Case Study
Arbor Day Foundation

Challenge

The Arbor Day Foundation's (ADF) vision is to inspire people to plant, nurture, and celebrate trees as a solution to many of the global issues we face today, including air quality, water quality, climate change, deforestation, poverty, and hunger. ADF work with their Planting Partners to identify projects that are relevant to their mission, from rehabilitating burnt down forests to creating parks in low socio-economic areas. ADF then helps match Funding Partners who want to sponsor these projects.

To further engage with partners and demonstrate the important work being performed, ADF sought to improve impact reporting and storytelling through the visualization of real-time partner data. This would require the management and visualization of geospatial-related data. However, ADF did not have a geospatial program and needed a trustworthy partner to help build this geospatial solution from the ground up.

Solution

First, Innovate met with ADF to conduct a needs assessment and to refine requirements through interviews with key stakeholders. Our team developed User Stories, Use Cases, conducted a Gap Analysis in data, and created a Product Roadmap.

Next, Innovate started to lay the framework for ADF's solution using Esri technologies including ArcGIS Enterprise, ArcGIS Pro, and Survey123. ADF chose to deploy their Esri ArcGIS Enterprise system in the Microsoft Azure Cloud. Working with stakeholders across the foundation, Innovate integrated unique data from various departments into an enterprise geodatabase. In addition, Innovate modernized data collection using Survey123 with Planting Partners to immediately provide geo-enabled data. The Survey123 forms capture donor information for planting trees so that Planting Partners could easily capture data for prospective projects (e.g., how many trees they want to plant) anywhere in the United States.

After setting up the back-end work, Innovate developed the "Corporate Partner Showcase", a custom application developed with React and JS API ArcGIS, which serves as a portal for Funding Partners. Funding Partners receive a unique ID and password and are able to view transparent, real-time data (e.g., number of trees planted, number of volunteers per project, etc.) about their sponsored projects, including pictures, stories, environmental offsets and other information gathered when planting the trees. This enables Funding Partners to see their impact through a dynamic and interactive median. We used Azure DevOps and Azure App service to create test and production application deployment pipelines. Innovate architected the system to deploy small changes to deliver incremental value without disrupting operations.

Benefits

- Provides reliable data to Arbor Day Foundation and its partners
- Provides real-time metrics about the impact of the trees planted and the environment
- Encourages others to support the Arbor Day Foundation's mission