

Getting to BIM for Embankment

Name
Ahamed

A close-up photograph of a person's hand holding a highly detailed, golden-colored mechanical dragon. The dragon is intricately designed with mechanical gears, levers, and a flame at its mouth. The background is blurred, showing more of the dragon's body and a colorful, artistic setting.

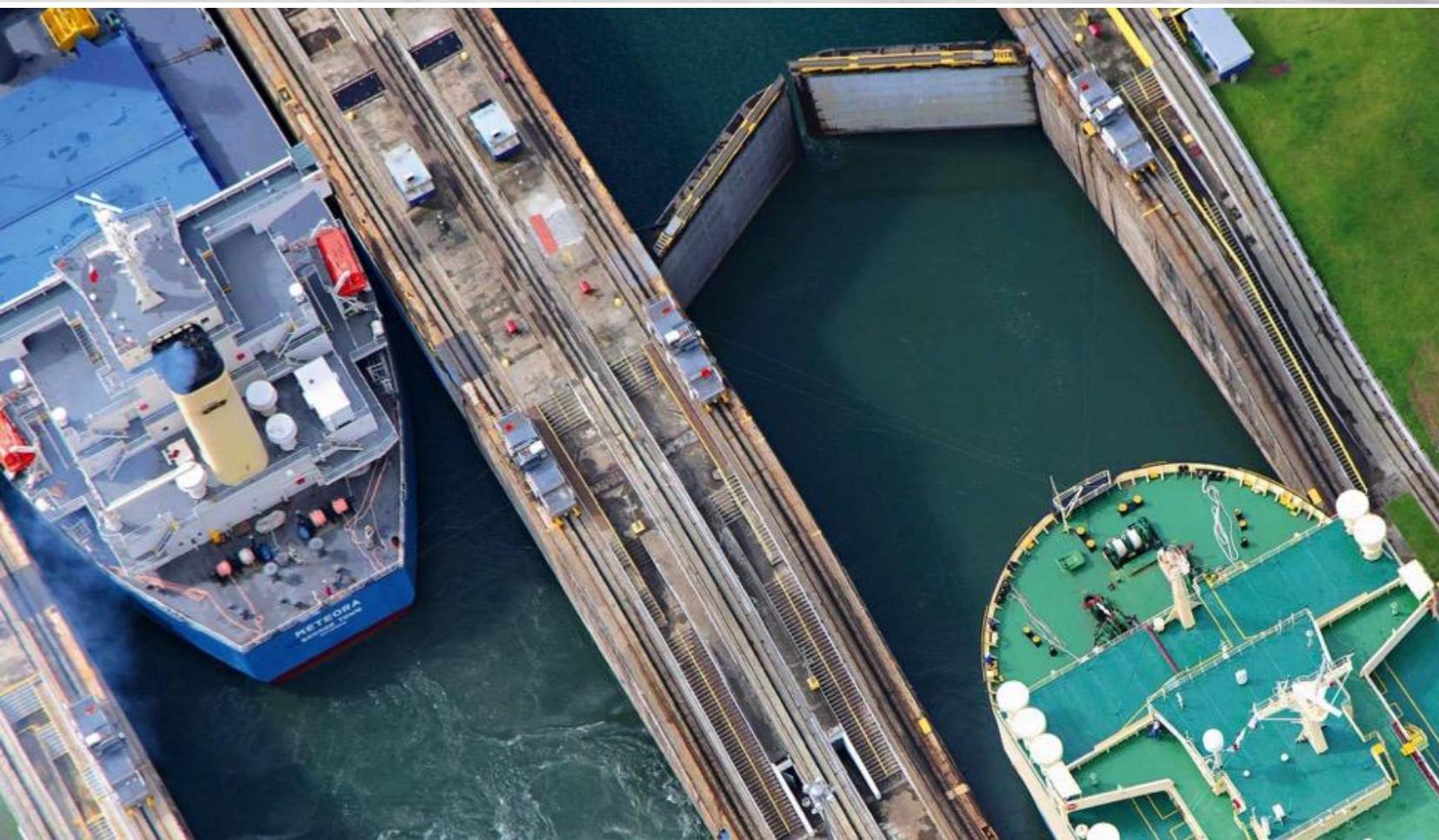
The Autodesk vision is to help people imagine,
design, and create a better world.



Image courtesy of Tesla Motors, Inc.



Image courtesy of Gensler.



