



Investing in Sustainability

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Portfolio Manager

BioIndustrial Innovation Centre/Sustainable Chemistry Alliance

Vision/Mandate

- Vision
 - *Canada is a global leader in innovative, environmentally sustainable, chemical products, technologies and processes, by becoming one of the top three bio-based economies in the world.*
- Mandate
 - *Deliver project commercialization, by managing, expanding and utilizing a self-sustaining fund and forging Alliances to invest strategically and support activities in the convergence of Bio and Fossil based feedstocks and energy in order to create bio-hybrid clusters in Canada.*

Achieving our Vision, Delivering on our Mandate

Connecting companies, investing in sustainable technologies

- *Creating jobs, environmental sustainability, economic wealth*

Supporting development of biohybrid clusters

- *Through strategic investments and connectivity through the business value chain*

... This is what we do

Opportunities

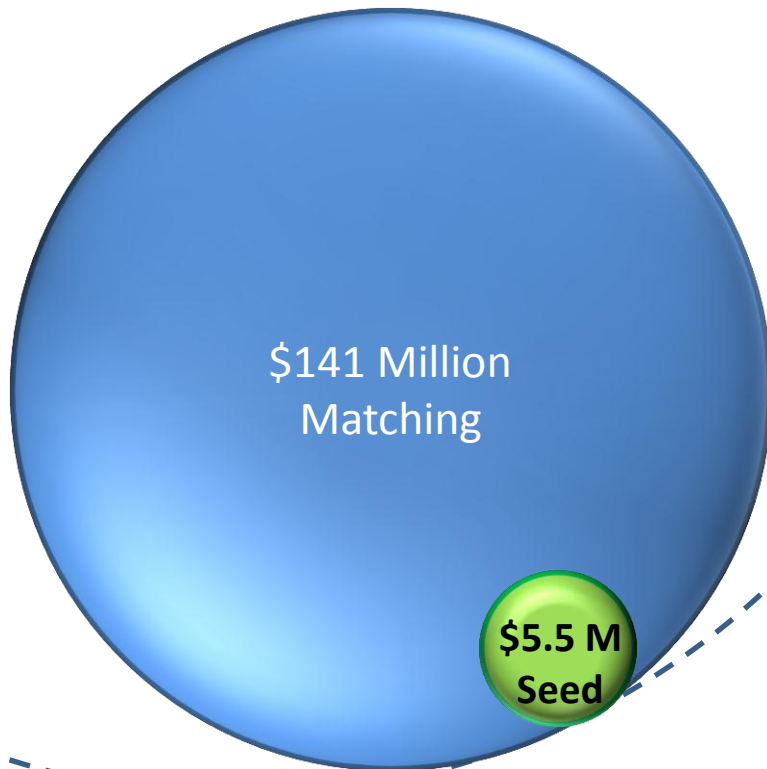
Successful
Results

More
Opportunities

Positioned to
do More,
Repeat

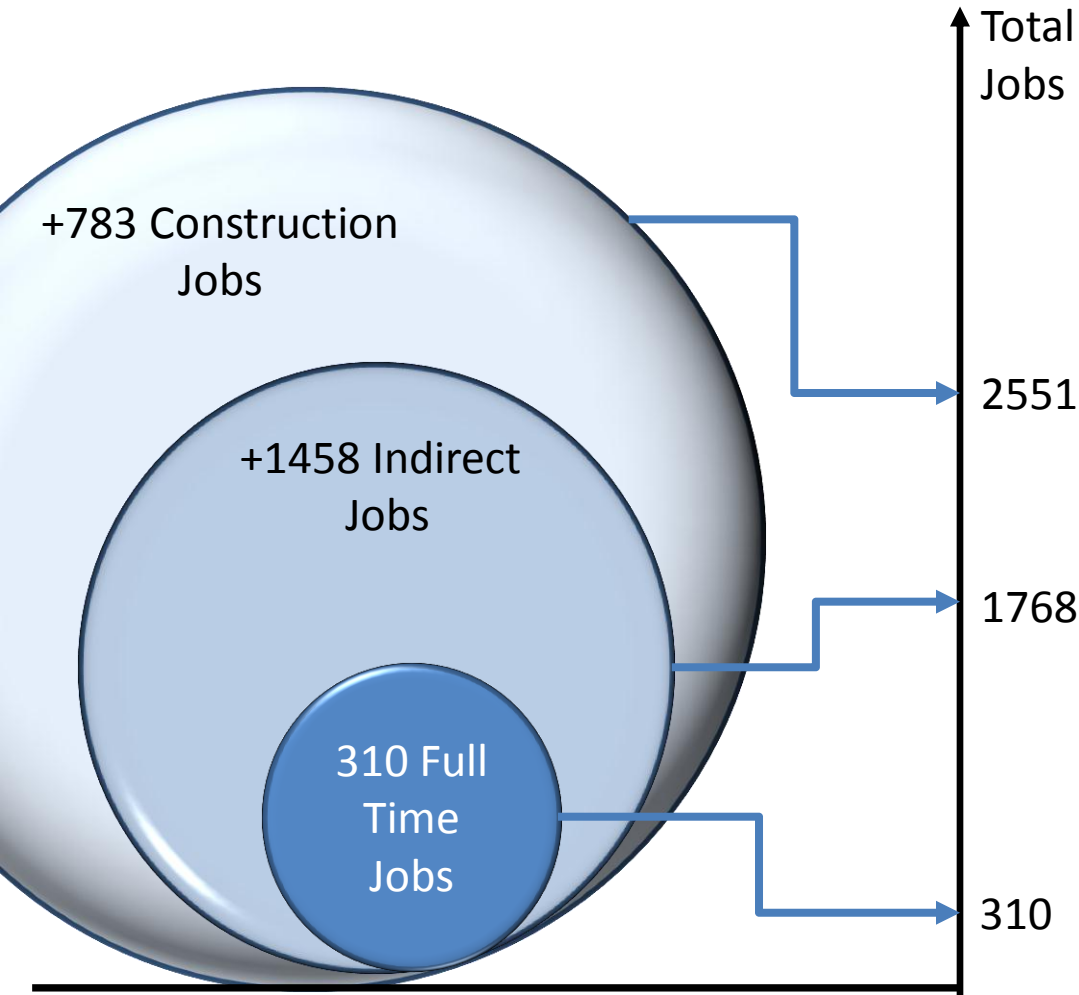
SCA Investments in Sustainable Chemistry

\$500+ M expected follow-on investment for full commercialization or IPO



- \$100 million IPO by EcoSynthetix
- S4CO2 IPO in March 2012
- 4 more IPO's expected within next two years
- Providing connectivity to deliver commercialization - project execution!

Sustainable Job Creation and Retention



- 6 commercial demo plants
- 1 major \$80+ M biobased plant
- Highly qualified people, skilled jobs
- New long-term jobs in sustainability
- New jobs in economically sustainable business models

1. Commercial Incubation and Launch

- Renovated Dow Canada Global R&D Centre
- World Class “Plug-and-Play” Piloting Facilities
- Door step to Sarnia Chemicals, Energy and Agricultural industry and access to forestry
- Within a day drive to >60% of N. American GDP



