

# Seminar - Standardisation needs for the steel industry's climate transition 19 January 2023

Aim and objectives, Execution of project,  
Stakeholder Analysis  
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# Project URSTARK: Standardisation needs for the steel industry's climate transition



**Aim:** Identify issues in the steel value chain, where standardization or harmonization of various initiatives can strengthen the Swedish steel industry's climate transition to production of steel with a very low climate footprint



**Goal:** A plan and to spread knowledge within standardization and other initiatives to strengthen the market position for “near zero steel”. Based on stakeholder analysis, mapping of initiatives and standards and a GAP-analysis.

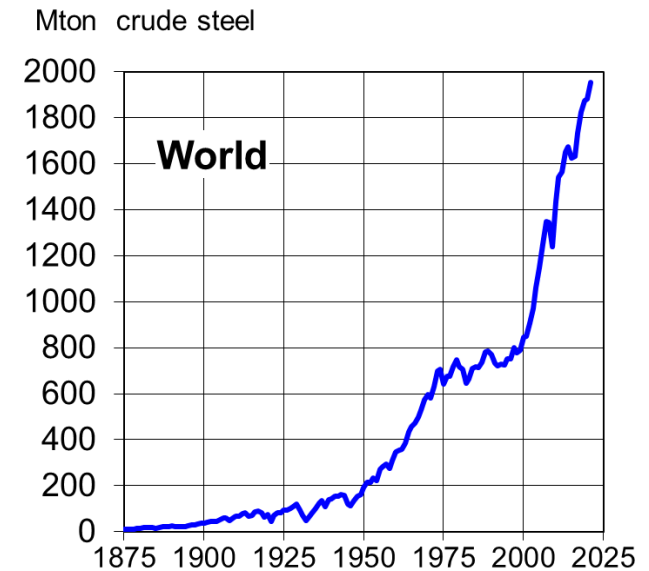
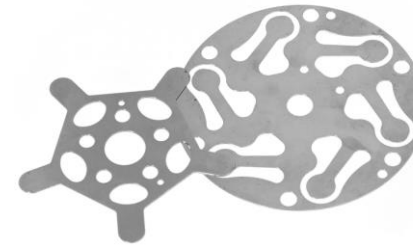
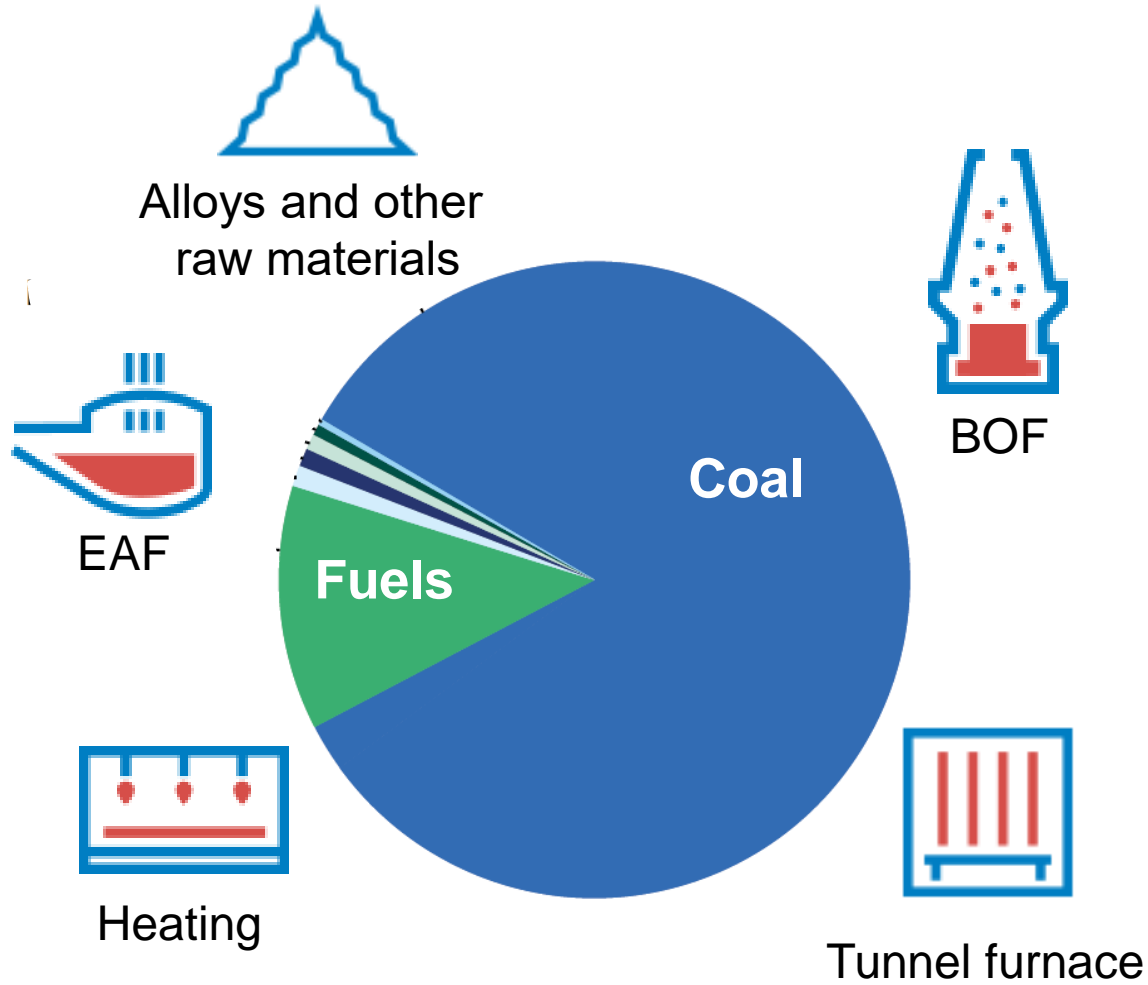


