



RESOURCES

*resourcing the new economy
for a better tomorrow*



EQ RESOURCES LIMITED

Critical Mineral Producer, Beneficial Reuse of Waste

Creating Value From Waste Rock Dumps With The Use of Sorting Technology

Kevin MacNeill, CEO

February 6th 2024



**DOWNLOAD
PRESENTATION**

ASX : EQR



Disclaimer



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- The information in this presentation partly relates to the outcomes of the Mt Carbine Bankable Feasibility Study Update (May 2023), made available through the Company's website www.eqresources.com.au/.
- The Company confirms that it is not aware of any new information that materially affects the information included in the corresponding market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

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**A Globally Significant
Tungsten Raw Materials
Supplier**

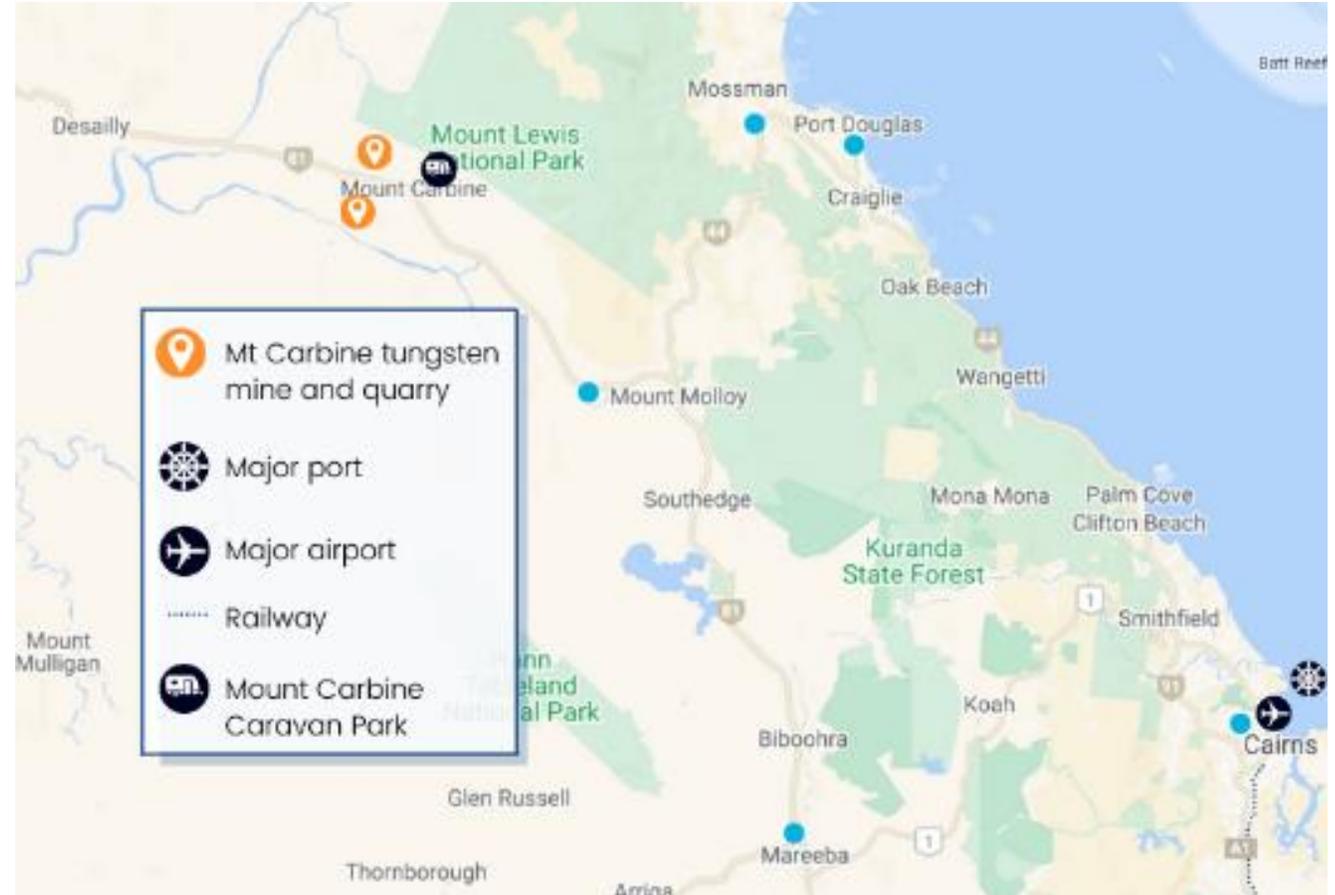


Mt Carbine Tungsten Mine and Quarrying Operations

Transforming an **Historical Mine** to Australia's Largest Primary Tungsten Producer and a Key Resource Producer (Quarry Materials)



- 2019 EQR began recommissioning of the **Historical Mt Carbine Mine**.
- Global **critical mineral** production.
- Advocates for a **circular economy** model.
- **Beneficial Reuse** transforms mining waste into valuable **quarry materials**.
- Operates through **Mt Carbine Quarrying Operations** subsidiary.



Mt Carbine Tungsten Mine and Quarrying Operations

Transforming an Historical Mine to Australia's Largest Primary Tungsten Producer and a Key Resource Producer (Quarry Materials)



- 1 Tailings Pond/
Retreatment Plant
- 2 Quarry & OOSR
Stock-pile
- 3 XRT Sorters
- 4 LG Ore Stockpile
- 5 Exploration Targets
- 6 Golding Offices
- 7 EQR Offices, Golding
Management Offices

The Second Phase of the Value Chain

Using Sensor Based Sorting Waste As Quarry Material.



