



Marcus Dawe – CEO



MCI aims to profitably decarbonize global industries by turning CO₂ emissions into valuable products. The technology is globally scalable, targeted at the hard-to-abate sectors, and generating low-carbon building materials

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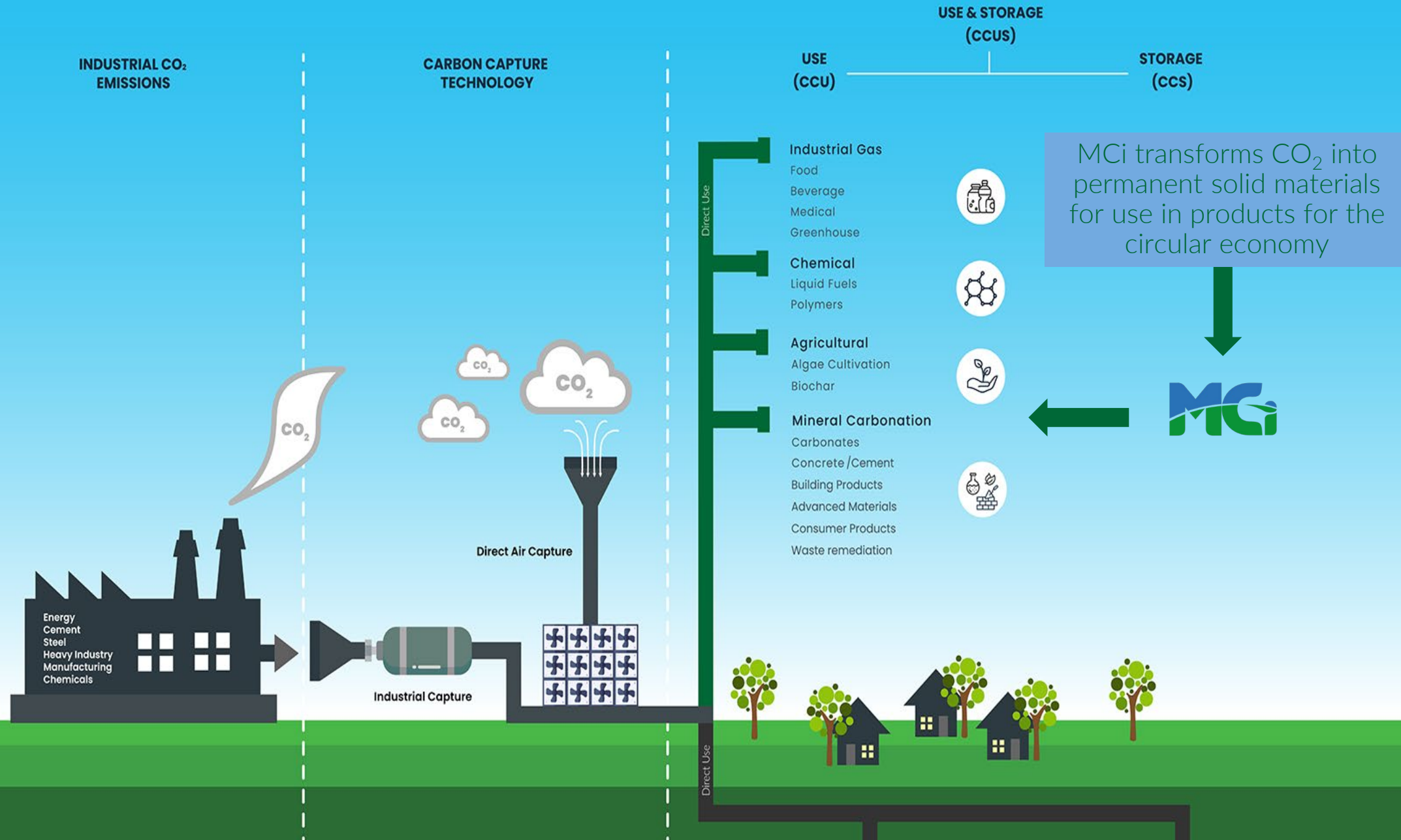
**We can capture carbon,
but what then?
Turning a profit will be key.**

Forbes – 27 January 2021

”



Where does MCI fit in the CCUS landscape?



