

CANADA MISSION PROCEEDING

31.5.-2.6.2022

DAY 1 /31.5.2022/: Following their objective of developing relations with international partners, the **4 European clusters of the Percy project, organized today, May 31st, in Montreal, Québec, Canada a meeting with 3 Canadian clusters and 30 representatives of their members** (enterprises and research centers).

The **PERCY clusters** were represented by Olivier GILLE (Polymeris - France), Daniela ADELHEM (WFG Heilbronn - Germany), and Jan VACLAV (Slovensky Plastikarsky Klaster – Slovakia). Dorte BAELUM, coordinator of the project and representative of Plast Center Danmark attended the meeting online. The European delegation included Jean-Pierre BRETAUDEAU (Hutchinson – Polymeris) and two representatives of TRENs, a Slovakian industrial company (Jaroslav HADVIG and Marko DANIS).

The three Canadian clusters partners of the Percy Project were

- Prima Québec, which works on all advanced materials, represented by Marie-Pierre IPPERSIEL
- Alliance Polymères Québec, represented by Simon CHRETIEN
- La Vallée des Elastomères, located in Sherbrooke around rubber industry, represented by Michel ROUSSEAU

The PERCY project, its objectives, and all the partners and participants in the meeting have been presented.

Two more presentations have been made on the state of the art of the last innovations on polymer recycling in Europe and North America. The presentations on this last subject have been made by:

- Professor Denis RODRIGUE, of the Department of Chemical Engineering, University of Laval, and animator of the CREPEC (Research Center for High-Performance Polymer and Composite Systems)
- Annie ROCHETTE, executive manager of COALIA, Applied and technological research centre on Plasturgy, Mineral technology, and Advanced materials

The meeting gave all participants an opportunity to exchange their projects during the networking periods and BtoB meetings. At the end of the afternoon, a **Memorandum of Understanding has been firm**ed between the three Canadian clusters and the PERCY Consortium with the ambition to develop, reinforce their partnership and the links between their members over polymer recycling.



Image 1: Signing of MoUs with 3 Canadian clusters

DAY 2 /1.6.2022/: On the second day of our Canadian mission, our delegation still driven by our 3 Canadian cluster partners has been received in the morning at the [CNRC \(Canadian National Research Council\)](#) in its plant of Boucherville, next to Montreal.

This plant is dedicated to Automotive and surface transport sectors. We were welcomed by Milena SEJNOHA, Director R&D Material and Processes who presented the organization of CRNC and of the site of Boucherville.

Then Karen STOEFLER, team leader on Polymer bioproducts, and Michel CHAMPAGNE, team leader on Advanced Polymer Composites, presented their activities. The Boucherville centre works a lot on the use of lignin in polymer processing. Some information was given on the possibility to transform Automotive Shredders Residues in graphene or syngas.... Then the delegation visited two laboratories, one equipped of a high pressure press to produce composites.

The next step was the visit of the [Polystyvert](#) company, a SME specialized in recycling of styrene plastics (and primarily PS) using different solvents (Cymene and ethylbenzene) and a performing purification process with more than 99% of purity for the final product. Polystyvert has developed a breakthrough technology for recycling polystyrene, using a dissolution process that works on all types of polystyrene: expanded, extruded and injection-moulded. Its recycled polystyrene product is of very high quality and can easily be re-extruded or re-injected, allowing many applications to incorporate 100% recycled materials. Marianne LEPINOIS and Roland COTÉ, explained the innovative process developed by the company whose demonstrator produce 125 kg of recycled PS per hour and which is searching for a plant to build a new factory around Montreal. The company searches for licensed partners.



Image 2: Meeting at CNRC

DAY 3 /2.6.2022/: Canada mission: Following its visits, the PERCY 's project delegation in Canada was on June 2nd on Polytechnique Montreal site. The delegation met:

- Pr Abdellah AJJI, director of the Chemical Engineering Department who works on thermal recycling of polymers and on intensified depolymerization and upcycling
- Pr Marie-Claude HEUZEY, in charge of the CREPEC, Research centre on polymers systems and high-performance composites. Promoting the principles of circular economy, Canada targets the objective of 0 plastics wastes in 2030.
- Pr Gregory PATIENCE, in charge of the Canadian Research Chair in High temperature, high pressure Heterogenous catalysis.

The delegation visited some of the Polytechnique Montreal laboratories dedicated to Polymers.

During the afternoon, the delegation visited the plant of the Pyrowave company, in Salaberry de Valleyfield, 60 km west from Montreal. PYROWAVE uses microwaves to recycle polymers and mainly Polystyren. Stéphanie BUSSIERES, vice-president communications and marketing of the company presented the technology.

The end of the day, we had a final meeting with PRIMA QUEBEC in their Montreal offices and we did a first debriefing of the mission with a lot of interesting contacts and the identification of multiple projects possibilities.



Image 3: Debriefing with PRIMA QUEBEC

NEXT STEPS: The next step should be a meeting proposed to the international partners of Percy in Dusseldorf during the next K Fair in October. A work 'll be done on the identification of specific possibilities of financing research and innovation projects between Europe and Canada.

Thanks again to our Canadian partners from Prima Québec (and its CEO Marie-Pierre IPPERSIEL), Alliance Polymères Québec and La Vallée des Elastomères for their contribution to the success of this mission, with the wish to welcome you in Europe in the next months.