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Institute for Managing

Sustainability

WU

BlackCycle Workshop 2021

Introduction to RE-SOURCING

*A Global Stakeholder Platform for Responsible Sourcing
in Mineral Value Chains*

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Presentation overview

1. RE-SOURCING Project – a quick introduction
2. Overview of the Roadmap 2050 for the Renewable Energy Sector (RES)
3. Circular Economy (CE) in RE-SOURCING: insights from the RES Roadmap 2050 and our current work on the Mobility Sector





The RE-SOURCING Project- a quick introduction

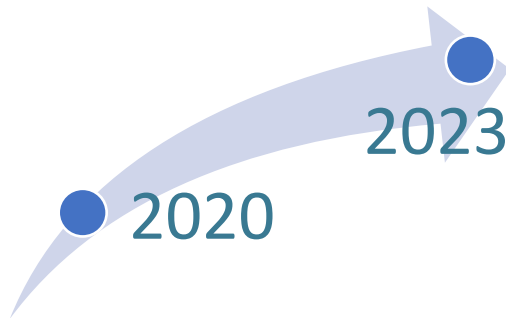
Main Aspects:

- Background and Consortium
- Challenges, objectives and approach
- Project timeline and how to get involved



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EC H2020 project



2020

2023

“Building a Global Stakeholder Platform for Responsible Sourcing”



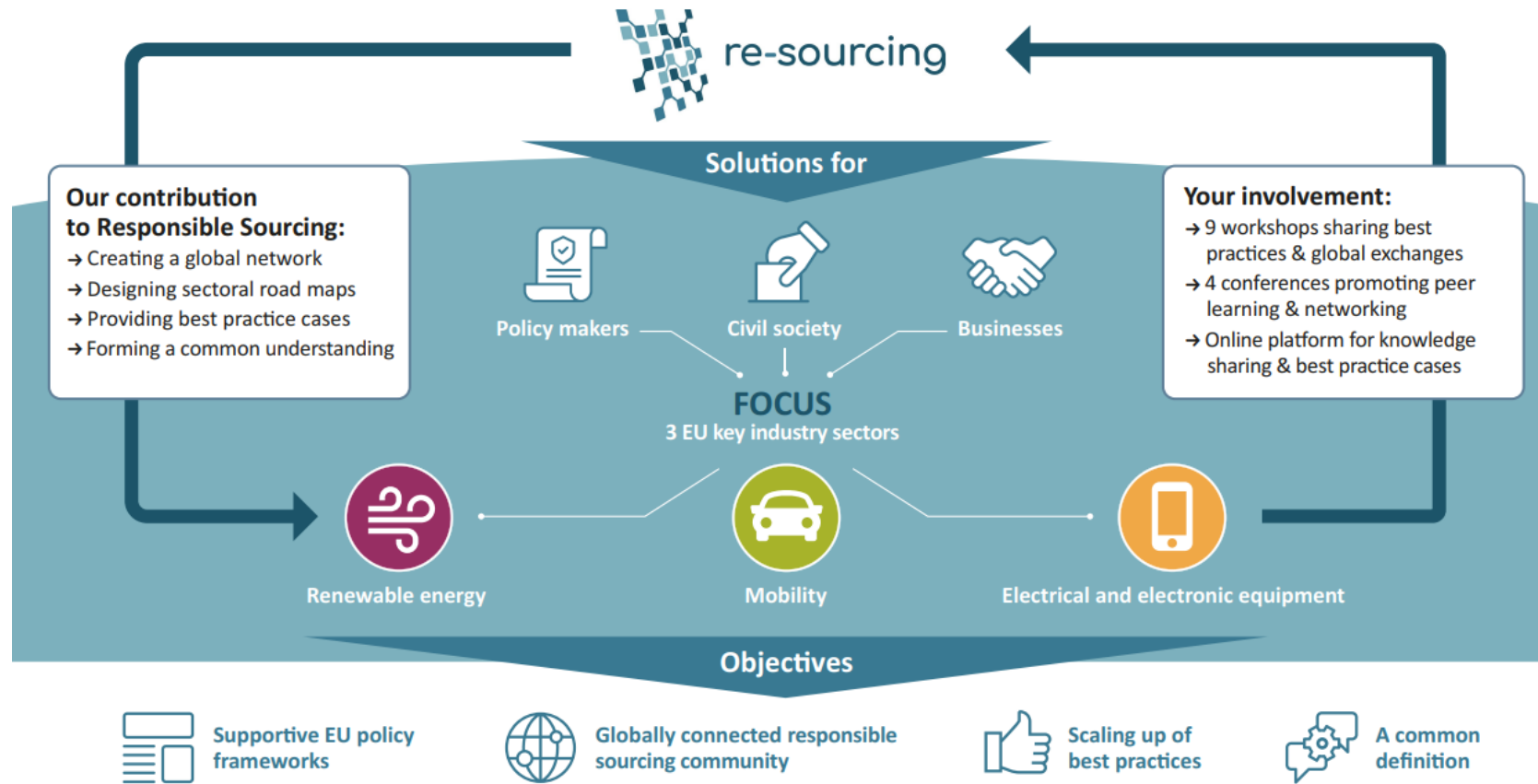
“A facilitator for the agenda on Responsible Sourcing”



