

# Clean Steel partnership

---

**Future Skills – Other Findings and Perspectives**

ESSA midterm conference

27 + 28 May 2021



# Clean Steel Partnership

E  
S  
T  
E  
P  
People

- Steel needs EU – and EU needs steel
  - Carbon Neutral
  - Sustainable growth
- EU steel industry
  - At forefront of carbon neutral steelmaking technologies
  - Ice-breaker for other sectors to transform to carbon neutrality in a level playing field:
  - **Cradle to Cradle processes with Renewable Energy**
- EUR 1.4 billion partnership => EUR 2.55 billion R&D&I need for decarbonisation
  - 50% private / 50% public (Horizon Europe + European Community for Coal and Steel assets <RFCS>)
- Full steel value chain involved + broad stakeholder engagement including other sectors
- High TRL + large scale demonstrators
  - Accelerate transformation of EU steel industry towards carbon neutrality
- Open, inclusive private governance using legal entity of ESTEP



## 3 Technology Pathways

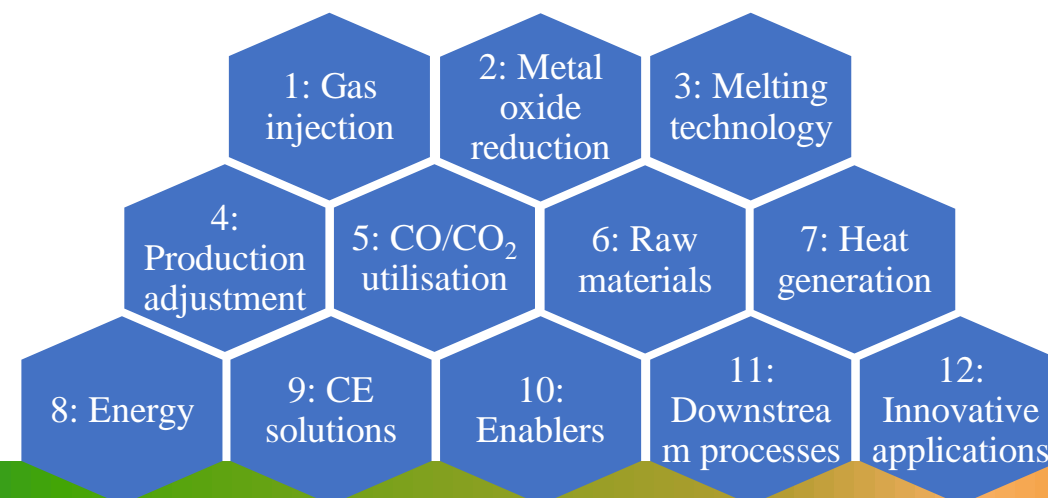
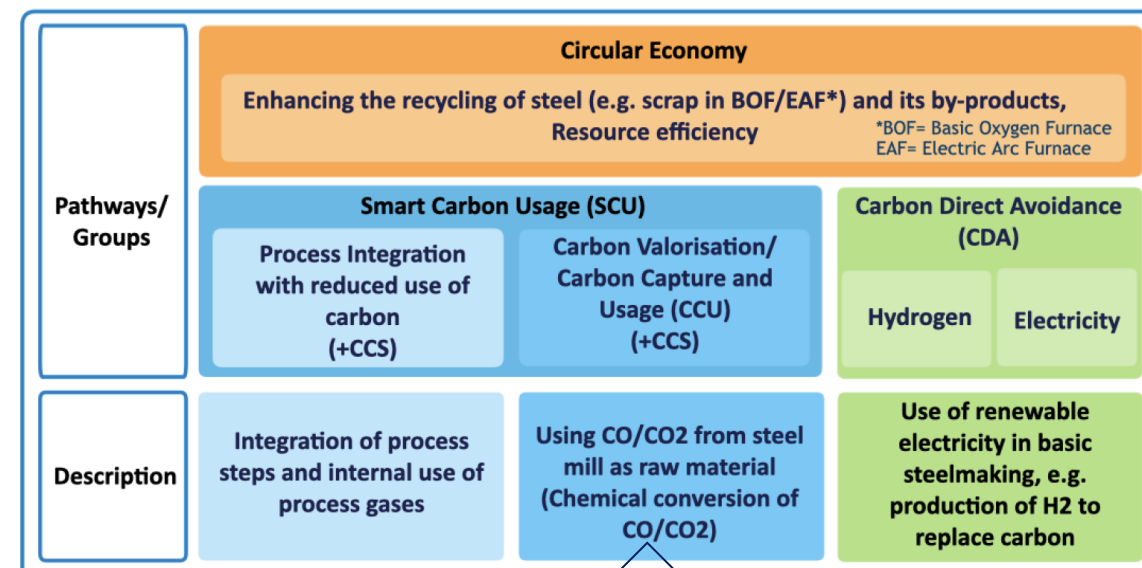
- Carbon direct avoidance (CDA)
- Smart carbon Usage (SCU)
- Circular Economy (CE)

