



# **BATTERIES** EUROPE

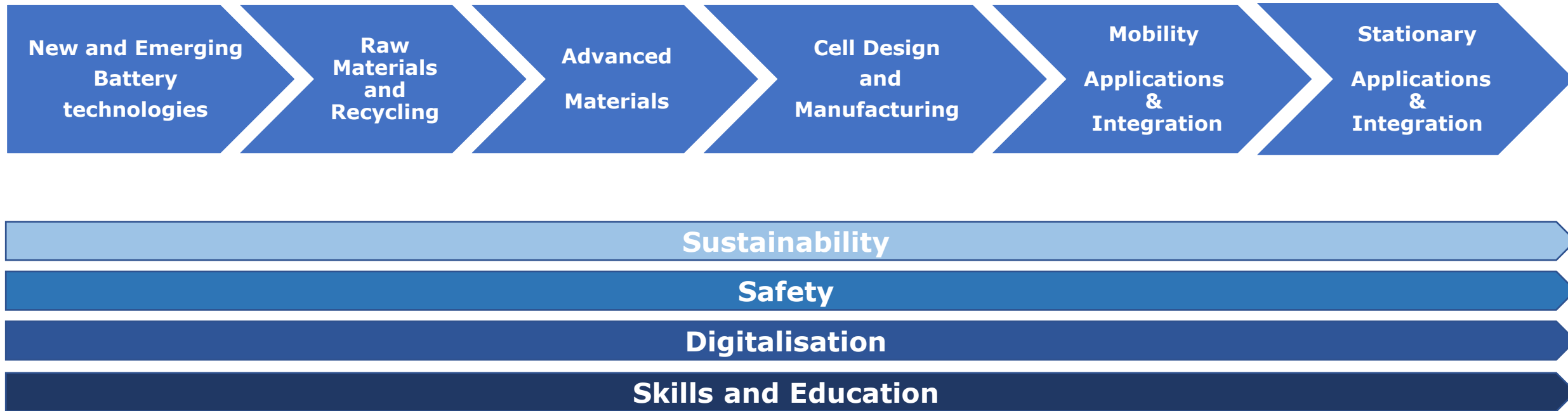
## EUROPEAN **TECHNOLOGY** AND **INNOVATION** PLATFORM

### **Developing the Batteries of the Future**

Dr. Edel Sheridan – Senior Business Developer SINTEF  
Batteries Europe Secretariat

# Batteries Europe ETIP

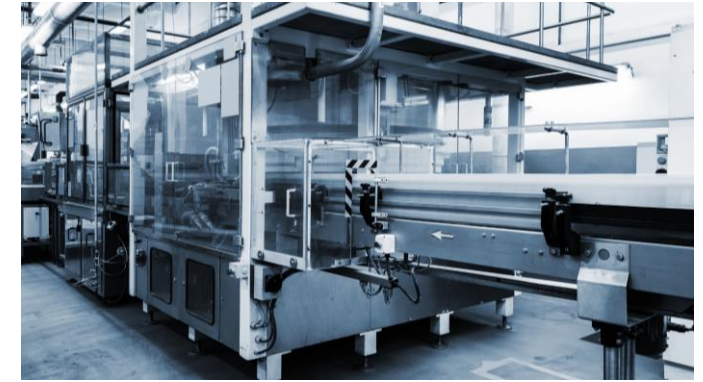
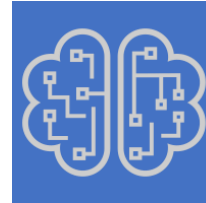
**"A holistic approach is essential"**





# Batteries of the future

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## **Raw Materials**

Sourcing, sustainability & traceability

Sustainable extraction & refining

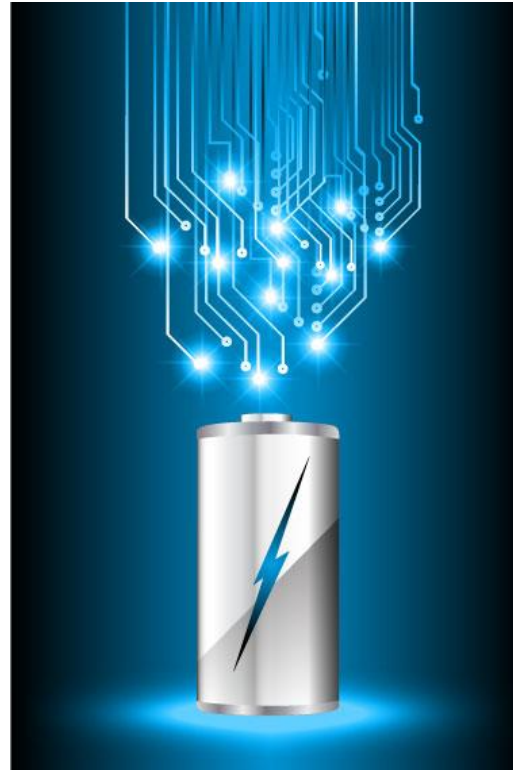
LCA & Material Flow Analysis

## **Advanced Materials**

Li ion –high power / high energy

Li ion – solid state

Fast charging



## **Manufacturing**

Reducing footprint for processes

Innovation in machinery & processes

Digital twins

## **Smart Functionality**

Sensors

Self – healing

Autonomous discovery

## **Batteries - Mobility**

Tailoring cell & system design

Battery management

Digital twins for system level

## **Stationary Storage**

Optimised performance, cycle life

Focus on enhanced safety & reliability

BMS – interoperability & open access

## **Recycling**

Collection, logistics, dismantling

Metallurgic processes

Design for recycling



# Challenges & Opportunities

## The Battery of the Future

Sustainable production, design, use and recycling will benefit all : this will take R&I, coordination and resources to implement

New materials & designs will allow for greater tailoring per application

Digitilisation will facilitate optimisation of almost all processes incl. manufacturing and use of batteries

Smart functionality will result in longer life, higher performance batteries

## Useful Resources

**BATTERIES EUROPEAN PARTNERSHIP**

**EUROPEAN  
BATTERY  
ALLIANCE** | EBA250



**LIPLANET**





# BATTERIES

## EUROPE

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