

The follow up: The third year of a Plone-based content management service

Helen Varley Sargan
helen.sargan@ucs.cam.ac.uk

Abstract

“Three years ago we set up a Plone-based content management service to provide templates websites with in-built functionality on which the site and content are self-managed.

We have just gone through a re-templating exercise and now have over 80 live sites and over 60 in development. How do we manage the service and keep our users happy?”

Why we set up the service

Within the University web sites were being set up for cross-institutional groups at some expense, then were being left unsupported, abandoned and reinvented (at more expense). In 2009 we proposed a project to:

- create a hosted, supported 'model site'
- that could be administered by a person or a group of people, who could add further managers and users
- using the constraints of the University web template
- responsibility for the site could be passed on when admin staff left

A small amount of money (£30k) was allocated from central resources to bring this about, and a candidate project selected to base the model upon.

Needs list - specific

With the admins of the first candidate site we created a needs list:

1. Directory of specialists (editable by authorised users)
2. Research theme descriptions
3. News and newsletter
4. Events (may be rss feed from central talks listings)
5. Notice/message board (for authorised users)
6. Static information
7. Collaborative area for file sharing and/or working (for authorised users).
8. Funding and/or job opportunities (taking rss feeds and allowing for submissions)
9. Self sign up for events

Needs list – for site administrators

- Select colour palette for site from a list of options
- Add local logos, department name and configure search box
- Opt for whether the site should have tabbed navigation
- Select optional content for right panel (lists, static content, rss feeds)
- Configure footer information and on a site-wide, directory level or page basis
- Manage groups, if necessary
- Configure research directory, if necessary

Needs list – for information providers

- Add and edit content (in pages and in directories), managing corresponding left hand navigation. Manage other editors?
- Request optional modules for the right panel
- Request required footer, if required

Needs list - functionality

Many plug-ins available for Plone – needed functionality for:

- Creating research directory
- Handling RSS feeds (alone and mixed)
- Creating redirects
- Creating message/discussion boards
- Creating forms

Setting up the Service: Groundwork

Preliminary groundwork was developed into a detailed specification of:

- What features should be in the site (with suggestions of plug-ins that could achieve this)
- How the site should look and work
- How this should be used to create a rollout package (or packages) that could then be used to generate sites

This specification was used to select a contractor.

Getting a contractor in

We spent the bulk of our development money getting a contractor on-site for 8 weeks both to do the work of creating the site and to teach us at the same time. In selecting a contractor it was essential to have the detailed brief – in our case we had quite a diverse set of needs that proved problematic for some of the smaller candidate contractors and several members of the selected contracting company were needed to complete the work. During the on-site work:

- Local staff must be prepared to clear their diaries and move office to take full advantage of embedded contractors
- Try to prepare for contingencies – no-one can take leave or be off sick!
- Good project management essential to avoid last-minute issues.

Setting up the Service: Pilot sites

After the contractor had finished, we tidied up the obvious loose ends, then fully populated the pilot site, tweaking site model when required along the way. This snagged various issues and it took 4-5 months to finally publish the finished site (May-June 2010), by which time a few other (internal use or experimental) sites were underway.

The service was named Falcon (in a local tradition of using bird names for services).

Who 'we' are

There are two of us managing Falcon:

- Me – I handle initial user contact, support and training, and also the styling and user-interface issues.
- David Carter, my technical colleague, handles the installation and management of hardware and software, integration of house styling into Plone and technical troubleshooting.

We also do other things – David manages our email system and I manage web sites, give other courses and so on. We have recently recruited an additional developer.

Making the service live

In June 2010 we opened the service to users. In the end we'd created a site model that would be suitable for groups or departments, as well as for the targeted cross-departmental research site for which it had been initially conceived.

In order to choke demand and to at least pay for the hardware we decided to charge £100 per year for the site, payable from the time a domain name was associated with the site (usually coinciding with when the site goes 'live').

Two years later...

During 2012 the University specified, commissioned and had delivered a new set of University templates. The templates were developed to be:

- fully responsive
- give good navigation
- have a professional design incorporating good imagery

We decided to

- migrate our Plone instances to Plone 4.2
- move from an early version of xdv to using diazo for presenting the new templates
- rework our Shibboleth integration to make use easier

Installing the new templates

- We had migrated to Plone 4.1 before the new template work began.
- Working on past experience we employed Laurence Rowe for 3 weeks on site to do the diazo work, and then for a further week to do the Shibboleth work.
- Templates had been received in October – by late November the work was complete.
- December and January were spent developing migration scripts and migrating the Computing Service site, which went live in February at the same time as the main University site.

Migrating existing sites

- The migration script was run for all sites to demonstrate the new templates, and work through the changes with site managers
- Keen managers started moving their live sites to the new templates in April.
- All development sites were moved to the new templates in May
- This month the Plone service is running approximately 91 live sites (of which 50 are in the new templates), and 78 development sites – adding 5-10 sites a month.

