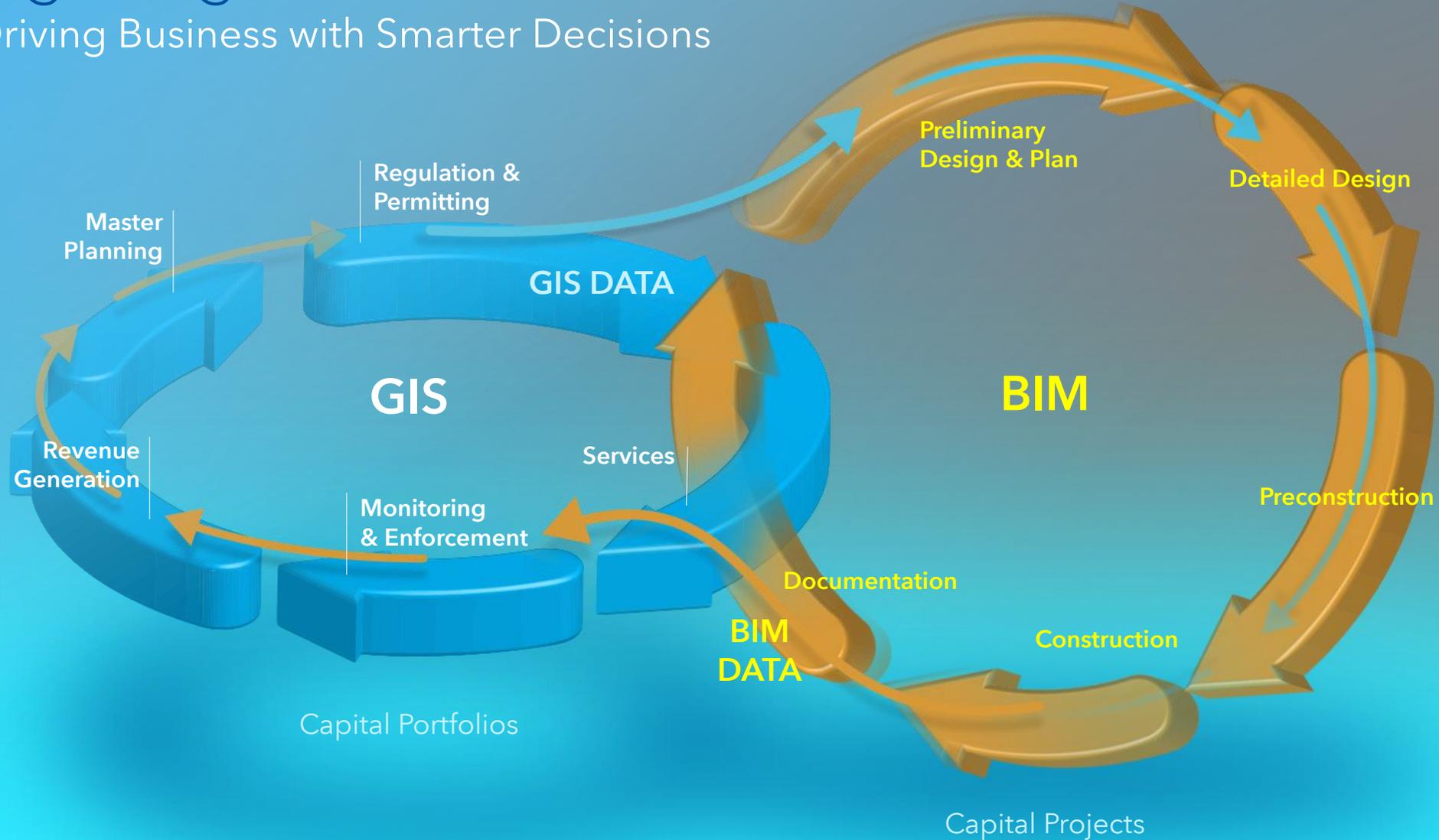
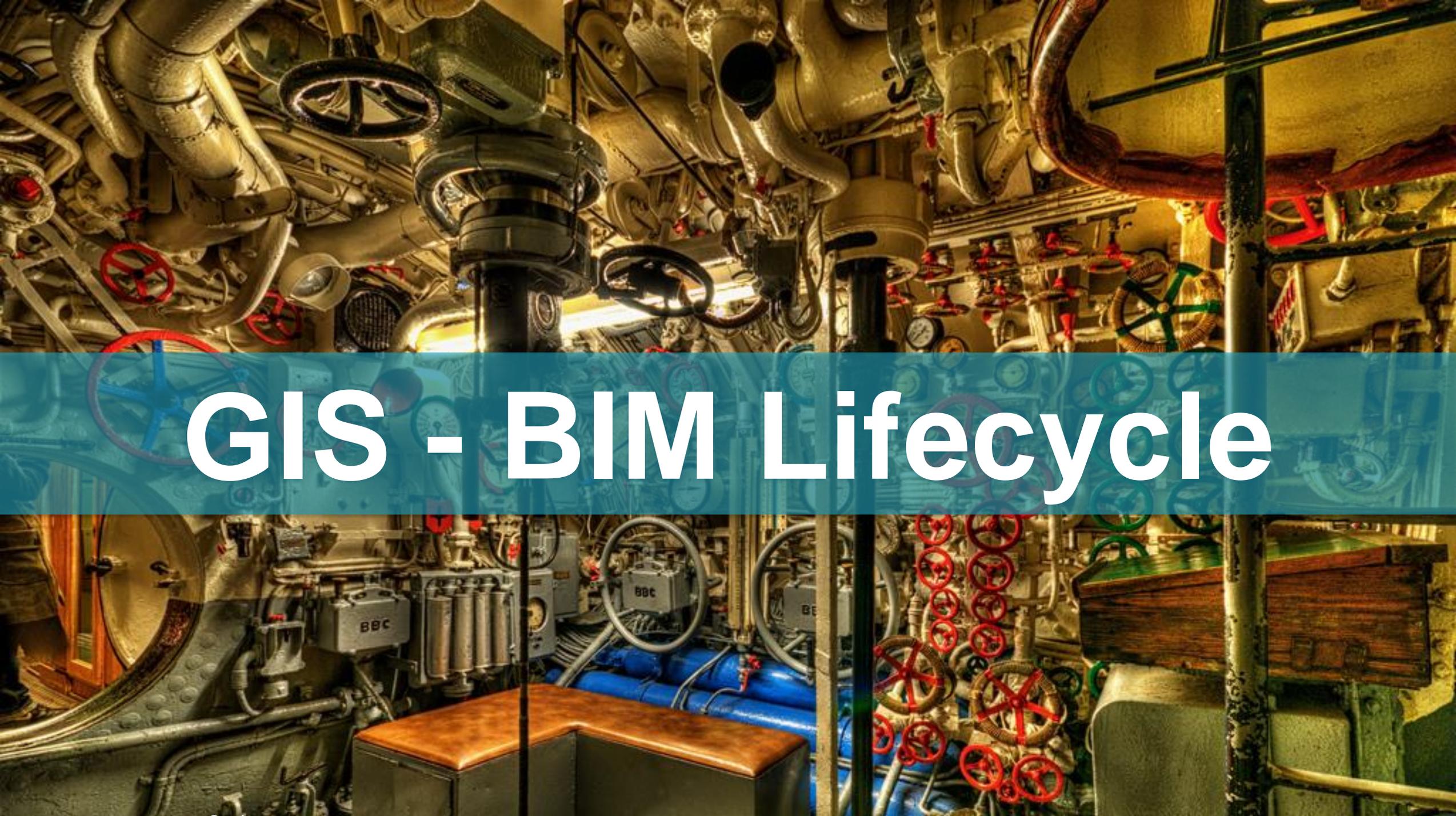


Integrating BIM and GIS Workflows

Driving Business with Smarter Decisions



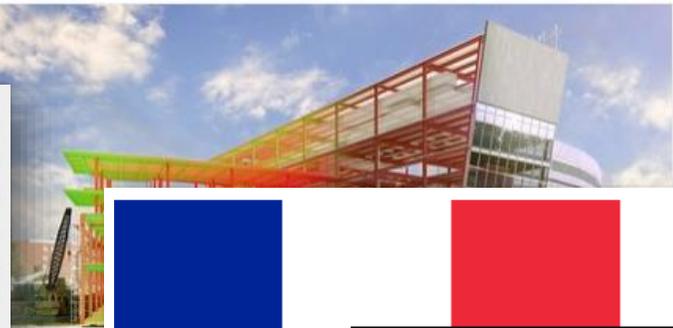


GIS - BIM Lifecycle

BIM is a process for increasing efficiency throughout the construction process

The screenshot shows the GSA website's '3D-4D Building Information Modeling' page. It features a navigation menu on the left with categories like 'Design & Construction', 'Architecture & Engineering', and 'Building Awards'. The main content area includes an overview of the National 3D-4D-BIM Program, a 'CONTACTS' section for Charles Matta, and a 'NONGOVERNMENT LINKS' section. A sidebar on the right contains a 'TIPS ON MEP AND STRUCTURAL BIM E-SUBMISSION' graphic.

Russia following UK's lead with plans for BIM mandate
By [Kim Slowey](#) | September 16, 2016 **print**



Updates on Mandatory BIM e-Submission

1. From July 2013, BIM e-Submission for regulatory approval would be made mandatory in three phases. New building projects with a Gross Floor Area (GFA) of more than 20,000 m², which are submitted to the Urban Redevelopment Authority (URA) for planning approval on or after 1 July 2013, are required to submit their architectural plans in BIM format.
2. From 1 July 2014, there will be mandatory structural and Mechanical, Electrical and Plumbing (MEP) BIM e-Submission for all new building projects with GFA of 20,000 m² and above (in 2013 and 2014).
3. From 1 July 2015, companies are also required to make architectural, structural and MEP BIM e-Submissions for all new building projects with a GFA of 5,000 m² and above (in 2015).

Article [Talk](#)

SOSI

From Wikipedia, the free encyclopedia

SOSI is a much used [geospatial vector](#) data format for predominantly used for exchange of geographical information.

SOSI is short for **Samordnet Opplegg for Stedfestet Informasjon** (literally "Coordinated Approach for Spatial Information" expanded in English to **Systematic Organization of Spatial Information**).

The standard includes standardized definitions for geometry and topology, data quality, coordinate systems, and metadata.

