What Integrating Location-Based Technologies with Infrastructure Project Delivery Looks Like

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13,000 BUILDINGS A DAY

30x AROUND THE EARTH / PER YEAR
120 stakeholders connected for design approvals

14 days
InfraWorks used continuously for project reviews every 14 days

20%
BIM in planning resulted in 20% time savings
Making the case
Why leveraging GIS data in design is important

- BIM for Infrastructure design workflows need the located geometry early on
- GIS data helps with planning and design decisions early in the project life cycle
- GIS data provides information for constructability and sustainability
- GIS data analysis can help with managing the built environment
- Integrated rich GIS data facilitates planning for future projects on the same site
Challenges with disconnected teams and workflows

- No federation of geographic data
  - Geographic data in a lot of places
  - Difficult to make data widely available
- No search and discover capability
- Users have to know what data exists and where to find it
- What version is the current version? Which workflow to consume it?
- Relying on limited public GIS data and files on servers for discovery
Diverse data managed & federated in a 3D design environment allowing for a project view that represents the real world context.
Case Studies
Location Intelligence in Design

Autodesk Connector for ArcGIS

- Access information from features shared in an easy to use, cloud-based environment
- Easily collaborate
- Access to Apps Maps Data around the globe and use it as you need
- Access to mobile application data such as Survey 123
Project Example
Major Campus Infrastructure Upgrade

- Preliminary design discovery in InfraWorks
- Campus GIS done years ago brings in the data needed to develop the scope
- Project’s potential issues seen immediately
Project Example
Aviation Design Build and Noise Study

- Terminal building Revit model into InfraWorks
- Parcel information with up-to-date owner information needed for study analysis
- Connector for ArcGIS brings in the data from one source and attribute info is exposed
Project Example

Very Large Superfund Sites with Abundant Legacy GIS Data

- Tremendous amounts of GIS data accumulated over the years
- Years of investigation testing over dozens of design and remediation projects
- Managing GIS data, CAD data, in a consistent workflow is a nightmare
The Value and Return on Investment

- Integrating GIS and design processes makes it easier to implement BIM on infrastructure projects.
- Integrating GIS and design processes provides access to a consolidated data source that is more effectively managed and kept up-to-date, reducing errors.
- Easy to learn, Train, Standards
- The integration of GIS and design streamlines workflows across the board, saving time on tasks that reduce project profitability.
- Save Time and Money
- The integration of GIS and design enables more effective use of data in planning, simulation, analysis, and design, helping make better decisions and win work.
Future of Making
Removing silos between the GIS and Design teams by creating more connected workflows, helps reduce risk, inefficiencies, data loss and cycle times.