**Participants:** LKAB, SSAB, H2 Green Steel, Höganäs, Ovako, Alleima, Uddeholm, Volvo CE, IKEA, Kobilde & Partners, Jernkontoret (April 2022 – January 2023)



**Deliverables:** Final report, open final seminar for various stakeholders, possibly a scientific article

# The Steel Industry - Processes, products and market



## Execution of the project April 2022 – January 2023

A stakeholder analysis based on survey questions and/or interviews

An inventory of relevant climate initiatives and standards

A review of where in the steel value chain actions can reduce steel's climate impact

A GAP analysis to identify where additional or revised standardization may be needed

One workshop for the project, two seminars and several project meetings for learnings and dissemination of results

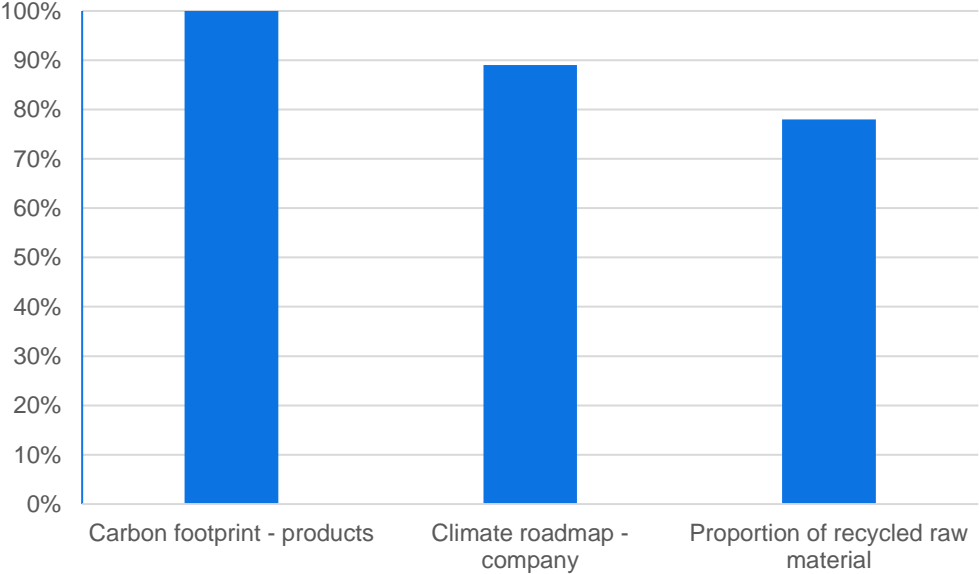
Collaboration with the Swedish Council for Innovative and Climate focused standardization and its working group for “fossil free steel”

