



# TraceMet

Tracing Environmental Performance of Steel and Copper Through the Value Chains



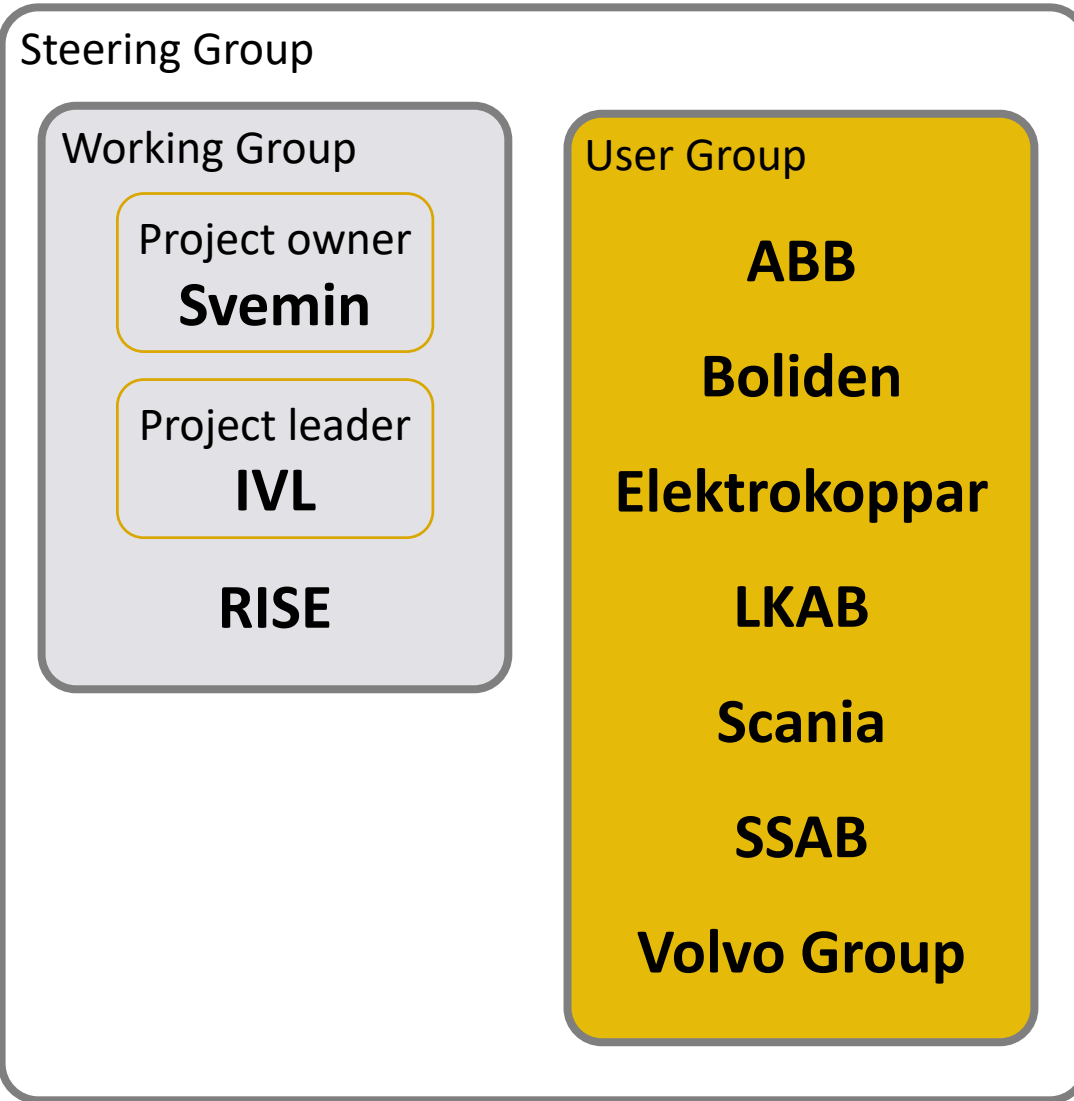
With support from



SWEDISH  
MINING  
INNOVATION

# TraceMet – Basic Facts

<b>Timetable:</b>	December 2019 to January 2021.
<b>Financier:</b>	The strategic innovation program Swedish Mining Innovation, a joint investment of Vinnova, Formas and the Swedish Energy Agency.
<b>Project owner and promoter:</b>	Svemin, the Swedish industry association of mines, mineral and metal producers.
<b>Partners:</b>	IVL Swedish Environmental Research Institute, Rise, Boliden, LKAB, Elektrokoppar AB, SSAB, ABB, Scania, Volvo Group. All industrial parties contribute with working time.

