

Circular construction by reutilization of mineral material flows – Research transfer in the ReMin Funding Initiative

Recy & DepoTech 2024

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ReMin Project Overview

The BMBF funding initiative “Resource-efficient circular economy - Construction and mineral material cycles” (ReMin) comprises 16 different collaborative research projects. The projects are investigating materials and technologies to enable a more **efficient (re)use of mineral secondary raw materials (SRM)**. These include **construction and demolition waste (CDW)**, **steelworks slags**, waste **incinerator bottom ashes** and **mining residues**.



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Summary of Results

Ashes, Slags & CDW

- Innovative milling and fragmentation of waste incinerator bottom ash
- Enabling use e.g. in cement, concrete, cobblestones
- Activation of steelwork slag, enabling use as a clinker substitute
- Recycling of carbon fibre concrete
- Production of light aggregates

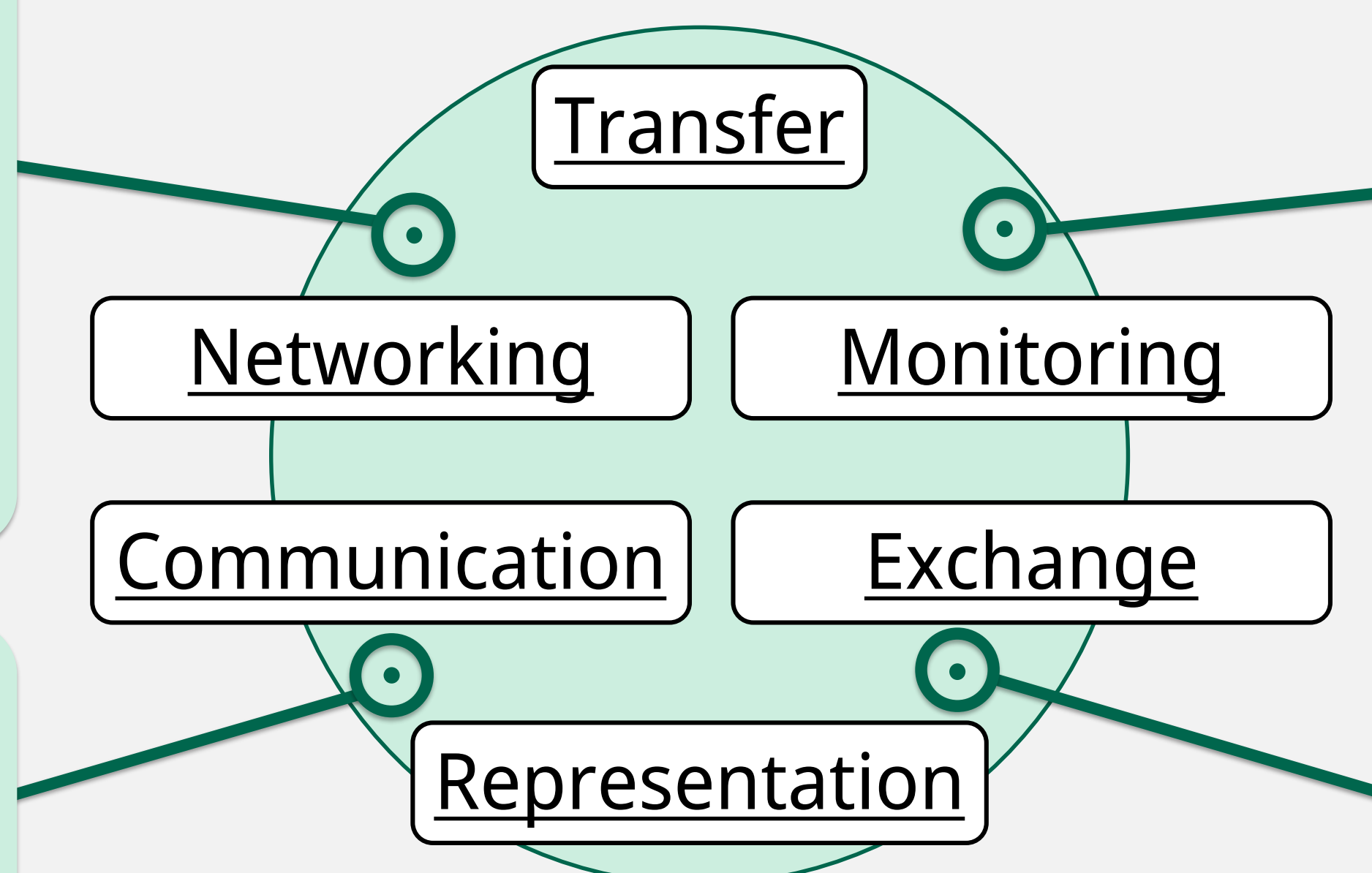
Technology & Digitization

- Sensor-based (e.g. LIBS) sorting to enable use of CDW as aggregate
- Discharge of asbestos
- self-learning algorithms
- Real-digital process chains to reuse whole building parts
- Estimation of the anthropogenic material stockpile
- Recycling of gypsum fibre board

