



LAWs CMS Workstrand:

WORK PACKAGE 3

BACK END USABILITY OVERVIEW

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1. PURPOSE OF DOCUMENT

To serve as an End of Workpackage Report for the LAWS CMS Workstrand, highlighting issues, lessons learned and recommendations.

2. PROJECT CONTEXT

2.1. Background: Workstrand within a National Project

The Local Authority Websites (LAWs) National Project is one of the national projects identified in the e-gov@local consultative document. The LAWs project is envisaged as a key component in helping local authorities develop online services and to manage consequent organisational change. The project will lead to a set of products, standards and body of best practice that will make the transition to online transactional services easier for many local authorities.

The project has been organised into several delivery work strands and this one focuses on the Content Management System (CMS) component of the overall system. It is important that all private sector partners involved in the development of work in this work strand are familiar with the national project in a holistic way

2.2. Building on the APLAWS Pathfinder

This work strand builds directly on the APLAWS Pathfinder Project¹, which set out to provide personalised access to council services through the use of Internet technologies. This project provided a tool for website content management, as well as the use of syndication portals for personalised content display. This work strand will develop the APLAWS CMS product as a standard product freely available to the local authority community

2.3. Further information

Further details of the aims of the work strand are available on request in:

- a separate strand CMS Project Initiation Document
- an overall LAWs Project Initiation Document

¹ See <http://www.aplaws.org.uk>

3. WORKSTREAM PROCESS

3.1. Method

From the beginning, it was important that as many current users as possible were involved in the process of capturing potential improvements and evaluating them. The aim of this workpackage was to make changes that would benefit the majority of users, in particular the standard users who use the system on a regular basis. At all stages during the process, quality measures were included to ensure that appropriate changes were made and these were checked and evaluated throughout the project.

3.2. Personnel

Organisation	Representative
Camden (Project Manager)	Lindsay Ould
Camden (Technical Support)	Arturo Dell
Camden (User Testing)	James Kearns/Web Team
Redhat (Supplier)	Dan Berrange
Runtime Collective (Supplier)	Oli Sharpe
Runtime Collective (Independent Usability Expert)	Jon Rimmer
Quality Assurance Panel	Members of Aplaws User Group (See Below)

The Project Manager had full-time responsibility for the day-to-day development and implementation of the project. The Quality Assurance Panel comprised of:

Quality Assurance Panel	
Organisation	Representative
London Borough of Camden	Martin Black
London Borough of Newham	Andrew Beattie
Stoke City Council	Sue Sales
Coventry City Council	David Francisco
West Sussex County Council	Stuart Taylor

3.3. Project Controls

The Project Manager regularly reported to the LAWS CMS team as this workpackage was interdependent with other CMS workpackages.

4. PROJECT OVERVIEW

- 4.1. The contract for this workstream was awarded to Redhat in September 2003
- 4.2. A secondary contract was awarded to Runtime Collective to assist in usability workshops and collection of requirements for improved usability of the content management system. A set of scenarios was written to cover the range of tasks performed within the system from creating a piece of content to advanced tasks such as adding a table to a content type and administration tasks such as setting up users
- 4.3. These were translated into an HTML demonstrator. The current prototype did not lend itself easily to formal usability testing so a more informal approach was adopted.
- 4.4. Two workshops were held, one in London and one in Stoke to which a range of users were invited. Individuals and small teams reviewed the system using the scenarios provided. These workshops were a great success, complimented by enthusiastic end-user representatives who provided very thorough feedback and offered useful comments and suggestions for improvement
- 4.5. A usability expert was present to lead users through the scenarios and prompt users to verbalise their thought process. These sessions were video taped and transcribed for analysis.
- 4.6. A summary report covering the main points raised by these workshops and recommendations was delivered to Camden on 22nd October 2003
- 4.7. A quality assurance panel was assembled with representatives from the APLAWS User Group. Organisations involved were Stoke City Council, London Borough of Newham, West Sussex County Council, London Borough of Camden, Runtime Collective, Redhat and the LAWS Workstream Project Manager and Programme Manager
- 4.8. This group met initially on 24th October to review the main areas of the report and to agree the high-level areas and priorities that Redhat would develop to improve usability.
- 4.9. Following this meeting, two sessions were held involving Redhat technical staff, Runtime Collective representation, and the two LAWS CMS project managers. These led to a detailed development specification being drawn up between LAWS Project Manager and Redhat. A core set of changes was included as well as a secondary list to be achieved if time allowed.
- 4.10. Development commenced during November and a first staging version was available on 9th December. Progress was reported to the quality assurance panel and other users at the Aplats User Group meeting on 10th December 2003.
- 4.11. Line items were tested as they became available and iterative changes were possible at this stage.
- 4.12. Several releases were made during the development stage until the final release of this code on 17th January 2004.
- 4.13. This code was then added to code from Work packages 1 and 4 for an integrated release on 29th January 2004
- 4.14. Regression testing was carried out on this new release to ensure that functionality that had been accepted previously had not been affected by the integration. A final set of testing was also carried out on Camden's Staging server against real content.
- 4.15. A set of end user documentation was commissioned from Runtime Collective to support the awareness and training for new and upgrading users.
- 4.16. Training and awareness sessions were carried out with the authorities piloting APLAWS+ - Barnsley, Kings Lynn and Northampton. These covered administration functions,

information management issues to be decided before set up and Training for Trainers who will deliver end user training.