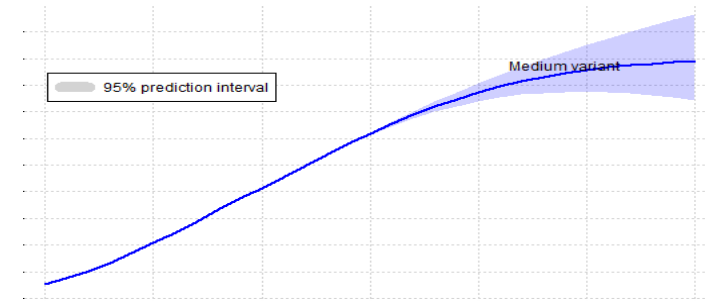


# Why?

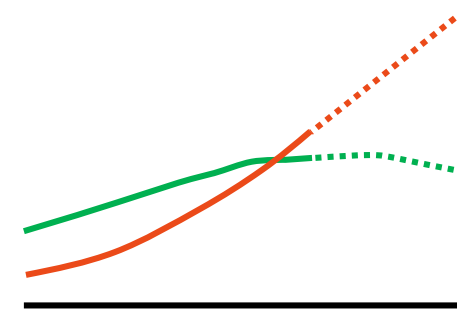
- Growing global population
- Increasing urbanization and standard of living
- Ongoing climate and biodiversity crisis

**“Every extra bit of warming matters, especially since warming of 1.5°C or higher increases the risk associated with long-lasting or irreversible changes, such as the loss of some ecosystems.”**  
(IPCC, 2018)

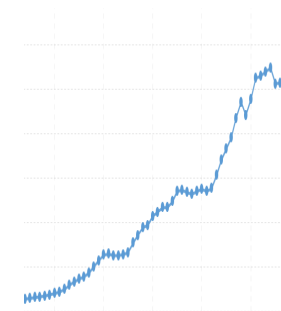
**“Nature is declining globally at rates unprecedented in human history — and the rate of species extinctions is accelerating.”** (IPBES, 2019)