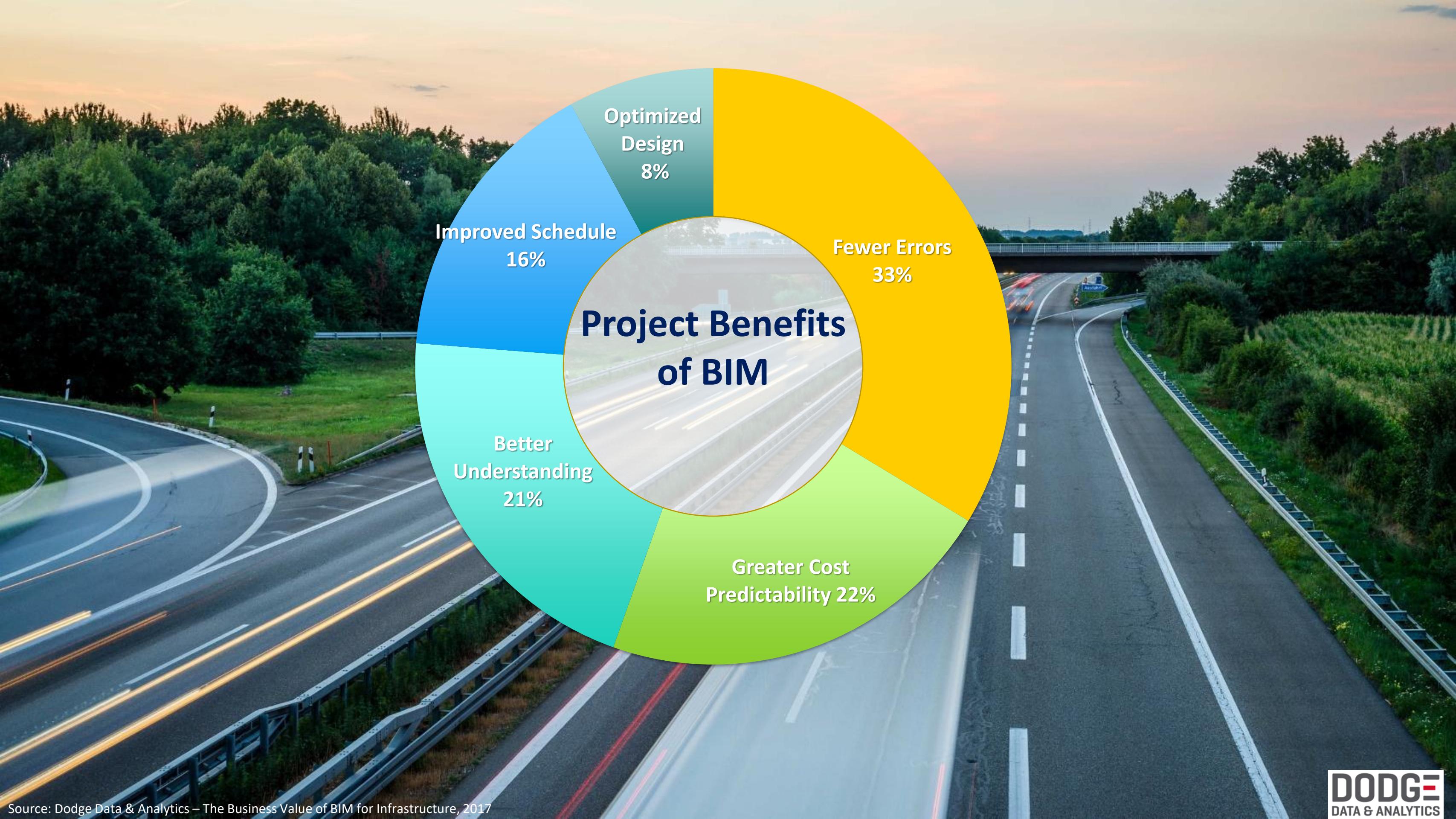
The Martian © 2015 Twentieth Century Fox. All rights reserved.

Building Information Modeling

More efficiently plan, design, construct, and manage buildings and infrastructure.

“A minimal increase in upfront costs of about 2% to support optimized design will lead on average to life-cycle savings of 20% on total costs.”





Survey

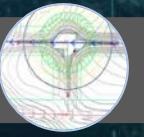


BIM For Roads & Highways



Survey

- + Convert high precision survey to detailed topographic data
- + Utilize automation for data extraction from LiDAR
- + Implement drone innovation to supplement context models

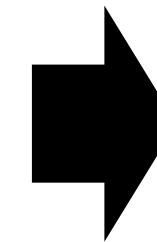
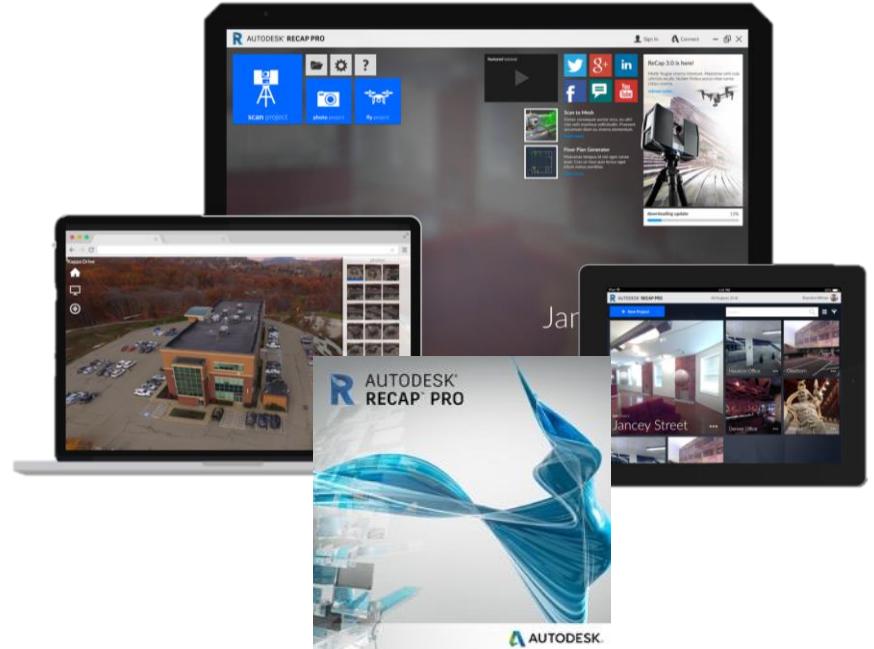
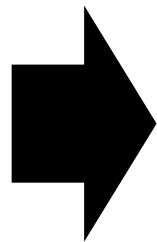


Planning & Concept Design



Detailed Design





Capture

Photo and Laser

Compute

**Automatic scan registration
Intelligent cleanup service**

Create

**Workflow
Integration**

Reality Capture (Mobile Lidar)

