U.S. Department of Energy LITHIUM-ION BATTERY RECYCLING PRIZE

# Team EVBs

## **A Circular Economy for Electric Vehicle Batteries**

#### **Contact:**

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**U.S. DEPARTMENT OF ENERGY** 

### **Team EVBs Introduction**

### **A Circular Economy for Electric Vehicle Batteries**

A demonstration whereby electric vehicle batteries are given a digital identity to connect all stakeholders in the lifecycles

Team Name: Team EVBs

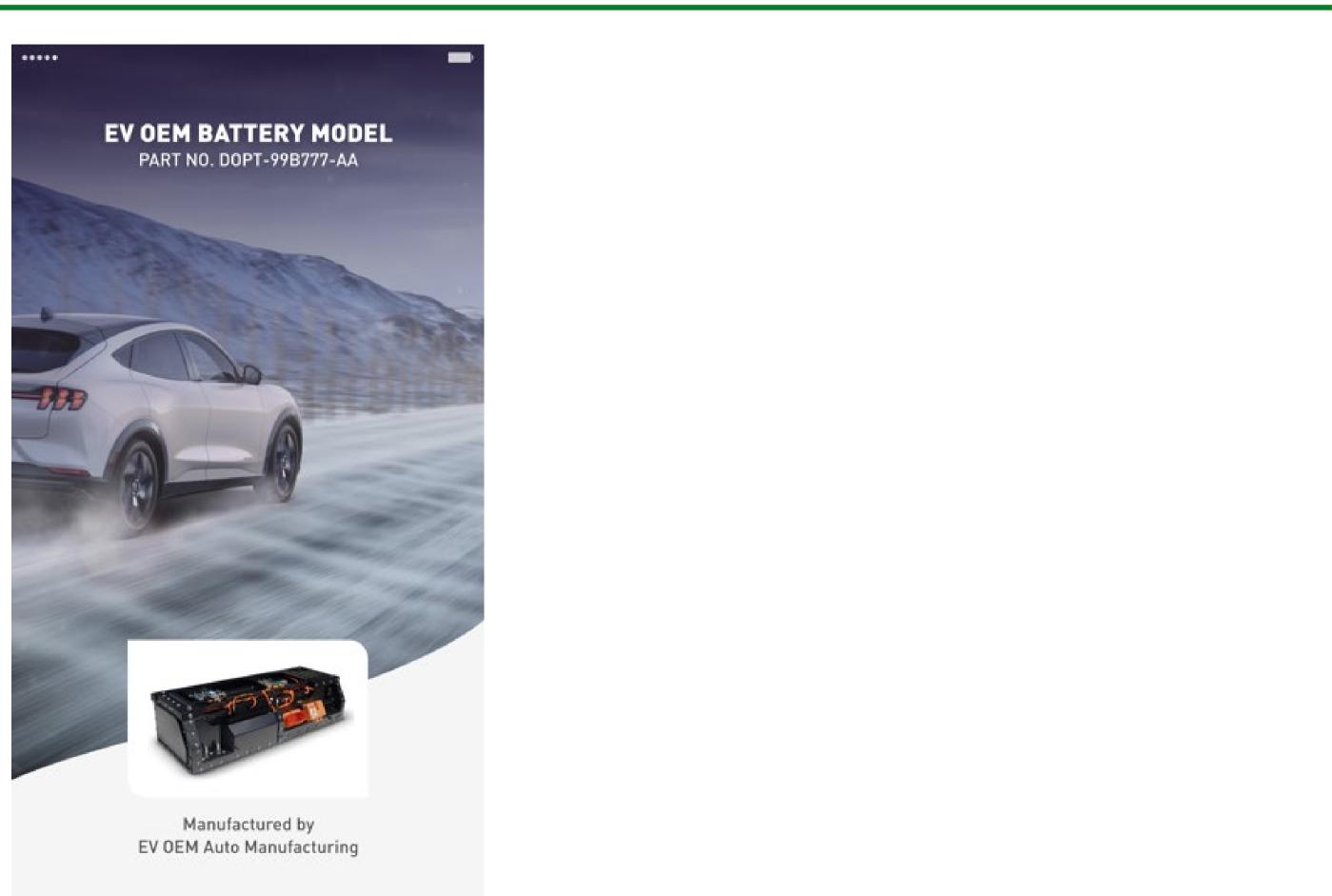
Lead: Lauren Roman, Everledger

#### **Partners and Affiliates**

Laura Wagner, Battery Lifecycle Manager, Ford Motor Company Todd Coy, Executive VP - KBI Recycling/**Retriev** Mark Caffarey, President - Umicore USA Inc. Mike Smyth, Interim Director - National Alternative Fuels Training Consortium Ginny Whelan, Director - Automotive Recyclers Association David Wagger, Chief Scientist - Institute of Scrap Recycling Industries (ISRI) Scott Wiggins, VP Environmental Health & Safety - ISRI Ron Lembke, Standards Committee Chair Reverse Logistics Association John Greaves, Chair American National Standards Institute (ANSI) Materials Handling 10 Standards Patrick Duffy, President - **Blockchain in Transport Alliance** (BiTA) Yorke Rhodes, Microsoft

