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Renewable Energy Roadmap Workshop

# Manufacturing of Wind Turbines & Solar PV Modules

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## Agenda

- Housekeeping
- Feedback D4.1
- Development of Roadmap

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Housekeeping



## Housekeeping

- Please mute your microphone
- Write COMMENT or QUESTION in chat
- 30 min Feedback D4.1
- 50 min Development of Roadmap

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## Feedback D4.1

Challenges

Standards

Vision

Gap Analysis

## Challenges – Manufacturing



- Wind Turbines & Solar PV modules
- Human Rights
  - Renewable Energy Benchmark
- Environmental Impact
  - Energy consumption
  - GHG emissions
  - Use of chemicals
  - Resource efficiency
- Health & Safety



IRMA  
 ICMM  
 EITI  
 IFC EHS for Mining  
 The Copper Mark  
 ARM  
 Natural Resource Charter  
 World Bank Climate-smart Mining  
 OECD Meaningful Stakeholder Engagement  
 GRI  
 EBRD  
 TSM



IFC Smelting and Refining



The World Bank Environmental and Social Framework for Financing  
 WWF Responsible Investment Framework  
 Connex G7



IFC wind energy  
 AWEA  
 IEC wind & solar energy  
 NSF457, NPCR 029, ... (national level)



IEC wind & solar energy  
 CESA  
 AWEA  
 ISO 16079; 61400



WEEE directive  
 DIN SPEC 4866

LME

OECD Responsible Mineral Supply Chains      Responsible Steel      ASI      CSC

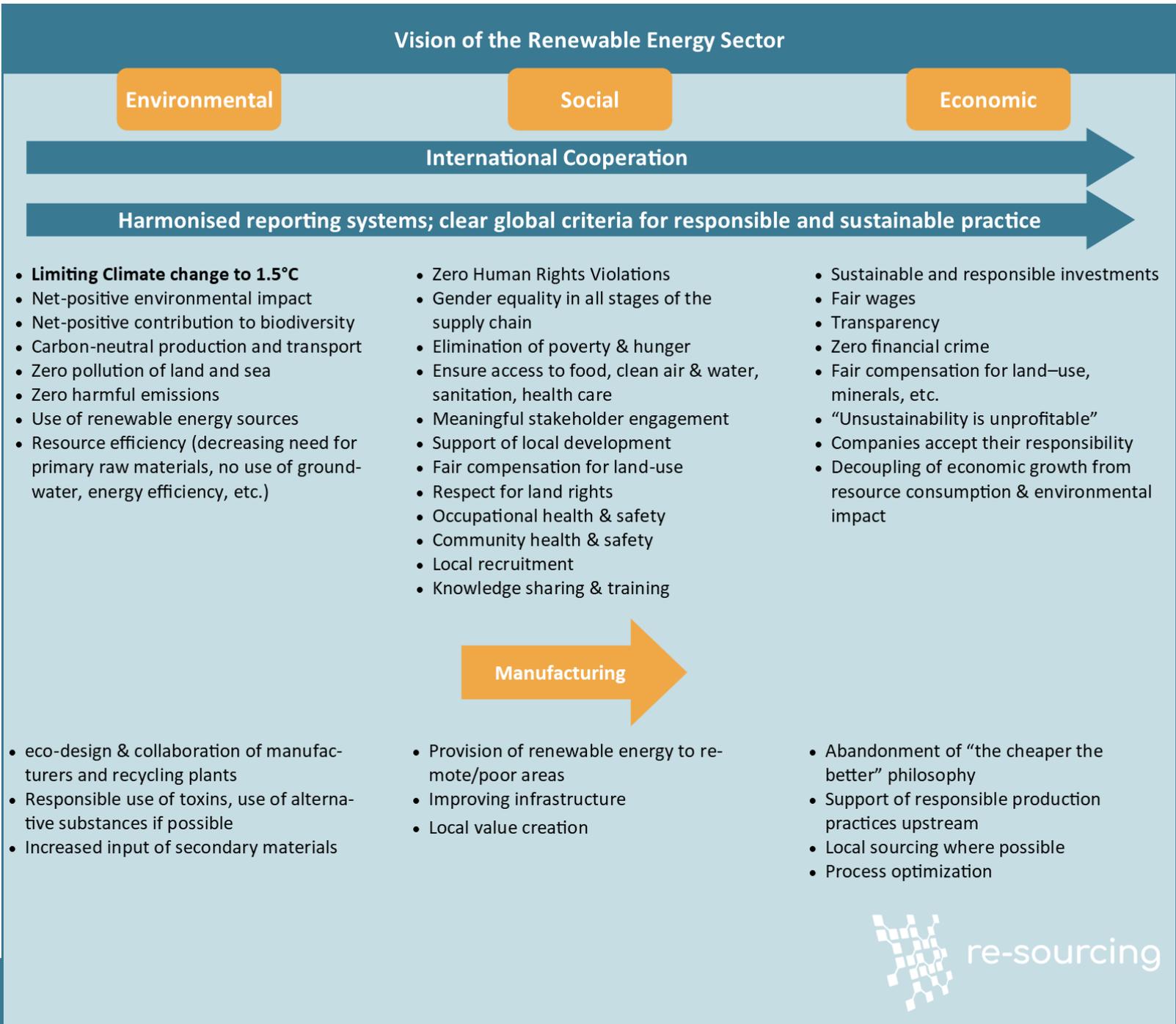
ISO 14000-series  
 ISO 50001; 20400; 26000  
 ISO 45001/OHSAS 18001      ILO  
 IFC EHS  
 OECD Multinational Enterprises      UN Human Rights Principles; UN Global Compact  
 SDGs  
 (GRI; ARM)



## Questions

- Have we included all relevant challenges?
- Have we included all relevant standards?

