

2015 Autodesk Excellence in Infrastructure Global Winners Announced

September 30, 2015

MTR Shatin to Central Link in Hong Kong, Hammersmith Flyover Strengthening Phase 2 in London, and the Sixth Street Viaduct, Los Angeles take top honors for exemplary use of BIM for civil infrastructure projects

SAN RAFAEL, Calif.--(BUSINESS WIRE)--Sep. 30, 2015-- [Autodesk, Inc.](#) (NASDAQ:ADSK) and [CGarchitect](#), a leading online magazine and end-user community for visualization and design professionals, announced this year's winners of the 2015 [Autodesk Excellence in Infrastructure Competition](#) to spotlight some of the world's best applications of [Building Information Modeling](#) [BIM] for civil infrastructure projects.

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Arup was awarded the first place prize in the 2015 Autodesk Excellence in Infrastructure Competition for MTR Shatin to Central Link, a 17km-long railway line expansion undertaken by MTR in Kowloon and Hong Kong Island. (Photo: Arup)

can help manage project scope and foster cross-disciplinary design to support design reviews, improve constructability, manage traffic and communicate more effectively with all stakeholders.”

Managed by CGarchitect, and co-sponsored by Autodesk and [HP](#), the competition's [panel of industry expert judges](#) selected the winners from a total of 40 submissions covering a wide range of airports; ports; bridges and tunnels; rail and transit; roads and highways; land, urban and campus; water resources; and utilities projects. The judges evaluated entries based on complexity, innovative use of technology, sustainability and the execution of a BIM process to anticipate, assess and act more confidently from project start to finish and continue to add value to operations and maintenance. The winners will be honored at the upcoming [Autodesk University 2015](#) conference this December in Las Vegas.

First Place: Arup

Arup was awarded the first place prize for [MTR Shatin to Central Link](#), a 17km-long railway line expansion undertaken by MTR in Kowloon and Hong Kong Island. The project involves construction of 1.8km twin railway tunnels, a new underground station with interchange facilities, as well as ventilation buildings and shafts in Wan Chai of the Hong Kong Island – one of the most built-up and busiest commercial areas in the territory.

“As one of the first movers, Arup is committed to be at the forefront of BIM development, driving BIM use to improve its positive impact across a diverse spectrum of disciplines and projects,” said Timothy Suen, Arup fellow and director of Railway in East Asia. “Using BIM in the design process is invaluable. With most works being underground and many things happening around the site, unforeseen conditions and changes are unavoidable. BIM allows us to make critical decisions using data that can be easily visualized, enabling the team to find alternatives more effectively with a clear overview of the sequence of work for this highly complex project.”

Second Place: Ramboll – Parsons Brinckerhoff Joint Venture

The second place prize was awarded to Ramboll - Parsons Brinckerhoff Joint Venture for the [Transport for London \(TfL\) Hammersmith Flyover](#) – a 622m long example of an early pre-cast post tensioned bridge constructed more than 50 years ago, which was in need of significant strengthening and repair. This prominent elevated roadway is constructed of segmental pre-cast concrete cantilever sections and is supported by 15 central piers. While the as-built model and concept designs were being progressed, the joint venture undertook internal and external laser scan surveys to provide further confidence and accuracy. Establishing a highly collaborative cyclic process between all stakeholders included modeling the proposed strengthening anchors and post tensioning cables, checking the design for fit and reporting, discussing and resolving issues, and repeating the process until the design worked. Using the laser scan, the design model, Autodesk ReCap, Autodesk AutoCAD and Autodesk Inventor in design workshops highlighted the greater accuracy of both the scan data and the model which helped to inform the construction tolerance required for the system.

In its fourth year, the Competition honors [Arup, Ramboll - Parsons Brinckerhoff](#) Joint Venture, and [HNTB](#) as the Competition's first, second and third place winners for their transit and bridge projects. The competition also recognizes [Civile, LLC](#) as small project award winner, and [Dawn Digital Pvt. Ltd.](#) as the visualization award winner.

“Each of the winning projects offers a model for the application of forward-thinking Building Information Modeling workflows and technologies for challenging infrastructure projects,” said Amar Hanspal, senior vice president, Autodesk. “First place Arup, for example, created a large-scale model for a section of a 17 km-long railway line that integrates GIS data from multiple sources and formats and consolidated this information with the proposed station, tunnels, public facilities and as-built records of the adjacent buildings. This remarkable effort demonstrated how the application of BIM process-based technologies and practices

Third Place: HNTB

HNTB received the third place prize for their work on the city of [Los Angeles Bureau of Engineering Sixth Street Viaduct project](#), one which goes beyond architecture and engineering – its impact will equally be felt in the surrounding urban fabric, extraordinary landscapes, and community engagement it supports. This is the first bridge with this type of arch configuration in California, and it presents challenges due to the difficulty in restraining seismic movement in the arch ribs. Sophisticated computer analyses have been performed on all elements and aspects of the Viaduct to ensure seismic and structural integrity. BIM was employed to support civil and structural coordination, design analysis, architectural detailing, visualization and cost/quantity analysis.

Small Projects Award: CivilE, LLC

CivilE, LLC received the small projects award for the [Walnut Park Apartment development in Austin](#), Texas. The site is approximately 18 acres and includes design challenges such as grade change of over 80 feet and more than 1,300 trees of various species. The owner, Larry Peel & Co., Inc., desired a site that would integrate into the natural terrain and preserve as many of the trees as possible. This required close coordination between the civil engineer and architect to strategically locate walls and discuss building access locations. This 5-person civil engineering firm, celebrating their second anniversary, employed BIM to improve multi-disciplinary design collaboration, simplify hand-off and integration of data helping to speed design iterations and support communications. With a BIM workflow, CivilE, LLC demonstrated that Autodesk's tools can empower small engineering firms to create compelling visualizations within the constraints of a small project's budget.

Visualization Award: Dawn Digital Pvt. Ltd.

Dawn Digital Pvt. Ltd. won the visualization award for [Godrej BKC in Mumbai](#), a Class A-office building developed by Godrej Properties Ltd. SOM, which is designed to create an ideal environment for a modern business. Dawn Digital balanced ascetics and functional design considerations to create a fly-through animation with dramatic music and seamless integration of the scenes to accentuate the specific stages of the project's development. The angles, lighting, textures, lifestyle and mood chosen for the images all contribute to a striking work of art to visually communicate a building environment designed to foster a successful business practice. Dawn Digital is one of the world's leading 3D architectural visualization companies, with more than 220 employees and offices in India, Vietnam and Hong Kong.

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