



Autodesk Investor Day

October 1, 2014

AEC Markets and Opportunity

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AEC Industry

The volume of construction output will grow by more than 70% to **\$15 trillion** worldwide by 2025.

Global capital project and infrastructure spending is expected to grow to more than **\$9 trillion** a year by 2025, up from \$4 trillion in 2012.



An aerial perspective of a city landscape. In the foreground, a river flows from the bottom left towards the center. A long bridge with multiple tracks carries a train across the river. To the right of the river, a multi-lane highway with several cars is visible. The middle ground is filled with a dense urban area featuring various building styles, including residential blocks and taller commercial structures. In the background, a large body of water is visible, with a city skyline and green hills on the far shore under a clear sky.

\$12B

AEC TAM

An aerial photograph of the Shanghai skyline, featuring the Shanghai Tower, the Oriental Pearl Tower, and the Jin Mao Tower. A large, bold, blue '230%' is superimposed over the center of the image.

230%

AEC Revenue Growth Q2 FY15



AIA estimates that more than **half of design firm leaders** in North American **expect growth** for 2014 and 2015.



Knight Frank suggests that **global investment in Real Estate** is predicted to increase by **11%** in 2014/2015.

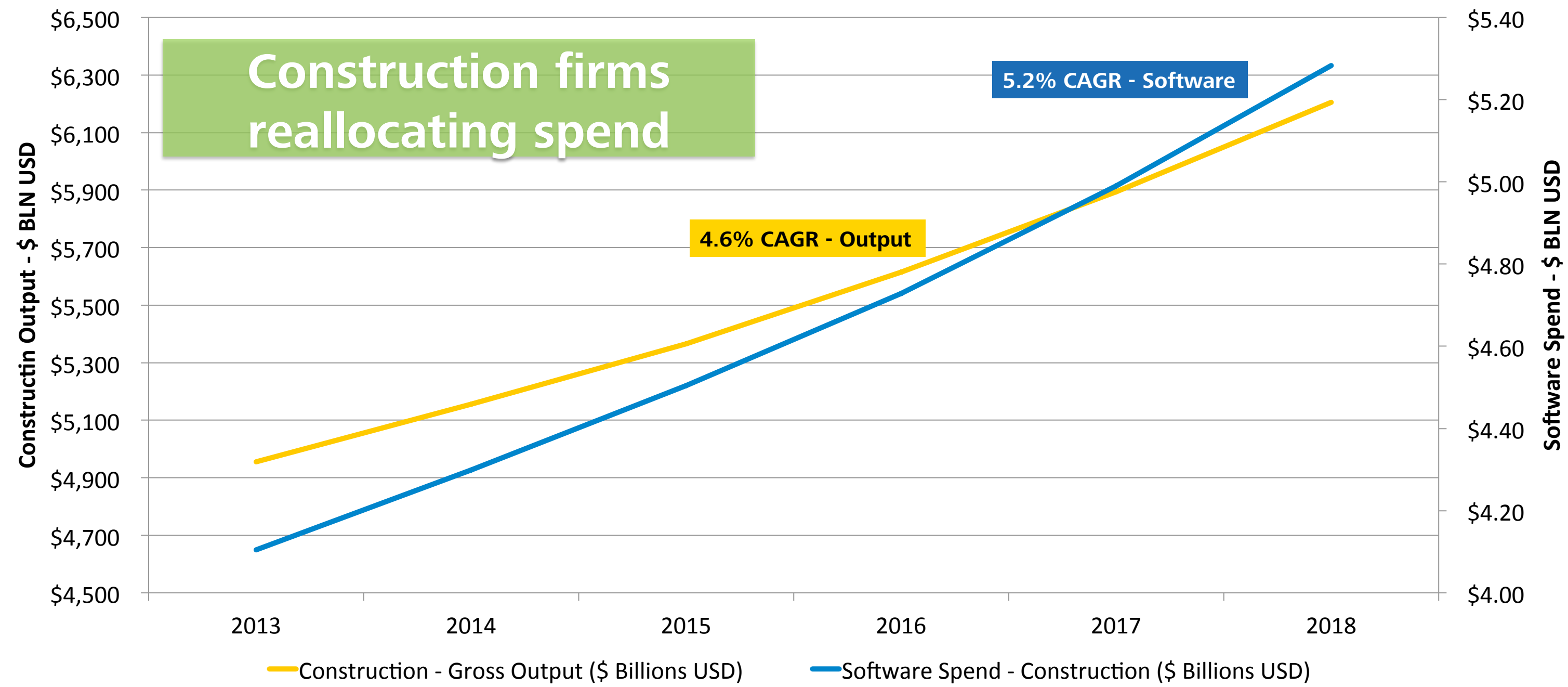


The Bureau of Labor Statistics anticipates approximately **18,600 architecture jobs will be added** to the U.S. economy between 2012 and 2022, which represents a greater-than-average growth rate of 17%.