A Global Stakeholder Platform for Responsible Sourcing in Mineral Value Chains

Challenge

Create the necessary framework conditions for responsible sourcing in the EU and globally



Project Roadmap



<https://re-sourcing.eu/>

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Overview of the Roadmap 2050 for the Renewable Energy Sector (RES)

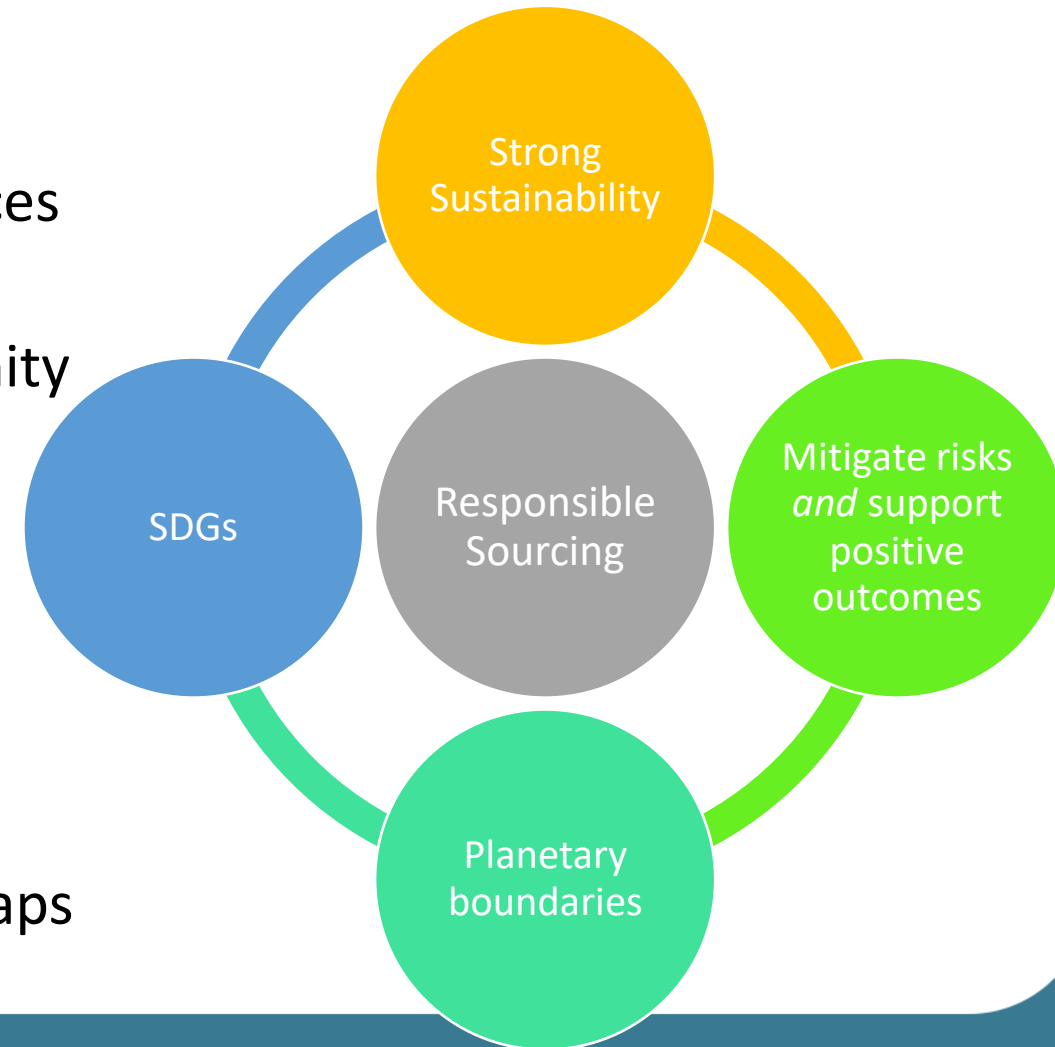
Main Aspects:

