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**Circular Economy Network+
in Transportation Systems**

Material Requirements for Transport
Systems in 2050 – Roadmap

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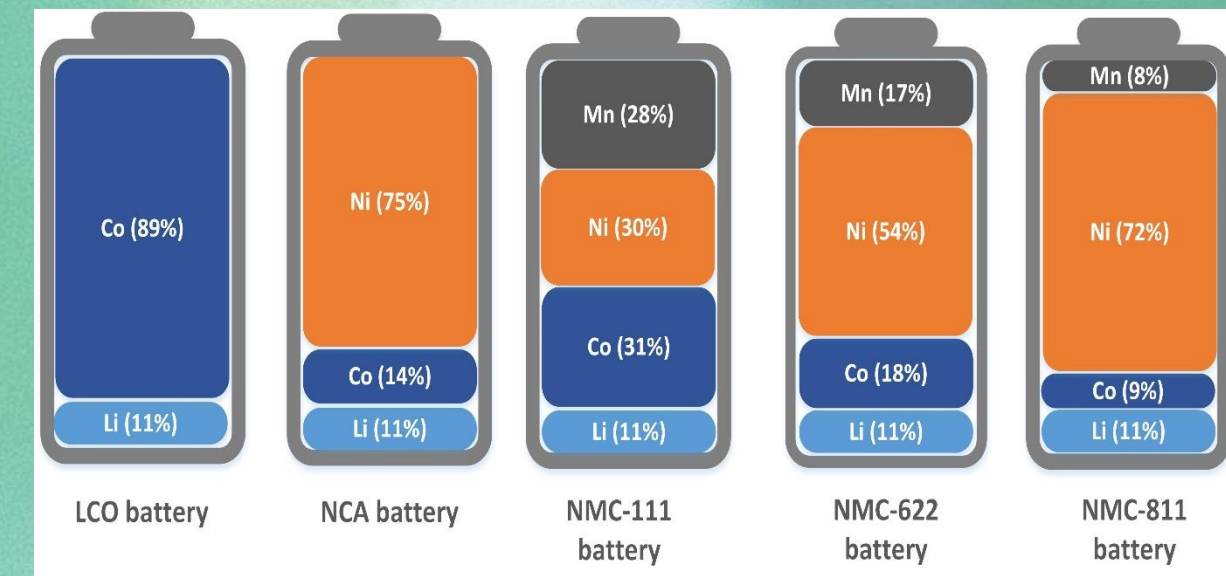
Aim

- Transport systems are material intensive.
- Transformation towards low carbon transport introduces changes in technologies and materials requirements.
- Material demand for transport systems is expected to increase in the coming decades.
- Material supply is not secure.
- There is now more than ever the need to make better use of our resources.



AIM

A vision and clear goals about the role of circular economy to future material needs in transport systems to 2050.