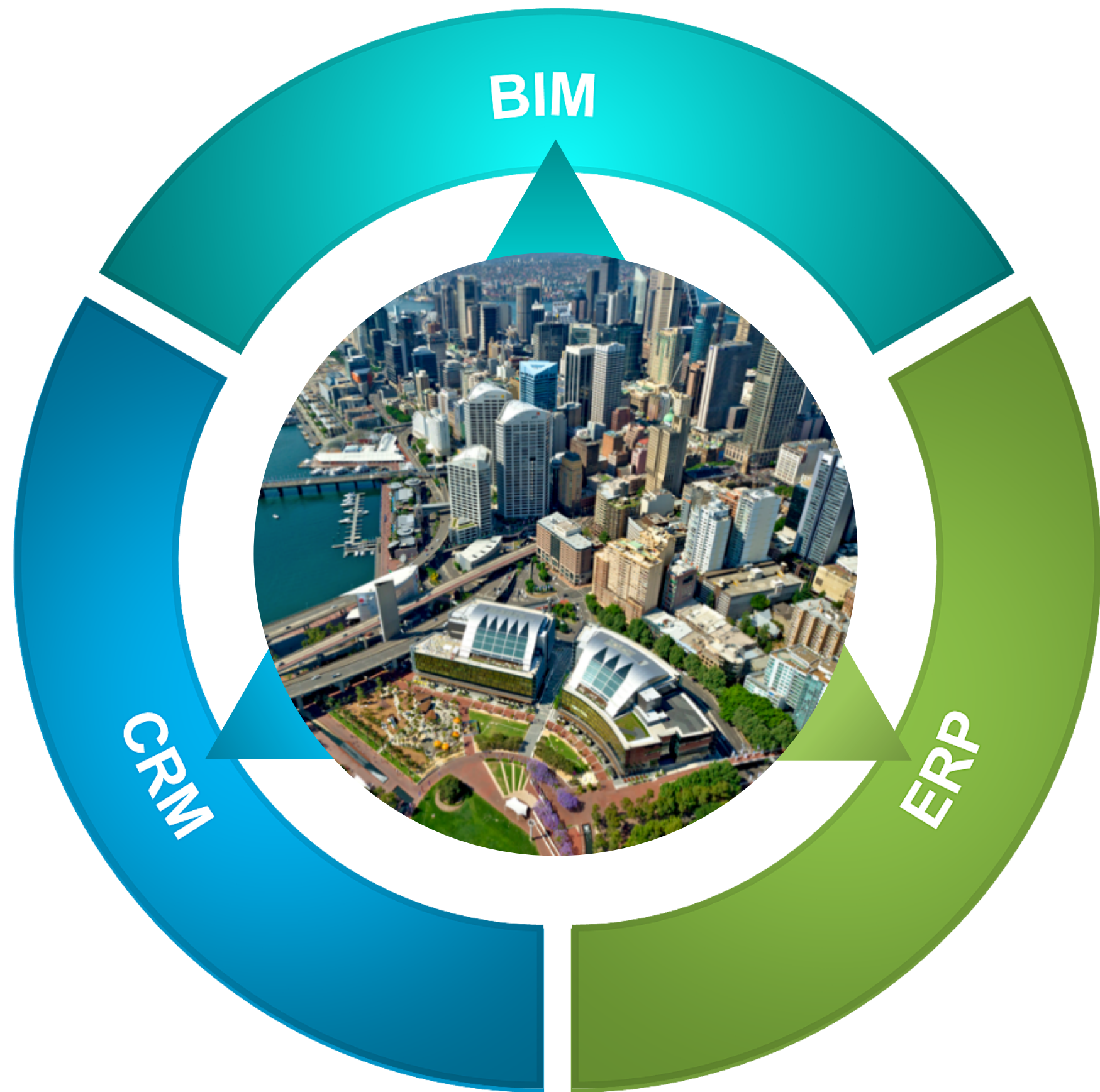


Commerce Department reported **construction spending increased 1.8%** in July to a 5-1/2-year high. It was the largest monthly gain since May 2012... Third-quarter growth estimates currently range as high as a 3.5% pace.

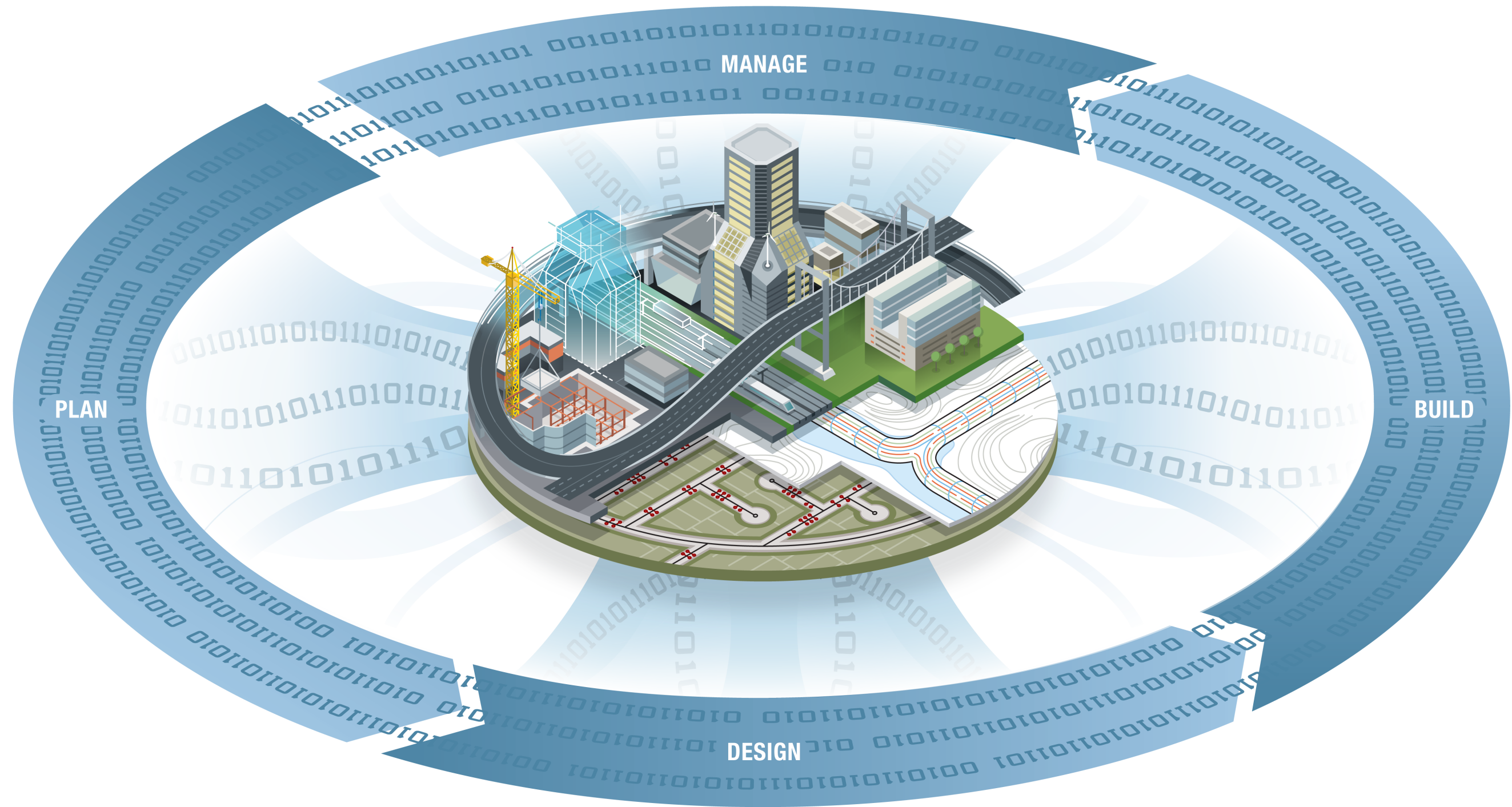
Software Spend Accelerating



Source: Oxford Economics; IDC IT Spend Forecast



BIM



Driving Strategic Value

- Up to **7%** reduction in project time
- Savings up to **10%** of the contract value
- Up to **40%** elimination of unbudgeted change
- Up to **80%** reduction in time taken to generate a cost estimate



Global BIM Mandates

AEC (UK) CAD & BIM Standards Site
A unified standard for the Architectural, Engineering and Construction industry in the UK

**NATIONAL
BUILDING
INFORMATION
MODELLING INITIATIVE**

 **National Institute of
BUILDING SCIENCES**
buildingSMARTalliance™
a council of the National Institute of Building Sciences

 **MLIT**
Ministry of Land, Infrastructure, Transport and Tourism

GSA

NOVABUILD
samoa
société d'aménagement de la métropole ouest atlantique



U.S. ARMY CORPS OF ENGINEERS

**Corps of Engineers Mandates
COBie Use for Military Construction**

 **MOLIT**
Ministry of Land, Infrastructure and Transport

BIM/IPD [AUS]

