



Centre d'innovation
des produits cellulosesques

Collaboration and Know-how: Scaling up Biobased Products and Bioprocesses

SINCE 1989

Scaling up conference
Ottawa, November 8th





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53

PASSIONATE
PEOPLE

600

YEARS OF
ACCUMULATED
EXPERIENCE

33

MULTIDISCIPLINARY
COLLABORATIVE
PROJECTS

27

HIGHLY QUALIFIED
PEOPLE TRAINED PER
YEAR

40M\$

IN RESEARCH
INFRASTRUCTURES

SYNCRONEX
Le réseau des CCTT

Tech-Accès  Canada

Biobased products and biorefining

- Conditioning of bioresources
- Biochar
- Bioenergy: biomass, pyrolysis, gasification, H₂
- Microalgae
- Pretreatment and biorefining

Cellulosic products

- Innovative and niche papers
- Thermoformed products
- Valorization of alternative fibers
- Scale-up of biorefinery processes
- Recyclable and compostable packaging

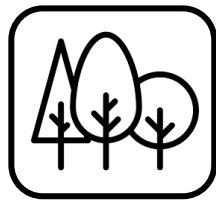


Why collaborate ?

- More expertise is needed in a project: it's better to collaborate than to develop a new expertise
- Access to more equipment and time effectiveness for analysis
- Synergy College – university and enterprise: the best to accelerate R & D
- Collaboration with other private companies who are among the value chain
- Industrial synergy: have the information without to be a part of the network

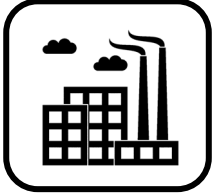


Integrated Bioeconomy at the mill



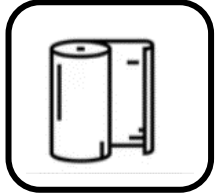
Supply & Harvest

Valorization of wood (softwood, hardwood, residual, barks, overhead, branches, infected wood, etc.)



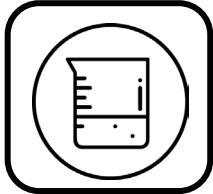
Biobased products and papers

Adaptation of pulp and paper mills



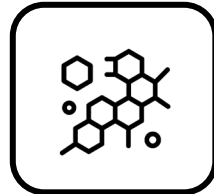
Pulp and paper

Non-woven products



Lignine

Building material, biofuel, development of biosourced products (monomer), bioadhesive, etc.



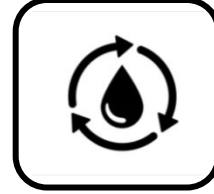
Cellulosic sugars (C₅ - C₆)

Bioenergy / cogeneration
Power – to – X :
chemicals, materials,
H₂ & bio-CH₄



Recovery of CO₂ emissions and thermal waste

Green technologies



Wastewater and sewage sludge recovery

Production of microalgae, industrial enzymes, bioplastics and others



Production of biobased ingredients for use by the plant

Chemical replacement, bio-based coating agents, equipment maintenance



Production of biobased ingredients for local use

Agriculture, animal feed, etc.



Commercialisation

Needs analysis (end users)
Technical and economic study
Technological acceleration - hub of bio-based products
Technology transfer