4.17. The Training sub-group will continue sharing its expertise and resources to support pilot and other new adopters of APLAWS+

4.18. The panel met again on February 12th and signed off the development

5. LESSONS LEARNED: WHAT WENT WELL

5.1. Involvement of End Users

From the first User Group held within the LAWS Project in July 2003, users were very willing to share their experiences of using the system, what worked well and what needed improvement. There had been a gap between the end of funding of the Pathfinder project and the start of the LAWS Project, which meant that authorities had had to implement the code as it had been delivered and had migrated a large amount of content. Using a system in a production environment had identified where functionality had seemed adequate and now required some changes to be 'fit for purpose' and other cases where work that had been defined earlier now was not seen as a priority

5.2. Quality Assurance Panel

Volunteers from the user group were willing to give up time to attend a Quality Assurance Panel to oversee the specification process. During the whole project, APLAWS users were willing to spend time and cover travelling expenses to share their views, which made the process more inclusive. During the first meeting, a set of priorities were identified that were fed into the specification meetings to ensure that those changes that were made would fit with existing users priorities.

5.3. Detailed Development Specification

The Usability report summarising the results of the workshops, site visit observances and working with Redhat staff who knew the existing system well provided detailed information about areas that needed improvement and the resource required to achieve this. Two long meetings were held to discuss the level of change that could be attempted within the timescale and this led to an improved understanding of the amount of resource required to improve particular functionality as well as a suppliers awareness of changes identified by the end users. Each change was a detailed line item, which could then be tracked during user acceptance testing.

5.4. Iterative changes made by Redhat

Potentially with development staff based in America on a different time zone, it could have been very difficult to manage changes within the tight timescale. This gave us time to review changes made the previous day in the morning before they started work 5 hours behind London time. Changes were made quickly and conference calls and use of the bug tracker enabled several staff to be involved in discussions before a final decision was made.

5.5. Documentation

Some funding was held until the end of the project as a contingency fund. This was used to fund an end user document that will form the basis of training resources that can be used by any APLAWS+ user. Pilot documentation was written during the user acceptance testing

phase. This had not been defined at specification stage but whilst testing the system, each step was documented and could easily be formatted into a document with screen shots. This also meant that testing was done very thoroughly and some bugs were located as a result of this work.

5.6. Pilot involvement

Pilot authorities started to get involved in the project at the end of January. Training and awareness sessions that were run for them meant that administration documentation had to be drafted and this helped to enhance the existing documentation as well as identifying some bugs to be fixed.

6. LESSONS LEARNED: WHAT COULD HAVE BEEN IMPROVED

The purpose of the Lessons Learned Report is to pass on any lessons, which can be usefully applied, to other projects.

6.1. Back end Demonstrator

A back end demonstrator was created based on scenarios for use in the workshops. There was a very tight timescale for this and it did not cover all the scenarios envisaged.

The demonstrator tried to show future system functionality and users felt that they were being shown changes that had already been made rather than concepts for discussion

As different suppliers were involved in creating the demonstrator and running the workshops, the workshop co-ordinators were not familiar enough with the content of the demonstrator leading to misunderstandings during the sessions.

Lesson:

Workshops could have been run using the existing system to identify problems and potential improvements without taking time to create a demonstrator. Users would have found this more suitable.

Lesson:

Involving the workshop co-ordinators in planning the sessions would have led to a better understanding of the system and may have improved the workshop experience for the users. This would only have been possible if more time had been available.

6.2. Involvement of End Users in User Acceptance Testing

Due to the tight timescales, and several releases, testing was only carried out by Camden staff. This could result in some functionality only being tested in a limited way where it is not used and understood by Camden e.g. Camden does not intend to set security to its folders so this was not tested as fully as it could have been if this had been based on a working set up within a live user environment.

Lessons:

To plan to involve users in testing at least in the later stages of the project. This could also be used to raise awareness of changes and to check that functionality is not used in an alternative way that has not been tested.

6.3. Best Practice

Due to the lack of original documentation, no two systems have been set up in the same way resulting in a difficulty of prescribing best practice. Each user has their own way of managing the system, which has led to misunderstandings about the functionality of the system. Best Practice has been defined for the pilot authorities but unless a core set of authorities set their systems up in a similar manner, recommended by the support community, There will continue to be issues around how APLAWS works.

Lesson:

Defining a best practice set up for new inexperienced content management system users will ensure that the core use of the system will be promoted and send out a clearer message about the system.

