

Using technology to make time

1. Summary

This case study demonstrates the value of using the right technology to make better use of staff time at Gwynedd Council. Gwynedd Council's use of new and innovative technology has enabled them to fully realise the potential of its Local Land and Property Gazetteer (LLPG) and GIS datasets, to deliver a faster, more efficient service to council departments and the public.

2. Background

Gwynedd Council is a mainly rural Welsh unitary authority and in land mass terms it is Wales' second largest council. Gwynedd serve over 118,000 residents. A large proportion of Gwynedd's land area is located within the Snowdonia National Park¹. The GIS and LLPG Custodian roles are within the ICT Department at Gwynedd Council. There are two members of staff covering these two roles.

3. The problems

The driver for change came from the need to be more efficient within the department and also from a need to enhance the usability of the council's web mapping capabilities. Previously, the council had a small GIS user group that was made up predominately of desktop GIS users. The costs of licensing and maintenance on the software meant that increasing user numbers was difficult.

The web based mapping system was a "one size fits all" solution. It had around 200 users and it served the needs of some users, but others required more functionality.

4. The solution

The first part of the solution was to upgrade the software. This was a major upgrade, but it included powerful new tools and features that would allow the GIS team to start re-building the GIS system from the bottom up.

Hand in hand was a project to rationalise the existing GIS datasets. A lot of out of date or unused data was deleted. New data was only loaded on the servers if an agreed updating schedule was arranged between the GIS team and the "owner" of the data.

Web mapping applications could now be built that would emulate the desktop GIS environment, enabling users to browse and edit GIS data via their internet browser. This freed up desktop licences that could in turn be allocated to more "advanced" users around the council. It also meant that departments with no desktop GIS license could also benefit from analysing their data spatially, without having to invest in proprietary software.

¹http://www.gwynedd.gov.uk/gwy_doc.asp?cat=5526&doc=26884&Language=1

But, the expanding user base created its own problems. More and more datasets had to be updated and loaded onto the server. Some of these, including processing the LLPG data, were time consuming tasks that had to be done monthly.

The second part of the solution was to invest in an FME Desktop licence. This software allowed the team to build workbenches that automated most of the regular tasks, scheduling then to run at any time. This allowed data sets to be updated automatically, including the LLPG dataset. These are now updated daily, with a process running every night to extract the data from the GMS, format it, and push it out to the GIS server and linked systems.

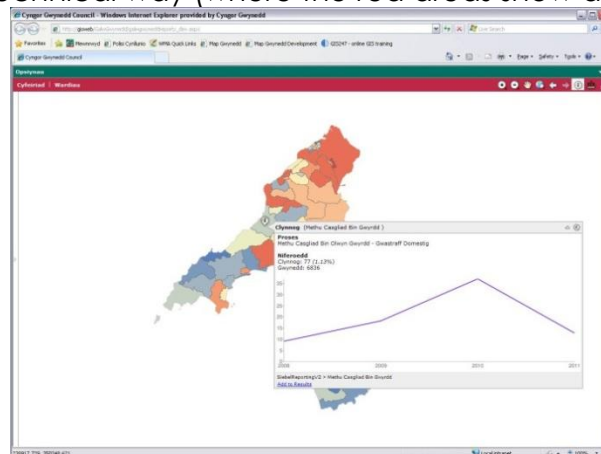
The team have 20 scheduled tasks which now save 55 hours processing time per week. This then frees up staff time to achieve other more creative projects.

5. Outcomes and impact

Using technology to free staff time has meant that the team have had more time to develop new systems and research new methods of working. Projects that would have been very time consuming and difficult before, could now be completed in a relatively short time frame. Some examples include:

- the team were involved in a new School Bus Pass system. The passes were only allocated to pupils who lived more than three miles from their school. The LLPG, Local Street Gazetteer (LSG) and school datasets were used to analyse all the pupils' homes to see which were eligible. To complicate things, some could be eligible for taxis or trains depending on how far they lived from their bus stop, so again, more spatial analysis and routing calculations had to be done to generate a final dataset. This was then used by the call centre staff and the online self-service bus pass application system. This final dataset contained around 1.2 million records, and it took FME around 80 hours to compile
- LLPG Integration into other systems was made easier. The daily FME task could create a customised version of the LLPG for the client system, and push the new release out. This meant all linked systems, from the CRM to web mapping applications, were all synced with the LLPG automatically
- the Council currently have 54 internal web mapping applications plus a public facing web mapping function which enables residents to interrogate information such "Find my nearest" etc
- the team have recently been involved with two projects with Social Services. The first was with the brokerage department. Companies used by them could charge more for supplying services for rural locations than to urban locations. Before, the department had to measure each property individually to decide whether the property was deemed urban or rural. Using the LLPG and FME, each property in Gwynedd was classified as either Urban or Rural. This saved time and money, as queries could be answered immediately, and since the routing data was available for them the methodology was transparent so the external organisations could examine how the classifications were derived
- because the LLPG feeds the CRM, a complete reporting system has been built which allows analysis of all calls. This has been a big success, and the Head of Customer Service has taken a great interest in the system. The Council can easily examine incidents such as bin collection rounds

complaints, and in turn they can improve the services to citizens. The map below shows how the information can be presented to show the information in a non technical way (where the red areas show a high number of



- errors)
- in terms of website metrics, in November 2009, there were 279 unique users for who accessed the corporate web solution. In October 2011 this had risen to 692. This can be attributed to the improved customer experience and amount of information available on the website, shown intelligently using the LLPG and enabled because the staff now have time to improve the service.

6. Next steps

The team are in the process of developing a geospatial strategy. They are also, looking to purchase advanced routing software to further support on the ground service delivery. The team are also preparing for the 2012 local elections where an interactive electoral map will be available to the residents of Gwynedd. Financial savings through GIS will be the driving the USP of Gwynedd GIS during the next 12 months with several projects already in the planning phase.

7. Further information

Aled Owen Jones
GIS Analyst
01286 679 010
AledJ@gwynedd.gov.uk

Zoe Britt
Research and communications consultant
020 7747 3500
Zoe.britt@geoplance.co.uk