

Product Presentation

Applicant Name:

Esri China (Hong Kong) Limited

Product Name: ArcGIS Online

Specification: ArcGIS Online is a cloud-based mapping and analysis platform that lets you deliver location intelligence to anyone, anywhere, on any device. With ArcGIS Online, you can create data-driven maps, use spatial analysis to learn more about your data, and share insights with others through useful apps. Because ArcGIS Online is software-as-a-service (SaaS), it can scale to support millions of users.



Core Functions: Create web map for data sharing and deployment on configurable apps and ArcGIS Field apps

Technology Used: Esri ArcGIS

Construction Process Involved:

Master Planning, Design, Construction and Operation

Key Improvement in Construction Process:

- Productivity – Conduct quality fieldwork with ArcGIS field apps and leverage map resource from other ArcGIS users
- Quality – ArcGIS Online enable access of synchronized project data on desktop and any other portable devices
- Safety – Create configurable safety dashboard to manage field condition in real-time
- Environmental – Replace traditional paper-based workflow with smart web GIS platform.

Job References:

[The West of Devers Transmission Line Upgrade Project, California U.S.A, Adoption, 2020]

[Integration of Web GIS and AR for asset inspection, Hong Kong, Trial, 2020]

[Utility Mapping for Water Asset Management, Ohio U.S.A., Adoption, 2019]

Innovative Features

Core Technology: Esri ArcGIS

Comparison with current practice and popular models:

- Data-driven map that manage 2D and 3D spatial and no-spatial on single SaaS platform
- Perform immediate geo-analytic on 2D vector and raster data of construction project
- Enable real-time data capture on field with out-of-the box mobile field applications
- Leverage data with ready-to-use configurable dashboard/web app for project management
- Access to resourceful 2D and 3D maps through ArcGIS Living Atlas of the World

First Launch Date: 2012

Adoption Example

Project for illustration:

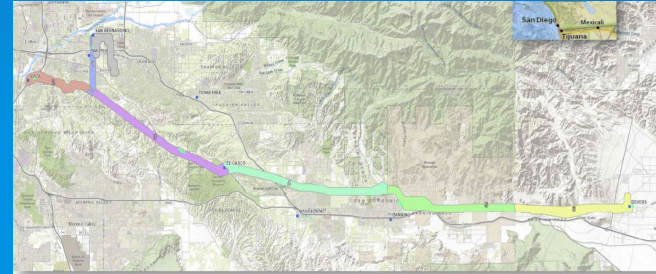
The West of Devers Transmission Line Upgrade Project, California U.S.A, 2020

Work Process:

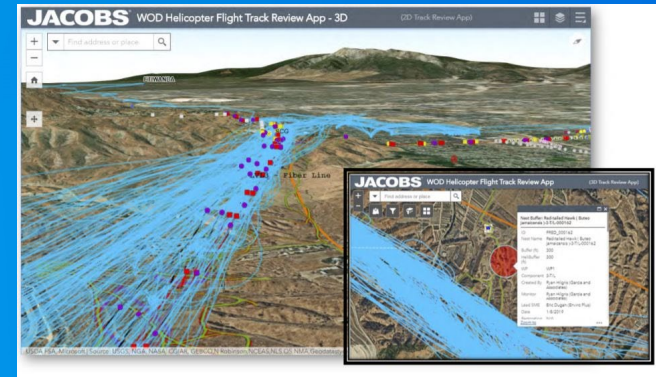
Construction and Operation

Use / Function in project:

- Single common data environment to manage and maintain project data
- Real-time data capturing on field through mobile field applications
- Perform spatial analysis to identify environmental impact of construction
- Create interactive dashboard to monitor project progress
- Create feature reports and automatic email reports
- Share project data to different stakeholders
- Present project detail with ready-to-use template



