What do we mean by eco-industrial?
- What is Partners in Project Green?
- Why Partners in Project Green?
- Areas of eco-industrial opportunity
 - Overview
 - Breakout Activities
- Wrap up



PART I

WHAT IS ECO-INDUSTRIAL?



What “?”

Industrial (and other) development for performance, ...

- Water
- Sewer
- Roads
- Energy
- Parks & Trails
- Stormwater



LEED™ certified manufacturing facility

- **Land use**
- **Infrastructure**
- **Buildings** e.g. LEED™
- **Operations**

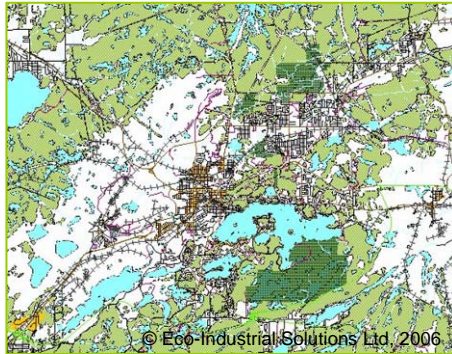
- Waste-to-feedstock synergies
- Joint green procurement
- Technology partnerships
- Micro / district utilities

Why go “eco-industrial”?

- Future-proof
- Meet growing market and public demand
- Maximize business competitiveness & profitability
- Retain and attract professional employees
- Bring innovative technologies to site servicing... and support demand management
- Improve environmental & human health



Scale of Eco-Industrial Activity



Greater Sudbury

Region

Community



Maplewood Community



Burnside Industrial Park

(Eco-)Industrial Area/Park

Multi-Tenant Building



Phillips Eco-Enterprise Center

Eco-Industrial Project Examples



Ross Eco-Industrial Park Retrofit

Regina, SK

- Led by Regina Eco-Industrial Network Association (non-profit)
- 400+ businesses
 - Significant transportation-related activity (Highway 1 and rail access)
- Current \$ from City, Province, Federal Gov't, Businesses

Leverage & strategize ... funding fits together like a puzzle!



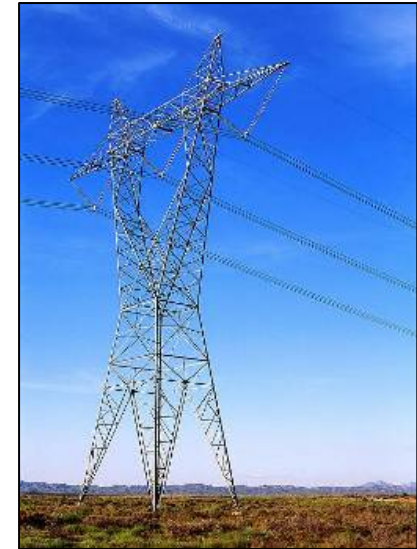
*Energy Use
in Ross*

More info: www.reina.ca

Ross Eco-Industrial Park Retrofit

4 key opportunities emerged:

1. Co-ordinated peak power management
2. Alternative Fuels purchasing block
3. Greening Buildings
4. Coordinated Commuting



Ross Eco-Industrial Park Retrofit

- REINA role
 - Information broker
 - Voice for progressive businesses
 - Common materials / service sourcing & contract management
 - Price negotiation
 - Education & outreach



Burnside Eco-Industrial Park

Halifax, NS

- Longest running Cdn project
- Cost saving business synergies / efficiency
- Many research projects
- Eco-Efficiency Centre
- New / restored trails, wetland
- Multiple partners, multiple funders



Burnside Industrial Park,
>1,300 businesses

www.eco-efficiency.management.dal.ca

New Eco-Industrial Parks



Concept Plan
TaigaNova Eco-Industrial Park
Fort McMurray, AB
www.taiganova.com



Small Bore Sewer™
(Ontario technology!)