- Starting point and baseline assumptions
- Roadmap on a glance
- The Roadmap's key elements: vision, targets, milestones & recommendations



Starting point and baseline assumptions

- **Strong sustainability** → acknowledging the irreplaceability of essential natural ecosystem services and therefore the need to preserve them
- **Planetary boundaries** → threshold limits for humanity to operate safely long-term
- **Responsible Sourcing (incl. CE) goes beyond de-risking** → caring about the environment and the society by actively minimizing negative impact *and* seeking to produce positive outcomes
- Alignment with the **UN Sustainable Development Goals (SDGs)** → important milestones in the Roadmaps



VISION FOR THE RENEWABLE ENERGY SECTOR



Transparency and Traceability



RECOMMENDATIONS FOR
POLICY MAKERS, INDUSTRY, CIVIL SOCIETY

2030

2025

2050

2040

STATE
OF
PLAY



CIRCULAR ECONOMY & DECREASED RESOURCE CONSUMPTION

Take back Programmes for Solar PV & Wind Turbines



PARIS AGREEMENT & ENVIRONMENTAL SUSTAINABILITY

Net zero Emissions
Net positive Contribution to Biodiversity
100% Renewable Energy

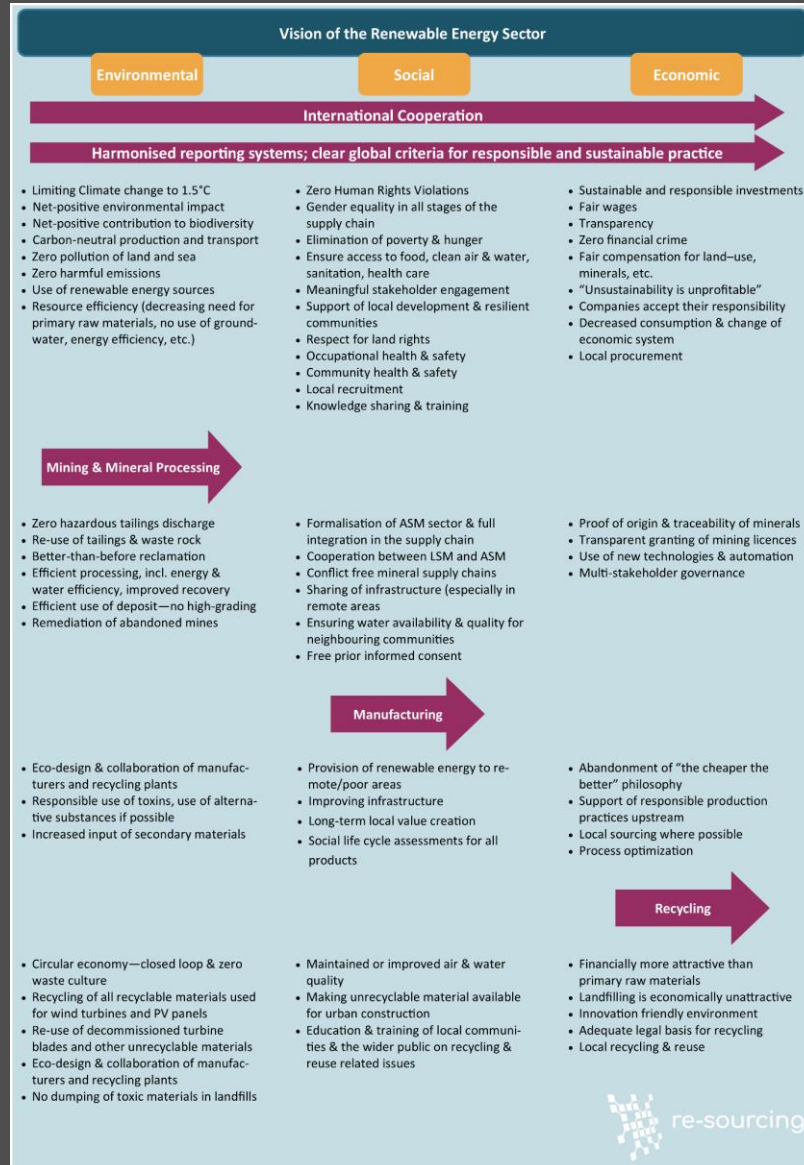


SOCIAL SUSTAINABILITY & RESPONSIBLE PRODUCTION

Local & regional Development,
Stakeholder Engagement



Renewable Energy Sector



Mobility Sector



VISION
for
each
sector

3

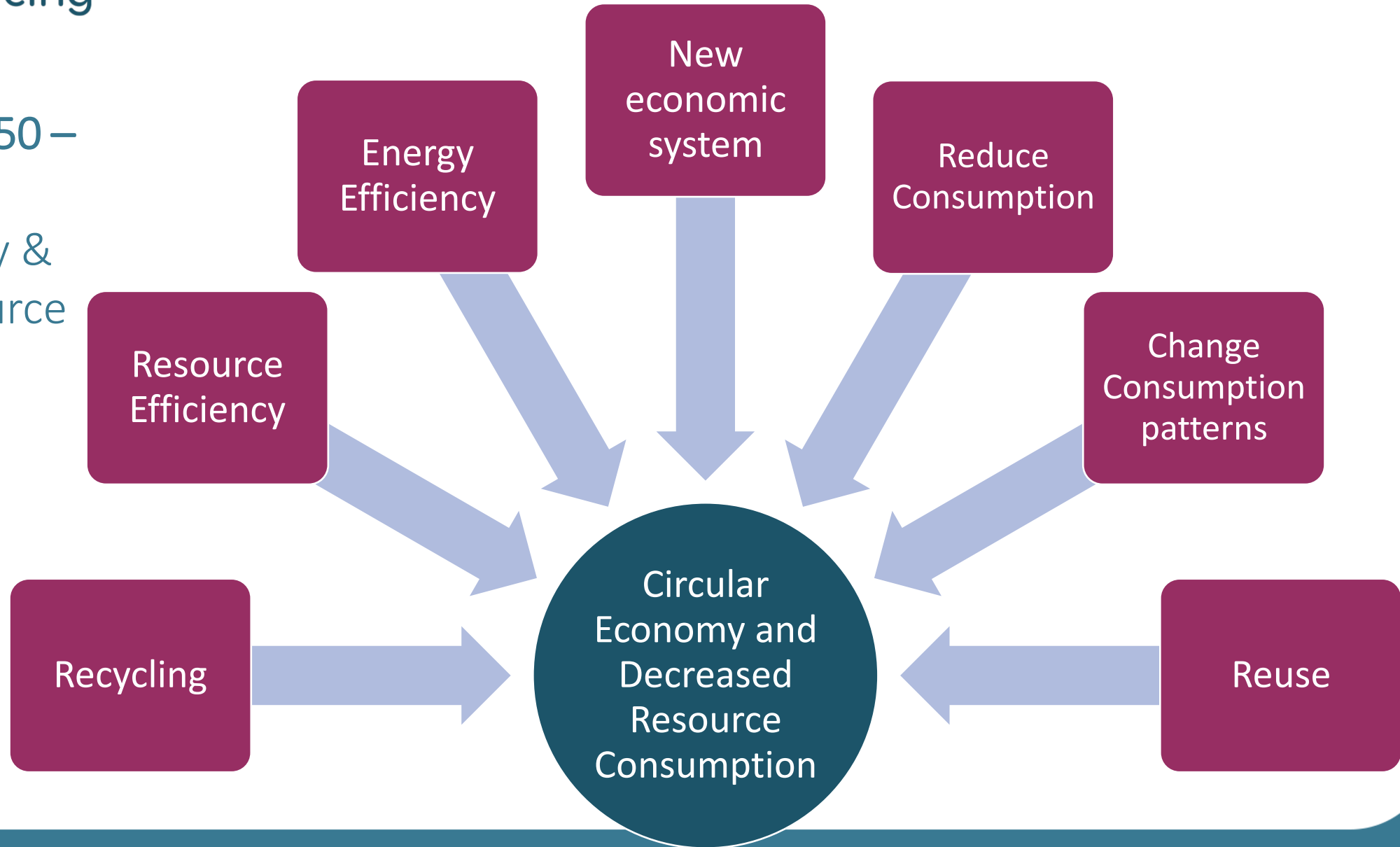
Circular Economy in RE-SOURCING: insights from the RES Roadmap 2050 and our current work on the Mobility Sector

