

GLENCORE



Circularity of batteries and trade-related challenges and opportunities

TESSD working group meeting on circular economy

17 March 2022, Geneva

WHO WE ARE

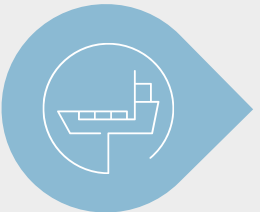
At a glance

As one of the world's largest natural resource companies, we have been transforming the global commodities industry for nearly half a century, acquiring industrial assets with histories going back even further.

Two business segments



Industrial business



Marketing business

Where we operate

● Head Office ● Industrial assets ● Marketing office/other



One of the world's largest natural resource companies

6
continents

35
countries

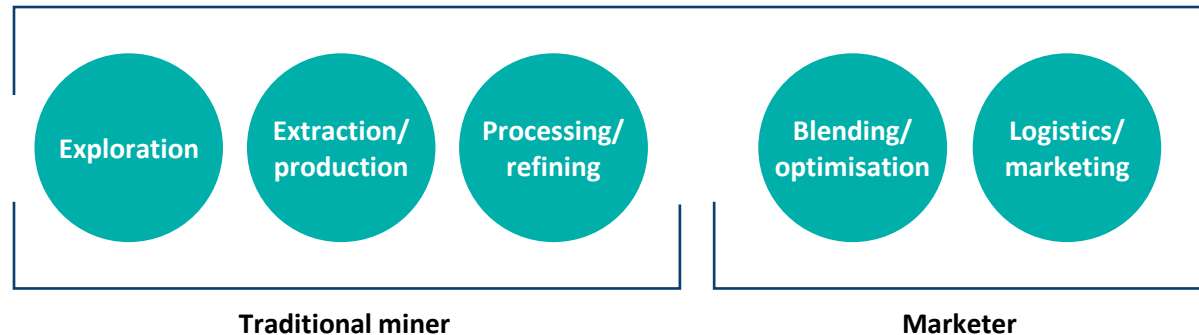
c135,000
employees and contractors

>40
offices

Key facts and figures

- One of the largest global diversified natural resource companies and a major producer and marketer of more than 60 responsibly-sourced commodities. We produce, process, recycle, source, market and distribute the commodities that enable decarbonisation while meeting the energy needs of today
- More than 40 offices in over 35 countries in both established and emerging regions
- Customers are industrial consumers – in the automotive, steel, power generation, battery manufacturing and oil sectors. We also provide financing, logistics and other services to producers and consumers of commodities
- Listed on London and Johannesburg Stock Exchanges.
- Current rating BBB+ (Positive)/Baa1 (Stable)

Glencore



Metals & Minerals

- Cu Copper
- Ni Nickel
- Fe_{ALLOY} Ferroalloys
- Fe Iron Ore
- Co Cobalt
- Zn Zinc/Lead
- Al Aluminium



Energy

- Coal
- Oil



Recycling



Marketing

Key competitive strengths

- A major supplier of energy and transition metals and solutions that support the journey to Net zero emissions
- Our asset portfolio is populated with large, long-life and low-carbon advantaged commodities
- Unique capability to supply the sustainable commodities of the future
- Highly resilient and cash generative business model

Our business model

Assets and natural resources

- Many long-life and high-quality assets
- Value over volume approach
- Embedded network and knowledge in marketing operations

Our people and partners

- Establishing long-term relationships with customers and suppliers
- Major employer with c.135,000 people globally