Pilot Plants Commissioning

KmX

- renewable butanol and ethanol

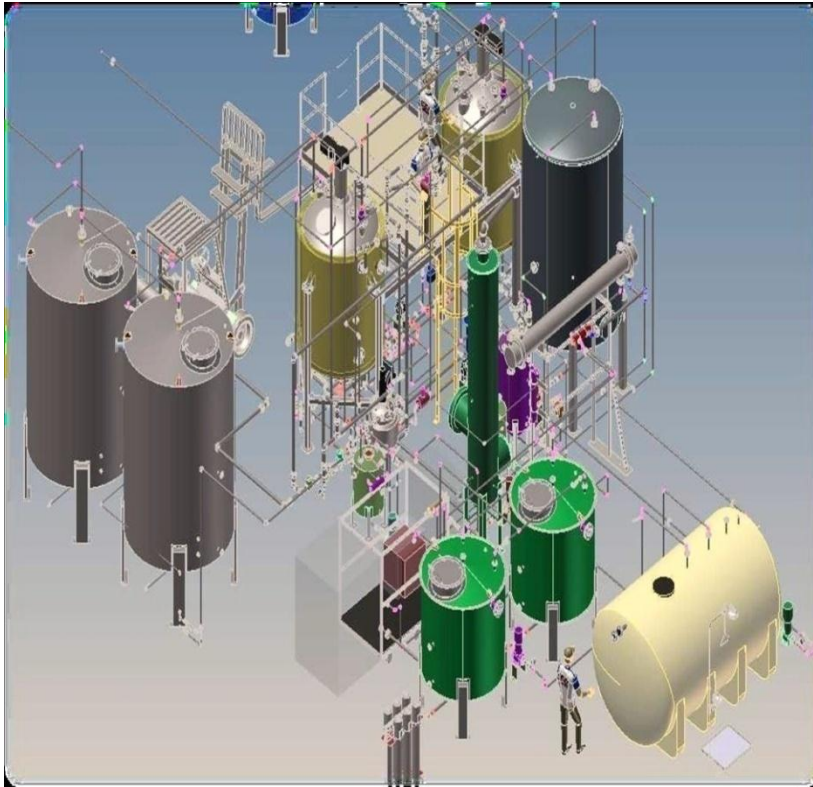


Photo approved and provided by KmX

Woodland BioFuel

- cellulosic ethanol

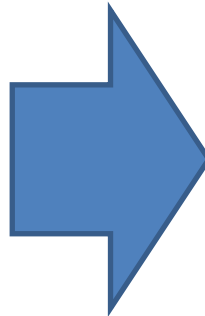


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Scale-up via Contract Manufacturing