## 6 Areas of Intervention

- Integrating BB into the 3 Pathways
- Focus on Enablers, Combinations of BB, Circular Processes

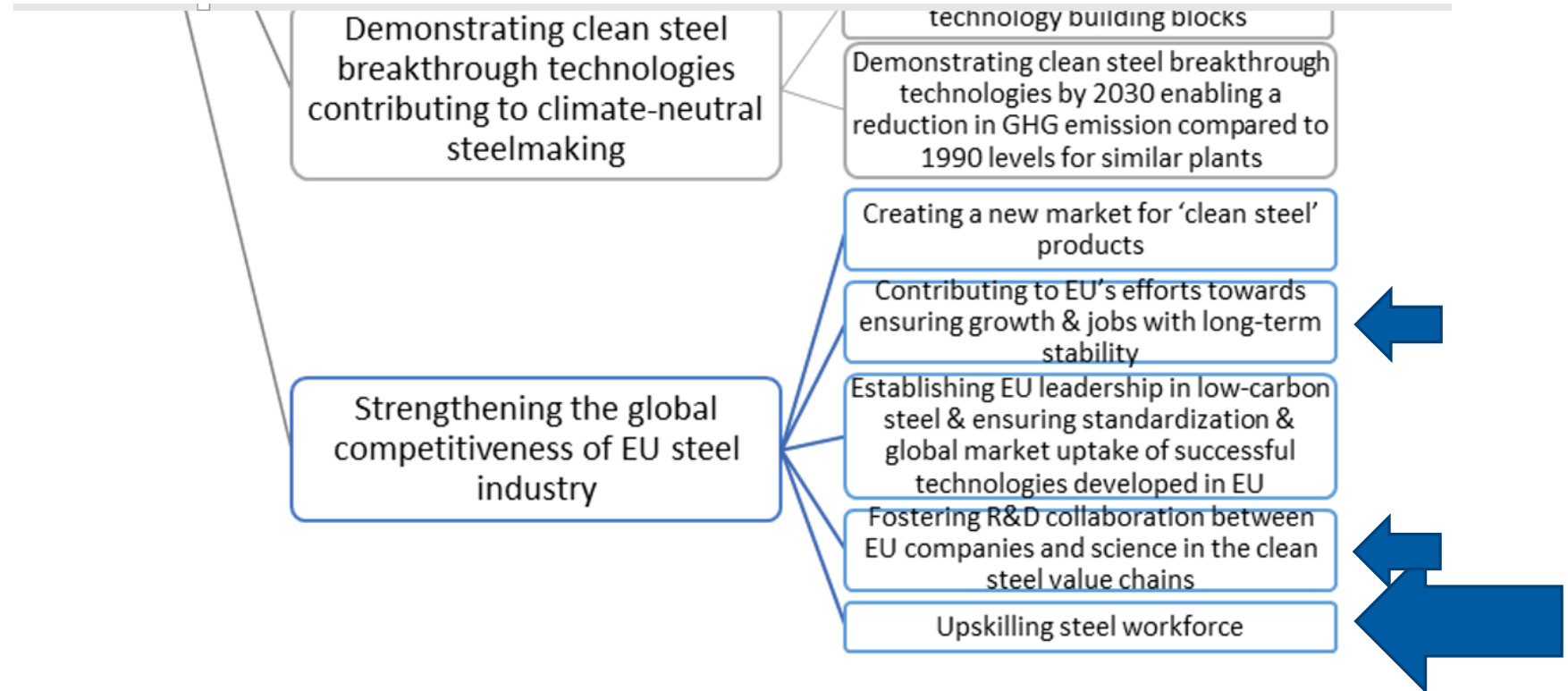
## 12 Building Blocks

- Bring to TRL8 at large scale



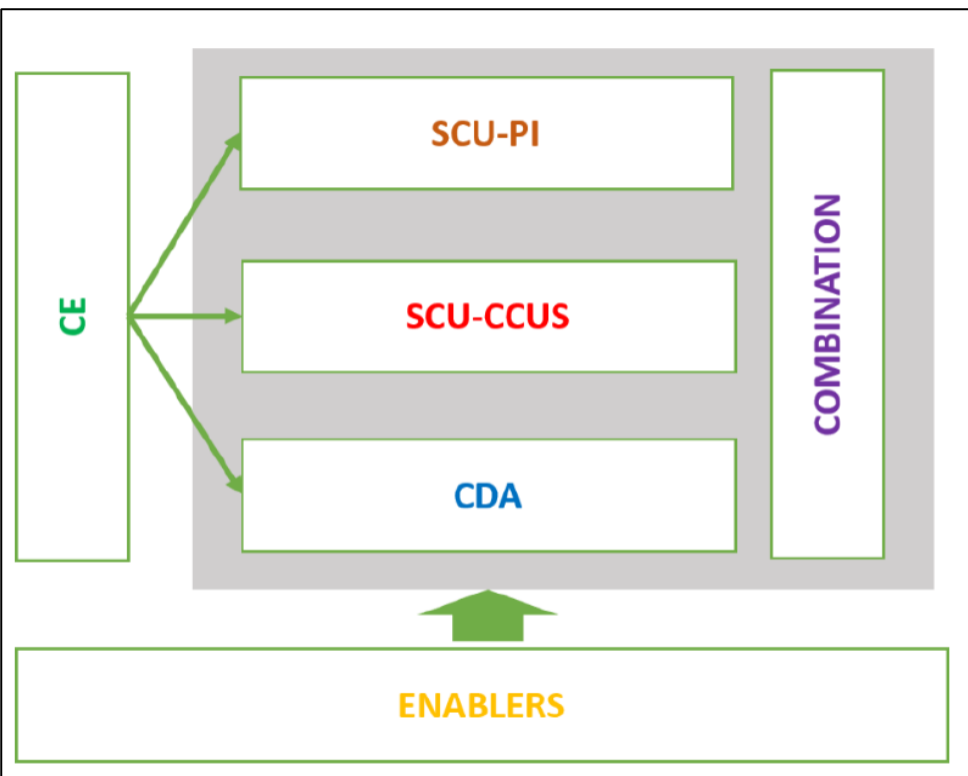
# CSP performance indicators dedicated to people aspects

