

Modernizing a state's legacy child support services mainframe

Deloitte Application Modernization

How Idaho updated an aging system to help improve its services



The challenge



The Idaho Department of Health and Welfare relied on an old and inefficient mainframe application to serve the needs of some of its youngest citizens. Its core child support application was housed on a 22-year-old mainframe that could not keep pace with the increasingly digital needs of the state's citizens.

The reason? The Idaho Child Support Enforcement System (ICSES) mainframe was not compatible with essential new technologies like cloud and mobile computing. And that impeded the department's ability to enhance its services to 385,000 children and adults.

Legacy code was at the core of the problem. The child support application ran on a combination of decades-old COBOL and Natural source code. As a result, implementing new services was a cumbersome and complex undertaking. "Our existing mainframe was unable to implement rapid customer-centric change, and the resources needed to make changes were very limited," said Greg Kunz, a deputy administrator in the division of welfare within the Idaho Department of Health and Welfare.

Department leaders understood that providing digital information to taxpayers often requires a new mindset, one in which citizens are treated as customers rather than constituents. This approach was the heart of a "smarter government" strategy that views healthcare as a connected and holistic service for citizens, according to Kunz.

In addition to a new way of thinking, delivering outstanding service would also demand up-to-the minute enterprise technologies and a retooling of business processes.

High costs and inefficiencies

The Department of Health and Welfare faced significant challenges that are typical among organizations that rely on aging mainframes and legacy applications. Vintage code prevented the department from implementing new services to address evolving business needs. For instance, it needed to enhance digital capabilities to communicate with citizens via text and email. This could easily be achieved using a Java platform to create Web services, but the legacy code wasn't compatible with modern languages.

The high cost of maintaining the mainframe was another factor. Supporting a mainframe and legacy applications requires employees with legacy code experience. In the state of Idaho, as elsewhere, the pool of employees fluent in legacy languages is drying up as workers retire. As they leave, experienced employees take with them years of knowledge of the systems, including undocumented updates over the decades.

Given these challenges, it's not surprising that the agency had weighed for several years options to modernize its child support system. In fact, the IT department had earlier attempted to implement a modernization solution that would emulate the mainframe on servers, but the initiative was eventually scrapped. The department simply did not have the know-how and experience to modernize on its own.



The Application Modernization process

In a meeting with the Department of Health and Welfare, Deloitte proposed an application modernization strategy that uses software to automatically refactor, or replace, old code like COBOL and Natural with modern languages like Java and .NET.

Deloitte's Application Modernization powered by innoWake™ suite of solutions can convert all legacy code into modern languages with complete accuracy, a process known as 100% automated refactoring. The software converts each line of legacy code to equivalent programming instructions in modern languages. This approach preserves the functionality and interfaces of the existing application while building a foundation for future modernization initiatives.

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Deloitte's Application Modernization team collaborated with department stakeholders to assess the agency's technology ecosystem, and then employ an incremental approach to refactor the ICSES system.

Using a parallel production pilot, we helped the department refactor 100% of its code and migrate data to a Java platform—without data loss or code freeze.

Refactoring by the numbers

The project refactored 1.7 million lines of Natural and COBOL code, 2,800 Natural programs, 1,100 online screens, 50 interfaces and 180GB of Adabas files.

Deloitte innoWake tools used:

development, enabler, and data

automated refactored system," said John White, Deloitte Consulting LLP principal and leader of the organization's National Child Support Services practice.

Deloitte's team accelerated implementation through an early roll-out of new screens to end users to facilitate familiarity with the system. During the process, Deloitte worked with the department to quickly identify and resolve issues with the refactored application.

More flexibility with Web-based tools

After refactoring, the Department of Health and Welfare is now set to use flexible Web-based tools to build new services on the Java platform. For instance, it has already created a Web tool that automatically generates a notice when an individual has not submitted a child support payment.

The department also employed Web services to more easily share data with its 50-plus third-party business partners. These new tools enable employees to instantly access information from internal and partner databases, which shortens the time that citizens wait on hold during calls for information about their accounts.

Lower operating costs

Finally, the initiative also decreased operating costs because the department no longer has to maintain the mainframe after applications and data were migrated to the Java platform.

A foundation for innovation

The Department of Health and Welfare is now starting to implement current technologies that will achieve its core mission of smarter government services. Over the next 18 months, it plans to build applications and capabilities on top of its modern digital foundation.

These include development of additional Web-based tools designed to improve worker efficiencies and communications with citizens. The department also plans to overhaul its financial-management system and automate capabilities for its workload- and caseload- management functionality.

"What Deloitte gave us was this incredible tool that got us here in 18 months at a cost that was substantially lower than rebuilding from scratch," Kunz said. "We think it's going to be one of the least-expensive modernization efforts ever of a child support system."

Results



The Transformation project was completed in just 18 months, a rapid turnaround that was a critical requirement for the department.

"Idaho required a fast implementation, and one of the reasons they selected Deloitte was our ability to meet the deadline while delivering a completely

Keith Ketcher

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