MCI turns CO₂ into powder-like materials used in a range of products with climate benefits



Amorphous silica, SiO₂

- Cements, concrete
- Binders in advanced materials
- Low rolling resistance tires / conveyor belts

Calcium carbonate, CaCO₃

- Filler and whitening agent in a range of products (paper, paints, plastics etc.)

Magnesium carbonate, MgCO₃

Chemically benign, fire retardant, light weight materials with many possible uses:

- New plasterboards, cladding products
- Filler/reinforcement of plastics and rubber
- Production of "green" magnesia, MgO
- Fire retardant materials and insulators
- Bushfire retardant
- Magnesium cements
- Food additives
- Pharmaceuticals



MCi Energy & Mass Balance Summary

Item	Quantity	Units
Mineral feedstock (various)	3 – 4	tonnes/tonne CO ₂
Thermal energy	3 – 5	GJ/tonne CO ₂
Electrical energy	0.2-0.4	MWh/tonne CO ₂
Direct flue gas CO ₂ capture concentration (option)	>15%+	Techno-economic threshold for direct capture without need for separate CO ₂ e.g. Steel, cement, chemicals, W2E
Net direct CO ₂ abatement	85-90%	Note: Includes residual emissions from energy consumption and carbon capture (full lifecycle analysis)
Net Revenue per tonne CO ₂ avoided/stored	US\$0->US\$350	Customer techno-economic studies show multiple business cases demonstrating positive net revenues
Total CO ₂ avoided	2 – 3	tonne/tonne CO ₂ (including direct emissions abatement + avoided emissions from products)

* Performance is dependent on a number of factors including CO₂ content and mineral type. Our technology can provide both capture and conversion – it should not be compared to capture alone. We produce useful products which displace other energy and emissions intensive materials.



