

COMPANY

ideas*

LOCATION

Melbourne, Australia

SOFTWARE

Autodesk® Inventor®
AutoCAD®

From refuse to reuse

Autodesk Inventor software and Digital Prototyping help ideas* design to develop one of the world's most advanced construction recycling facilities

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—**Michael Percy**
Managing Director
ideas*

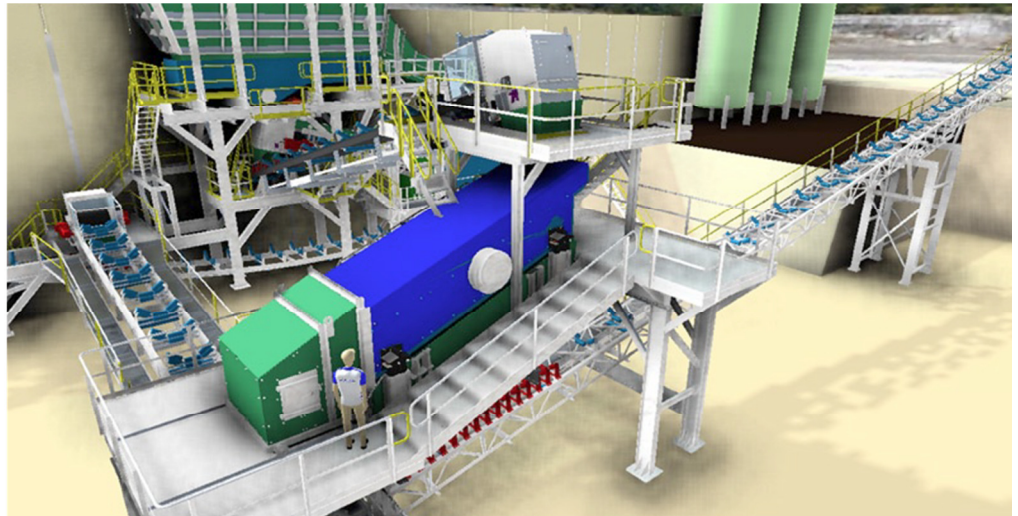


Image courtesy of ideas*.

Project summary

Headquartered in Melbourne, Australia, ideas* is an engineering services firm dedicated to developing innovative process, manufacturing, and technology solutions. Beginning as a design services firm in 1994, the company now comprises a team of 16 engineers, project managers, and business consultants with core competencies in the areas of mechanical, structural, and electrical engineering design, process modeling, and detail design.

ideas* believes that taking a smarter, more collaborative approach leads to better outcomes. The firm discusses ideas and objectives with its clients, holds various workshops, and provides guidance throughout the decision-making process. Its clients range from startups to established brands in a diverse range of industries, and its portfolio includes such high-profile names as Orica, George Weston Foods, Alcoa, and BlueScope Steel Ltd.

ideas* is also known for its innovative designs and exacting engineering in the recycling and renewable energy sectors, helping clients develop effective strategies to reduce their carbon footprint and environmental impact. The company has been involved with a number of large-scale waste

recovery initiatives, including rubber, waste heat recovery, and biomass opportunities in conjunction with renewed carbon.

Recently, ideas* garnered praise for its innovative work on a project for the Alex Fraser Group, winning commendations in the Industrial Development and Manufacturing category of the Victorian Engineering Excellence Awards. The project entailed providing detail design and engineering for a massive \$20 million, state-of-the-art construction recycling facility.

The size of four football fields, the plant was designed to efficiently recycle 1 million tons of discarded construction and demolition materials per year. Since products made from recycled concrete have 65 percent less carbon impact than products made from quarried stone, the recycling facility promised to significantly reduce the environmental impact of construction projects throughout Australia.