Steve Christensen, Executive Director **Responsible Battery Coalition (RBC)** 

### **Solution Illustration**





### **The Battery Passport**

- World Economic Forum Annual Meeting 2020
- January 23, 2020



COMMITTED TO IMPROVING THE STATE OF THE WORLD

# GLOBAL BATTERY ALLIANCE

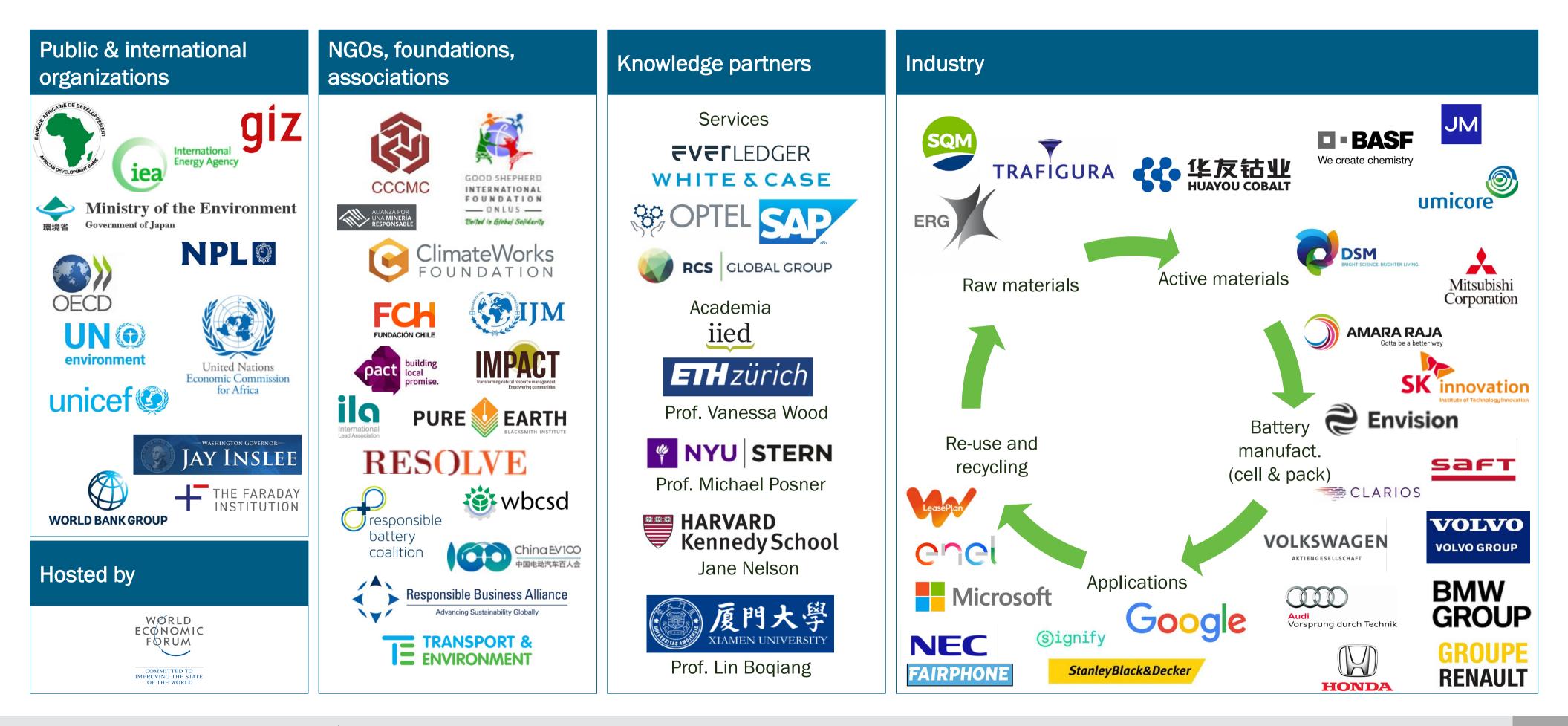
BATTERIES POWERING SUSTAINABLE DEVELOPMENT

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### **70+ GBA members**



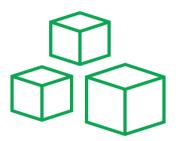
### Implementation phases

Phased buildout of the Battery Passport in consultation with stakeholders across the value chain ensures full protection and realization of benefits



#### **Battery Passport concept** Groundwork

- Evaluation: static<sup>1</sup> and dynamic<sup>2</sup> data sets, data implementation in Battery Passport 1.0 and 2.0
- Establishment: Battery Passport platform – compliance with GBA principles and implementing commitments (standards)



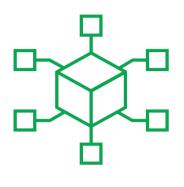
#### Battery Passport 1.0 **MVP**

- Focus on static data<sup>1,2</sup> e.g.
- Provenance of materials
- Static battery information
- GHG disclosure
- Limited dynamic data<sup>1,3</sup>

#### Battery Passport 2.0 **Broader ecosystem rollout**

- Battery aging

- 1 No confidential business information.
- 2 Data this constant after being recorded.
- 3 Data that changes after being recorded.



Extension of participant group

Extension of technical and

organizational solutions across

the battery value chain

Focus on limited relevant

dynamic data<sup>1,3</sup>, e.g.,

- Life-cycle emissions