





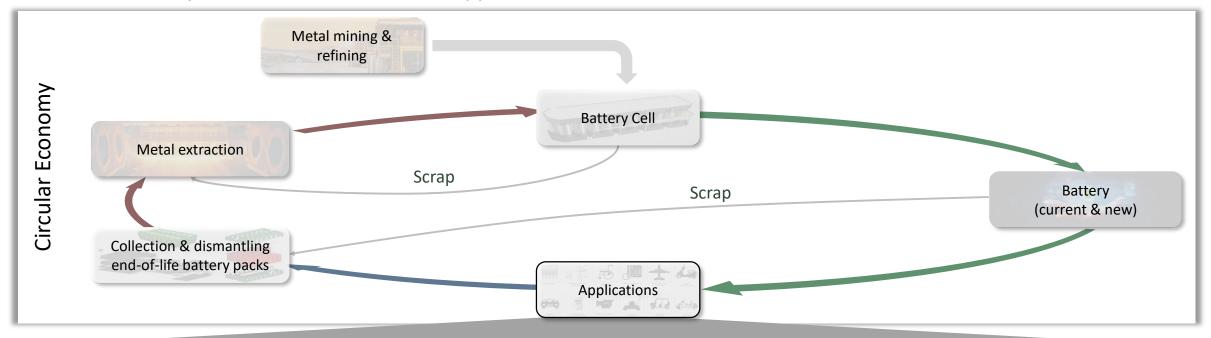


consortium partners

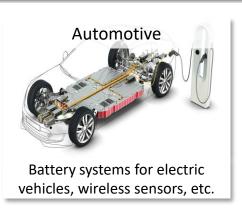
## **MOTIVATION**

## Circular Economy – Addressed Industries & Applications













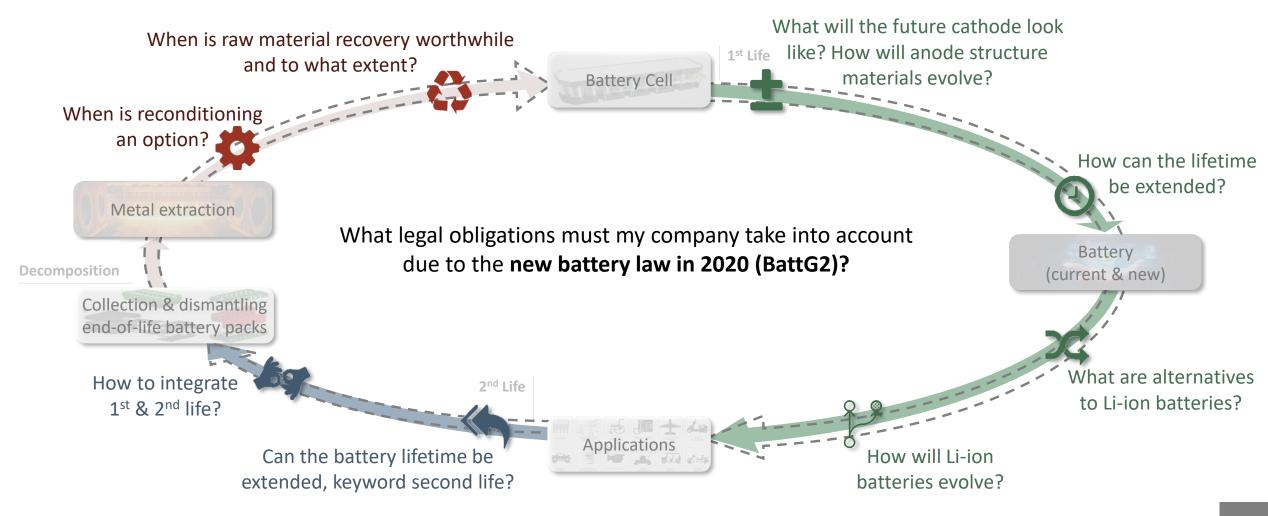


## **MOTIVATION**

Someday every battery must be recycled! – The question is when?



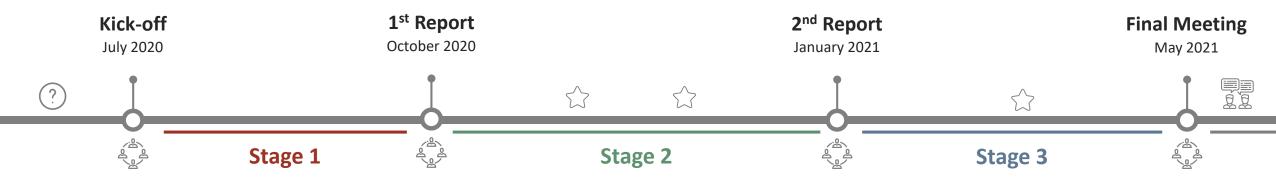
## Example questions answered in the consortium project