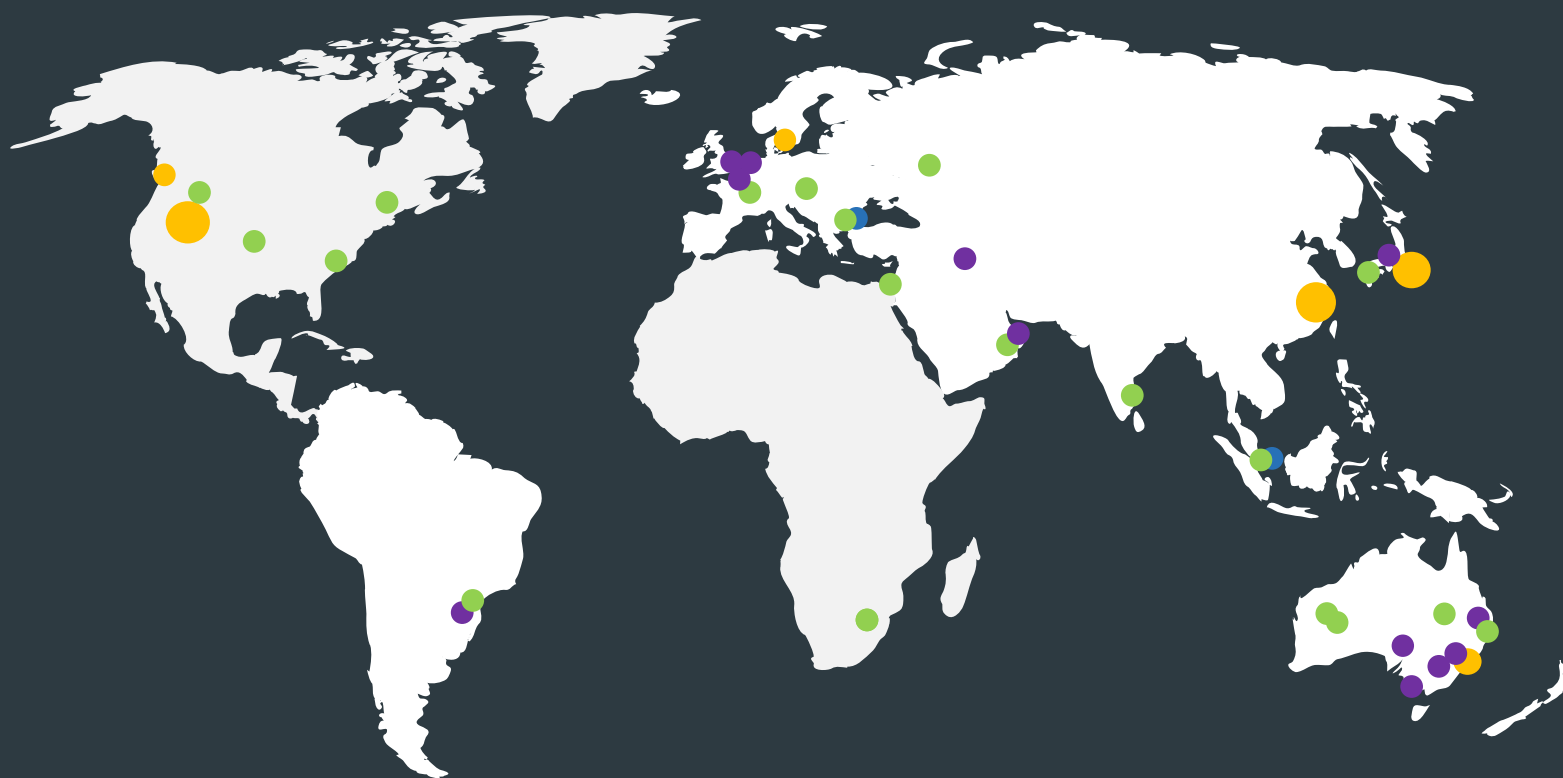
Demonstration Plant



MCi will begin construction of a 10k Tonne/P.A decarbonisation plant in 2022



Live Activity Pipeline (active engagements):



Abatement customers

Projects across several sectors:

- Steel
- Cement
- Mining / mineral processing
- Hydrogen / ammonia
- Waste to Energy
- Ports & energy hubs
- CCUS hubs & CO₂ capture projects



Low-carbon embodied materials customers

Manufacturers and researchers of products including:

- Cement / concrete
- Plasterboards
- Consumer products (paint, plastics, etc.)