# Stakeholder Analysis – input from stakeholders

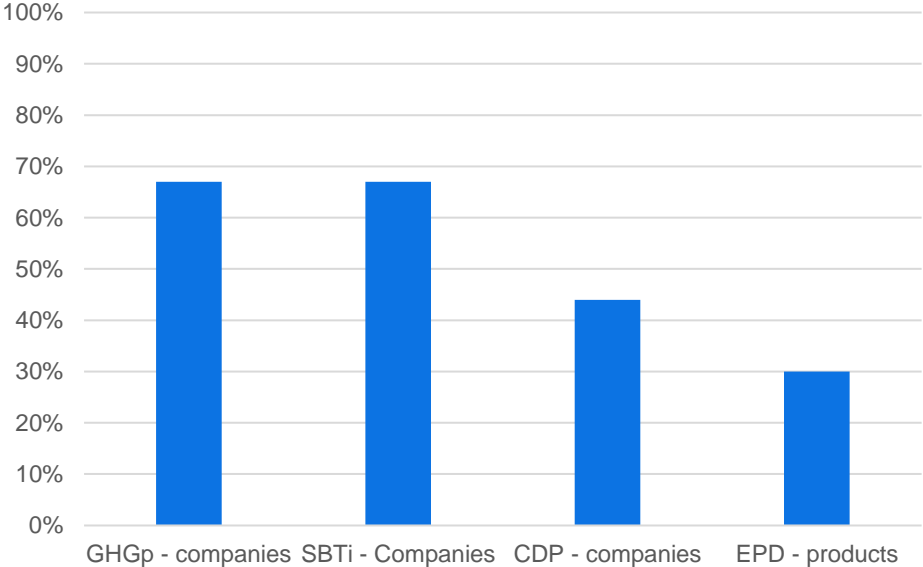
- Results from interviews or survey responses from 36 different stakeholders
- Nine steel companies in Sweden
- Twelve customers and steel distributors, representing
  - automotive and transportation,
  - engineering,
  - building and construction and
  - furniture
- A majority are present in Sweden
  - Some German customers
- Seven raw material suppliers, three investors and five Swedish authorities

