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Trimble Announces Tekla Global BIM Awards 2022 Winners

T2 Alliance Wins Best BIM Project for Complex Airport Expansion Project

SUNNYVALE, Calif. , Oct. 4, 2022 /PRNewswire/ -- Trimble (NASDAQ; TRMB) announced today the winners of its 2022 Tekla® Global Building Information Modeling (BIM) Awards. In this biennial competition, the world's most impressive structural construction projects that use Tekla solutions are judged in eight categories. The criteria the projects are judged on include Use of BIM and Collaboration, Innovative Use of Tekla software, Constructibility, Environmental Benefits and Cool Factor. The overall winner for the best BIM project of 2022 is T2 Alliance, for their Helsinki Airport expansion project.

Best BIM Project: T2 Alliance, Helsinki Airport, Finland

The 103,000 square-meter extension to the existing Helsinki Airport is the winner in the Public category and the Best BIM project of the 2022 Tekla Global BIM Awards. This approximately 1-billion-euro project was a cooperation between Ramboll Finland, Finavia Corporation, SRV Rakennus, ALA Architects Ltd, Arkkitehtitoimisto HKP, and Gravicon. The project entails a new 450,000 square-meter apron, 16 new wide-bodied plane parking positions, and 4,800 new parking spaces for cars. Finavia, the owner of the project, achieved the BREEAM Excellent sustainability certification.

The BIM-based collaboration throughout the project was instrumental to the success of the project. All 100-200 engineers and building product manufacturers modeled their products digitally. The contractors orchestrated the use of over 400 high level-of-detail models in the project using 30 BIM-related software products.

"This project showcased such a strong way of collaborating and building things digitally and then creating the physical twin. It demonstrated innovation and re-engineering the processes for the benefit of all the different stakeholders," said jury member Salla Eckhardt, director of Digital Building Lifecycle & Innovation at Microsoft.

As the winning team, T2 Alliance will present its Helsinki Airport project at Dimensions+ 2022 , the Trimble User Conference taking place in Las Vegas, November 7-9, 2022.

International Competition

What started as a regional drawing contest in 1999, has grown into an internationally recognized competition in the field of structural engineering. Teams from across the globe working on some of the world's most challenging projects compete on the basis of the best or most innovative use of BIM and digital technologies in structural engineering. Over 132 projects were entered in this year's competition, which included winners of regional Tekla BIM Awards from 37 countries.

The projects are judged by an international jury consisting of industry experts Salla Eckhardt, director of Digital Building Lifecycle & Innovation at Microsoft (US); David Lash, product manager of Tekla Structures at Trimble; Kalle Kähkönen, professor & head of Civil Engineering Unit at Tampere University (Finland); and Holger Karutz, civil engineer & editor-in-chief at CPI Concrete Plant International trade journals (Germany).

"The Tekla Global BIM Awards celebrate the best in structural engineering and BIM," said Jari Heino, vice president and general manager, Trimble Tekla. "Our Tekla software enables structural engineers the world over to push the envelope of design quality, functionality and sustainability. The exceptional quality of this year's entries shows the progress that the Tekla community is making in furthering the impact of the structural engineering trade."

Tekla 2022 Global BIM Awards Category Winners

Commercial: King's Cross R8, United Kingdom

Arup is the winner of the award in the Commercial category for Lot R8, a part of the King's Cross Masterplan in London. This high-visibility project comprises a 13-storey office block and residential block. The £110 million development will provide approximately 13,000 square meter office space and over 70 apartments. The team consisting of Arup, Argent, McLaren Construction, Piercy & Company, Severfield UK and Getjar used a Common Data Environment based on Trimble® Connect® collaboration platform and applied an IFC standard-based exchange to collaborate with stakeholders. The group made significant use of Tekla Warehouse for content sharing. Another noteworthy aspect was the intricate rebarset that was designed for the project.

Public: Helsinki Airport, Finland

The extension to the Helsinki airport—a project by the T2 Alliance—won the Public category and Best BIM Project award. The jury praised the fact that the model used was created only by a few people and shared by many, especially in the light of synchronized production and the project's impressive dimensions.

Industrial: Pierrefonds Waste Management Plant, France

The creation of the Pierrefonds waste separation facility on the island of La Réunion (off the coast of East Africa) is a multi-year, 230-million-euro project by a consortium of specialist firms led by industrial contractor CNIM, and will promote the island's circular economy. The design created in Tekla Structures, using Tekla Model Sharing, combines units for the sorting and processing of recyclable materials, digestion of biowaste and will generate renewable electricity, making this what the jury deemed "an environmentally positive industrial project" at "an interesting location."