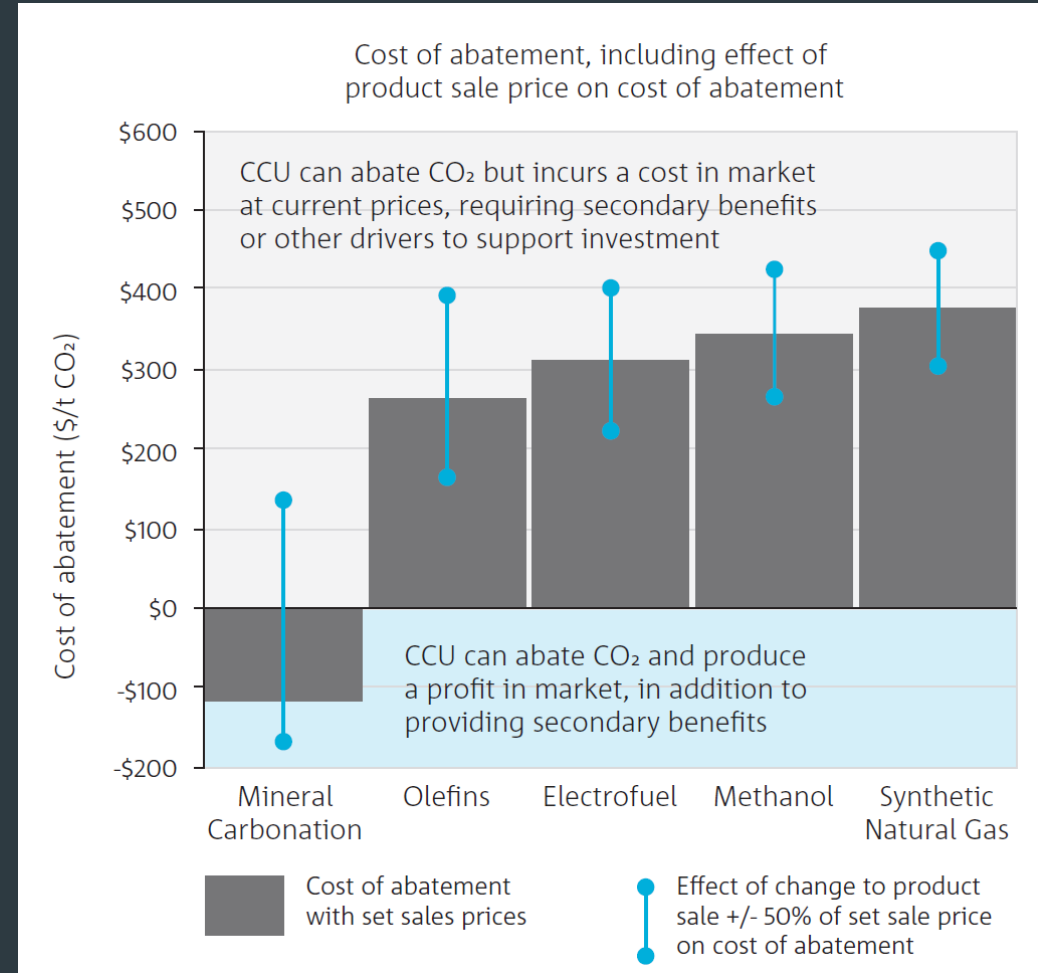
Partnerships

NDAs, MoUs and collaboration agreements with groups including:

- Global commodity traders
- Carbon traders
- Standards groups
- Industry consortia/bodies
- Feedstock suppliers
- Mining partners
- Engineering partners
- Capital partners