Global population 1950–2100  
United Nations, 2019



Urban and rural population 1950–2050, UN  
World Urbanization Prospects 2018



GDP per capita population 1960–2020  
Macrotrends, 2020

Increasing demand  
for metals and minerals

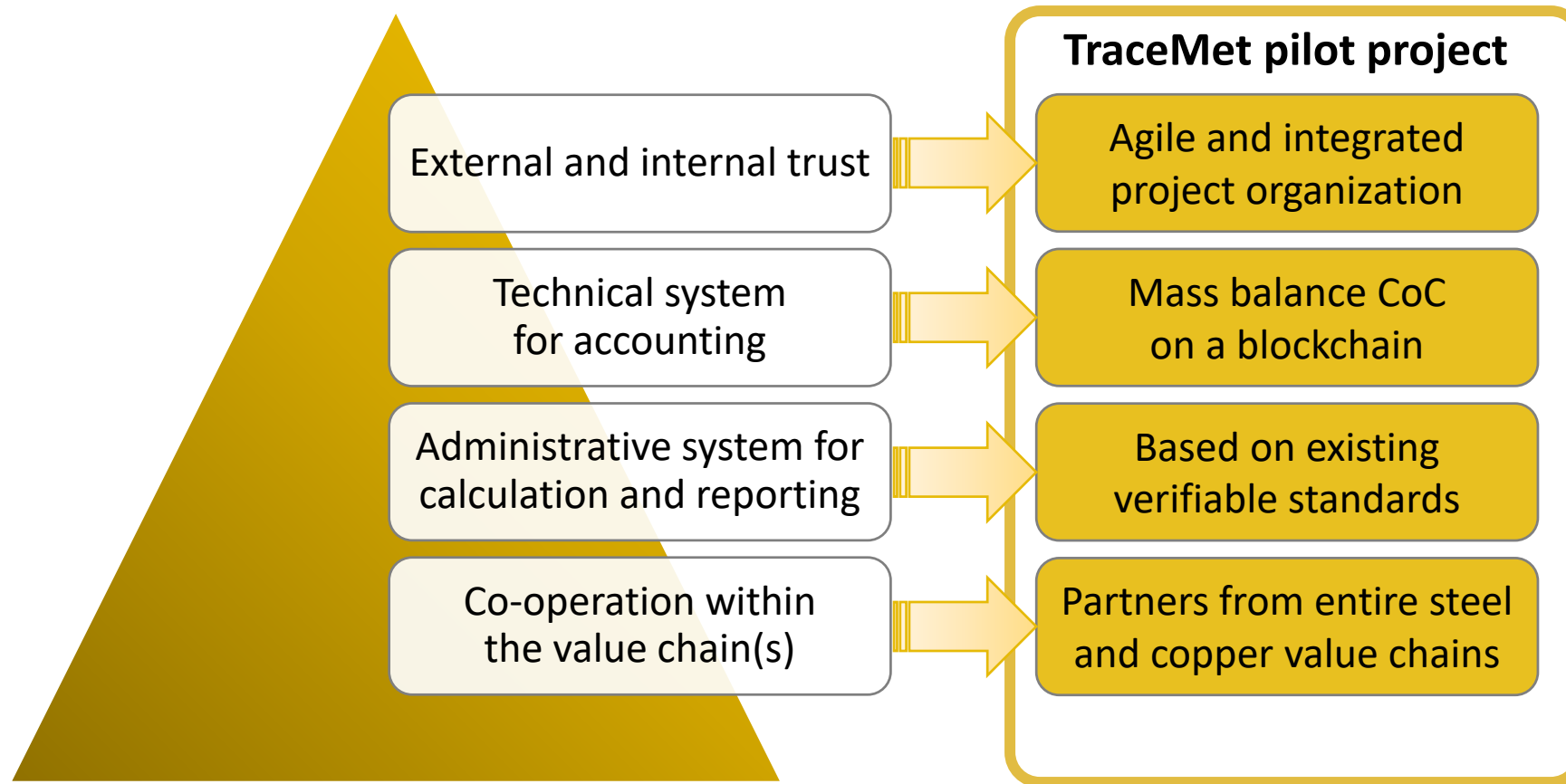
Need for  
sustainable supply chains



**Possibility to trace the environmental performance through the value chains**

**Pro-active and responsible actors should have a competitive advantage**

# How?



Agile development  
with continuous evaluation  
and close vertical and lateral  
interaction between  
project partners

Quick

Simple

Two well-known  
value chains with only  
three consecutive actors –  
from mine to buyer