The open standard was developed by the Norwegian Mapping and Cadastre Authority. It was first published in 2001.



NEWS FRANCE AND GERMANY MOVE FORWARD ON BIM ADOPTION



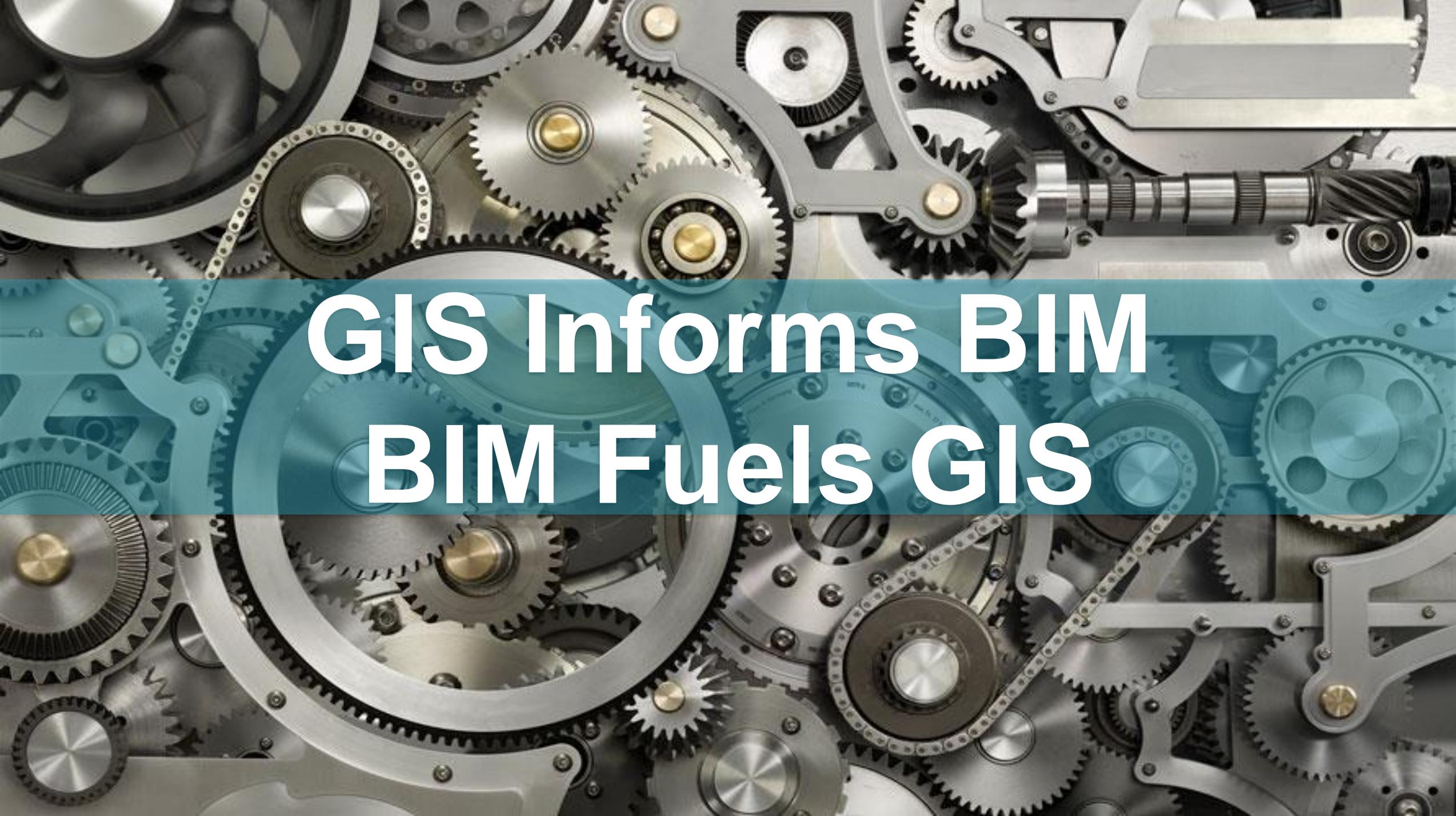
Reducing Uncertainty

Construction
Documentation
Scheduling
Costs
Safety
Visualization
Coordination

B
G i S
M



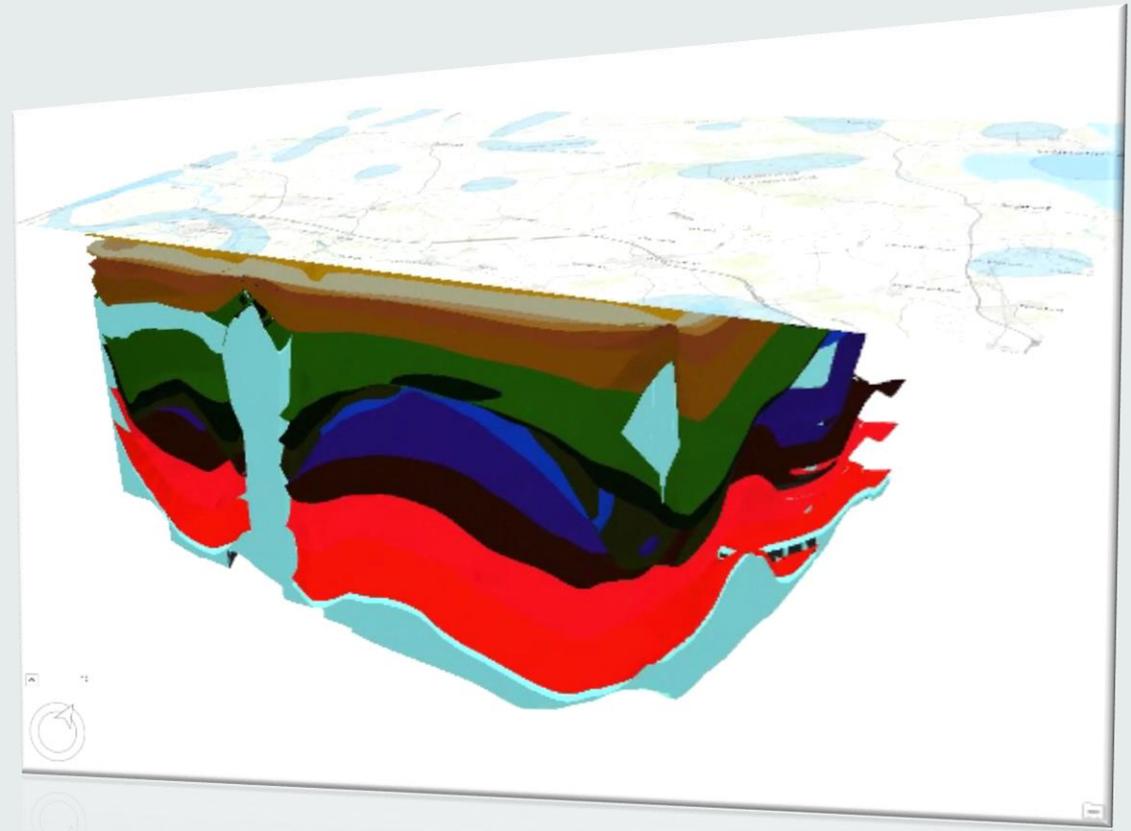
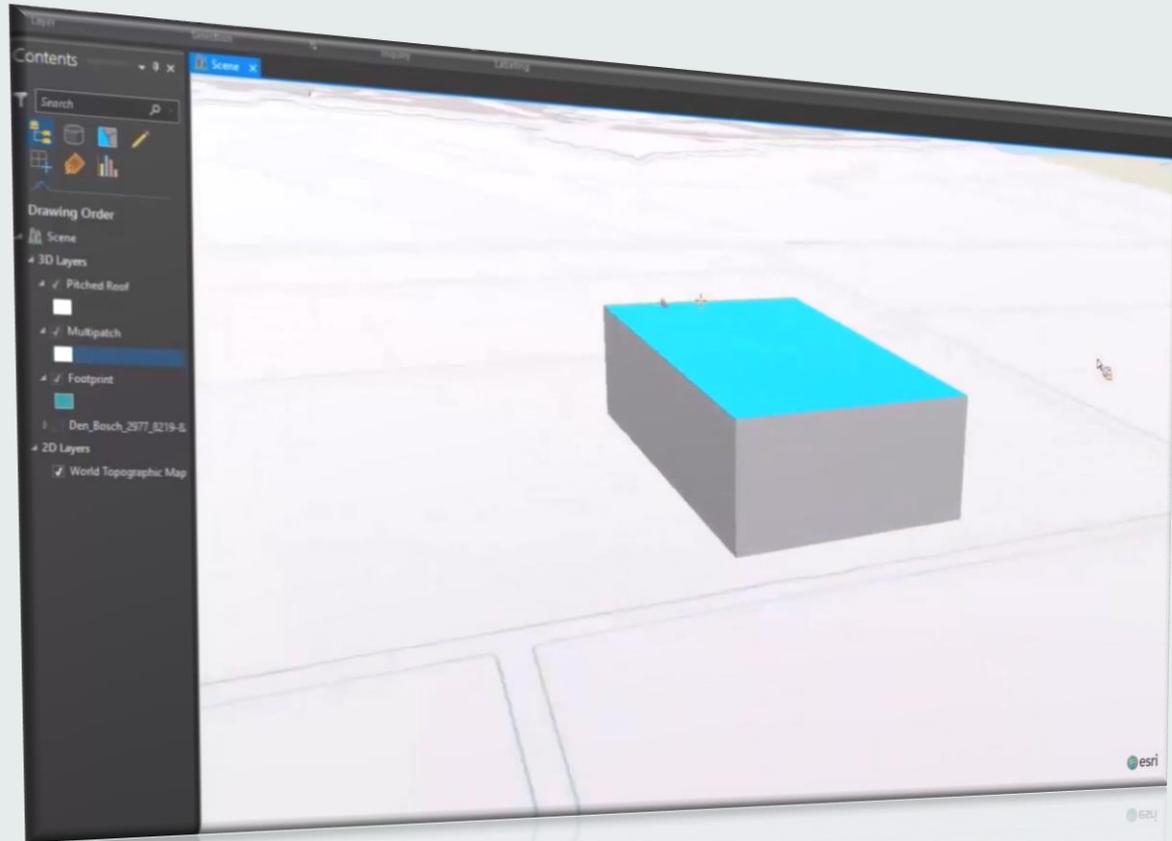
Where
should we go
next?



