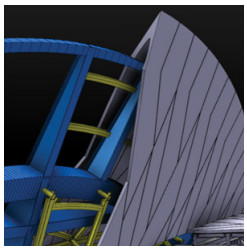
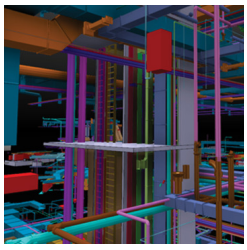
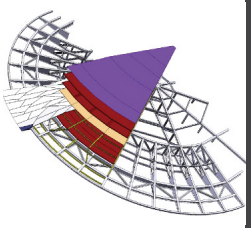
Gehry Technologies

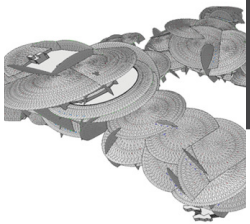




"The building was so complex that it would have been impossible to do it without Gehry Technologies"

- **Brian Wait**
  Partner, Ateliers Jean Nouvel





National Museum of Qatar

Doha, Qatar

Project Summary

Renowned Pritzker Prize winning French architect, Jean Nouvel, is the architect for the new National Museum of Qatar. The museum is prominently located on a 1.5 million square foot site, encompassing 430,000 square feet of program space while preserving the existing palace at the south end of Doha's Corniche.

The design itself was inspired by the idea of a desert rose, *a formation of crystallized sand beneath the desert's surface*. The building form grows organically around the former palace to celebrate the culture, heritage, and future of Qatar and its people. There are hundreds of interlocking disks that represent the desert rose concept in the walls, ceilings, roofs, and floors; all varied in curvature and diameter. Glazed facades fill the voids between the disks with perimeter mullions recessed into ceilings, floors, and walls which give a transparent illusion when people look from outside.

Client:	Ateliers Jean Nouvel Eric Maria Architects Astad Project Management
Project Size:	430,000 square feet
Project Team:	Ateliers Jean Nouvel Gehry Technologies ARUP Engineering
Project Services:	Project Management Design Development Bidding Documents Wind Load Analysis Construction Documents Maintenance Verification

"We appreciated the energy and dedication that the team put in the project, they really adopted it as if it was their own. You don't find that with any service provider frankly."

- **Brian Wait**
  Partner, Ateliers Jean Nouvel

The Dilemma

From conceptual design through design development, Rhino was used as a main design tool, and then AutoCAD was tried as a documentation tool. The design was so intricate and challenging that even the most creative architects would have difficulties getting an accurate view on how all the different pieces would be constructed as well as ensuring the information would be clearly communicated to the construction team. The team knew their current workflow was not suitable for the complexity of the project. In addition, it was nearly an impossible task to create a complete set of construction documentation, which is a requirement in Qatar. They needed a specialized team and solution that could help solve this complex challenge.

"Gehry Technologies service team were always there to listen and do their best to meet our needs. It was a dream collaboration and I can't wait to work with GT again."

- Brian Wait
Partner, Ateliers Jean Nouvel

The Solution

Brian Wait, partner at Ateliers Jean Nouvel, and project manager for the National Museum of Qatar, knew they needed to implement a different workflow. Wait and the team evaluated many Building Information Modeling (BIM) solutions, but the final decision came down to either Digital Project from Gehry Technologies (GT) or Autodesk Revit.

"The decision was quickly made to bring in Gehry Technologies and implement Digital Project. Revit was not up to creating complex, organic design. Also, Autodesk sells the software but only provides part time support. We were looking for both a software solution and full time support."

GT was appointed to work on the project for the construction documentation phase, providing both services and Digital Project software training. There were 3-4 full time GT experts in Nouvel's Geneva office for a year, collaborating closely with the team.

"What we appreciated about the GT team was that they were very transparent with us. They were partners with us and got involved with the process to really make sure we were successful. It was a win-win situation."

Digital Project was exceptional for problem solving during the design phase. The designers and GT team would work together to move, remove, and rationalize the disks, alter the structure, and work on the details to make sure everything was designed properly. The team was able to refine the design, and make it buildable essentially in real-time with 3D modeling experts working alongside the designers.

The Digital Project 3D building information model was also utilized beyond solving problems. The model was exported to create a physical 3D model that was presented to the client. The physical model was also used to perform wind tunnel analysis.

GT was also a close partner during the construction phase of the project. GT's involvement benefitted both design and construction teams because of the expertise and familiarity with the project was understood by all parties. It enabled the teams to make faster, more informed decisions, and execute on the design intent accurately to avoid costly delays.

The construction team not only is utilizing Digital Project, but they've adopted GTeam as part of their workflow. GTeam is a centralized, web-based file management and BIM collaboration solution to organize, manage, and share data throughout the entire project lifecycle. It is a purpose-built solution specifically designed to support BIM workflows and 3D model sharing for the architecture, engineering, construction and owner professionals.

National Museum of Qatar
Doha, Qatar

Images courtesy of Ateliers Jean Nouvel

For Further Information, visit us at *www.gehrytech.com* or call +1 877 487 8877

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