19/10/2007
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Installing new sewer
Innovista Industrial Park
Hinton, AB
www.eip.hinton.ca

Local News

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Industry eco-park sprouts; Alberta project inspires Kingston

Posted By Frank Armstrong

Posted 16 days ago

If a plan to develop an ecologically friendly industrial park in Kingston is successful, it may be the first of its kind in Ontario, but it won't be the first in the country.

That file will go to Hinton, Alta., where construction of a 108-acre eco-industrial park called Involve is well underway.

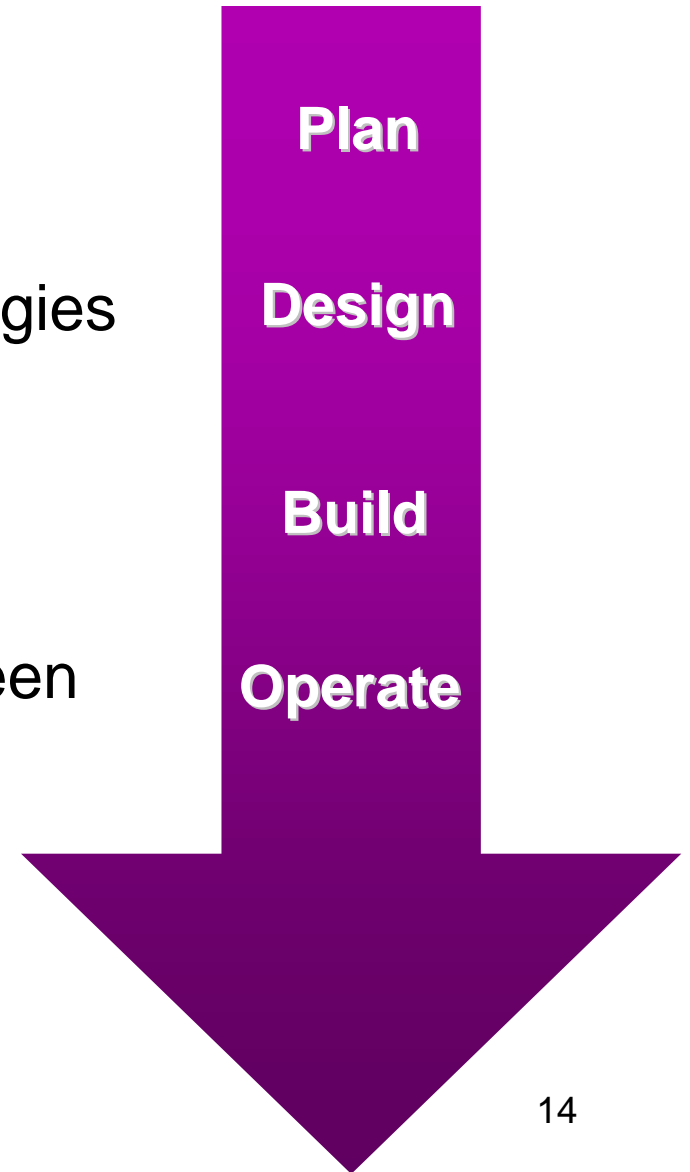
Situated on the eastern edge of Jasper National Park in the Rocky Mountain foothills and about 280 kilometres west of Edmonton, the town of 10,000 people approved the plan to build its own eco-industrial park in 2004.

Meant to balance environmental, social and economic interests, the plan for the unusual business park came about due to monetary reasons as much as any thing else, said Renee Laboucane, Hinton's economic development manager.

"The parcel on land itself was deemed to be too expensive to develop traditionally," Laboucane said yesterday.

New Eco-Industrial Parks

- Smart zoning and design guidelines
- Eco-infrastructure designs / technologies
- Sustainable Construction Plans
- “Conventional” buyers now going green



PART II

What is Partners in Project Green?



