

Ford Product Visualization Center, US

From physical prototyping to 3D virtualization



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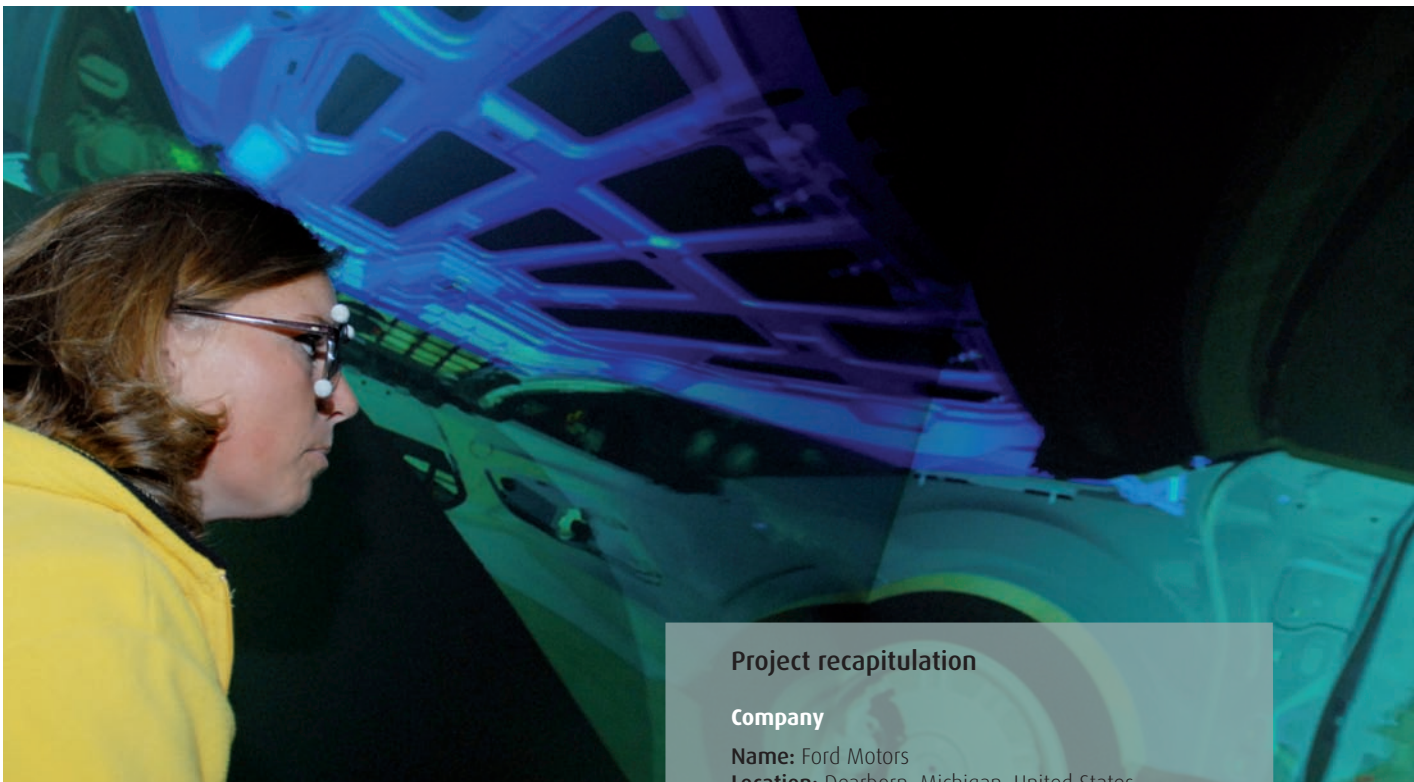
Bob Coury, Ford Core Vehicle Architecture supervisor

Prototyping and design evaluation consume a great deal of time in the automotive product development process. That’s why Ford’s North American product development team decided to check out the company’s European virtual reality center in Germany, and investigate similar facilities at competitive automakers. After an extensive review, they wanted to pattern their new digital lab like their overseas counterpart. Ford officials consulted Barco to help with the system design and implementation of their virtual environment.

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Ford adopts Barco's immersive, virtual environment

Ford's new digital lab consists of Barco's **I-Space**, a four-sided immersive virtual room. The walls are rear-projected screens that display computer-aided designs (CAD) in full 3D. Eight Barco high-resolution, stereo-enabled projectors provide the visual quality to produce photorealistic images. Engineers wear electronic glasses to experience the car designs in 3D from all angles, inside and out. Hand- and head-tracking technology monitors the user's movements within the visual data and adjusts the user's visual perspective. It also enables the user to interact with the CAD image.

"Our new Product Visualization Center represents the next step in advancing automotive designs and differentiating our brand in the marketplace," said Bob Coury, Ford Core Vehicle Architecture supervisor. "Barco's I-Space will be critical in our development efforts to deliver quality products at the right times and ahead of the competition."

Project recapitulation

Company

Name: Ford Motors

Location: Dearborn, Michigan, United States

Products and services: car manufacturer

Website: <http://www.ford.com>

System specifications

Virtual room: four rear-projected walls

Projection: eight SIM 6 Ultra II projectors

Visualization: passive 3D stereo

Tracking: head and hand tracking

Faster, more efficient auto development

"Barco's I-Space allows our engineers and designers to see three-dimensional models of vehicles and components at full scale," said Mr. Coury. "It will reduce the need for physical prototypes, saving both time and money in the development process."

With the Barco I-Space in place at the Dearborn facility, Ford now has the capability to remotely collaborate with its European center. This enables design teams on both sides of the Atlantic to be immersed in the CAD data for virtual analysis, decision-making, and development of global vehicle platforms.