



MINERAL CARBONATION INTERNATIONAL

In 2016 Mineral Carbonation International (MCI) switched on the world's first carbon reactor at the University of Newcastle in Australia. The pilot plant reacts industrial CO₂ emissions with alkaline mine waste to produce a range of carbonate products for the construction sector.

The Orica backed start-up joins a growing research effort targeting "negative emissions technologies" or "NETs". NETs aim to capture emissions at the source or remove them directly from the atmosphere for safe and permanent storage via physical or chemical means. The IPCC has said that it is now impossible to meet the 1.5C target established under the Paris Agreement without significant deployment of NETs.

Conventional wisdom views carbon emissions as waste and this viewpoint has underpinned the development of early carbon capture and storage (CCS) technologies. But by converting carbon emissions into useful new products MCI is part of an emerging subset of the NET industry. It's called carbon capture and utilisation (CCU) and it's transforming the way we think about carbon 'waste'.

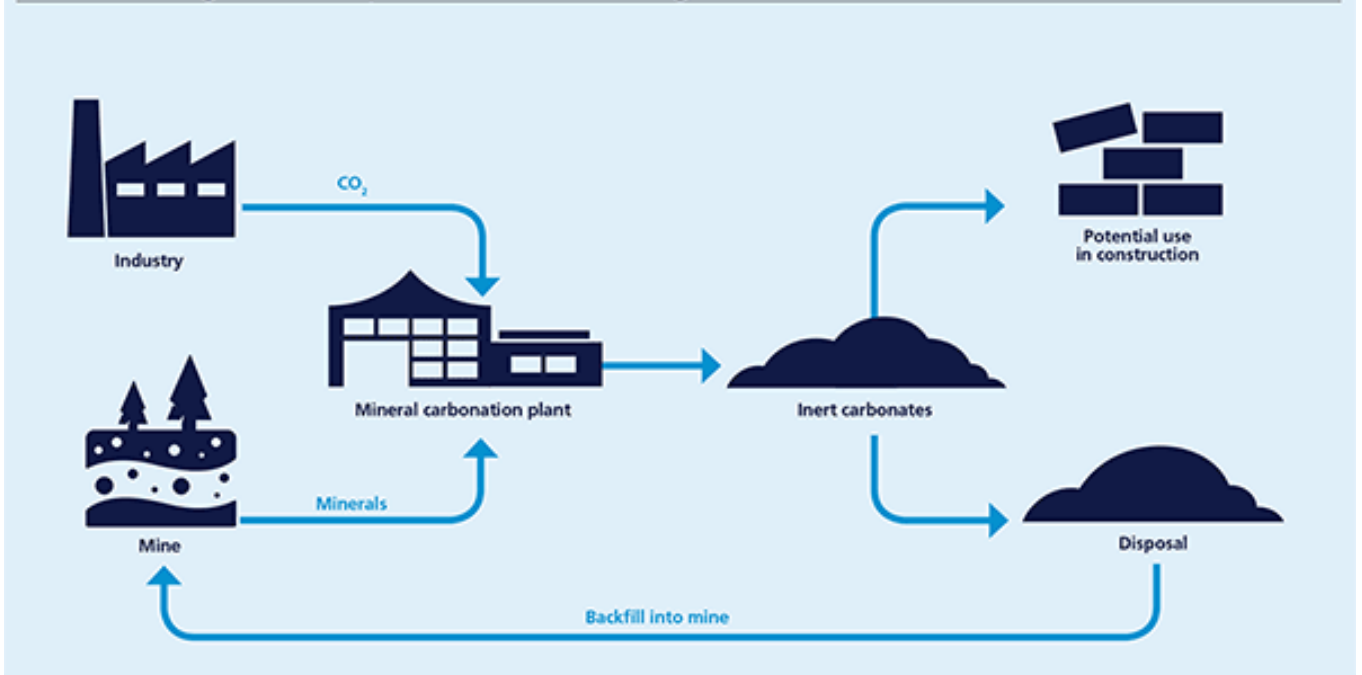
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Where CCS is driven by cost, CCU is driven by value.

By providing pathways for industrial partners to transform their CO₂ and alkaline waste streams into useful products such as cement, aggregate, plaster board and pavers, MCI is decoupling its NET from legislation and subsidies. “If we can create business models,” says COO Sophia Hamblin Wang “we can incentivize these industries quicker than waiting for governments to legislate.”

Transforming CO₂ into products for building



The commissioning of the new research plant and signing of the MoU follows nine years of R&D investment undertaken by the joint venture partners Orica, GreenMag Group and the University of Newcastle, in a research initiative worth AUD\$10m, funded by Orica, Commonwealth and New South Wales Governments and supplemented by the R&D rebate scheme.