Mt Carbine Mine demonstrates the feasibility of repurposing SBS waste for various construction materials

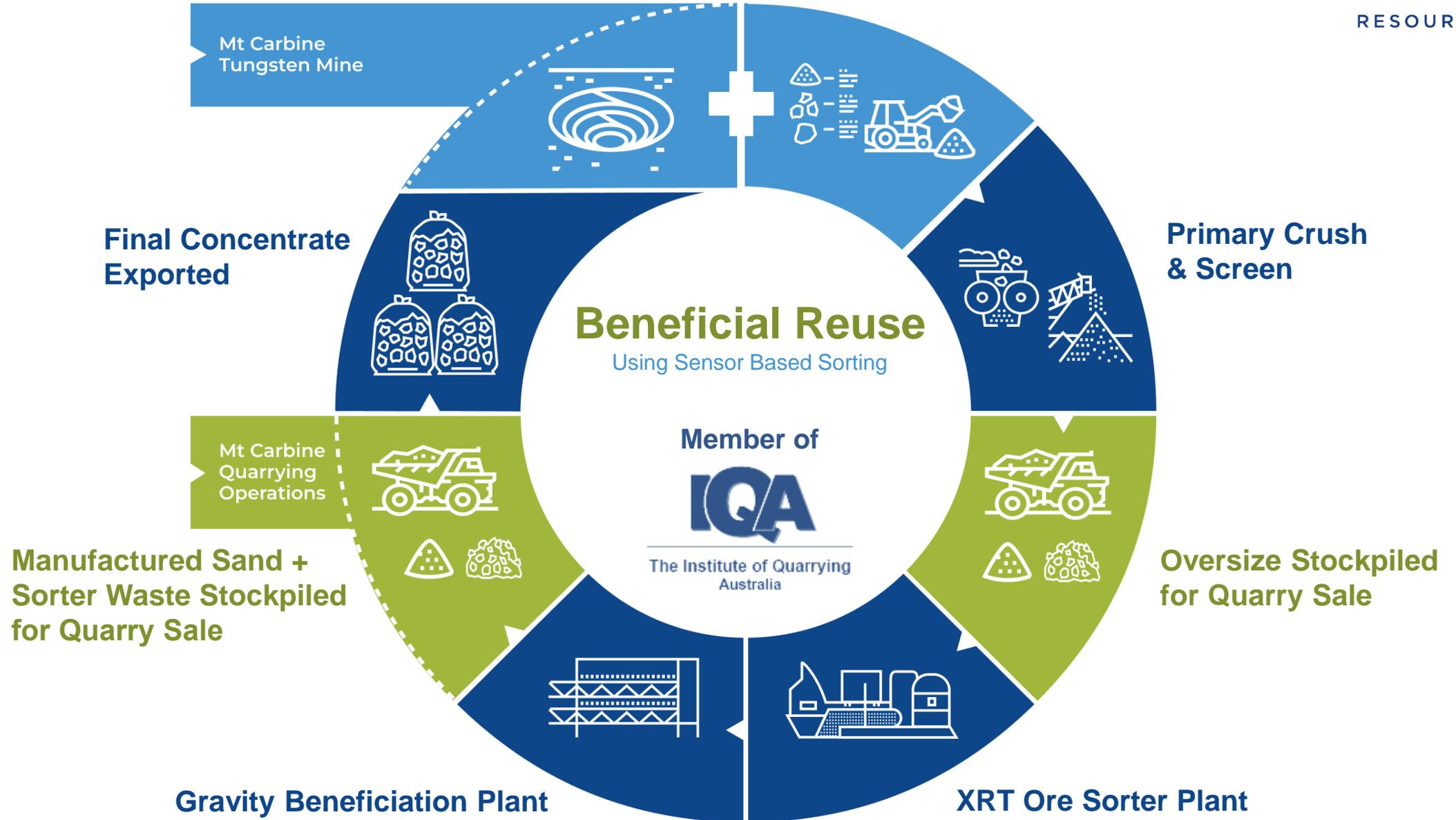


Mt Carbine Tungsten Mine and Quarrying Operations, QLD, Australia. June 2023



Mt Carbine Tungsten Mine and Quarrying Operations, Low-Grade Stockpile

Ore: Open Cut Mine +
Ore: Low Grade Stock Pile



Mt Carbine Quarrying

Sustainable Aggregates for a
Better Tomorrow



Department of Transport
and Main Roads
Registered.



Independently tested to
meet quality control
specifications.



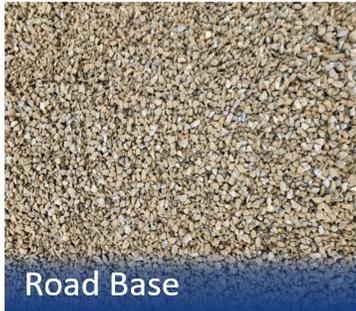
On-site Lab to ensure
quality consistency