Financial discipline

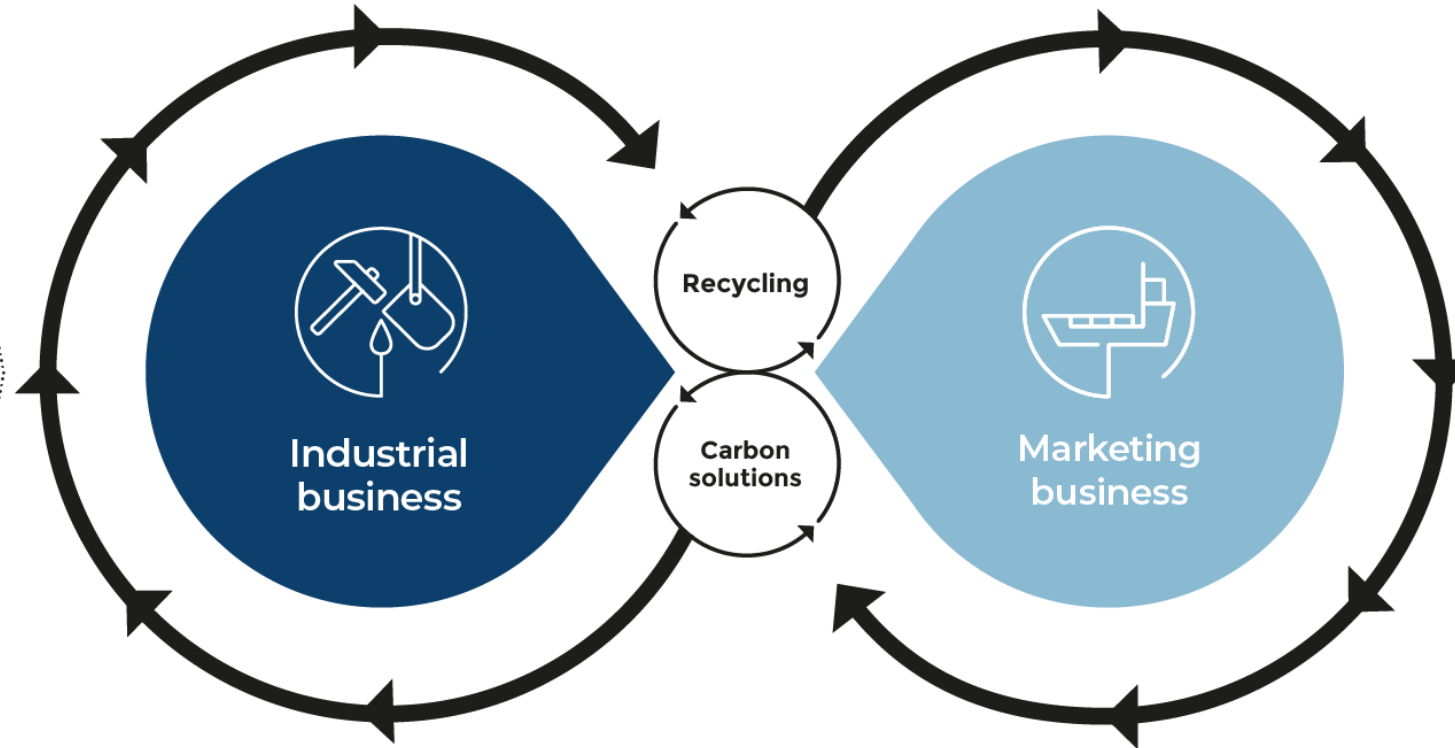
- Capital deployed in disciplined manner
- Marketing hedges out the majority of absolute price risk by volume-driven activities and value-added commodity chain

Unique market knowledge

- Finding value at every stage in the commodity chain

Our industrial business spans the metals and energy markets, producing multiple commodities from over 65 assets

We move commodities from where they are to where they are needed

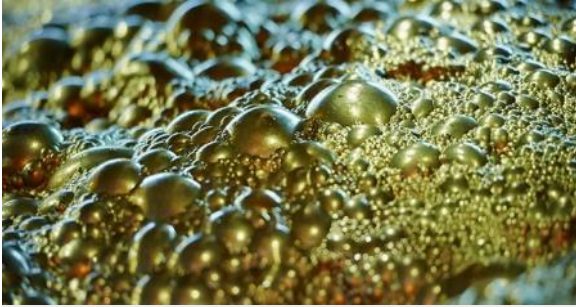


- Unique position in producing, recycling, sourcing, marketing and distributing the commodities that enable the transition
- Portfolio of critical minerals and energy necessary to meet the needs of today and tomorrow
- Leading CO₂e emissions reduction targets for scope 1+2+3 emissions to 2035 with net zero ambition by 2050
- Significant pipeline of future critical mineral growth options
- Flexible business model that adapts quickly to changing conditions and is ideally positioned for the future

Our diversity by geography, product and activity, maximises the value we create



Metals and Minerals



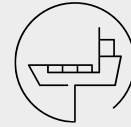
We produce and market a diverse range of metals and minerals – such as cobalt, copper, ferroalloys, nickel and zinc – and also market aluminium and iron ore from third parties.