Infrastructure: Ovalo Monitor Bridge, Peru

The winner in the Infrastructure category is an overpass of 870 meters, with a complex reinforced concrete superstructure and a substructure consisting of 2 abutments and 21 piers. The team from TSC Innovation, together with the builder INCOT and the rebar supplier Aceros Arequipa, used detailed (LOD400) and collaborative VDC engineering, prefabrication and applied IFC and cloud connectivity. The jury recognized the impressive digital workflow, as disparate design teams used Tekla Model Sharing and Trimble Connect as a common data environment; commenting: "combining the BIM data with conditions is a strength for decades to come."

Sports & Recreation: Tampere Deck and Arena, Finland

In the Sports & Recreation category, the 2022 TeklaBIM Award went to the Tampere Deck and Arena project. The site is complex, with a living oasis being built over a railway in the middle of an urban area. The team from SRV Rakennus, Ramboll Finland and ARCO Architecture Company worked on around 500 models using Tekla Structures, Tekla Model Sharing, Trimble Connect and Trimble SketchUp® modeling software. In the project, an initial InfraBIM-based information model was implemented. Infrastructure and traffic planning were implemented in a versatile manner with simulations used for traffic arrangements. Sustainability aspects were considered in multiple ways, such as a condensation heat recovery system and solar collectors.

Small: The Big One, Season 2, United Kingdom

The Big One is one of the best-known rollercoasters in the UK. Taziker Industrial won a 2021 TeklaBIM Award for their project on the re-tracking of 9 tracks. This included a tunnel crossing and changing the line of the tracks for a smoother ride, collaborating with the dynamics engineers at Westlakes Engineering. The team faced complex geometry, using point cloud to determine geometry of the existing track, which was then exported for design improvements, and reimported for the new line design and final modeling. Tekla Structures was key to the success of this project along with its variety of tools such as point cloud import, layout manager and the Grasshopper® link ability and the possibility to back check using a total station to confirm final geometry. The jury commented, "this kind of project raises the bar for the industry overall."

Student: Corrèze Bridge, France

The winning student project is a design project for a bridge over the Corrèze river. A team of 6 students from the IUT du Limousin Civil Engineering Department worked for only 13 working days on the discovery of the bridge under construction as well as the concrete execution plans & mixed steel-concrete structure design. The team applied Tekla Structures to model the boom as built as well as the bridge, and scanned the boom to find missing dimensions, produced the reinforcement cage designs for the bridge supports (piers, abutments and deck). And finally, they presented the designs to the project engineer, manager and owner. The jury was impressed, saying: "There is a lot of new talent growing and entering the industry."

API Developer: ScaffPlan, Australia

The 2022 Tekla Global BIM Award for an API Developer went to ScaffPlan, for their ScaffPlan® system for scaffolding modeling built on top of Tekla Structures. Scaffplan utilized the full power of Tekla Structures, through the Tekla Open API, combined with ScaffPlan features, resulting in a solution that helps increase companies' ROI. A team of 5 developers worked on 3 million lines of code. The solution is a strong proof point of Trimble's platform strategy, aiming at 100 percent of the construction trades creating constructible information.

Special Recognition: E6 Ranheim-Værnes, Norway

The jury awarded special recognition for the E6 Highway project in Norway, a 23-kilometer highway expansion to improve traffic flow and safety. It comprises 240-meter bridges and 2 CIP concrete tunnel portals. The team consisted of ACCIONA Engineering, Ramboll, ACCIONA Construction, COWI, Statens Vegvesen (road authority) and Nye Veier (project owner). This is a true wide-scale BIM project from design to construction with digital information being central to decision making, collaboration (through Tekla Model Sharing), coordination as well as data exchange across teams and final handover for operations. Trimble Quadri ® was the main coordination environment for model federation and interdisciplinary coordination. The jury highlighted the efficient use of IFC files and the use of Trimble Connect for the information exchange between structural, modeling, drafting and project coordination teams.

More information about the Tekla Global BIM Awards projects, submissions, jury and winners is available at: https://www.tekla.com/bim-awards .

Project Images

About Trimble Construction

Trimble is developing technology, software, and services that drive the digital transformation of construction with solutions that span the entire architecture, engineering and construction (AEC) industry. Empowering teams across the construction lifecycle, Trimble's innovative approach improves coordination and collaboration between stakeholders, teams, phases, and processes. Trimble's Connected Construction strategy gives users control of their operations with best-in-class solutions and a common data environment. By automating work and transforming workflows, Trimble is enabling construction professionals to improve productivity, quality, transparency, safety, sustainability, and deliver each project with confidence. For more information, visit: construction.trimble.co m .

About Trimble

Trimble is an industrial technology company transforming the way the world works by delivering solutions that enable our customers to thrive. Core technologies in positioning, modeling, connectivity and data analytics connect the digital and physical worlds to improve productivity, quality, safety, transparency and sustainability. From purpose-built products to enterprise lifecycle solutions, Trimble is transforming industries such as agriculture, construction, geospatial and transportation. For more information about Trimble (NASDAQ:TRMB), visit: www.trimble.com .

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