Use lightweight point cloud
Automate data extraction
Enhance existing conditions



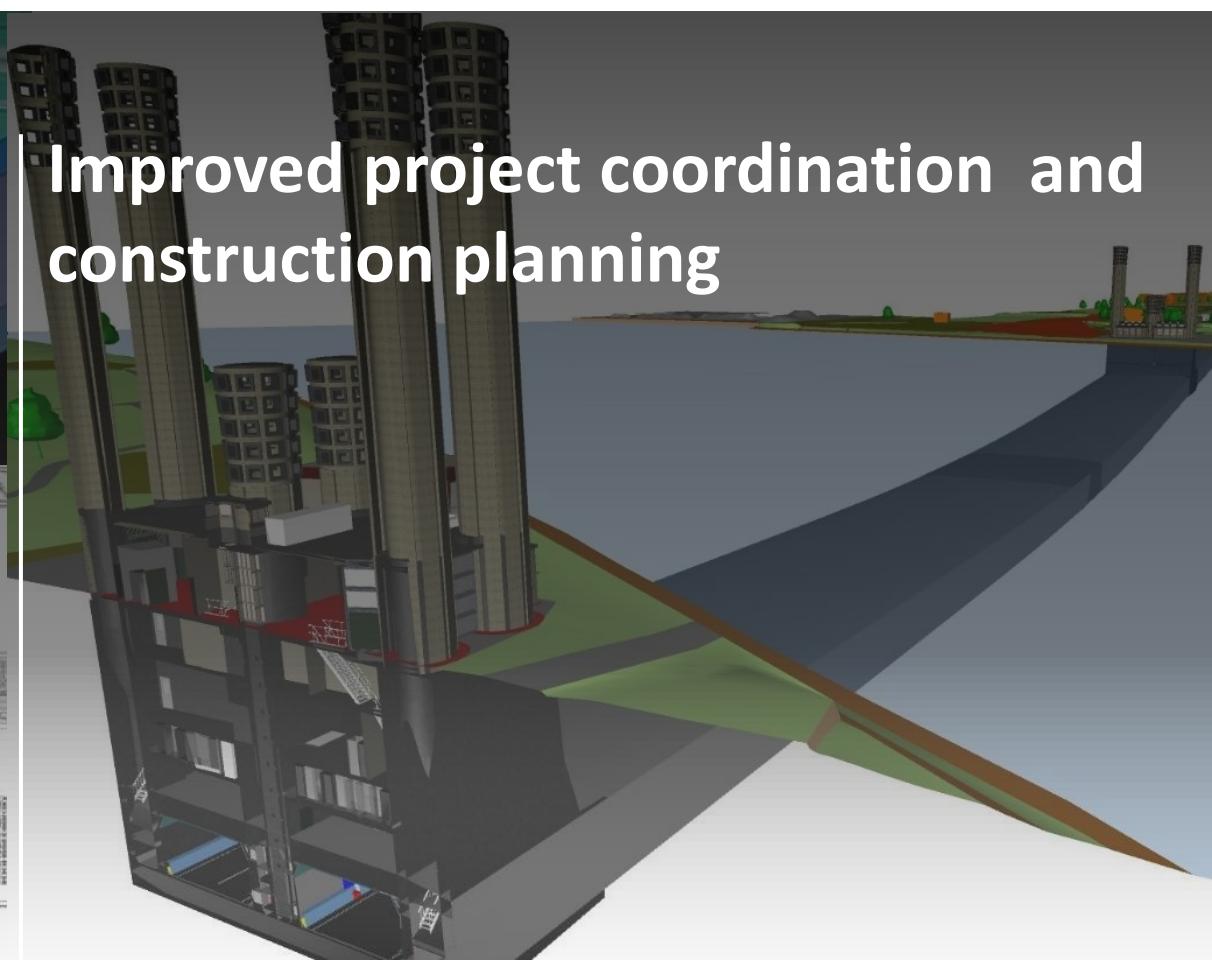
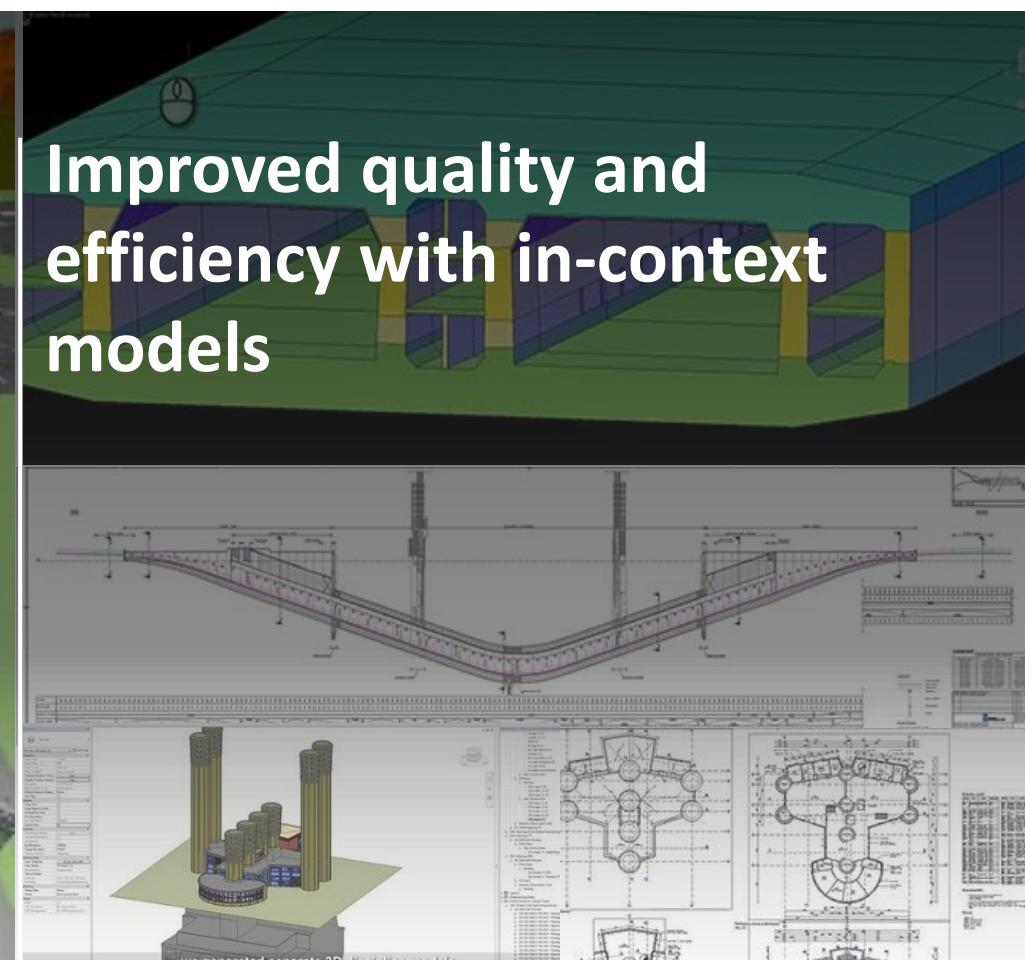
Reality Capture (Drone & Photo)

