

Tackling graffiti, finding a toilet and walking your dog - all made possible through GIS.

# Hobart's spatially empowered city council

Image: Flickr user Simon Lieschke (CC BY 2.0)

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Tasmania's capital city might have one of Australia's smallest city council areas, but when it comes to adopting spatial technologies, the City of Hobart has proved it isn't one to follow the lead of others. In a spatial revolution spanning just a few years, the City of Hobart has spatially empowered internal processes and developed a suite of publicly available location services, and in doing so stumbled upon opportunities they had never imagined.

## A city of heritage and bushland

As a city council, Hobart stands out as unique: its mountainous Tasmanian setting means the council's municipal area is 61 per cent native bushland and, as Australia's second oldest city, 10 per cent of the buildings are protected by heritage listing. As a result, the council has a diverse range of priorities to juggle, with limited resources.

"We are caught between being a capital city and only being seen as a regional centre," said Mark Wise, coordinator of GIS at the City of Hobart. "You get caught between receiving advantages on one hand, and not receiving support on the other."

### Maps Gallery



City of Hobart: Recycling and Garbage Collection



City of Hobart: Waterworks Reserve Site



City of Hobart: Bushcare Groups



City of Hobart: Dog Exercise Information

**Hobart City Council's spatial applications are available through the online maps gallery and through the ArcGIS App for mobile devices.**

Yet somehow, the council's GIS team of three has been able to carve out a position as innovators in adopting spatial technologies. The transition from manual, paper-based systems into a digital age is a continuous journey and the GIS team, consisting only of Wise as coordinator and two part-time GIS staff, are dedicated to improving council operations at every opportunity, in which spatial technologies can provide added benefit.

In the goal of being recognised as a liveable city and a first-class tourist destination, the past few years have seen the City of Hobart implement a range of spatially-enabled processes for internal matters such parking operations, graffiti removal and web maps for sharing public information.

These ambitious feats have been supported by the winning over of the decision makers within the council, who have begun to see that spatial information

is not merely an informational tool, but vital to strategic development.

"We are slowly building up to providing information for strategic decision making, whereas before it was more at an operational level," said Mr Wise. "That's the bigger change: the evolution that is happening as more senior managers become involved and you start moving away from operational into tactical and strategic decision-making."

Supported by ArcGIS Online for streamlined web map generation and Collector for ArcGIS to empower inspections of all kinds, the City of Hobart has made impressive inroads from where they were only a few years prior, and often in unexpected ways.

## Finding a toilet

Upon entering office as the Lord Mayor of Hobart in 2014, Alderman Sue Hickey had a plan to improve the amenity of

the city's public toilets. To kick off the process, Ms Hickey planned to go on a tour of the public toilets and asked council administration the simple question: "Where are our public toilets?" With the expectation today that information should be delivered spatially, naturally it was a map that officers sought to deliver to their new Lord Mayor. The Lord Mayor's request set off a chain reaction throughout the council administration, leading to the GIS team being asked for the same map by seven separate people within council. The team jumped at the opportunity to employ the latest GIS platforms to create maps for toilets and countless other purposes.

"Over the last three or four years, with the greater take-up of mobile devices, you can see people wanting to be more mobile, and this would actually bring benefits to the organisation," Ms Wise said. "Then there's the matter of the infrastructure and how you put it out; it has only been in the last 18 months to two years where ArcGIS has given us the platform to do that in a cost effective and robust form."

Previously, council information would have only been available either as a paper copy at council or through a cumbersome

PDF form that presented information either in words or in a table format. In many cases, if a resident would like to know about something, their only option would be to call, leaving residents disgruntled and placing strain on a labour-intensive customer service facility.

### Everything happens somewhere

The recent move to online maps, mobile GIS solutions and new methods of community engagement has allowed the City of Hobart to share information and disrupt workflows in ways they never expected.

This is especially true of the numerous services that have been made available to the public through web maps and apps for smartphones and tablets. The following is a list of just some of the maps published through the City of Hobart's ArcGIS Online platform:

- Playground locator.
- Significant trees.
- Stormwater network.
- Recycling and garbage collection.
- Waterworks reserve site.
- Bushcare groups.



**The Dog Exercise Information Locator provides an interactive map for mobile users to access information about dog exercise areas and provide routing to their chosen site.**



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The city cleansing team at Hobart City Council is now able to assist Police in charging offenders.

## Tickets and taggers

While the public maps are much more visible to the wider community, the council has also been working behind the scenes to spatially empower its internal processes, gaining efficiencies and stumbling upon some unforeseen benefits.

Contrary to popular belief, parking officers do have many tasks in addition to issuing fines to those who have been found in breach of parking regulations. Hobart City Council's parking operations is also responsible for performing vacant spaces surveys, a task carried out several times throughout a year to monitor the usage of parking facilities. Traditionally, a vacant spaces survey involves a clipboard, paper, pen and manual entry into a spreadsheet back in the office. The parking operations staff themselves made the push to move into a digital framework. The council decided to adopt Collector for ArcGIS to support real-time surveys and visualise their information in new ways without the need to step out of the vehicle. However, as was noted by Mark Wise: "We came across an unforeseen problem: car sickness! But with Collector, the pedestrian approach is still four to five times quicker."

In other areas of operation, unexpected gains for both council staff and the wider community were achieved.

