



CONSTRUCTION PRODUCTS EUROPE
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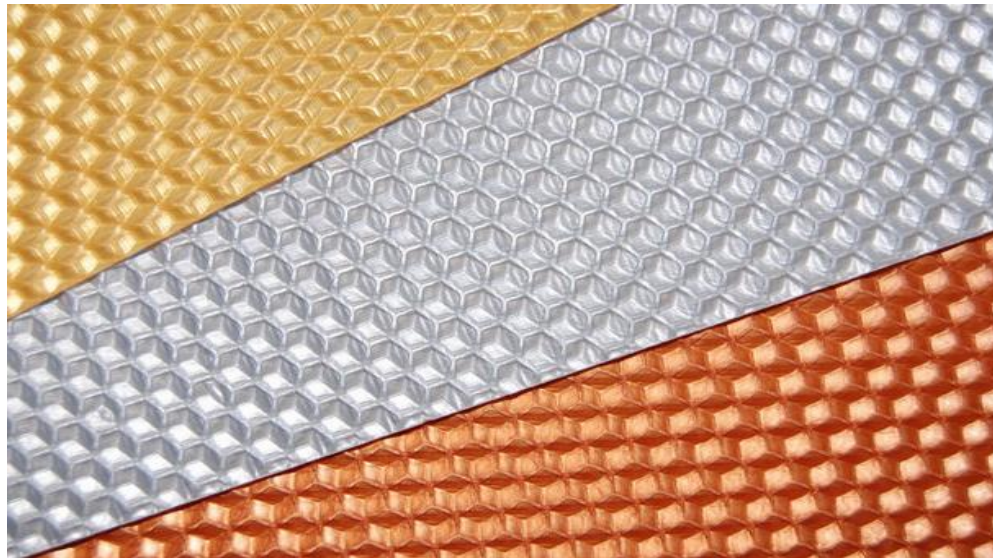
Sustainability Assessment Workshop

4th March 2014

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PEF pilot project on metal sheets

Pilot Project on Product Environmental footprinting (PEF) for metal sheets



**Construction Products Europe Workshop
C. Leroy, EAA**

Why a PEF project on metal sheet?

- The metal industry considers LCA as one of the appropriate tools to assess the environmental impacts of products on their full life cycle, integrating the use phase and end-of-life phase (i.e. recycling).
- The metal industry is active in LCA for decades contributing to the development of LCI datasets and LCA methodology for metals.
- The metal industry has identified several concerns regarding PEF and has considered its participation as the best mean to integrate good LCA practice into the thinking on PEF.