- Strategic Research Innovation Agenda (SRIA), page 25



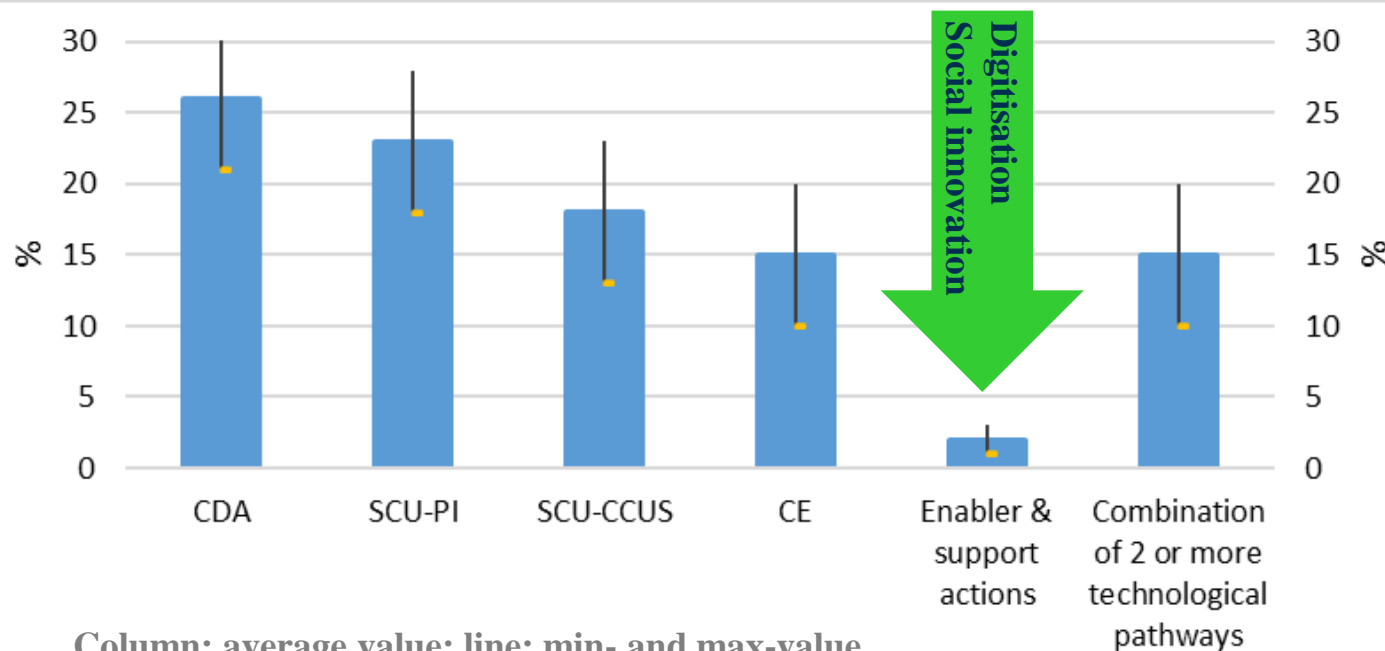
*Source: Author's elaboration on consultation with ESTEP members.*