BCA ACADEMY
of the built environment



Rijkswaterstaat
Ministry of the Interior and
Kingdom Relations


Rgd BIM Standard

Rgd BIM Norm | Version 1.0.1 | 1 July 2012 | EN 1.0 | 1 July 2012

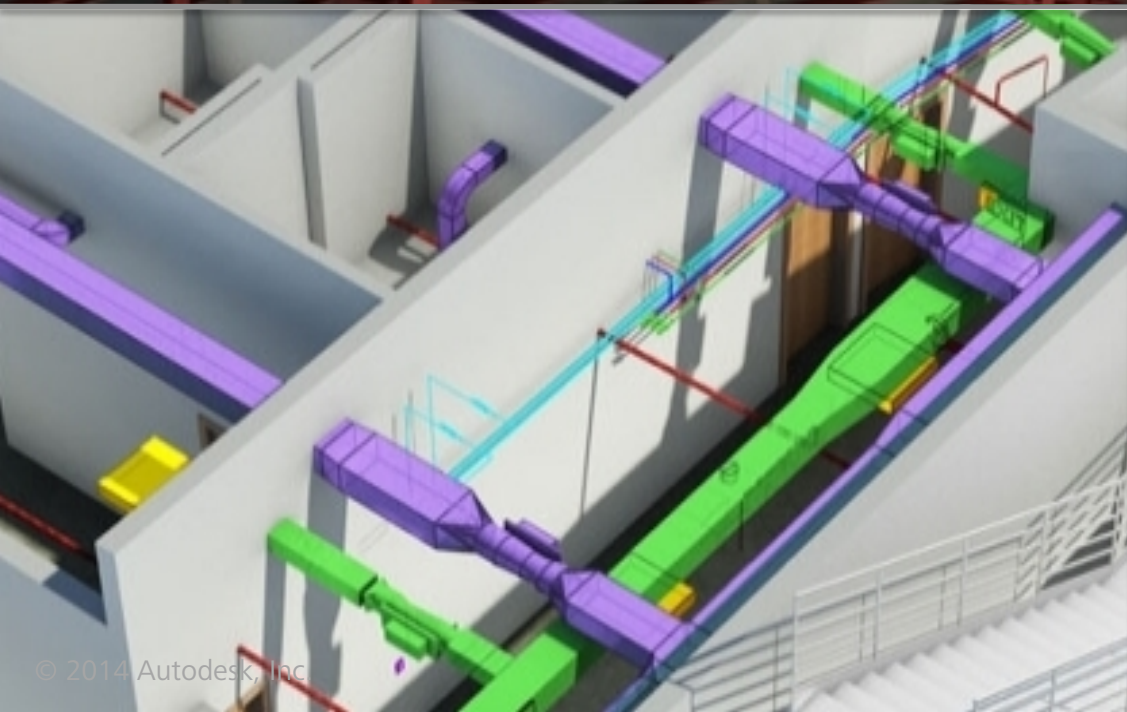
建筑信息模型
Building Information Modeling

设计与施工的革新，生产与效率的提升
Transforming Design and Construction to Achieve Greater Industry Productivity

 **Hong Kong Housing Authority**


United States
**NATIONAL BUILDING INFORMATION
MODELING STANDARD**
Version 1 - Part 1: Overview, Principles, and Methodologies
Standardizing the Building Supply Chain through Open and Interoperable Information Exchange

