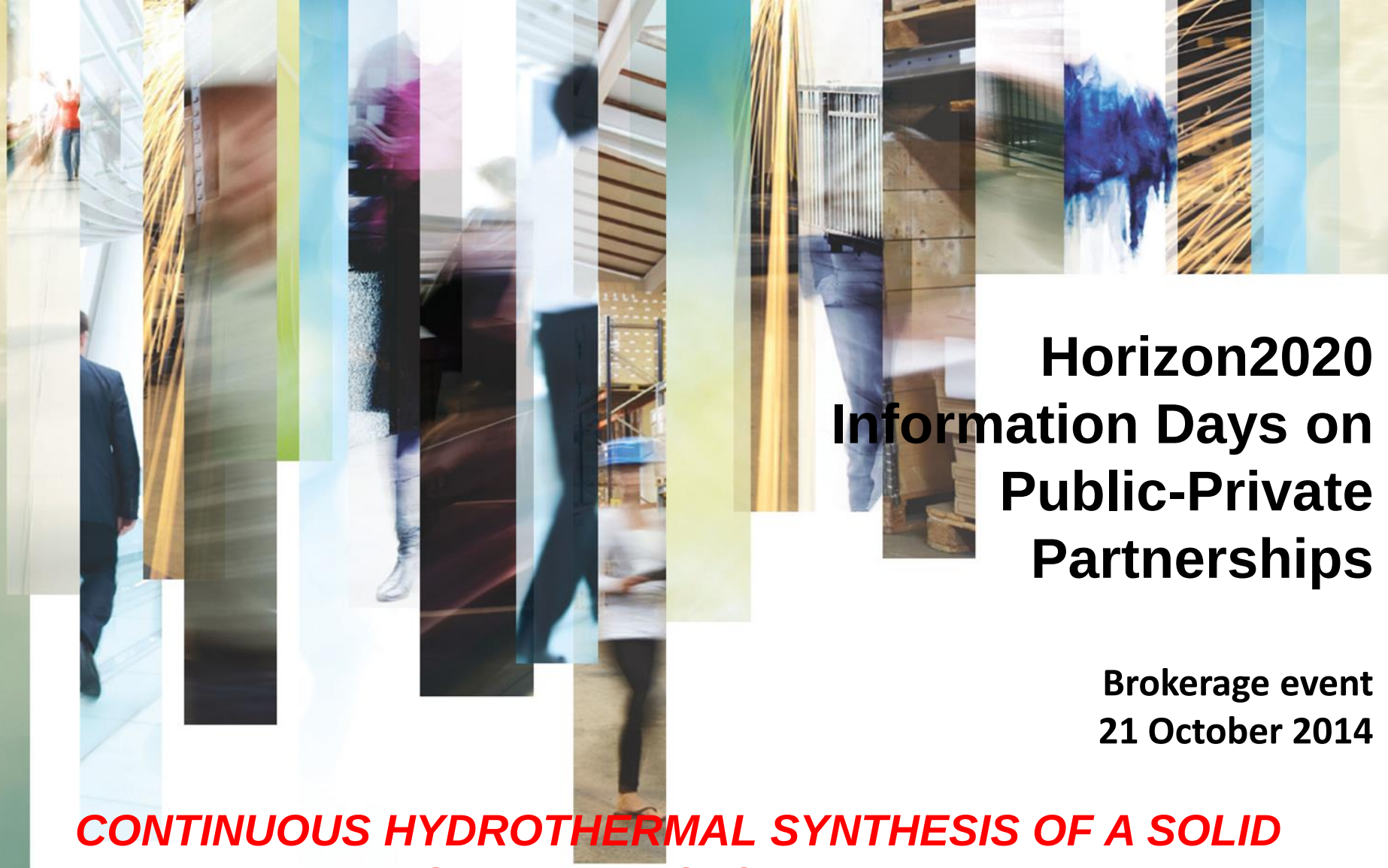

Horizon2020 Information Days on Public-Private Partnerships

Brokerage event
21 October 2014

CONTINUOUS HYDROTHERMAL SYNTHESIS OF A SOLID WITH AN INTENSIFIED REACTOR