Sustainable &
Environmentally
Responsible



Customisable to meet
specific needs



Road Base



Fill



Rock



Aggregates



Concrete & Cement



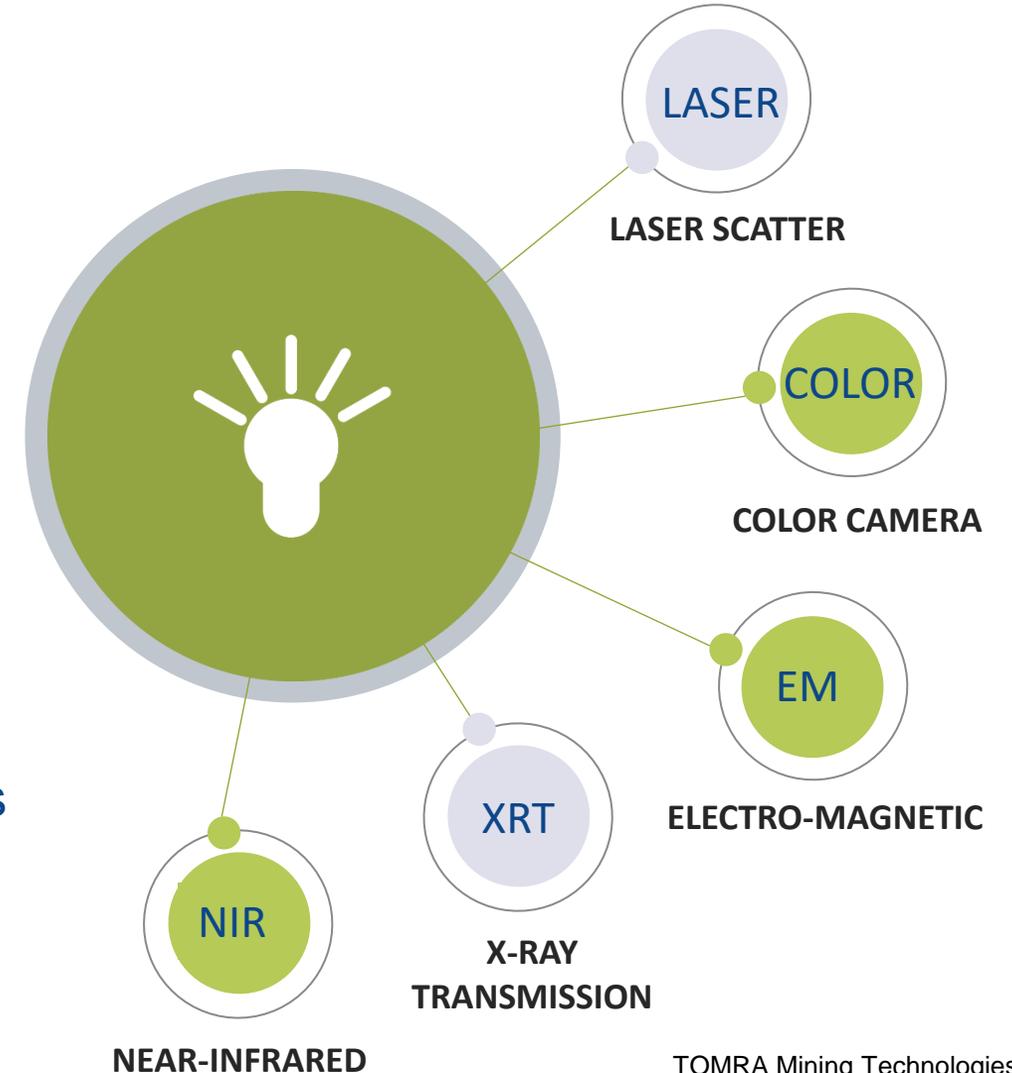
Manufactured Sand

What Is Sensor-Based Ore Sorting?

Sensor Based Sorting (SBS)



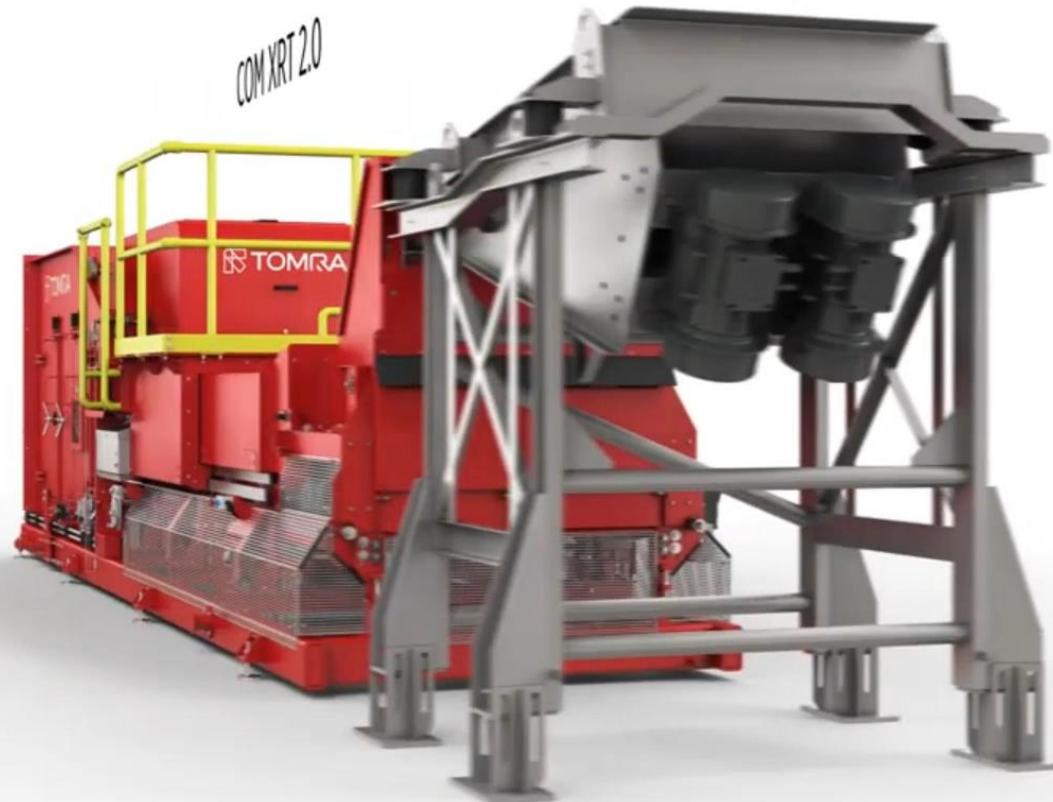
1. Sensor-based sorting is a **coarse particle separation** technology applied in mining for the **dry separation** of bulk materials.
2. Particles are:
Individually detected by a sensor technique,
Individually ejected by an amplified pneumatic process
3. The technical **feasibility depends largely on the liberation characteristics** of the particles.
When physical liberation is present, sorting work as a separation technique.