Source: GTAA Living City

The Future...Pearson Eco-Business Zone



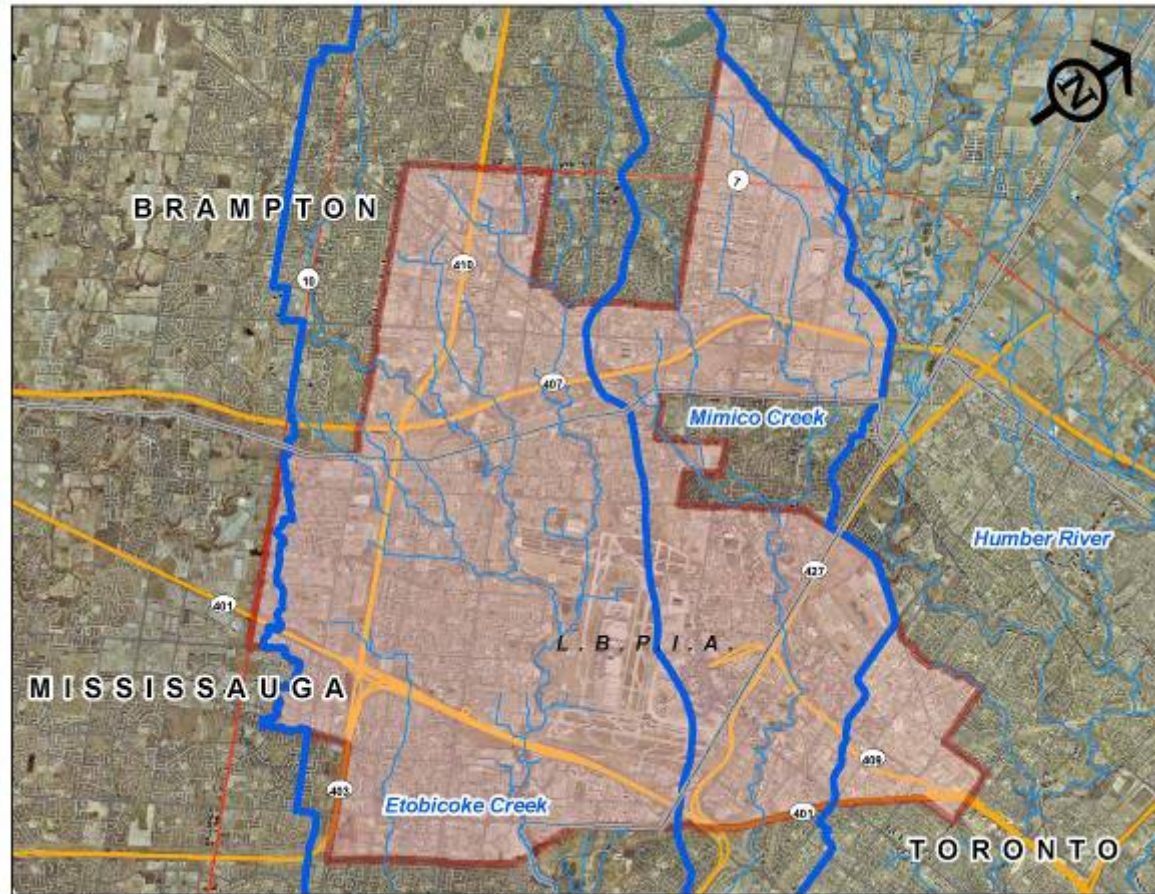
- North America's largest eco-business zone
 - Cost reductions and new revenue streams via resource efficiencies & synergies;
 - Better goods movement increases efficiency / reduces emissions
 - Cost effective, high performance development
 - Ecological assets restored and integrated
 - Reputation as the hub for competitive, sustainable business