**TraceMet  
success factors**

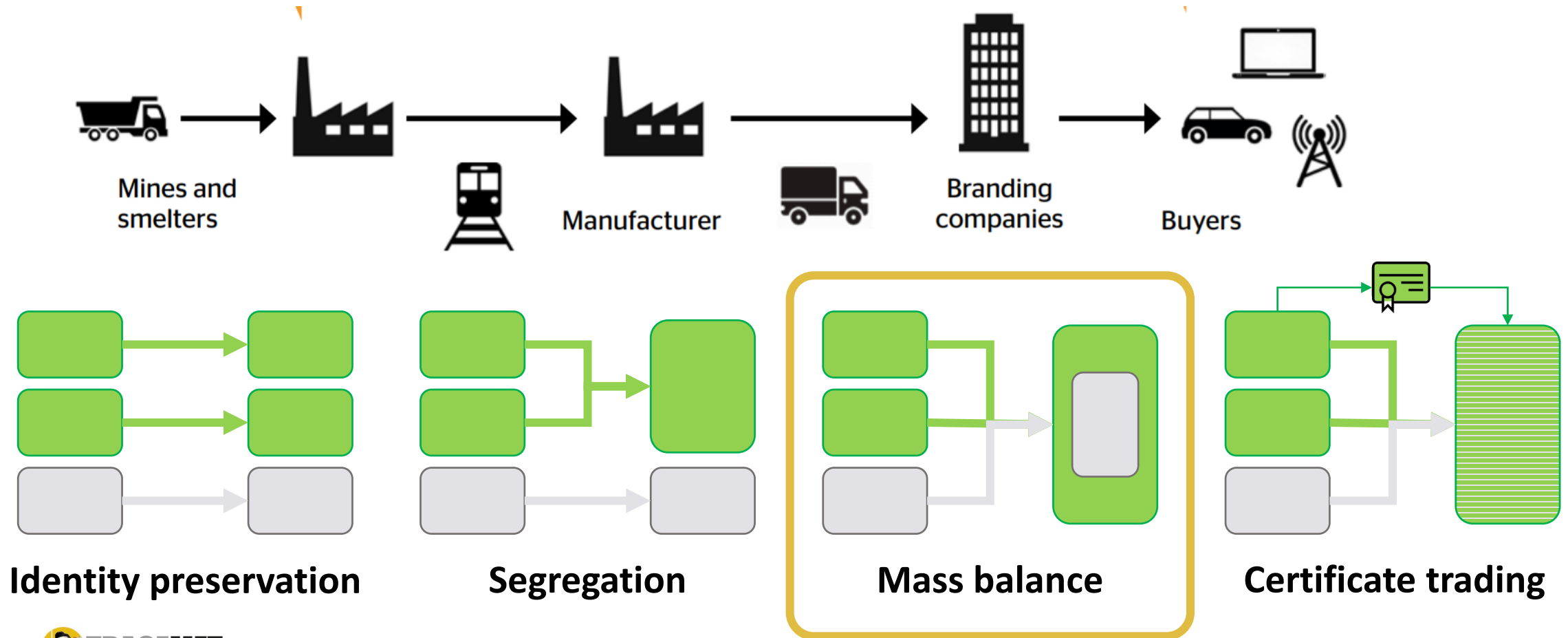
Reliable

Real

Adjusting existing sustainability  
criteria for carbon footprint  
and recycled content rather  
than developing new criteria

Industry partners  
representing all value-chain  
actors, providing actual  
user-cases and data

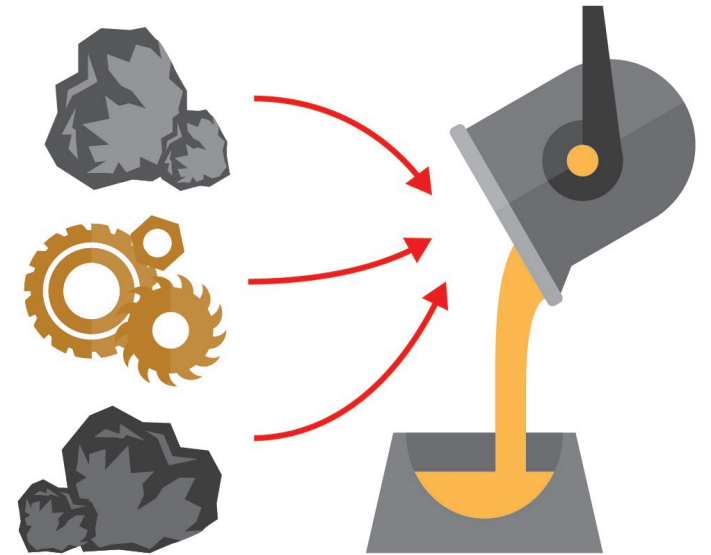
# Chain of Custody and Traceability





# So far TraceMet has achieved to...

- Implement a mass balance CoC accounting on a blockchain database
- Develop (project internal) Product Category Rules (PCR) that enables a certified declaration for carbon footprint and recycled content of metals
- Present solutions to a number of specific system challenges





