

# i-DESIGN Engineering Centre

Increasing productivity by 40% with CATIA



## Overview

### ■ Challenge

*i-DESIGN Engineering Centre needed to increase its competitive advantage in product design and design reuse*

### ■ Solution

*The company chose CATIA for its superior design capabilities*

### ■ Benefits

*i-DESIGN increased productivity by 40% and reduced design errors three-fold enabling the company to double the number of new projects*



"The productivity of our designers has increased by 30-40% enabling us to double the number of projects implemented."

S.V. Gromovoy,  
Cad. Sc. (Engineering) Director  
i-DESIGN Engineering Centre LLC



### Russian design leader

i-DESIGN Engineering Centre LLC is the partner of major Russian automotive companies such as KAMAZ, IzhAvto, and Group GAZ, and specializes predominantly in the design and engineering of motor vehicles. Established in 2005, the company's main activities include scientific and technical support for small businesses along with the development and implementation of innovative projects in the fields of industrial design and engineering.

i-DESIGN manufactures new vehicles such as bonneted trucks and upgrades existing cars in its IZh-series. It also designs consumer goods projects such as massage beds and equipment, upright tanning beds, and hunting rifles. i-DESIGN also provides interior designs for industrial, commercial, public, and residential buildings. Thanks to its expertise, i-DESIGN was awarded the Golden Mercury 2007 - the national prize of the Russian Chamber of Commerce and Industry in the area of business activities and named the best innovative small company.

### Decision to introduce CATIA

In an effort to increase competitive advantage over its competitors, i-DESIGN Engineering Centre decided to adopt high-performance software technology capable of handling its complex design needs. After benchmarking several CAD systems, i-DESIGN chose CATIA based on its superior design capabilities and its leading reputation on the market.

Most orders received by i-DESIGN are requests to upgrade previously manufactured products. These include modifying product exteriors, developing new interiors, or providing new structures that need to be adapted to a vehicle's existing framework. Since customers often have no digital models of their products and can only provide either drawings or samples of their parts, i-DESIGN engineers use CATIA's efficient solid and surface modelling tools to create a virtual 3D model of the existing structures that correctly reflects all the vehicle's features and that can be used for future upgrades.



Since CATIA makes reverse engineering easy, i-DESIGN engineers can digitally capture physical prototype shapes to create a 3D model of any product. CATIA's intuitive and ergonomic interface reduces the time it takes to create these digital models and makes change management painless thanks to associativity with downstream applications. The reverse is also true: once design changes are incorporated, production data and processes are automatically updated reducing the possibility of error and assembly problems down the line.

### Improved product quality

Technical and ergonomic improvements in vehicles are just some of the benefits i-DESIGN derived from using Dassault Systèmes solutions. "Using CATIA has definitely helped us improve the quality of our products," said S.V. Gromovoy, Cad. Sc. (Engineering) Director, i-DESIGN Engineering Centre LLC. "And it's our customers who tell us that the design and reliability of our products have improved!"

Other benefits for i-DESIGN include: improved project management; fewer errors during the design phase by a factor of two to three; and increased worker productivity. "The productivity of our designers has

increased by 30-40% enabling us to double the number of projects implemented," said Gromovoy. In addition, engineers appreciate CATIA's user-friendliness and intuitive, straightforward interface. "This makes it possible for them to rapidly learn how to use the system while preserving their preferred way of working," said Gromovoy.

### Data and project management

The company's next task is to further improve design methodology, create an integrated information model of its products by developing tools for simultaneous design, and introduce a PDM system. i-DESIGN plans to enhance its data and project management capabilities with ENOVIA to capitalize on company know-how and to refine some of its company standards. "Making this information available to all our engineers will increase our production capacity even further and enhance our service offering to our customers," concluded Gromovoy.

"Using CATIA has definitely helped us reduce design errors three-fold and improve the quality of our products, which is confirmed by our customers"

S.V. Gromovoy,  
Cad. Sc. (Engineering) Director  
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