TOMRA Mining Technologies

How Does an XRT Sorter Work?

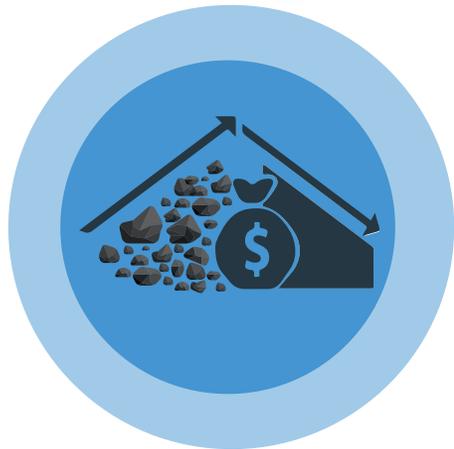
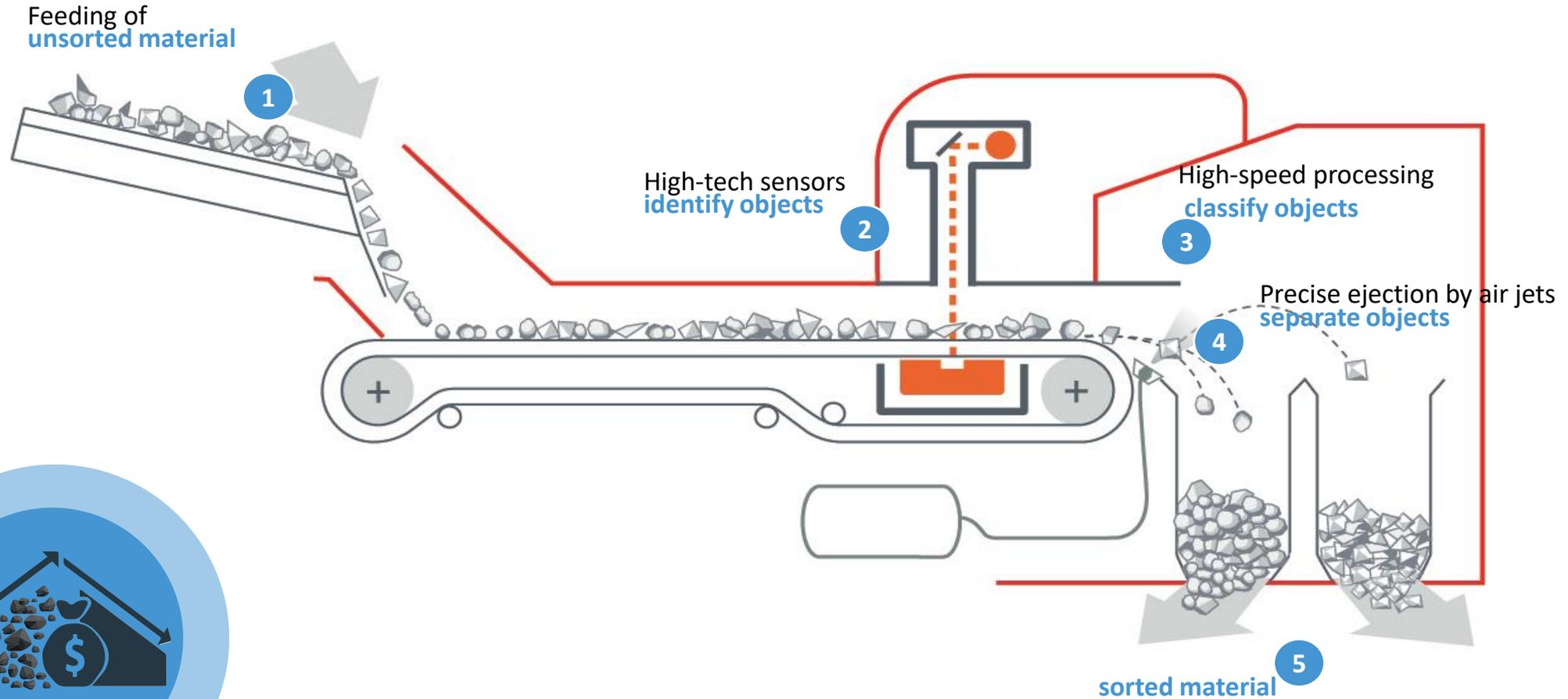
Sensor Based Sorting : Technologically Driven, Economically Proven



[Video](#)