# Environmental Performance

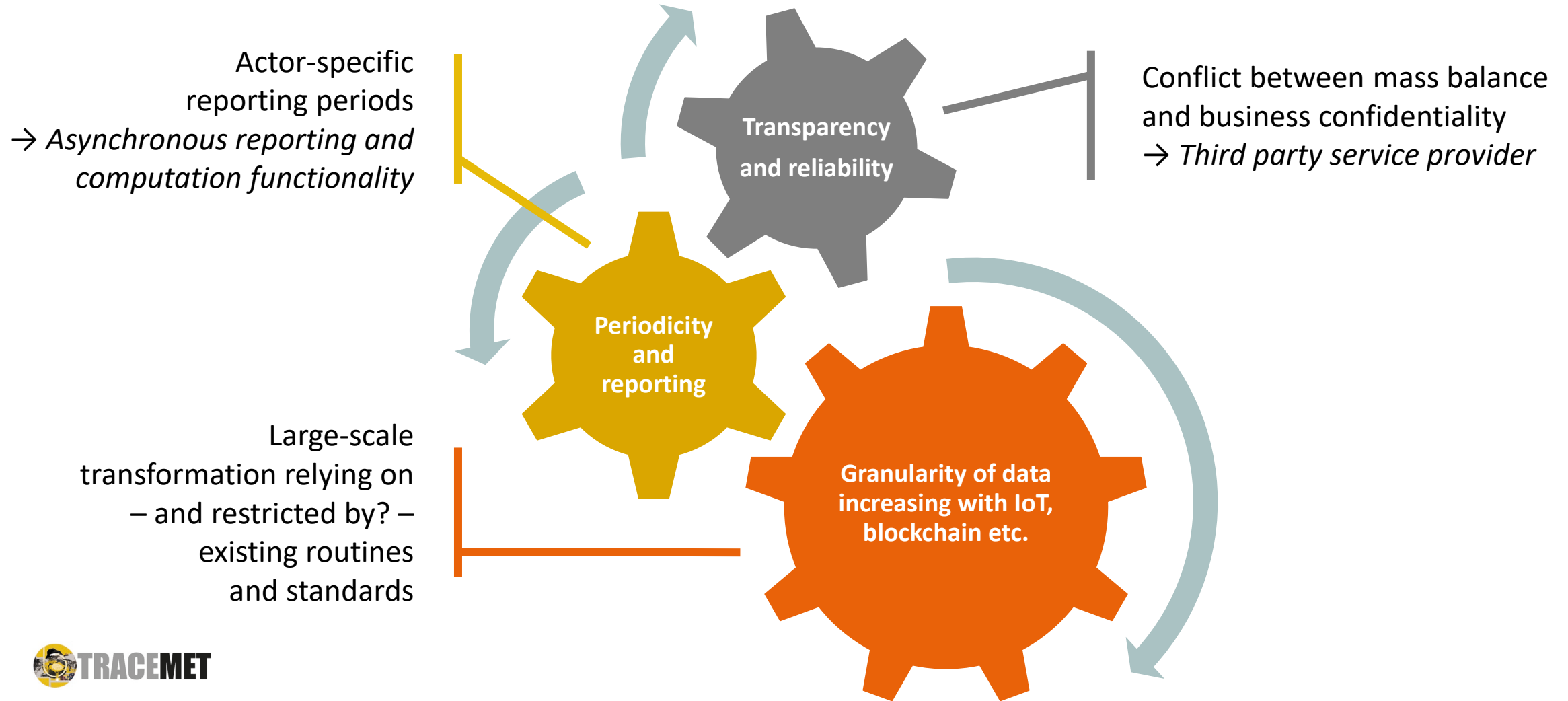
- Carbon footprint (based on EN 15804 modules A1-A3)
- Recycled content (based on SS-EN 45557:2020)
- TraceMet has an attributional approach with some consequential elements (common in LCA, in line with Product Environmental Footprint (PEF) methodology)
- Third party verification

## The Devil is in the detail!

**Multi-actor, cross-value chain perspectives  
imperative to identify, explore and solve challenges**



# Challenges and Opportunities



# Lessons Learned and Way Forward

- Any solution must meet the specific requirements of its value chain
- Necessary to engage all actors along the value chains to keep the development simple, real, reliable and quick
- Final implementation and evaluation until December 2020
- Looking ahead (beyond the pilot project):
  - Defining the Minimum Viable Product and value proposition for market success
  - Exploring conditions for adding e.g. critical raw materials and/or more environmental performance parameters



For more info, see:

[www.ivl.se/tracemet](http://www.ivl.se/tracemet)

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# TRACEMET

Traceability for sustainable metals and minerals

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## PROJECT OWNER

Svemin

## PROJECT LEADER

IVL Swedish  
Environmental  
Research Institute

## PROJECT PARTNERS

ABB, Boliden,  
Elektrokoppar AB,  
LKAB, Rise,  
Scania, SSAB,  
Volvo Group

## FINANCIER

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