

# Sustainable Employment & Industrial Lands In Practice

Panel Presentation  
Building Tomorrow's Jobs  
Westside Economic Alliance | Clackamas  
County Business Alliance | Metro

**FEBRUARY 1, 2011**

# I. Overview of Eco-Industrial Parks

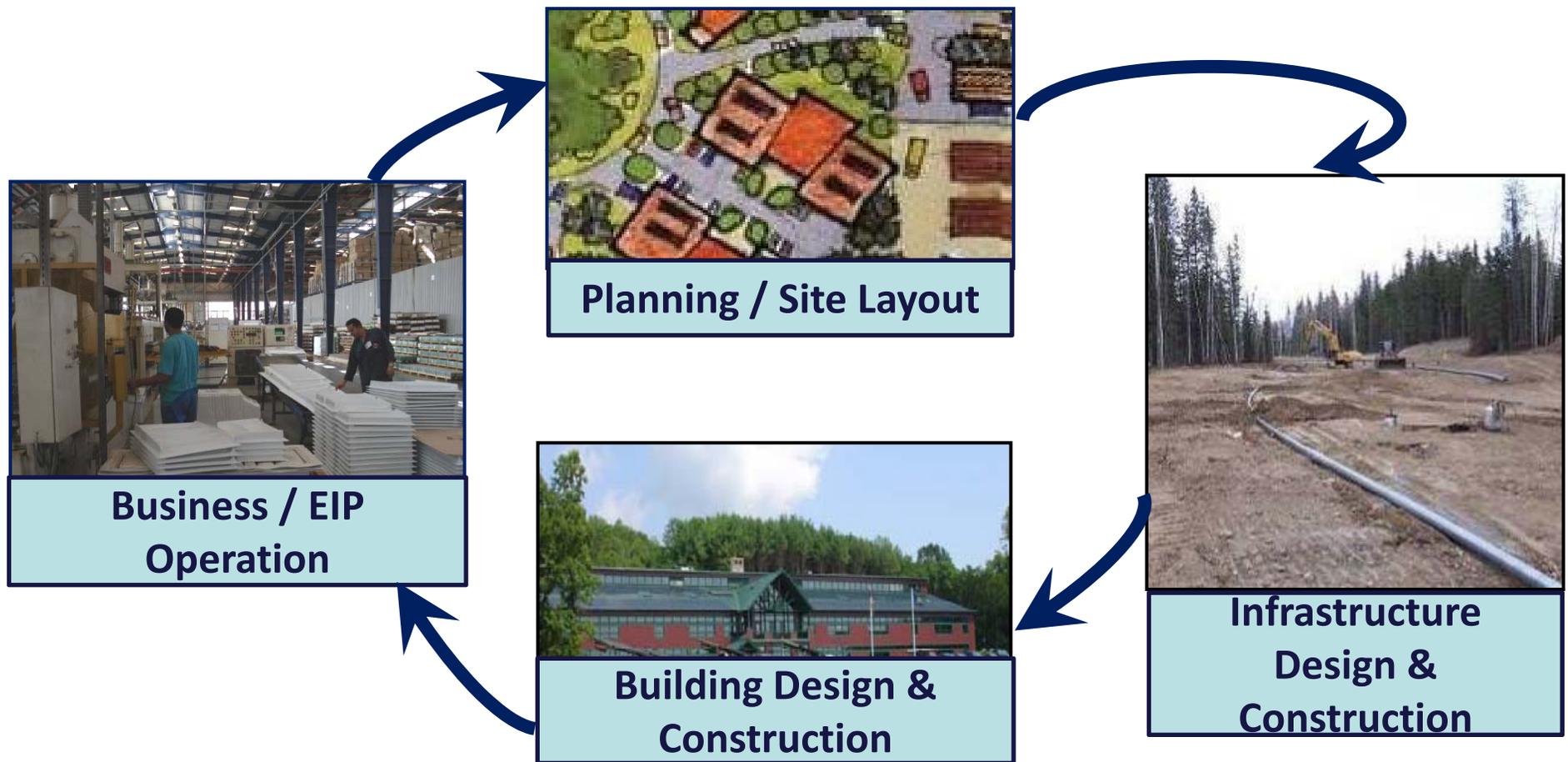
(aka Sustainable Industrial or Employment Lands)