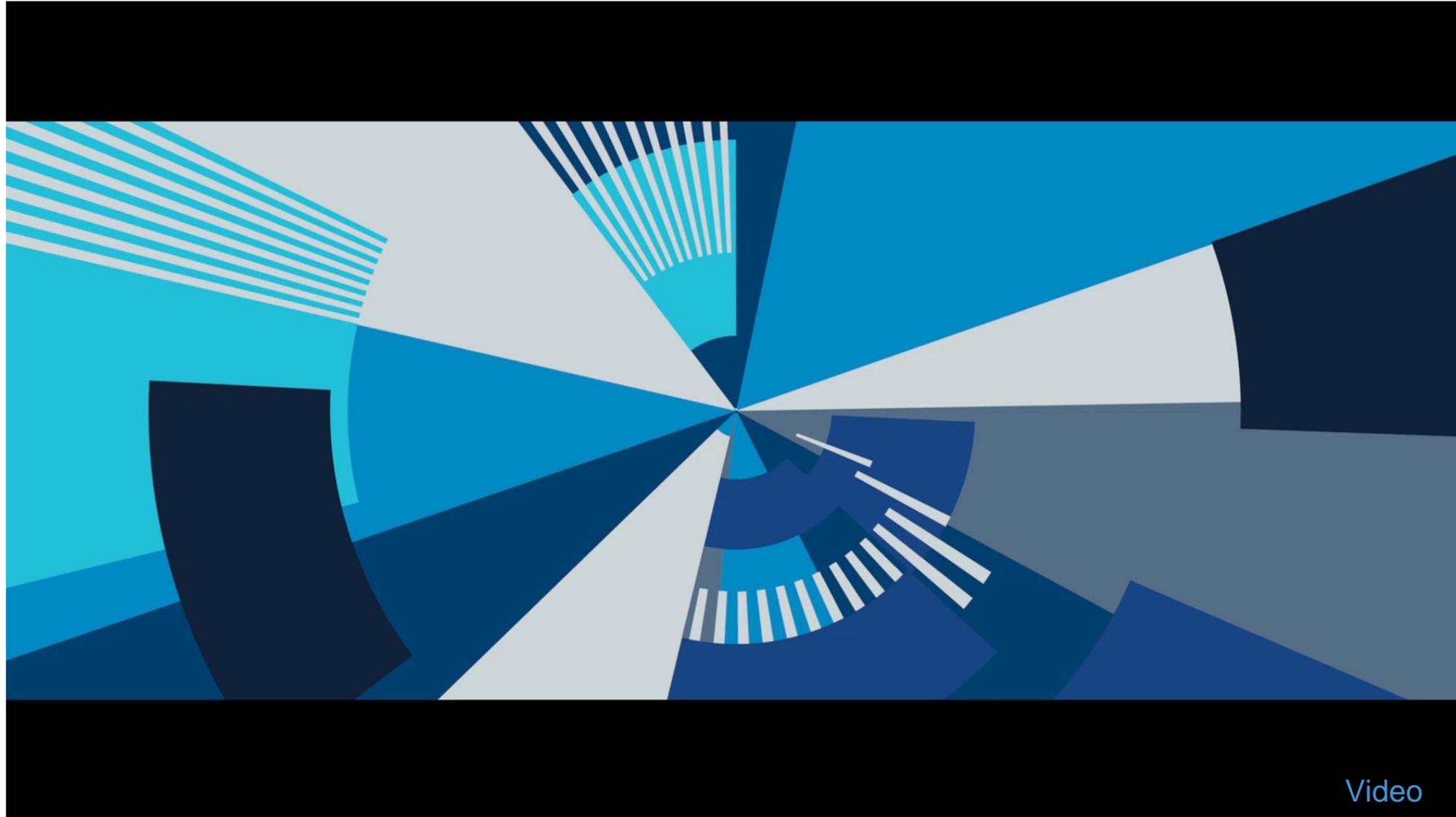
How Does an XRT Sorter Work?