# Steel companies – some results

Steel companies' customers ask for



Steel companies communicate climate emissions according to different methods

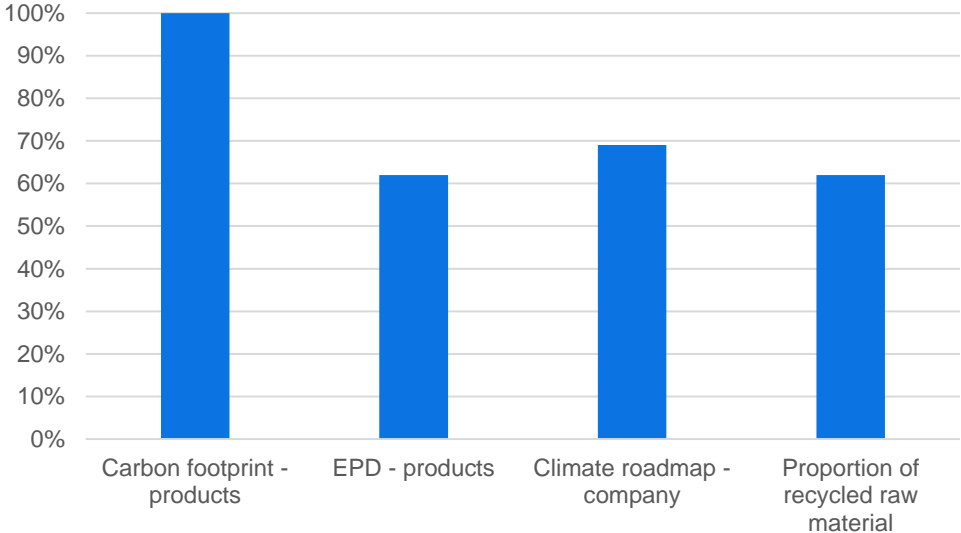


# Swedish steel companies

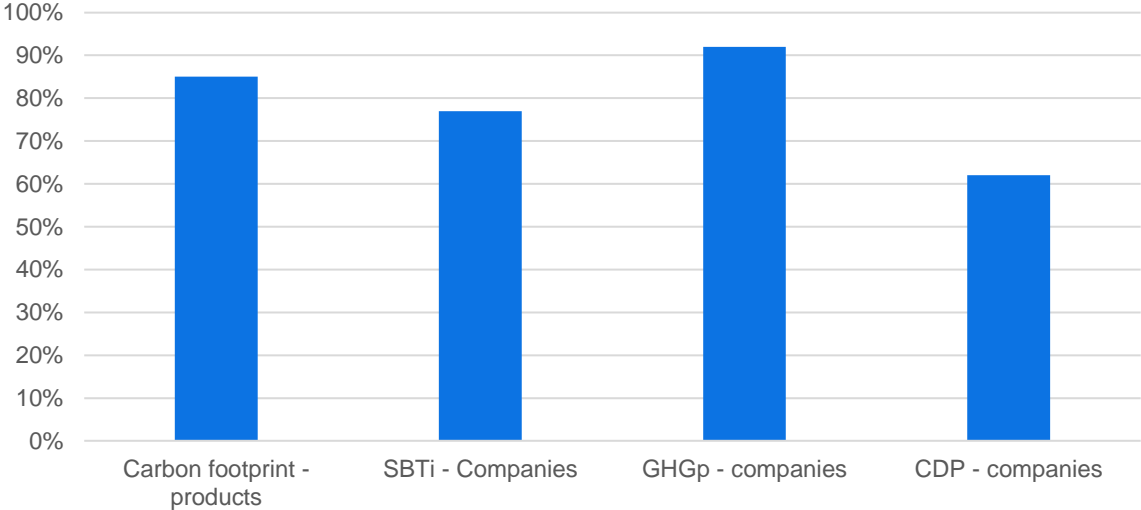
- Customer request product data
  - Carbon footprints, of any kind, are of big interest for the steel companies' customers
  - Some specify what type of carbon footprint, e.g. EPD with CO<sub>2</sub>-equivalent figures
- Company data
  - GHG reporting according to Green House Gas protocol and climate roadmaps according to e.g. Science Based Target initiative are important tools
    - both for steel companies and their customers

