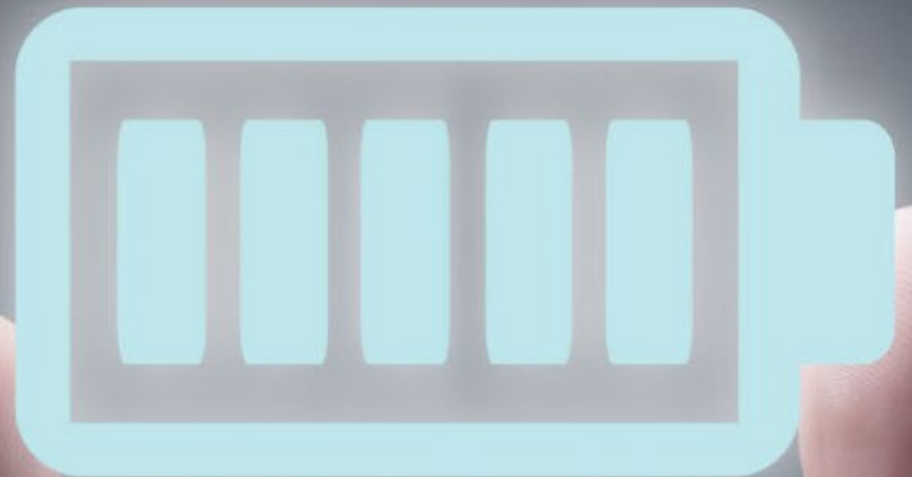




Update and outlook
Stedman Ellis
CEO





Imagination

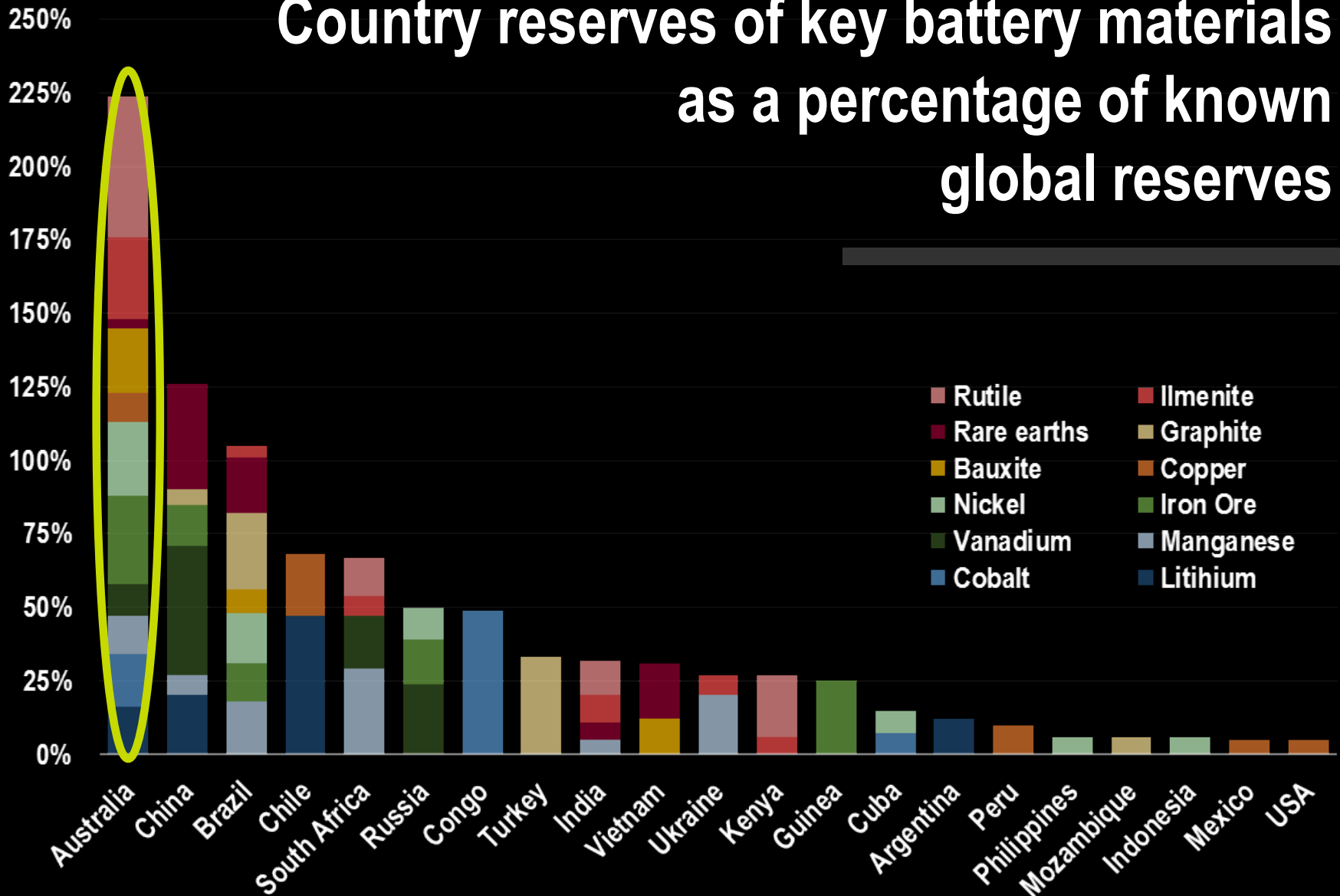


LUFAST
EV CHARGING ONLY





Country reserves of key battery materials as a percentage of known global reserves



The background of the slide features a silhouette of a city skyline against a bright, orange-hued sunset sky. The sun is positioned on the left side, partially obscured by the buildings. A prominent power pylon stands in the middle ground, with power lines stretching across the scene. The overall atmosphere is one of energy and transition.

Powering Australia's future battery industries

FBI CRC is an independent centre where industry, government and researchers can come together to create the tools, technologies and skills to grow the role of battery storage in Australia's electricity grids, and make Australia a larger player in global battery value chains.

A fast start-up

- January 2018 – Consortium steering committee formed
- July – October – Stage 1 CRC bid submitted and shortlisted
- November – Stage 2 CRC bid submitted
- February 2019 – Final CRC selection interview
- April – Commonwealth funding of \$25M announced
- May – Initial workshops with participants
- June – Inaugural Board meeting
– Invitation for research ‘expressions of interest’ (53 received)
- August – Board invites first full project proposals

Governance and management structure

Grant Agreement

Constitution

Participants Agreement

Future Battery Industries CRC

Participants Council:
12 representatives

Board of Directors

CEO/Management Team

Committees:

- Audit & Risk
- Remuneration
- Research Implementation Advisory
- Commercialisation

Collaborative Research Programs

Research Program 1`

Research Program 2

Research Program 3

Projected impacts

Investment

\$25M Commonwealth Funding

\$28M Participant Cash

\$82M Participant In-kind

2020

2025

2029

2034

Benefits:
\$128.83M per annum
(\$282.34M accumulated)

Benefits:
\$293.91M per annum
(\$2.50B accumulated)