What we offer

On request, a site is set up overnight at a URL similar to <http://www-falcon.csx.cam.ac.uk/site/SITE>

The site is assigned:

- some initial managers
- the shortname (which can extend to 8 letters)
- a role-based email address
- a domain name (before it can go live)

Site set up is by the Falcon admins via a form, which is also used for amendment of site details. The initial site is a pre-styled vanilla site with all functionality available in it.

We collect sites into an internal list for which indexing is blocked.

What we offer

UNIVERSITY OF CAMBRIDGE | Study at Cambridge | About the University | Research at Cambridge | Quick links | Search

Plone Site

Home | News | Events | Jobs | Research Themes | Research Directory

Welcome to Falcon

Welcome to the Falcon Content Management Service

[Site with help text](#)

If you need further help you can email us at falcon-support@ucs.cam.ac.uk

Contact us

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UNIVERSITY OF CAMBRIDGE | Study at Cambridge | About the University | Research at Cambridge | Quick links | Search

Plone Site

Home | News | Events | Jobs | Research Themes | Research Directory

Welcome to Falcon

Contents | **View** | Edit | Rules | Sharing | SEO Properties | Aliases | Display | Add new... | State: Publish

by admin — last modified Jul 06, 2013 07:10 AM — [History](#)

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User support

We support users (site managers) in a number of ways:

- Email support via our service desk and falcon-support@ucs.cam.ac.uk (which comes to both of us, plus some trainees)
- One-to-one sessions with site managers to orient them and lay the groundwork for their site
- A user group session a couple of times a year.
- While the snagging of the pilot site was going on, I created a help site (<http://falcon-help.csx.cam.ac.uk/>), which is one of the main planks of user support.

Training courses

In May 2011, I trialled training courses with UCS staff, running the first course in June 2011. They are organised to run for two half-days (in the same week, preferably adjacent days), and I now run a course every month.

The first day gives an introduction to the system and the second day gives more detail about setting up and using the directory, forms, user management – if attendees don't think they will need that (because they are content editors), they need only come for the first session.

There is now also a range of courses for managers, running for a half day once per month, to concentrate on specific topics such as managing users and groups, and writing content rules.

Assigning a domain name

When sites are ready to 'go live' a domain name is assigned. Since a security certificate has to be applied for, this can take up to 24 hours. If they are re-assigning a domain name additional time for DNS to update – we usually suggest this happens over a weekend.

Although we have ongoing issues with Shibboleth, on request, sites can be registered with the UK Federation. On request, sites can be registered with ProtectNetwork for assignment of Shibboleth IDs for third parties.

Sites hosted

The sites that use our service fall into five broad categories:

- Departments (including the Computing Service)
- Research groups
- Cross-departmental or cross-institutional groups
- Conference or special interest sites
- Research initiatives or networks

The departmental sites see most traffic, while many of the other sites receive a negligible amount.

Sites hosted

The screenshot shows the Cambridge Language Sciences website. The header includes the University of Cambridge logo and navigation links for 'Study at Cambridge', 'About the University', and 'Research at Cambridge'. The main content area features a large, colorful abstract image with the text 'Our entangled world of words'. Below this, there are several sections with icons and titles: 'Human Language Technologies', 'Language Change and Diversity', 'Language Communication and Comprehension', 'Language Learning across the Lifespan', and 'Cambridge English'. Each section has a 'Read more' link.

The screenshot shows the UCS University Computing Service website. The header includes the University of Cambridge logo and navigation links. The main content area features a large image of a computer monitor displaying the UCS logo and the text 'The UCS - support for IT in the Collegiate University'. Below this, there are several sections with icons and titles: 'General IT Training', 'Software Provision', 'General IT Training for staff & students', 'General IT Training for staff & students', 'General IT Training for staff & students', and 'General IT Training for staff & students'. Each section has a 'Read more' link.

The screenshot shows the Department of Architecture website. The header includes the University of Cambridge logo and navigation links for 'About the Department', 'Centenary Events', 'People', 'Jobs', 'Research', 'Links', and 'Support Us'. The main content area features a large image of a city skyline with the text 'Exhibition 2012 4-7.07.2012'. Below this, there are several sections with icons and titles: 'Open Days 2012', 'Information for Current Staff and Students', 'Assessing Pathways Efficient and Climate-Wise City 2012', 'CA Project as Research Success', 'Industrial Placement with Mercedes GP Petronas Formula One Team', 'Industrial Placements with Red Bull', 'Richard Sworcer joins Renault F1', 'Cambridge University Eco Racing team unveil new car design', and 'Formula 1.com'. Each section has a 'Read more' link.