Energy



We are a major producer and marketer of coal, with mines in Australia, Africa and South America – while our oil business is one of the leading marketers of crude oil, refined products and natural gas.



Marketing



We physically source commodities and products from our global supplier base – and sell them to customers all over the world.



Recycling



We are a leading recycler of copper, nickel, zinc and precious metals, committed to producing the commodities the world needs to advance everyday life.

We are targeting a step change in our recycling capabilities over the next five years



Glencore is one of the world’s largest recyclers of end-of-life electronics, batteries and battery metals

- Our significant portfolio of smelting and refining assets is designed to handle a wide range of complex feeds, allowing us to process recyclable materials at a significantly lower cost and overall carbon footprint⁽¹⁾.
- The goals of the Paris Agreement are best achieved through a circular economy.
- The volumes of commodities needed to decarbonise energy supply place a growing burden on finite raw materials.
- Narrowing the gap between global resource use and recycling is essential to minimise impacts on the world.

Our recycling strategy

- We are targeting a step change in our recycling capabilities over the next five years through a larger global footprint/capacity in our core and new markets.
- We are working with industry and governments to improve circularity in electronics and batteries and have helped design and launch **Circular Electronics Partnership (CEP)**.
- We are also testing new technologies to allow us to responsibly recycle more complex materials in a manner that is safe and sustainable.

(1) In 2021, our nickel recycling business processed 17,900 tonnes of recycled material containing 4,400 tonnes of nickel, 1,500 tonnes of cobalt and 870 tonnes of copper. During 2021, our copper/e-waste recycling business recovered around 40,000 tonnes of copper, 77,000 ounces of gold, 1.4 million ounces of silver, 15,000 ounces of palladium, and 6,000 ounces of platinum from electronic scrap and other recycling feeds

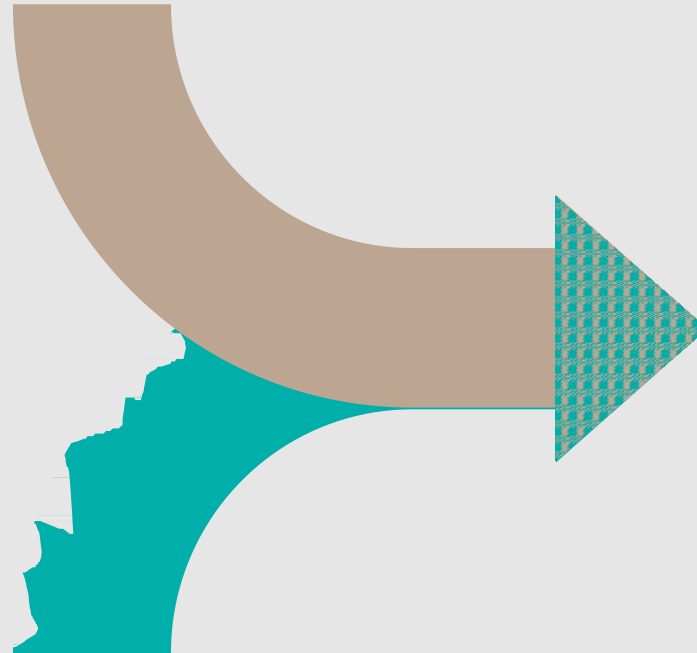
Effectively combining Primary and Recycled battery metals streams is key to the energy transition

Primary Supply

- Still the most substantial source of key battery metals for the foreseeable future
- Can be blended with recycled supply to meet quality / chemistry requirements

Recycled Supply

- Not enough to meet energy transition goals
- But critical to scale massively
- Variability in quantity
- Variability in quality / chemistry