Reduce survey effort
Improve safety
Add context to your design

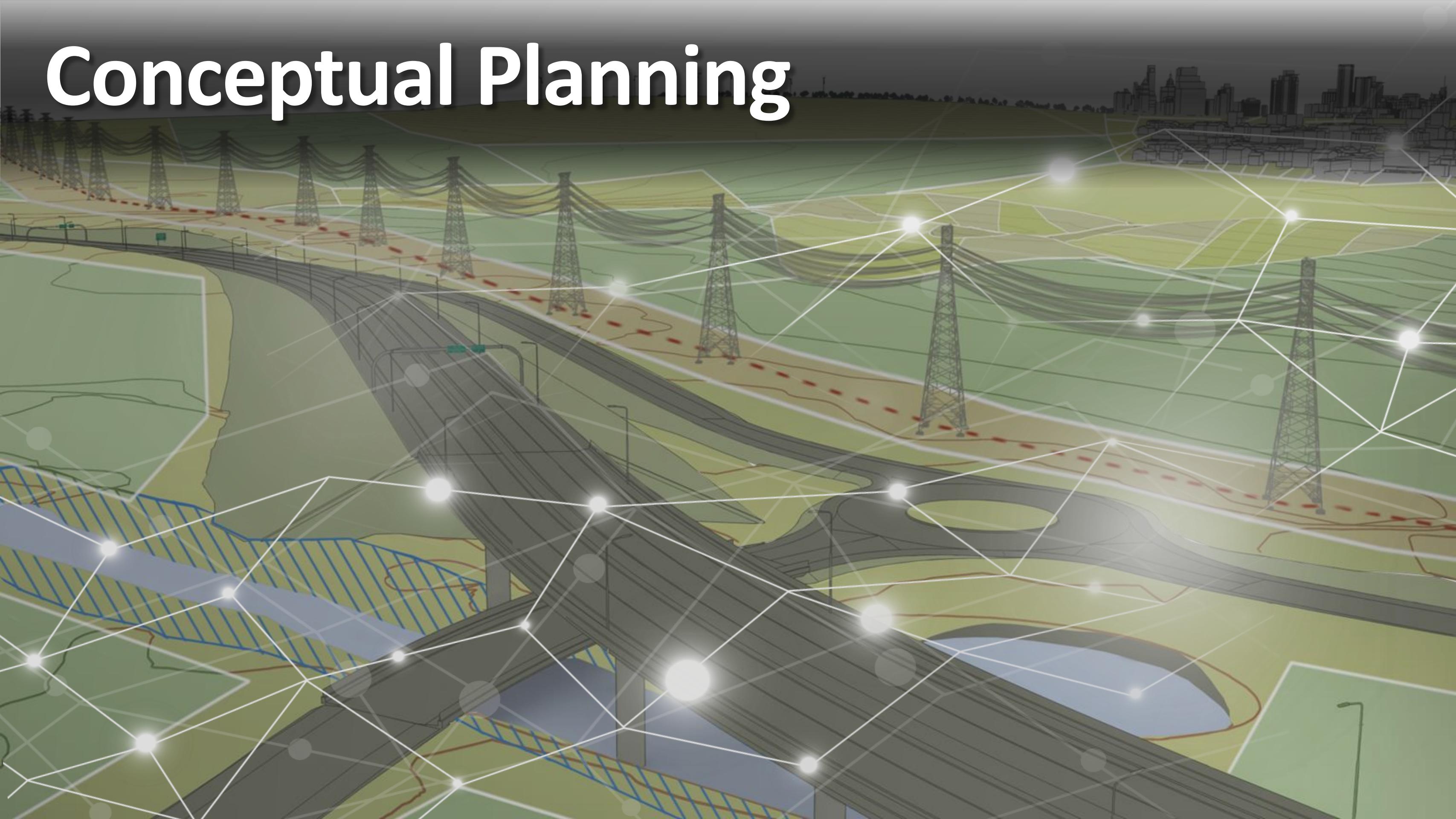


Hyacint Velsertunnel

The Netherlands



Conceptual Planning

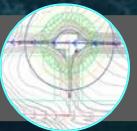


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Planning & Concept Design

- + Aggregate data to create project context
- + Develop parametric roadway, bridge, and drainage designs
- + Evaluate design alternatives
- + Perform analysis to optimize designs
- + Communicate your design with videos and renderings