BIM-MEP AUS

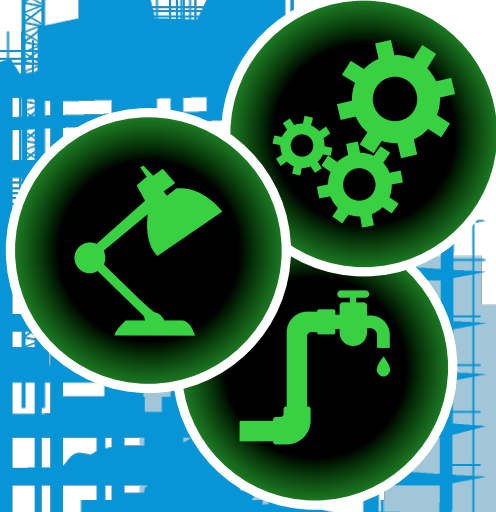


Lead the Industry's Transformation to BIM

BIM Opportunity



Architecture



MEP



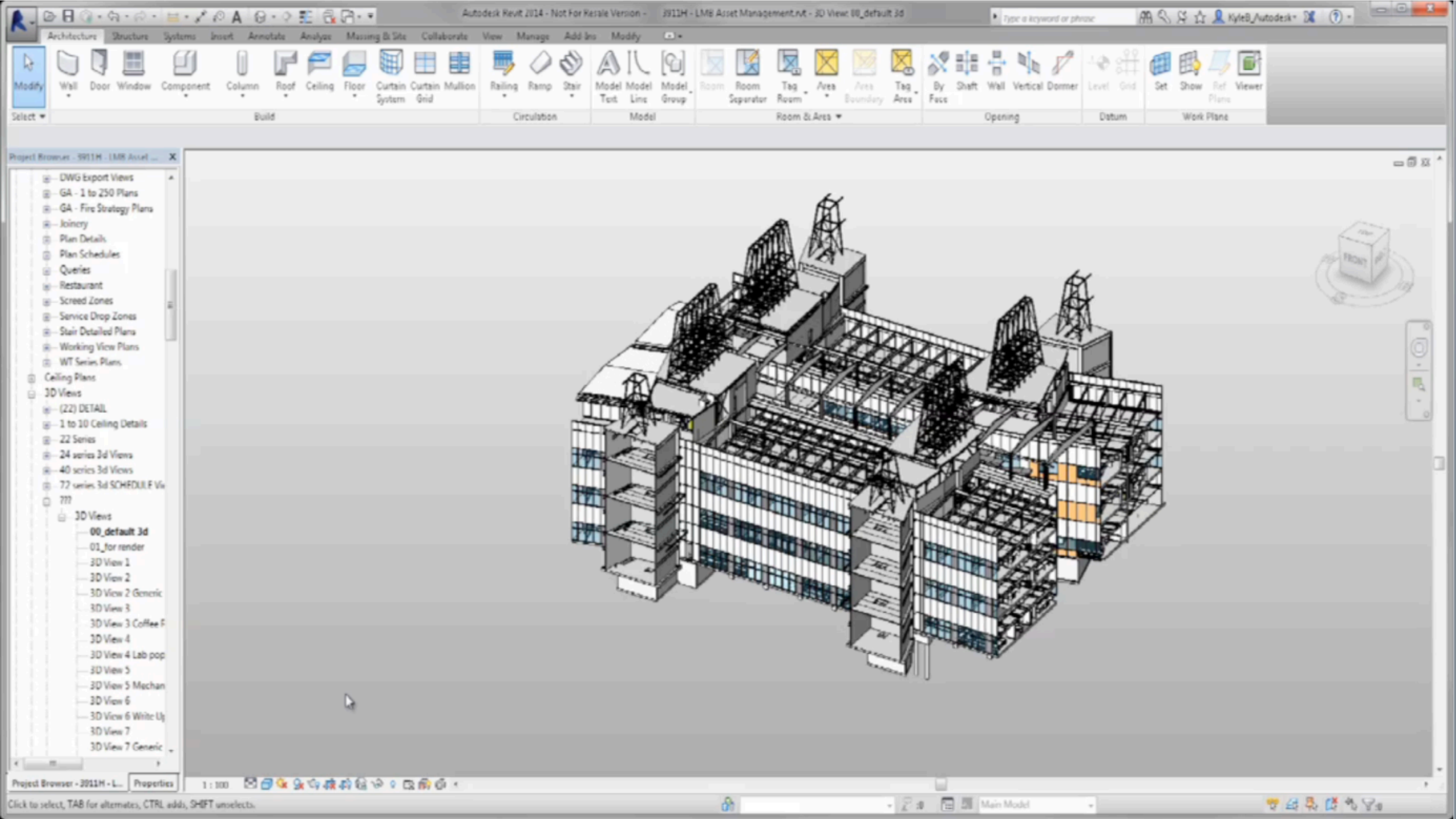
Structural
Engineering



Civil
Engineering



