



The difference is what you see

SA Department for Families & Communities

Nunga Wali Spatial



The Department for Families and Communities brings together a range of services for those who are economically and socially vulnerable in the South Australian community (children, young people, families, people with disabilities, the ageing and the homeless). The Department's strategic agenda charts the direction for the Minister's portfolio areas in housing, the care and protection of children and young people, disability and ageing. The Department works in partnership with Federal, State and local governments and with a range of community organisations to make a real difference to the wellbeing of low income South Australians.

// Outcomes

- DFC now has a single spatial repository of dwellings and properties for all remote Aboriginal communities and settlements
- Significant efficiency improvements have been achieved, with the asset audit process reduced from taking one hour to about ten minutes per dwelling
- All staff now have immediate and easy access to accurate and timely information to meet reporting requirements, apply for funding and make decisions about future capital expenditure
- Strategically, DFC is in a better position to understand what is required to meet its SA Strategic Plan targets in relation to Aboriginal housing
- With the improved knowledge of assets, the A&RH unit have been granted several million dollars of federal funds to repair and build new housing

// Challenge

With a strong commitment to improving service delivery to its clients and staff, the Department for Families and Communities (DFC) identified the need to expand the organisation's enterprise Geographic Information Systems (GIS) capabilities, as well as extending the services for non-GIS professionals. Furthermore, the Department was keen to improve business effectiveness through improved workflow and evidence based decisions to achieve increased efficiencies throughout the organisation.

One area of the organisation that was identified as requiring GIS assistance was the Aboriginal and Remote Housing (A&RH) unit, responsible for the remote indigenous community housing program. In the past, property details in the remote communities were captured using a notepad and pen and then entered via a laptop at the end of each day. While in the field, staff had no access to information about upgrades that had previously been completed, any historical data or information about related assets. This audit process was not ideal due to the difficult environmental conditions within these remote communities, with ad-hoc data collection creating obvious issues with data integrity and accuracy. Staff back in the office also did not have easy access to the captured housing information, with no reporting tools available to enable decisions to be made on the captured data.

// Solution

A location intelligence solution called Nunga Wali Spatial was developed which uses the latest field capture technology with integrated GPS, GIS tools, laser rangefinder and media capture. With professional services assistance from ESRI Australia, the asset auditing process, from capture and storage to publication and reporting has been completely transformed.

A&RH field officers are now fully equipped to capture a wealth of information in real time, with asset information now only needing to be captured once, with incremental updating and inbuilt data validation ensuring complete data integrity and accuracy. With an easy to use interface, well-designed data capture forms, efficiently controlled data input boxes and hands-on training provided, the use of mobile GIS has enjoyed great success and rapid uptake.

A&RH and Department staff back in the office, regardless of their GIS knowledge, now have access to a GIS Web portal, powered by ESRI Australia's location intelligence gateway solution Dekho. Using the location element within corporate data, Dekho seamlessly links together information from the Department's multiple corporate systems, including the COGNOS business intelligence system. This integration has enabled DFC staff to have immediate and easy access to accurate and timely



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SA Department for Families & Communities



With a simple mobile interface, standardised workflow processes, rigorous data validation and integrated information dissemination, the Department now has a sophisticated location and business intelligence capability.

// Solution

information to meet reporting requirements, apply for Commonwealth Government funding, and make decisions about future capital expenditure.

// Benefits

DFC now has a single spatial repository of dwellings and properties for all remote Aboriginal communities and settlements, with location intelligence linking this information to other asset details through a series of business rules. With a simple mobile interface, standardised workflow processes, rigorous data validation and integrated information dissemination, the Department now has a sophisticated location and business intelligence capability. This intelligence enables more informed decision making for remote housing capital expenditure.

Where the previous manual asset audit process would take one hour for each dwelling, the use of mobile GIS has reduced this to about ten minutes. During this process, the officer collects everything from photographs in and around the dwelling, to the condition of the dwelling, including fixtures and linings inside and out. At set stages of the asset audit process, the application validates the details collected and informs the officer if any of the minimum required details are missing. This validation process provides A&RH with a benchmark in data collection for all community owned dwellings in remote communities. Additionally, if officers believe

that details relating to other infrastructure in the community will assist in making future decisions regarding infrastructure upgrades, they can capture this information with a GPS point, boundary or line. This information is tagged with a general description and photographed if required.

The information collected is pushed back to the central server in Adelaide and is available to all staff via the Web portal within 24 hours. This improved data transfer and publishing system has improved workflow management of asset information and increased communication and understanding between central staff and field officers. This is the first time that all data captured in the field can be distributed to all relevant Department staff, including planners, policy makers and external government agencies.

Strategically, DFC is in a better position to understand what is required to meet its South Australian Strategic Plan targets in relation to Aboriginal housing. The A&RH unit can now provide evidence to any level of government and/or agencies to justify the required funds to maintain dwellings at an acceptable standard, or to build new housing. Other business units from the Aboriginal sector in DFC have also identified opportunities using this information, including future planning of communities, maintenance programs, locating housing with disability accessibility, allocation of housing to families, and vacancy rates within communities.

Since the implementation of Nunga Wali Spatial, the Department has been able to use the evidence collected in the field, analyse it and demonstrate to the Commonwealth Government a clear knowledge of assets they are responsible for in indigenous communities. As a result, the A&RH unit have been granted several million dollars of federal funds to repair and build new housing within these communities.

// The Future

Since the delivery of this project, many agencies – both within and external to the Department – have recognised the benefits of cost effective capture and distribution of geospatial and business information, and have expressed an interest in implementing a similar location intelligence solution. The Department's Online and Geographic Services Unit is working to leverage the existing GIS technology to assist in completing Housing SA's remote indigenous tenant audit program, which has been incorporated with the Remote Asset Audit program.

Other projects on the horizon include Housing SA's maintenance audit program for over 39,000 dwellings distributed throughout South Australia, and the State Recovery Office for post disaster data collection and real-time publication to agencies involved in the emergency management and recovery process.