



VTT pilot facilities in bio and circular economy

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Pitch perfect and boost the European Bio-Economy Cross-border matchmaking and networking event 7 November 2018, 10am-6pm
Sheraton Brussels Airport Hotel



From laboratory via piloting to markets

- **Piloting enables crossing the “valley of death” for commercialization.**
- **New process industry innovations often require extensive piloting.**
- **Open access Shared Pilot Facilities:**
 - Competence in piloting and scale-up
 - Time saving with ready-to-use facilities
 - Cost savings by sharing the investment and operation costs

VTT pilot plants for bio and circular economy 2018

Regional innovation hubs with national, European and global impact

Key features for VTT pilots

- Covers the development chain from raw materials to end products
- Two types of pilots: Process specific and multi-purpose
- Scale-up of own and customers technology development

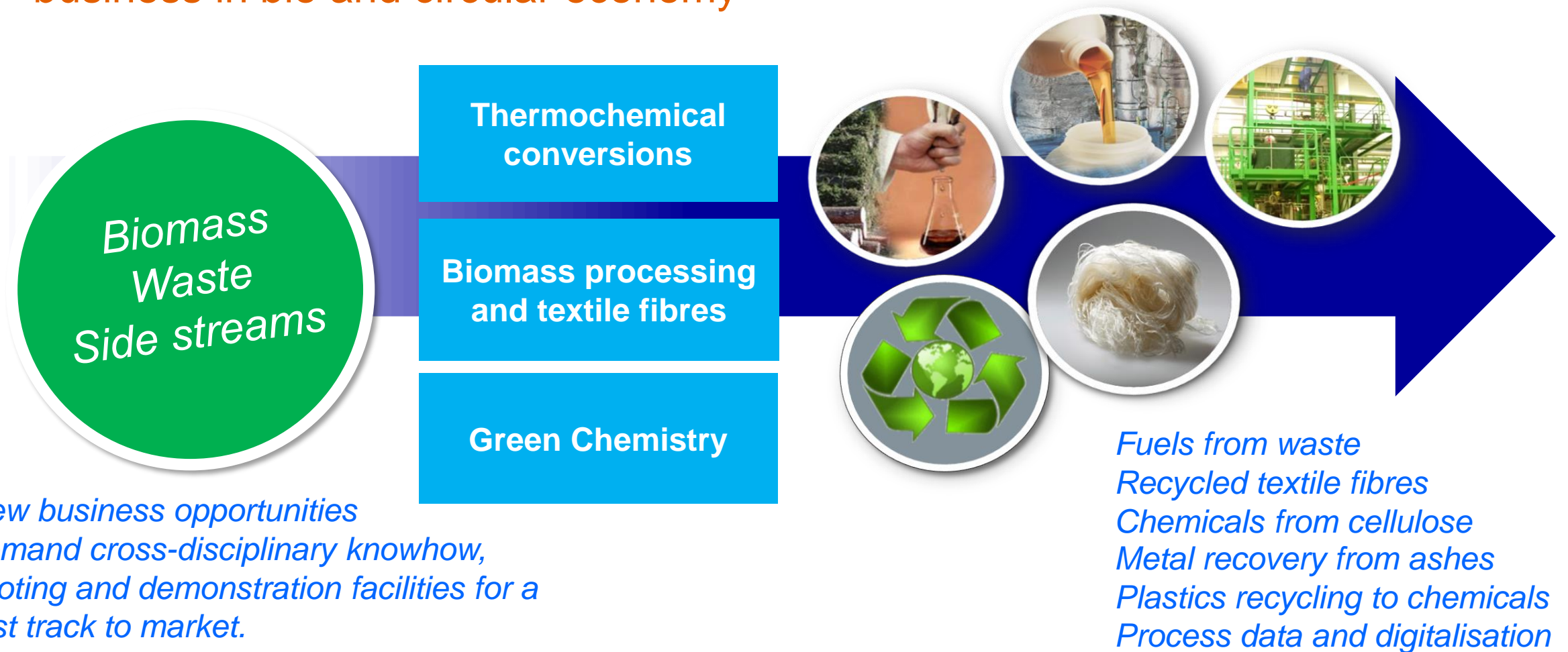
Pilot operations figures 2015-17 (annual averages)

- 125 customers
- 45 foreign customers
- Contract commissions ~40%
(varies by pilots 20-80%)
- SME:s 10-50%



VTT Bioruukki Pilot Centre

An integrated enabler to accelerate higher value business in bio and circular economy



Bioruukki Pilot Centre – Connecting industries

1



THERMOCHEMICAL CONVERSION PLATFORM

Gasification and pyrolysis technologies for biofuels and biochemicals. Recycling concepts. Carbon re-use and energy storage.

Started in Bioruukki
2015

2



BIOMASS PROCESSING and TEXTILE FIBRE PLATFORM

Innovative biomass processing and fractionation.
Cellulose based textile fibres.

Started in Bioruukki
2018

3



GREEN CHEMISTRY PLATFORM

Sustainable chemistry for tailored biobased chemicals and materials, new processes, and recycling concepts.

Starts in Bioruukki
2020

Our innovation ecosystem partners

- Process industry
- Technology companies
- SMEs, Start-ups
- RTOs and universities
- Regions and cities
- European pilot networks

NESTE

fortum

Valmet

SIEMENS

Chemigate

The Infinited
Fiber Company®

VTT

A?
Aalto University

ESPOO
ESBO

SmartPilots
Interreg Europe

Pilots4U

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Thank you!