

AT A GLANCE

Company: MegaHouse
URL: www.MegaHouse.co.jp
Location: Tokyo, Japan
Industry: Developer and manufacturer of high precision figures and toy foods

Challenges

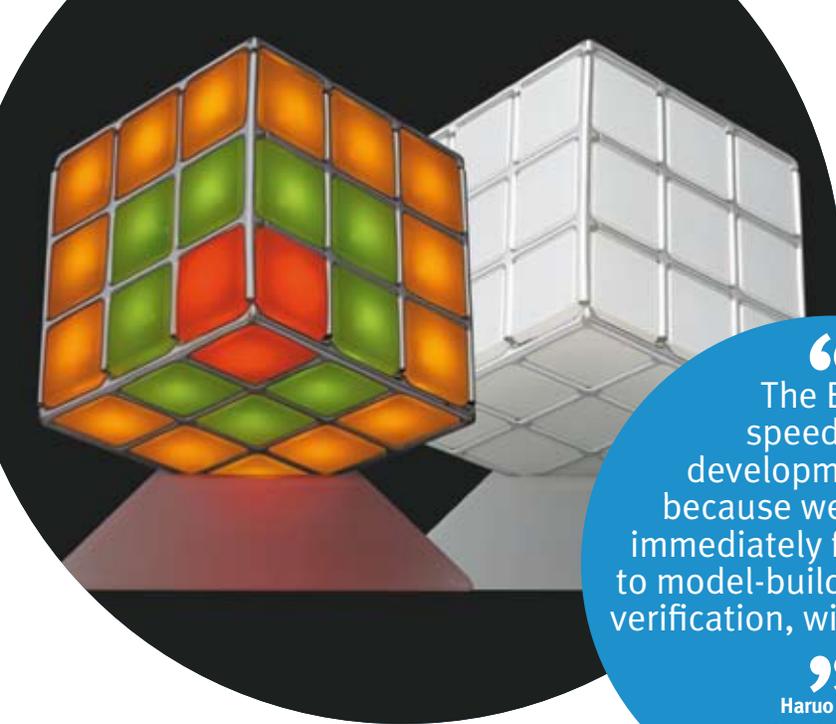
Due to short product life cycles, with many products requiring a high number of parts and detailed surfaces, MegaHouse needed to cut product development time and cost.

Solution

In-house prototyping using the Eden260™ 3D Printing System

Results

- > Significant reduction in development time
- > More accurate die fabrication, reducing post processing modifications
- > Dramatic cut in prototyping cost due to in-house fabrication



“
 The Eden speeds our development cycle because we can move immediately from drafting to model-building and on to verification, with no time-lag

”
Haruo Oishi
 General Manager
 Development Design
 Department

Realizing efficiency in the design and development process and considerable cutback in the development cost according to the installation of an Eden machine



MegaHouse Boosts Design & Development Efficiency with Edenz260™

Tokyo-based MegaHouse develops and manufactures high-precision figures and toy foods targeted to both adults and children. Because the company serves a wide range of customers and its products often comprise many finely detailed parts and usually have short life cycles, MegaHouse works hard to streamline development.

To reduce costs and speed time to market, MegaHouse has focused on improving the efficiency of its design process. It installed 3D CAD tools and attempted to cut development costs by enhancing its die fabrication process. MegaHouse subcontracted prototyping and created

just one prototype for each product. Consequently, preliminary examination according to prototyping was insufficient and design defects were often found after the die was fabricated. The post-process design changes, die modifications and other steps needed to correct the problems extended development time and added extra costs – just the opposite of what MegaHouse needed.

Ease of use and high precision makes Edenz260™ a winner

MegaHouse considered its rapid prototyping options and decided that installing an RP system onsite was the best way to reduce prototyping costs, increase access to prototypes, improve design quality and reduce development time.

It selected Objet's Edenz260™ because the 3-dimensional printing system enabled molding with a high level of precision, supporting their need to verify mechanisms, and because it was easy to use, enabling MegaHouse to create molds with non-expert staff. The strength of Objet's FullCure® materials was another advantage of the Edenz260™ as it allowed MegaHouse designers to test the models without fear of damaging them.

Benefits exceed expectations

The Edenz260™ proved its value within a very short time, bringing benefits that went far beyond what MegaHouse had expected.

The Edenz260™ makes it possible to easily obtain a high-precision prototype in the early stages of conceptual design. This means that design work can now proceed without the delays MegaHouse used to incur while waiting for the service bureau, thus considerably reducing design time. Also, the Edenz260™ enables design defects to be found before the die is fabricated, avoiding the post-

processing changes that had previously cost MegaHouse so much time and expense. The ability to handle virtually all prototyping in-house has created significant cost savings for MegaHouse. Also, due to the weakness of the material used for the prototypes that were subcontracted, the strength could not be verified until a molded product made with the die was available. Now, with the Eden260™-produced models, product strength and parts fit can be verified during development. Because it is so easy and cost effective to make models using the Eden260™, the models can be repeatedly and even somewhat roughly handled. This allows everyone in the design and development team to examine and “play” with them, improving understanding and enabling more effective product verification and quality assurance. This has been particularly noticeable when verifying the constitutional parts.

Even the sales department has benefited from the installation of the Eden260™, as presentation models are now used in sales activities right from the early stages – an important competitive advantage for MegaHouse.