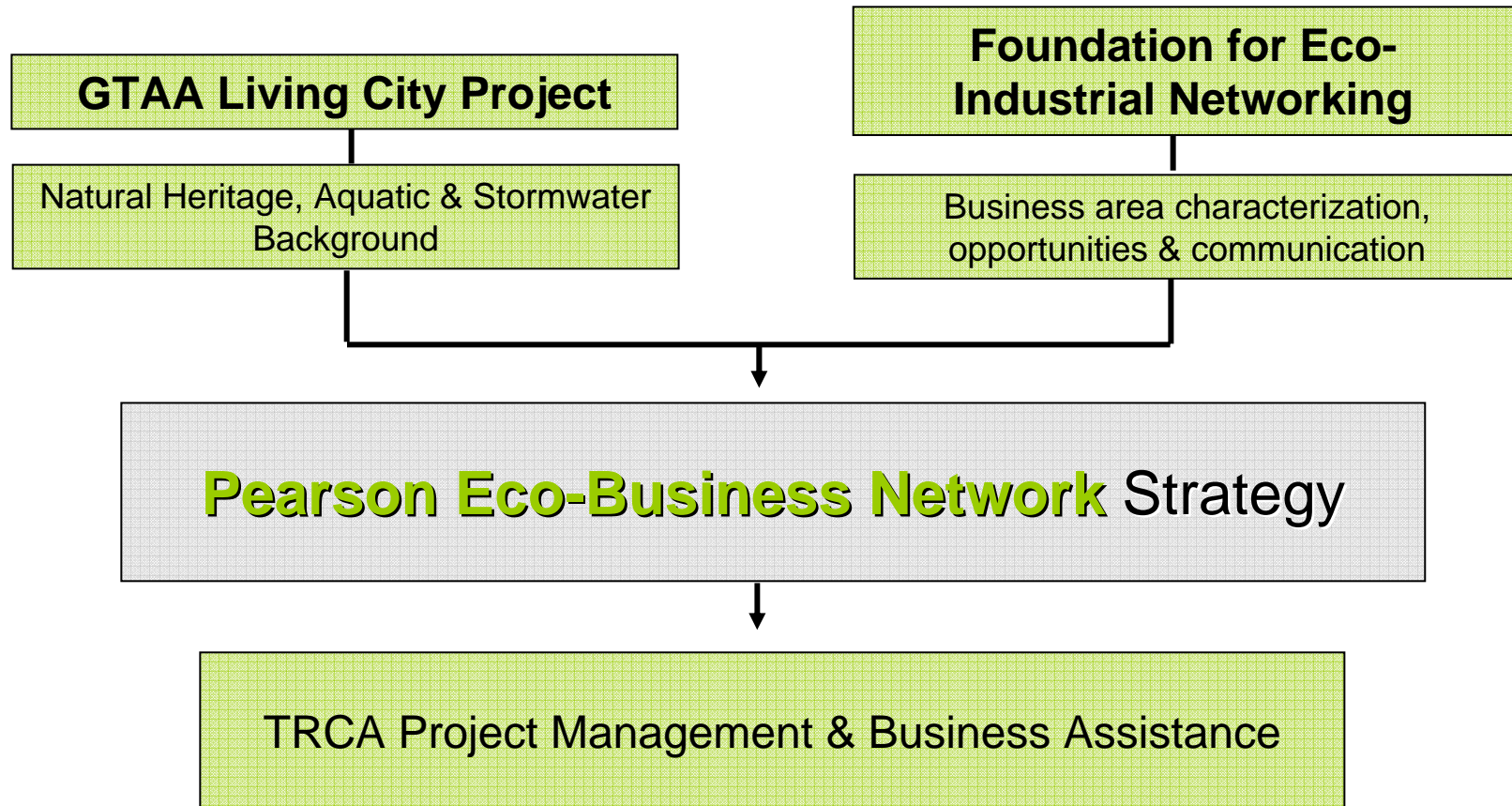
How Might This Be Achieved?

- Companies share & co-ordinate resources & services
- Businesses are located in facilities built or retrofit to reduce operating costs
- An information clearinghouse supports local green business initiatives
- By-product synergies
- Municipal policies foster innovation

Partners in Project Green: Pearson Eco-Business Zone Area



Partners in Project Green: Process



PART III

WHY PARTNERS IN PROJECT GREEN?

