



Scaling Up 2019

Delivering a Bio-Circular Economy

November 4 – 6, 2019, Fairmont Château Laurier, Ottawa, Canada

OPEN INNOVATION & THE CIRCULAR ECONOMY

CREATING VALUE FOR FORESTRY AND AGRICULTURE



November 6th, 2019

OBJECTIVES



To capture the ***Value of the Open Innovation (OI)*** approach to build competitive advantage in the bioeconomy



To illustrate the ***Power of Open Innovation (OI)*** through an example related to bridging the forest and agricultural industries

OI is not a new concept/tool, however how it is applied is evolving – especially in the context of the bioeconomy, where value chains are multi-sectoral and global in nature, as well as geographically distributed



We are a **leader** in identifying and designing promising new **business** concepts for companies seeking **diversification** in the **bioeconomy** while applying **risk-based mitigation** design tools.



Management Consulting

Engineering Consulting

- ✓ We bring together **business and technology expertise**
- ✓ We focus on mitigating technology and market **risks**
- ✓ We collaborate with our **network** of leading technology and downstream partners

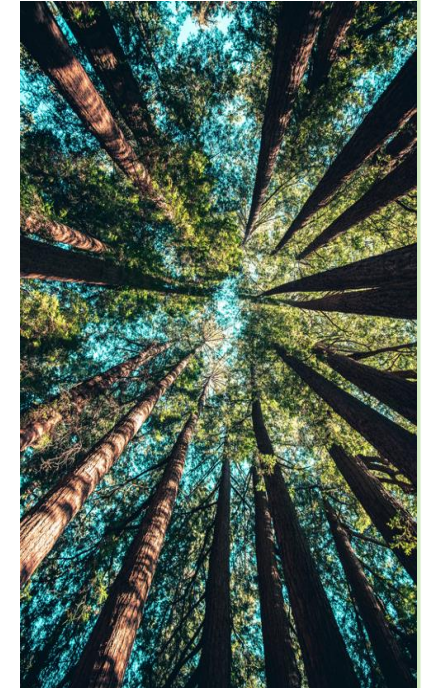
De-risking Innovative Technology Strategies

Adding Value through Transformative Business Strategies

Supporting Bioeconomy Corporate Strategies Definition

FOREST BIOECONOMY & INDUSTRIAL SYMBIOSIS

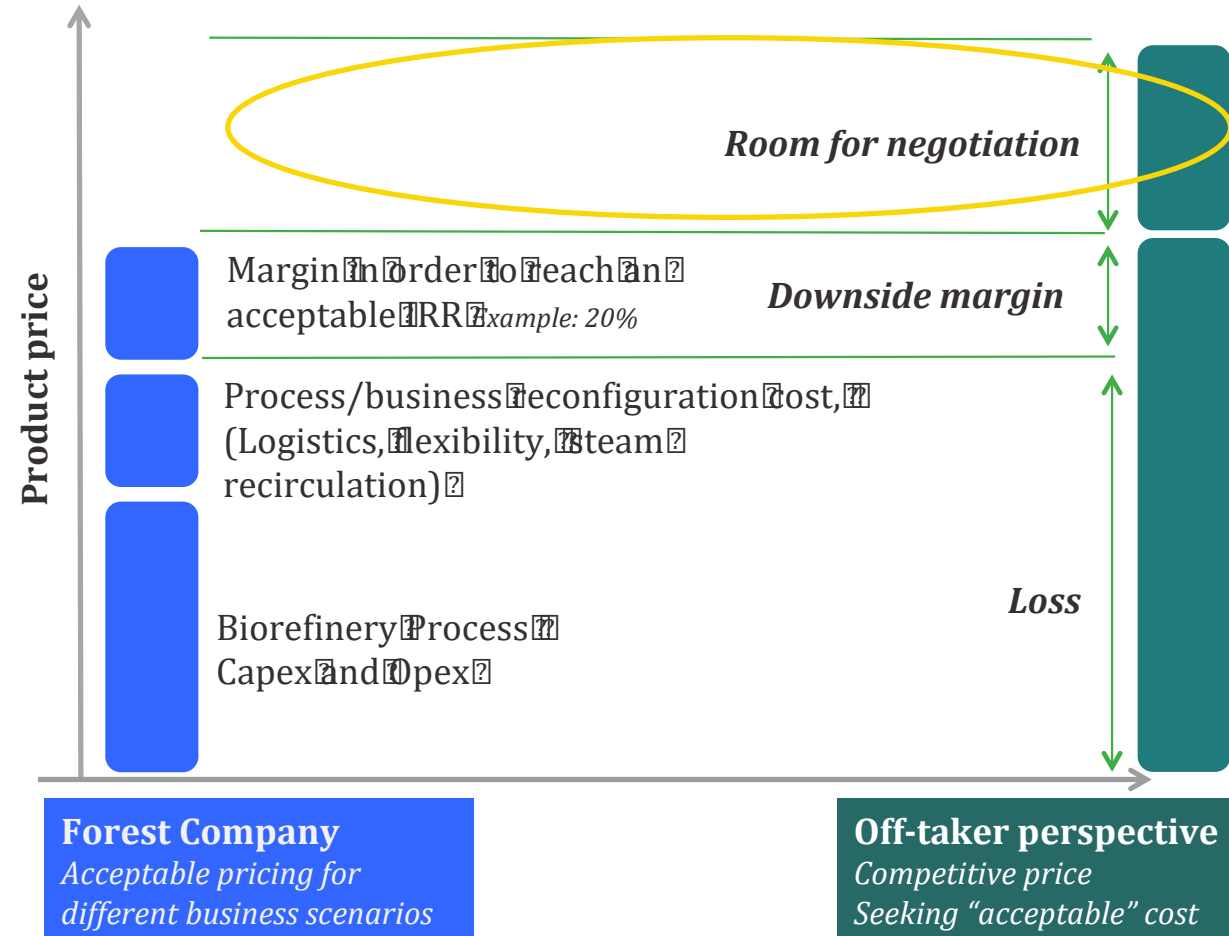
- Companies developing their biorefinery strategy work hard at developing a vision and when it is identified, are at risk of not being robust over the long term facing an ever-changing world.
 - New products, new innovations continually being launched...
 - Policies, regulations evolving...
- Winning business models involve **creating partnerships with other sectors/industries** with the goal of developing **new value chains** that are competitive over the longer-term.