6.4. Training

During the workshops, many users spoke of lack of initial training or inappropriate training on the system. Often external training sessions were too technical and had been abandoned before completion. Many users had developed their own in-house sessions and had put considerable resource into writing documentation and delivering a range of training courses from awareness sessions for stakeholders and front line staff to end user training

Lesson:

A training sub-group has been established that will take the good work done in this area forward. Training notes prepared as part of this project will act as a basis for APLAWS+ documentation to ensure consistency and save individual resources. Training should always involve in-house staff – if external providers are involved, a clear briefing as to the level of training must be agreed or training will not be effective. Training in-house staff to deliver their own training may be a better use of resources.

7. OUT OF SCOPE WORK

From the workshops, it was clear that not all improvements could be carried out during this project. Indeed it was important to choose a smaller number of items to improve considerably rather than a larger number of smaller changes

Items listed below cover areas that could not be improved during this project but that the APLAWS User Group or individual authorities may want to consider for the future.

7.1. Redevelopment of Content Types:

During work carried out with the Information Architecture and Standards Workstream, a review was made of the content types developed for APLAWS version 1. In many cases fields were present for person, date and address data but these fields did not comply with data standards such as BS7666 for address and other Government Data standards as defined in the Government Data Standards Catalogue (GDSC). This is not surprising as these are emerging standards and their importance is becoming clearer as the requirements for integration with back end systems and syndication standards are being defined.

- ❑ Some improvements were made to the existing content types during the LAWs project. These were:
- ❑ Removing redundant data fields from view – Launch Date fields and Homepage fields were hidden from general use although these can be configured to appear in individual instances if required.
- ❑ Ensuring that fields with similar functions are named consistently. Fields named lead, lead line, summary and description all are used as a description field within the Search Summary. As these fields equate to the subject. description field in the metadata, their display tag was changed to description
- ❑ Metadata – When the description field is created or edited within the content type, its contents are automatically saved to the subject. description field, thus ensuring that metadata fields are filled and saving an additional step where this field had to be added manually
- ❑ Additional HTML enabled fields within content types – Users found that some of the content types were not flexible enough because text area fields could not be formatted. This was the case for Contact details fields. As a short-term fix, at least one field was HTML enabled within each content type.

An ESD Service content type was developed during this project and is now available to display the imported generic content within APLAWS+ and to be a good practice example of building content types to standards to ensure consistency. Porism who worked on this from an Information and Architecture Standards focus produced an XML schema for the content type and a document describing the process of defining this.

Existing content types add new fields to basic properties step of content creation. This makes this section very clumsy to display. A possible way forward would be to create a new authoring section after basic properties/body text called additional information to house these steps or to display sections called 'personal data' and 'job specific data' for example. Joint discussions with Redhat and other developers should define how to address this.

Recommendation: If existing content types are to be redeveloped either by the user group or by individual authorities, they are based on the standards such as those used for the ESD service type to ensure that they are fit for purpose for syndication or display on alternative information channels.

7.2. Alerts

Improvements to the workflow and expiration alerts had been made for the Herefordshire Partnership in version 5.2 and so these were rolled into the main code as part of the usability improvements. The ability to configure alerts by content type was out of scope for this work package but could be approached in the future. As many instances are not using workflow or lifecycle alerts fully at this stage, this area of work should be reviewed later to identify future improvements based on experience.

7.3. Image Library

Several users identified the need for all content types to use the central image library and for a user interface to be able to upload images prior to content creation. This enhancement should be added as a priority as being able to load images prior to migration would ensure sharing of common images and good image management which is much more difficult to integrate at a later stage.

7.4. Improved Administration View

The focus of this workpackage was to improve the experience for the majority of users who create content. This meant that the administration tasks interface was not reviewed. For new adopters of APLAWS+, this requires accessing a range of shortcuts, as these are not grouped together on an administrator's panel. This could be achieved with a small amount of work. There is a lack of Documentation for administrative tasks which should be tackled as a User Group Task to ensure clarity of understanding of the functionality and to limit resources required if each authority has to produce individual documentation

7.5. Display icons for Folders and Item View

Currently the view of the system is confusing as folder and item names wrap on the screen and it can be difficult to distinguish the end of one name and the beginning of another. This would be a relatively large piece of work as display of the screens are relative and depend on the browser, screen size etc. Users are familiar with the use of icons and so this would be a well-received improvement.

7.6. Reporting Application

Administration staff see the requirement for a reporting application to allow them to query the database and manage the system actively. Due to the complexity of the database, this would require a normalizing table to be built. Once this has been defined, it could be set up for all users and reports could be specified and written by in-house staff with the appropriate skills or by a contractor. All users should share core reports and this could be managed in a similar way to the ESD toolkit reporting application where individual authorities can sponsor specific reports but these can be available as a library for all users to use.

Recommendation: Several authorities have expressed a need for this functionality – This should be a priority for joint development.