Why Partners in Project Green

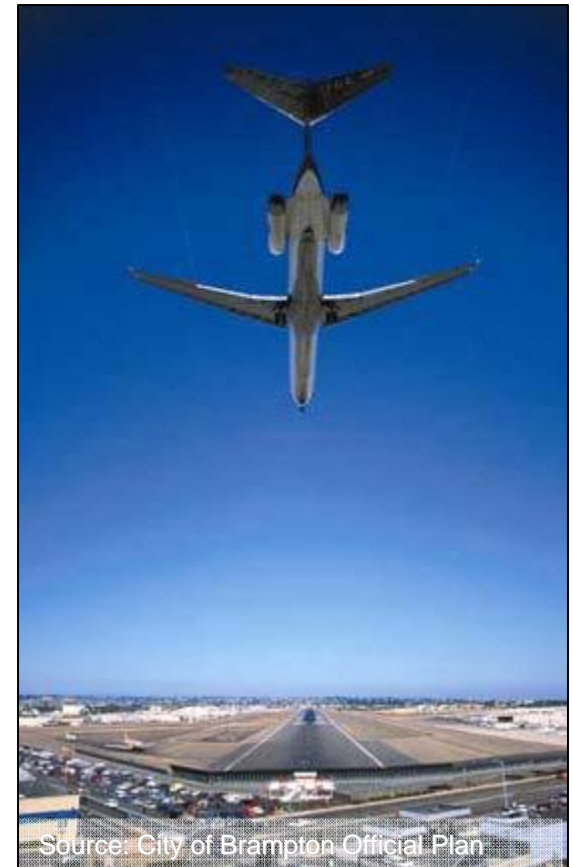
- Evolution from regional achievements
 - Businesses (Wall of Fame!)
 - GTAA, TRCA, local governments
- Work together for better solutions to regional challenges
- Protect regional assets



Pearson International Airport

Greater Toronto Airport Authority

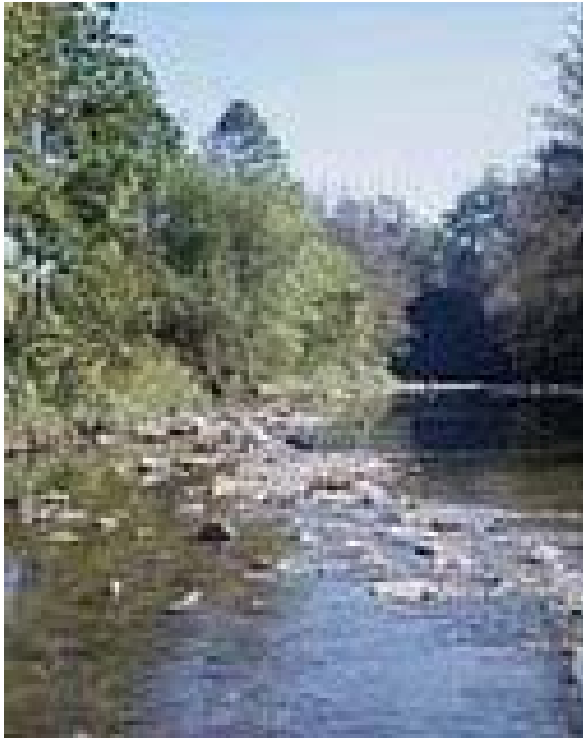
- Co-generation and growing district energy opportunities
- Commitment to fostering sustainability
- Water and energy conservation, and recycling targets
- Encourage tenants' improved environmental performance
- Energy Management Committee
 - saved 28,000 MWh of electricity in 2005
- Airports now compete on sustainability



Eco-Airports Worldwide

- Reducing employee travel (Auckland, Paris, London)
- Electric supplies to aircraft on ground to avoid fuel use (Oakland, Narita)
- Alternative fuels in service & fleet vehicles (Dallas)
- Consolidated distribution center reduces deliveries (London)
- LEED Silver buildings (San Jose, Oakland)
- Co-generation, off-peak electricity use (Nagoya)
- Creating Environmental Liaison Council to coordinate & exchange info with other airports (Narita)