The city cleansing team is responsible mainly for cleaning up graffiti across the city. When the decision was made to use Collector, it was initially just to keep records of where work was being completed. However, after the field crews drove changes to the app capturing time, methods of cleansing, photographic evidence and naming tags, wider community benefits arose.

Working closely with Tasmania Police, the new approach enables Council to link offenders to their signature tags providing supporting evidence. In one instance, the council has been able to link an offender to 34 tags and support the police in charging them accordingly.

## Spatially empowered governance

Ms Wise attributes the council's ability to swiftly produce so many spatially empowered services to the ability to

- Dog exercise information locator.
- Bush Adventures Winter 2015.
- Bush Adventures Spring Program.
- Hobart Interim Planning Scheme 2015.
- Public toilets.
- Urban art.
- Storm surge map.
- Mobile food vendor trial zones.
- Works program.

The list does not end here, and will continue to grow, with the next project on the horizon the conversion of eighty pages of heritage listings into a mobile app. Having information presented as maps rather than text, the council has effectively turned data into information, opened up community conversation, and provided easier ways for people to visualise and discuss what is happening in their community.

In most cases, setting up the online maps was a simple matter of reformatting conventional data into an interactive, online and mobile format that community members would enjoy using again and again. ArcGIS Online allowed the streamlined publication of these maps on standard templates enabling access across desktop and mobile devices.

## Converting the community to spatial

Earlier this year, Alderman Suzy Cooper, one of 12 Aldermen who represent the businesses and residents of the City of Hobart, received a wave of positive feedback when she shared ten of the

new web maps across her popular Facebook page.

Ms Cooper received multiple direct messages and emails from people interested in the possibilities of using Hobart City Council's data, and requesting further maps.

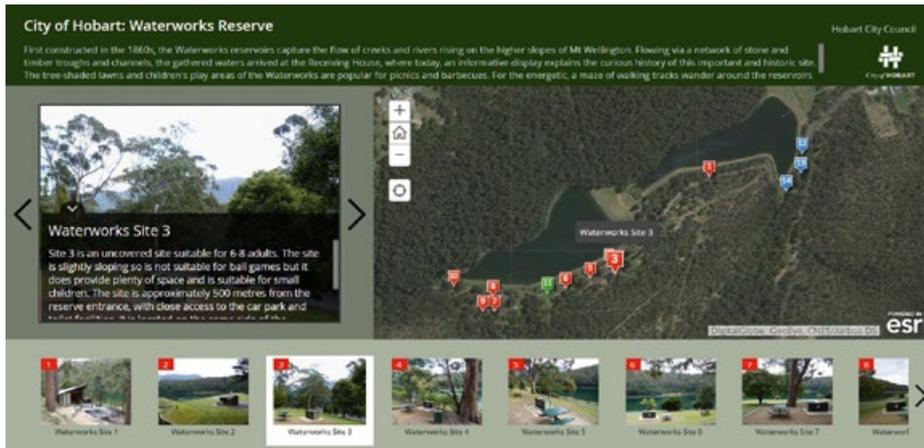
"I've had a lot of interest from people I know who work in web development and graphic design," she said. "They can see all kinds of possibilities for projects. These are people aged 20-45, who might previously have had very little interest in, or contact with, local government.

"I've also had direct approaches from people wanting to know what our council does with some of the data we collect, so people are definitely thinking about not only privacy and security, but also about what's possible. They're seeing themselves as part of the conversation, not just passive recipients of information."

Of the initial set of maps the City of Hobart released, the dog exercise areas particularly captured residents' imagination, as the comments under one of Alderman Cooper's Facebook posts show.



Comments on Alderman Suzy Cooper's Facebook page praising the council for its Dog Exercise Information Locator.



engineering and surveying. Within these business units there are personnel with varying degrees of GIS skills able to manage their own data, perform custom mapping, and complete analysis for their own department's purposes. This model eases the burden on the dedicated GIS team, allowing those directly involved in initiatives to be responsible for the spatial operations. The GIS team is then freed up for administrating the corporate GIS system and capitalising on new opportunities as they arise.

"It's about keeping your ears open, understanding what is happening around the organisation, and being able to pick up on opportunities that may arise," said Ms Wise. "For example, the parking app arose because the parking guys were looking to move from paper-based to using a mobile device to enter the data into a spreadsheet. So we jumped on that opportunity."

"It's about stepping into someone's office and saying 'You are putting that in a spreadsheet, have you ever considered doing it this way?' What we are finding is that once you break that barrier down, they begin to see the benefits, and things begin to snowball." ■

**City of Hobart's Waterworks Reserve historic story map.**

implement solutions faster than ever before.

"The way we have approached it is the 'just do it' mentality", said Ms Wise. "Until you actually put something tangible in front of people, most of them don't get it. But once you put something tangible there, you start to see take-up."

"One of the major benefits of the ArcGIS Online templates we have adopted, is that it actually takes longer to scope a project than to develop it these days. We can knock out things very

quickly." The approach is to spend time understanding clients' end requirements, and then delivering a first draft as soon as possible on the understanding that there will be changes and challenges – not getting caught in the cycle of attempting to deliver perfection.

Despite the small GIS team, Hobart City Council as a whole is spatially empowered by GIS-trained staff across the various business units of the organisation, including parks, planning,



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