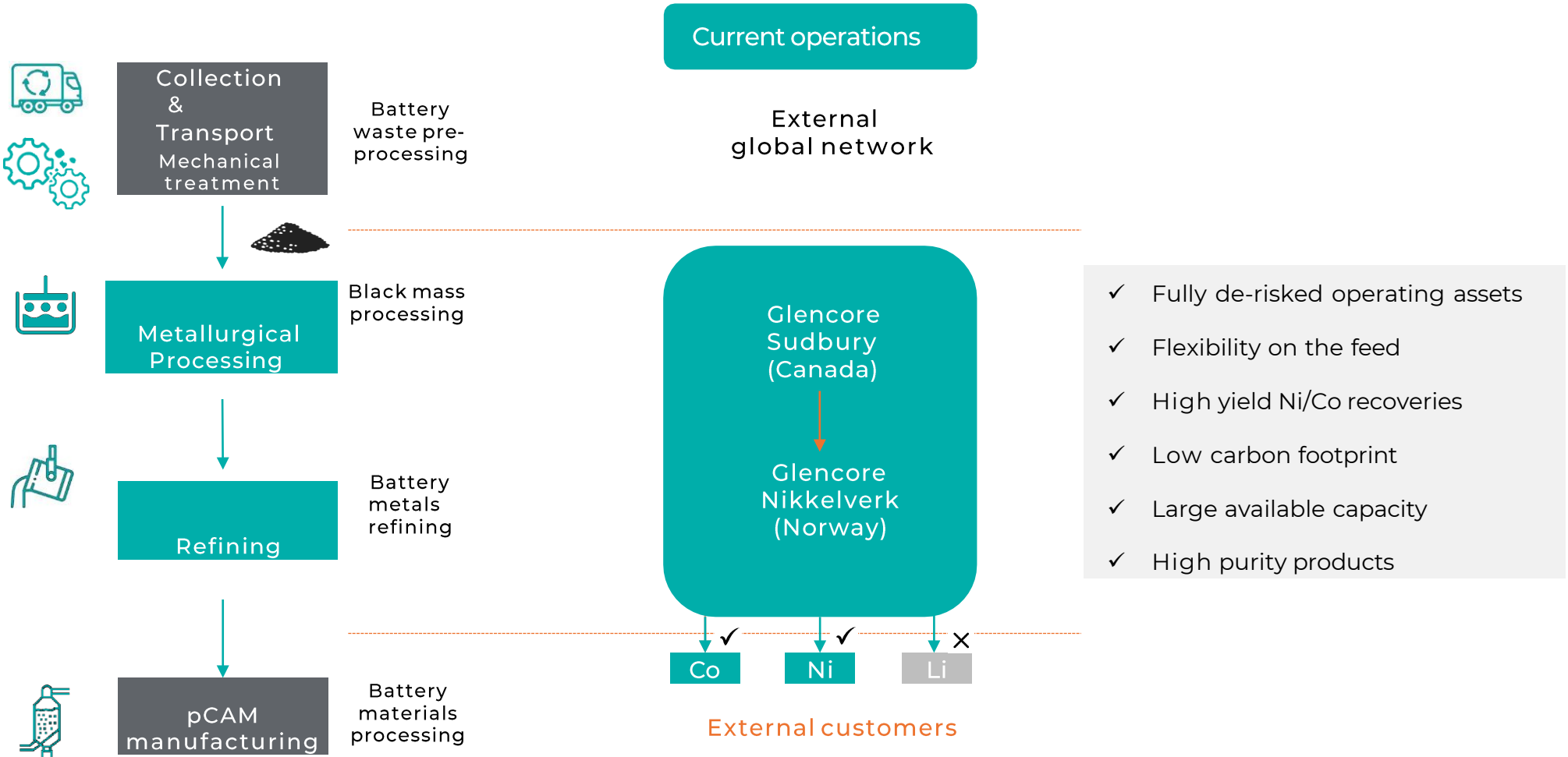


Glencore Edge

- Effectively combine Primary and Recycled feeds (Ni, Co, Li)
- Meet quantity and quality requirements
- Minimum recycled content (growing over time)
- Potential localization benefits
- Lower carbon footprint