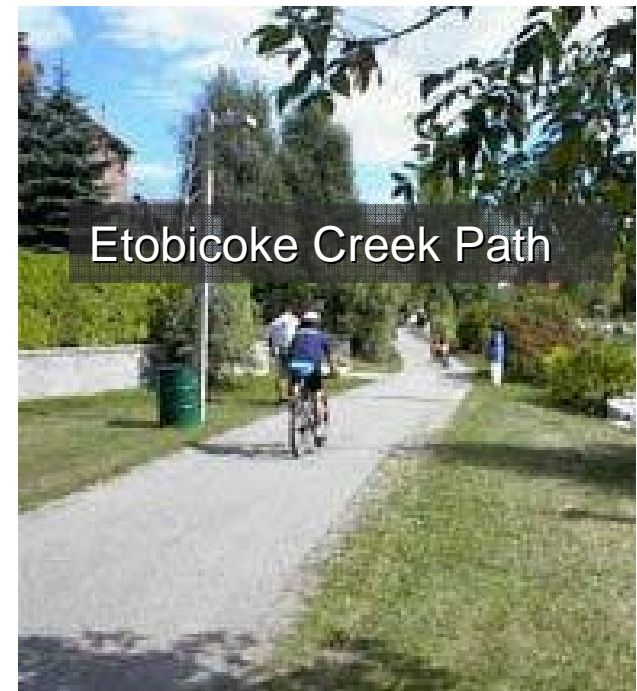
Toronto and Region Conservation Authority



- Championed this project
- Impressive scientific and community work e.g., Living City project
- Working with retailers to green their operations
- Experienced in evaluating eco-impacts of development and supportive constructive solutions
- Solid reputation for environmental education and outreach to varied audiences

Municipalities Pursuing Sustainability

- Support innovation in infrastructure design (Brampton)
- Ecosystem planning approach (Brampton)
- Promote energy conservation, reduce, impervious cover, reuse of water & materials (Mississauga)
- Reduce loads to sewer system via Sewer Use Bylaw & education (Peel)
- Support green industry & energy production, GHG reducing infrastructure, multi-objective utility corridors (Toronto)



Business Leading the Eco-Way

- Build from great achievements / leadership
- Support increased competitiveness
- Meet growing customer / shareholder demand for sustainability
- Achieve and maintain industry leadership

Existing Environmental Leaders

Bayer

Canadian Tire

Chrysler

Pratt & Whitney

Unilever

Whyte's Foods Corp.

Zellers

... and many more!