François Collignon
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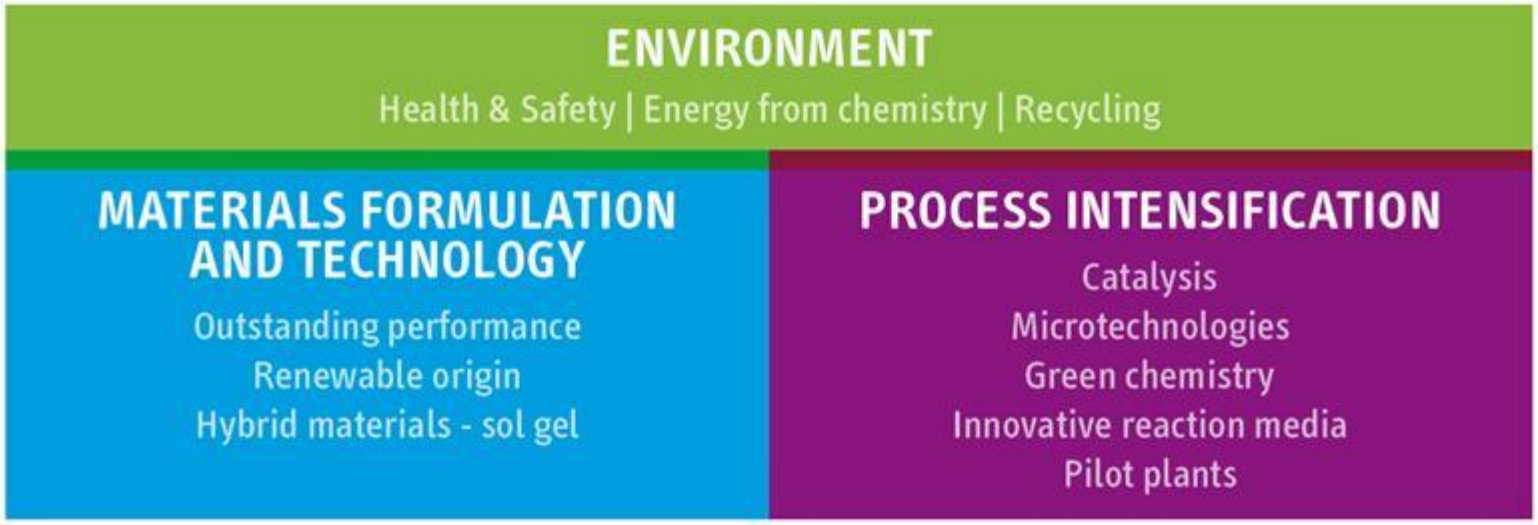
SPIRE
Sustainable Process Industry through Resource and Energy Efficiency

