Retooling the Canadian Forest Industry

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In partnership with

RAVEN

Groupement Forestier Pontiac (GFP)

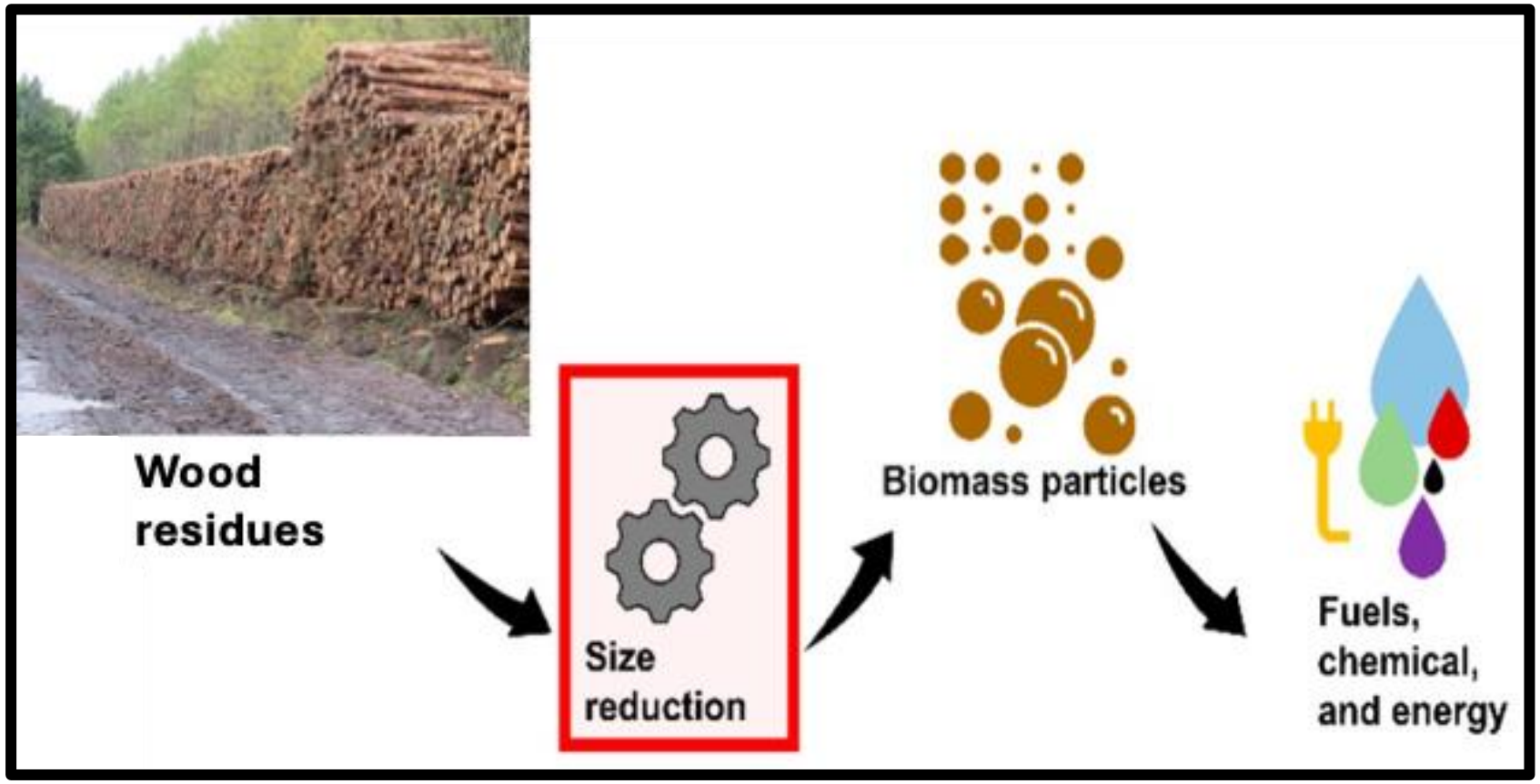
Natural Resources Canada | Ressources naturelles Canada

CanmetENERGY

Campbell's Bay Cement

Abbcarb

The Core Idea



Overall Goals

Mission:

Make wood a viable alternative feedstock for energy and non-energy applications: wood pellets, pulp to sugar, fabric, insulation

Vision:

Deploy sustainable technology solutions for a sustainable Forest sector

Problem Statement

- The Canadian forest industry’s historical reliance on a single-product commodity model (pulp and lumber) has left it dangerously exposed to global market volatility and trade tariffs.
- This presentation advocates for a systemic "retooling" of the sector, transitioning from centralized commodity production to a decentralized, high-value biorefinery model.
- We propose a diversified output strategy that integrates advanced mass timber for housing, biomass for energy, and specialized dissolving pulps for textiles, biochemicals, and rigid insulation.