vertichem^o

Lignin
Xylose
Cellulose



>99.5% VAN



>99.5% SYA



PU Foam



>99.5% Xylose

Benzene
Toluene
Xylene

13 patents
26+ pending

Front End Products

Downstream Products

2. Accelerate and Improve Rate of Successful Commercialization

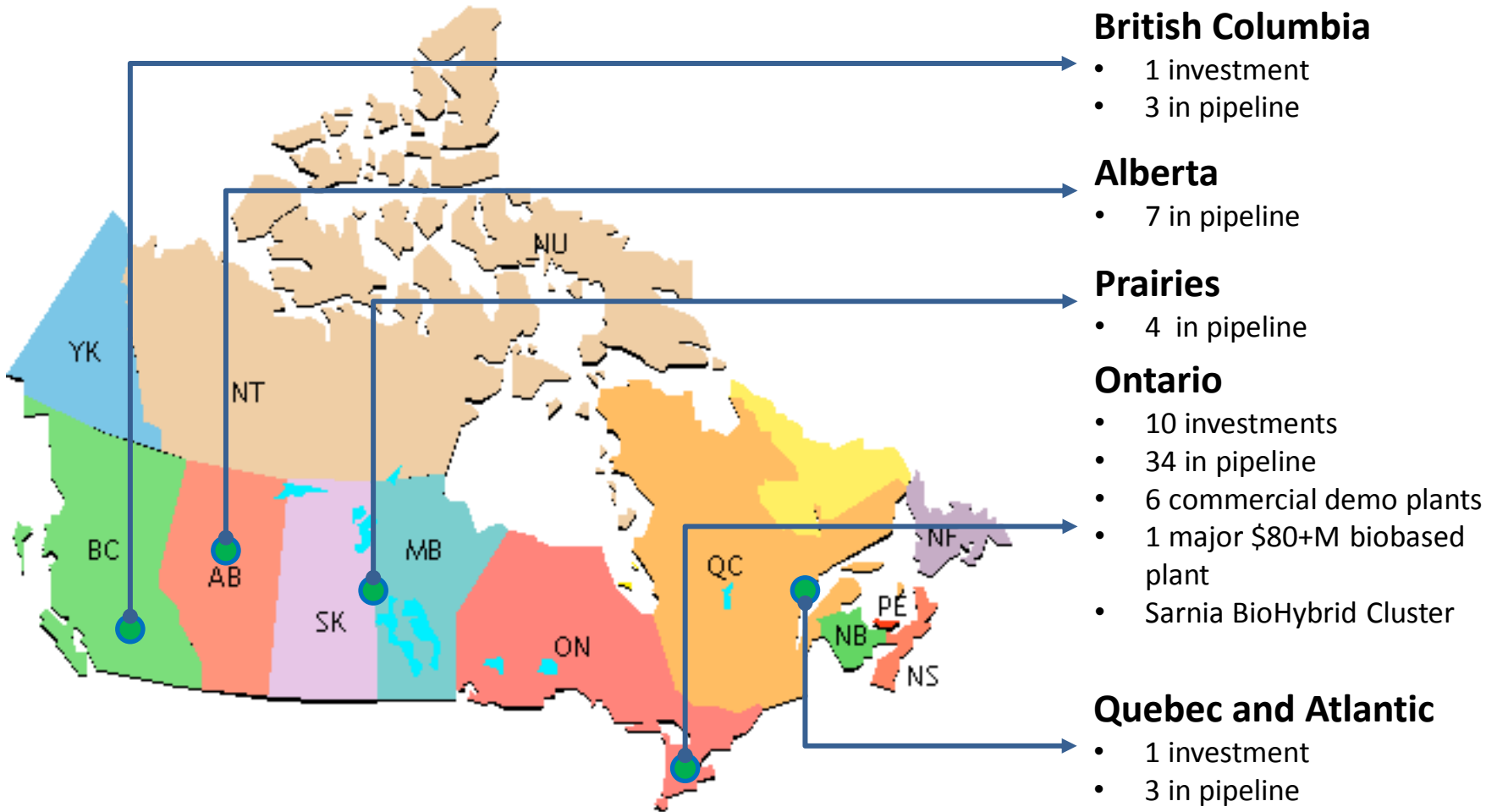
BIC helps with:

1. Early Stage Financing
2. Connectivity
3. Readily accessible critical skills
4. Risk Mitigation
5. “Street Creds”



Delivering
Commercialization by
Bridging Gaps of
“Death Valley”