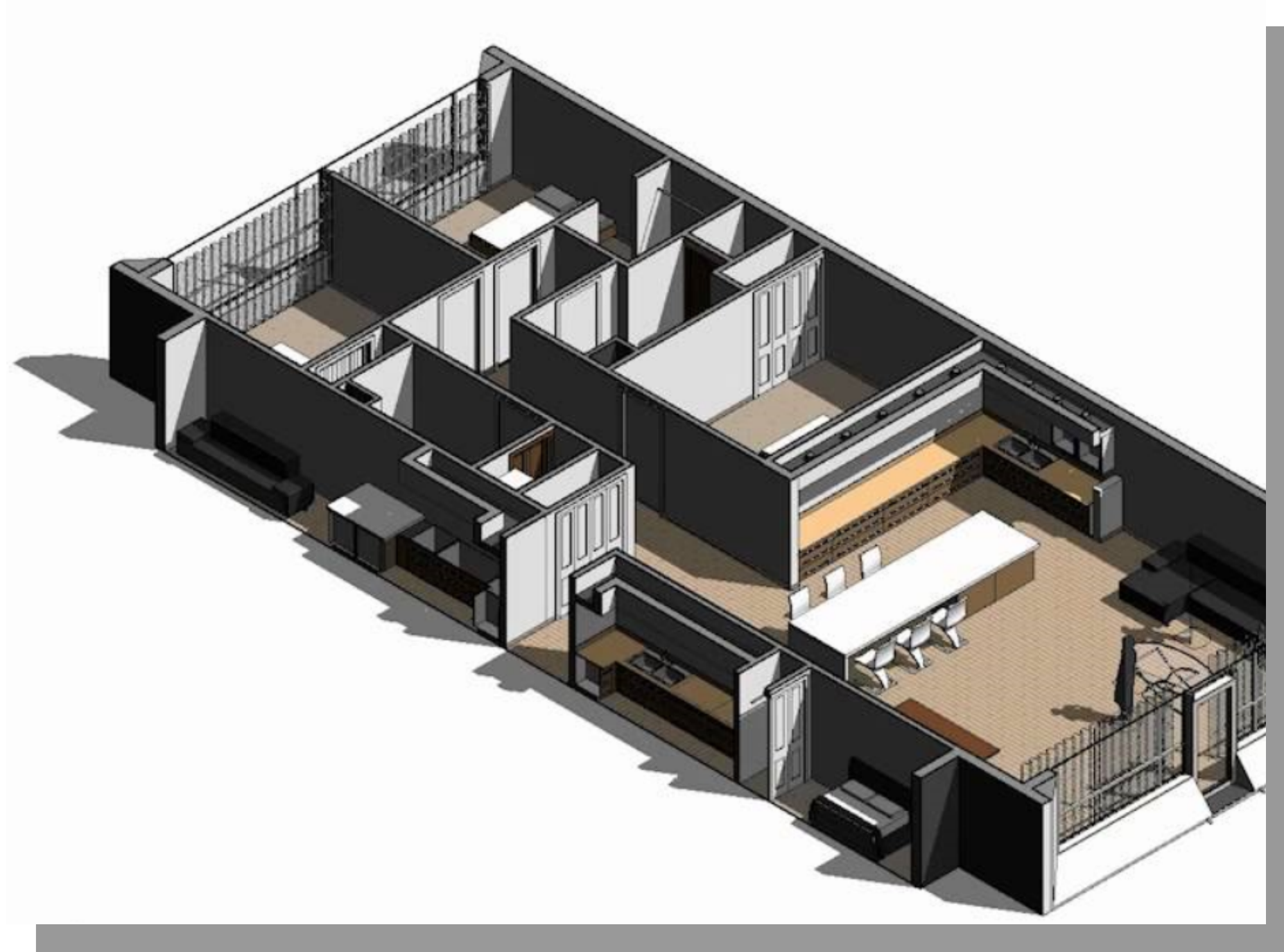
Construction



 | AUTODESK®
REVIT LT™ 2015



 AUTODESK®





AUTODESK®
REVIT® MEP 2015



AUTODESK®

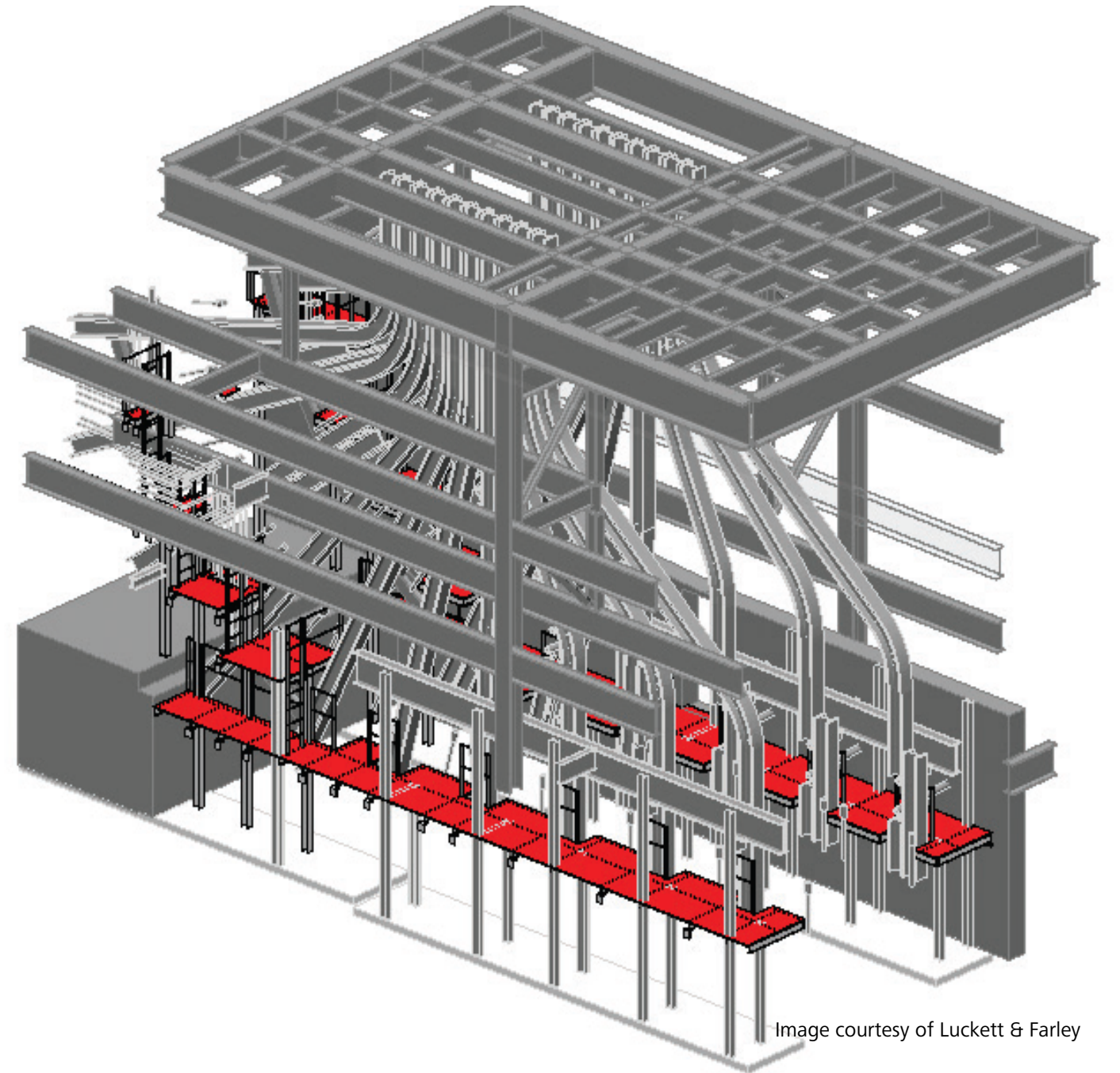
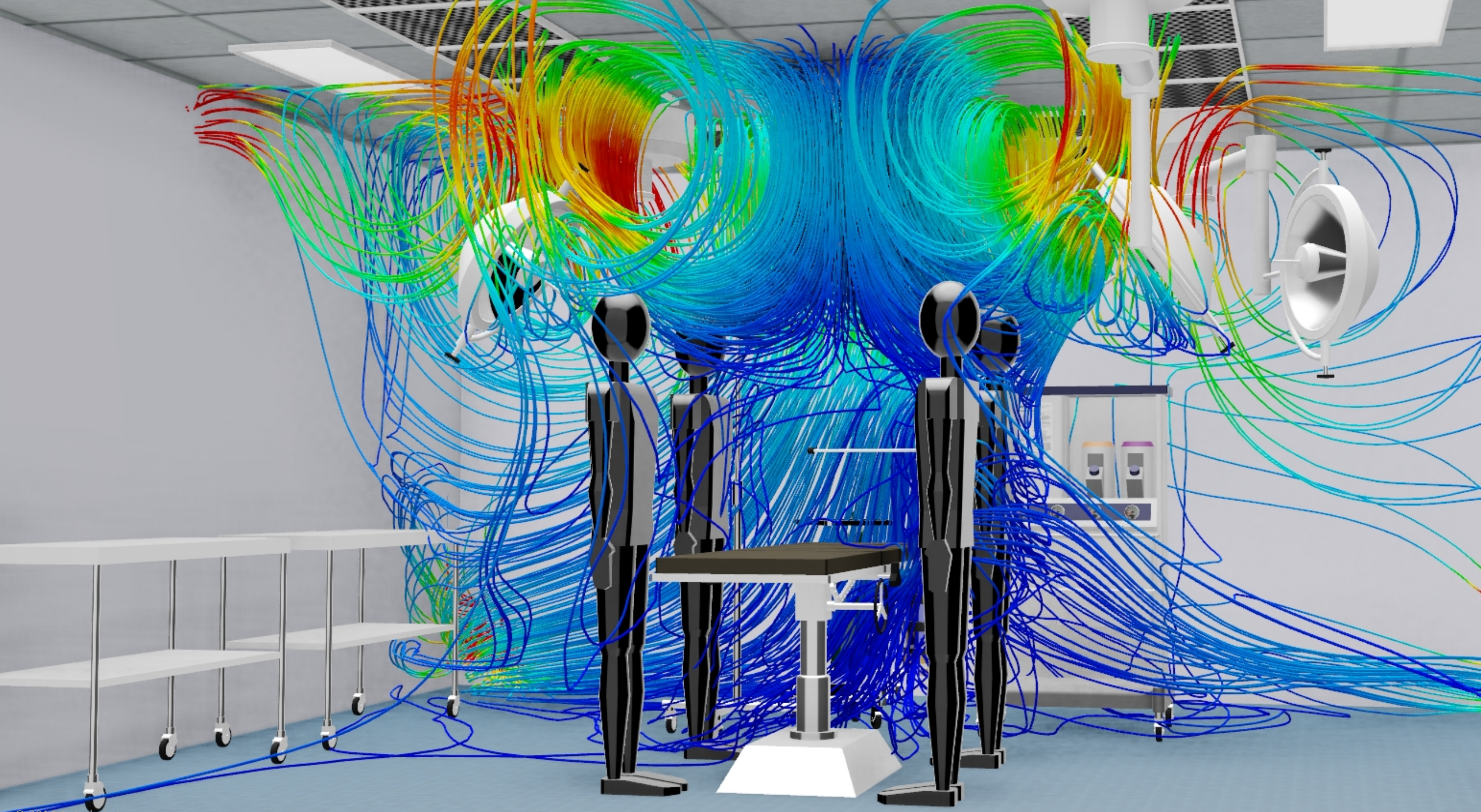


