

BENTLEY SYSTEMS

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THE EXTRAORDINARY INFRASTRUCTURE PROJECTS OF THE 2017 BE INSPIRED AWARDS



Bentley's mission is to provide *innovative applications and services* for the enterprises and professionals who *design, build, and operate* the world's infrastructure – advancing both the global economy and the environment for *improved quality of life*.

The 2017 Infrastructure Yearbook is a Bentley Systems publication that showcases the extraordinary work of Bentley users who have participated in the 2017 *Be Inspired* Awards program. For information about how to enter your innovative project for consideration in the next *Be Inspired* Awards program or for additional information about this program, visit **www.bentley.com/beinspired**.



Online Versions

The digital version of the 2017 Infrastructure Yearbook and from previous years are available for viewing or download at **www.bentley.com/yearininfrastructure**.

Browse Bentley's user project profiles at **www.bentley.com/projects**, where many of the projects nominated in Bentley's annual *Be Inspired* Awards program are featured. Through these portfolios of exemplary project achievements, Bentley shares innovative best practices of the architects, engineers, constructors, geospatial professionals, and owner-operators who advance the world's infrastructure.



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BIM ADVANCEMENTS & GOING DIGITAL

Bentley's 2017 Infrastructure Yearbook recognizes and records the outstanding accomplishments of Bentley users who design, construct, and operate the world's infrastructure. It highlights the more than 400 remarkable projects nominated in the annual *Be Inspired* Awards program. Each project demonstrates the vision and talent of the infrastructure professionals who have applied innovative strategies to achieve significant BIM advancements for improved project delivery and asset performance.

Underlying these strategies are Bentley's "Project Playbooks" of software for advancing infrastructure. Leveraging Bentley's apps, applications, and services, project teams from around the world have developed advanced digital design, analytical, construction, reality, and asset performance modeling workflows that enable better project delivery through greater information mobility and improved asset performance through greater depth of information modeling.

These digital workflows can enable new business opportunities, such as conceptioneering, the process of quickly creating multiple iterations of a conceptual infrastructure design model with engineering content at the beginning of a project, to constructioneering, the process of bringing engineering data directly to the field to drive construction workflows and equipment, during construction and into operations. It can also mean inspectioneering, which is the process of bringing as-operated and continuously surveyed, engineering reality meshes into digital engineering environments, enabling engineers to inspect and evaluate infrastructure assets from any location. And, operationeering, the process of bringing engineering data into the production and operations phases of a

project and using that data to drive operational workflows, ensure reliable production performance, facilitate predictive maintenance, and improve asset reliability.

The projects featured in this yearbook illustrate the outstanding BIM Advancements for Going Digital of infrastructure professionals around the globe. Among them are a project by Mott MacDonald and the Costain, VINCI Construction Grands Projets, Bachy Soletanche Joint Venture to update the east section of the Thames Tideway Tunnel in London; a Guinness World Record-setting structure built by JCM2 in Simi Valley, California to support a skydiver in a 25,000-foot freefall jump; a new airport in Sanya, China that is being constructed on an artificial island reclaimed from Hongtang Bay; and a project using drone technology and reality modeling to standardize the inspection of Italy's 11,800 radio base stations.

In Malaysia, the MRT Corporation used Bentley applications on the first metro project in Asia to adopt a BIM Level 2 strategy for the development of the Sungai Buloh-Serdang-Putrajaya rapid transit line. To develop the Sewer Master Plan 2041 for five municipalities in Rio de Janeiro's Region of the Lakes, AEGEA utilized Bentley software to compare scenarios for improving operation efficiency.

With the 2017 Infrastructure Yearbook, Bentley celebrates the year's most inspiring infrastructure projects by users of its software. It also recognizes the commitment of the infrastructure professionals and organizations responsible for their design, construction, and operation to advancing the global economy and the environment, improving quality of life for all.

TABLE OF CONTENTS



About The Year in Infrastructure 2017 Conference

2017 Be Inspired Awards Jurors

264

Z/

Index Alphabetical by Organization

Index **Project Location** by Country

287

Index Alphabetical by Category

302

SPECIAL RECOGNITION AWARD WINNERS

 Asset Information Management Advancement 	14
Comprehensive BIM Advancement	15
Conceptioneering Advancement	16
Constructioneering Advancement	17
Inspectioneering Advancement	18
Operationeering Advancement	19
BE INSPIRED AWARD WINNERS	

BIM Advancements in Bridges BIM Advancements in Buildings and Campuses	21 29
BIM Advancements in Environmental Engineering	16

BIM Advancements in Manufacturing	87
BIM Advancements in Mining and Offshore Engineering	105
BIM Advancements in Municipal Operations	127
BIM Advancements in Power Generation	135
BIM Advancements in Project Delivery	147
BIM Advancements in Rail and Transit	155
BIM Advancements in Reality Modeling	167
BIM Advancements in Roads	193
BIM Advancements in Road and Rail Asset Performance	215
BIM Advancements in Utilities and Industrial Asset Performance	219
BIM Advancements in Utilities Transmission and Distribution	225
BIM Advancements in Water and Wastewater Plants	235
BIM Advancements in Water Networks	239



www.bentley.com

Corporate Headquarters

685 Stockton Drive • Exton, PA 19341 • United States 1-800-BENTLEY (1-800-236-8539) • Outside the United States +1 610-458-5000

Bentley EMEA Bentley Systems International Limited

2 Park Place • Upper Hatch Street Dublin 2 • D02 NP94 • Ireland +353 1 436 4600

Bentley Asia

Unit 1402-06, Tower 1 • China Central Place, Beijing 100025 • China +86 10 5929 7000





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