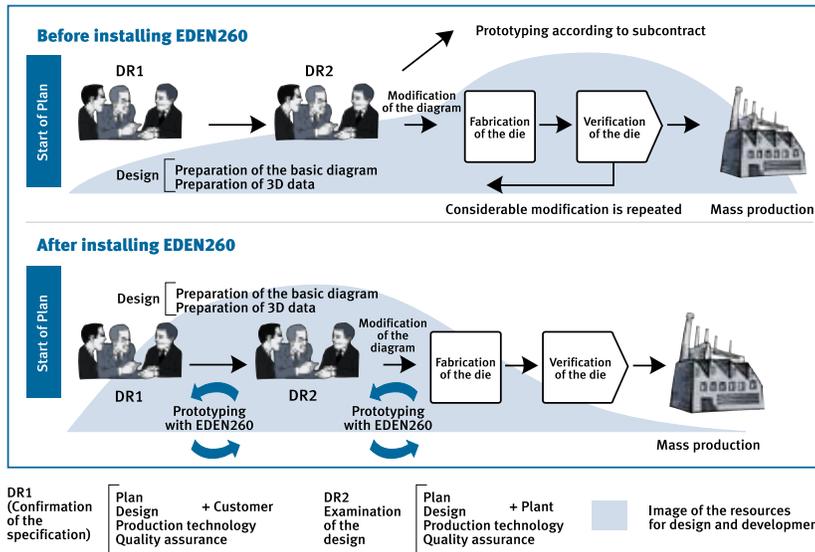


Figure 2: Significant changes in the product development process before to after installing Eden260™. Sufficient examination was enabled at the upstream of the product development process and big changes in the design at the downstream decreased with the installation of the Eden260™. Reduction in the development period can be achieved

About Objet Geometries

Objet Geometries Ltd., the innovation leader in 3D printing develops, manufactures and globally markets ultra-thin-layer, high-resolution 3-Dimensional printing systems and materials that utilize PolyJet™ Polymer Jetting technology, to print ultra-thin 16-micron layers.

The market-proven Eden™ line of 3D Printing Systems and the Alaris™30 3D desktop printer are based on Objet’s patented office-friendly PolyJet™ Technology. Connex500™ is based on Objet’s PolyJet Matrix™ technology, which jets multiple model materials simultaneously and creates composite Digital Materials™ on the fly. All Objet systems use Objet’s FullCure® materials to create accurate, clean, smooth and highly detailed 3-dimensional models.

Objet’s solutions enable manufacturers and industrial designers to reduce cost of product development cycles and dramatically shorten time-to-market of new products. Objet systems are in use by world leaders in many industries, such as automotive, electronics, toy, consumer goods, and footwear industries in North America, Europe, Asia, Australia and Japan.

Founded in 1998, Objet serves its growing worldwide customer base through offices in USA, Europe and Hong Kong, and a global network of distribution partners. Objet owns more than 50 patents and patent pending inventions.

Objet Geometries Ltd.
Headquarters
2 Holtzman st.,
Science Park,
P.O Box 2496,
Rehovot 76124, Israel
T: +972-8-931-4314
F: +972-8-931-4315

Objet Geometries Inc.
North America
5 Fortune Drive
Billerica,
MA 01821
USA
T: +1-877-489-9449
F: +1-866-676-1533

Objet Geometries
GmbH
Airport Boulevard B 210
77836 Rheinmünster
Germany
T: +49-7229-7772-0
F: +49-7229-7772-990

Objet Geometries AP
Asia Pacific
Unit28, 10/f, HITEC
1 Trademart Drive
Kowloon Bay, Kowloon
Hong Kong
T: +852-217-40111
F: +852-217-40555

Objet Geometries AP
Limited China Rep Office
Rm1220, CIMIC Tower,
1090 Century Blvd,
Pudong Shanghai
2000120 P. R. China
T: +86-21-5836-2468
F: +86-21-5836-2469



Figure 1: Prototype of an illuminated cube created on the Eden260™. Stylish Rubik’s-Cube-shaped plug-in speaker flashes lights to music in your private space!

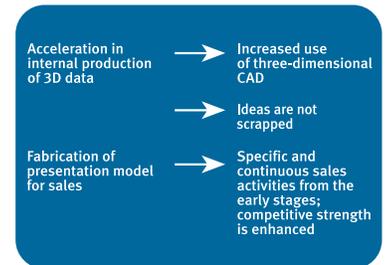


Figure 3: Installation effect + α . Effect of installing Eden260™ was manifested in a manner much greater than what was imagined at the time installation was being studied.

info@objet.com www.objet.com

© 2009 Objet, Quadra, QuadraTempo, PolyJet, FullCure, SHR, Eden, Eden250, Eden260, Eden260V, Eden330, Eden350, Eden350V, Eden500V, Job Manager, Objet Studio, CADMatrix, Connex, Connex500, Alaris, Alaris30, PolyLog, TangoBlack, TangoGray, TangoPlus, VeroBlue, VeroWhite, VeroBlack, VeroGray, Durus, Digital Materials, PolyJet Matrix and ObjetGreen are trademarks of Objet Geometries Ltd. and may be registered in certain jurisdictions. All other trademarks belong to their respective owners.