QUESTIONS AND BREAK

Opportunity: Greening Business

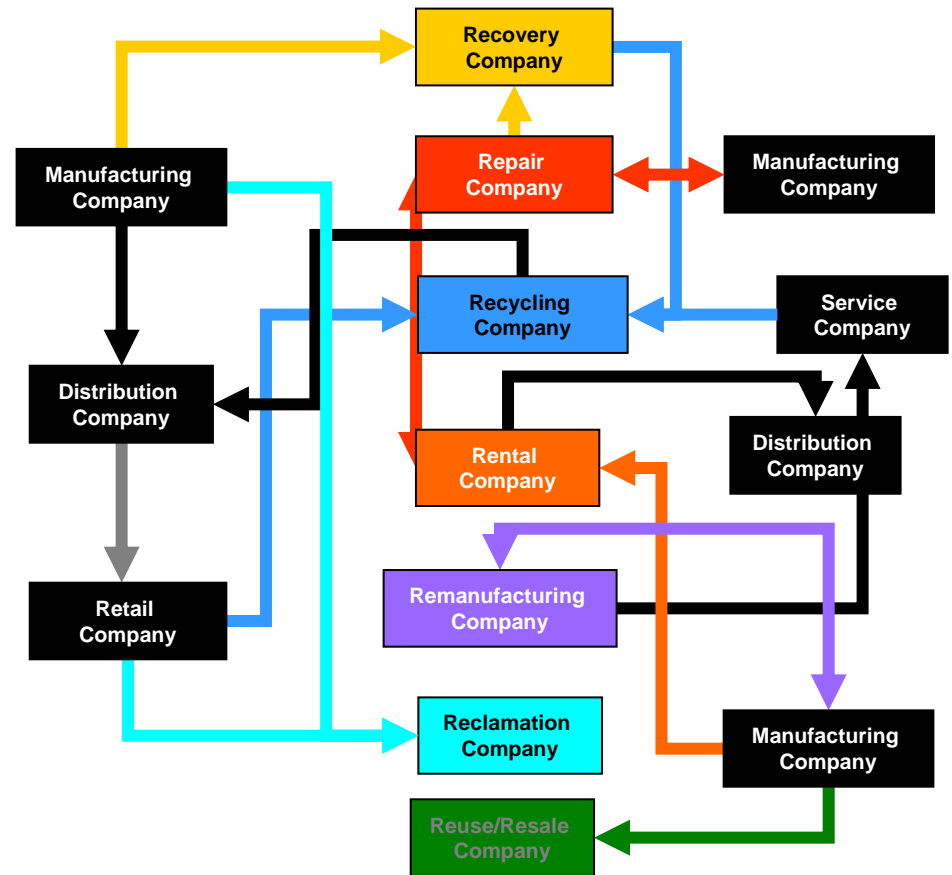
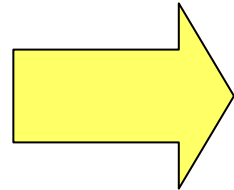
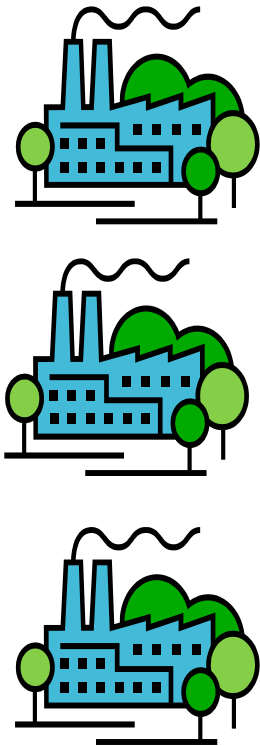
Keep Up the Good Work

Each business continues towards eco-efficiency

- Energy efficiency, on-site renewable energy
- Water conservation, recycling
- Improved product yields and reduced waste
- Green procurement
- High-performance or green facilities



Greening Business



Source: Eco-Efficiency Centre, Burnside Eco-Industrial Park

Eco-Business Zone

Eco-Efficiency

And... achieve more with eco-industrial approach

- Improve business case through collaboration
- Knowledge exchange and capacity building
 - Green purchasing groups for better pricing
 - Multi-business efforts e.g., regionwide warehouse retrofit program
- Material and energy networks
 - By-product / waste heat synergy
 - District energy
- Green (eco-) industrial/business parks



Credit: Natural Resources Canada



Biodiesel Truck

BREAKOUT SESSION #1

GREEN THEME

Opportunity: Improve Goods Movement



Photos: Eco-Industrial Solutions Ltd, 2006

Vital for Economic Health



- Toronto Pearson rated in top thirty airports worldwide for cargo activity.
- Almost 30% of all businesses are in the **wholesale, distribution, transportation and warehousing** business
- All municipal partners prioritizing safe and efficient movement of people and goods

Eco-Industrial Approach for Efficient, Lower Impact Goods Movement

- Eco-fuel, engine technology purchasing blocks
- Co-ordinated logistics
- Efficient logistics bldgs (stop heating the outdoors!)
- Logistics centres → eco-industrial hubs
- Transportation Management Associations that promote sustainability in all aspects of transportation
- Information and knowledge sharing networks