Project organisation

EC Steering Committee
Eurometaux



EC Technical Secretariat

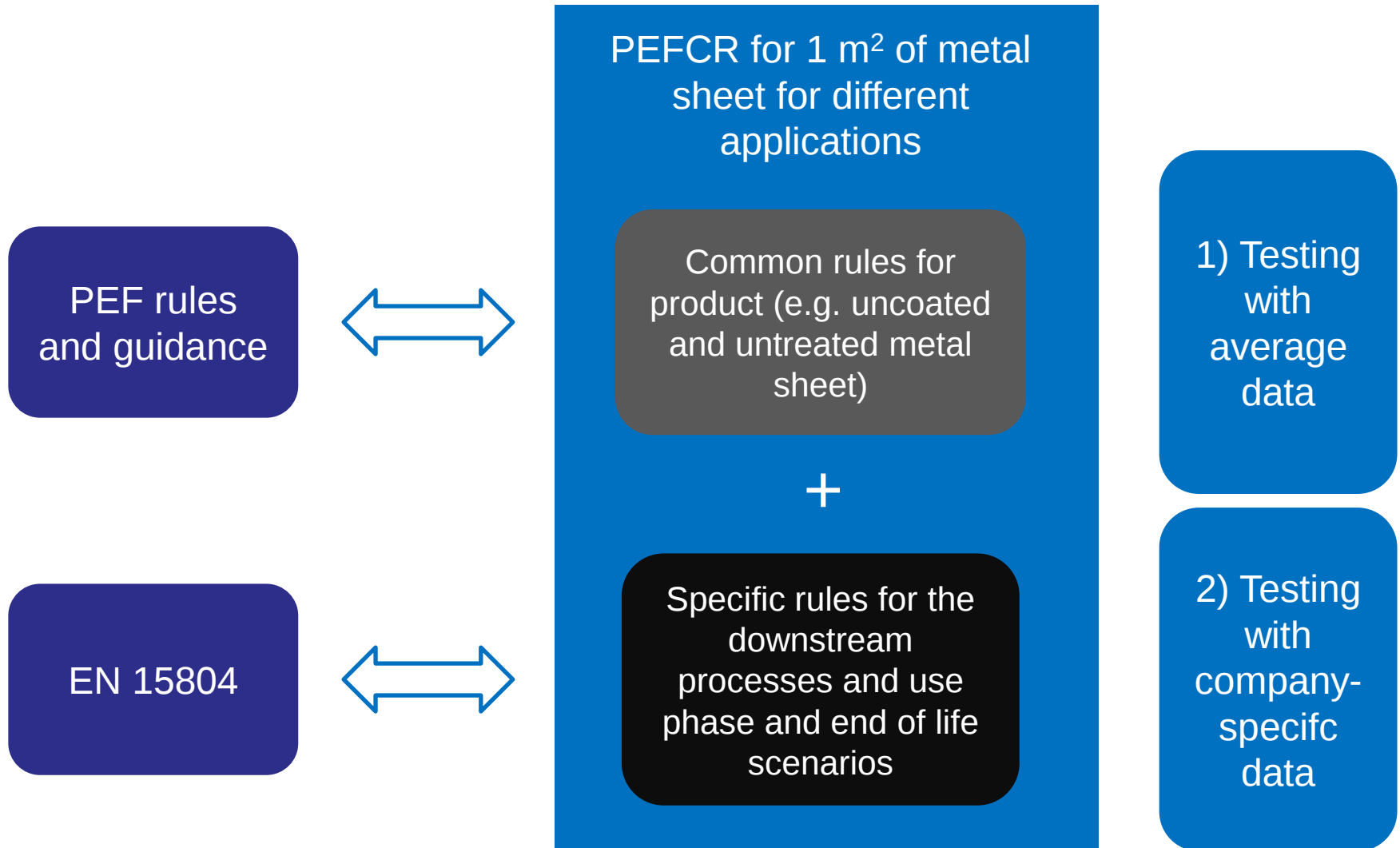
Eurometaux: coordinator
Members: EAA, ECI, ELSIA,
Euromines, Aurubis, ArcelorMittal,
KME, Tata Steel
PE International
+ stakeholders

Start: Nov 2013
Three year project
coordinated by
Eurometaux and
supported by PE
International

Main challenges

- Project-specific challenge
 - Scope and representative products definition considering the broad scope of the project “Metal sheets for various applications”
 - Developing PEFCR for a multi-metal and multi-application product scope
- Methodology-specific challenges
 - LCA methodology robustness for Recycling,
 - LCIA Indicator robustness for Toxicity and Resource depletion/ADP
- Construction-specific challenges
 - CEN/TC350 (EN15804) vs PEF
 - Building vs. product and related benchmarking issue

PEFCR concept for metal sheet



Pilot project vs. PEFCR

- Scope of PEFCR on metal sheet can be very broad
- In practice, PEFCR will be tested for a limited number of metals and applications.
- As a result, pilot project will test PEFCR:
 - For the four metals directly involved in the pilot project, i.e. steel, aluminium, copper and lead
 - For specific applications, i.e.
 - Roofing for Cu, Pb and Al,
 - Appliances for steel and Al
 - Flooring for steel.

PEFCR Scope

- Scope/Functional Unit definition
 - 1 m² of metal sheet providing a protective and/or structural function
 - Function: includes (non-exhaustive list): structural integrity, weather protection, physical separation, shaping, sealing, aesthetics, etc.
- Product Properties (How well?):
 - To be specified through national, European or international product standards or via technical approvals

Product Life span (How long ?)

- Determined by its specific application.
- Use phase scenario for a specific application of the metal sheet.
- For the screening study a construction application will be selected since use phase scenarios are well documented and sector guidance documents providing life-time assessments for various products is available