GIS Informs BIM BIM Fuels GIS



3D Platform



Improving 3D Experience



Find address or place

My Data

- Buildings_San_Francisco



3D Objects

ArcGIS Pro - MyProject1 - Map

PROJECT MAP INSERT ANALYSIS VIEW EDIT SHARE APPEARANCE

Clipboard: Paste, Cut, Copy

Map: Explore, Navigate

Basemap, Add Data Layer, Add Preset Layer

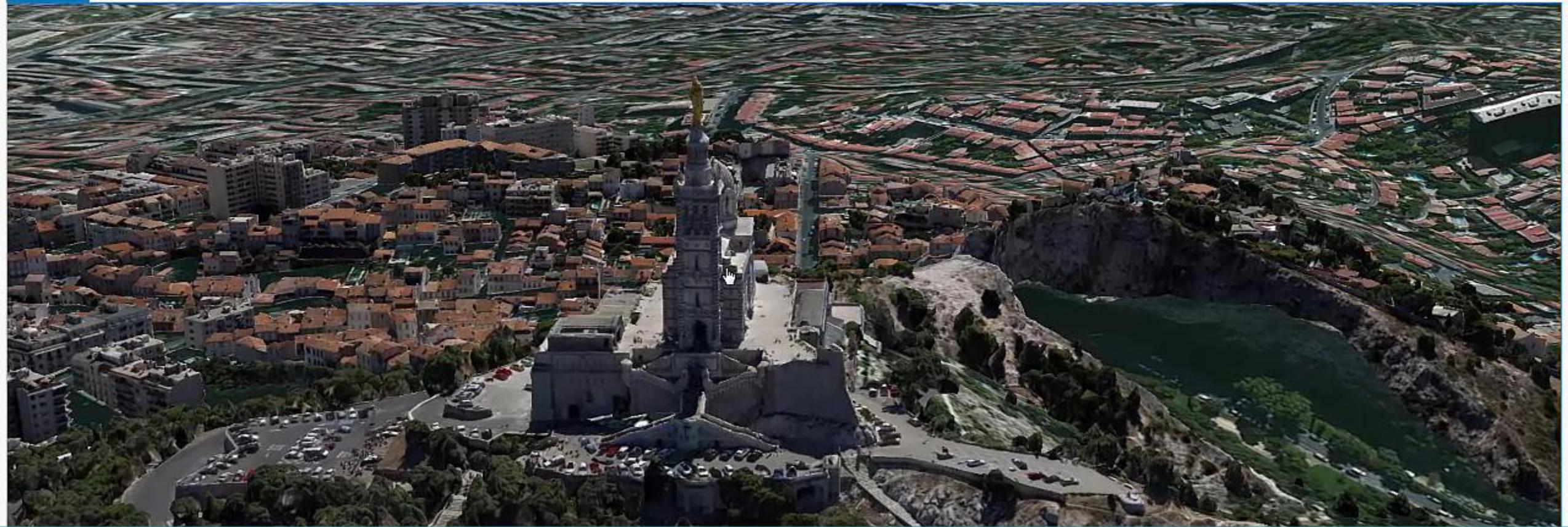
Select, Select By Attributes Selection, Select By Location Selection

Attributes, Clear

Infographics, Measure, Locate, Inquiry

Pause, View Unplaced, More Labeling

Scene

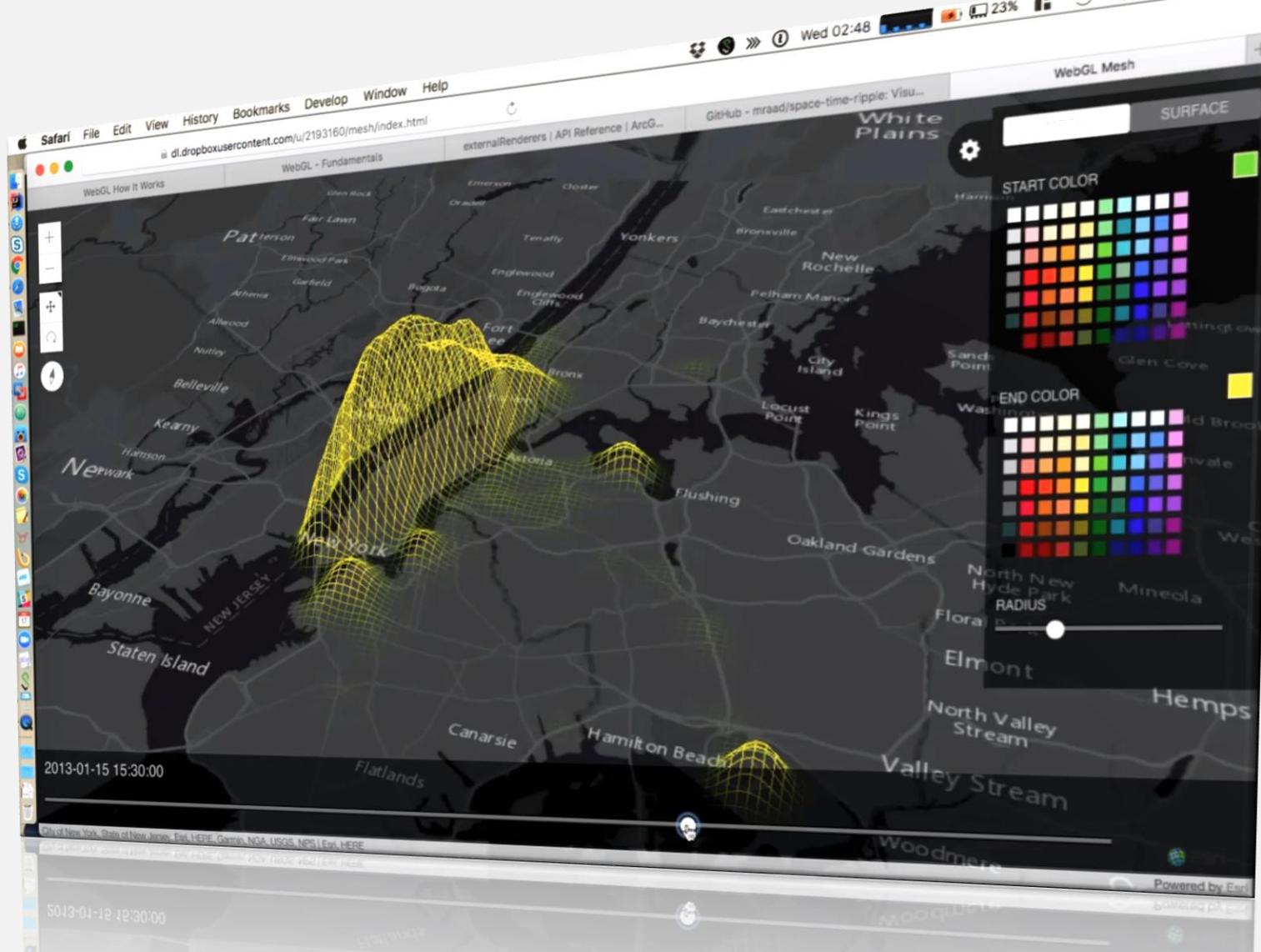


Mesh

Windows taskbar showing various application icons and the system clock displaying 11:14 AM.



Point Clouds



esri

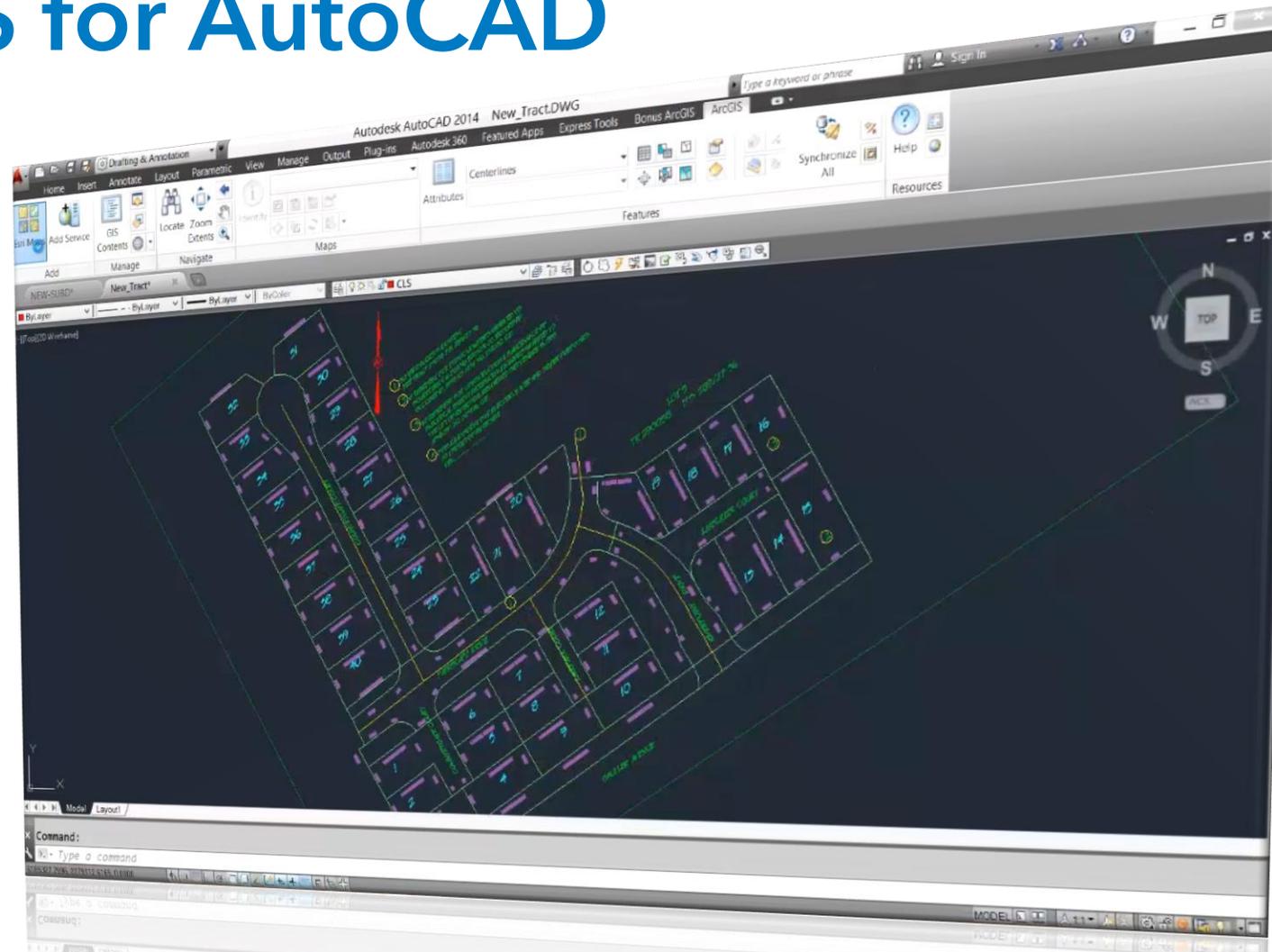
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3D Geoanalytics