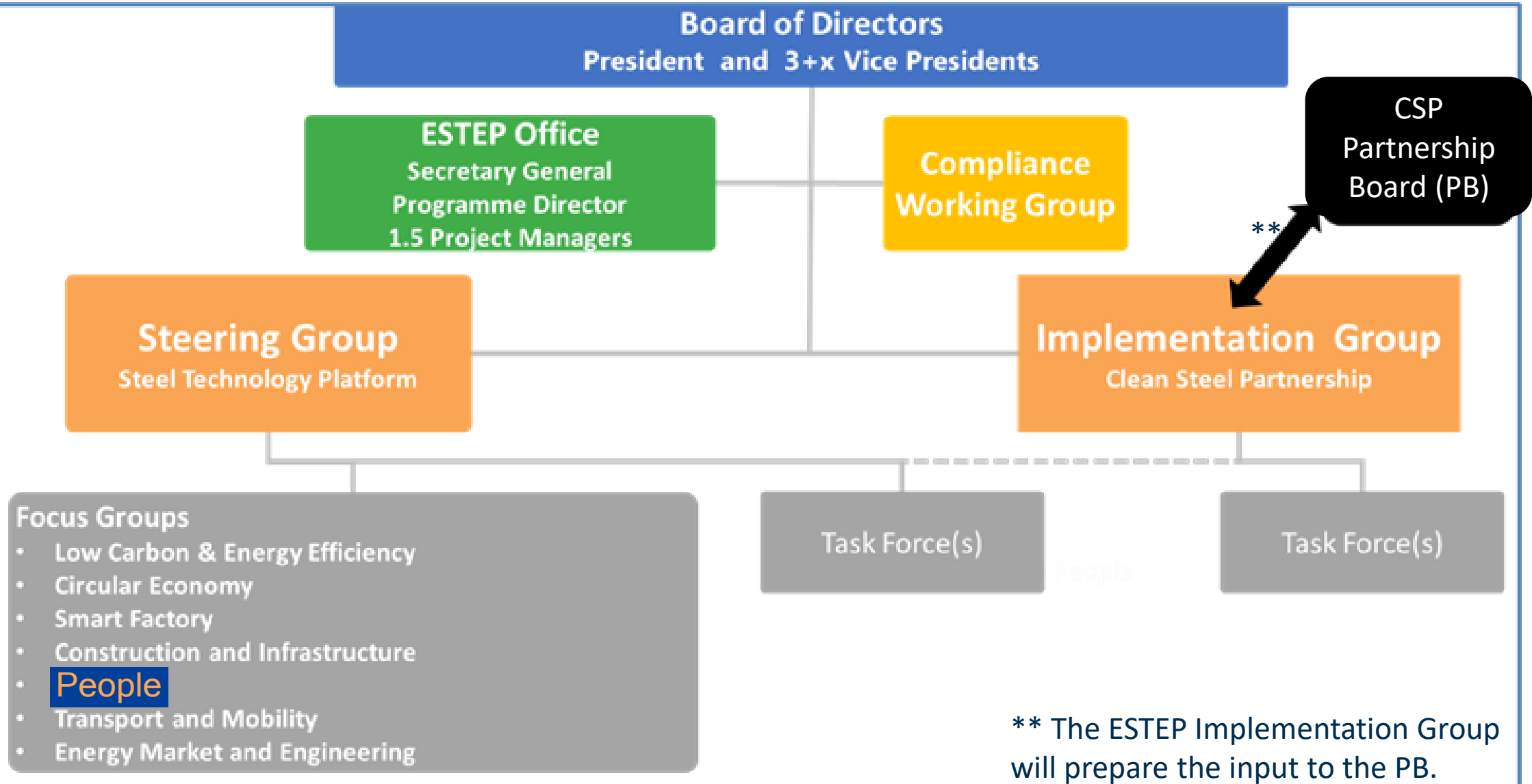
### 6 Areas of Intervention



CDA = Carbon Direct Avoidance  
 SCU = Smart Carbon Usage  
 PI = Process Integration  
 CCUS = Carbon Capture and use/storage  
 CE = Circular Economy

### Budget split according areas of intervention (total: 1.4 bn €)

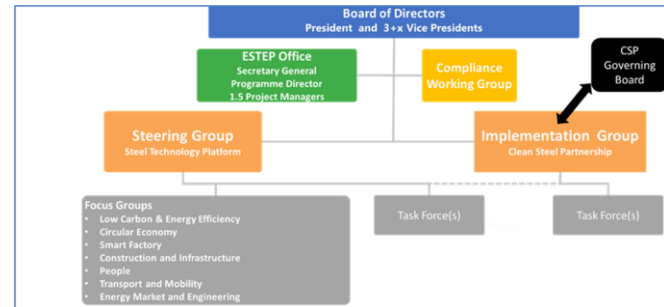
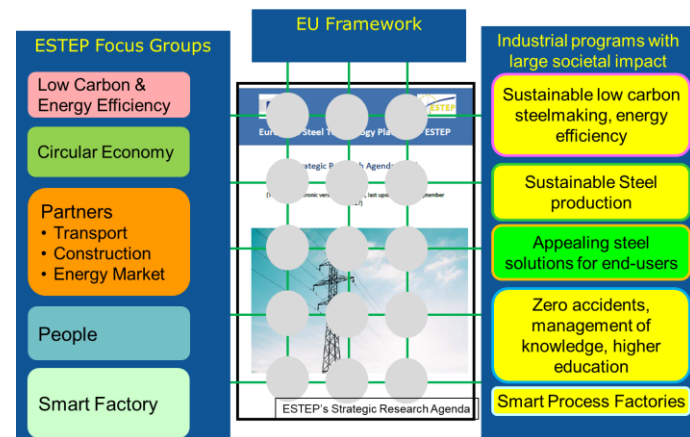




## Observations and experience while establishing Clean Steel partnership and ESTEP as legal entity

- Lifelong learning
  - Curious
  - Open-minded
  - Continuous efforts
- Increase of complexity
  - Challenge to understand both big picture as well as details
  - Communication
- Increase of speed of change
  - Surprises will always come (COVID-19)

- Main barriers
  - Time gap between realising skills needs and implementation of dedicated programs
  - Resist to change
- Positive experiences from Clean Steel partnership and ESTEP
  - Permanent Focus Groups and encourage open network approach
  - Very transparent and inclusive approach
  - Create awareness and visibility
    - Dedicated Focus Group *People*
    - *2% budget allocation to enablers (digitisation and people) in Clean Steel partnership*



# Transformation needs more than painting skills ...

Thank you very much for your attention!