System boundaries

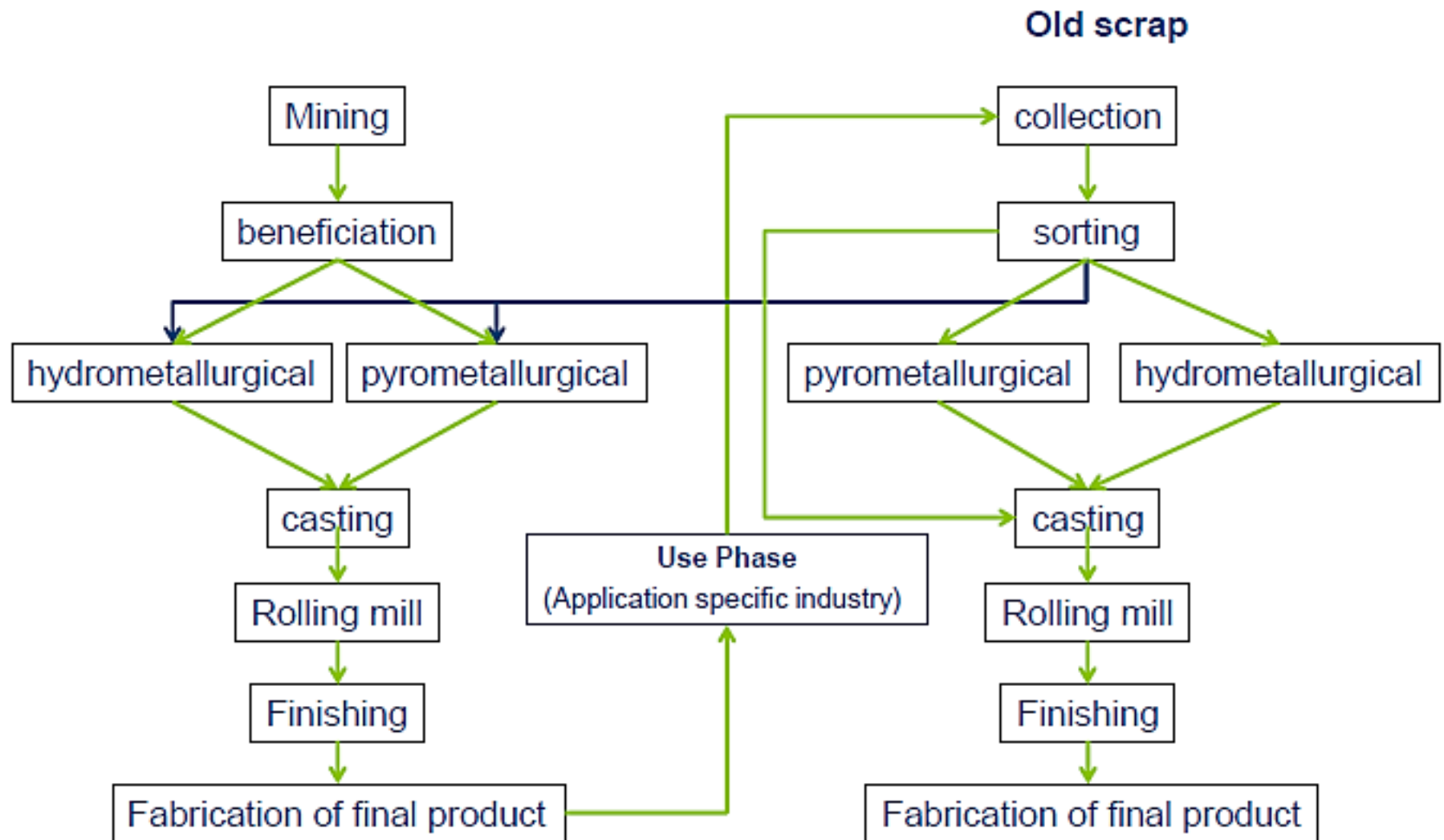


Figure 1-6: System boundaries – Generic high level process flow sheet

Representative product(s)

- Steel largely dominates most of the applications covered by the PEF pilot project
- Therefore, a virtual product composed of 25% of each metal sheet (Al, Cu, Pb and steel) has been chosen
- This issue is still open considering the need to integrate the benchmarking objective into the representative product(s)

Combining representativity & benchmarking: is it compatible?

What you need to know before you define the Representative Product ?

Unit of analysis

Unit of analysis is starting point of PEFCR development



Product category

Based on unit of analysis, the product category is being defined, including CPA code(s)



Representative product

Representative product is defined based on market shares of various technologies in product category

