Global Battery Alliance Vision 2030

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~60 organizations support this initiative

Public & international organizations
- GIZ
- IEA
- Ministry of the Environment, Government of Japan
- OECD
- NPL
- UN environment
- World Bank Group
- UN Environment Programme
- Jay Inslee
- World Economic Forum

NGOs, Foundations, Associations
- CCCMC
- Good Shepherd International Foundation
- UN in Africa
- ClimateWorks Foundation
- FCH
- IJM
- Impact
- Pure Earth
- Resolve
- Responsible Business Coalition
- Responsible Business Association

Knowledge Partners
- Prof. Michael Posner
- Prof. Vanessa Wood
- Prof. Lin Boqiang

Industry
- Raw materials
- Active materials
- Batteries manufactured (cell & pack)
- Battery recycling
- Applications
Overview of objectives*

1. **Shift the value chain to sustainable outcomes**
   - Create demand for sustainable batteries
     - Publicize a vision and roadmap backed by world-class analytics for what a sustainable battery market looks like and how it can be achieved
     - Drive the wide-spread adoption of principles and KPI for a sustainable value chain through leadership endorsements
   - Build confidence that a sustainable market can be achieved in low- and middle-income countries
     - Quantify opportunities for African and Latin American markets to link battery demand with sustainable development (establishment of sustainable mining, recycling industries, etc.)
     - Establish a network of governments committing to pilots and other interventions in support of such goals

2. **Develop transparent, sustainable raw material supply chains**
   - Drive investment, standard-setting and transparency for a sustainable cobalt supply
     - Drive the development of a standard to scale up responsible artisanal small-scale mining based on best practice
     - Drive investment and commitments to address child labour in the cobalt supply chain
   - Develop a strategies and launch public-private interventions in support of sustainable supply chains for other key battery materials (e.g. nickel, lithium).

3. **Develop a circular, low-carbon value chain in support of the Paris Agreement**
   - Create the market conditions for large-scale EV battery recycling
     - Identify the largest drivers of transaction costs associated with the transboundary flow of EV batteries for recycling
     - Direct the adoption of policy frameworks to lower these costs
   - Scope the establishment of a data platform („Battery Passport“) to capture essential information for a sustainable battery market
     - Develop an open-source platform with lifecycle data of batteries („Battery Passport“) to enable an efficient and sustainable market and value chain

4. **Unlock innovation along the value chain to accelerate battery deployment**
   - Direct capital and incentivize innovation towards battery applications in low- and middle-income countries
     - Steer investment and expertise towards a faster deployment of battery storage for clean, affordable energy access in low- and middle-income countries
     - Steer capital and pilot initiatives towards an accelerated, sustainable deployment of electric mobility in low- and middle-income countries

*This and additional work will be guided by the Value Chain Roadmap recommendations.*
A Vision for a Sustainable Battery Value Chain in 2030

Sustainable Development Impact Summit
September 23, 2019
A vision for a sustainable battery value chain in 2030

- Establishing a circular battery value chain as a major driver to achieve the Paris Agreement
- Transforming the economy in the value chain creating new jobs and additional value
- Safeguarding human rights and economic development in line with the UN SDGs

30% emission reduction in transport and power sector

10m additional jobs and 150b of economic value in a responsible and just value chain

600m add. people with access to electricity, reducing the gap of people without electricity by 70%

SOURCE: World Economic Forum, Global Battery Alliance, McKinsey Analysis
Batteries reduce emissions in transport & power with positive economic value.

SOURCE: World Economic Forum, Global Battery Alliance, McKinsey & Systemiq Analysis
### 10 recommendations to scale up the battery value chain sustainably

<table>
<thead>
<tr>
<th>Circular value chain and connected business cases</th>
<th>1</th>
<th>Implement design and systems for life extension and end-of-life treatment</th>
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<tr>
<td></td>
<td>2</td>
<td>Implement smart-charging and vehicle-to-grid</td>
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<td>3</td>
<td>Scale up electric shared and pooled mobility</td>
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<td>Sustainable economy &amp; technology</td>
<td>4</td>
<td>Increase the share of renewable energies and energy efficiency measures in the value chain</td>
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<td>5</td>
<td>Accelerate the roll-out of charging infrastructure that allows for smart-charging and V2G services</td>
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<td>6</td>
<td>Adjust regulation for battery-enabled renewables as a dispatchable source of electricity for the grid</td>
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<td>7</td>
<td>Finance sustainable expansion, support value creation &amp; economic diversification in local communities</td>
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<td>Responsible and just value chain</td>
<td>8</td>
<td>Ensure consistent transparency based on established sustainability norms and principles</td>
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<td>9</td>
<td>Establish integrated GHG disclosure and emission regulations</td>
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<td>10</td>
<td>Support the deployment of batteries for energy access</td>
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**SOURCE:** World Economic Forum, Global Battery Alliance
Potential Actions to Advance Recommendations

How can we work together to advance near-term action to implement the recommendations?

Potential Examples

- **Principles** to foster product design and technical development to facilitate disassembly for repurposing, repair and recovery of materials

- A **Public-Private Action Coalition and Roadmap** towards eradicating child labor from the cobalt supply chain and improving working conditions in artisanal small-scale cobalt mining

- A **Funding Platform** to implement projects for sustainable impact in local communities

- A **Utility Grid Public Policy Framework** for integrating batteries, smart charging and vehicle to grid to foster renewables as a dispatchable source of electricity for the grid

- A **Circular Economy Policy Framework** to accelerate battery life extension and recycling; and electric shared and pooled mobility

- A **Blended Financing Plan** for scaling battery enabled renewable energy micro-grids in emerging markets