# Industrial Ecology - Distilled

1. Industry is part of the ecosystem → a systems and ecologically-based approach to designing and operating industry is required
2. Natural ecosystems offer many lessons that can be translated to industrial systems

# Practically Speaking: What is an EIP?

Embed industrial ecology in industrial park life-cycle



# Practically Speaking: What is an EIP?

EIP =

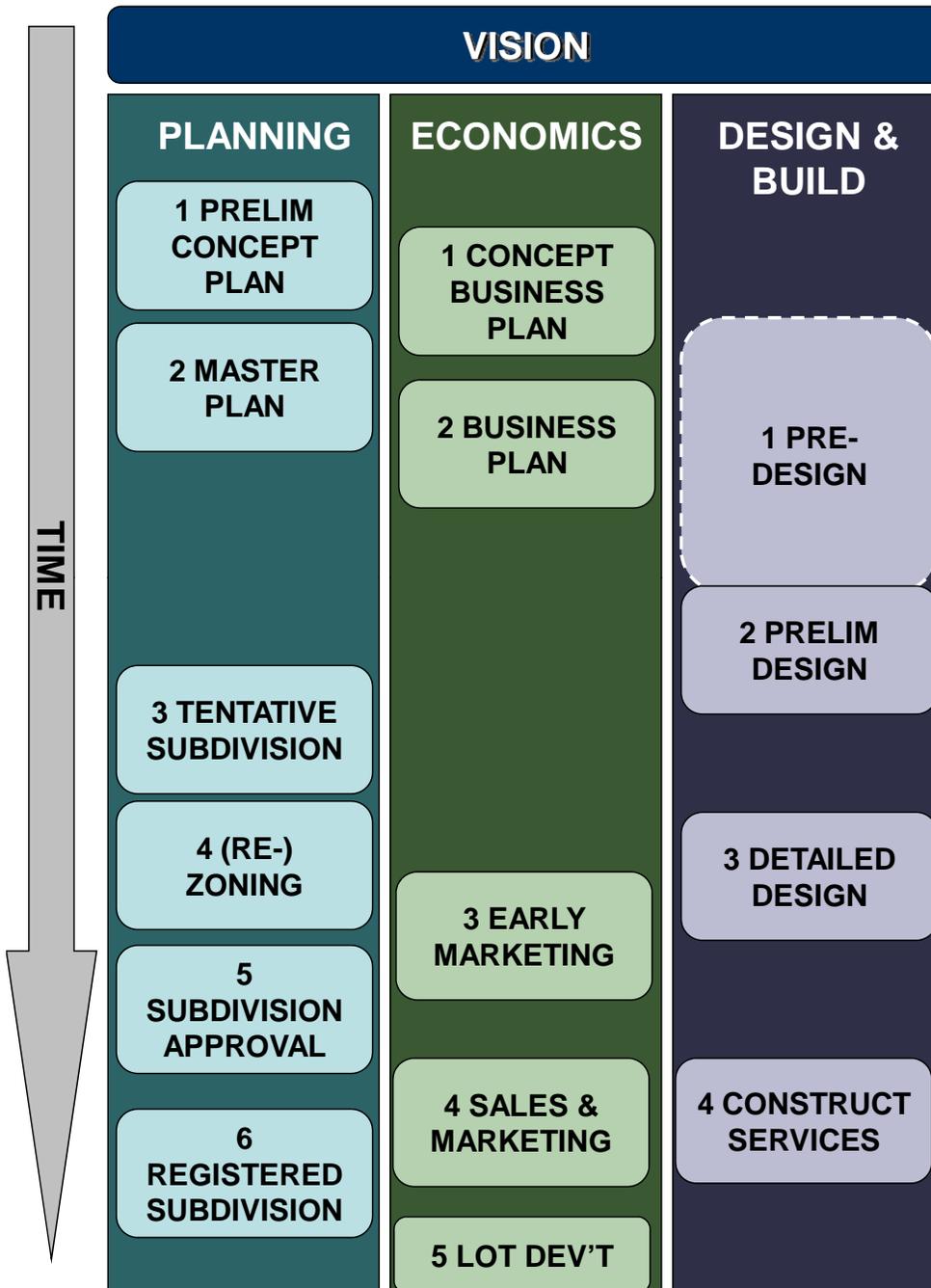
Raw Land + Services + Lot Creation  
= **Real Estate Development Project**

