



**AWK'23**

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11. / 12. MAI 2023

## Quantification of Sustainability Impact

Impulse presentation – Session 3  
Andreas Peters

# Empower Green Production

 **Fraunhofer**  
IPT

 | **RWTH AACHEN**  
UNIVERSITY



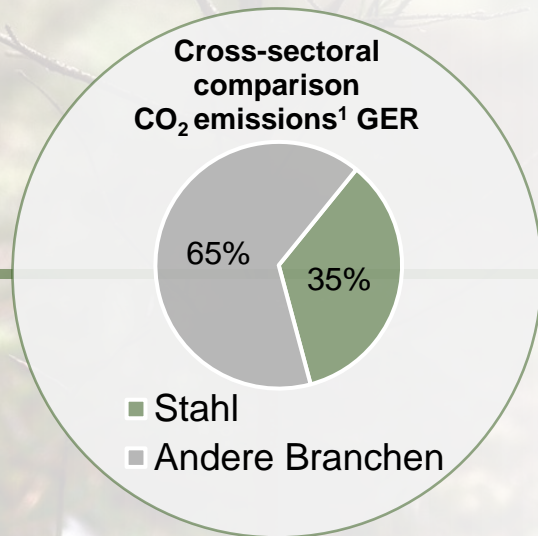




# Orientation on sustainability in the steel industry

## UN 2030 Agenda - Guide to Sustainability

**No method for combining new technologies and sustainability goals**

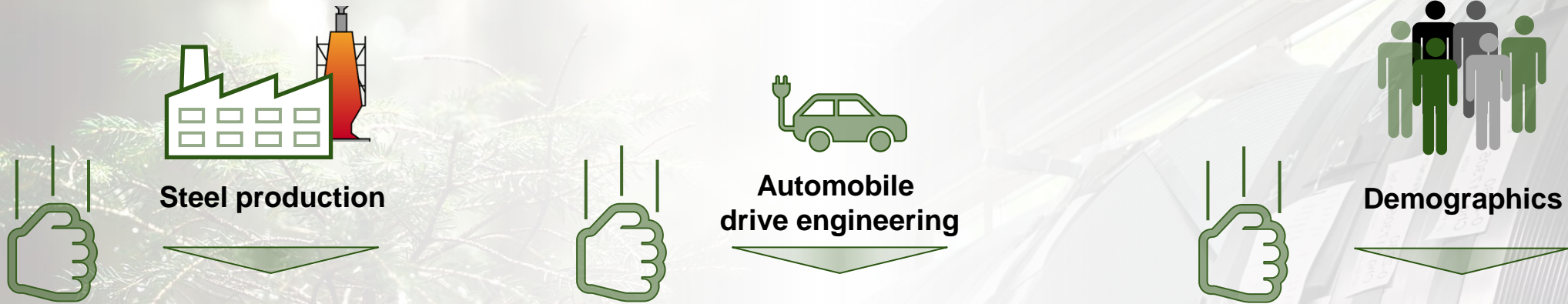


## Status quo in the steel industry

... causes **5%<sup>2</sup>** of European and **7%<sup>2</sup>** of global CO<sub>2</sub> emissions