Detailed Design



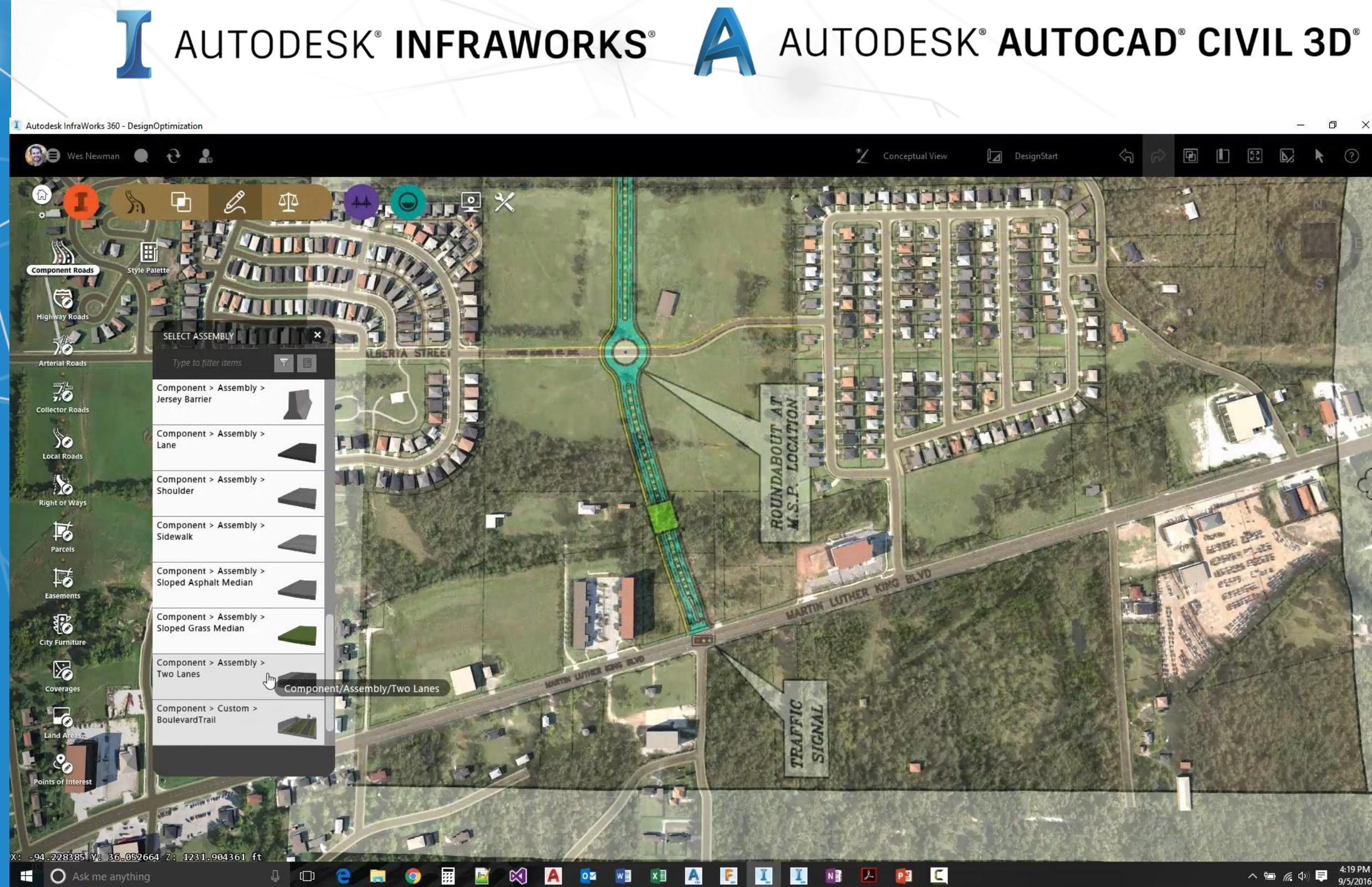
Context Model Development

Create project context with aggregated data

The screenshot shows the Autodesk InfraWorks 360 software interface. At the top, there's a navigation bar with icons for user profile, search, and help. Below it is a toolbar with buttons for 'Model Builder', 'New', 'Open', and filters for 'Date', 'Name', 'Group', 'Author', and a search bar. To the right, there's a 'Specialize' section for 'Autodesk® InfraWorks 360' with a 'Subscribed' status. A 'Preview' section lists 'Corridor Optimization', 'Land Areas & Grading Behaviors', and 'Suitability Maps' with toggle switches. A note says 'These services are previews only and experimental in nature, therefore not officially supported.' and a 'User Feedback Agreement' link. The main area is titled 'My Models' and displays a grid of 12 project thumbnails. Each thumbnail includes the project name, date, author, and a small house icon. The projects shown are: BeyondBentley (Today by Me), DesignOptimization (Yesterday by Me), BeavertonORegon (9/16/2016 by Angel Espinoza), Stellar (9/16/2016 by Angel Espinoza), RoadwayDrainage (9/15/2016 by Me), TransportationQuickStart1 (9/15/2016), LHSubStation (9/15/2016 by Angel Espinoza), Germany CAP 2 Times (9/15/2016 by John Sayre), and two other partially visible thumbnails.

Embankment Design

Quickly evaluate multiple design options
Validate design in real time
Continue in Civil 3D