Program 3

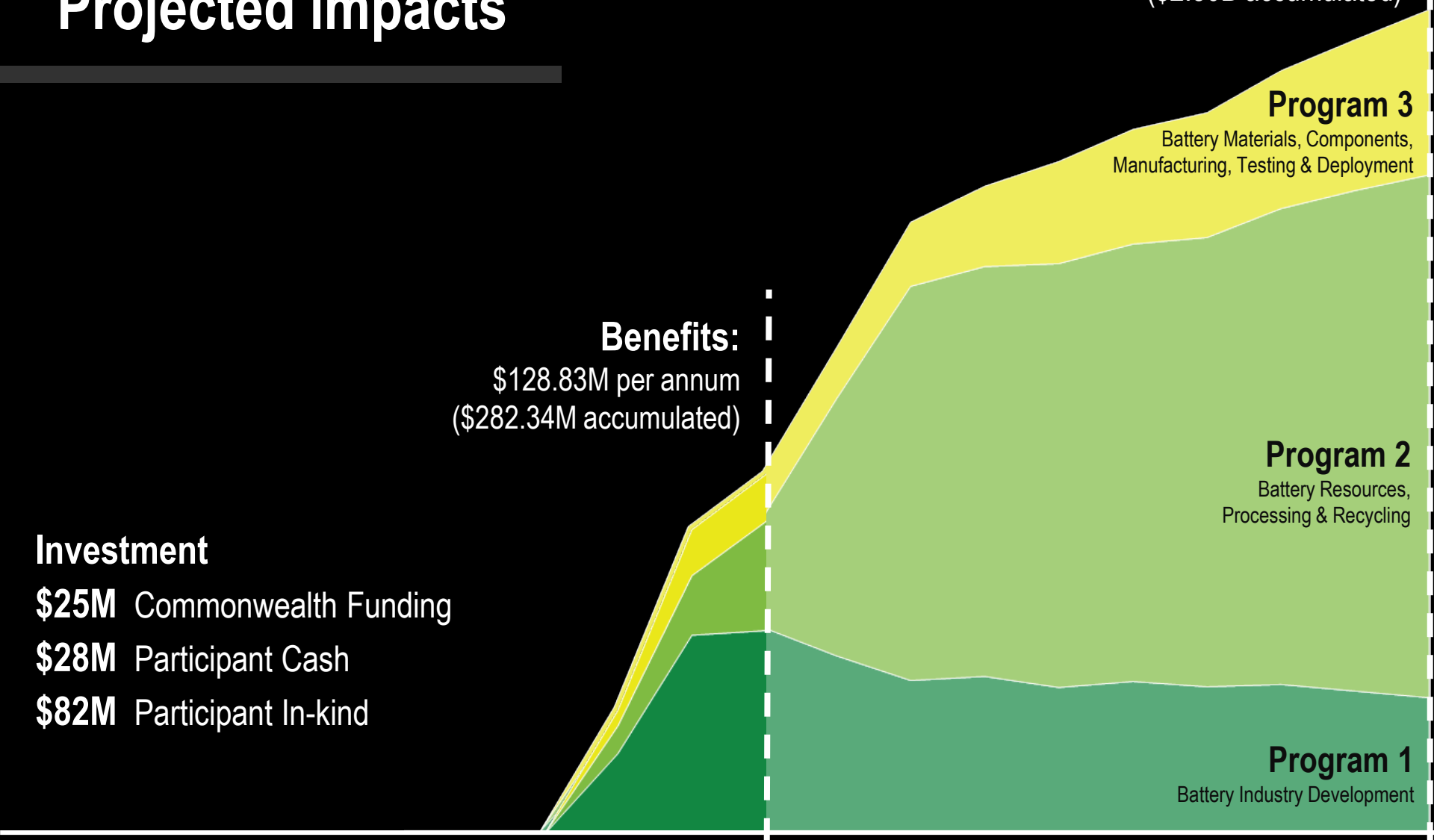
Battery Materials, Components,
Manufacturing, Testing & Deployment