- Winning business models typically rely on **enhanced value proposals for substitution products** on the market, when functionality has yet to be identified for targeted applications, and when time-to-market is a decisive factor for securing a competitive position.

ESTABLISHING THE RIGHT VALUE PROPOSAL...

- Recognizing that **bioproduct performance for specific applications** will drive the definition of the value proposal
- What does it cost to produce and deliver the bioproduct?
- What is the bioproduct value to the off-taker – considering sometimes required switching costs?
- What is the perceived value of the bioproduct for the end-customer?
- How should the difference be shared between value chain partners towards establishing a win-win business model?



➤ **One application at a time, one customer at a time...**

FACING THE REALITY AND COMPLEXITY OF DEVELOPING NEW BUSINESS MODELS...

KEY ISSUES

- In many cases, bioeconomy strategies are identified in a *somewhat* opportunistic manner with limited competitive analysis
- Limited time and resources...
- Often a core-business focus and commodity-oriented culture
- Risk averse strategies
- Limited investment in product development
- ...

How can we ***systematically and efficiently explore new bioproduct opportunities*** and ***define the associated value proposals*** working in collaboration with companies which ***may or may not become strategic partners***, but which are ***close to the final customer*** – and at the same time ***not be diverted from the core business...?***

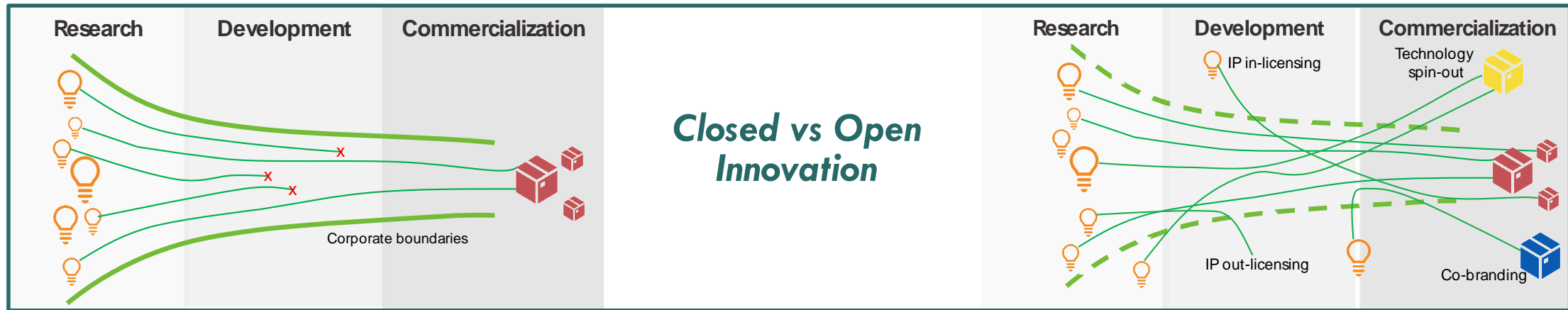


OPEN INNOVATION – AN EFFECTIVE AND POWERFUL TOOL

✓ Many definitions...