Roadmapping

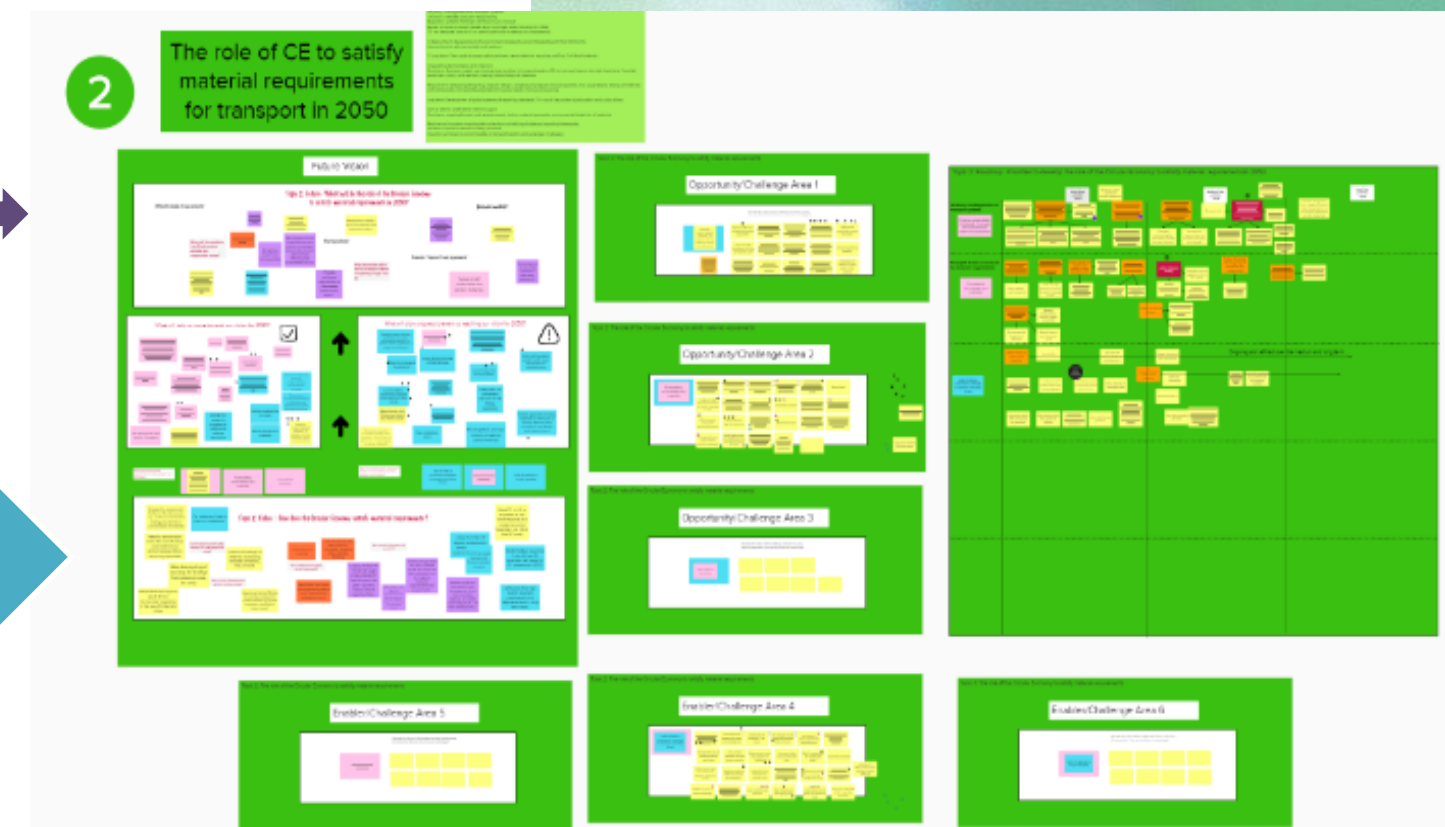


Virtual roadmap development steps:

- Online survey to focus the **topics** of the roadmap exercise
 1. Material requirements for different transport systems in 2050
 2. The role of CE to satisfy material requirements for transport in 2050
 3. Social trends that will influence material for transport in 2050
 4. Material supply chains with CE principles for transport
- Three virtual workshops
4th December 2020; 7th December 2020; 11th December 2020
- Virtual white board with interactive discussions