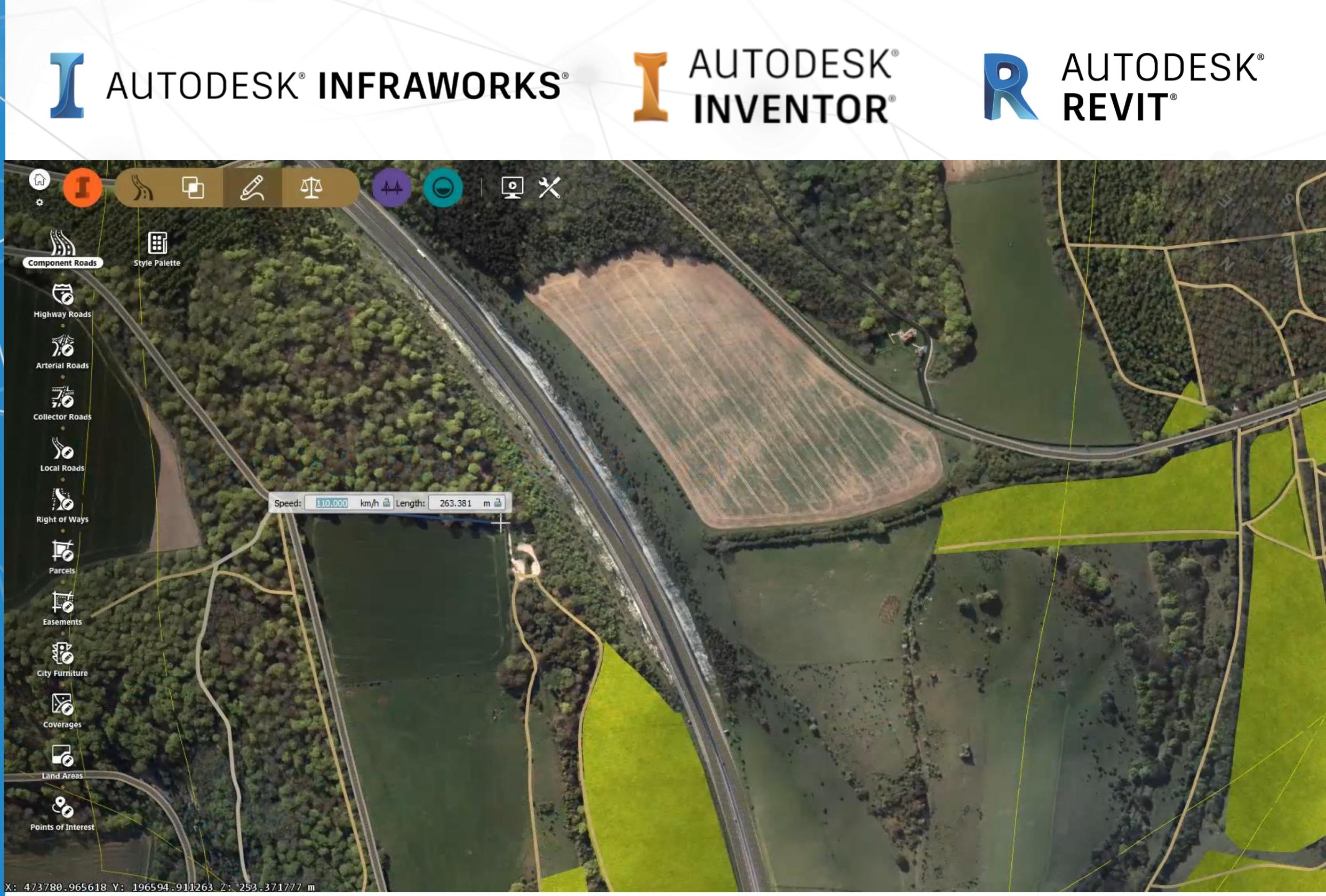
Drainage Design

Quickly evaluate multiple design options
Validate design in real time
Continue in Civil 3D

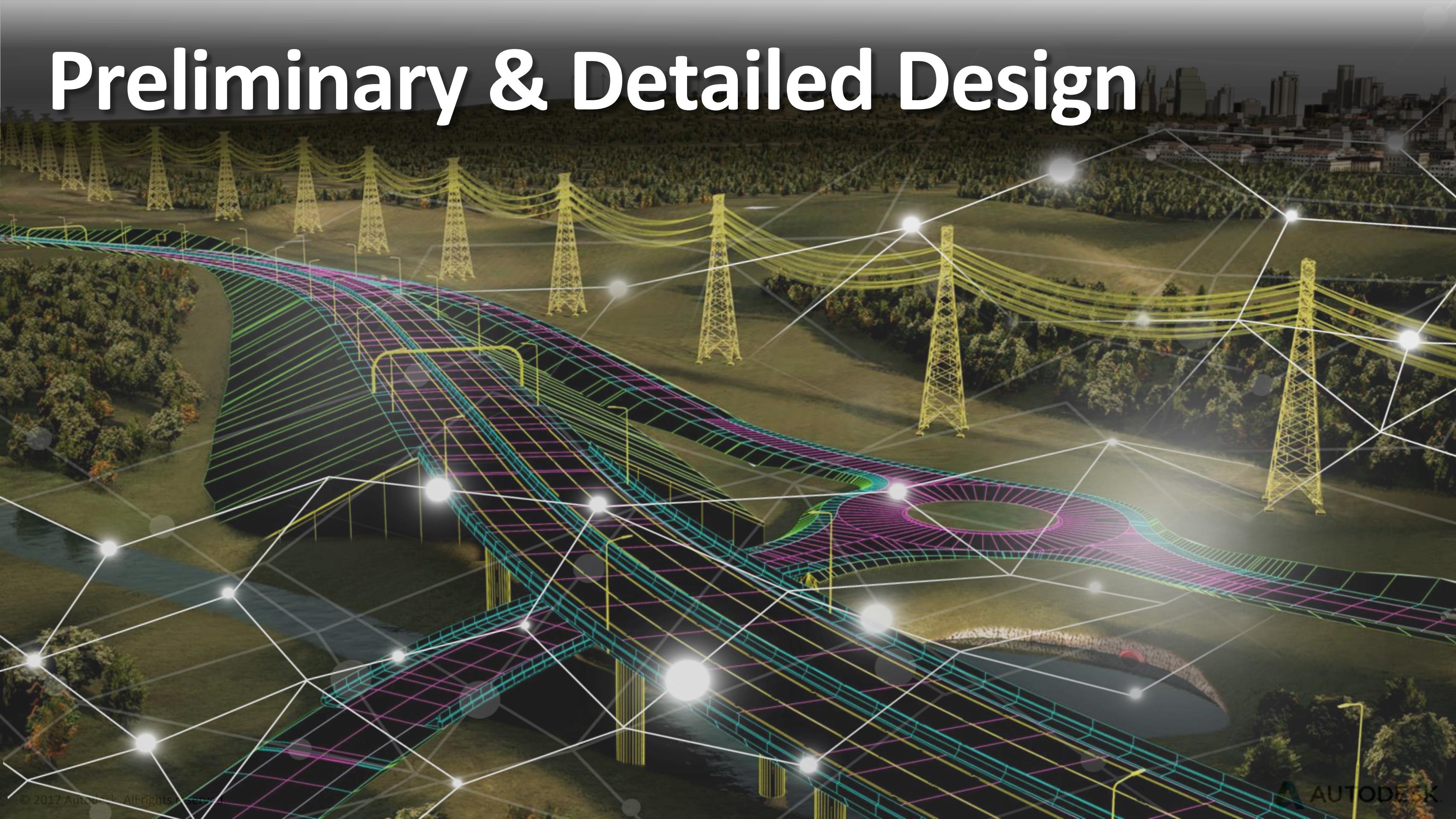


Bridge Design

Quickly evaluate multiple design options
Validate design in real time
Improve design with interoperability of Revit & Inventor