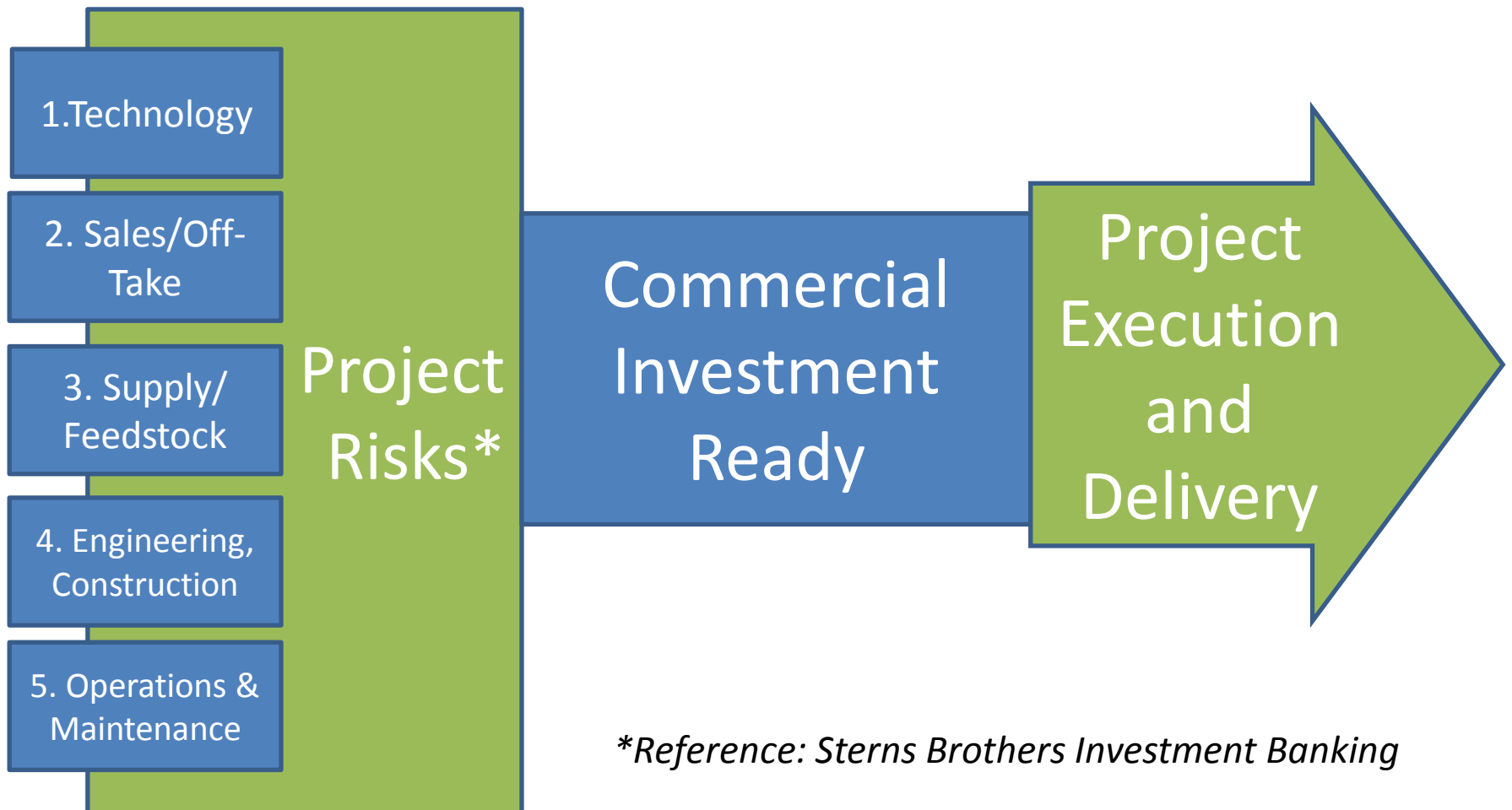
Investing Across Canada



Environmental Sustainability

SCA Investment	Contribution to Environmental Sustainability
Lowering carbon footprint	
BioAmber EcoSynthetix Solutions4CO2 Azule, CORE BioFuel, Woodland Fuel, GreenCore	<ul style="list-style-type: none"> • GHG reduction vs. fossil based alternative • 62% GHG reduction vs. fossil based alternative • Capturing GHG from combustion flue gases and AD off gas • Alternatives to fossil fuel • Alternative to petroleum based plastics and materials
Converting waste to value added use	
Duropar Solutions4CO2	<ul style="list-style-type: none"> • Converting waste asphalt and plastic to railway ties • Converting CO2 to algae and algae coproducts
More efficient use of renewable and non-renewable natural resources and energy	
BDR Renix Vive Crop Protection	<ul style="list-style-type: none"> • Lower energy use and capex, achieving high quality fuel and omega 3's • Less use of controlled chemicals, less waste, more energy efficient • Better efficacy with less
Creating valuable products from renewable natural resources	
CORE BioFuel, Woodland Fuel BioAmber, Vertichem EcoSynthetix GreenCore Solutions4CO2 Vive Crop Protection	<ul style="list-style-type: none"> • Biofuels from agri and forestry biomass • Platform bio-based chemicals from sugars and biomass • Alternative to petroleum based polymers from corn starch • Alternative to plastics from forestry biomass • Biobased fuels and chemicals from algae and fish oils • Green formulation of crop protection chemicals