Sensor Based Sorting : Technologically Driven, Economically Proven



XRT Sorting Technology

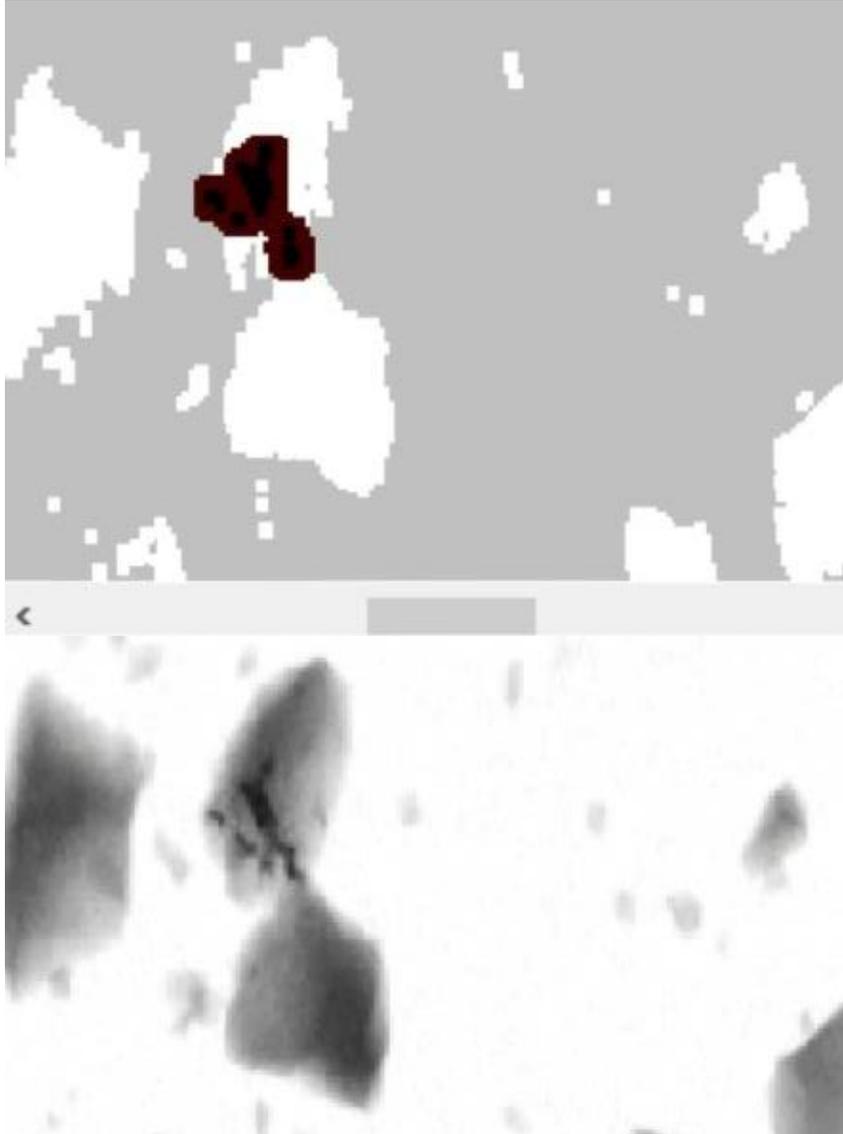
Sensor Based Sorting (SBS) : Technologically Driven, Economically Proven



Video

XRT Sorting Technology : Advantages to Waste Sorting

Sensor Based Sorting : Technologically Driven, Economically Proven



•Precision:

- High-accuracy separation of undesirable minerals e.g. Sulphides - Arsenopyrite, Pyrite, Chalcopyrite.

•Efficiency & Energy:

- Speeds up sorting process.
- Lowers energy use with targeted sorting.

•Adoption & Customisation:

- Broad use in mining operations.
- Tailored for operation's specifications.

•Recovery & Purity:

- Enhances resource recovery rates.
- Secures waste mass integrity and purity.

•Economic & Eco Impact:

- Boosts profitability and environmental stewardship.
- **Cost to run sorter: \$2/t ~2kWh/t**

XRT Sorting Technology : Advantages to Waste Sorting

Sensor Based Sorting : Technologically Driven, Economically Proven



XRT Sorting Technology : Advantages to Waste Sorting

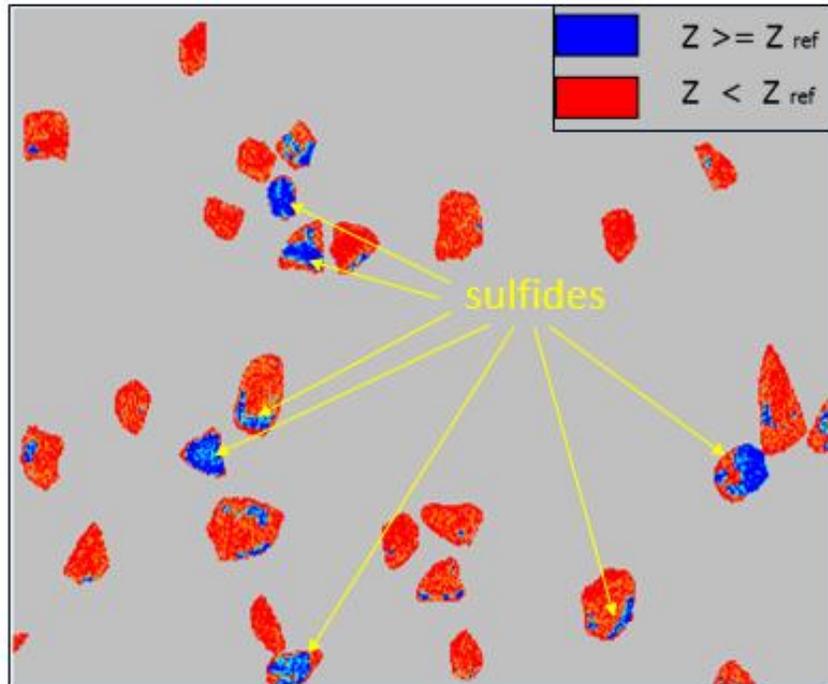
Sensor Based Sorting : Technologically Driven, Economically Proven

Dual Energy Sorting

- Detection of Sulfides (high dense)
- Detection of Quartz (low dense)
- And a combination of both

Inclusion Sorting

- Contrast filter applied to enhance 'black spots'
- Detection of Pyrites (high dense inclusions)



SBS Waste as Quarry Material: Mt Carbine Quarrying



- Continued development of **'green / recycled aggregates'** business as an **additional revenue stream**.
- Turns **clean waste rock** into vital **construction materials** for Far North Queensland.
- Opening **opportunities** in the local and regional market as demand for **recycled products** increases.
- **Beneficial Reuse** of waste product promotes **Circular Economy commitment** in-line with QLD Government initiatives.



What Makes a Good Aggregate?

Criteria for SBS Waste Repurposing

- **Composition Standards:**

- Chemical stability for construction use.

- **Physical Properties:**

- Shape, hardness, and durability for material integrity.

- **Size Specification:**

- Sizing within the desirable range for construction aggregates.

