Bioindustrial Innovation Canada
Creating Jobs and Economic Value Sustainably for Canada

Resource Recovery Conference
June 22, 2018

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Bioindustrial Innovation Canada
Accelerating commercialization of clean technologies

Vision:

Creating jobs and economical value sustainably for Canada

Mission:

Bioindustrial Innovation Canada provides critical strategic investment, advice and services to business developers of clean, green and sustainable technologies. Our expertise in commercialization builds a stronger Canada.
Bioindustrial Innovation Canada
Supports commercialization of sustainable chemistry

Cluster Builder
• Build a strong hybrid cluster in Sarnia-Lambton
• Create strong partnerships with Colleges and Universities
• Integrate cluster model into additional Canadian communities

Critical Strategic Investment Fund:
• Raise risk capital for clean, green and sustainable startups
• Invest in start up companies with high potential for success
• Use BIC talent and connectivity to accelerate success and profitability

Strong Leader for Commercialization:
• Provide commercialization advise and services
• Increase awareness and understanding of successes
• Provide leadership for sustainability (LCA, GHG reduction, water reduction and quality)
Integrating into the Hybrid Chemistry Value Chain
Opportunity for recovered resources to commercialize

- Fossil-based Feedstock
  - Ethanol
  - Butanol
  - Biodiesel
- Bio-based Feedstock
  - Biomass
  - Recovered Resources
  - Oils / Fats
- Fuels & Energy
- Primary Chemicals
  - Succinic acid
  - iso-Butanol
  - Levulinic acid
  - Lignin
- Polymers & Chemicals
- Finished Products
  - PLA
  - Butanediol
  - Carbon Fibre
  - PET
  - Ecosphere™
- Processed Biomass
  - Lignin
  - NCC
  - Natural fibres
- Consumer
- Advanced Manufacturing

Low Value Added ➔ High Value Added

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Getting to Successful Commercialization Requires a systems approach

Build Robust Supply Chains:
  • Access to sufficient quantities
  • With the appropriate quality
  • At a cost commensurate with competitive products

Leverage Existing Value Chains:
  • Maximize the economic value of the raw materials (supply push)
  • Generate value through co-products (no waste)
  • Identify gaps and leverage market pull whenever possible

Build Clusters (collaborative ecosystem):
  • Share infrastructure and services
  • Leverage common technical skills within the workforce
  • Collaborate to find synergies with cluster members
Economics Ultimately Drive Adoption
Key Elements to Consider

Innovation is a Necessary Element:
- Innovation occurs to overcome society’s unmet priorities
- Commercialization only happens once viability tests are met

Successful Business Models:
- Access to resources is always limiting (capital, manpower, time)
- Sustainability only achievable through profitability without subsidy
- Short term incentives can reduce first-of-kind technology risk

Policy as a Behavior Change Tool
- Facilitates change in society using a carrot and/or stick approach
- Influences the early adopters to move forward
- Cap and trade attempts to put societal costs on raw materials
- Waste diversion legislation incents through lower feedstock costs
- Change requires perseverance and time
Thank you - Discussion