

Verslag Information Flows in a Circular Economy: Monitoring, Metrics, and Digital Evolution

Improving monitoring tools and leveraging digital transformation are two actual focus themes within the Circular Economy. What fundamentally ties these themes together is the quest for information and the corresponding needs. An economic system depends heavily on the availability and exchange of information. However, when information is lacking, further interactions suffer. This deficiency is precisely the challenge faced by the CE: existing information flows are tailored primarily to the needs of a linear economy. In a Circular Economy, different and novel types of information are essential; for example, information about the origin, history, and quality of materials is crucial for reuse initiatives. Although such information can be technically gathered—either by generating new data or by tapping into existing sources—it often comes at a significant cost.

The next phase in monitoring the Circular Economy, leveraging digital innovations to support CE, and the synergy between the two, involves developing effective systems for collecting, storing, and disseminating information among stakeholders. The central question revolves around identifying which stakeholders require specific information for what purpose. The spectrum of responses to these questions forms the foundation for devising metrics, systems, tools, and so forth, to enable the Circular Economy. This principle applies universally to any information product, whether it's a regional CE monitor, a circularity assessment for a company, or a digital product passport. The speakers delved into the challenges of monitoring and digitalization from the standpoint of information requirements. Case studies were presented on CE monitoring at the country/regional level, as well as circularity assessments for companies and the development of digital product passports. This session provided insights into how the diverse information needs among the stakeholders of the quintuple helix of the Circular Economy shape the array of necessary information products and how to navigate overlaps and disparities among them."

Keynote Information in a Circular Economy, Karel Van Acker, CE Center

Panel 1:

CE Monitor, Luc Alaerts, CE center

Circularity Metrics Lab, An Vercalsteren, VITO

Repair Index, John Wante, Cabinet Minister Khattabi

Information exchange with consumers, Cyrille Regardin, Vandenborre

Moderator: Cillian Lohan, EESC

Panel 2:

Opportunities of Digitalisation, Benoit Hucq, Digital Wallonia ,

Sensor data and AI to optimize circular production processes, Philippe Mack, PEPITE

Artificial Intelligence to stimulate Circular Economy, Bart Doooms, VITO

Opportunities and challenges of Digital Product Passports, Emilie Bartolini, Avery Dennison

Moderator: Julie Leroy, Agoria

Some Quotes:

Keynote Karel van Acker, (CE Center, KULeuven)

"The accessibility and transaction of data are not evident, and furthermore, their relevance depends on which stakeholders will use them."

Luc Alaerts (CE Center, KULeuven)

If you don't monitor, you won't know where you stand. However, monitoring is just the beginning; what's more important is to use the insights you gain to steer towards your desired goal'

Benoit Hucq (Digital4Wallonia)

Data 4 Wallonia is a collaborative dynamic aiming to place data at the heart of public policies in Wallonia. It has been developed based on the technical foundations of the Digital Wallonia Platform. [Data 4 Wallonia](#)

The Circular Ecosystem, built upon the "Data 4 Wallonia" platform, serves as a digital tool in the Walloon Region to promote and facilitate circular economy initiatives, providing accessible information, fostering innovation ecosystems, showcasing projects, and generating data-driven insights for future policy decisions. [Circular economy ecosystem in Wallonia \(wallonie.be\)](#)

Philippe Mack (PEPITe)

If you are not efficient in the way you produce, you have a problem to survive the coming years

Emilie Bartolini (Avery Dennison):

Companies are preparing for Digital Product Passports but are struggling to navigate the many unknowns that remain

Data quality, integrity and reliability will be key to the DPP's success

Pilot projects and collaborations will be key to understand implementation challenges and find workable solutions that policymakers can take into consideration.

Bart dooms (VITO)

'I have a dream that researchers find the relevant insights without searching, We use large language models to capture research questions and results from project/publication reports, and this is the beginning of how my dream comes true'