



BATTERIES

EUROPE

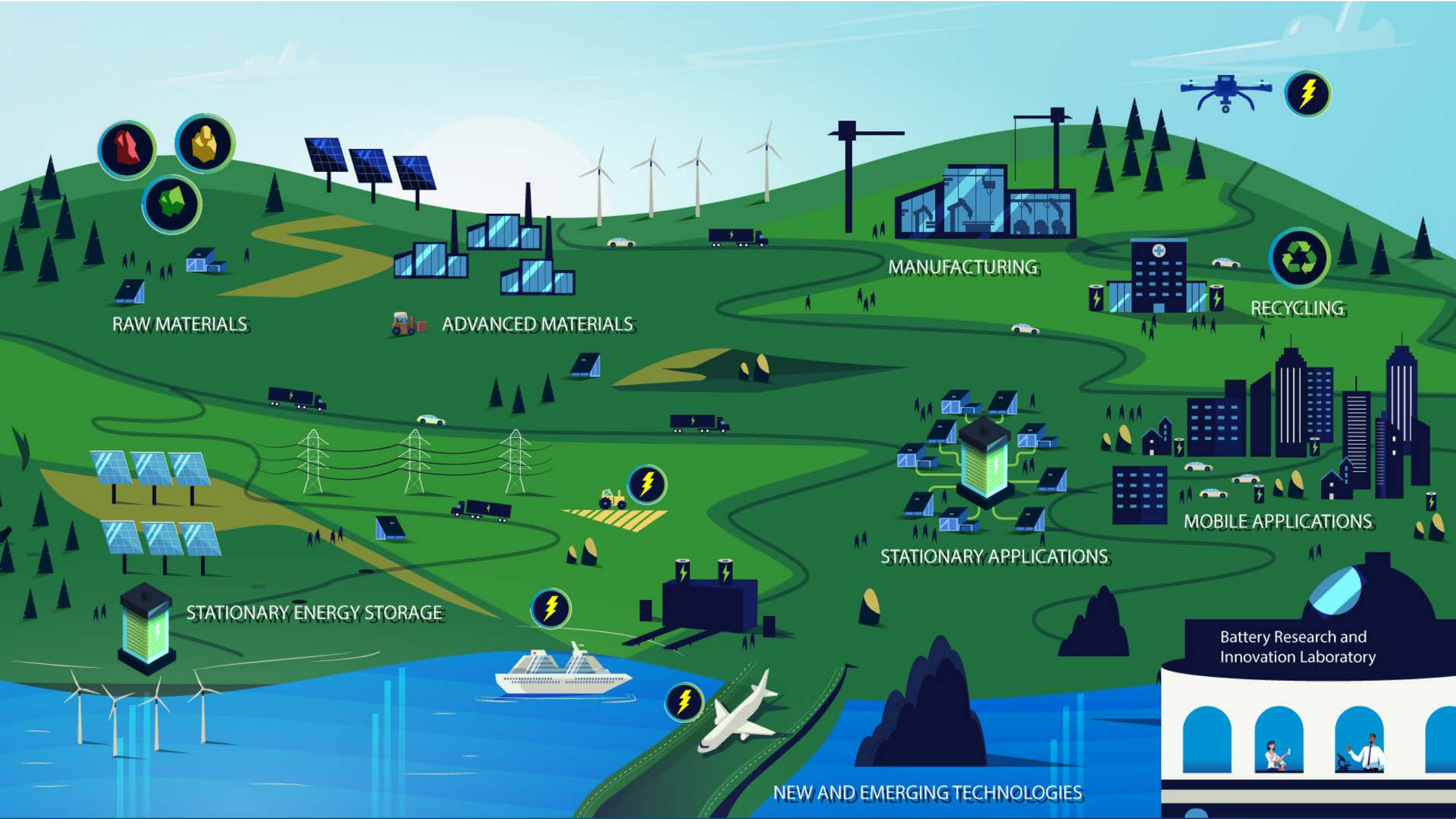
EUROPEAN TECHNOLOGY

AND INNOVATION PLATFORM

Sustainability at the heart of the battery industry

Edel Sheridan, Senior Business Developer, SINTEF
Batteries Europe Secretariat





RAW MATERIALS

ADVANCED MATERIALS

MANUFACTURING

RECYCLING

STATIONARY ENERGY STORAGE

STATIONARY APPLICATIONS

MOBILE APPLICATIONS

NEW AND EMERGING TECHNOLOGIES

Battery Research and Innovation Laboratory





Batteries & Sustainability COP26

BATTERIES EUROPE
EUROPEAN TECHNOLOGY
AND INNOVATION PLATFORM



Developing a sustainable battery industry that can deliver on climate ambitions

Organised by IEA

Wednesday, 10 November 2021, 10.00-12.00, Korea Pavilion



November 10: Transportation

Building a Better Battery

U.S. Department of Energy

The Building a Better Battery panel, led by DOE Deputy Secretary David Turk,



Batteries Europe & Sustainability

Batteries Europe is the “one stop shop” for the Battery R&I Community

Focal point of information, exchanges, priority setting and co-operation on Batteries R&I

Creates/reinforces networks between all stakeholders international, European, national and regional

Batteries Europe develops key strategic documents covering all the battery value chain at all TRL levels

- Strategic Research Agenda
- Technology roadmaps & KPI's
- Position papers
- Reporting methodologies

4 Task Forces : Sustainability, Safety, Skills & Education and Digitalization

Sustainability Task Force Position Paper



ECONOMIC



SOCIAL



ENVIRONMENTAL

Three key dimensions of sustainability

Fanny Barde & Marcel Weil
(Leaders of Batteries Europe Sustainability Task Force)



Key sustainability **hotspots** along the battery value chain



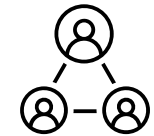
New **sustainable business models** (incl. regulatory aspects)

Availability of (raw) materials

Improve technical performance & decrease cost

Geopolitical considerations / **Sustainability of imports** / Circular economy & Recycling

Sustainable business models



Workers rights and social aspects along the value chain

Safety of workers along the value chain / Societal acceptance and uptake

Social-LCA (incl. safety)



Carbon footprint / GHG emissions

Resources usage (water, hazmat, energy...) along the value chain

Full LCA



Sustainability label

To promote all the dimensions of what sustainability, one option is to design and implement, a **new sustainability label for battery and related products.**

