

The CIRAIG announces one of the world's largest life cycle research partnerships

Montréal, Thursday, November 30, 2017 – The International Reference Centre for the Life Cycle of Products, Processes and Services (CIRAIG) announced a new five-year partnership as part of the International Life Cycle (ILC) Chair with nine organizations in Québec and around the world: **ArcelorMittal, Hydro-Québec, LVMH, Nestlé, Optel Vision, Michelin, Solvay, Total** and **Umicore**.

Building on the knowledge gained in its two previous mandates and the new research techniques made possible by artificial intelligence and data science, the ILC Chair will work to address a number of key issues, including the decarbonisation of production and consumption activities, efficient resource and energy use, materials flow circularity, planetary limits, optimal complex systems integration, ecosystem services and the need to align economic development and social needs.

The International Life Cycle Chair emerged from a partnership between **Polytechnique Montréal** and **UQAM's School of Management (ESG UQAM)**. Benefitting from \$4.25M in investments, it combines engineering and the social sciences. Driven by a community of practice and the pooling of partner contributions, the Chair remains open to new collaborations.

Based in Montréal, the ILC Chair seeks to consolidate its presence in Europe, particularly through a privileged research collaboration with Professor François Maréchal at École polytechnique fédérale de Lausanne. The initiative will be led by chairholder Professor Réjean Samson at Polytechnique Montréal and the three co-chairs, Professors Manuele Margni (Polytechnique Montréal), Nicolas Merveille and Cécile Bulle (ESG UQAM). The team brings together 50 experts, as well as graduate students and postdoctoral fellows. The Chair will also gain from the synergies created by its vast network and international collaborations.

A FEW OF THE ILC CHAIR'S MAJOR ACHIEVEMENTS

In the past decade, the ILC Chair has become a reference in sustainability assessment. Remarkable scientific developments arose from the first (2007–2011) and second (2012–2016) mandates carried out with international partners in key economic sectors, including energy, transport, metals, chemicals, retail, food, financial services, aerospace, waste management and pulp and paper.

- Creation of IMPACT World+, the first global method to coherently assess regionalized life cycle impacts | www.impactworldplus.org
- Development of the Québec life cycle inventory database | www.ciraig.org/fr/bd-icv.php
- Direction of WULCA, a working group of the UNEP/SETAC Life Cycle Initiative to set out an international consensus to assess water use impacts in LCA with some 100 experts in 21 countries | www.wulca-waterlca.org
- Major contribution to the creation of USEtox, a consensus-based model endorsed by UNEP to assess toxic impacts in LCA | www.usetox.org
- Authors and partners of the WBSCD in its statement of principles, *Towards a Social Capital Protocol – A Call for Collaboration* | www.wbcsd.org

A FEW WORDS FROM SOME OF OUR PARTNERS

ArcelorMittal :

ArcelorMittal has been involved in the CIRAIG Chair since its first mandate in 2007. The Chair's balanced program, which combines basic research and applied projects, enabled our Sustainability R&D team to maintain our level of expertise and develop our practices based on new concepts such as MFA and the circular economy. As part of this third mandate, we will work in even closer collaboration, in particular through the introduction of Mitacs awards on these new concepts, as well as on planetary limits and the social value of products.

Anne-Laure Hettinger, Head of Sustainability R&D Department

Hydro-Québec :

Hydro-Québec is proud to be an early partner in the CIRAIG International Life Cycle Chair. The support provided to the previous Chairs by Hydro-Québec and the other partners helped contribute to the refinement of life cycle analysis methodology and develop world-class expertise in the field in Québec. The work conducted by the CIRAIG enabled us to better determine and promote the environmental footprint of the electricity generated in Québec. The work of the third Chair should help better grasp the impacts of energy transition scenarios in a world of rapid change.

André Besner, Director – Environment Hydro-Québec

Michelin :

As a partner of the International Life Cycle Chair for the last 6 years, the Michelin group has developed its foundation in life cycle thinking. We look forward to continuing the partnership to extend and reinforce life cycle assessment as a key tool for informing our innovation strategy. The Chair is an important partner in supporting Michelin's sustainability program.

Antoine Pinneau, Senior Vice President, R&D, Michelin

Nestlé

Nestlé has benefitted from its collaboration with CIRAIG researchers and the industrial partners. We have developed new quantitative sustainability analysis methods, particularly in life cycle inventory, circular economy and social analysis. Among the leading results is the publication of the Circular Economy: A Critical Review of Concepts white paper.

As part of the next phase of our collaboration, we are very pleased to continue the development of regionalized indicators and include the concept of planetary limits in life cycle assessments. The findings of these research projects will be implemented in the product design tools used here at Nestlé, enabling us to offer consumer products with better environmental performances.

Urs Schenker, Sustainability Expert, CT-Pack, Sustainability & Novel Packaging

Optel

Optel's vision is to build a better world through our behaviours and traceability solutions. By creating a smart and efficient supply chain, Optel seeks to increase the visibility of environmental impacts and facilitate the establishment of the circular economy. Our long-term initiatives and objectives and the CIRAIG's 15 years of internationally recognized expertise are a perfect fit. The CIRAIG researchers are the most capable of supporting us in our best life cycle practices, training our staff and assisting our teams through the advisory service, which is in tune with our reality and needs. Our participation in the Chair's third mandate is fundamental to the fulfillment of our mission, and the synergies between the partners can only accelerate the change required to create a better world.

Steve Gélinas, Director of Strategy and innovation

Solvay

Solvay's second participation in the ILC Chair is based on the promising program for the new mandate which will provide clear and most useful guidance for making LCA an efficient tool to support decisions within the Group, while integrating sustainability in a LCA-based framework which is recognized as the most relevant by the industry.

Guy-Noël Sauvion, Manager Eco-Efficiency Evaluations team

TOTAL:

As a partner for nearly 15 years, TOTAL is very pleased to renew its support for the innovative work carried out by the CIRAIG. For TOTAL, the efforts to ensure that the development strategy remains within a broader perspective that considers climate, environmental and social issues constitute an issue that the CIRAIG's new research directions, which are firmly rooted in support for strategic decision-making, will help address.

Jean-Paul Cazalets, Direction HSE

Umicore

We appreciate the combination of research and advice on themes related to all aspects of sustainability assessments of products and services. We experience a growing business interest for topics related to circular economy and the life cycle aspects thereof. We are looking forward to pursue our participation in the third mandate of the chair and its network.

Staf Laget, Leader Climate, Recycling and Product Sustainability

DETAILS ON OUR PARTNERS

<http://www.arcelormittalinfrance.com/>

<http://www.hydroquebec.com/>

<https://www.lvmh.fr/>

<https://www.michelin.com/fre/>

<http://www.nestle.com/>

<https://www.optelgroup.com/fr/>

<https://www.solvay.com/en/index.html>

<http://www.umicore.com/>

<https://www.total.com/fr>

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