

LEVERAGING OPEN SOURCE TECHNOLOGIES & BEST PRACTICES FOR GOVERNMENT

Date Published: June 2006

"In April 2005, the RCMS Proof-of-Concept by ImageWork Technologies was the first solution in the industry to leverage JSF, Acegi, BPEL, Spring & Hibernate in a single cohesive solution."

Challenge

The NYC DOP's core Criminal Justice processes were either leveraging closed source proprietary software or manual processes. This led to an increasing incidence of errors in cases, probationer absenteeism and paper copies within the investigation process.

The DOP wanted a case management system that was scalable, extensible and open. A reusable case management platform that didn't simply become obsolete, but rather evolved along with the technology around it and the requirements of the business became the central technology vision of the agency.

Solution

A key initiative for the New York City Department of Probation, the RCMS provides a variety of services to Probation personnel, Probationers and RCMS Administrators. It is a state-of-the-art platform built with reusability, extensibility, portability and standards compliance in mind.

The Reusable Case Management System (RCMS) is the core business execution engine for the Department of Probation. RCMS will be designed to handle 1000 concurrent users,



Solution Overview:

Customer Profile:

The business of the NYC DOP is protecting the community by intervening in the lives of offenders, holding them accountable and serving as a catalyst for positive change.

Objectives:

To architect and develop the Reusable Case Management System (RCMS) for NYC DOP.

Solution:

ImageWork deployed a 100% Open Source solution that leveraged ECM & BPM technologies. The Open Source and standards based approach allows the DOP to extend and share its solution with other agencies.

Technical Components:

- SpiderSilk.OSS Framework
- Spring
- JSF 1.1
- Hibernate
- BPEL4WS
- AJAX
- Acegi
- Apache FOP
- SOAP over HTTP/S
- IBM Websphere Suite
- JUnit
- JMeter

support over 25 roles, offer single sign-on access to approximately 1500 Probation Personnel and allow them to:

- Perform Investigations, Supervisions and Closure processes on Adult and Juvenile Probationers.
- Extract Key Performance Indicators from their Business Processes and optimize them for the future.
- Rapidly retrieve case folders and probationer profiles for review and reference.
- Maintain a detailed audit log of all view, edit and delete actions performed by Probation personnel.

This powerful platform is also designed with Open Source and Standards in mind - it heavily leverages Service Oriented Architecture, XML and Object-Relational Concepts to increase cross-environment compatibility and eases information sharing across various Criminal Justice boundaries.

RCMS leverages Java Server Faces (JSF), XML, XSLT, Hibernate, Spring, Acegi and crucially BPEL within its architecture. Business Process Execution Language (BPEL) is a powerful standard for Service Orchestration. These key technologies form the ideal foundation for infinitely building and extending RCMS as requirements change and other Government agencies adopt it to their rules and regulations. Within a Service Oriented Architecture, it is imperative that these services are coordinated, provided and executed in a controlled sequence we would call a Business Process.

A business process management approach gives the Department of Probation a visual perspective of their business in full flow and allows them to identify potential bottlenecks and allows for optimization. RCMS heavily leverages NYC DOP's Websphere Business Integration Server Foundation (WBISF) platform to ease integration and perform certain workflow



and process management functions not supported by the BPEL standard. WBISF offers a host of APIs and integration adapters to aid the process of integration.

ImageWork Technologies played a key role in the design, planning and development stages of this initiative and achieved a successful phase 1 roll out in April 2006. The system was built using a team of 12 developers in 5 months from the requirements being frozen. RCMS has 160 tables, 1550 fields, 260 explicit routing rules, 13 workflow stages, 268 screens and 45 reusable custom components built with JSF. RCMS is designed to integrate with a multitude of Database and Application Servers with minimal changes to its configuration.

In addition to the back-end being pluggable, the front-end is entirely templated and leverages industry standards such as XHTML and CSS for maximum flexibility and consistency. On average, a completely new "skin" can be added to RCMS within 4 hours by simply changing the style sheet and Javascript libraries.

RCMS provides DOP personnel with an unprecedented level of insight and knowledge about their probationers and gives them a rich workflow oriented experience that "pushes" work to relevant personnel and ensures case folders are processed in a timely manner. As usage increases, a Cognos ReportNet Business Intelligence front-end will supply management with fine-grained reporting from a replicated data warehouse on DB2. RCMS was recently nominated as a finalist for "Best Government Solution" at IBM PartnerWorld.