Preliminary & Detailed Design

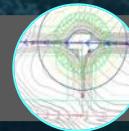


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Planning & Concept Design

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- + Communicate your design with videos and renderings



Detailed Design

- + Design in a dynamic 3D model-based environment
- + Design with contextual rule-based standards
- + Produce plans that dynamically reflects changes
- + Collaborate across multidisciplinary design teams
- + Centralized access to project information

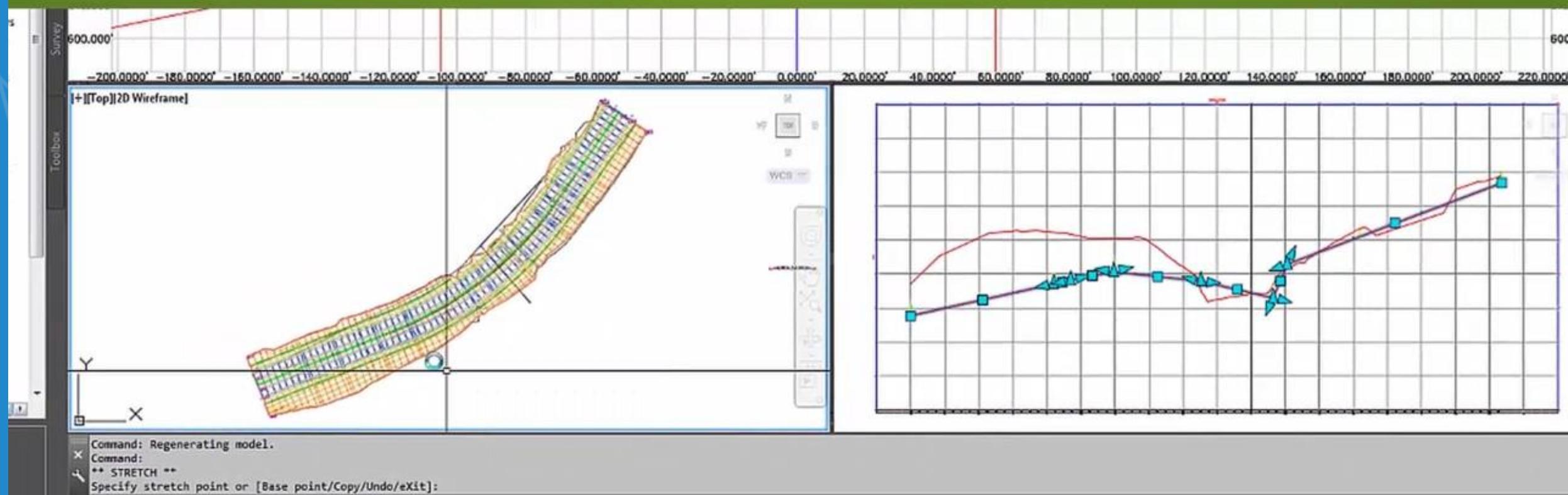


Model based design

Improve productivity
Reduce errors and omissions
Streamline design-to-construction

