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## AN AI PLATFORM FOR OPTIMISING CONCRETE RECIPES

 PROPERTY & CONSTRUCTION

### The startup aims to reduce costs and carbon emissions of concrete production by combining data and artificial intelligence

**Spotted:** Concrete is the **second most** consumed substance globally, responsible for more than four billion tonnes of CO2 emissions yearly. As well as the high carbon footprint of its production, the raw materials used in concrete are not always readily available, and vary in quality, which can lead to inconsistencies in concrete performance and appearance. To help mitigate this problem and cut carbon emissions, AICrete offers a unique ‘recipe-as-a-service’ platform that leverages artificial intelligence (AI), machine learning, and domain knowledge to reduce concrete’s cost and environmental impact.

The platform works with concrete producers to optimise local materials to minimise their concrete mixture costs, reduce the amount of cement used, reduce their CO2 footprint and almost triple profit margins for concrete producers. AICrete also optimises the concrete mixtures in days, brings the best practices and technical expertise to the entire industry, and powers concrete producers with the ability to respond to and improve supply chain issues. The technical teams also work to discover and develop more advanced, cost-effective, durable, and sustainable concrete mixtures.

With AICrete, the customer sets out what properties they would like to achieve and provides raw material data sheets and costs for concrete mixtures they want AICrete to optimise. Then, the customer ships samples of raw materials to AICrete’s lab in California and the platform uses its proprietary models, algorithms, and database to test various combinations of the raw materials in order to achieve the customer’s specific objectives, while keeping cost and CO2 per cubic yard to a minimum. This optimised concrete mix is then sent back to the customer.

Video source [AICrete](#)

The startup recently received an investment from CRH Ventures. Through the partnership, AICrete looks to expand the proof of concept, scale commercially, enhance the database, and improve predictive machine learning models.

Given its huge climate footprint, many innovators are working on making concrete more sustainable. Springwise has spotted a research team [converting fly ash](#) into environmentally friendly concrete and an [all-electric concrete mixer](#).

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19th May 2023

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### **Takeaway:**

In 2021, worldwide production of concrete was responsible for [1.67 billion tonnes](#) of CO2 emissions, and production is only likely to increase as countries across the globe urbanise further. As the demand grows, so do the emissions, and AICrete reflects a growing need to find sustainable alternatives to producing such a sought-after material. The platform makes concrete production as efficient as possible, improving results for its clients and the planet.