Glencore is a key player in the global battery recycling market

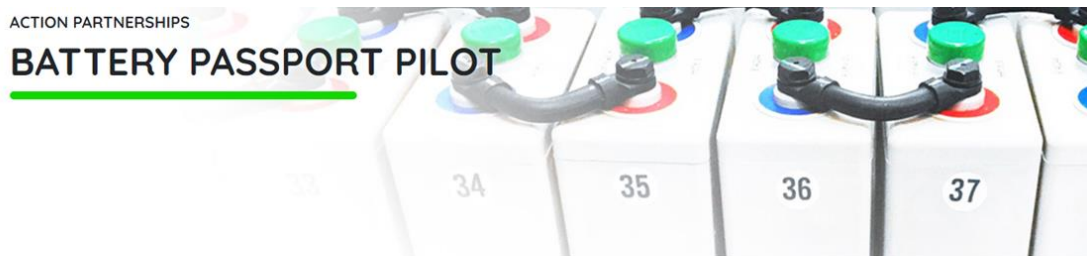
Leveraging Glencore's low-risk assets while building the next generation platform



Existing asset base providing immediate access to high-yield recycling solutions

Global Battery Alliance – Battery Passport

Glencore is proud to be part of the world’s first battery passport proof of concept launched by the Global Battery Alliance



PROOF OF CONCEPT LAUNCH

About the Battery Passport and the proof-of-concept pilots

On January 18th, at the Annual Meeting of the World Economic Forum in Davos, the Global Battery Alliance has officially [launched](#) the world’s first battery passport proof-of-concept pilots. First [conceptualized](#) by the Global Battery Alliance in 2019, the launch builds on three years of pre-competitive multi-stakeholder collaboration across the battery value chain. This included the development of dedicated rulebooks to establish key sustainability performance indicators related to the battery carbon footprint and child labour and human rights due diligence as set out in the [Greenhouse Gas rulebook](#) and the [Child Labour](#) and [Human Rights](#) indices. While the launch of the proof-of-concept battery passport pilots represents a critical milestone and very proud achievement, the long-term objectives of the battery passport are explained in this video.

- [About the Human Rights Index and Child Labor Index](#)
- [About the Greenhouse Rulebook](#)
- [About the GBA Battery Passport Proof of Concept](#)



We spearheaded the first pilot passport leveraging the **ReSource platform** in collaboration with Glencore’s Kamoto Copper Company SA, LG Energy Solution and Tesla.

The **ESG performance** of mineral production as well as battery and vehicle manufacturing must be clearly communicated to our customers and other key stakeholders.

Traceability is key to this. It has always been possible to track mineral units back to origin and gather ESG information at each step, for example through chain of custody approaches.

New technologies offer us an unprecedented ability for traceability in the supply chain. We support the development of this through being one of the founders of the ReSource consortium – an end-to-end collaboration between major cobalt industry players working in the DRC to deploy various technologies.

The GBA’s Battery Passport provides the **framework for a standardized approach** to collecting and reporting on ESG data specific to each battery.