Autodesk Inventor software provided ideas* with greater flexibility to design an award-winning recycling facility

To help streamline the design process and improve collaboration with a multitude of fabricators on the project, ideas* created a single digital model with Autodesk® Inventor® software. By implementing the Autodesk solution for Digital Prototyping, the firm was able to:

- Increase productivity among designers and engineers by 20 percent
- Improve overall quality as a result of greater collaboration with fabricators
- Win over a diverse group of stakeholders with stronger visualization
- Meet a 10-month deadline from initial design to final installation

The challenge

The Alex Fraser Group project came with a tight time frame, so the design work had to be split and subcontracted to 14 different fabricators—something ideas* did not need to consider on previous projects. The company needed a solution that bridged the typical gaps of understanding between conceptual design, engineering, and manufacturing teams.

“One of the key things that sets us apart from the competition is our commitment to keeping all stakeholders in the loop,” explains Michael Percy, managing director. “In order to offer a more interactive and consultative experience that enables everyone to explore ‘what-ifs’ throughout the design process, we needed to move beyond 3D to Digital Prototyping.”

The solution

ideas* used Autodesk Inventor software to digitally prototype the recycling plant. This provided the flexibility to integrate all structural and mechanical

components, effectively communicate the design, and help enable rapid modification during the many design iterations. Key plant features designed with the software included a “dual jaw crusher” for breaking down construction materials into smaller chunks, a comprehensive multilayered separation system, and a high-capacity “pug mill” for grinding and mixing materials to form high-quality road base materials.

Equally important, Autodesk Inventor software provided a platform that enabled ideas* to more seamlessly integrate design aspects that leveraged its investment and commitment to AutoCAD® software. By expanding on its AutoCAD skills while adopting the new strategy, the company could reduce the cost of transition and decrease disruption to its production schedules.

The result

With design work on the Alex Frazer project subcontracted to 14 different fabricators, Autodesk Inventor software provided a flexible, central management point for the different teams, facilitating important design revisions across the entire project. The collaborative approach helped increase overall productivity by 20 percent and helped enable the entire project to be installed within 10 months of the first designs.

“A design project of this scale would have been impossible without Autodesk Inventor,” says Percy. “All team members used Inventor to create digital prototypes, enabling faster design decisions and improvements earlier in, and throughout, the design process. The result was a greatly improved system, with less costly rework and modifications during installation and commissioning.”

Using Autodesk Inventor software allowed ideas* to take a more intelligent and effective approach to its ambitious project. This, in turn, led to a better outcome for its stakeholders. In fact, the outcome can best be summed up by John Brumby, premier of Victoria, Australia, who said: “This plant is not just the best plant in Melbourne, Victoria, or Australia. It ranks up there with the very best plants of its type—anywhere in the world.”

For more information

To find out how Autodesk solutions can help you get innovative products to market faster, visit www.autodesk.com/inventor.

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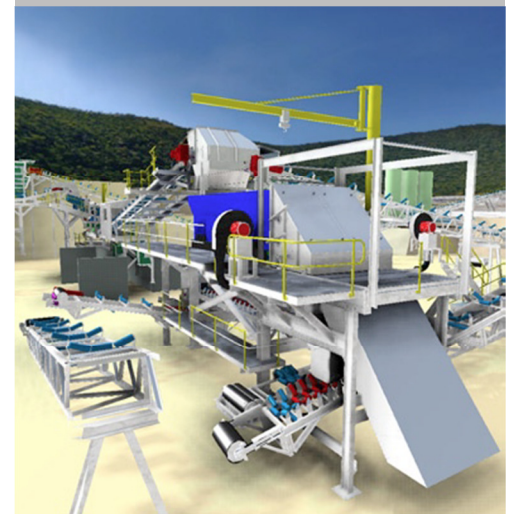


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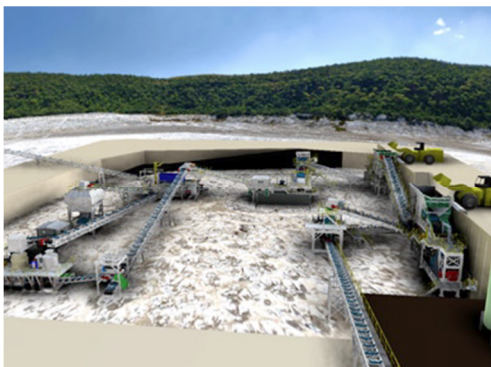


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