

# Fulton Hogan Mobile App: Mobilising a Remote Workforce

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## SUMMARY

There is a growing demand by industries who use spatial data, to have mapping applications available for portable devices. This pressure has resulted in Esri developing different ready to use applications (apps) such as Collector for ArcGIS or Web AppBuilder for ArcGIS, which can be used outside the office. These apps are very powerful and allow light customization and configuration by editing a small amount of code and thus customizing the app to the client's needs.

However, when the client has more complicated needs, these generalized apps cannot always fulfill the client's requirements. This was the case for Fulton Hogan, a New Zealand company specializing in building and maintaining transport and civil infrastructure.

Fulton Hogan regularly work in remote areas, which results in their requirement of an offline GIS environment. Therefore their main requirement is the ability to use mapping functions including editing features, viewing their GPS location and using basemaps on their touch screen devices in disconnected environment. Previously Fulton Hogan used a complicated workflow which included using multiple applications to achieve the required result (marking the faults in the utilities networks they manage). This workflow included using ArcReader for the mapping component which is not designed for use with touch screens and truly mobile devices.

In October 2014, ArcGIS Runtime SDK for .Net was released which allowed development of an application that can be used in an offline environment. The runtime has all the required mapping capabilities and is touch screen friendly. This development tool was created by using the #C programming language in the .Net framework. Fulton Hogan were now able to access all the functionality they required regardless of a network connection being available by using just one app with touch screen gestures for the entire workflow. By tapping the button in the app the end users

are able to add and edit features, find their current location or export the map to pdf. Once the end users are back in the office they have the ability to share changes (edits) with their clients through an ArcGIS Feature Service.

This new application is much faster, has a user-friendly interface and provides a simple workflow for the end user. Implementing this new approach has also made the processing of field data more efficient.

Through this mapping application, Fulton Hogan has a powerful mapping tool that can be adjusted to keep pace with their evolving needs.