Eurometaux

METALS: AT THE HEART OF EUROPE

Supply Chain Transparency and Communication
from safety information to **material recovery** opportunities

Helsinki Chemicals Forum
PANEL 3 – Transparency & risk communication
Wednesday 28 April 2021 13:00-14:30

Violaine Verougstraete

Al Cu Ni Pb Zn Au Ag Pt Sb Be Si Co Mo V Sn Pd Ru As Os Ir W Ta Ge Se Ga Cd Mg

Why do we need supply chain transparency?

Objective #1
Ensure safety for human health and environment during the entire life cycle

- well addressed over the past decade by broad and robust set of existing regulatory tools (e.g., CLP, REACH, RoHS, OSH).
- ongoing refinement process (ECHA evaluation & committees activities, REFIT exercises to streamline legislations)

Further efforts should focus on **enforcement**.

Why do we need supply chain transparency?

Objective #2:
Enable material recovery opportunities as basis for circular economy models

Technology is evolving, allowing more and more materials to be recovered

- Need to identify and rightly allocate recoverable materials/products at the end of life

Full material disclosure would be ideal in combination *to combine with)* industry know-how

- Need access to the right information at the right time (considering that product life time could be very long)
- Need to protect industry's knowhow to make it work

>> CONTROLLED FULL MATERIAL DISCLOSURE!

Circular economy requires access to streams of recoverable materials

- Existing and **emerging technologies** are capable of recovering substances from complex materials.
- Significant **volumes** of such materials need to be identified at the end of product life to make these circular models **economically sustainable**.
- Materials in products must be tracked, together with data on chemical compositions but this requires companies to disclose confidential **trade information** and **know-how**.

Solutions explored by industry:

- **Controlled Full Materials Disclosure** to guarantee **transparency** while protecting companies **trade secrets** and **know-how**

"***Controlled Full Material Disclosure*** *is the capacity to provide full detail on materials and chemical compositions throughout the value chain while keeping control of which, when and by whom information can be accessed*" (Lorenzo Zullo - CEO @ChemChain)

Ongoing industry initiatives on chemicals and materials tracking

UN Environmental Programme report:

"Harnessing Blockchain Technology for the Delivery of Global Environmental Benefits"

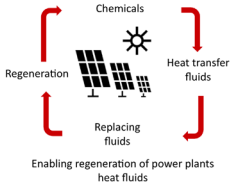
CHEMCHAIN

ChemChain: quoted as existing blockchain-based application for traceability and tracking in chemical supply chains

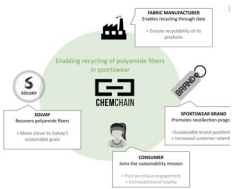
Examples of ongoing ChemChain substance tracking industry pilots:

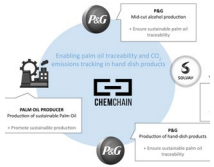
- Textile fibers from textile/garments
- Polyurethane foam in mattresses
- Pharmaceutical packaging
- Heat transfer fluids in solar energy plants

DOW



SOLVAY





Metals: recycling and circularity is the business model of the industry

Still ...facing challenges

Metals sourcing and production

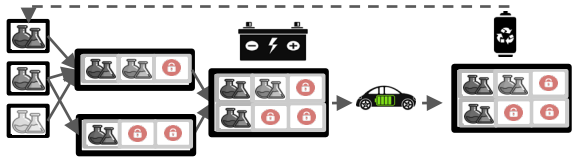
Access to raw materials, especially critical & valuable metals

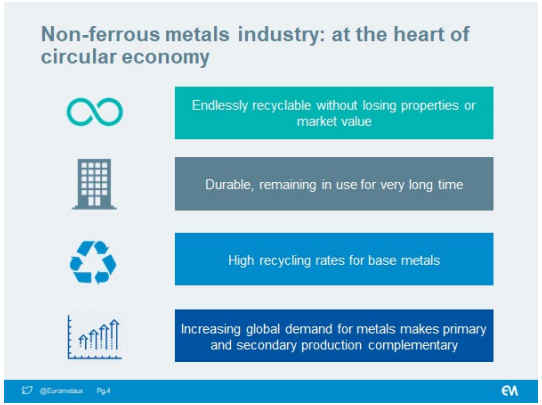
Metals recycling

- Sub-optimal collection & sorting
- Global recycling imbalances (export of metals outside the EU)
- Illegal shipments
- Insufficient enforcement of waste legislation

Metals use

- Implementing recyclability in product design
- Consistency of product policy
- Guarantee of metals recovery after product reuse/repair





How? Improve product design, through requiring easier and more efficient disassembly, **traceability and recyclability of metals (e.g. for electronics) - identify streams**

Why is blockchain a technology explored by industry?

- Decentralized (no single entity handing the data of companies)
- Tamper proof (data exchanged cannot be altered by a single entity without being noticed)
- Auditable (full and transparent history of data exchanges is stored in the blockchain)
- Incentivized (token economies can be developed to reward users for the use of the solution)

Not only industry to make it work: what about brands and consumers?

All actors in the supply chain play a key role in circular economic and sustainable model... it is just a matter of giving a reason and a mean for them to contribute.

Consumers play a fundamental role is closing the loop. In the same way they get compensated when bringing back bottles to the supermarkets, why could that not happen for any materials according to information available on the products? This would also overcome some major roadblocks for waste operators to increase their sorting capacity.

Closing messages

- The suggested goal to disclose everything by 2030 may not help the case:
  - E.g. giving a full list of chemical ingredients to a consumer or a waste operator is probably meaningless: they should be able to understand whether the product is safe or not, or where and how could be dismantled/recovered,

- Ensure that data/information on materials and products flows along the value chain, reaching the right persons at the right time while allowing companies to keep control and meeting transparency requirements

- This is key for all: society, authorities and industry!