Program 2

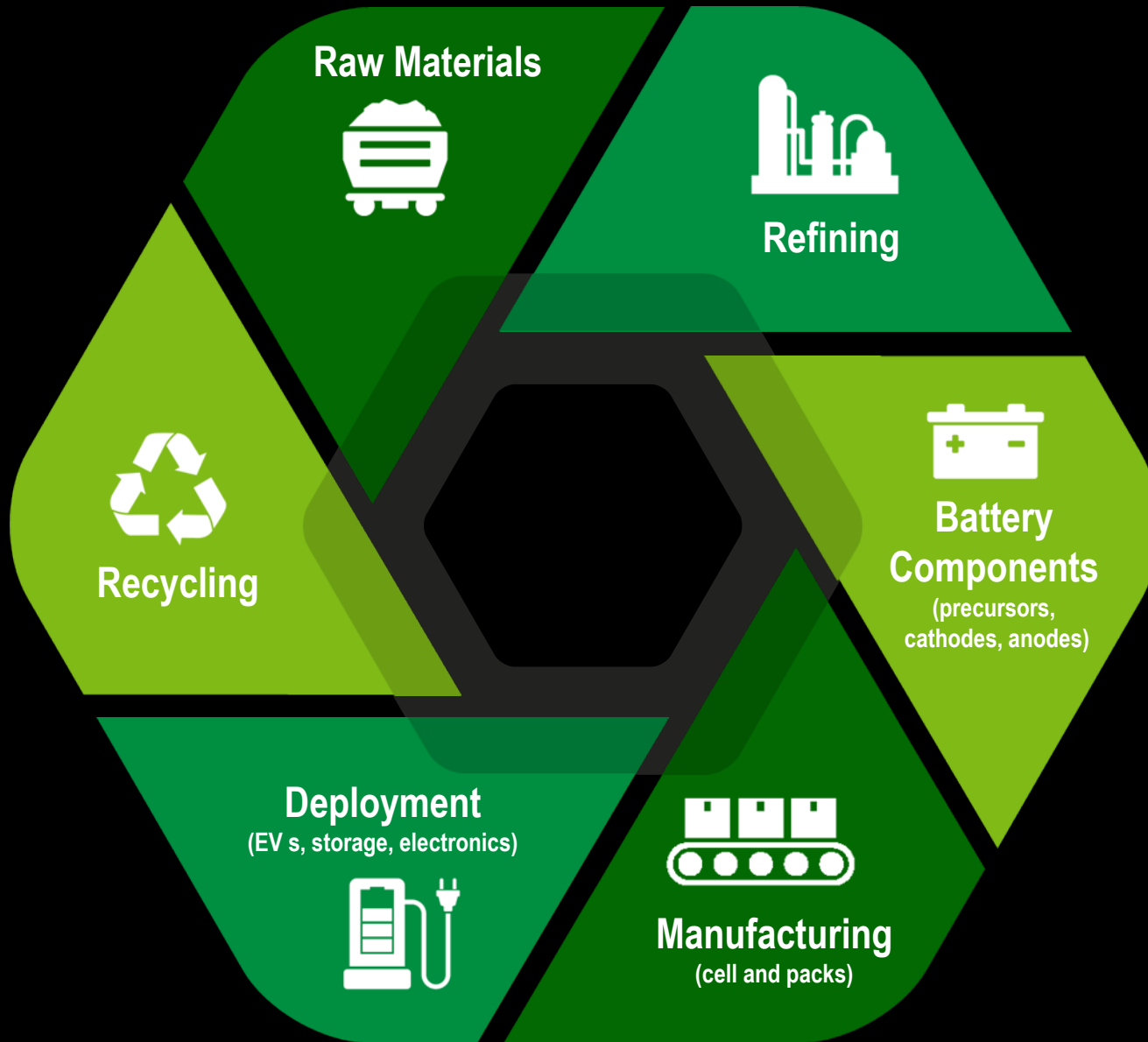
Battery Resources,
Processing & Recycling