# Development Projects Require a Developer

- Acts as the 'conductor' (or hires one)
  - Manages finances, planning, infrastructure design, construction, sales, regulatory approvals
  - Manages all consultants and contractors
  - Takes the financial risk
- Government, private, joint venture
- Responsible for servicing land (building infrastructure) and sometimes for putting up buildings

# EIP Elements & Process

- Many and often interdependent steps
- Some flexibility in timing
- Developer (or Development Manager) co-ordinates all this
- Other due diligence, feasibility work not shown



# EIP Elements & Process

*(and some advice)*

- Creating an EIP is more than planning, more than engineering, more than marketing
- Up-front \$ pays off (think of green buildings)
- Time is \$ always
- Every lesson you learn will cost you \$ → so hire people who have already learned the lessons
- Do you know what you don't know?

# EIP Drivers

- ✓ Economic development & diversification
- ✓ Challenging site to develop
- ✓ Council said 'make it so'
- ✓ Broad municipal sustainability picture
- ✓ Developer understands business case to go green

# EIP Barriers

- Lack of development experience
- Challenging site to develop
- Lack of resources (\$ and time)
- Lack of political will and supportive policy framework
  - Leads to delays and time is \$
- Developer doesn't understand business case to go green
- Idealism vs. vision

# Types of EIPs

- Theme-Based / Sector-Based
  - Resource recovery
  - Zero waste
  - Bioproducts
  - (Value-added) agriculture
  - Green energy / tech
- Anchor tenant based, usu. large plant like a co-generation facility
- Straight market driven

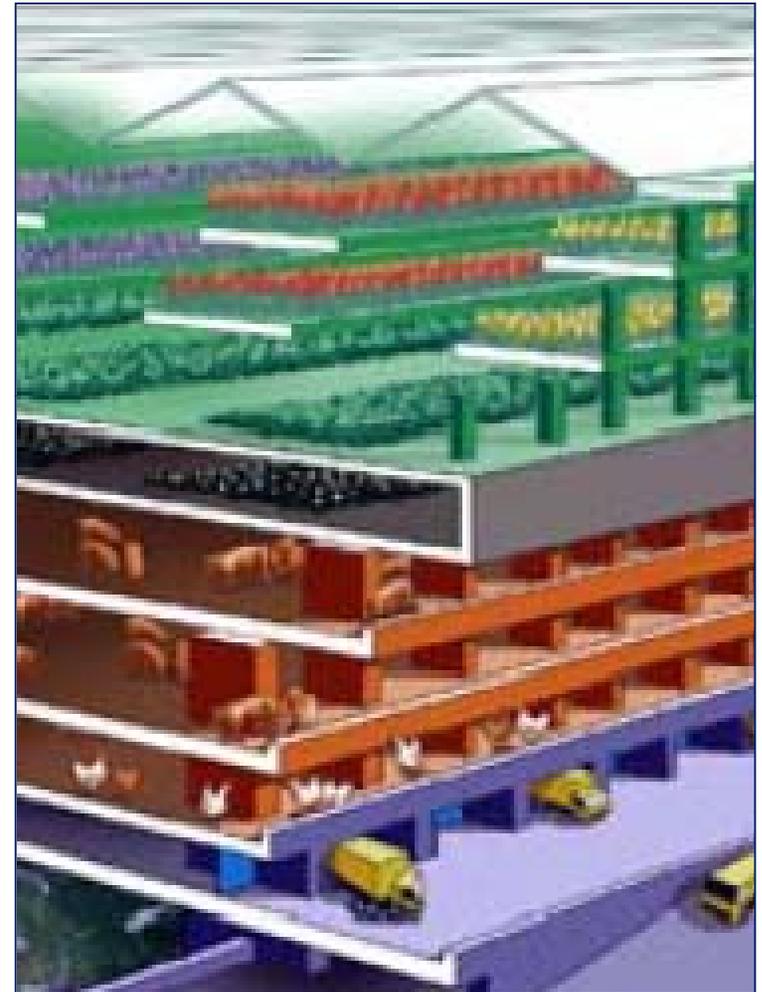


Image from Agroparks: the concept, the responses, the practice. Innovation Network. Netherlands (book)



# TaigaNova Eco-Industrial Park

Fort McMurray, AB

- **Planning:** Master plan, guidelines, zoning
- **Infrastructure:** Habitat protection, reduced pavement, trails, solar lighting, approved locations for district energy piping
- **Buildings:** Conventional businesses going green (City's 1st LEED Gold industrial bldg)
- **Operations:** Custom eco-zoning, guidelines, sales & marketing, education
- **Profit:** Profits used to support affordable housing. Conventional ROI and timelines!