## TIMELINE & POTENTIAL RESULTS

### Circular Economy for Battery Technologies





# 3 months Segmentation & Scanning

- Structured and pre-evaluated overview of state of the are solutions and applications for battery management, alternative battery concepts and battery recycling
- Assessment of relevant technology trends according to specific consortium needs
- Scanning & scouting for cross-industrial best practices, solutions and research applications

➤ Basis for the structuring and evaluation of the applications in Stage 2

# 3 months Detailed technology assessment

- Systematic selection of attractive applications and specific technology questions by the project partners
- Detailed technology studies for each selected application and questions e.g. assessment of technological feasibilities or cooperation partners
- Preparation of industrial or research overviews to identify the most important players for the respective application.

Basis for the selection of the cases in Stage 3

## 3 months

#### **Business Case/ Roadmap/ Expert landscape**

- Different evaluation opportunities possible depending on consortia demands:
  - Derivation of detailed business cases for selected applications/components
  - Creation of technology roadmaps for e.g. battery concepts or battery recycling technologies
- Optional: Individual Tech-Cases can be ordered additionally

Information basis for partner-specific roadmaps/strategic decisions





STAGE



Optional workshops with partners/experts



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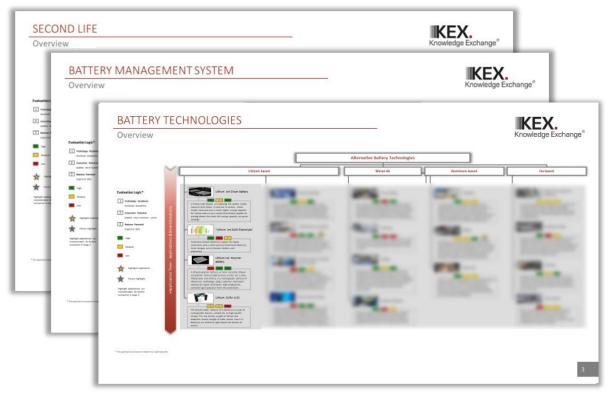
STAGE

Optional network/platform meetings

## PROCEEDING — EXAMPLE OF PREVIOUS PROJECTS

### Stage 1: Segmentation & Application Trees





### **Segmentation**

- Selection of focus areas based on consortium preferences (questionnaire)
- Systematic overview on technology segments, structure and overall market readiness within the focus areas
- Suggested segmentation: battery materials, battery technologies, battery management system (BMS), second life, battery recycling/ decomposition
- A connection between the different segments and its solutions is generated

#### **Application trees**

- Structured overview of current and future solutions in the context of specific applications fields to be presented to the consortium during the 1<sup>st</sup> report meeting
- Pre-evaluation of the most relevant applications (approximately 250 cross-industrial solutions)
- → Basis for the selection of possibilities in Stage 2







## PROCEEDING — EXAMPLE OF PREVIOUS PROJECTS

### Stage 2: Detailed Technology Assessment





## **Detailed technology analyses**

- Technological deep dive to assess different technological concepts based on partner specific applications of interest.
- Aggregation of relevant technology- and market-related information
- Evaluation of current advantages and disadvantages of the applications chosen by the consortium and their technological feasibility
- Identification of potential technology partners 6 providers
- **Executive Summary** for a quick evaluation of each application

## **Cross-industrial workshops**

- Cross-linking of compatible research and implementation partners from different industries in a facilitated workshop
- Derivation of clusters of **common problems** and derivation of **possible common solutions**





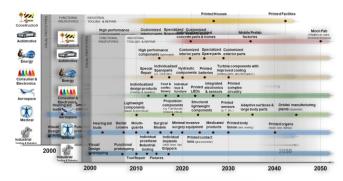


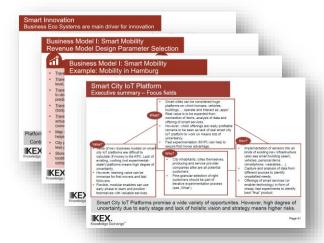
## PROCEEDING — EXAMPLE OF PREVIOUS PROJECTS

## Stage 3: Expert landscape | Roadmaps | Business Cases









### **Expert landscape**

- Identification of relevant research facilities (science, industry) conducting research and development in the field of the selected solutions
- Determination & evaluation of potential partners

## Roadmaps

- Identification of relevant research facilities (science, industry) conducting research and development in the field of the selected materials
- Definition of development roadmaps for the selected applications/ technologies

### **Business Case analyses**

 Detailed calculation of business cases for the selected applications/ solutions relevant to the consortium/ partner



## REFERENCES

#### Former KEX Consortium Partners





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