**Pressure to reduce the ecological footprint**

# Balancing act between pressure to act and innovations in steel production



## Current challenges in steel supply chains of the automotive industry



Transition from C- to  
H-based steel production

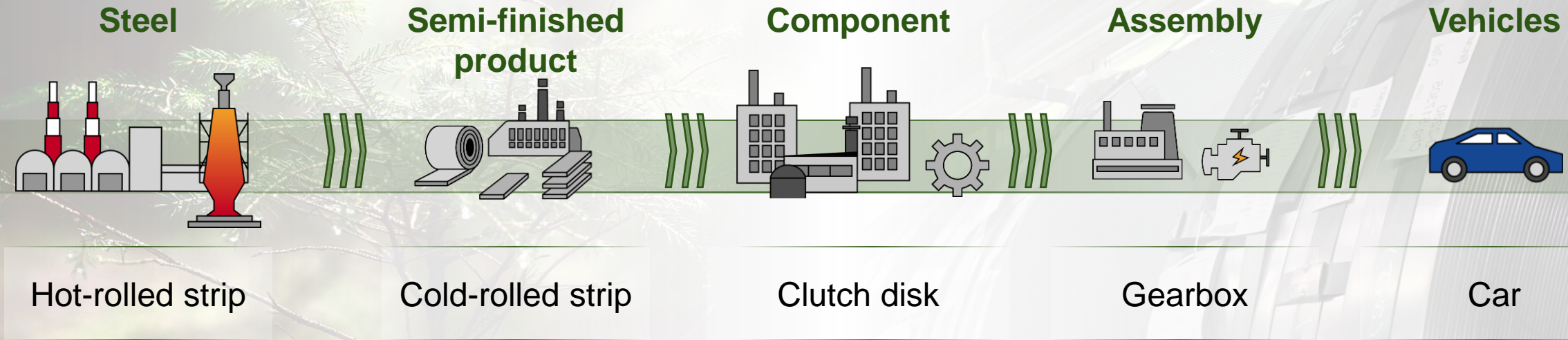
Scrap utilization\*

Innovations in steel production  
**Impact on the supply chain**

\*Flat products



# Steel value chain in the automotive industry

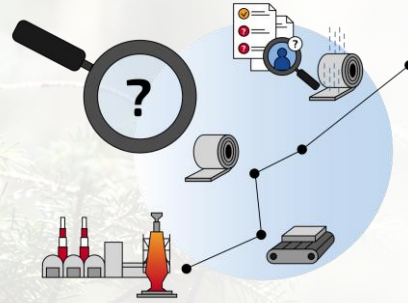


## Challenge

Optimization across the value chain

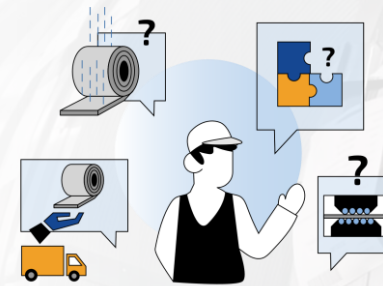
# Deficits hamper optimization of value chains

## Deficit Methodology



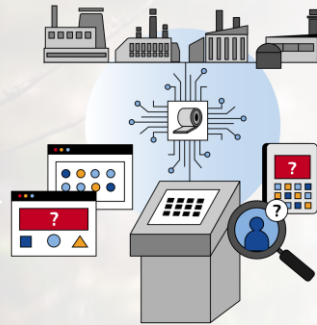
Materials often (still) black box

Hardly any use of explicit knowledge



## Deficit Knowledge

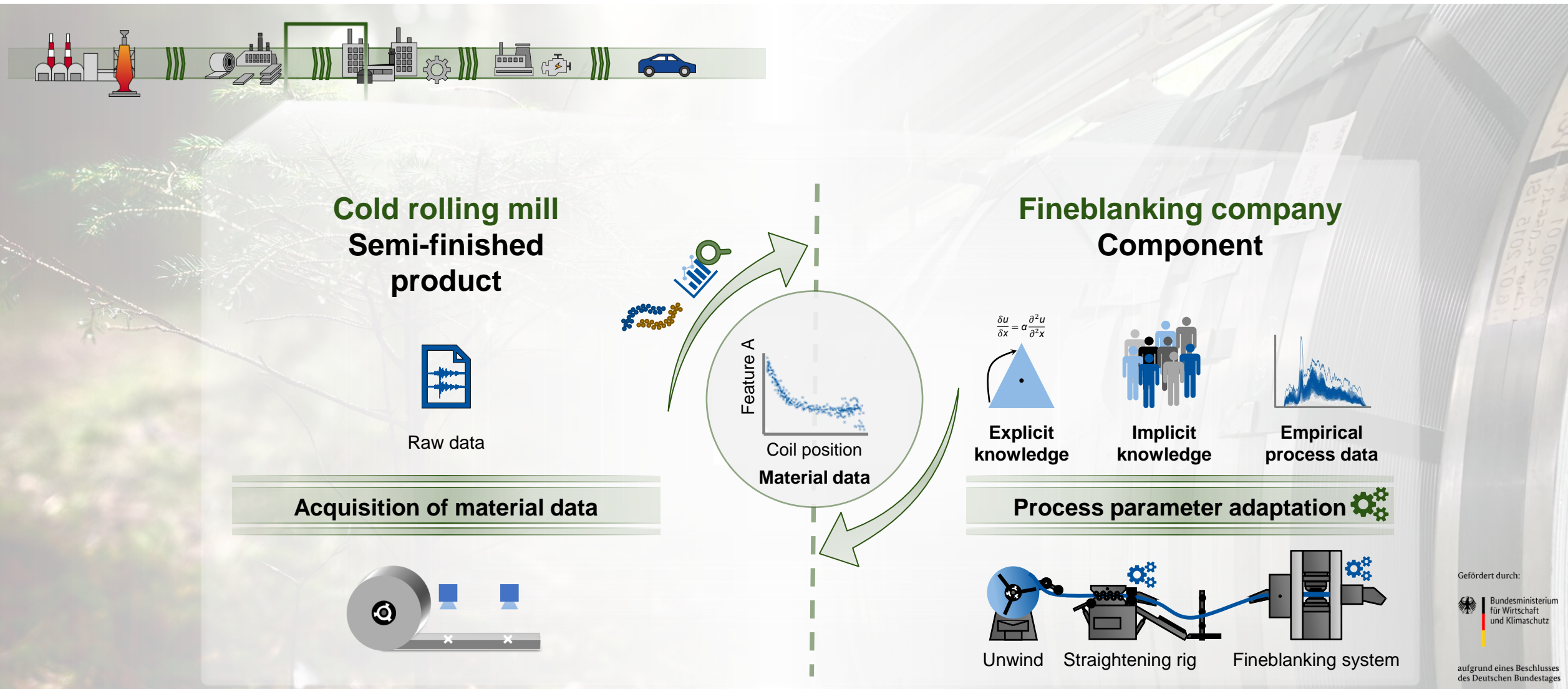
## Deficit Digital Integration



Technical and mental prerequisites often not given



# The path from data to knowledge goes via



# Why don't we get started?



**Costs**

**Making research projects  
more accessible for SMEs**



## Why don't we get started?



**Costs**

**Making research projects  
more accessible for SMEs**

**Resources**

**Increased collaboration  
with partners**

## Why don't we get started?





## The experts

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