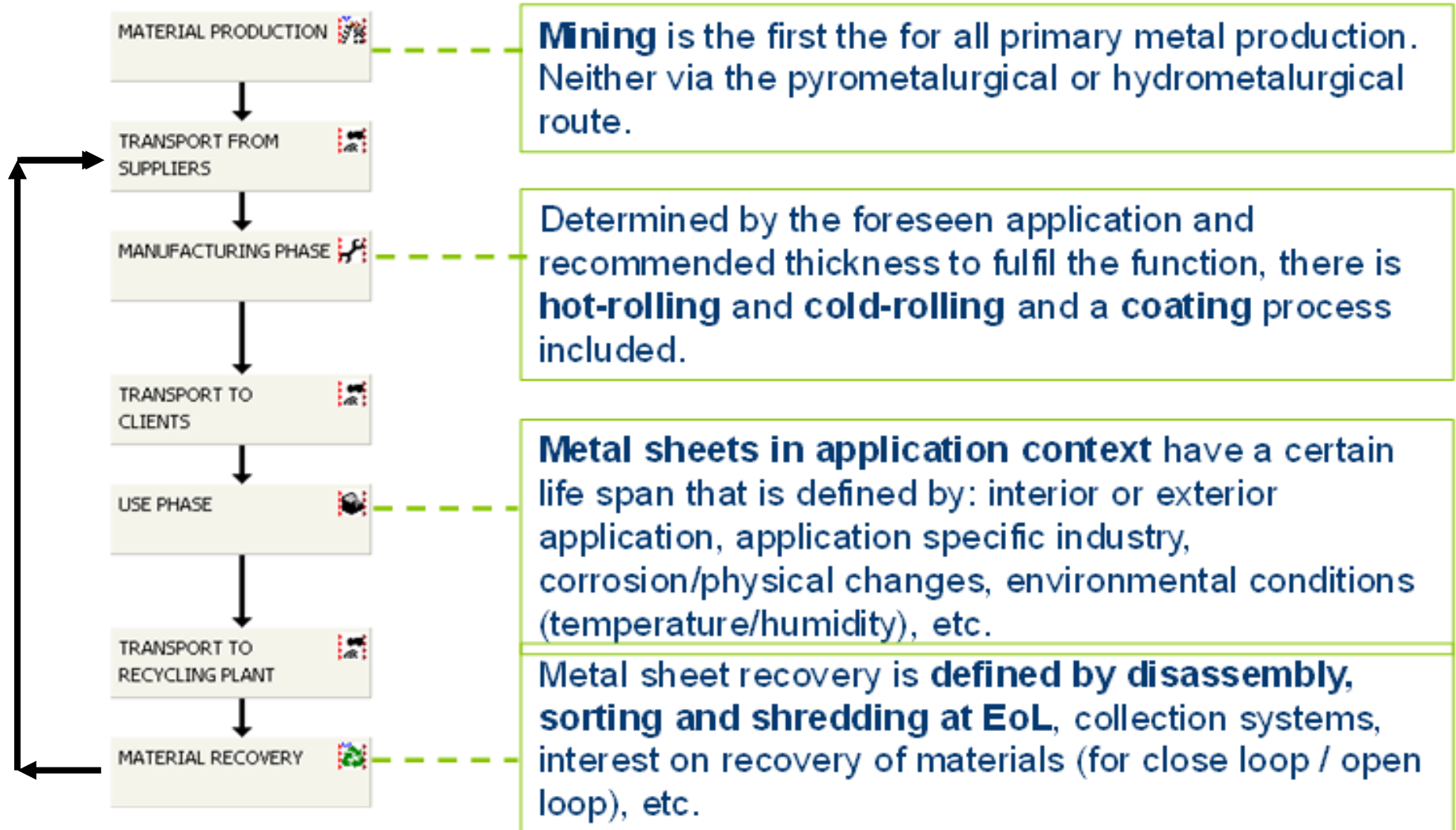


Benchmark

Benchmark is developed starting from the environmental profile of the representative product (C-performance class) and then refined based on the results of the different consultations and the supporting studies



Model for PEF screening



Key aspects for metals: recycling

- Integration of credits and burdens occurring at end-of-life of the representative product will be:
 - Calculated according to the default formula provided by the European Commission (EC)
 - Calculated according to an alternative formula provided by the EC
 - Calculated according to EN 15804 including Module D addressing the additional recycling benefits resulting from the EoL stage.
 - Calculated according to any other relevant approach based on industry practice or stakeholder contribution

Indicator robustness issue

- Today, the use of LCA-based methods to calculate biological or human health impacts leads to misleading and poorly reliable information, especially for metals.
- Today, there is no agreement around what is the right method to use to measure depletion of natural resources, i.e. Abiotic Depletion potential (ADP)
- Metal industry does not recommend using these indicators in a product policy context
- Better considering risk assessment into the decision-making process is key for these aspects .
- Metal industry is active on this field for proposing possible alternative routes for the future

Next steps

- First Stakeholders meeting on scope and representative product(s): 7 March
- Collecting and integrating stakeholders comments: March
- Development of the PEFCR: March - Sept



Thank you for your attention

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