[www.taiganova.com](http://www.taiganova.com)

## II. Overview of Eco-Business Zones

# EIPs can be....

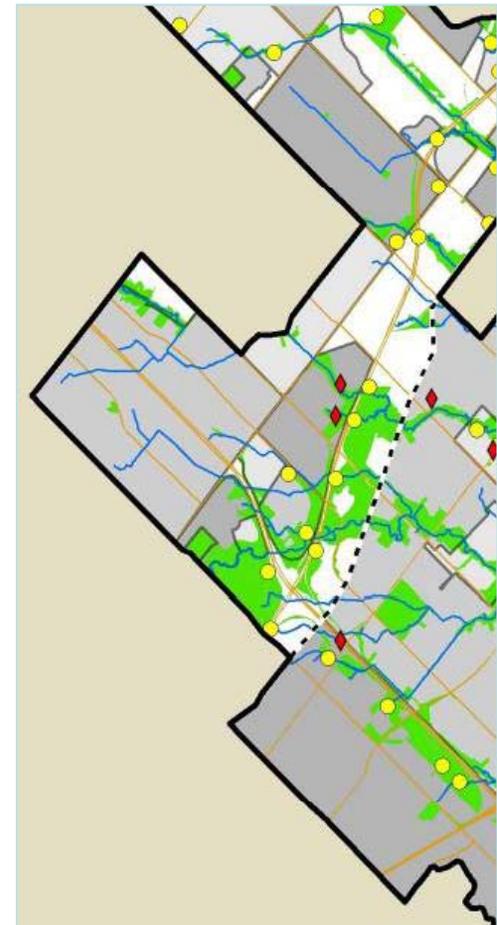
**New**  
**'from scratch'**



**Retrofit**



**Regional**



# EIPs can be....

**New**  
**'from scratch'**

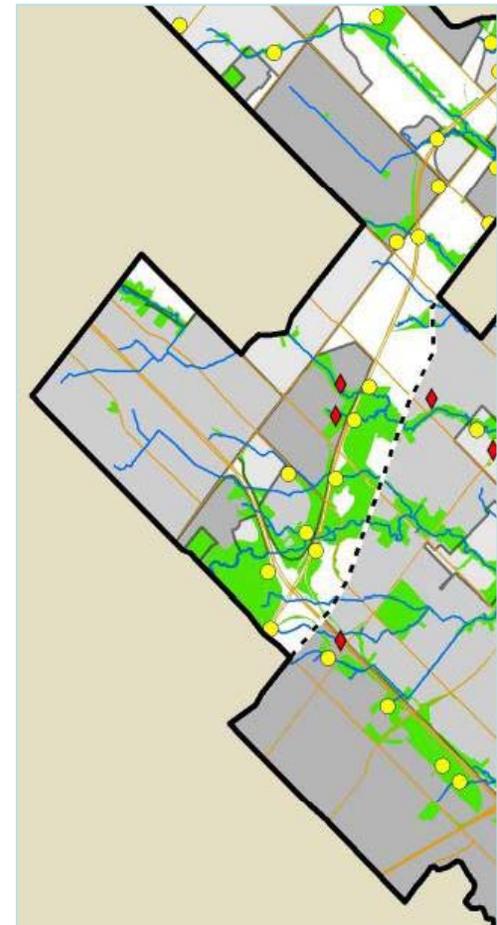


**We just covered those!**

**Retrofit**



**Regional**



# Practically Speaking: What is an EIP?

Embed industrial ecology in industrial park life-cycle



# Eco-Business Zone = EIP Retrofit

Transform existing employment land area  
(industrial / business park) to create:

- ✓ Green buildings
- ✓ Smart planning
- ✓ Sustainable infrastructure
- ✓ Efficiency & symbiosis
- ✓ Eco-business networking
- ✓ Lower carbon footprint



