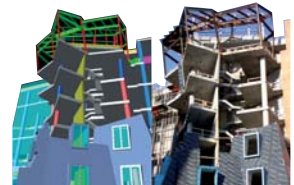


# Addressing the Needs of the AEC Industry with Digital Project

Gehry Technologies helps the AEC industry make the transition from a drafting and paper based project management culture to one based on 3D digital design and construction with its CATIA-based building information modeling system – Digital Project.

**F**ounded in 2002, Gehry Technologies, a consulting and development firm of 80 people, provides a suite of products and services tailored to the architecture, engineering and construction industry. Based on the experience of the Frank Gehry R&D team and high end technologies from Dassault Systèmes, Gehry Technologies applies advanced digital technologies to complex building projects and supports its clients in their transition from a drafting and paper-driven approach to digitally-enabled design and construction methods and processes.

Gehry Technologies combined PLM's 3D design and data management capabilities with project experience gained while using Dassault Systèmes'



3D solutions over the years to create Digital Project, a CATIA-based building information modeling (BIM) system. A platform that includes Dassault Systèmes solutions as well as dedicated software developed by Gehry Technologies, Digital Project generates a single digital model that can be accessed and modified by all teams participating in the same building project.

## OVERCOMING CULTURAL HURDLES

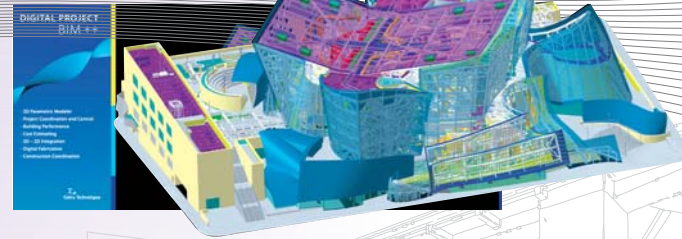
Convincing the AEC industry to adopt 3D digital-based technology has not always been easy for Gehry Technologies. Edoardo Luzzatto-Giuliani, Director, Europe Gehry Technologies Inc explains, "We faced many challenges in the past as we applied, to the architecture and construction industry, technology that had been traditionally developed and reserved for the automotive, aerospace and consumer goods industries. We were seen, back then, as the "new kid on the block" with powerful technology that even though is proven today, was not culturally accepted or understood by this industry back in 2002." One of the hurdles Gehry Technologies had to overcome is the fact that the AEC industry does not see a parallel between the way building projects are designed and built and the way

projects are designed and manufactured in other industries. Mr Luzzatto-Giuliani comments, "In the automotive industry, for example, design engineers model all the details of a car down to the way elements are bolted or welded together. In AEC, designers model things from a macroscopic and functional perspective thus working at a higher level of component granularity."

**W**e help architects by providing 2D drawings derived from the 3D single model.

Why, then, are more and more architectural firms turning to Gehry Technologies and its Digital Project? "We provide them with solutions that allow them to develop and resolve complex projects either in form (complex shapes) or by their function (quantity of systems to be integrated) and to incorporate the notion of constructability and fabrication early on in the design stages.

Building professionals also have better control over a project since they can integrate, iterate, optimize and coordinate their information more efficiently. This ensures project coherency and the fact that it can be built in accordance with financial and planning obligations as well as design intent", explains Mr Luzzatto-Giuliani. "Finally, we help architects minimize their exposure



by providing 2D drawings directly derived from the 3D single reference model, making them more accurate", he adds.

## REDUCING COSTS AND WASTE THANKS TO 3D

Economic factors drive many of the decisions made during a building project. The difficulty with the current 2D-based process used by most architects and engineers is that it is not easy to integrate downstream information. Managing building information reduces waste and construction time since potential problems, detected upstream and corrected early, do not appear during construction where errors would be more costly to repair. Digital Project helps identify these potential problems early resulting in considerable cost savings.

Optimizing designs also reduces waste and costs. Floor space, for example, is expensive so architects need to minimize the loss of floor square footage by optimizing space utilization of the different systems. Managing this level of information requires a system that can provide visibility and coordination between the different professions. Plus, the more information you have upfront, the better the quality of the design. The cost of building design is approximately 5% of the cost of construction, which itself is 5% to 20% of the cost of operating and maintaining a building. Decisions that are made during the design phase will therefore, affect operating costs. Simulating maintenance

operations in a digital environment can help architects determine whether the space allotted for repairs and maintenance is sufficient.

## NEW ENVIRONMENTAL CONCERNS CAN EASILY BE ACCOUNTED FOR

As buildings and their technological and environmental specifications become more complex, architects and engineers are seeing the benefits of using a system such as Digital Project. They can perform high level analyses and integrate advanced building requirements such as the need for lower energy consumption, rainwater recycling, etc. Digital Project gives architects and engineers an early view of the finished project thereby providing owners and developers visibility on the impact and economies green building related choices can provide. By working on a single model, structural and clearance problems can be dealt with before tender, and bills of materials and construction

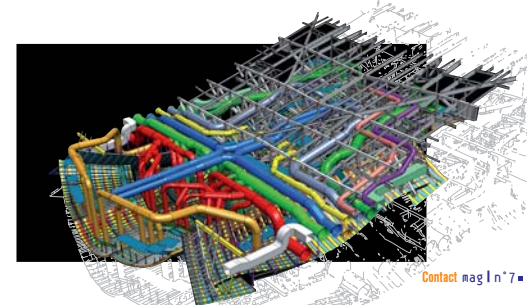
considerations can be more accurately analyzed and priced. A unique 3D model also helps keep material quantities under check when bidding on a building project. All materials are accounted for through the 3D master model practically eliminating the risk of over-ordering and driving up costs • ]

For more information:  
[www.gehyrtechnologies.com](http://www.gehyrtechnologies.com)

## About Gehry Technologies

Gehry Technologies provides three basic configurations of its Digital Project:

- Digital Project Viewer, a light, easy to use review and information management interface
- Digital Project Foundation for basic geometry and knowledge modeling capabilities
- Digital Project Designer for full geometry and knowledge modeling capabilities



feature