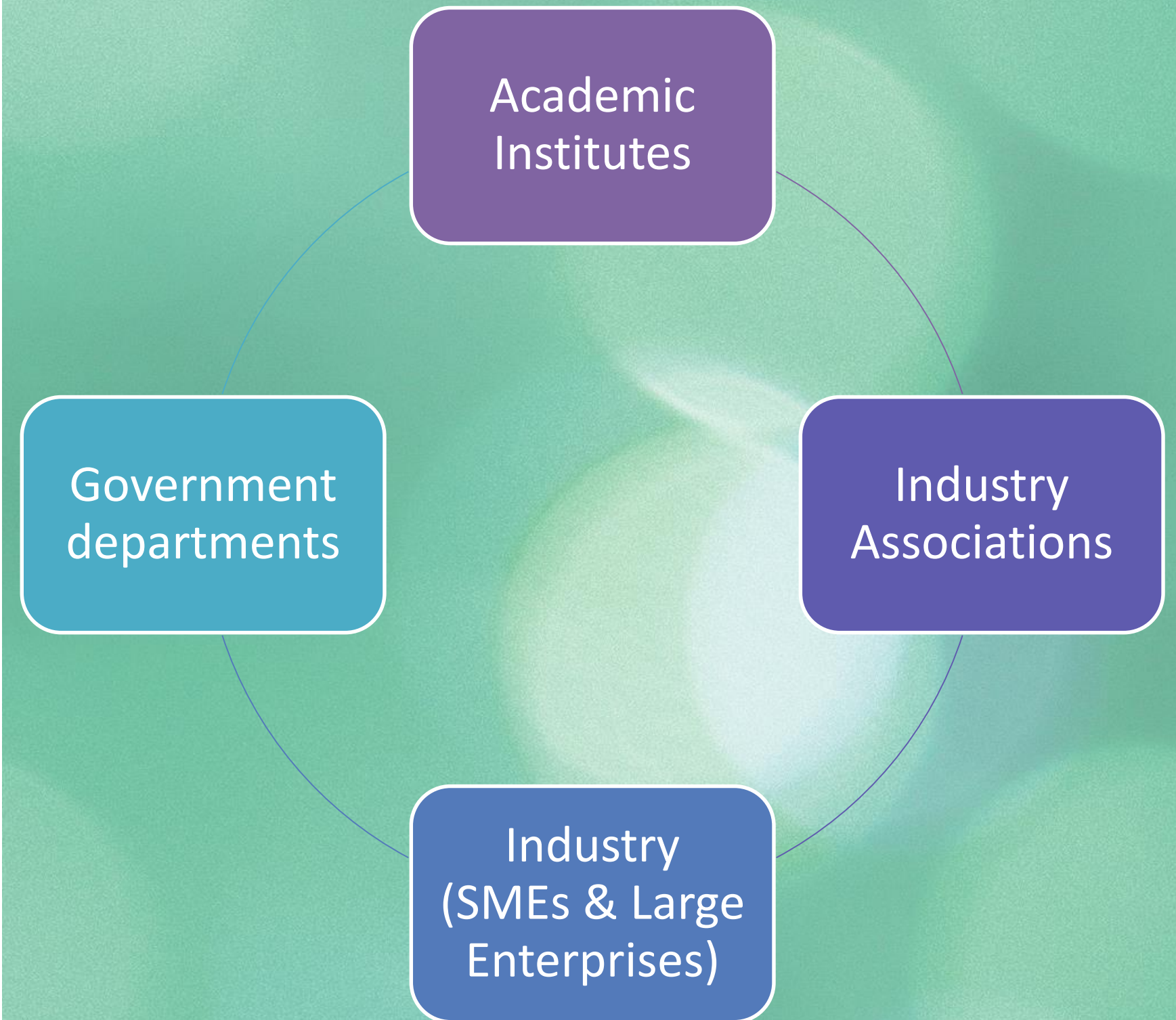
Roadmapping process



Participants



- Responses from 45 participants in our online survey
- More than 60 participants in total in the three virtual workshops
- Participation from several research/academic institutes with representation from ECRs and Senior members
- Government participation (e.g. Defra, EA, InnovateUK etc)
- Industry and Industry association participation



So far.....

A substantial amount of information has been collected during this process.

Supply Chains with CE principles

Poor economics <u>Action</u>	Industrial Symbiosis <u>Action</u>	International agreements <u>Action</u>
<ul style="list-style-type: none">-Cost modelling of CE routes for materials-Incentivise CE material procurement	<ul style="list-style-type: none">Examine development in different transport sectors and opportunities for industrial symbiosis synergies	<ul style="list-style-type: none">-Establish international standards to set the baseline for agreements

CE and material requirements

Producer responsibility for materials <u>Action</u>	Foresighting <u>Actions</u>	Data on material stocks & flows in transport <u>Actions</u>
<ul style="list-style-type: none">-Development of UK Producer Responsibility regulations for ELVs	<ul style="list-style-type: none">-Identify and explore best practice in other transport sectors-Consider foresight outcomes in policy making	<ul style="list-style-type: none">-Forward supply chain mapping- Reverse supply chain mapping-Data ownership & standardisation

Next Steps

Reflection and contemplation.

Next steps include:

- Analysis of collected information
- Synthesis of draft roadmap
- Dissemination of draft roadmap to receive feedback from participants and key stakeholder groups (e.g. policy, industry, funding bodies)
- Follow on events and roadmapping exercises