Image courtesy of Luckett & Farley

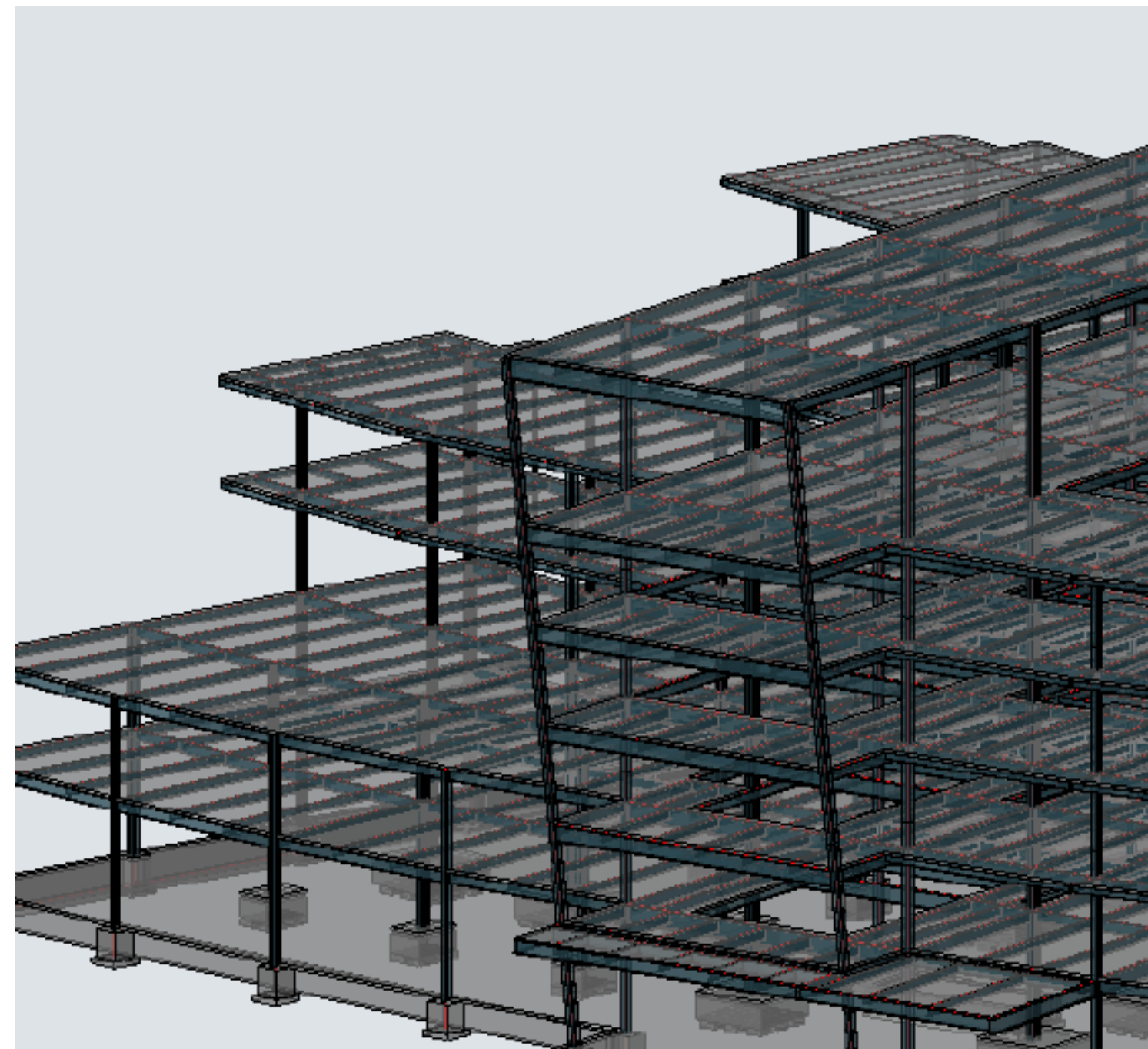


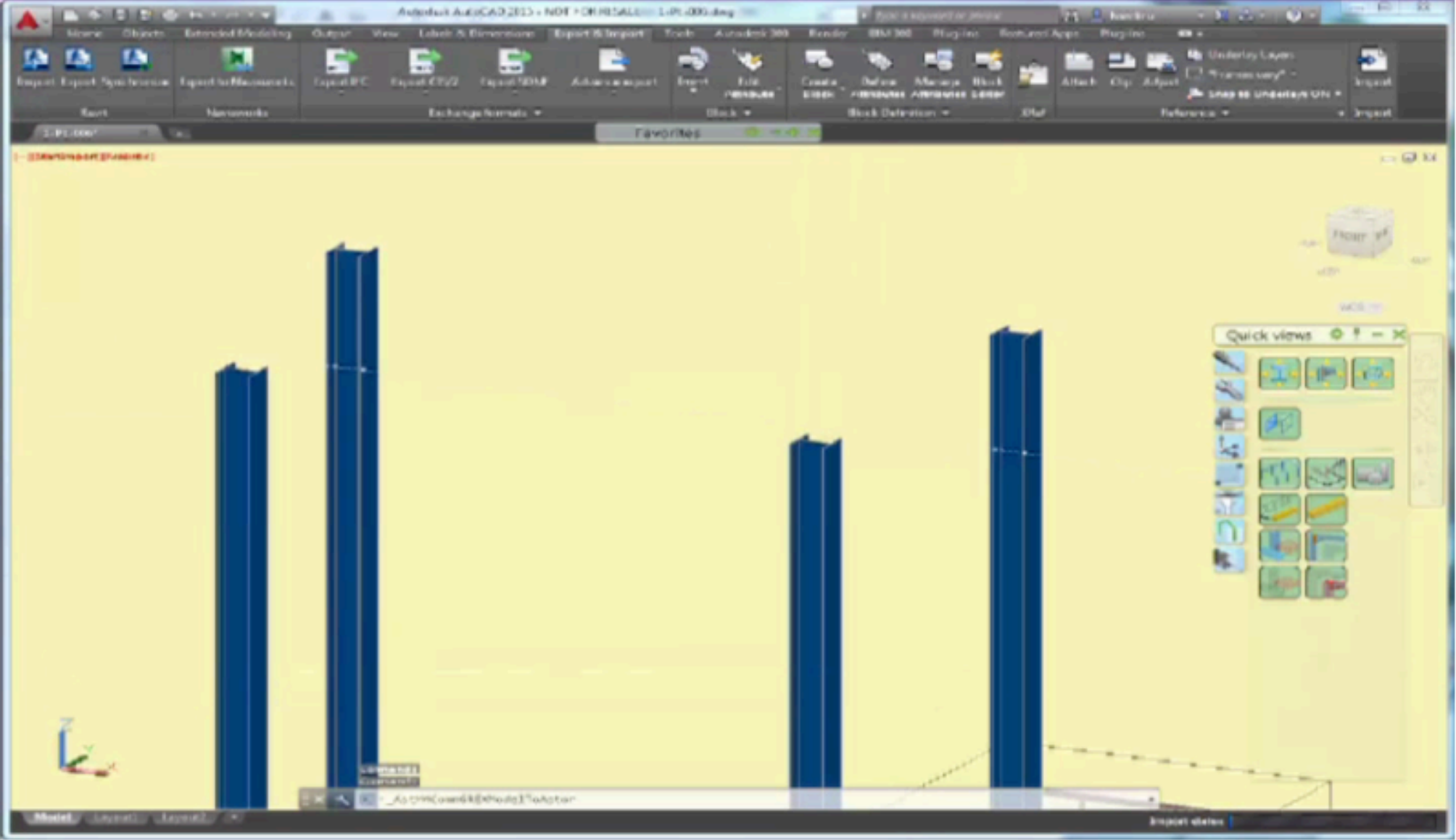


AUTODESK® REVIT® STRUCTURE 2015



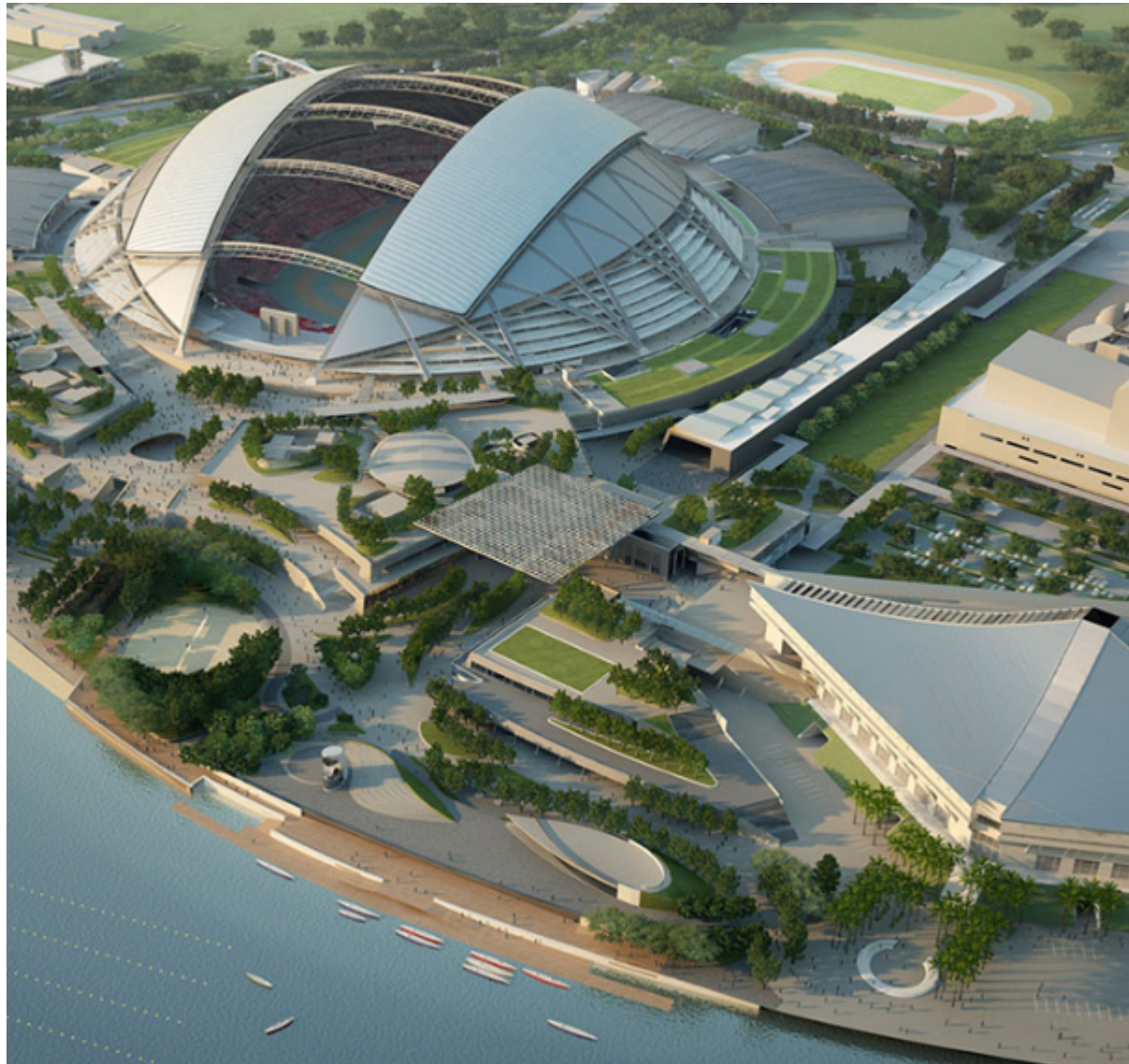
AUTODESK®







Singapore Sports Stadium



BIM brought greater integration and collaboration among the developers, designers, builders and fabricators across the construction value chain.

BIM Opportunity



Architecture



MEP