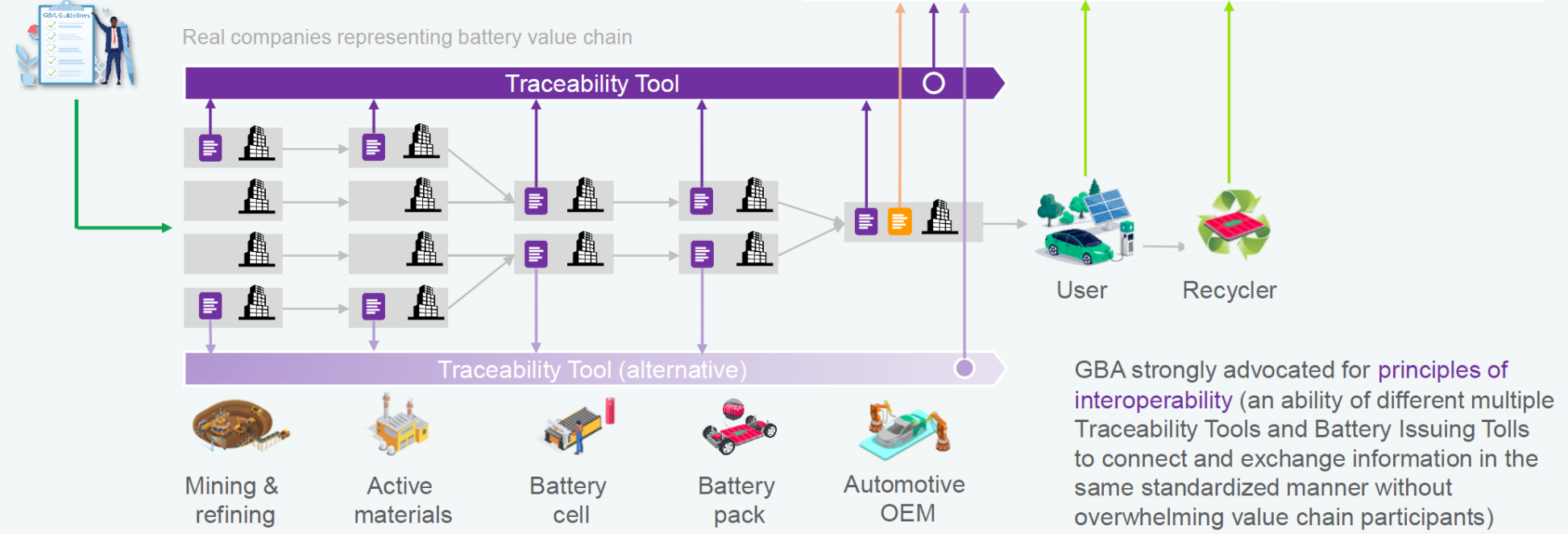
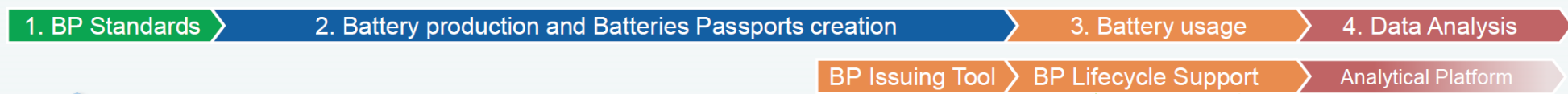
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We have developed architecture of the future BP ecosystem

The role of the GBA is to orchestrate the ecosystem of external traceability providers and verifiers



Challenges

Classification

- **Basel Convention** as reference point.
- Divergences exist at country-level particularly on **definition, classification** and distinction between hazardous waste, non-hazardous waste, and non-waste goods destined for reuse, failure analysis, repair and refurbishment.

Transaction costs

- The nature of the costs include **licensing** for transporters, sending and receiving facilities, as well as storage and delay costs incurred as a result of **paperwork confusion** or **inconsistent understanding** of processes at the border.
- Indirect transaction costs involve administrative burden for obtaining **trade permits** (labour cost).

Permitting costs

- PIC procedure **largely paper-based** and cumbersome and thus inefficient. PIC involves notification of export and written consent by importing and transit states, the use of transboundary movement documents and confirmation of disposal.

Opportunities

Border measures

- Need to **digitalise** and **automate** PIC notification procedures.
- **Regulatory cooperation** to implement fast-track or streamlined trade permit systems or pre-export verification.
- Developing better materials **traceability** throughout the supply and reverse supply chain (e.g. “battery passport”)

Internal measures and transparency

- Need to develop **harmonized standards** for handling electronic waste that are recognized and accepted by regulators internationally.
- Transparency on **domestic requirements** for waste classification and movement will help business to plan reverse supply chains – good example CPTPP that builds on the WTO TBT Agreement.

Policy action

- Discussion within WTO on **reverse supply chains** for electronics, batteries. Outline **best practice commitments**, which reinforce market access obligations and support efforts at **regulatory convergence**.
- **Regulatory cooperation**: North Sea Resources Roundabout (NSSR) and EU’s Waste Shipment Regulation (WSR).



Thank you !