# Vision





## Gap Analysis

- International Frameworks
  - EHS
  - Procurement – ISO enough?
- Environmental sustainability
- Resource Efficiency





## Questions

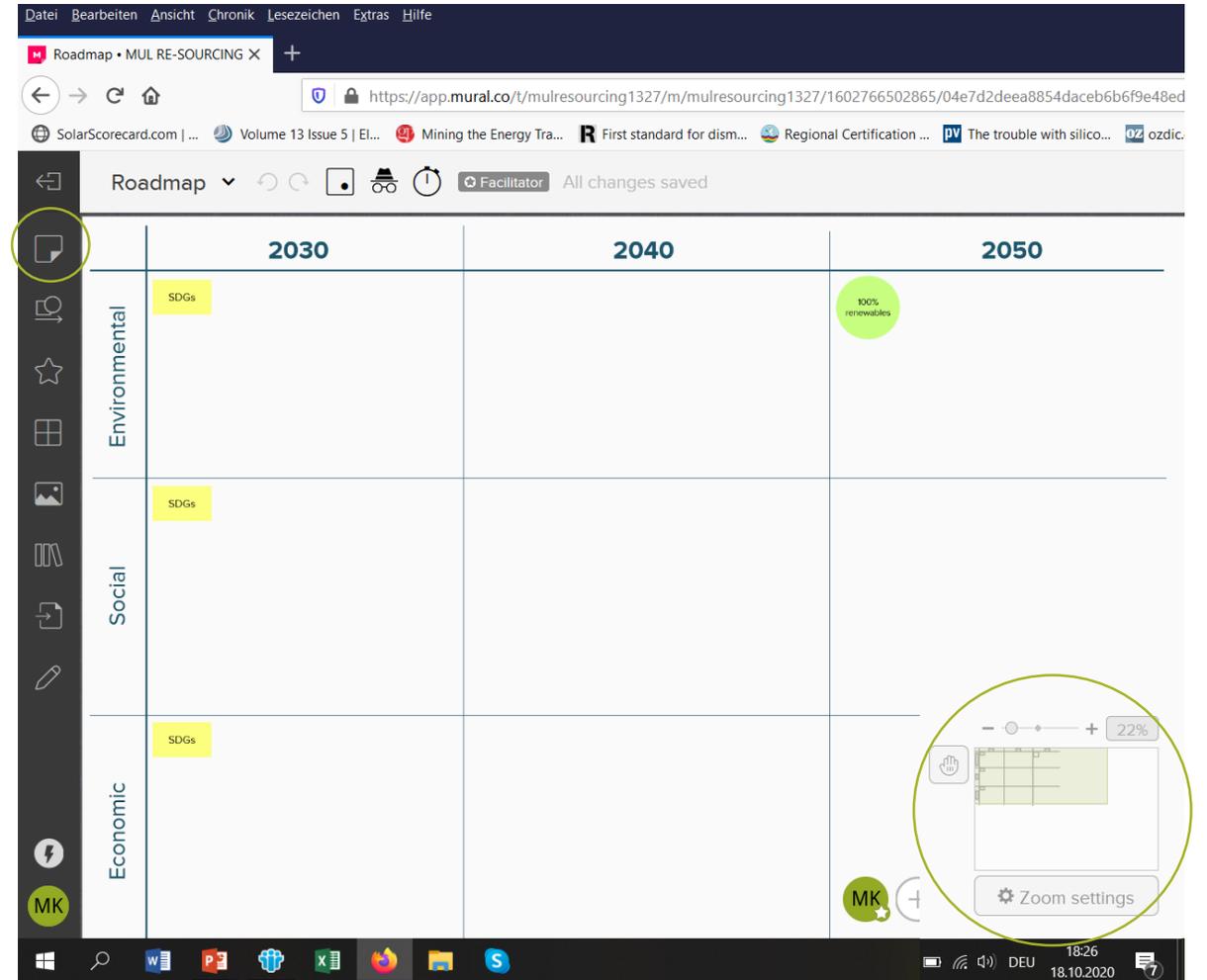
- Are you aware of any new standards/initiatives currently being developed?
  - AWEA – only for US, model for international framework?
  - EU Ecodesing, Energy Label, etc.
  - Others?
  - Can they cover some of the gaps?
- What do you think is the most important gap that needs to be addressed?

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## Roadmap Development

# Roadmap Development

- Mural, i.e. virtual whiteboard
- Link in chat:  
<https://app.mural.co/t/mulresourcing1327/m/mulresourcing1327/1603361412287/3e34cf4347e3ed1be3889a323e9c414828f4d777>
- Everyone can participate
- Use sticky notes
- Zoom/Navigation using mouse or controls bottom right corner



The screenshot displays a Mural Roadmap interface. The main area is a grid with columns for the years 2030, 2040, and 2050, and rows for the categories Environmental, Social, and Economic. Each cell contains a yellow sticky note labeled 'SDGs'. In the 2050 column, there is a green circular sticker with the text '100% renewables'. A zoom control is visible in the bottom right corner, showing a zoom level of 22% and a 'Zoom settings' button. The interface includes a top navigation bar with 'Roadmap' and 'Facilitator' options, and a bottom taskbar with various application icons and system information.



# Roadmap Development

- Step 1: Brainstorming
  - What do we need to achieve by 2050?
    - Benchmark 2030 – SDGs, is that enough?
  - What are milestones that need to be implemented by 2050?
  - What is missing from a responsible supply chain?
- Step 2: Setting Priorities
- Step 3: Organising in Timeline
  - Urgency
  - Timeline 2030, 2040, 2050
  - Environmental, Social and Economic Milestones
  - Vision 2050
    - Suggestion – 100% Renewables
    - What else?



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THANK YOU  
for your attention!



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