Use of purposive *inflows and outflows of knowledge* to accelerate **internal** innovation, and expand the markets for **external** use of innovation – Chesbrough, 2006



✓ Many purposes...



R&D for new product development
Market intelligence for valuable information
Market plan for securing a competitive advantage
Talent for scouting new collaborators

✓ Many applications...



Innovation Ecosystem at the value chain level
Open Innovation Portfolios at the product/project level
Innovation challenges at the strategy level

OPEN INNOVATION – AN EFFECTIVE AND POWERFUL TOOL

- An Open Innovation process can ensure effective results by integrating the ***Voice of the Customer*** at the early stage of strategy development while ***creating a collaborative environment*** to develop win-win partnerships through a transparent process.



Some Examples of Open Innovation in the Industry



Klabin

*6 open innovation challenges
launched to date*



storaenso

*2 open innovation challenges in
2019*



suzano

*Open innovation initiatives to
prospect partners and boost ideas*



Kimberly-Clark

*Several open innovation
challenges – core business related*



WestRock

Inno360 Engine since 2010



UPM

*Open innovation ecosystem on
Montegancedo Campus*

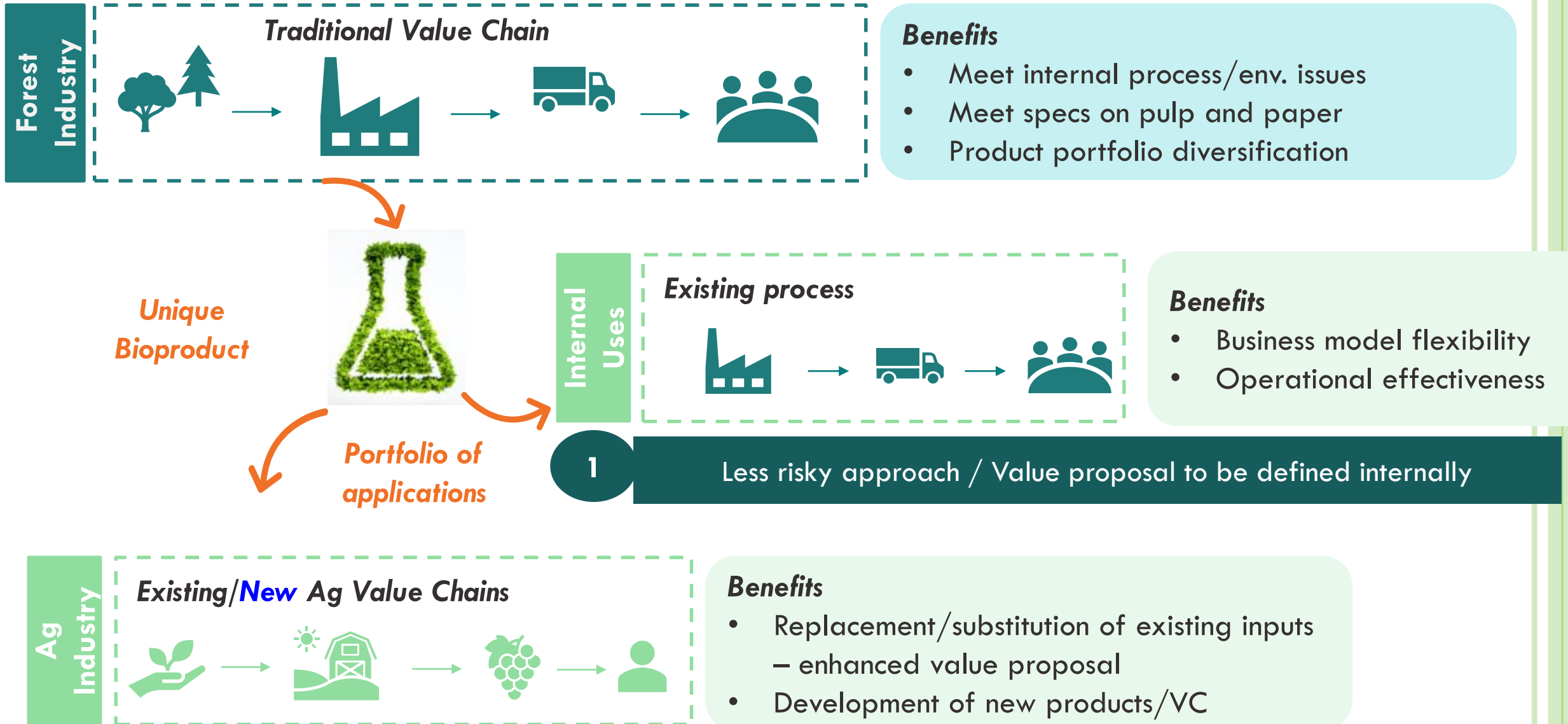


Metsä

*Open source innovation platform
since 2017*

**How can the
Open Innovation
concept be used
as a tool for
identifying value
proposals?**

CASE STUDY – VALUE PROPOSAL DEFINITION THROUGH OI



CASE STUDY – VALUE PROPOSAL DEFINITION THROUGH OI



- Unknown bioproduct performance relative to market applications
- Unknown functionalization requirements/opportunities
- Unknown market certifications/standards
- Unknown value chains and market penetration potential
- Unknown best practices for business model development
- ... an ***imperative to demonstrate short-term return on initial investment***

