

Case Study ArcCollector Mobile Data Capture

The Biodiversity Division of DELWP engaged Spatial Vision to produce a mobile application in ArcCollector to be the field data capture tool for the DELWP biodiversity web mapping application STAR.

The Spatial Temporal Activity Recorder (STAR) is a plant and animal management tool for planning and delivering and recording spatial features associated with assessing and controlling plants and animals, most often weeds and pests.

The key objective of this project was to bring mobile data capture into the existing STAR solution to give field officers an easier and more consistent technique for loading their field data into STAR. An important aspect of this work was the consultation with all relevant groups to standardise data capture across the state, streamlining the condition of the environmental reporting. The solution delivered centralised access and automatic data uploading, reducing the time and cost to officers while increasing data reliability and security.

"Spatial Vision has successfully transformed a range of ad-hoc field data collection methods and processes into an efficient, user accepted field data collection process. Working with users and understanding their needs and constraints as well as technical and system know-how has resulted in a great tool."

> Virginia Harman Senior Project Officer, Biodiversity Division, DELWP

Customer Profile www.delwp.vic.gov.au

Company DEWLP - Biodiversity Division

Location Victoria

Industry State Government

Product

STAR – ArcCollector Mobile Data Capture

Solution

Spatial Vision produce a mobile field data capture tool for the biodiversity web mapping application STAR. The solution developed allows field officers to record spatial features associated with flora and fauna observation, assessment and control from every corner of the state online or offline from any mobile device.

Benefits

- Offline enabled field data capture for all Victorian biodiversity assets
- Standardised data to produce highly accurate state of the environment reports

ArcCollector Mobile Data Capture - Spatial Vision

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The vision for the STAR application had always Rincluded mobile data capture however was not developed alongside the web application. As a live application the challenge was to integrate a mobile data capture solution to fit in with the established data and structures while providing flexibility for offline capture.

DELWP also required this solution to be available across the state to all field employees and be simple to use to assist with change management for the officers. Essential to the success of this project was consultation with each of the regional reporting areas to unify the fields they collected. This solution needed to provide the regional reporting areas with the ability to continue to report on their existing metrics while ensuring they captured the core fields required for centralised reporting.

The Solution

In this context, the best solution for this situation is an Esri ArcCollector application supported by ArcOnline. ArcCollector is capable of capturing point, line and polygon features on a range of mobile devices with offline enabled. ArcOnline integrates with Esri tools which are used to design the data-structure and load data as a hosted feature layer.

The complexity was handled by custom python scripting. By creating a replica of the ArcOnline layer the data can be transformed into the feature classes, related tables and views of STAR and synchronised after transfer. This technology stack allows permissions to be set for individuals and jurisdictional groups (improving security), to maintain their internal reporting requirements (accommodating legacy), to take their work offline (collection coverage) and automatically have their work synced into STAR (time saving).

The solution was built and deployed to existing department infrastructure, is self-repairing in the event of an outage and can be easily replicated for many mobile capture purposes. It could also be rolled out in stages giving each of the regional reporting areas their own time to manage the transition with no outage or impact on the existing live system.

The Benefits

The benefit of this solution to DELWP is the capability of capturing data from every inch of the state on any mobile device as a standard output. This can be used to produce a condition of the environment report which is comparable across work type, regions and time frames thereby achieving the most important aim of the STAR platform. This solution completes the original design for STAR, giving it eyes and ears into the far corners of the state so it can record the weed and pest animal management actions delivered on the ground to protect Victoria's biodiversity.

We delivered a solution that easily integrated with exisiting infrastructure.

If you'd like to know more, please get in touch.

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