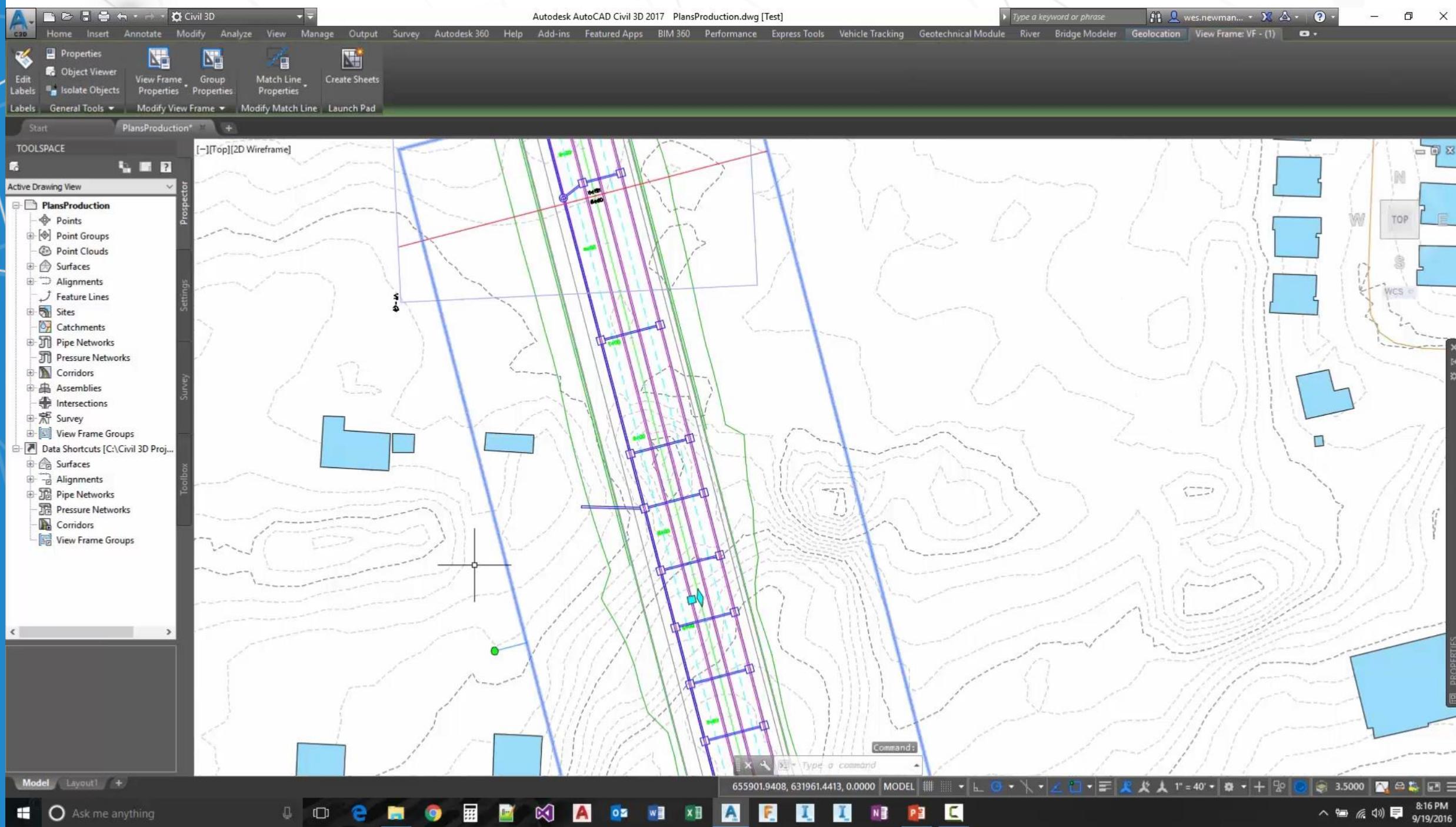


Design more efficiently



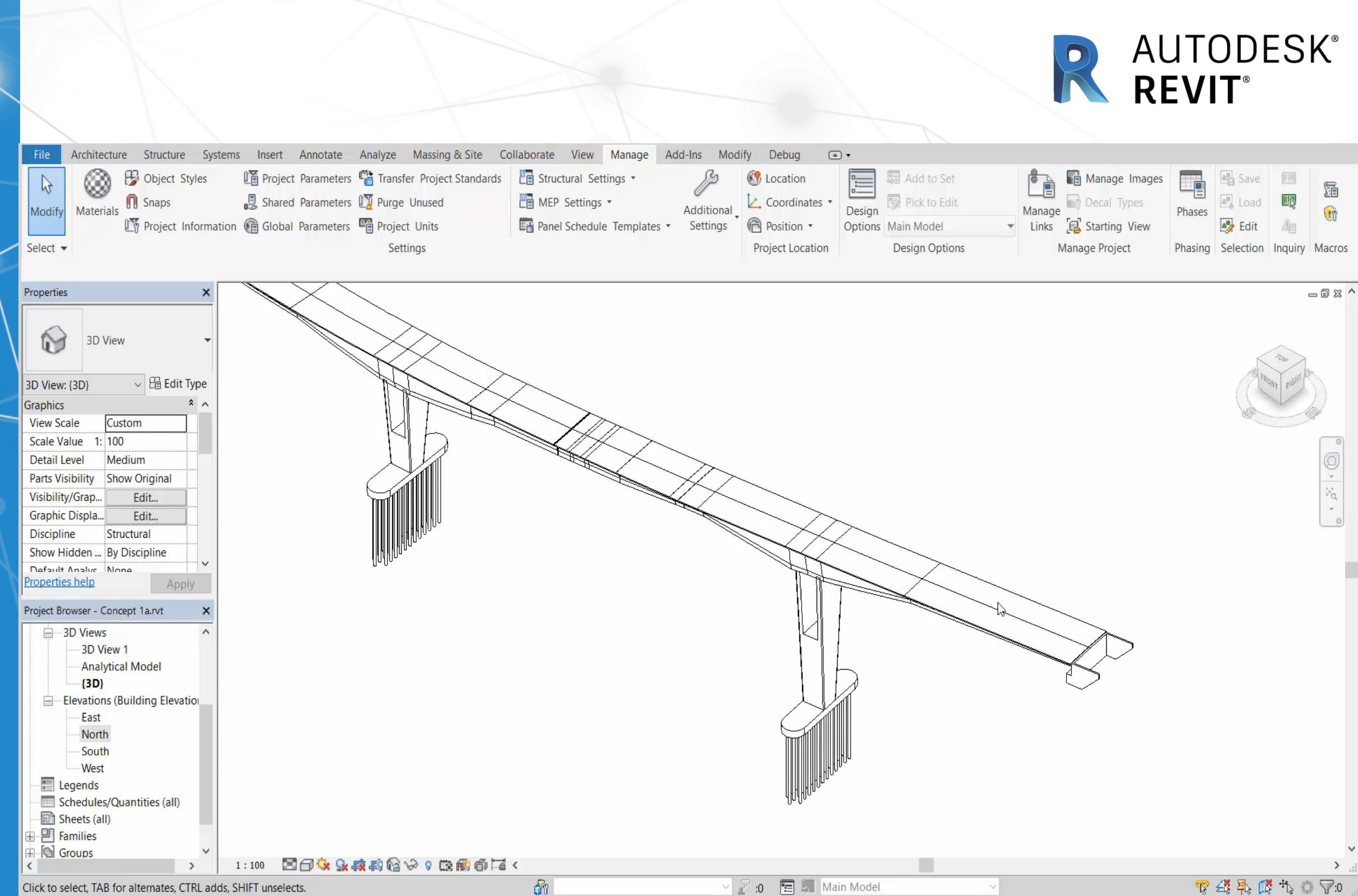
Plans Production

Automate sheet creation
Benefit from dynamic link
between design and plans



Bridge Design

Improve designs with
interoperability to InfraWorks
Automate rebar
Generate plans from the model

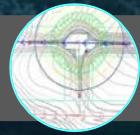


Autodesk Roads & Highways Solution

Included in Autodesk AEC Collection



Survey



Planning & Concept
Design



Detailed Design

 AUTODESK®
INFRAWORKS®

 AUTODESK®
RECAP™ PRO

 AUTODESK®
AUTOCAD® CIVIL 3D®

 AUTODESK®
REVIT®

 AUTODESK®
AUTOCAD®

 AUTODESK®
VEHICLE TRACKING



AUTODESK® ARCHITECTURE,
ENGINEERING & CONSTRUCTION
COLLECTION