AR / VR / 3D Mobile

ArcGIS for AutoCAD



GIS Services in AEC

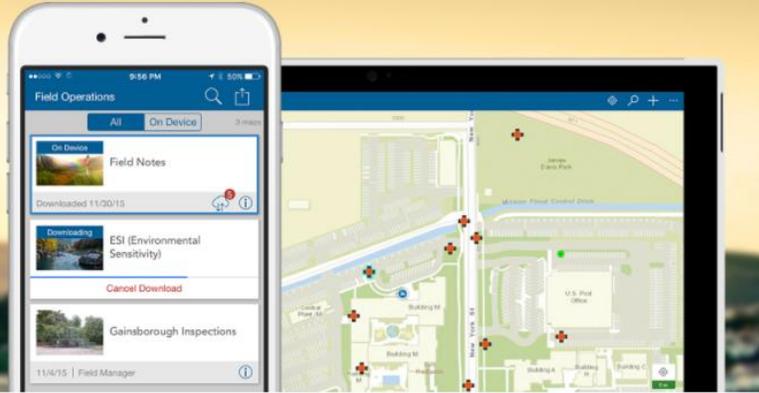
GIS/AEC Patterns....



Collector for ArcGIS

Accurate Data Collection Made Easy

Get Started →



Operations Dashboard

Collect and Update Data in the Field

Put mapping in the hands of your field workforce to improve the accuracy and currency of your spatial data and make more timely and informed decisions.

How It's Used

From damage reports and service requests to inventory and inspection of asset data, create and edit accurate data in the field.



Collect and update information in the field and log



Use Collector for ArcGIS online or offline – regardless of



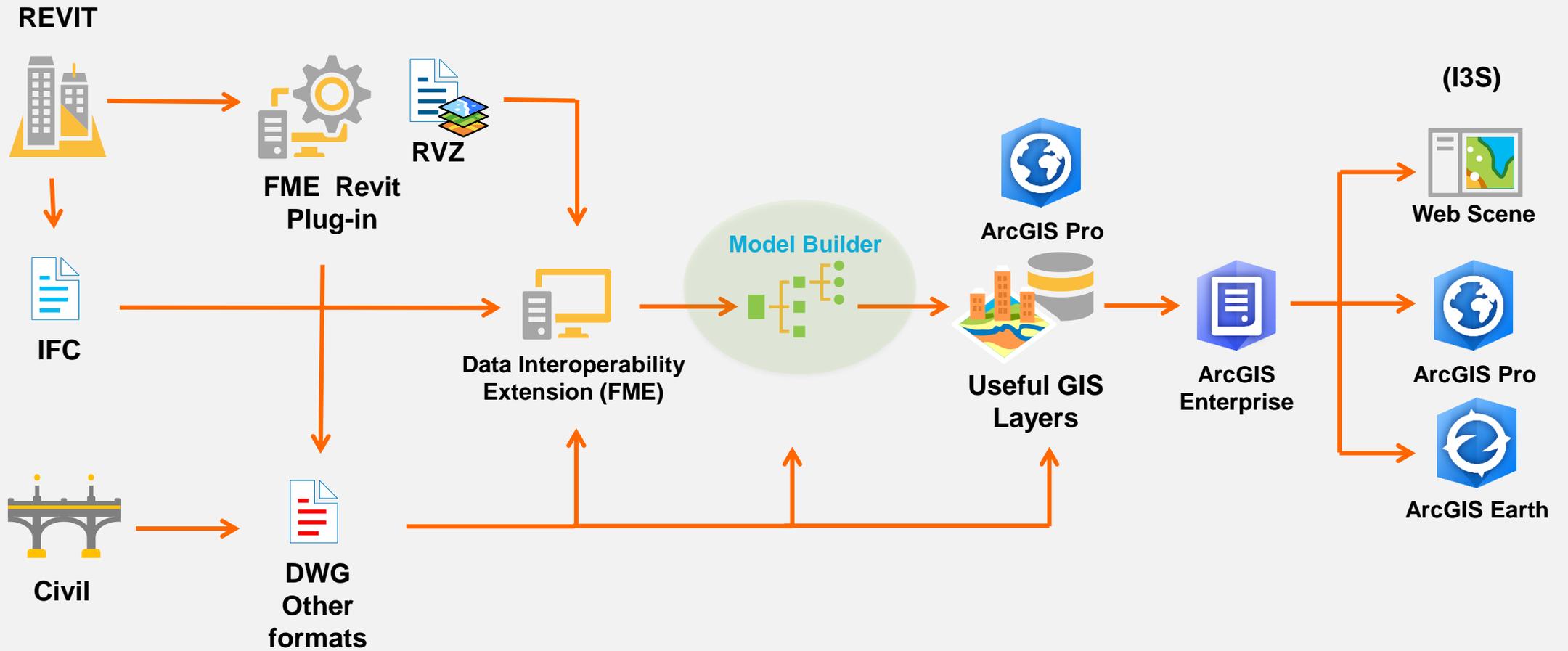
Works on iOS, Android, and Windows.



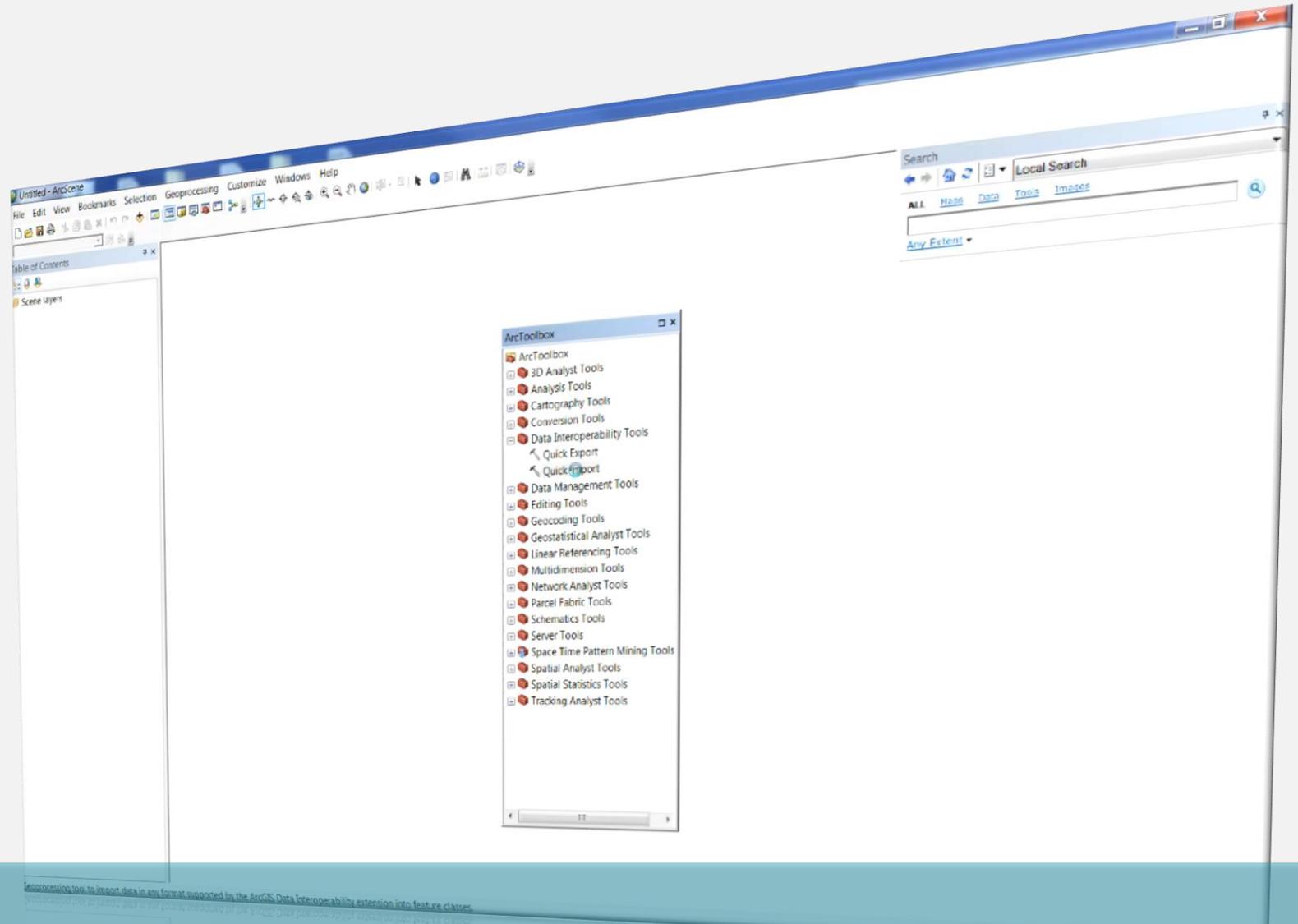
Supports external receivers for improved spatial accuracy.