Networking

- Active exchange with other initiatives und networks (e.g. RecyBau)
- Cooperation with the dialogue platform „Recycling Raw Materials“

Transfer Activities



Stakeholder Engagement

- Foundation of a stakeholder support group with researchers and professional associations
- Involvement in events and exchange on technical topics

ReMin Events

- Organisation of conferences and workshops
- e.g. **cluster workshops** on major questions regarding the circular economy of the construction sector

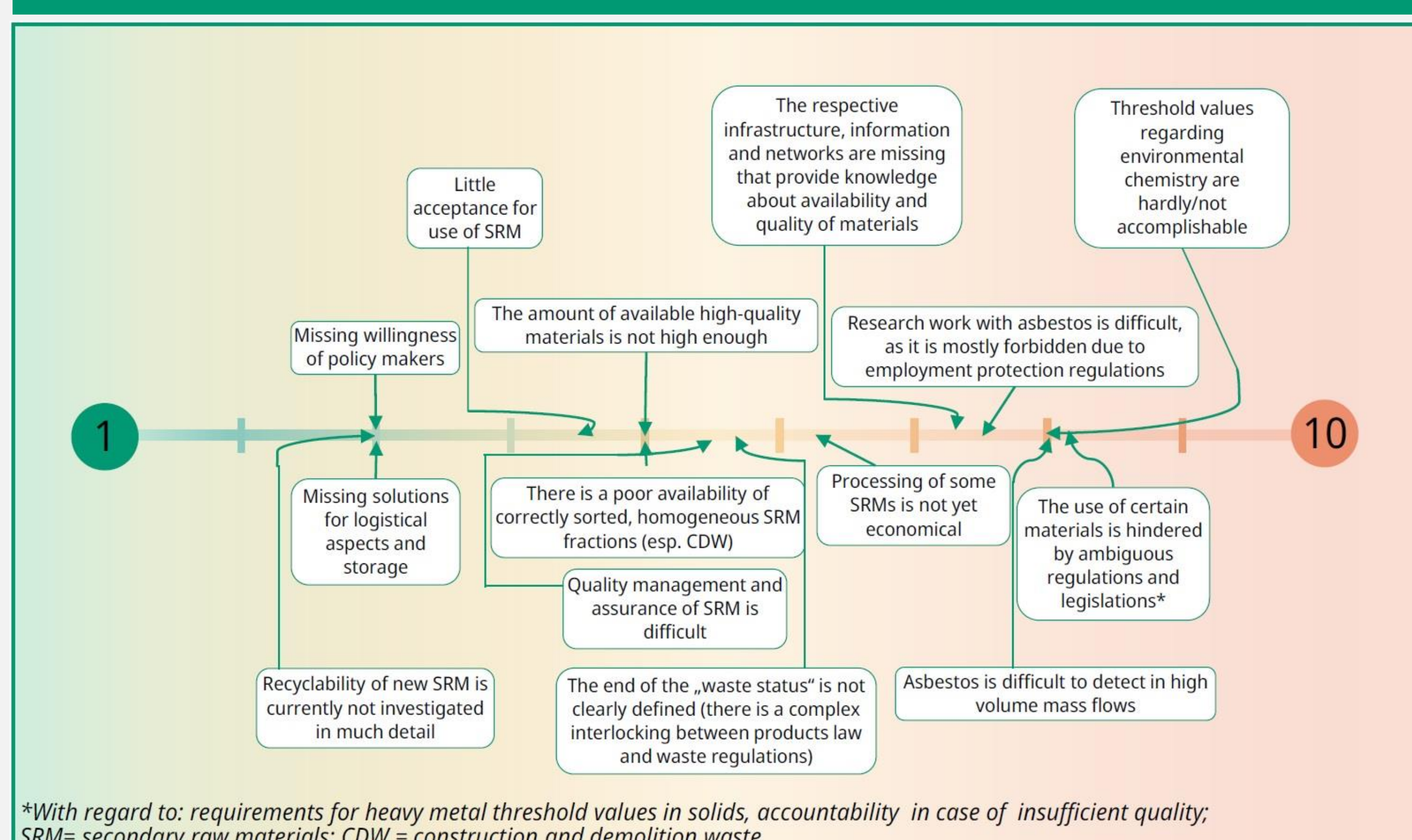
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Public Relations