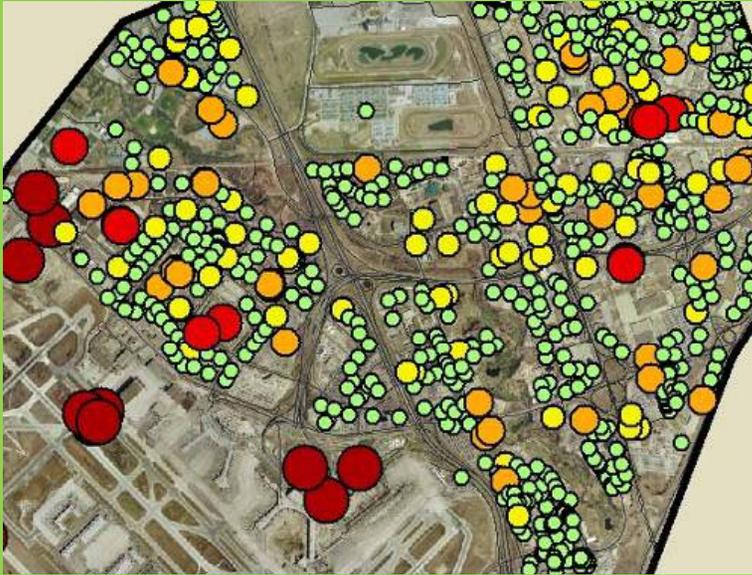
# Eco-Business Zone Implementation

Eco-business opportunities should:

- Embed sustainability culture and industrial ecology thinking
- Conserve energy, increase renewable energy, and reduce ghg emissions
- Conserve water and materials
- Promote industrial symbiosis
- Protect and enhance local ecosystems
- Save businesses \$\$\$

# Retrofit Process – Key Elements

## Intelligence / Analysis



## Consultation / Engagement



**Eco-Business Zone Strategy**

**Implementation**

# Eco-Business Zone *General Process*



- Visioning
- Stakeholder engagement
- Baselines & benchmarks
- Intelligence-based evaluation
- Opportunity assessment
- Prioritize and plan
- Develop strategy & action plan
- Implementation



# Eco-Business Zone Drivers

- ✓ Cut business costs and create opportunities
- ✓ Faster innovation & reduced risk
- ✓ Maximize return on public & private infrastructure investments
- ✓ Bring all business into the green economy
- ✓ Increase green technology commercialization
- ✓ Cut waste and emissions
- ✓ Create sustainable communities *with* industry not in spite of it



# Eco-Business Zone Barriers

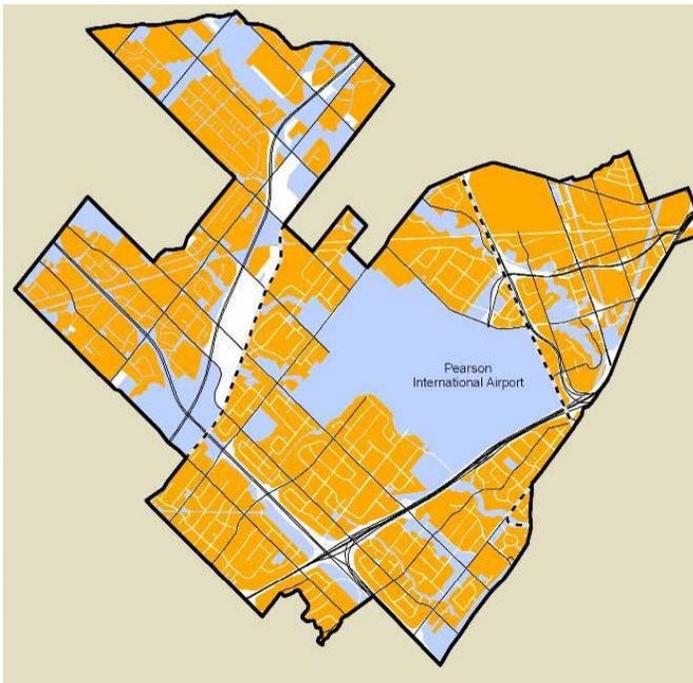


- Multiple land owners & business types
- Champion is often an 'outsider'
- Lack of resources (time and \$) → loss of momentum
- Lack of capacity and understanding (businesses, community, government)
- Lack of data & information
- Lack of political will & supportive policies
- Moving from individual to collaborative action

# Pearson Eco-Business Zone

Greater Toronto Area, ON

- Toronto & Region Conservation Authority, Greater Toronto Airport Authority + municipalities+ region
- 12,000 ha, ~ 355,000 jobs, 12,500 companies
- Goal: North America's largest eco-business zone



# Thank you!

Further questions / comments?

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