Program 1

Battery Industry Development



A circular economy for batteries



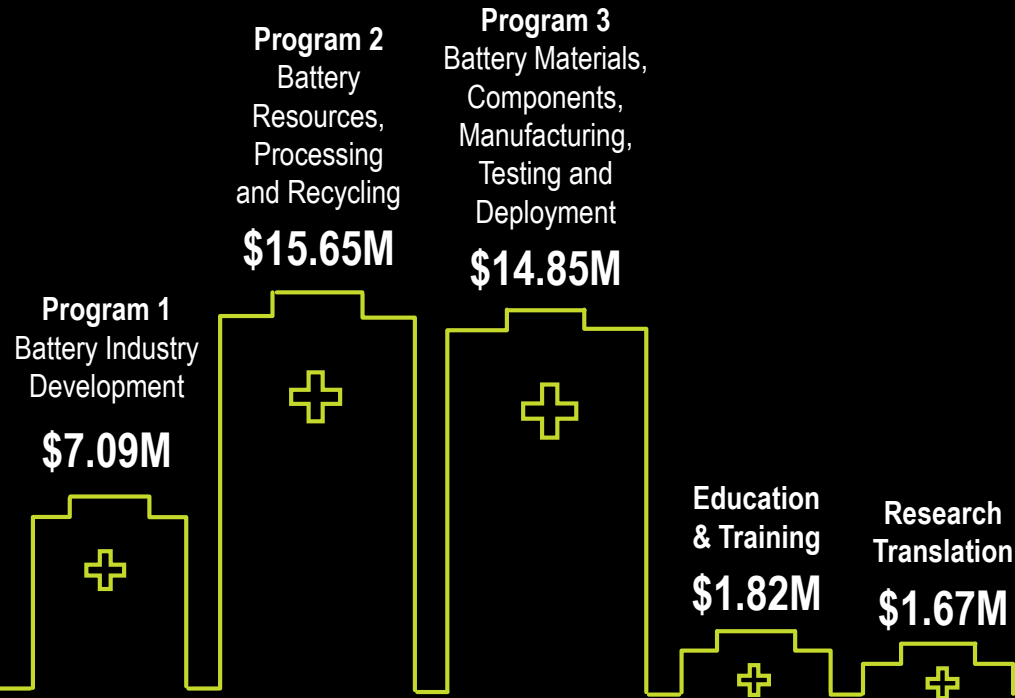
Partners across the supply chain



Partners across the supply chain



Targeted R&D and pathway to impact

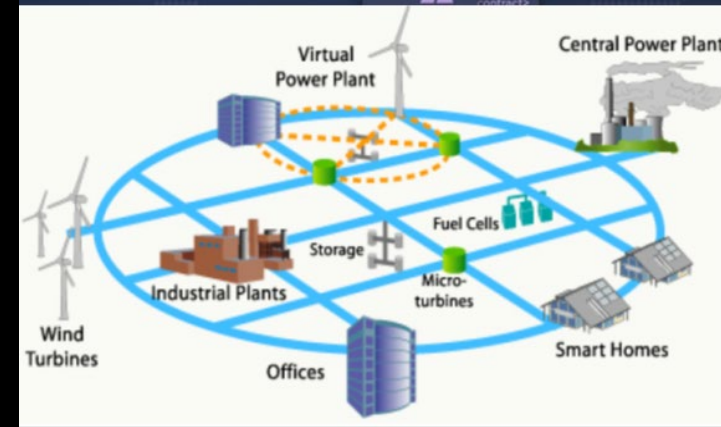


+

-

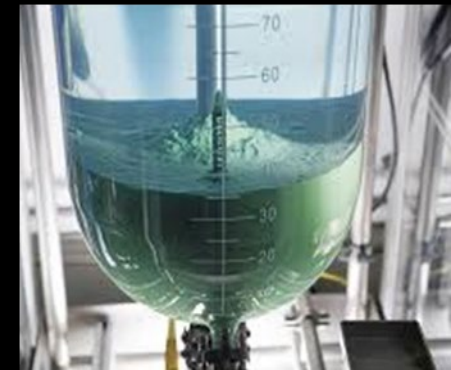
Battery Industry Development

- Battery market & value chain development
- Battery supply chain integrity: provenance, traceability, environmental footprint
- Energy grid optimisation & harmonisation
- Transitional impact on society & economy
- Battery industry ecosystems & hubs



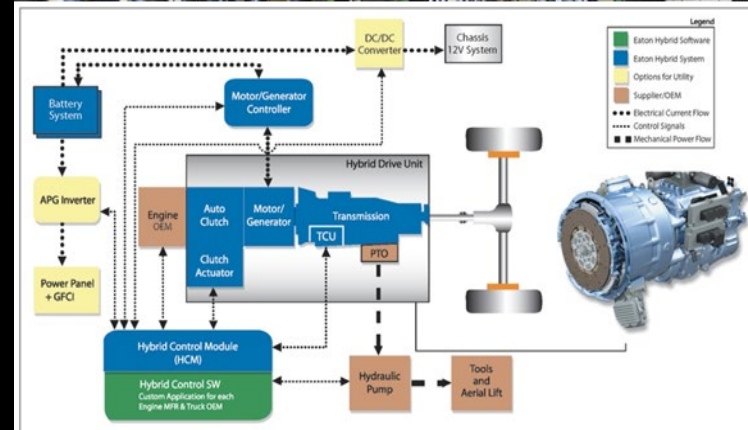
Processing Resources to Precursors

- Environmental & waste management strategies.
- Cost-competitive processing of battery minerals.
- Premium quality battery grade materials.
- Battery recycling, repurposing and reuse.
- Develop battery component precursor production



Battery Design, Testing, Manufacture and Deployment

- Cell manufacturing & testing
- Battery energy storage systems and testing
- Specialised batteries for niche deployment
- Smart battery management systems
- Battery safety and security



Initial work program – project proposals invited

- A pilot plant facility for the production of mixed hydroxide cathode precursor powders and subsequently lithiated cathode active material
- A national battery testing facility for the testing of lithium ion and vanadium redox flow battery energy storage systems
- A prototype battery with associated battery and energy management systems for a rough terrain autonomous vehicles and drones
- A new environmentally friendly direct leach process to extract nickel and cobalt from sulfide mineral resources and produce battery grade sulfate salts
- New processes to enhance lithium extraction recovery, reduce energy needs and lower the environmental footprint of lithium processing and refining
- Novel processes for mine and refinery waste reuse, repurposing and recycling for battery metals

Skills for Future Battery Industries

Vocational skill sets
defined for new jobs

Next generation research:
40 PhDs

Targeted training
& industry forums



Capitalising on the opportunity

- FBICRC six year research program will help participants work together to become more successful players in the world's battery supply chain
- It brings together 60 partners and significant investment by the Commonwealth and Western Australian Government
- A commitment of cash and in kind of \$130M represents the biggest R&D battery industry collaboration in Australia's history.
- Participation in the CRC remains open to new entrants and supporters – we invite you to join us on this nation building journey.



The race for a new industry