- **Environmental Compliance:**

- Environmental safety regulations for reuse.

- **Quality Assurance:**

- Implement rigorous testing to guarantee aggregate quality for end-users.

~A\$ 12/t



~A\$ 10/t



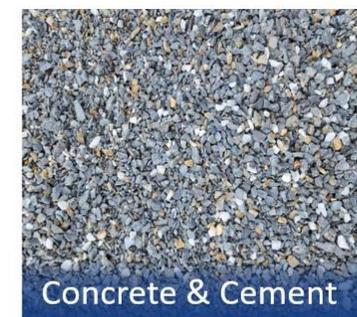
~A\$ 25/t



~A\$ 30/t



~A\$ 30/t



~A\$ 8/t

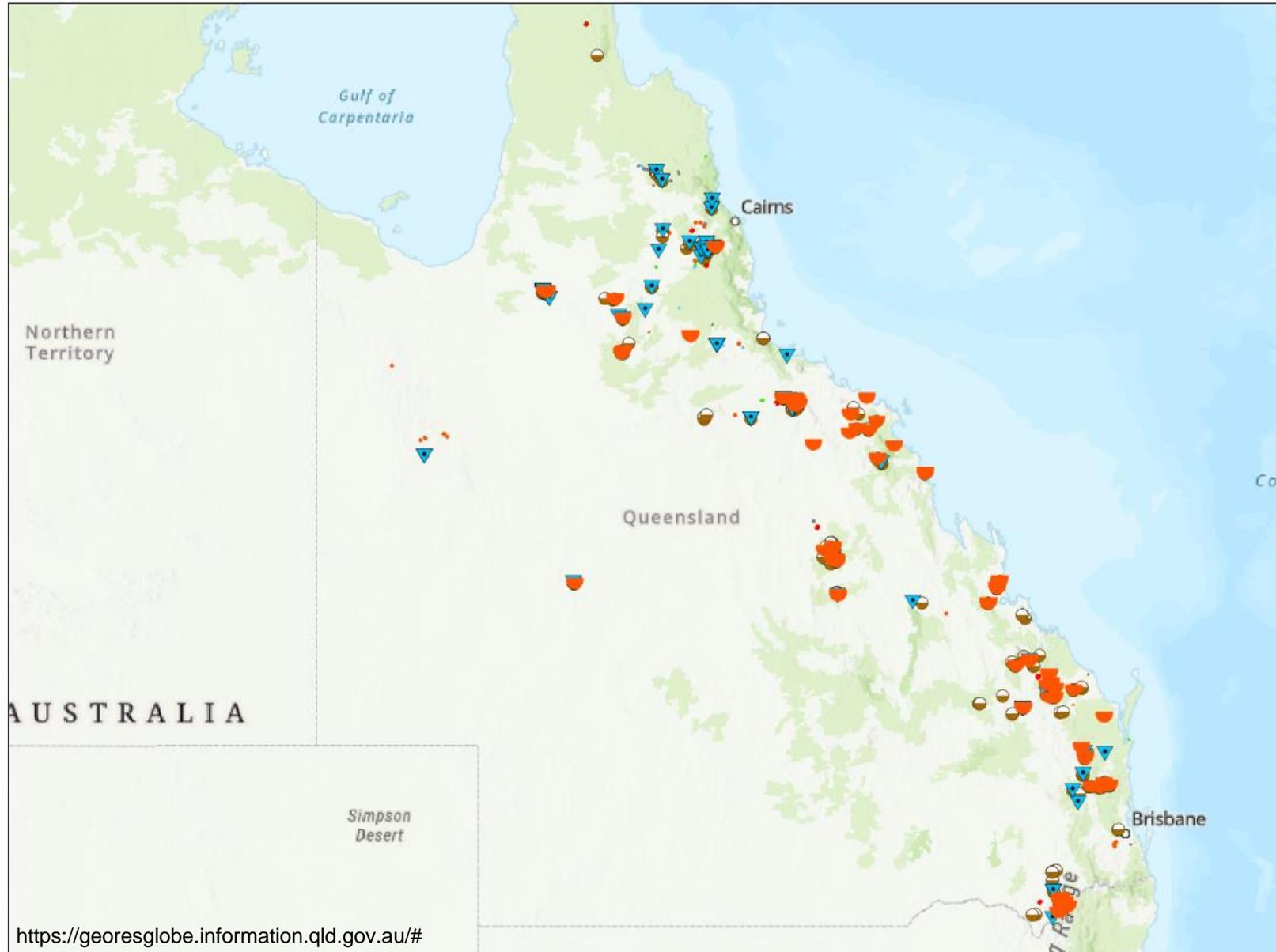


Historical Mine Workings



Wolfram Camp Historical Operations, QLD, Australia

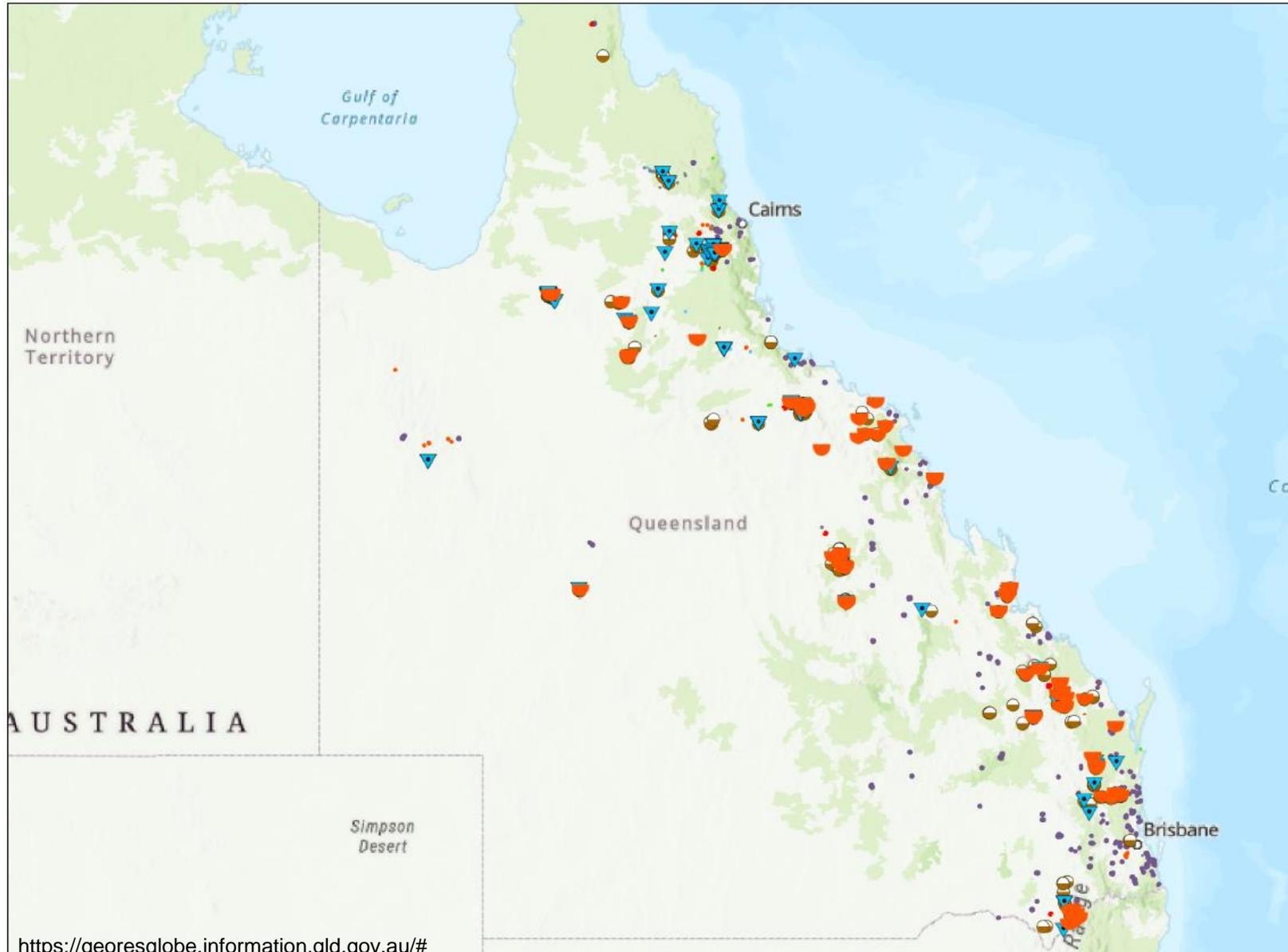
Historical / Abandoned Mines QLD



Legend

-  Shallow workings area
-  Pit (point)
-  Mineral material (point)
-  Shallow working (point)

Key Resource Area (KRA) + Abandoned Mines QLD

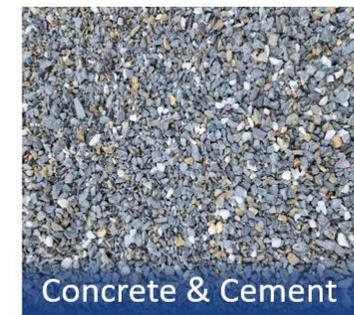


Legend

-  KRA resource/processing area
-  KRA separation area
-  Shallow workings area
-  Pit (point)
-  Mineral material (point)
-  Shallow working (point)

Creating Value From Waste Rock Dumps With The Use of Sorting Technology

- **Call to Action and Future Directions**
 - Encouraging further research and policy reform
 - Engaging stakeholders for sustainable mining practices
- Suggestion for a statewide **testing program**
- Importance of assessing **viability and value**
- **BFS** impacts, **PRCP** impacts, **environmental** benefits
- **Policy** considerations and challenges
- Transportation **subsidies**, **preferential treatment** in tenders
- Long-Term **Environmental Liability**



Recognition For Our Sustainability Efforts

Responsible and Sustainable Critical Mineral Production



Strategic Partners



Endorsement Through Funding & Grants

Strong Support for Critical Minerals Projects in Australia



Queensland METS Collaborative Projects Fund (METS Ignited) ASX Announcement 24 July 2020: [Government Support for Mt Carbine Mine Waste Transformation Initiative](#)
Advanced Manufacturing Growth Center (AMGC) ASX Announcement 25 January 2022: [Federal Government Co-Invests in High-Tech Ore Sorting](#)
Critical Minerals Accelerator Initiative (CMAI) ASX Announcement 19 September 2022: [Federal Government Funding for Mt Carbine Reconfirmed](#)

Successful Beneficial Reuse

A QLD Key Resource Supplier



**Job
Creation**



**Key
Resource
Production
& Sales**



**Revenue
Generation
-Company
-Government**

Successful Beneficial Reuse

A QLD Key Resource Supplier



**Local
Economic
Growth**



**Genuine
ESG
Commitment**



**Upskilling of
local
workforce**

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