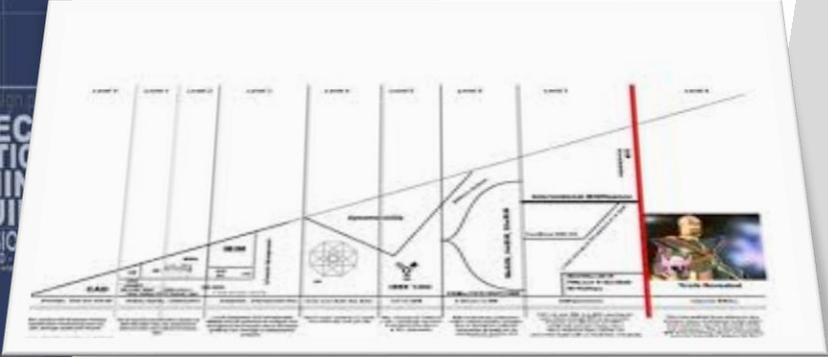
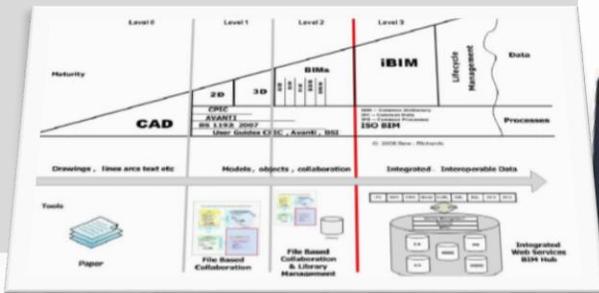
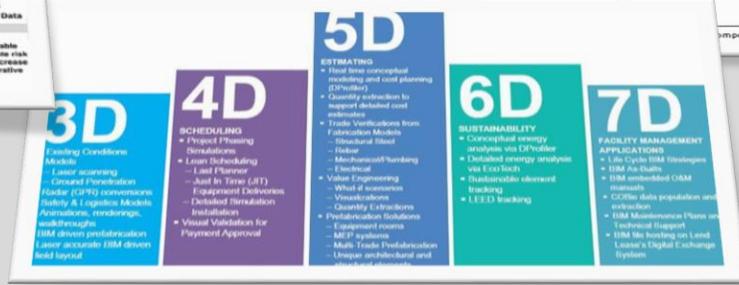
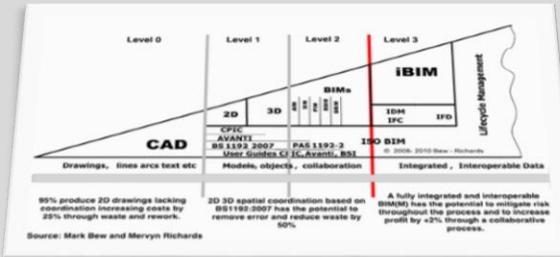
Platform



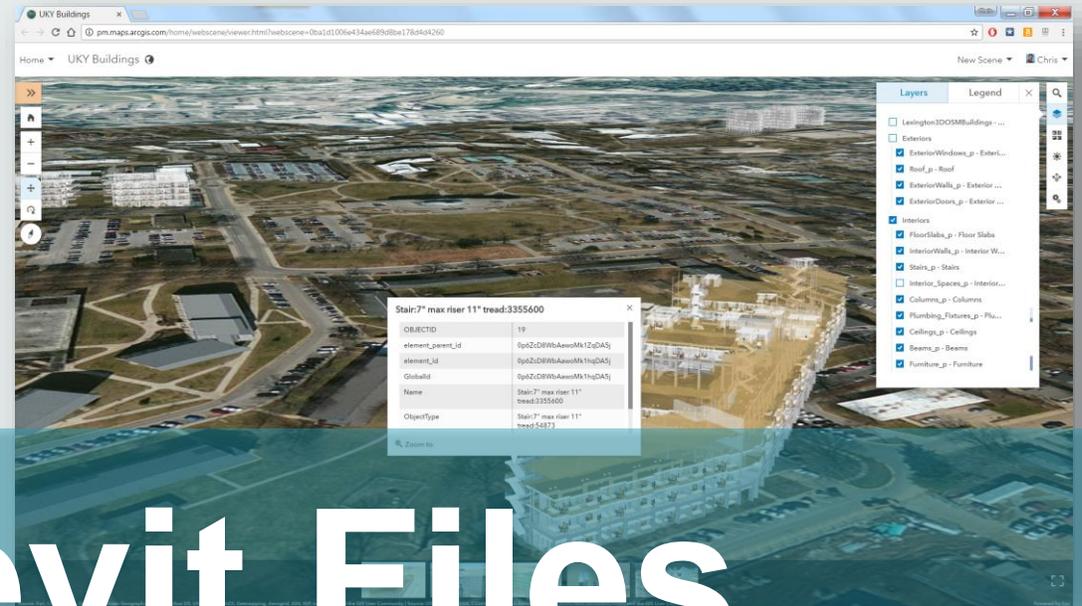
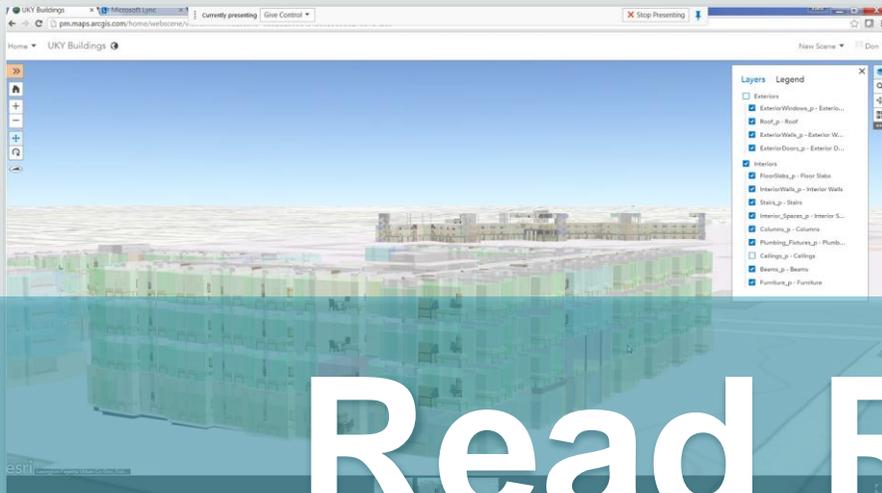
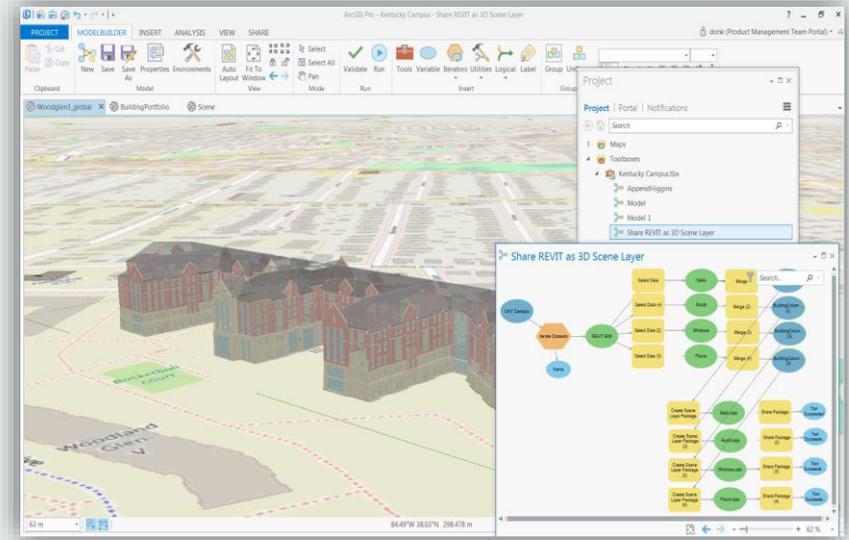
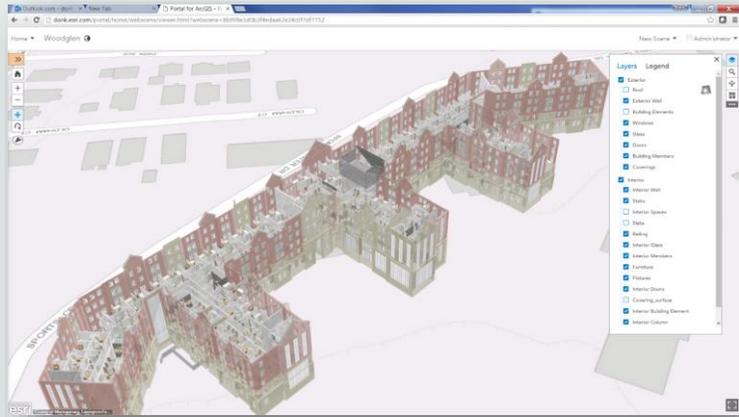
BIM to 3D GIS Workflow Today



BIM to GIS Today...



