



P R O M E T I A

# PROMETIA LCA Webinar

## 31<sup>st</sup> August 2021

Meeting venue: 'Teams' teleconference

The sustainability assessment (targeting economic, environmental and social impacts) is becoming a key element for the industrial development of any innovative solution in the Mining and Recycling sector. More specifically, the environmental benefit associated to any new technical solutions needs to be demonstrated using tools such as the carbon footprint or the Life Cycle Analysis (that will include more environmental impact categories than only the greenhouse gas emissions). These methods are used more frequently now by the Mining and Recycling sector but they still need more study and development to be accepted as reliable decision-making tools. New impact indicators should be developed to reflect/qualify/quantify the contribution of new processes, new productions, new sectors to the circular economy. New LCA methodologies are also needed to reflect dynamic transitional systems.

This 9th scientific seminar of the PROMETIA association will be the opportunity :

- to address the scientific and technical challenges associated with LCA and carbon footprint methods in connection with our field of activity,
- to present case studies from industry and R&D actors,
- to present new methodology development related to the raw materials field and the circular economy
- and of course to stimulate collaboration in between LCA experts and process engineers/researchers.

Note that for each presentation, 10 mn on the morning and 5min in the afternoon will be dedicated for Q&A and comments

10:00 – 10:10	<i>Introduction</i>
10:10 – 10:40	<b>Principle of LCA applied to Processing and Recycling</b> – B. Sprecher (Leiden University / TU Delft)
10:40 – 11:10	<b>LCA of metals production : key challenges ahead and potential way forward</b> – A. Beylot (BRGM)
11:10 – 11:15	<i>Break</i>
11:15 – 11:45	<b>Carbon footprint of Boliden's main metals</b> – A. Babikian (Boliden)
11:45 – 12:15	<b>LCA in the state-of-the-art ironmaking and steelmaking and future technologies</b> – N. Jaeger (Thyssenkrupp)
12:15 – 13:30	<i>Lunch Break</i>
13:30 – 13:50	<b>Metal resources indicators in LCA - From depletion of the geosphere to recoverability from the anthroposphere</b> – E. Pirard, S. Belboom (Université de Liège)
13:50 – 14:10	<b>Innovative methodology approach for integrating LCA and LCC, and metal lightweight materials case study</b> – J. Ibañez, J. Díez, M. Santiago, D. Blanco, S. Martel, R. Barros (ICCRAM – Universidad de Burgos)
14:10 – 14:30	<b>The sustainability assessment in the FineFuture project with a focus on LCA</b> – L. Rigamonti (Politecnico di Milano)
14:30 – 14:50	<b>Life Cycle Sustainability Assessment for a Circular Resource Economy - Comparing primary production of neodymium against recycling using an LCA approach</b> – L. Smith (Materials Processing Institute) and L. Tijsseling (Minviro Ltd.)
14:50 – 15:00	<i>Break</i>
15:00 – 15:20	<b>Influence of materials recycling processes in the life cycle assessment of energies</b> – P. Judais, D. Hartmann (CEA/DES/ISEC)
15:20 – 15:40	<b>LCA analysis of zinc cell recycling in Waelz kiln</b> – K. Klejnowska (IMN)
15:40 – 16:00	<b>Discussing the challenges in LCA studies for alumina pathways in EU funded research projects.</b> – A. Preveniou (AdMiRIS P.C.)
16:00 – 16:20	<b>Life Cycle Assessment methodologies for multi-functionality in the steel sector</b> – M. Cruz Fernandez, P. Hodgson (Tata Steel in Europe – UK)
16:20 – 16:30	<i>Conclusion</i>