Main Aspects:

- Overview major milestones
- Zoom into key recommendations and challenges of cross-sectoral relevance
- Key messages in the context of Circular Economy



RES Roadmap 2050 – Target 1: Circular Economy & Decreased Resource Consumption





Selected key challenges of CE identified in the Renewable Energy & Mobility Sectors

Health & Safety:

- Hazardous substances, e.g. electrolyte or toxic metals in batteries
- Improper recycling facilities and methods especially outside the EU

Design:

- Use of various product designs and material compositions
- Disassembly difficult/impossible (e.g. due to use of glue to reduce weight, etc.)

Environment:

- Energy intensity
- Inadequate execution may cause emission of pollutants to air and water

Economy:

- Expensive logistics (due to dispersed EoL materials, safety requirements, etc.)
- Limited upscaling due to comparably small waste streams (i.e. available EoL material)
- Untransparent international waste trade

Governance:

- Heterogeneous regulatory landscape
- Regulatory barriers regarding the export and processing of EoL materials



Recovery of copper from wires in open fire (Accra/Ghana; Source: Öko-Institut)



Selected key recommendations from the RES Roadmap 2050

Policy Makers

- **Level the playing field for a secondary raw materials market** (e.g. lift PRM subsidies, make landfilling economically unattractive, minimum SRM content in new products, etc.)
- **Review and homogenization of national waste definitions and legislation** in line with the EU Waste Framework Directive
- More strategic control of export of recyclable materials outside the EU (=loss of strategic material source!), considering appropriate collection and recycling infrastructure is available in the EU and unless it will be recycled/handled properly outside the EU

Industry

- Prioritize Eco-Design considerations for all new products (esp. low resource input, durability, repairability and recyclability, use of SRMs)
- Implement innovative business models to improve recycling rates and focus on usage rather than ownership (extended producer responsibility, product as a service, etc.)
- **Use of standards, certifications and due diligence** to assure the sustainability of sourced SRMs



Key messages for a successful CE from the perspective of Responsible Sourcing

- The Circular Economy requires proper framework conditions, safeguards and management systems in order to be successful, i.e. **technologically feasible, economically viable AND sustainable**.
- A successful Circular Economy needs to **combine different measures** (the different “R”-schemes) and be complemented by a change of consumption patterns & behaviour
- **Action is urgently needed here and now** in order to achieve the ambitions of sustainability agendas until 2030, 2040 or 2050



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THANK YOU
for your attention!



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