ORGANIZATION/COMPANY

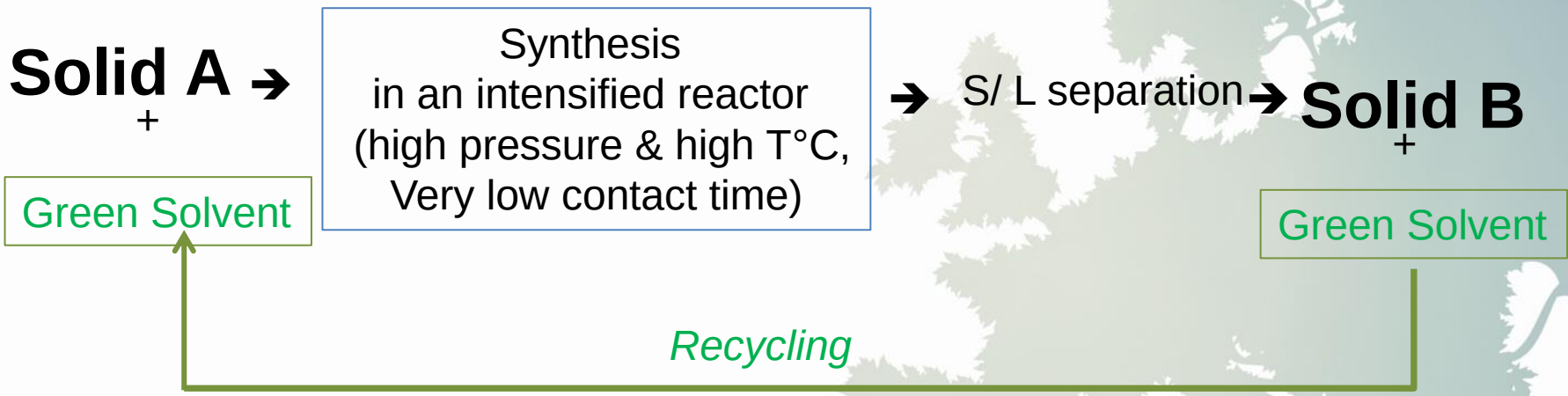
Certech: summary

- Applied Chemical Research Centre
- Close to Brussels
- 36 people
- Research Strategies: i) Process intensification
  ii) New materials
  iii) Environment



PROJECT IDEA: *Continuous Conversion of solid A into B under high P & T°C*

- *main concept:*



* Certech has some expertise with the continuous treatment of liquids (aqueous slurries, oils,..) containing particles under high pressure and temperature.

* Certech has also an experience in the continuous treatment of large solids particles (1mm-10cm) in emerging recycling processes (catalytic cracking, solvolysis,)

PROJECT IDEA

- *main concept:* **Continuous hydrothermal (under P& T°C) synthesis of a solid with an intensified reactor**

- *Relevant key component/key action as reflected in the SPIRE roadmap:*

➔ ***Key component n°2: Process : Solutions for more efficient processing and energy systems for the process industry.***

➔ ***Key component n°3: Applications : New processes and materials for market applications that boost energy and resource efficiency throughout the value chains.***

➔ ***Key component n°6: Outreach: Reach out to industry (especially SMEs)***

- *Horizon2020 call topic*

➔ ***SPIRE 8 -2015 : SOLID HANDLING for INTENSIFIED PROCESS TECHNOLOGY***

EXPECTED IMPACT

- *In relation to the call topic:*

i) SHORTHER TIMES to process/market and HIGHER production capacity

ii) Innovative modules allowing to process solids in medium to small scale production units.

iii) Amelioration/Improvement of chemical applications via process intensified reaction systems through whole process design with focus on solids (dowstream) processing operation

- *In relation to the SPIRE roadmap*

i) Key Component Process.

➔ *Key action 2.4. More efficient system and equipment*

(ii) Key Component Application.

- *Indicate the cross-sectorial characteristics of the idea*

EXPECTED IMPACT

- *Cross-sectorial characteristics of the idea*

i) Reaction condition allows shorter reaction time

ii) Reaction condition allows shorter reactor volume

iii) Intensified reactor is a small reaction condition allow to process in small scale production unit. ➔ *Call topic*

iv) Intensified reactor allows recycling of chemical (e.g. water) and energy➔ key action 2.4

EXISTING PROJECT CONSORTIUM

Please use 1 slide to indicate the existing project consortium as well as the main role of partners.

certech
centre de ressources technologiques en chimie

➔ R&D research centre

Dequenne Chimie sa

➔ Industrial partner for applied R&D and for application of product n°1

LOOKING FOR PARTNERS

Please use 1 slide to indicate the profile of the partners you are looking for and their envisioned role

Other partners

- ➔ For other applications (ex: zeolite synthesis, …)
- ➔ Pumps suppliers, pressure control techniques,…
- ➔ For managing eco-efficient water recycling in the Liquid /Solid separation system

CONTACT DETAILS

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