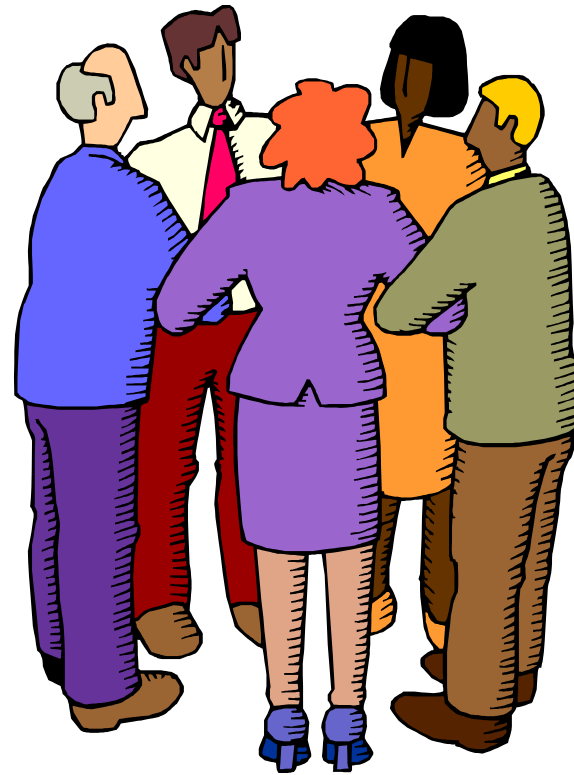
Source: City of Brampton Official Plan

PART V

Wrap Up & Next Steps

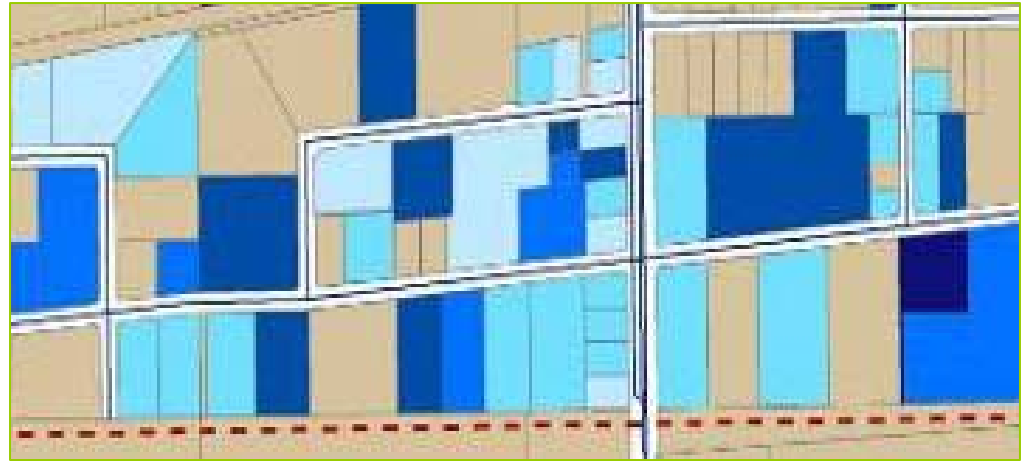
Next Steps

- Increase business partnerships & participation
 - Establish Steering Committee



Next Steps

- Continue business characterization



Next Steps

- Start working on the quick and easy opportunities



Next Steps

- Increase business partnerships & participation
- Continue business characterization (detective work)
- Identify and prioritize eco-industrial opportunities
- Start working on the quick and easy opportunities
- **Finalize Pearson Eco-Business Zone Strategy**

.... Measure the results!

Your Participation in Partners in Project Green



- ↑ **Join our e-mail list**
- ↑ **Provide data and permission to access water and energy data**
- ↑ **Attend Workshops and Future Focus Groups**
- ↑ **Participate in an interview with TRCAS or its consultant**
- ↑ **Project Advisory Committee Number**
- ↑ **Project Steering Committee Member**
- ↑ **Project Funding Sponsor**
- ↑ **Implement E-I ops at your business**

Questions?

Thank you!