Using Connectivity and Deep Sectorial Experience to Mitigate Top 5 Risks



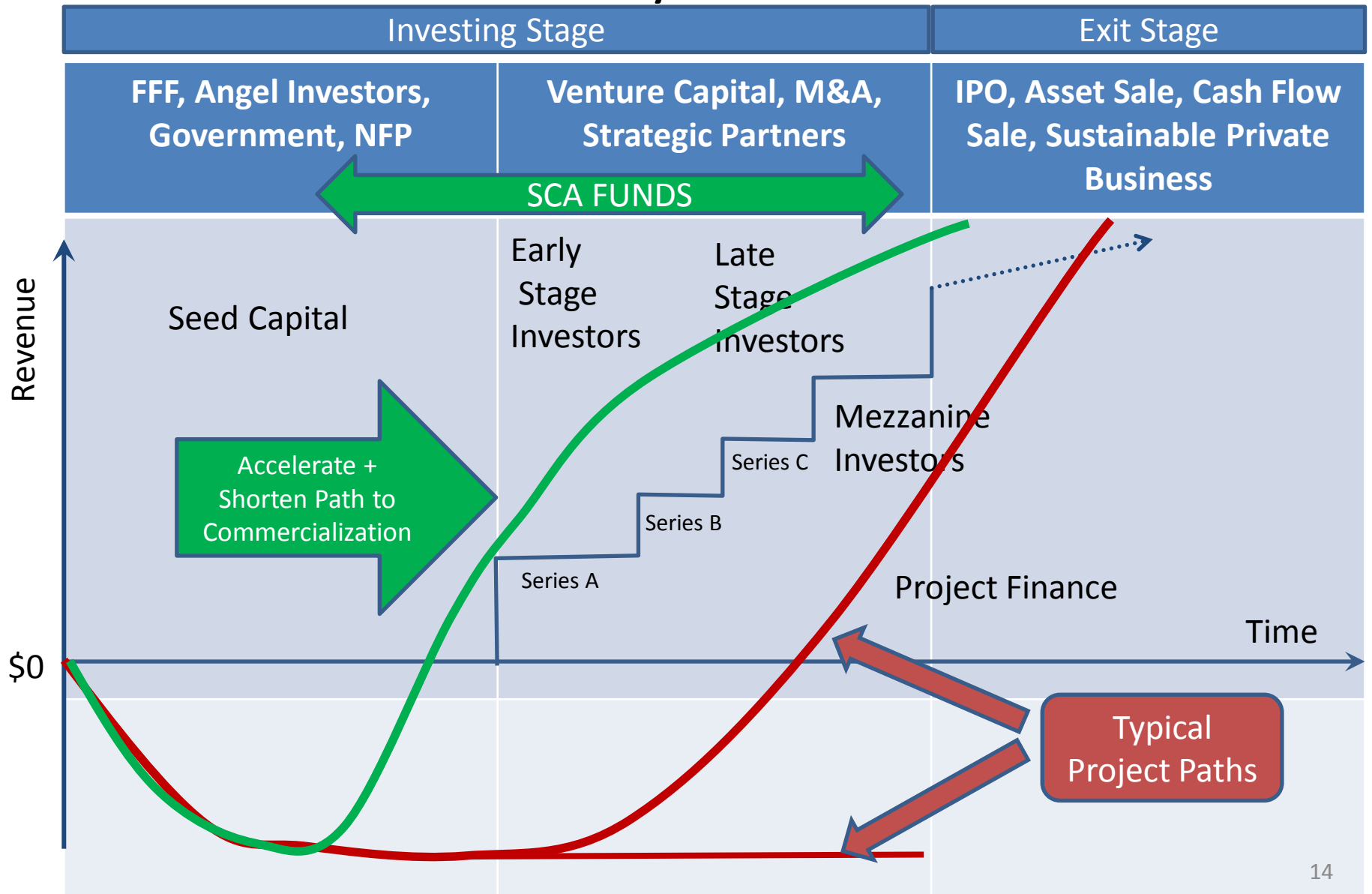
Enable Invested Companies to Focus on Delivering Results