Problem Statement Cont’d

- By shifting production closer to the source, this model retains economic value within local and Indigenous communities rather than exporting profits to external stakeholders.
- Central to this transition is the application of a proprietary gPAI (generalized physical AI) platform designed to optimize multi-product streams and supply chain logistics.
- This technology-driven, localized approach fosters economic security and industrial resilience in a fluctuating global landscape.

Decentralized wood conversion

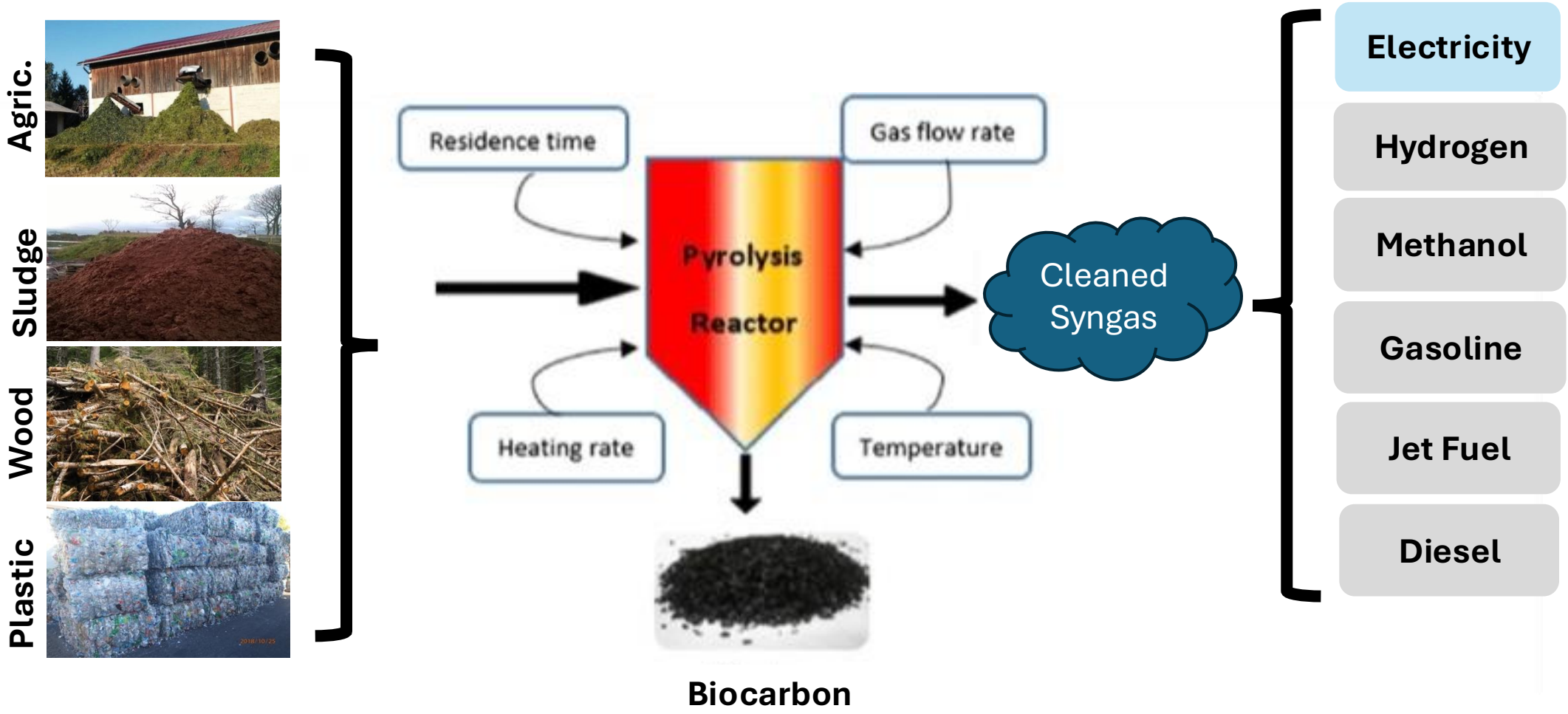
Wood Yard

Lumber → Construction

Woodchip → CELF Platform → Lignin (Textile); Cellulose (Ethanol); Pentose & Extractives (Chemical)

