Liberating GIS data with Cadcorp at Bracknell Forest Council

Chris Atkins
Vidya Sagar Gurung
March 2017
About Bracknell Forest
Bracknell Forest is located 28 miles west of London
A former ‘New Town’ of post-war England
Includes the settlements of Bracknell, Crowthorne, Sandhurst, Binfield and part of Ascot
Extends over 109 sq. km of central Berkshire in the ‘Thames Valley’ area
Population of 115,058 (Mid-2012 estimates based on Census 2011)
Growth rate slowed from 14% (in 2001) to 3% (2012)
Average age 37.4 years (Census 2011)
Highway access to M3 and M4
Rail access to Reading and London Waterloo
Harry Potter ‘house’ was filmed in Binfield (Pocket Close)
Where is Bracknell Forest?
Bracknell Forest Council

We are a unitary authority established in 1998, and deliver services which include:

- education
- health
- recycling and waste
- social care
- planning
- highway management
- housing
- council tax and business rates collection
- leisure centres
- parks and countryside
Bracknell is changing from this...
via this...
and this...
into this (opening September 2017)
Looking for a new GIS
Existing Systems

- **ESRI ArcGIS Desktop**
  - In use from 1995 to 2017
  - 10 licenses

- **ESRI ArcGIS Server**
  - In use from 2010 to 2017

- **ESRI LocalView Fusion**
  - In use from 2010 to 2017
  - Replaced ESRI ArcIMS based solution for internet/intranet mapping
  - No longer supported
Drivers for Change

- **Financial**
  - Dramatic cuts in funding from Central Government
  - Pressure to show savings in all I.T. systems across the Council
  - Need to demonstrate that GIS is value for money

- **Functional**
  - Expand and exploit the use of GIS data *without* incurring major costs
  - Deliver equivalent or improved functionality to users
  - Ensure that the GIS systems still meet the organisation’s needs

- **Aspirational**
  - Exploit new technologies including open source solutions
  - Liberate data held in proprietary systems
  - Transform map and data analysis services
  - Develop team skills and knowledge
Timetable for Change

2014  |  2015  |  2016  |  2017

Investigation  |  Apr 14 - Feb 15
User Consultation  |  Feb 15 – Jul 15
Procurement  |  Sep 15 – May 16
Implementation  |  Jul 16 – Apr 17
Review  |  May 17 -

Local Authority Software Applications RM1059
http://ccs-agreements.cabinetoffice.gov.uk/contracts/rm1059
A new GIS solution
Implementation Overview

Desktop Tools
(SIS, WML, QGIS, FME)

Web Server
(GeognoSIS)

Database Server
(SQL Server 2012)
New GIS Platform Benefits

- **Desktop Tools**
  - Cadcorp SIS Desktop 8
    - Retains a desktop GIS capability
    - Additional functionality (Network, Spatial Analyst)
    - Provides industry standard tools for data management
    - Manages WML/WME content
  - QGIS 2.14
    - Inexpensive desktop solution
    - Adds scalability and allows GIS user base to grow
  - Safe Software FME Data base Edition
    - World class toolbox for data management
    - Capable of introducing data workflow around the organisation

- **Web Server**
  - GeognoSIS
    - Robust web server enables sharing of GIS data and services
    - Able to share data with others in OGC data formats

- **Database Server**
  - Microsoft SQL Server 2012
    - Industry standard database format
    - Independent from supplier
    - ‘Proper’ spatial database
    - Opens up data sharing

---

Bracknell Forest Council
The Challenges of Migration

- **Data**
  - Cleaning and importing almost 500 datasets from existing ESRI SDE database
  - Converting hundreds more local datasets (SHP, FGDB, PGDB)
  - Importing data in bulk into new SQL Server database
  - SRID and SQL Data Owner issues

- **Workspaces**
  - Remaking hundreds of useful workspaces

- **Symbology**
  - Preserving and converting complex symbology

- **Users**
  - Migrating users from ArcGIS to new software
  - Building new intranet solution
  - Training users in WML/WME
Achievements and Future Plans
What has been achieved?

- GIS data has been liberated from a closed format
- A ‘proper’ spatial database has been created
- Cost savings have been made
- A scalable GIS platform has been put in place
- GIS capabilities have been retained and even increased
- The profile of GIS has been raised across the organisation
New Public Facing GIS (WML)

http://www.bracknell-forest.gov.uk/findmynearest
New Internal GIS (WME)
What next?

- **OGC Compliant Data Services**
  - Share data with partners via secure WMS or WFS services
  - Allow back office applications to consume live data via WFS
  - Use web services to make open data available to the public

- **Promote Self Service**
  - Empower more desktop GIS users
  - Offer more feature rich intranet and internet GIS services

- **Integration with Digital Services**
  - Supply GIS data as a web service for integration into web pages
  - Enable map based incident reporting
Thank you for listening

Enquiries:
chris.atkins@bracknell-forest.gov.uk