Esri BIM Roadmap



Read Revit Files

Design BIM

Record BIM

Trades BIM

"As-Maintained" BIM

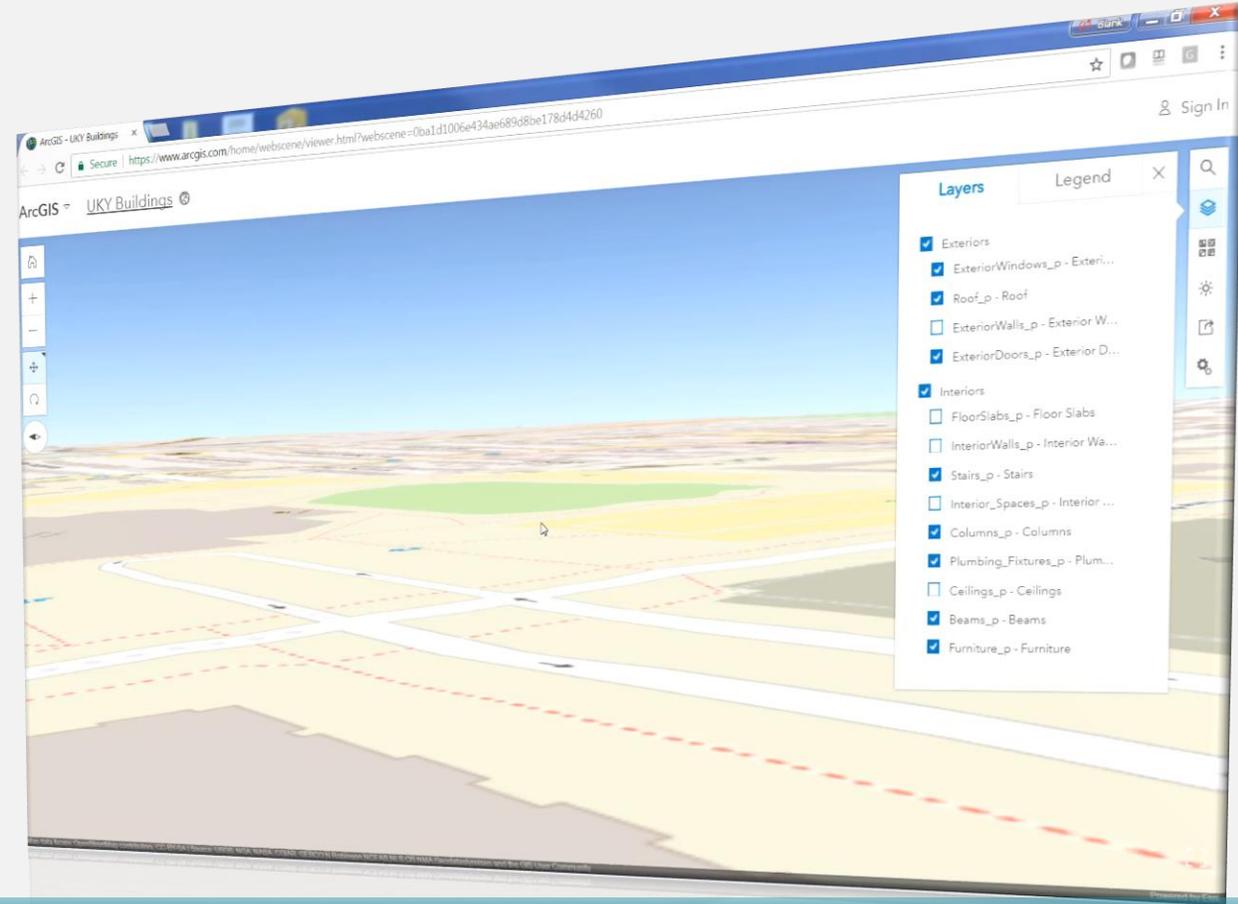
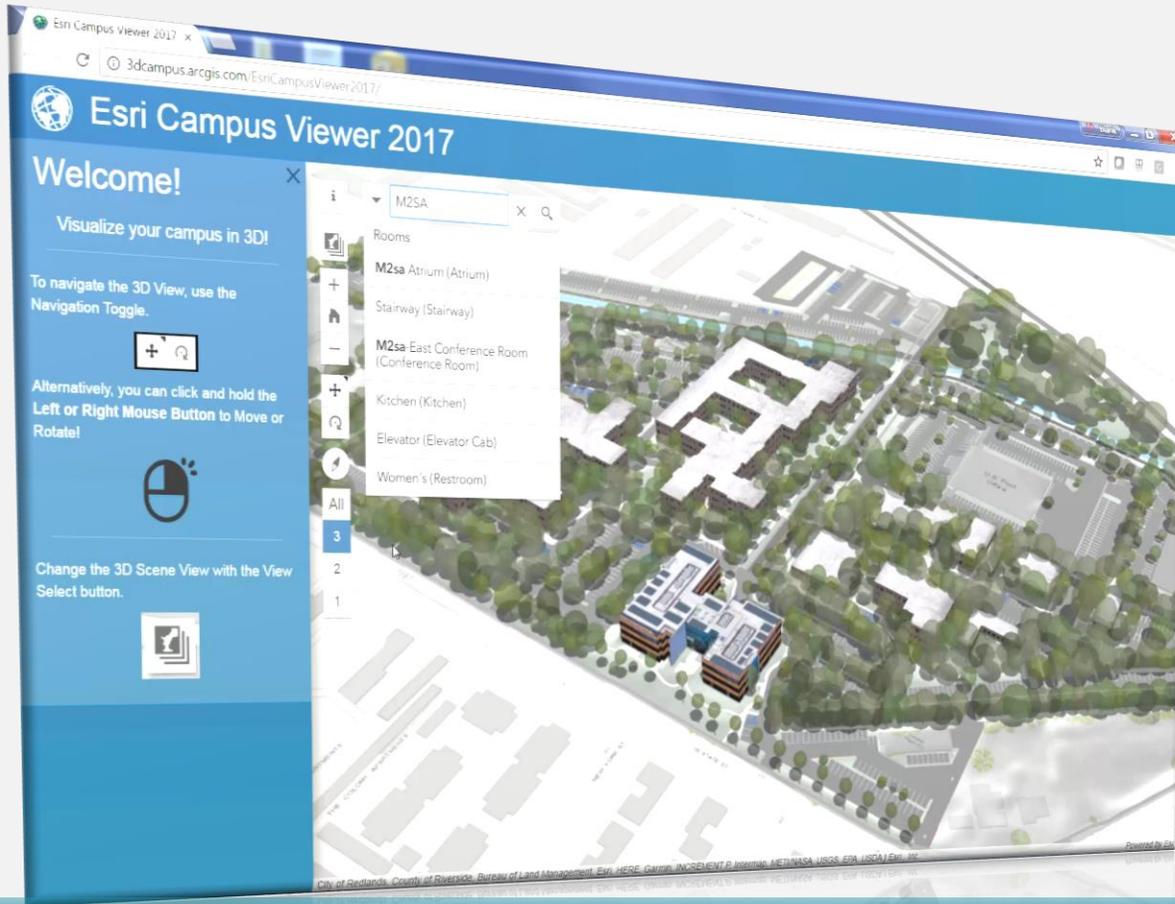
As-Built BIM