- Advise
- Connectivity – partners, market, finance, knowhow
- Pooled back office support from partners
 - Legal
 - Accounting
 - Media
 - IT
 - Engineering
- Investors

"Your efforts at bridging the financed "valley of death" for these companies is a critical component in commercializing these technologies, and has not gone unnoticed in the world of bioproducts."

Lester H. Krone, Managing Director, Stern Brothers and Co.

Accelerating and Shortening the Walk through the “Valley of Death”



3. Strategic Investments and Alliances to Build Sustainable BioHybrid Clusters

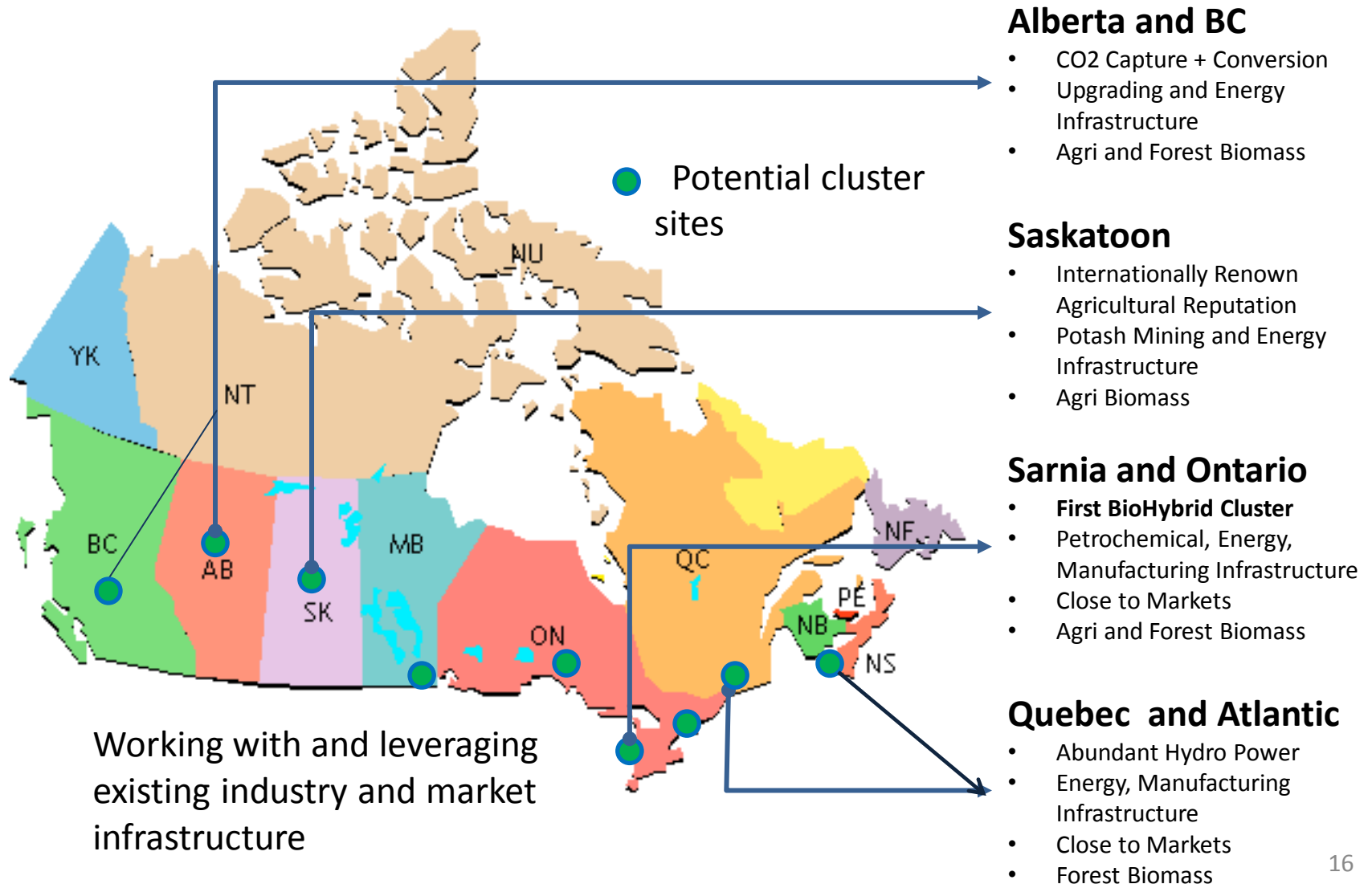


Taking an active role through:

1. Connectivity
2. Alliances
3. Deep sectorial experience
4. Established networks
5. Investor and stakeholder confidence

Creating BioHybrid Clusters Across Canada