# Customers and distributors

Customers and distributors request from steel companies



Customer and distributors communicate





## Customers and distributors – examples of viewpoints

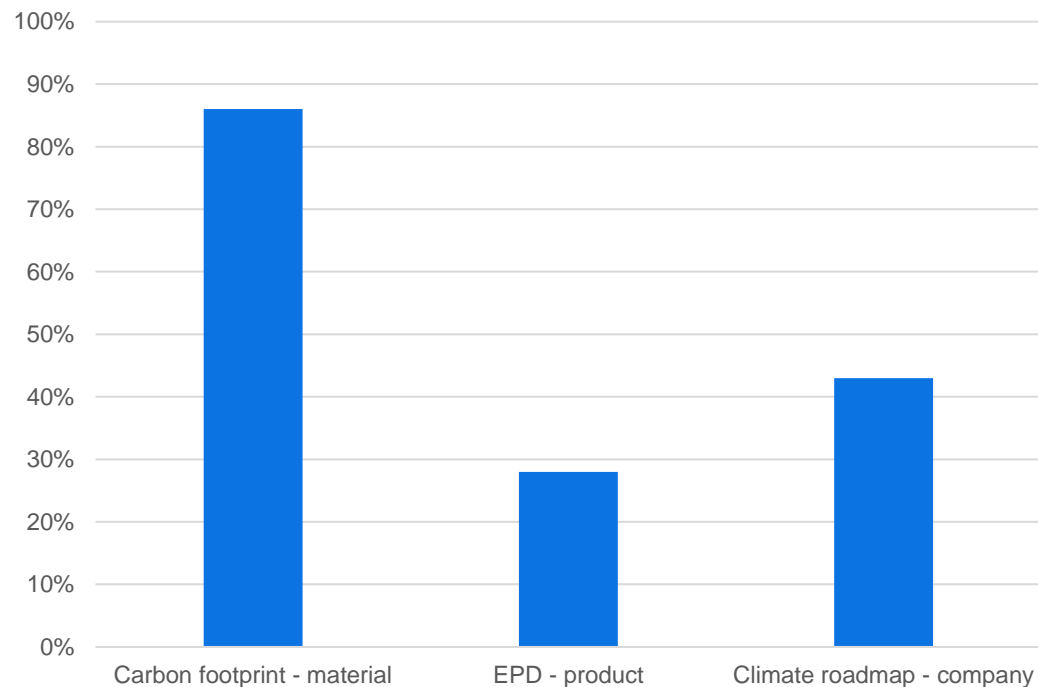
- The construction sector
  - values EPD according to EN 15804
  - has a lot of certification schemes for sustainable buildings including climate impact
- The automotive and transport sector
  - uses steel to a large extent
  - transformation by electrification -> more the focus on the materials' climate footprint
  - specific LCA-data is often requested
  - some companies also want to increase the proportion of recycled raw material in their final products

## Customers and distributors – examples of viewpoints

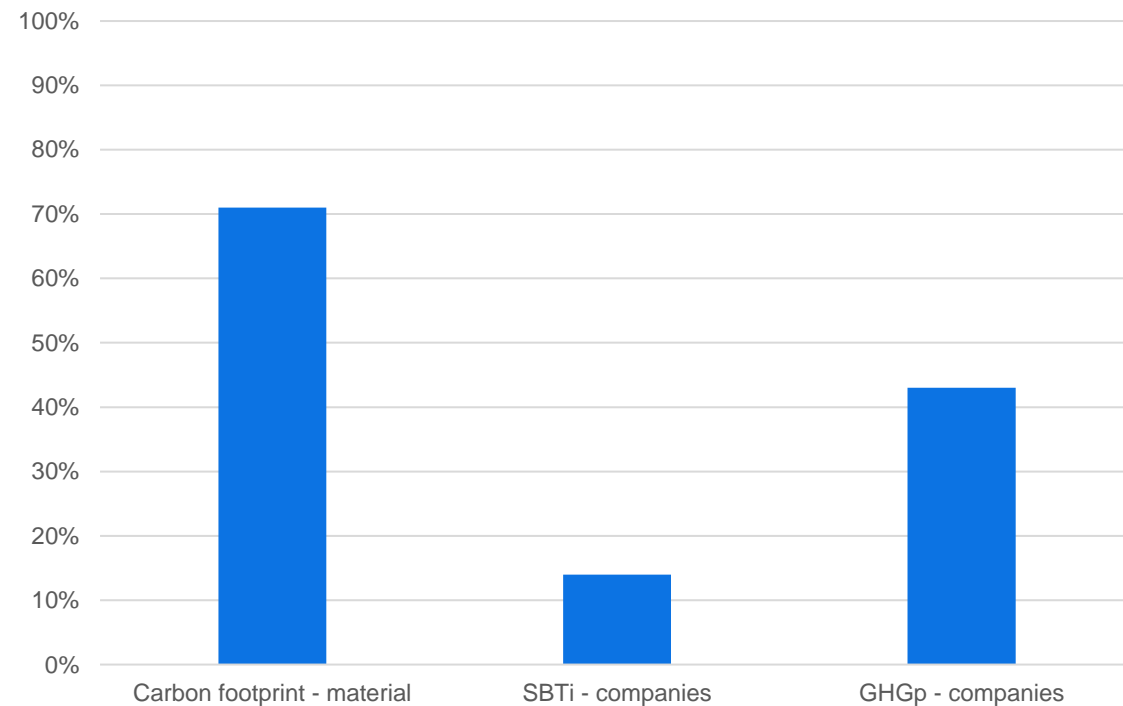
- Engineering companies
  - want specific LCA-data along the value chain
  - request roadmaps for a specific proportion of their suppliers, to reach their own climate goals
- Steel distributors
  - value standardized methods for EPD for comparability reasons