The current EU eco-label promotes Europe's transition to a circular economy, with focus on environmental aspects (less waste, CO₂, energy, raw materials; longer lifetime; easy to repair / recycle).

We propose to add criteria on socio-economical aspects to reflect the broader definition of sustainability.

→ **define ethical, social and environmental indicators.**

As a result, the information can be used for marketing enabling choices of customers based on quantified and validated environmental and societal performances. A rise in customer interest and willingness to pay for higher quality products is expected:

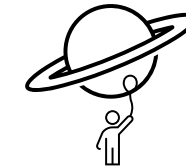
this trend has already taken place in food and textile industries...



Eco-label

= Environment aspects

Logo to be found!



Sustainability label

= Environment
+ ethical
+ social aspects

- Responsible sourcing
- Traceability along the value chain and for 1st & 2nd life applications (...)
- Social LCA criteria...



TF Sustainability Conclusions

Sustainability is a key factor industry must take into account to ensure the green energy transition, which **needs to be integrated from an early stage in order for the industry to succeed.**

In order for the battery value chain to fulfil the sustainability requirements specific challenges still need to be overcome – incl. traceability, lower impact production and recycling, extended lifetime

R&I is still needed to achieve a future battery system which has a significantly better performance and better environmental footprint than today.

Competitiveness and sustainability need to go hand-in-hand,

Dissemination actions towards end-customer via the introduction of a new ‘sustainability label’ going much further in scope than the current ‘eco-label’ might help overcome the dilemma sustainability versus competitiveness.



R&I actions & proposals



Joint Call – Closed Sept 2021

- LCA and design for sustainable circularity - holistic approach for zero-emission mobility solutions and related battery value chain



Sustainability topics of interest include

- Design for circularity – broad idea, new business cases incl. 2nd life batteries and direct recycling
- Traceability and risk assessment – to support battery digital passport, eg block chain solutions, etc...



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