

Celebrating a decade of construction excellence

With continued technological innovation happening across construction, these projects used new concepts and capabilities to connect multidisciplinary teams across the project lifecycle to build better, faster, and more sustainably.

USA, 2020 AEC Excellence Winner

Georgia Institute of Technology, Kendeda Building for Innovative Sustainable Design

Skanska USA

OUTCOME

Proving Net-Positive in Hot Climates

The education and research facility was designed and built to the rigorous sustainability guidelines of the International Living Future Institute's Living Building Challenge 3.1 standard and LEED Platinum, showing that regenerative, sustainable buildings are viable in the South.

PROJECT

Higher Education

The 36,978-sq. ft. sustainable urban structure includes a 170-person auditorium, classrooms, and maker spaces. It also features a green roof, solar panel canopy, cisterns for rainwater collection and reuse, and integrated plantings to provide food for students throughout the year.

HIGHLIGHTS

The project **INCLUDES 90-100% SALVAGED MATERIALS.**

The building **GENERATES at least 105% of its ENERGY** needs.

It's **THE FIRST FULLY CERTIFIED Living Building** in **GEORGIA.**



IN THEIR OWN WORDS

"No matter the type or size of project, BIM can help you achieve sustainability goals. Always think about the opportunities not to waste, even in terms of becoming a paperless project."

— Jimmy Mitchell, Director of Project Solutions, Skanska USA

United Kingdom, 2019 AEC Excellence Winner

E03 Canada Court and E05 Quebec, Wembley Park

John Sisk & Son

OUTCOME

An Innovative Site Management Solution

Key construction workflows were digitized by linking project data to "digital smart containers" via QR codes, creating a single source of information for efficiently coordinating design and site activities and avoiding costly rework for delivery ahead of schedule.

PROJECT

Urban and Rural Planning

The complex build-to-rent residential project includes ten buildings that are divided among two blocks. The buildings range from 12-26 stories, have 1,200 apartments, and are linked on the ground by a podium-level garden.

HIGHLIGHTS

SAVED £90K of concrete rework through enhanced clash detection.

REALIZED 35% TIME SAVINGS with digitized QA/QC processes.

The first apartment block was **DELIVERED 25 DAYS AHEAD OF SCHEDULE.**

IN THEIR OWN WORDS

"Digital Project Delivery is an excellent approach for delivery processes, and we look to work with our construction partners to enhance the use of these. To reduce risk, improve delivery, and learn how to build better."

— James Burt, Quintain (client)

Ireland, 2018 AEC Excellence Winner

Clonee Facebook Data Centre

Mace Group

OUTCOME

Integrating Teams with Collaboration Tools

By adopting lean, integrated workflows, the extended project team of as many as 1,500 people could coordinate in real time for improved productivity, increased quality, and faster delivery.

PROJECT

Data Centre

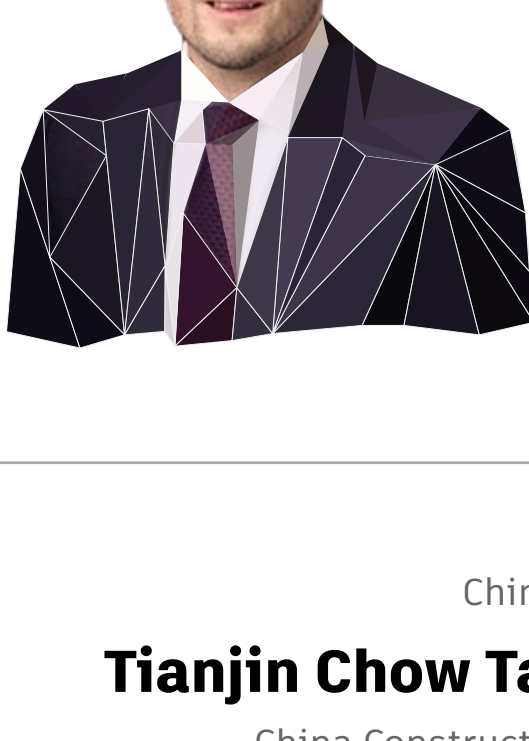
The pair of 25,500-sq. ft. complex buildings that house eight data halls were designed to support social media apps and services to 1.04 billion daily active users.

HIGHLIGHTS

Powered by **100% RENEWABLE ENERGY.**

REDUCED time spent on model management by **97%.**

INCREASED PRODUCTIVITY by **35%** with digital workflows.



IN THEIR OWN WORDS

"You can have the best technology, but it doesn't really do much good unless you have backing from the whole team. From the client to the trades, everyone on the project bought into the use of BIM and cloud technology. Now, it's hard to imagine doing a project like this any other way."

— Paddy Ryan, BIM Lead, Mace Group

China, 2017 AEC Excellence Winner

Tianjin Chow Tai Fook Financial Center Project

China Construction Eighth Engineering Division Corp., Ltd.

OUTCOME

BIM from the Beginning

Connecting all employees, specialties, and processes, BIM was used from project start through delivery and ongoing operational maintenance of a complex building design with precise as-built production, zero reworks, and no storage on the construction site.

PROJECT

Financial

The striking new 390,000-sq. m. landmark integrates business and commercial space, luxury apartments, and a five-star hotel into the 103-story tower, reaching a total height of 530 meters.

HIGHLIGHTS

184,504 MODELS were tracked through project completion.

SAVED \$14M RMB in material and labor costs.

2,950 QR CODES were used to track equipment and prefabrication components.

IN THEIR OWN WORDS

"Only by using BIM and the latest technologies throughout the entire construction process can we finish a building 530 meters in height in five years. BIM has not only changed the way we work but also clarifies how we think about and meet new challenges."

— Yawu Su, Project Manager, China Construction Eighth Engineering Division Corp., Ltd.



China, 2016 AEC Excellence Winner

Tencent Beijing Headquarters

China Construction Third Engineering Bureau Group Co., Ltd.

OUTCOME

Making Sites Safer, More Productive

By embracing BIM and IoT, the entire project lifecycle was connected to better measure, manage, and monitor project delivery, driving efficient collaboration and increased safety and quality for a seamless handoff.

PROJECT

Offices

Located in China's Silicon Valley on land reclaimed from the sea, the huge 1.6 million-sq. ft. building is home to the maker of the popular QQ and WeChat messaging apps and includes research labs, offices, parking, a bus station, health and gym facilities, and building-wide IoT smart features.

HIGHLIGHTS

THREE BRIDGE LAYERS with shared facilities **CONNECT TWO TOWERS.**

REDUCED cost by **\$100M** with BIM.

SHORTENED project schedule by **3 MONTHS.**

IN THEIR OWN WORDS

"Using sensors and devices connected to the cloud, we monitor building components' structural integrity, track the temperature of concrete pours, and learn the location of personnel and materials. All that data gets pushed to the cloud in real time. The result? A more efficient project and a higher-quality building."

— Yan Bin, Chief Engineer, China Construction Third Engineering Bureau Group Co., Ltd.

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