# Raw material suppliers

Requested from customers to raw material suppliers (ore, alloys, lime, scrap)



Reported and communicated by raw material suppliers (ore, alloys, lime and scrap)



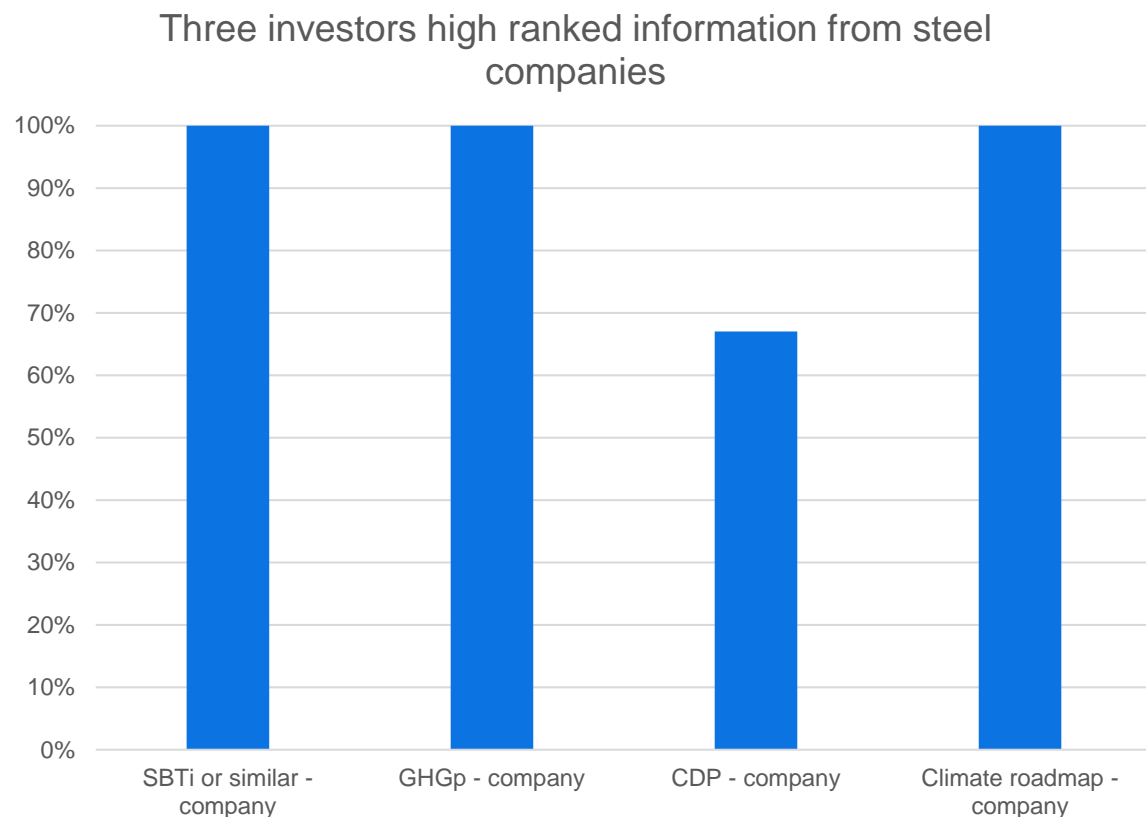
## Raw material suppliers – examples of viewpoints