Scan to BIM

Concept BIM

CONSTRUCTION BIM

**3D CAD w/
Attributes**

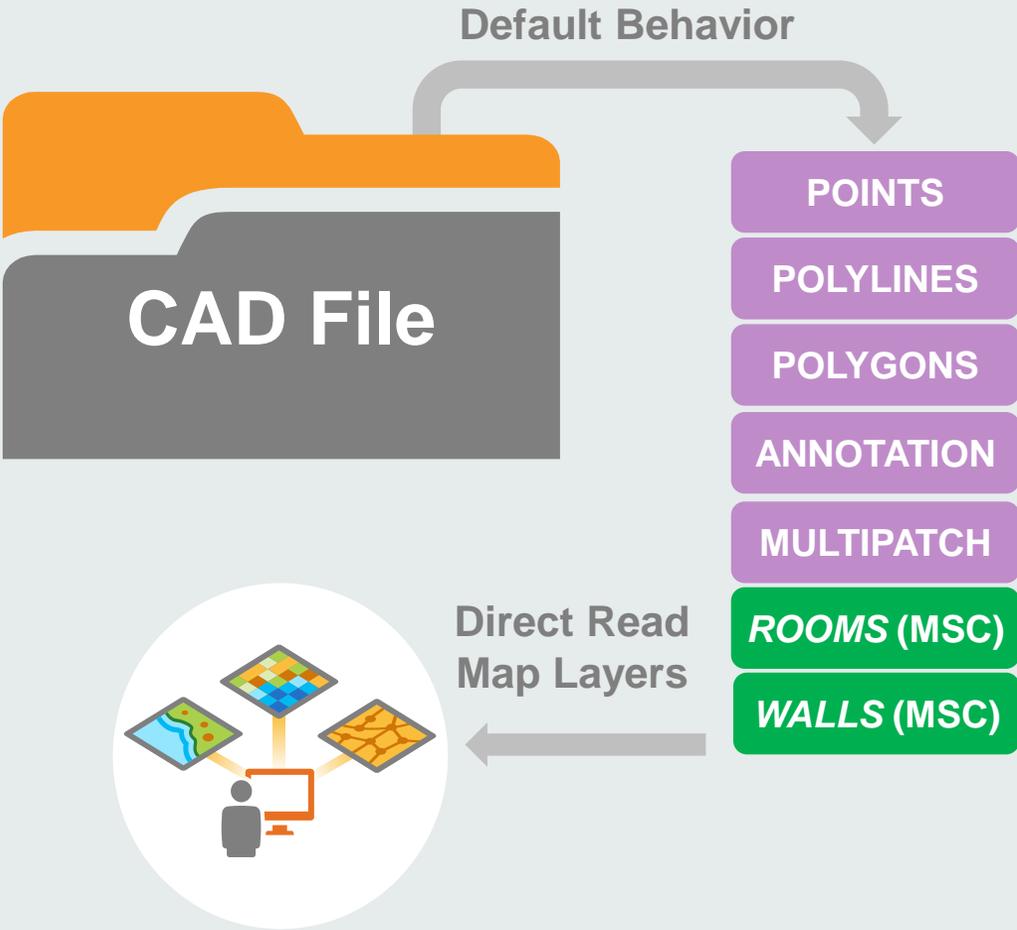


Features or Visualization



Adding CAD Data in ArcGIS Pro

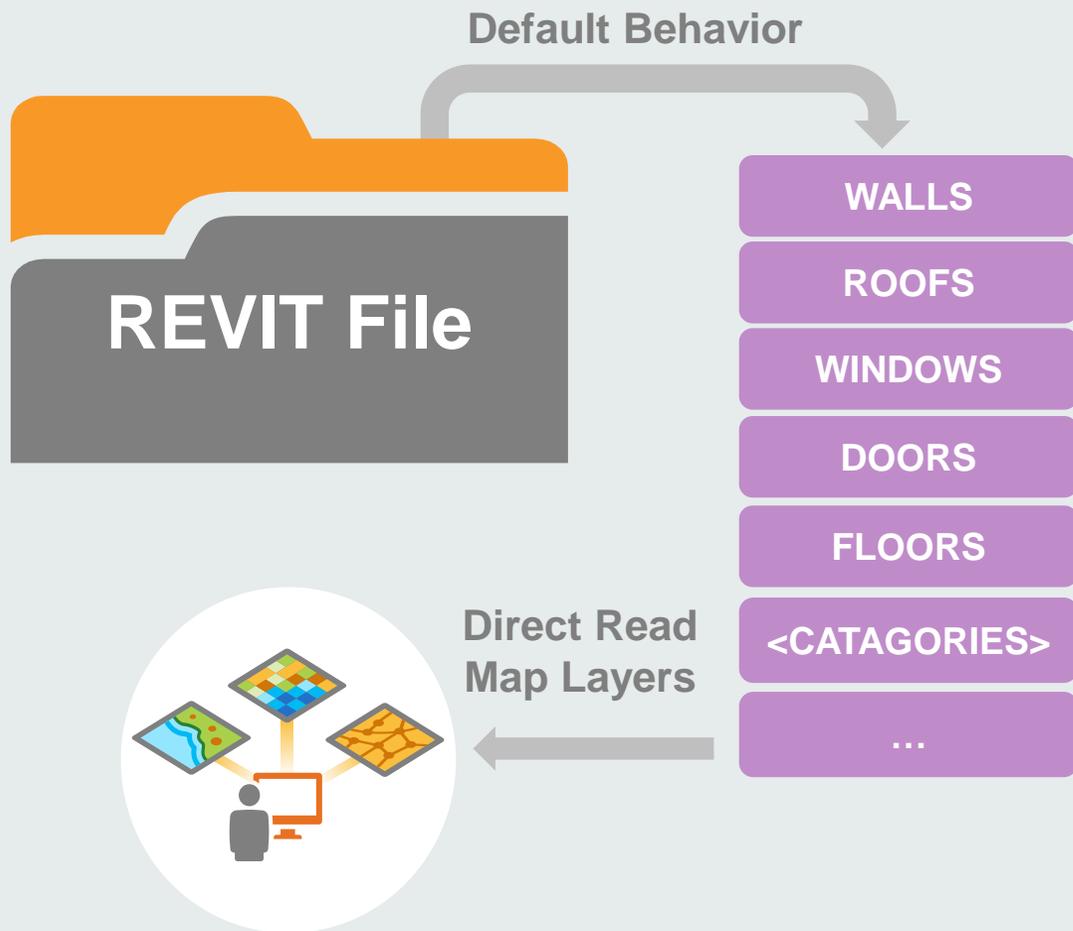
CAD Reader





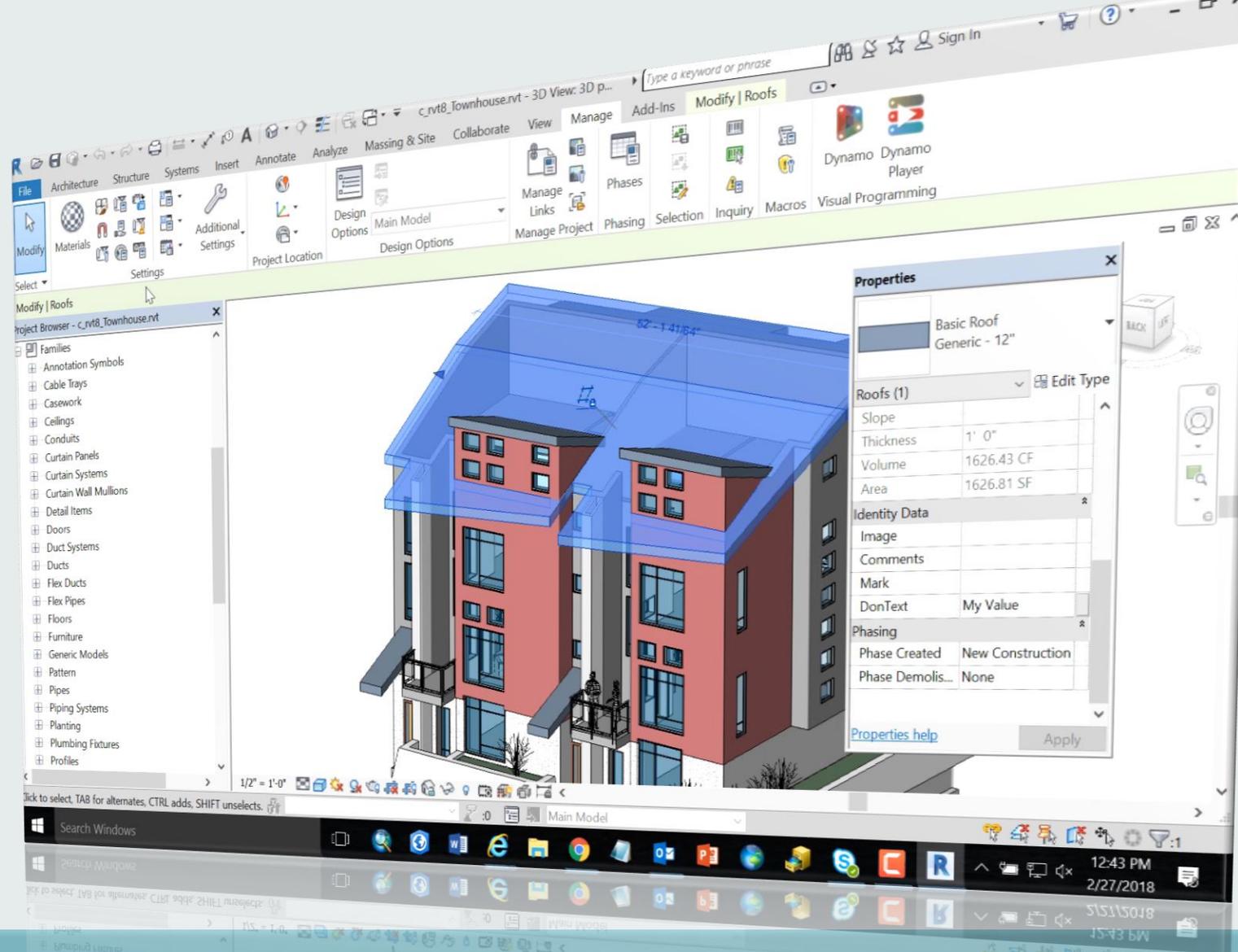
Adding REVIT Data in ArcGIS Pro

REVIT Reader

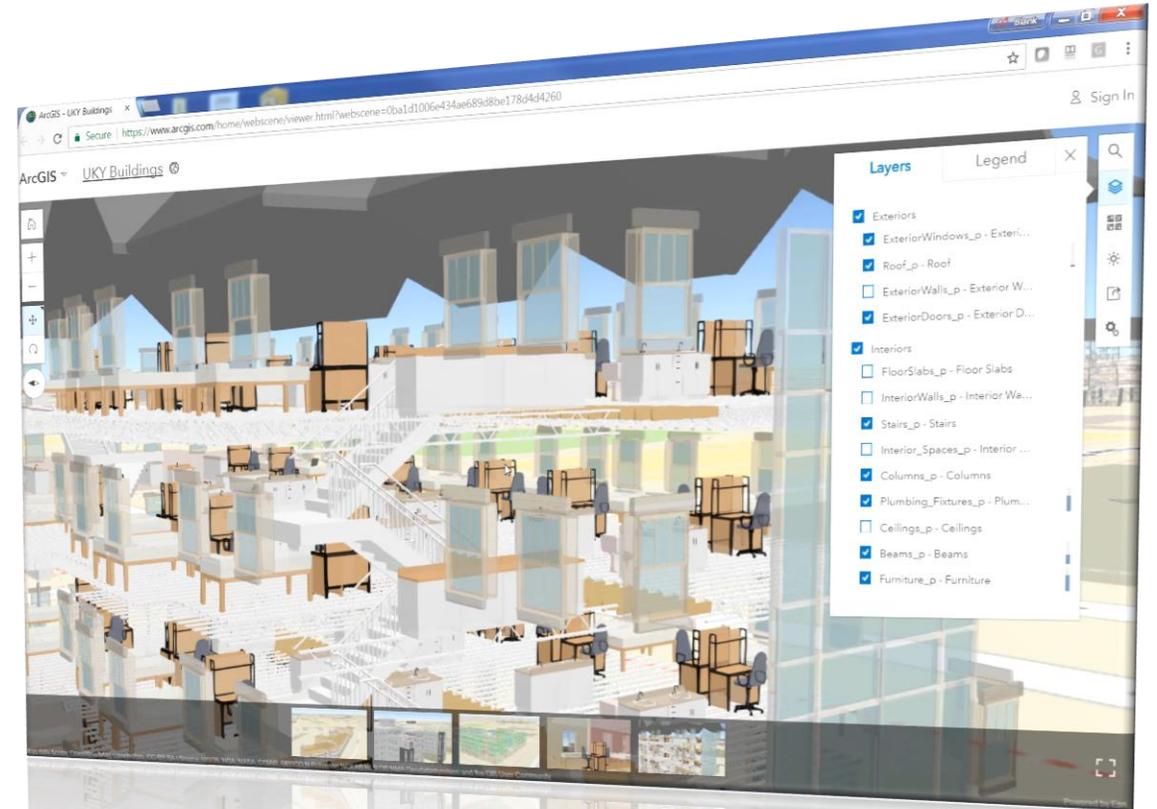
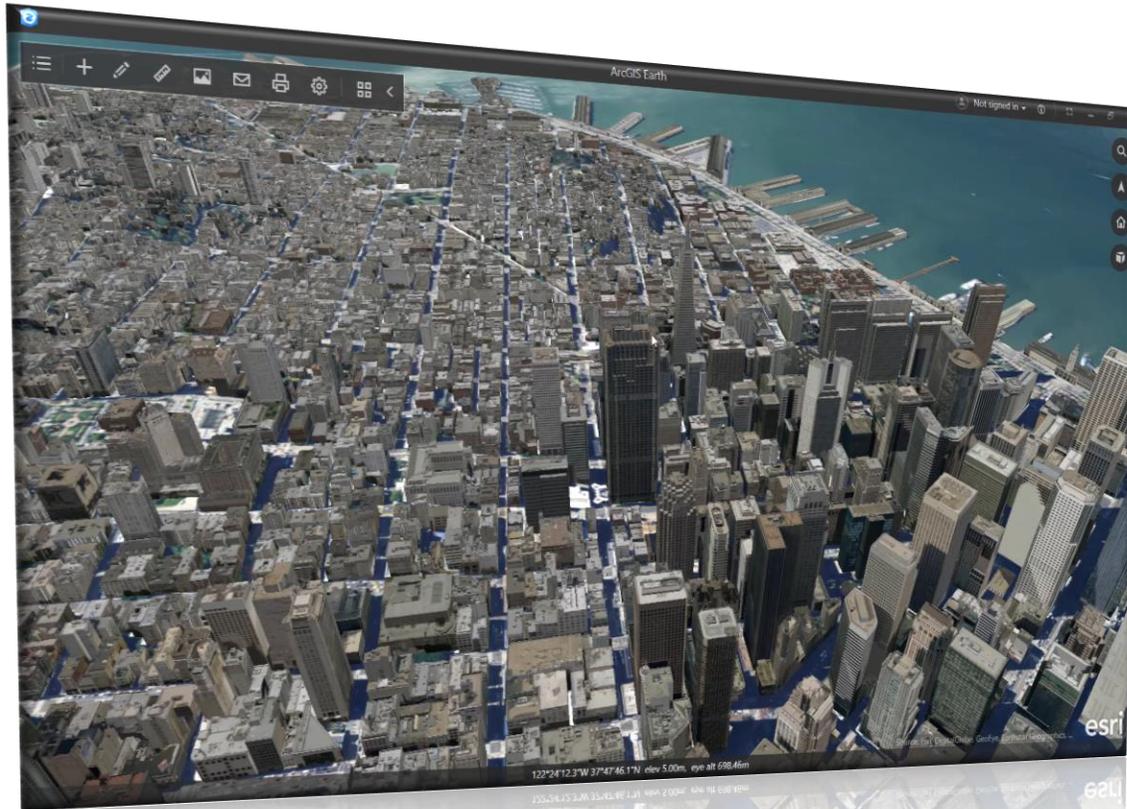