Converging Fossil and Renewables to a Sustainable Industry



Sarnia BioHybrid Cluster

Fossil Based

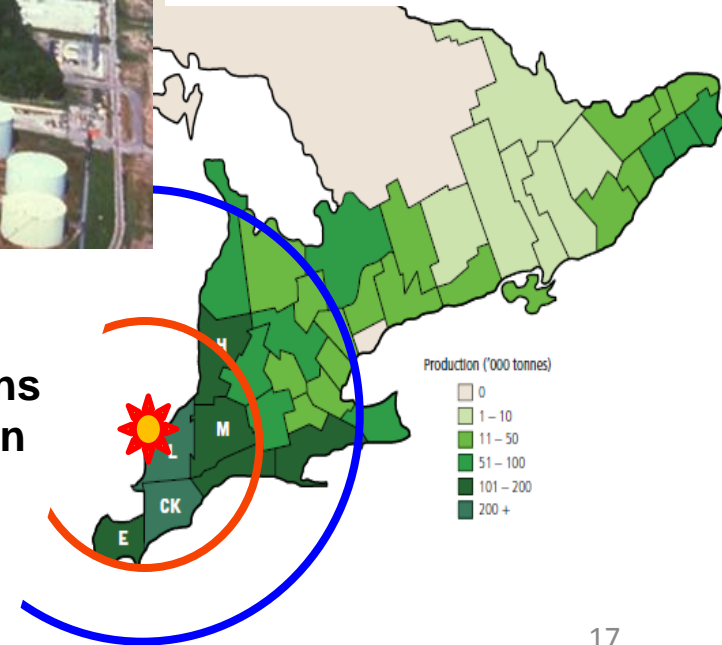
- Air Products
- BP Energy
- CF Industries
- DuPont
- Ethyl Corporation
- Imperial Oil
- LANXESS
- NOVA Chemicals
- Ontario Power Generation
- Pembina
- Praxair
- Royal Dutch Shell
- Styrolution
- Suncor Energy
- TransAlta Energy



Bio/Renewable Based

- BioAmber
- Cargill
- Enbridge
- Greenfield Ethanol
- Methes Energy
- KmX
- Solutions4CO2
- Suncor Ethanol
- Woodland Biofuels

•80% of Ontario soybeans and corn within 200km



Partnering to Achieve Success

A Sample of our Connectivity through Established Relationships

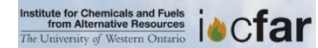
Canadian Industry



The miracles of science



Public Sector and Not for Profit



International



Thank You