- Iron ore company
  - many initiatives, labels with climate classifications that are not comparable
  - many global business assessment initiatives are very broad which makes comparisons difficult
  - GHGp and Carbon footprint according to ISO 14067 are useful
- Alloy supplier
  - to become CO<sub>2</sub>-neutral, fossil reducing agent needs to be replaced with fossil-free alternatives
  - this must be discussed with the steel industry as the path chosen may affect the quality of the alloy

# Raw material suppliers – examples of viewpoints

- Scrap companies
  - optimizing scrap availability for the Swedish steel companies with focus on quality and logistics -> reduced climate footprint
  - sorting of scrap qualities needs to be optimized to achieve as high value as possible in the scrapped metallic material
- Lime suppliers
  - too many initiatives and standards/methods that are similar but still not comparable
  - standards should be clear whether compensation via offsets is okay or not for carbon footprints of materials or products
  - allocations principles are also important

# Investors



# Other tools useful for investors

- UN Convened Net Zero Asset Owner Alliance (NZAOA)
- Climate Action 100+ and the Net Zero Company Benchmark
- Science Based Targets initiative's coming steel sector guide will be used, why it is important it becomes robust and scientifically grounded

## Authorities– examples of viewpoints

- Methods
  - EN 15804, GHG protocol, ISO 14064, ISO 14020, ISO 14025 and ISO 14040:2006 Life cycle assessment are useful
  - But.. differences in PCR hos different EPD-operators exist. Mass balance approach used by some EPD-operators is also problematic
- The Swedish Transport Administrator
  - The incentive model rewards climate-savings in infrastructure project. For steel material, the requirements risk only affect the amount of scrap steel used, not the manufacturing processes in the steel sector.  
“Near zero steel” definition could perhaps contribute to reduced climate impact from long lived infrastructure projects.

## Authorities– examples of viewpoints

- The Swedish National Board of Housing, Building and Planning
  - No opinion on best method, but refers to EPD-data according to EN 15804 for specific data for climate declarations for new buildings
  - Refers to European Commission, where a review of Construction Product Regulation is ongoing. Probably the 16 environmental impact categories according to EN 15804 will be requested
- The Swedish Energy Agency
  - Request av clear definition of “green steel” or “fossil free steel”. Can steel be classified as green even if it is possible to trace fossil fuels in the value chain?



## Authorities– examples of viewpoints

- The National Agency for Public Procurement
  - Values traceability and possible certifications for proportion of recycled post consumer raw materials in products
  - Environmental and climate impact shown with standardized third-party audited environmental declaration, such as EPD
  - Climate offsets are generally very difficult to verify

# Preliminary results from the stakeholder analyzes

**Transparent data:** All stakeholders in the steel value chain want transparent life cycle based climate footprint data for materials and products



**Standards:** Existing standards and methods for environmental declarations and climate footprints for products are used. Still the results are not always comparable



**Company reporting:** Stakeholders report and communicate the climate impact from the total company. Roadmaps for reducing the climate impact is also common and requested.



**Different CO<sub>2</sub>-figures:** Difficult to understand the difference between reported CO<sub>2</sub>-figures  
To many initiatives



**Scrap recyclability:** Value of recycling or recyclability of steel scrap differs in different methods



**“Near zero production”:** Some but not all steel companies are in favor of methods defining and evaluate “near zero steel production processes” to support the transition of steel making



**Competiveness:** Methods and tools to evaluate steel and products used as purchasing criteria might affect the market and competitiveness