CASE STUDY – VALUE PROPOSAL DEFINITION THROUGH OI

Forest

- ✓ Product characteristics and properties
- ✓ Network of major players in the field
- ✓ Optimization of operating conditions to meet product specification

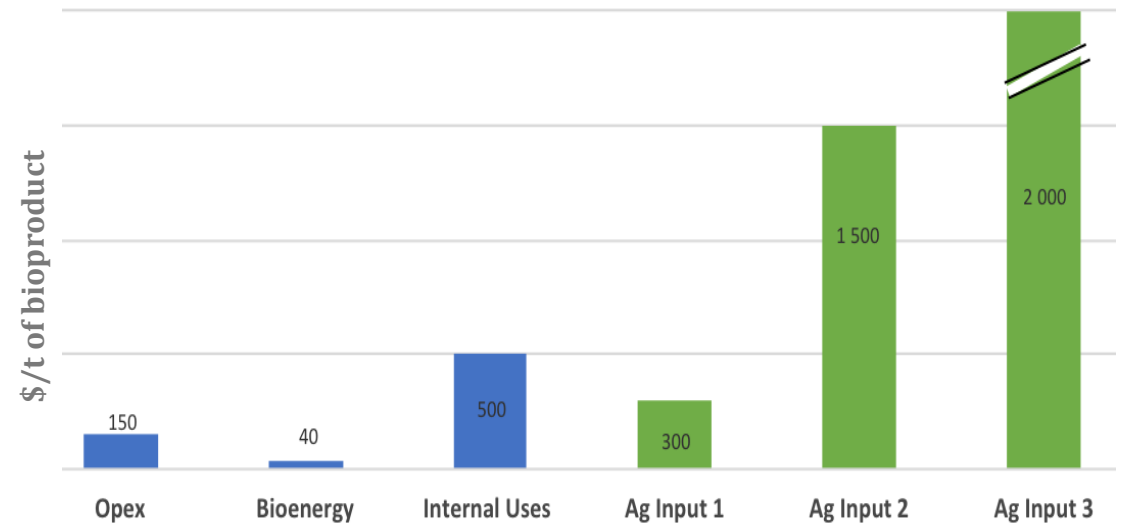
After 6-8 months of OI Process

Ag

- ✓ Testing performance for different applications
- ✓ Market penetration potential estimation
- ✓ Elaboration of business model basis



- Value proposal for different applications
- Drivers for value creation/negotiation
- Opportunities to enhance value proposal through purification/functionalization
- Certification and other market barriers
- Prioritization towards next PDP
- **Value proposal in hand to target a broader pool of stakeholders**



Potential for Value Proposals



SOME CHALLENGES ASSOCIATED WITH THE OI PROCESS

- Objectives of the Open Innovation (OI) are not well-understood by respondents and/or well-communicated by proponents
- Targeted group of collaborators is not representative - too limited
- Lack of implication of stakeholders within the OI project
- **Intellectual property rights** are disputed impacting the timeframe of the OI project
- Terms and conditions related to confidentiality and **property of testing results**, or to exclusivity for future commercialization are challenged



A well-defined approach can be used to mitigate these challenges :

- invest (\$) in the OI process: ensures stronger commitment and better guarantees access to results
- negotiate specific agreements with collaborators beforehand
- do not commit to any pre-commercial deals before the OI process is completed
- maximize the value of the OI by leveraging access to knowledge (tech and market) throughout the process

KEY MESSAGES

- Product development and market penetration is a long process which can be accelerated by teaming-up along the value chain in order to ensure value proposal definition and a robust business model.
- The value proposal should be defined **one application** and **one customer at a time**.
- To ensure time-to-market and minimize deviation from core business, OI can be used as a efficient tool to add value to an existing process (or not!) through a systematic approach.
- However to be effective and leverage the value of OI, you need:

Active Engagement

Trust and Openness

Innovation Culture



Scaling Up 2019

Delivering a Bio-Circular Economy

November 4 – 6, 2019, Fairmont Château Laurier, Ottawa, Canada

*Thank
you!*

Virginie Chambost – Principal Consultant

virginie.chambost@envertis.ca

514 891-8944