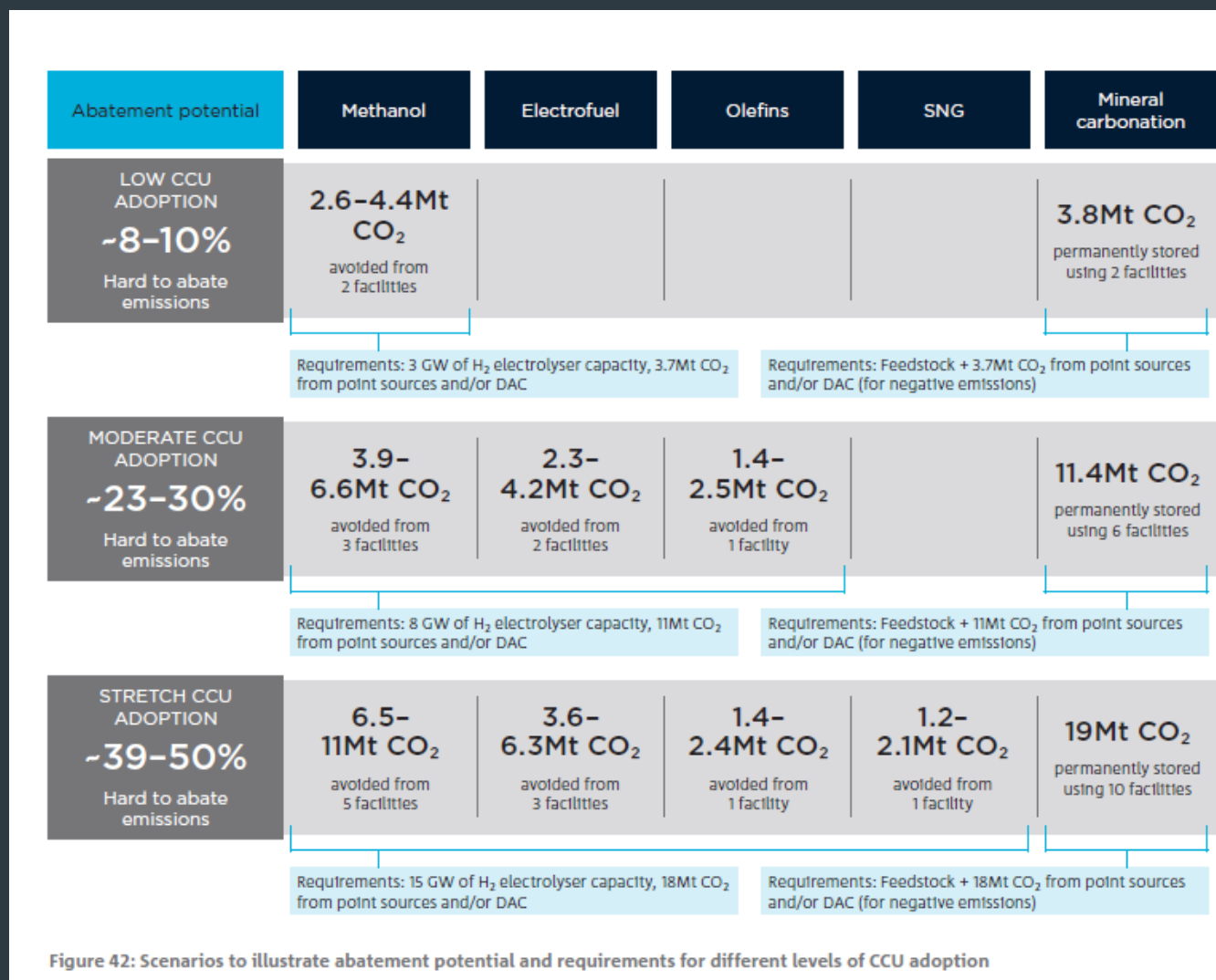


CO₂ Utilisation Roadmap



Source: CO₂ Utilisation Roadmap, p13

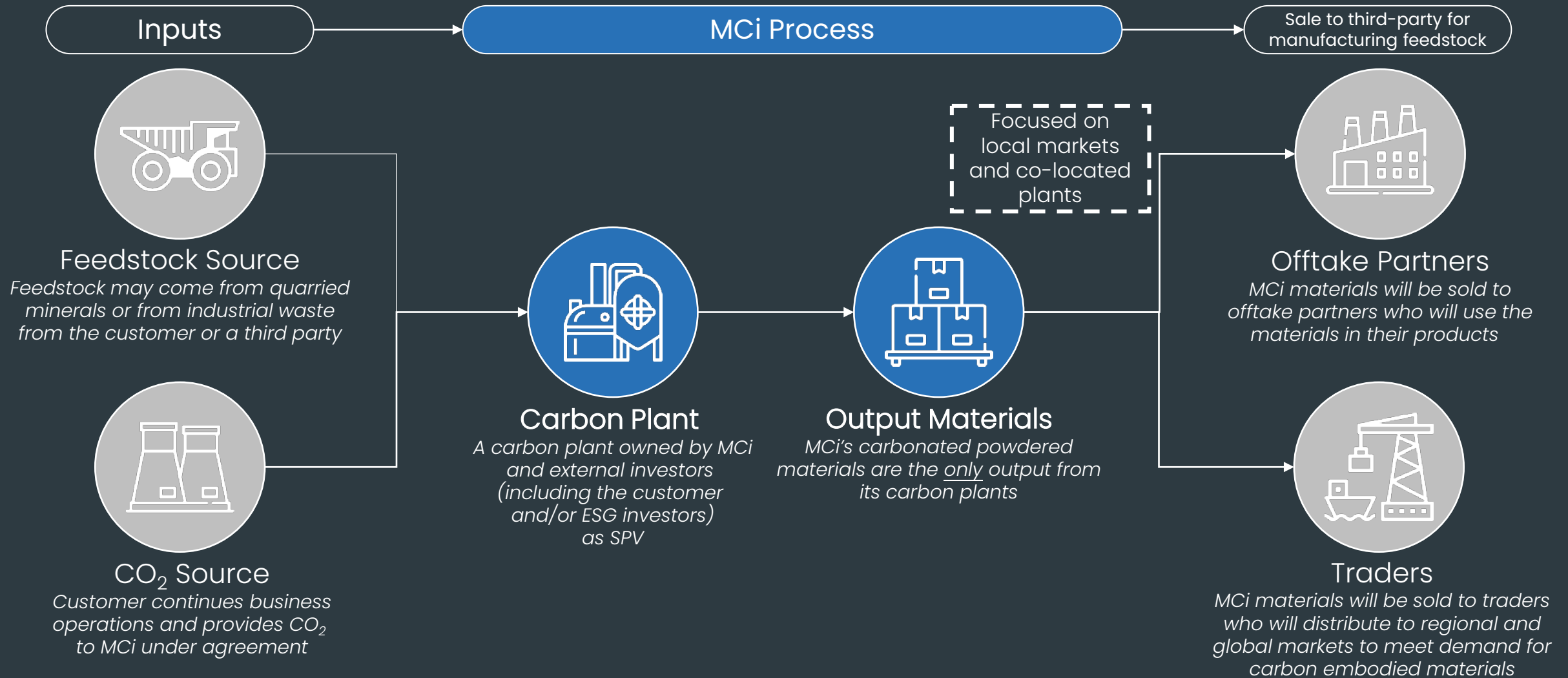
CO₂ Utilisation Roadmap



Source: CO₂ Utilisation Roadmap, p99

Direct integration into the customers' value chain

MCi plans to build carbon plants – Carbon Removal as a Service (CRaaS)



MCi is leveraging government and sector initiatives to create a decarbonised economy



- CO₂ Value Australia
 - Signed MOU with CO₂ Value Europe in 2020.
 - Advocating for the creation of a carbon processing industry in Australia.
 - Technologies and supporting businesses that transform CO₂ into fuels, chemicals and materials.



- Future Battery Industry CRC
 - Using MCi's pilot plant as a core R&D asset to fast-track Lithium Carbonate and other pathways



- World Economic Forum
 - MCi engaged in the Working Group for the World Economic Forum Value Model for Carbon in 2021
 - Opportunity to further engage in WEF Groups and Meetings through MCi COO's appointment to Young Global Leaders Community through MCi Carbon title.



- Materials and Embodied Carbon Leaders Alliance (MECLA)
 - MCi Carbon is a founding member.
 - Driving reductions in embodied carbon in the building and construction industry.



MCi is leveraging government and sector initiatives to create a decarbonised economy



- Australasian Iron & Steel Slag Association
 - Performing assessment of utilisation of steel slag as feedstock
 - Pathway for decarbonisation of steel making
 - Primary uses: hazard remediation, cement additives, refractory products



- HILT CRC
 - Decarbonising heavy industry CRC



- Minerals Research Institute of Western Australia (MRIWA)
 - Actively contributing to and providing consultation on the Western Australian Mineral Carbonation Roadmap



- SmartCrete CRC
 - MCi providing carbonated and silica material to be available for members to use in development



- Clean Energy Regulator
 - MCi active input and consultation on the development of carbon utilisation methodologies.





UN CLIMATE
CHANGE
CONFERENCE
UK 2021

IN PARTNERSHIP WITH ITALY

Awarded #1 Cleantech



"...the winning submission was MCI's scalable carbon platform technology that converts industrial carbon dioxide (CO₂) emissions into solid bulk materials."

Announced during the Net Zero Technology Centre's (NZTC) COP26 program, *'The Road to Glasgow: Destination Net Zero'*



"Winning company MCI showed true innovation as well as grit and resilience, which will stand them in good stead as they further develop their technology and grow their business."

Martin Gilbert, Chair of the NZTC Judging Panel



Mineral Carbonation International

Key funders



Supporters and partners



Recent media coverage



Thank you

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Join the discussion



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