Structural
Engineering



Civil
Engineering



Construction



Project Information

Project Name: [Blank]

Location: [Blank]

Client: [Blank]

Scale: 1:1000

Units: Feet

Color: [Blank]

Material: [Blank]

Height: 10.00

Width: 10.00

Depth: 10.00

Volume: 10.00

Area: 10.00

Perimeter: 10.00

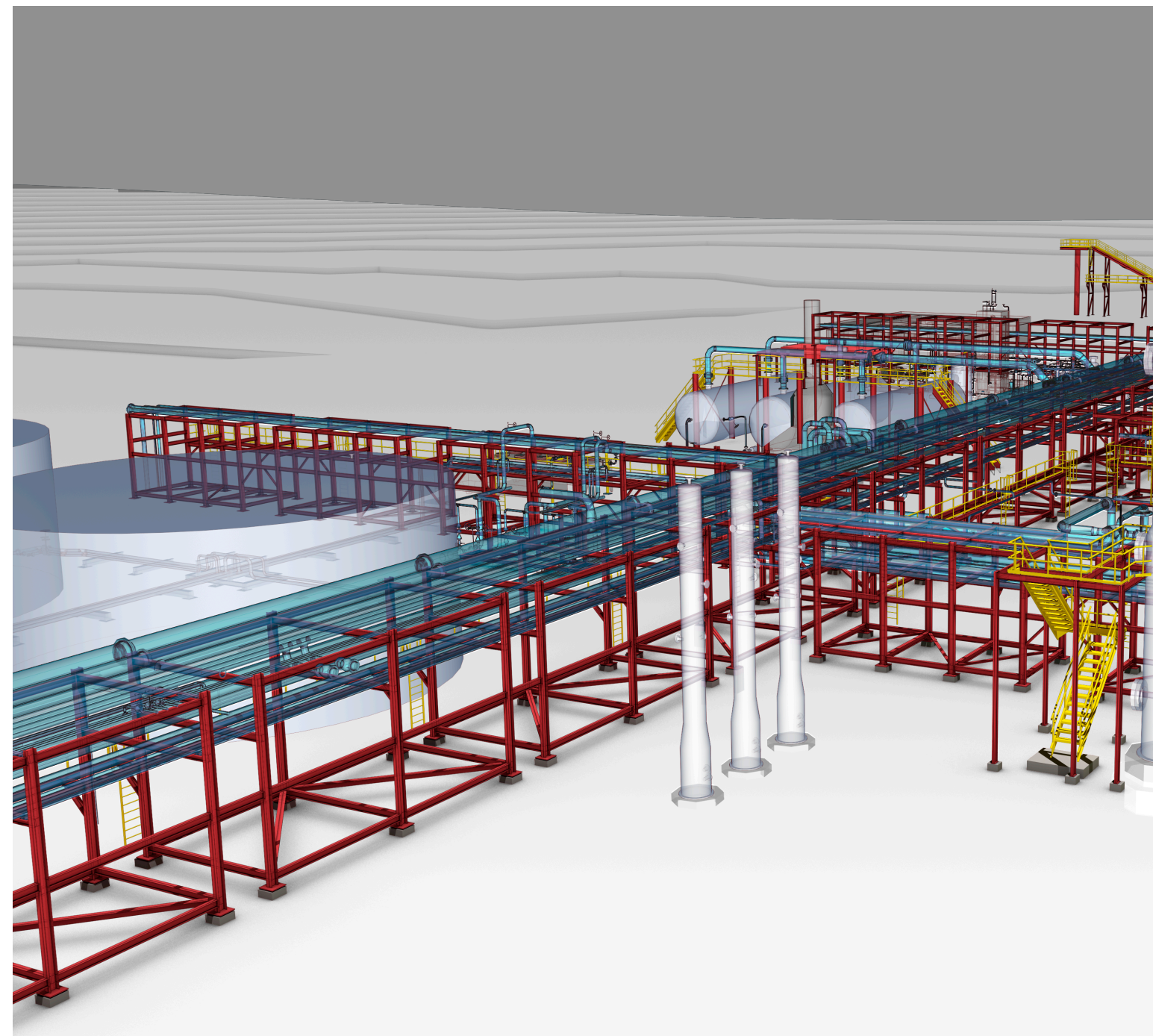
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AUTODESK® AUTOCAD® PLANT 3D 2015