Waste Biomass → Local heat & power use

What: Accelerate Deployment of Viable Waste-to-Energy (WtE) Technologies

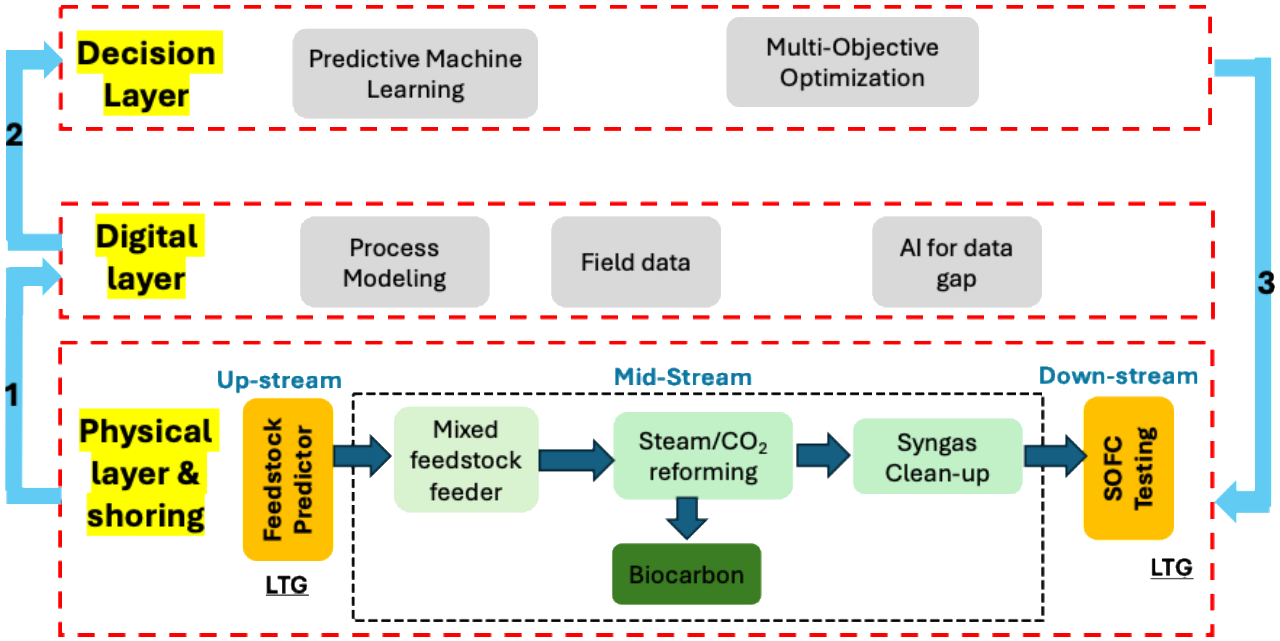


Levering Our Digital Shoring Platform

Generalized Physical AI (gPAI)

- Field data from existing Pilot, Demo & Commercial Plants
- Use AI for Data gap and predictive analytics
- Multi-objective optimization (MOO)

Digital Platform Architecture



Our 2-step approach (1/2)

Step #1. SWOT analysis

- ❑ Identify **Promising** Technologies for Wood Utilisation
- ❑ Identify off-takers for bio-products
- ❑ Offer **Anchoring** solutions in Canadian resource rich regions
- ❑ Lever **patented gPAI** platform to accelerate technology validation and commercialization
- ❑ Identify local partners and **Funding/Grant** sources

Where – Campbell's Bay (Pontiac, Qc)

- Two buildings ready for pilot/demo using patented Generalized Physical AI (gPAI) Platform.
- Robust 5,000 sq ft industrial high-bay facility, 600V/600A high-power outlets (building #1)
- A 1,000 sq ft dedicated lab/workshop (Building #2)
- Renovated 1,500 sq ft of office space.

Our 2-step approach (2/2)

Step #2. Case Study

- ❑ First Canadian demonstration of CELF platform (Textiles?)
- ❑ Campbell's Bay is less than one hour from Ottawa, 1.5 hours from US border, 3 hours from Montreal and 4 hours from Toronto.
- ❑ Industrial park (heavy industry): 1,350 acres available (inexpensive for future expansions)
- ❑ More than 700,000 m^3 wood per year available

Core team

CEO/CTO

- Founder and CEO of LTG
- MS.C. in Physics and Ph.D. Materials Chemistry
- 25 years at National Research Council (Ottawa, ON, Canada
- Two years at Texas Center for Superconductivity (Houston, TX, USA)
- Director for Clean Fuel technologies, Over 10 patents, 70 Peer-review Publication and a Book on Nanotechnology.
- Launched the first open data hub used by numerous federal departments and partners within the G20 (RD20) for technology benchmarking
- Design, synthesis and testing of new engineering materials

VP Business Development

- Fred Schwartz is an Adjunct Professor in the Faculty of Environmental and Urban Change at York University in Toronto,
- Executive Director of York's International Renewable Energy Academy.
- Executive Director of the Solar Valley Consortium at the Center for Environmental Research and Technology at the University of California, Riverside.
- Worked in the field of renewable energy since the late 1970's, and has received awards from the President of the United States, US EPA, and the United Nations.