Case study #1: Development of pallets from construction and demolition wood

2 enterprises

- 1 recycler
- 1 end user

1 university

Innofibre - applied research center

High qualified persons

- 1 master student
- 2 collegial students

Funding from NSERC and CRIBIQ



Case study #2: Scaling-up of a pyrolysis system

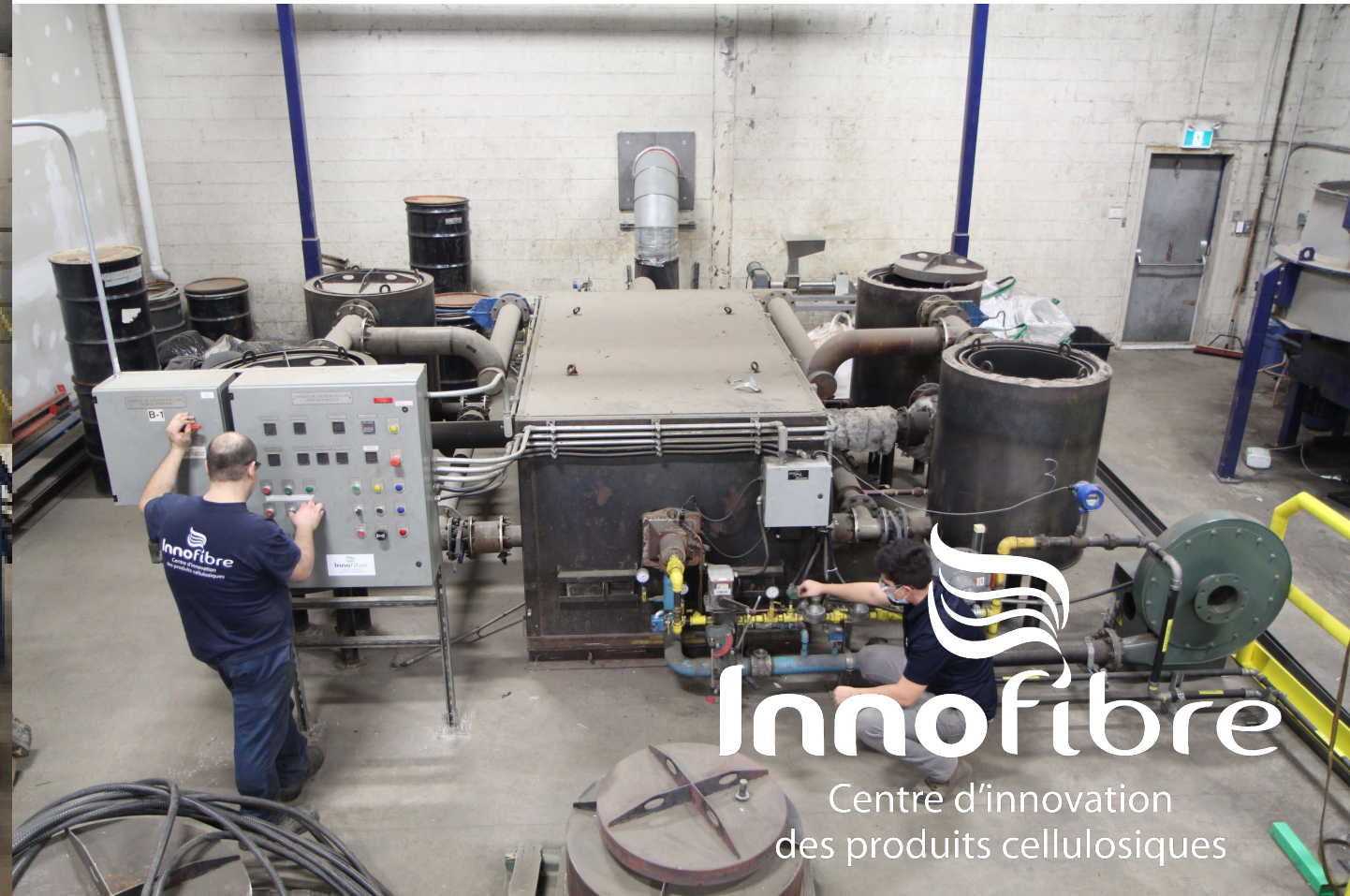
2 enterprises

1 university

1 p.H.D student

Innofibre and CMQ – applied research centers

Funding from NSERC and CRITM




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Industrials need for the development of bioeconomy

- Access to the state-of-the-art infrastructure: pilot and precommercial equipment and knowledge
- Partners to accelerate the development of biobased products and reduce technological risk
- Governmental funding to support pilot and precommercial research and development
- Acceleration of the granting of funding
- Policies and regulation to support the bioeconomy growth
- Develop sustainable collaboration: a good collaboration start with a « fit » between two persons





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