2D Map of Transmission Line

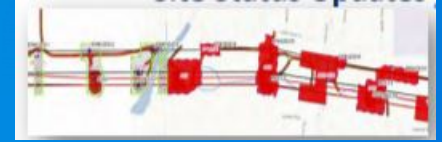


3D Helicopter Flight Track Review App

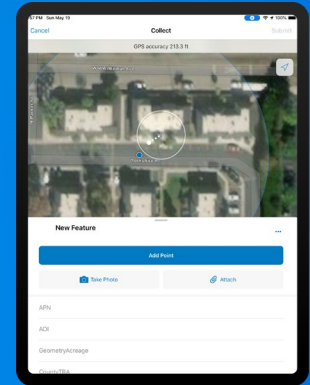
Benefits – Productivity

Improve productivity by:

1. Data visualization
 - a) Enable better understanding of project condition with 2D and 3D visualization. For example, project officer could view detail of 3D BIM model of new transmission line on ArcGIS web scene.
2. Create quality field maps
 - a) Obtain ready-to-use 2D and 3D map resources through ArcGIS Online Atlas.
3. End-to-end workflow of data capturing
 - a) Data captured on field could be immediately synchronized to ArcGIS Online
 - b) Data could be instantly shared internally by creating report or quick export.
4. High accuracy of data capturing
 - a) Use ArcGIS field application (e.g. ArcGIS Collector) to collect spatial data in high geographical accuracy.
5. Create progress monitoring dashboards
 - a) Manager could track progress status with real-time dashboard.



3D Model of Transmission Line

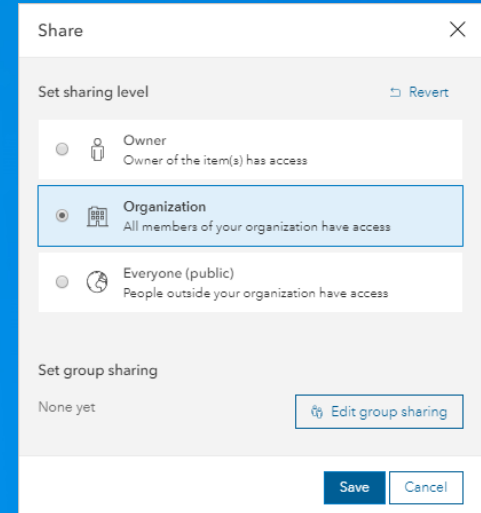


ArcGIS Field Applications

Benefits – Quality

Improve Quality by:

1. Single Source Platform for Project Management
 - a) All models, client data and application are stored and maintenance in single ArcGIS Online Organization. This sufficiently reduces risk of data discrepancy when different parties access to same set of data
2. Synchronized data flow
 - a) Back-to-back synchronization of data from field to backend office.
Prevention on data loss due to data transmission
3. Security Control on data accessibility
 - a) Administrator and project owner could define user right of data
 - b) Unauthorized access would be banned to avoid unauthorized modification on project data

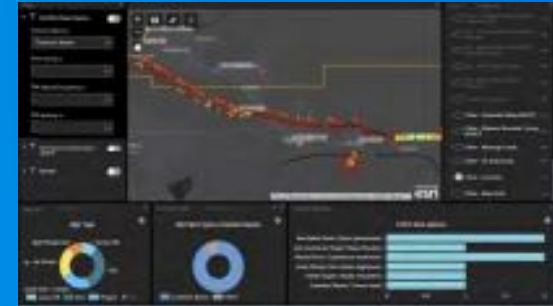


Setting of sharing level

Benefits – Safety

Improve Safety by:

1. Channel of incident report through ArcGIS field application
 - a) Field workers could report accidents to manager by using ArcGIS field application (e.g. ArcGIS Survey 123)
 - b) Easy-to-use smart form to report real-time coordinate, textual information and photo capturing
2. Create Safety Monitoring Dashboard
 - a) Manager could supervise all safety index of job site in single dashboard
 - b) For example, dashboard could visualize location of incident and incident information immediately after system receiving the form



Safety Monitoring on ArcGIS Dashboard