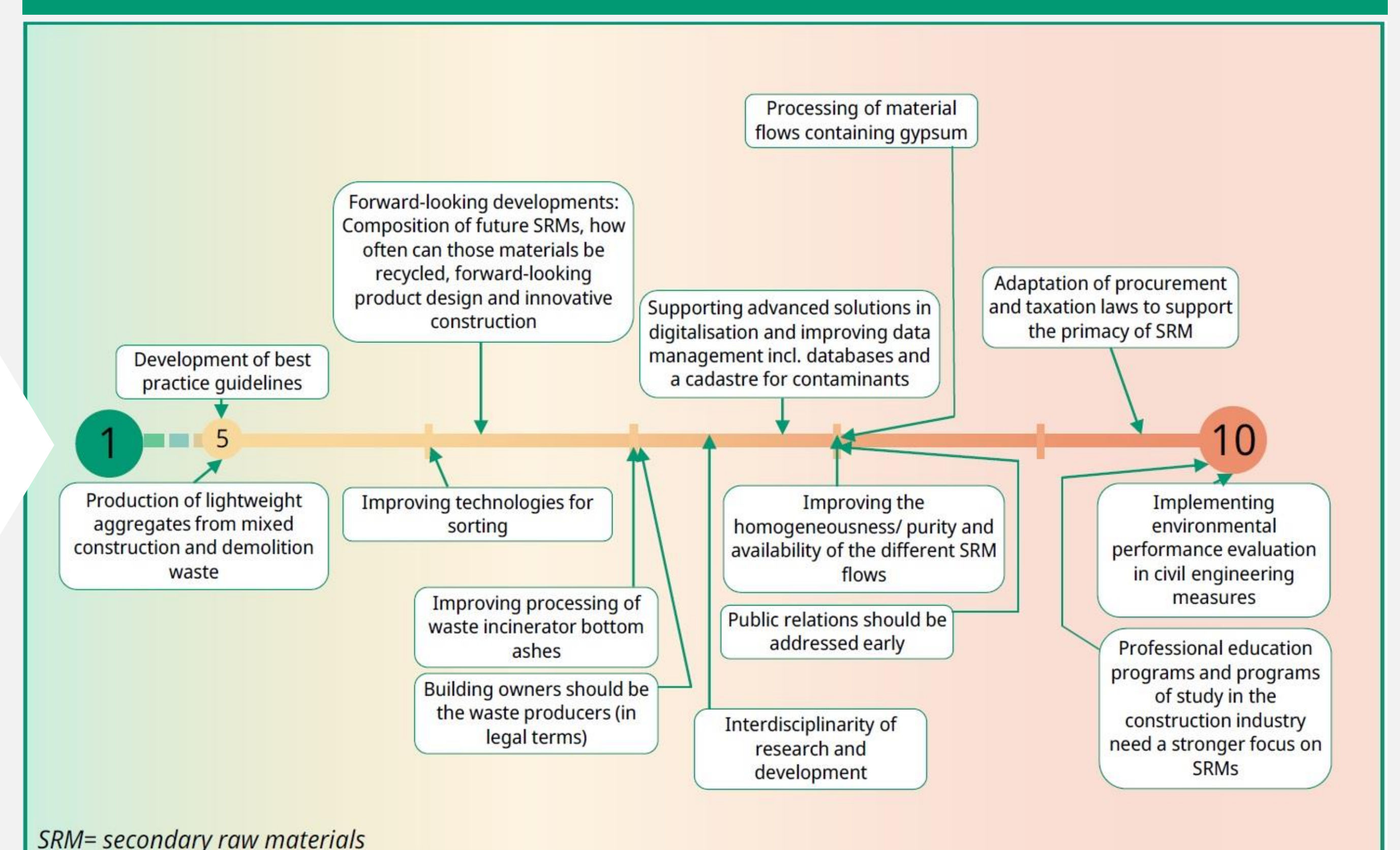
- Presentation at conferences
- Participation at events for professional networking
- Presentation of results in brochures, flyers and **film**

Selected Workshop-Results



Aspects that currently hinder the use of SRM, especially in Germany (the impact is given on a scale of 1-10)

Recommendations for Action



Possible solutions to support the use of SRM in the construction sector (the impact is given on a scale of 5 -10, no points below 5)

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