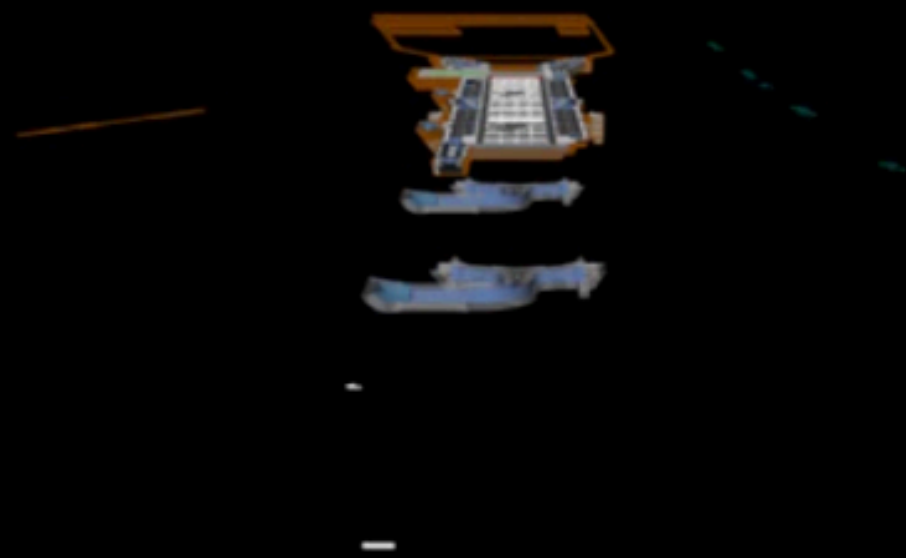
AUTODESK®



BIM Wins







BIM Opportunity



Architecture



MEP



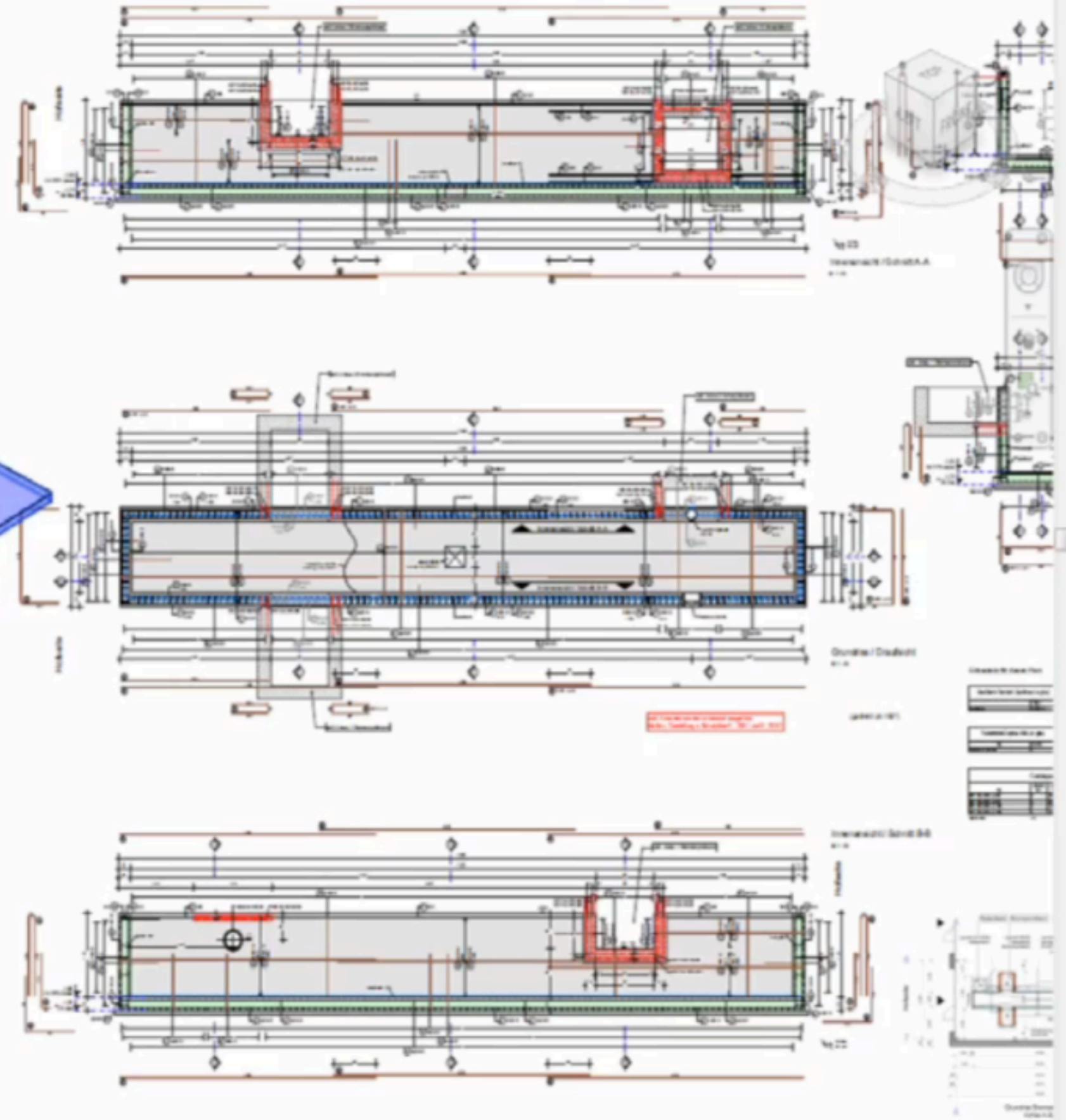
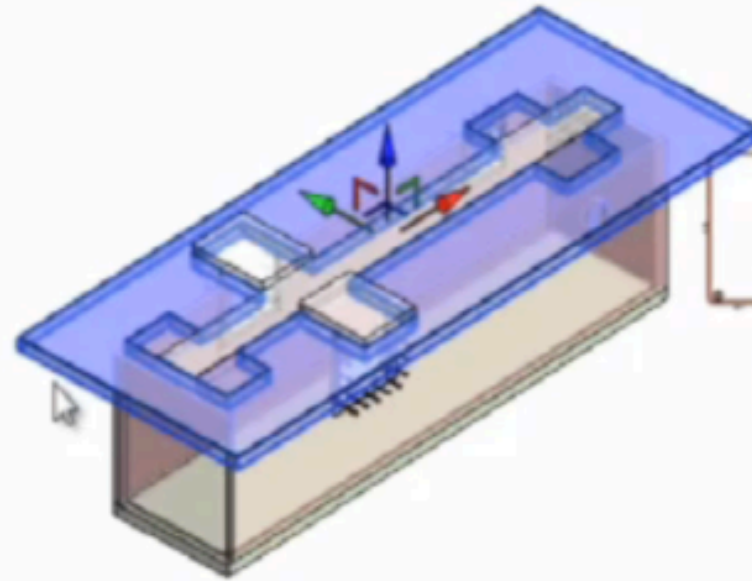
Structural
Engineering



Civil
Engineering



Construction



FINISHED PAINTED
SURFACES
DO NOT DAMAGE

APC SERVICES OF NEW ENGLAND

FINISHED
SURFACES
DO NOT DAMAGE

APC SERVICES OF NEW ENGLAND

FINISHED
SURFACES
DO NOT DAMAGE

APC SERVICES OF NEW ENGLAND

Mortenson Construction: One of the Best Software Implementations

- Automation of **50%** saves 2.5 hours per inspection or **12.5** hours per week
- Increased customer access to the model and created a higher level of confidence



Image courtesy Mortenson Construction



205%

BIM 360 Billings Growth Q2 FY15

BIM Wins



Summary