Adding REVIT Data in ArcGIS Pro

REVIT Reader



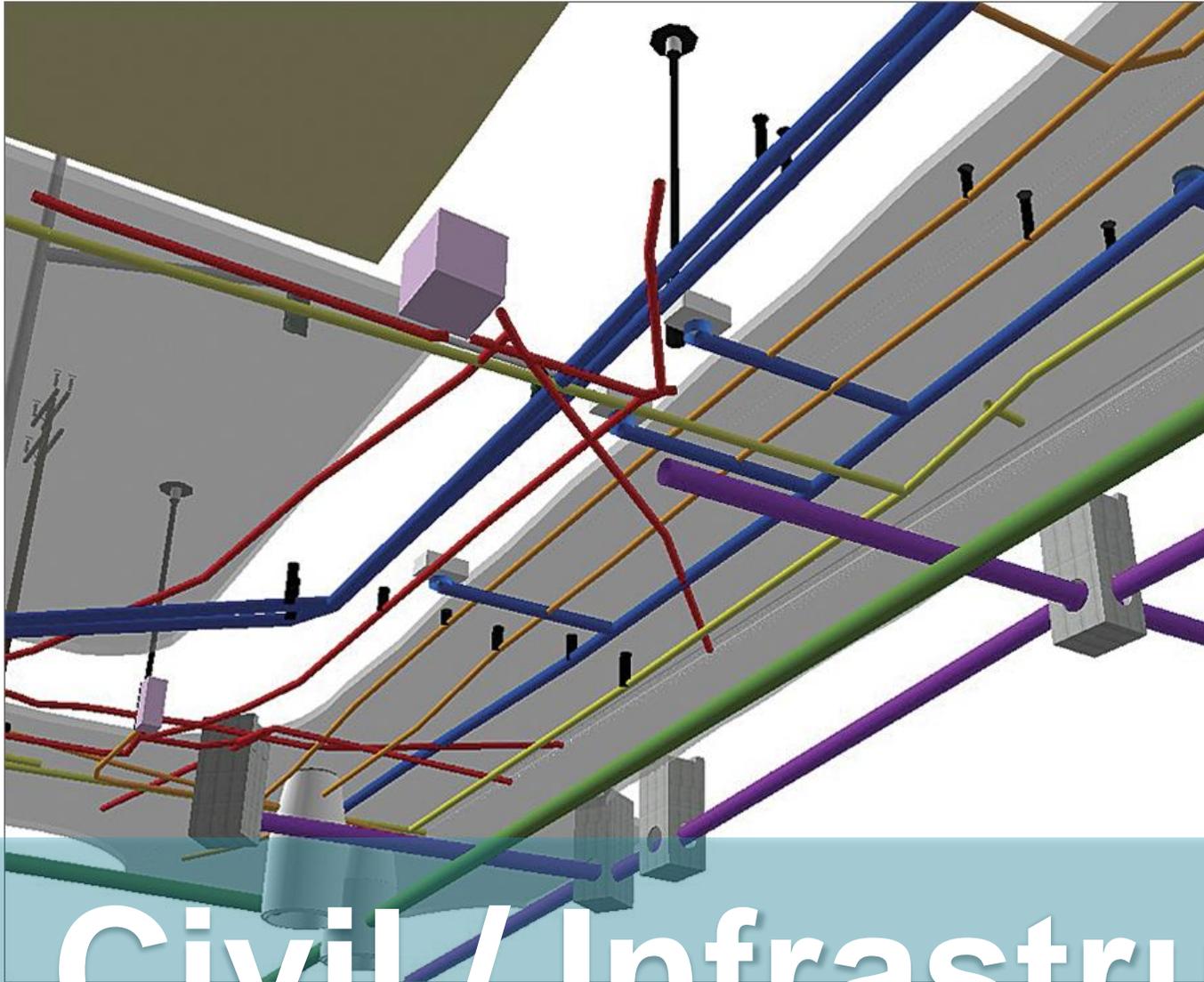
Reading Revit Files



Web Scene Layers & BIM



Information Framework

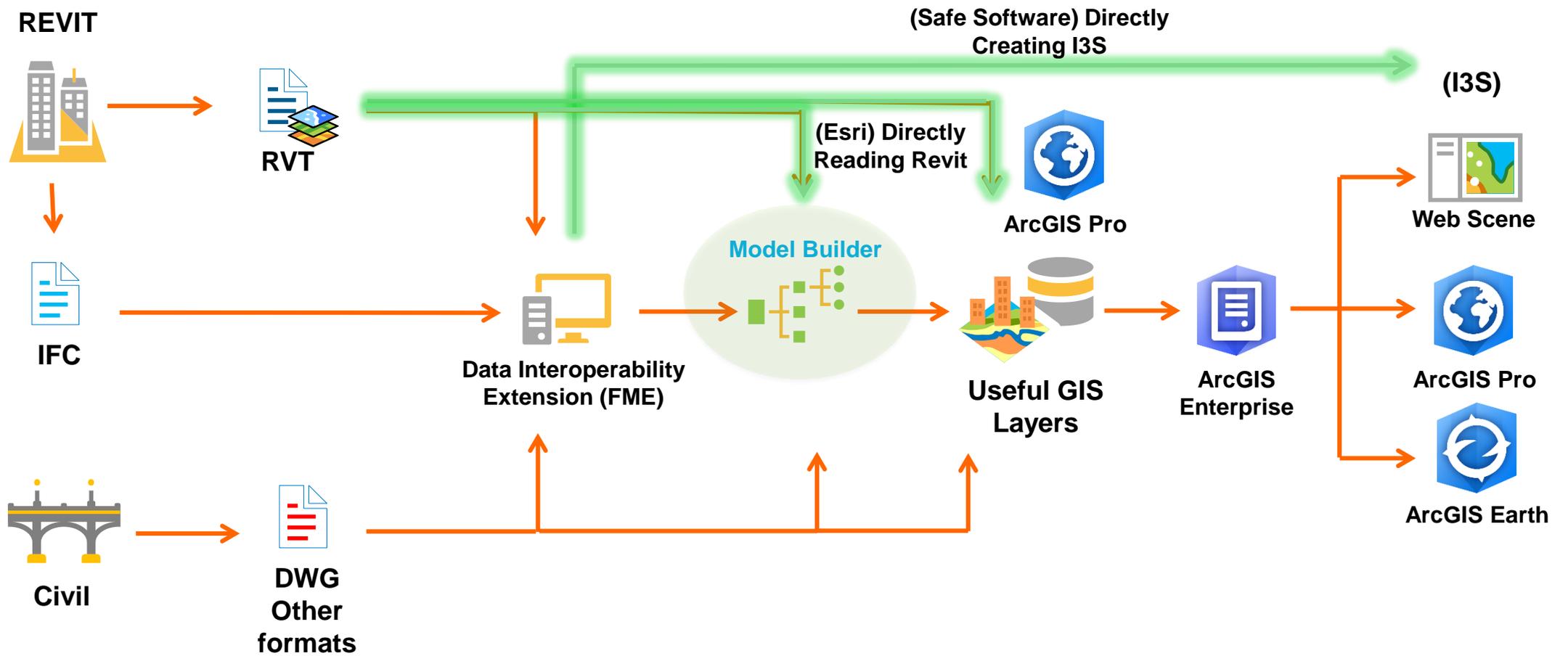


Civil / Infrastructure BIM



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Near Term Workflows Enhancements...

Main Message

- **Transforming the Project Lifecycle** – Throughout our initial meetings, our focus has always started with understanding the complete workflow of how data moves between planning, designing, building and operating buildings and infrastructure. The key has been to figure out how we can more easily integrate BIM and GIS data to improve this process. We also want to bring context to the design and construction workflows that lead to construction and renovation of facilities and infrastructure. Improving data integration workflows will bring immediate value to both GIS and BIM users. We know we can achieve more than just data integration and are already researching opportunities.
- **Reality Capturing and Sharing** - the world around us (Imagery, Capture, AR/VR) – Unlike ever before, we are in a time when we can scan, photograph, and sense the three-dimensional world around us. Every project can start with a realistic, accurate ‘picture’ of the original site and then have daily scans recording how the site changes with every phase of development. Through use of drones, data processing and other sensor input, designers and project staff can have a continuous context of the site and the environment around it.
- **Designing the Real World in 3D** - Traditionally, designing and representing the world has been done in 2D. With advancements in technology and hardware, 3D is quickly becoming the standard people want to use for design, visualization, and analysis of assets throughout their lifecycle. Our focus will be on tools and apps that utilize 3D to facilitate better use of spatial information to inform and guide the design process so that projects can achieve economic, sustainability, and performance goals.
- **Geographically Informed Design** - Buildings and assets will be planned, designed, and built in a way that considers project context in depth by making relevant information available when it is needed most. By integrating GIS and BIM, planners and designers will better understand projects in relation to their surrounding context: how the natural and existing built environment will be impacted by and interact with new projects. By pulling these insights up the project lifecycle, project owners will be able to predict potential issues, streamline the project lifecycle, and reduce costly cycle churn.
- **Optimize how infrastructure operates (IoT)** – After an infrastructure asset such as a building or bridge is constructed, we’re now able to monitor every tremor and temperature change with embedded sensors. The world is going to be tracked with billions of sensors all around us, many of which will be designed into the assets we use and then tracked and analyzed in 3D experiences. This data will fuel machine learning that will generate new insights when they are most relevant. By sharing Esri’s expertise in the Science of Where and Autodesk’s leadership in design analysis, we hope to discover new opportunities for enabling customers to plan, deploy and consume sensor information to improve operational performance of large systems of assets.
- **Open Data Management**- Recognizing that Data is at the Center of our customers’ businesses and organizations, we want to create platforms that are extensible for our users to create the next generation of tools – the future of our platforms depends on users extending, creating new tools and inventing new workflows to become more productive and achieve great results.