What's happened since June 2010

There has been a gradual increase in number of sites, with periodic dips when we clear test sites that are no longer needed:

Upgrading and maintenance

- Plone 4 was due to be launched in December 2009, but did not eventually appear until September 2010, so we started out sites using Plone 3 but built in all we could to facilitate moving into to Plone 4.
- Since we are dependent on various plug-ins we were unable to move to Plone 4 until mid-2011.
- Since then we did two major changes and upgrades, and two minor, so we were positioned for the Plone 4.2 upgrade, which we used when we instituted the new University templates at the end of last year. We anticipate moving to 4.3 next year, when plug-ins allow.

Sites are independent of each other, so upgrades can be made a site at a time. Routine upgrades are made on a group of sites, having backed them up before-hand, and ensuring they are checked afterwards. Because different sites use different features, it can be tricky to pinpoint where conflicts come from.

Upgrading and maintenance: Plug-ins

Currently we use:

Autocomplete widget 1.2.4

Carousel for Plone 1.4

Content tree widget 1.0.6

Data grid field for z3c.form
0.12

Diazo theme support 1.0.4

FacultyStaffDirectory 3.1.3

FacultyStaffDirectoryFalcon
Extensions 3.0dev-r2480

Feed mixer 1.6

HTTP caching support
1.1.3

Plone JQuery Integration
1.4.4

Plone JQuery Tools
Integration 1.3.2

Plone Keyword Manager
1.9

Plone Quick Upload 1.5.6

PloneFormGen 1.7.11

Ploneboard 3.3

RedirectionTool 1.3.1

TLSPU Cookie Policy
1.1.3

WebServerAuth 1.6

jQuery UI 1.8.16.9

plone.app.collection 1.0.8

quintagroup.seoptimizer
4.2.0

Upgrading and maintenance: Hardware

We started the service with one pair of servers

We now have three pairs of larger servers (one of each pair is off site, with data replication once per hour) with a course server, which is also an emergency spare.

A cron job and a backup are performed every night, along with monitoring to make sure loading is OK and all sites are up.

We use a Varnish cache.

(mail falcon-support@ucs.cam.ac.uk if you have more questions!)

The Good

- There was a pent-up demand for a facility to set up a web site and manage it in a granular way, and the demand remains. The in-built directory is popular. The new templates are almost impossible to manage by hand, so we are experiencing ongoing rapid growth.
- The system makes it easier for users to produce web sites using the University templates and the automation improves the quality.
- The system was relatively straightforward to create as we found supported plug-ins to do many of the functions we wanted, and it is very reliable when left to its own devices.

The Bad

- Finding you have a site manager who is a devoted fiddler – it's not obvious to such people how meddling with settings can easily break things
- Site managers who think they don't need to do the training and then complain
- Obscurely inter-related problems with plug-ins (often caused by upgrades), which can take a long time to track down and solve. (Plone is more complicated behind the scenes than it needs to be because of years of accumulated history with frequent changes in direction.)
- Upgrading to new versions of Plone is hard work and each time has brought to light obscure bugs. Applying updates to over 100 sites is time consuming.
- Having half of the team off work for 8 weeks put huge pressure on the other half and presented a big risk to the service. We have recently employed a new developer to help reduce risk.

The Ugly

- Wishing something basic had been done differently but knowing how much work it would be to change it – 20:20 hindsight is a wonderful thing.
- Ways some site admins find to style their sites
- Obscure problems: The fact that things can break in really odd ways just because someone creates an object where the shortname clashes with something else in the system.

Summary of the present

When we started looking at CMSs I was advised that to really get on with one you had to be prepared to marry it. Like any partner, sometimes it drives you mad, but most of the time it does the job and we get on – it can certainly devour time, and planning is vital. Generally the following is true:

- There is more to creating and running a website than being able to create and edit its content through the web – site admins can under-estimate this and then some of them blame the system.
- The most successful sites have been created by people who already had web skills or were prepared to ask questions and put effort into learning them.
- Since everyone gets the same site model we can only make improvements or changes that will be successful for all of them. It's important to keep focussed.
- Often site managers chafe at the restrictions that templates apply and the desire to be 'creative' drives them away from the service (but reliability and availability of training can drive them back).

Lessons learnt

- It is crucial to keep up with releases and anticipate what the release will add, with the problem of sometimes having to wait for plug-ins to be upgraded.
- We need to police the plug-ins we use very carefully. We are wholly dependent on some of them, so we must only use ones that are under active development. At the start of our service we had to remove at least one plug-in that became unsupportable.
- Like living with a cranky spouse, we need good anticipation of what might cause trouble and deal with it quickly. This only comes with experience.
- Buying in developer time can be very productive. Having a developer on site is immensely helpful for knowledge transfer.

The Future

Since we are now quite an important service for the University, we are applying to get funding to allow us to do some development work. This would include

- redeveloping the Faculty/Staff directory plug-in to new Plone architecture
- developing connectors to external interfaces

Questions

