

Case Study



Custom Content Management System

Empowering Digital News

Abstract

One of the largest news websites in the world partnered with Infosys in building a custom CMS addressing the unique needs of its vibrant online property. Infosys leveraged its cutting-edge research-driven knowledge capital in helping the client develop a new-age CMS.

Business Scenario

The client is a large newspaper operating in the US. Their business was witnessing a rapid shift in consumer behavior. Both readership and advertising revenue from the print business was declining. They had successfully forayed into the online business which grew at robust rates and their website became one of the largest trafficked news sites in the world.

The existing content management platform was built on an off-the-shelf product and over a period of time it has become quite inflexible limiting their ability to scale their web operations. There were several critical gaps in the existing CMS that continued to hinder their overall web ambitions. The key problems with the existing system included:

- A non-intuitive user interface that prevented web producers from working efficiently
- High development effort required to support innovative content types like multi-media and topic-based content aggregation
- Lack of flexibility in managing specialized news events in a way that differentiates from regular news days
- High operational costs to keep up to speed with the version upgrades of CMS product

In this context, the client wanted to replace the existing CMS product with a much advanced commercial-off-the-shelf product. Infosys helped the client evaluate relevant Web CMS products in the market to determine their ability to meet the exacting needs of the client.

Due to the lack of a suitable commercial product that could satisfy the key evaluation criteria and also help meet the client's objectives in the long term, Infosys recommended that the client build a CMS from ground-up. Infosys was chosen as the technology partner for this large core transformational initiative.

Solution

Infosys worked with key business stakeholders to identify the least disruptive path for transitioning the web newsroom seamlessly to the new CMS platform. Infosys analyzed the current operations and helped identify the requirements that would help the client move to the desired state. The key drivers for the solution included

- Putting in place an advanced web content management system that is easy to use, intuitive, highly user friendly and facilitates easy transition between the two systems.
- Improved integration with existing tools and systems, both upstream for content collection and downstream for content delivery.
- Reduce or eliminate manual tasks involved in editing & organizing content.
- Foster automation of repetitive tasks using customizable algorithms that can lead to producer productivity.
- Use latest technologies/open standards and advanced UI features like AJAX to support flexible content layout and section front creation, including in-context editing.
- Provide better collaboration between producers and handle concurrency while during content editing more effectively

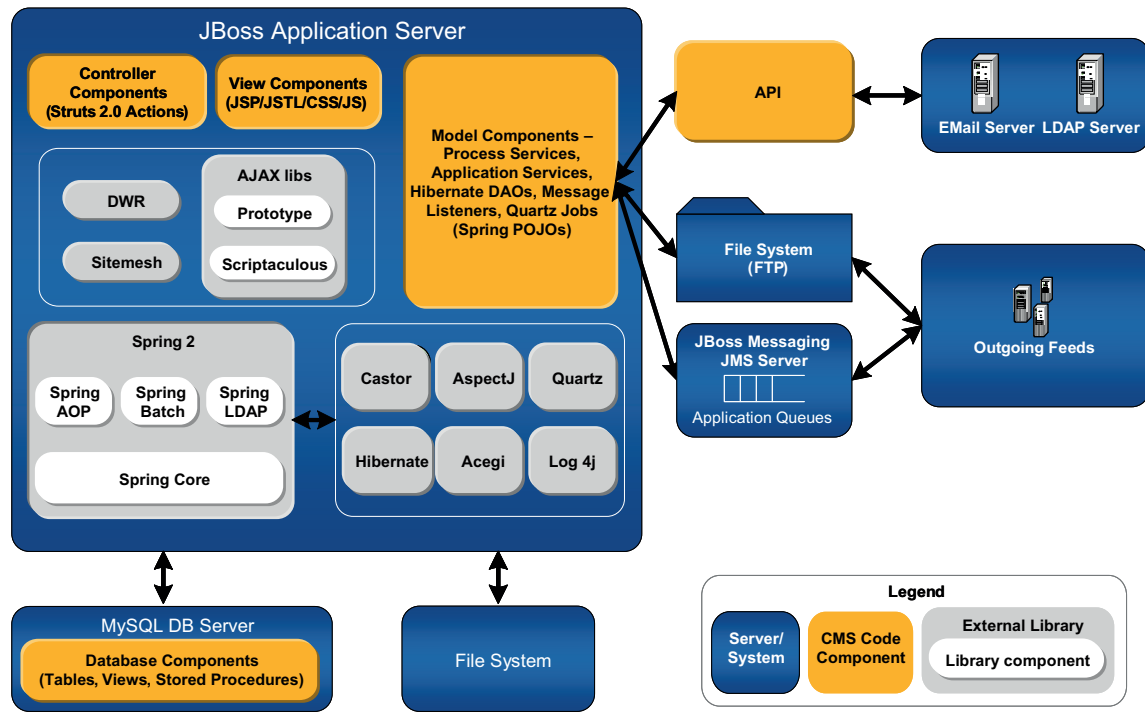
Infosys also leveraged its knowledge capital in web development to recommend a phased development and transition to the new CMS. Migration of aggregate content initially followed by primitive content was recommended. Key drivers to the phased approach were:

- Avoid big-bang transformation that is both disruptive and expensive
- Focus on efficiency improvements and job enablement for content editing and page creation
- Refine usability and functionality based on continuous user feedback
- Roll-out implementations to manage change effectively in a news environment that is constantly challenged for time and has a zero-tolerance for failures

Infosys architected, designed and developed the custom CMS with necessary features and flexibility that enabled the client to address the strategic needs of the content platform.

Technology

The solution delivers key functions by combining industry standard features like robust user management, access control, change logging and audit trail along with unique features like drag-and-drop, page organization, user dashboard and custom content models. The solution also integrates with existing down-stream delivery platforms and incoming feeds using technology neutral communication.



The solution was designed and developed using a combination of open source tools and robust technologies like J2EE standards, Web2.0 concepts and off-the-shelf plug-in components. The application is implemented in Struts 2.0. It uses Spring & Hibernate as the supporting backend frameworks. The application uses UI frameworks such as Prototype, Scriptaculous & DWR to implement intuitive drag-and-drop features that enable the news producers to manage their content organization & page layout activities.

Benefits

Implementation of the custom CMS provided users and administrators with the following key features:

- Ability to organize web pages through a drag-and-drop interface – a vast improvement from the traditional ranking driven page organization
- A flexible content model designed to account for specific needs of existing content types and is extensible to support future needs
- User dashboard to surface key actions and information items to ensure seamless and structural workflow
- Enriched search capabilities to enable editorial staff to swiftly execute a simple search, drill-down through meta-data driven search

These unique features provided following key transformational benefits to the client

Ease of use

By designing the solution in close consultation with users and usability experts, the custom CMS provides the editorial staff with an intuitive environment to perform activities like ranking stories on pages, controlling the rendering options and in effectively managing all publishing actions.

Future proofing editorial

The print editorial staff's reluctance to adapt to a single news production system for both online and print has been significantly reduced. The solution eliminated a major barrier in enhancing participation of print journalists, laying the ground for a possible integration of print and online newsrooms. Some of the features like role based permissions and advanced UI capabilities make it easy for non-expert users to safely use the application.

Flexible templating

The solution provides a large inventory of templates catering to the multiple content presentation needs of the editorial team. By providing templates that do not restrict content types to specific locations of the page, the solution is able to produce innovative and usable web-page layouts. This also enhances the reader experience and enables easy navigation to stories and related multi-media.

Robust news-management

By deploying best in class editorial capabilities like content locking during editing, rights-based access to editing, publishing and audit control of changes, the system provides greater editorial control. This eliminated typical newsroom errors operating in tight story deadlines through a structured governance process.

Ease of Integration

By providing easy means of integrating with systems that manage in-coming and out-going news feeds, the CMS solution offers a complete end-end news development and publishing environment.



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