

Case Study – Documentation & Migration – COBOL

Business Scenario:

The customer is a US urban county of about 26 square miles located close to Washington DC.

The County's CLIENT And Service Event (CASE) and Purchase of Service (POS) systems are complex service costing and invoicing systems, with a total of about half million lines of code. These systems perform numerous vendor case event handling, scheduling and transactions, including statement and check printing.

The CASE system is the County's custom designed and built client services entry system. The Dept. of Human Services (DHS) uses this system to record demographic information about its members and to track delivery of children's services, housing programs, adult services, and state benefit programs. Detailed service information is recorded in the system so that direct payments to members or payments to vendors can be created through its Uniform Welfare Reporting (UWRS) and Purchase of Service (POS) systems, respectively.

The POS system allows the County's staff members to create purchase orders and record invoices of vendor-delivered services. Unlike off-the-shelf accounts payable systems, this system was custom designed to allow entry of detailed information required for delivery and tracking of children's services. This system reads the member information entered into CASE, merges and edits recorded vendor invoice information, and passes this data to the County's general ledger and accounts payable systems. The County ERP systems handle vendor payments for DHS.

Challenge:

The County was providing child services, housing, and state benefits to its members using legacy systems written about 20 years ago in COBOL, CA-IDEAL and DATACOM. These systems were installed on an IBM mainframe that incurred recurring maintenance costs.

There are various challenges with these systems:

- Mainframe maintenance costs were rising and becoming too expensive for the county,

- Support staff were becoming difficult to find,
- The systems were unable to connect to other systems
- It was not possible for the systems to be extended or enhanced in response to changes in legislation and evolving new methods of doing business over the internet,

Business Objective:

The County wanted options to make these systems scalable, maintainable and extensible using web interfaces.

The County had invested a considerable amount of time and resources in accumulating business drivers in the systems and was not in a position to simply throw away this investment and start from scratch. At the same time migrating to modern platforms was not without risk.

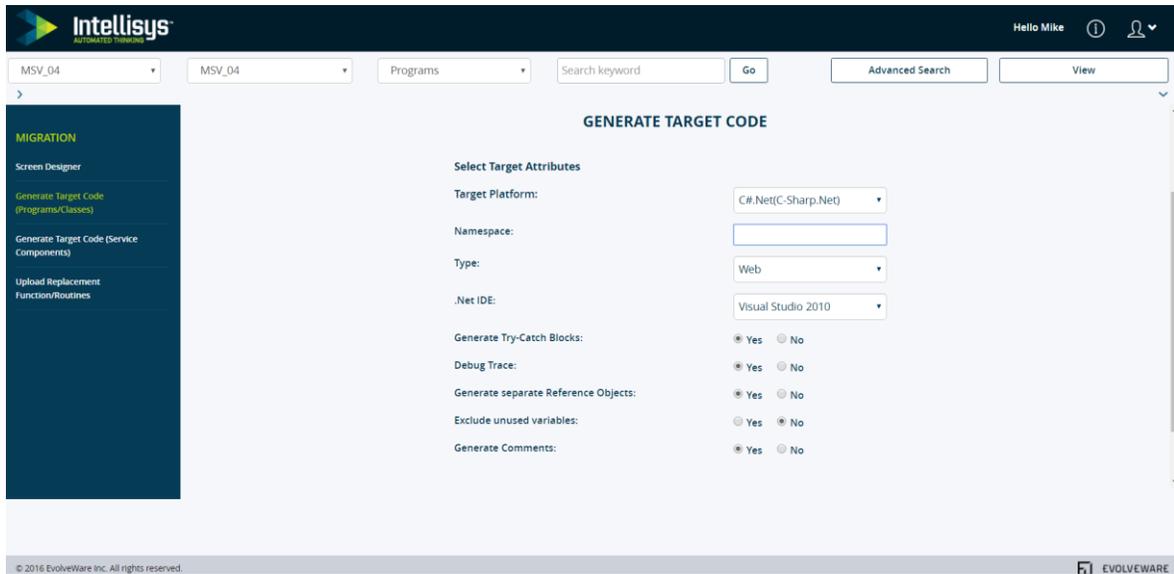
Migration methodologies have been primarily manual with multiple disparate tools providing partial automation of the processes. Most such initiatives took long periods of time to complete, adding to the risk already inherent in manually driven tasks.

To overcome these issues, the County tasked their IT managers to identify a solution that was at least 40% automated and could move the systems to a modern platform in no more than 8-9 months.

Solution:

The County selected a solution built around EvolveWare's Legacy Modernizer because this product automated the entire application modernization process anywhere from 75-95%. EvolveWare's Legacy Modernizer offered the County a single product that extracted embedded information from the source, allowed the information to be optimized and modernized, and generated modern web-based code that was scalable and maintainable. In migrating the County systems, Legacy Modernizer automated the extraction of the data model and business rules to 100% and automated the generation of the target systems to 87%.





With the target applications having no run-time dependencies, the County was assured of running these modernized systems without having to pay any recurring maintenance costs.

Project Deliverables & Time Lines:

The project included the following deliverables:

- Business Rules extracted from the source code
- Target application with enhanced user interfaces deployed
- Database converted from a legacy database technology to a modern supported solution
- SQL Server Reporting Services (SSRS) converted from batch processes that generated CA-IDEAL reports
- Windows PowerShell scripts converted from batch JCL/Procedures

The application was documented and modernized in 7 months, an average of 8 personnel documented, converted, tested and deployed the application using EvolveWare's Legacy Modernizer. The following statistics provide the time spent on each of the major project tasks performed in the course of the migration project.

1. Extraction of embedded information and generating target specifications - 4 weeks
2. Data model normalization and data transfer - 4 weeks
3. Generating target code - 1 week
4. Completing and testing target code - 12 weeks

5. Regression and user acceptance testing - 8 weeks
6. Packaging and deployment - 2 weeks

Business Benefit:

The County's migration of CASE and POS systems was implemented on-time and at a fixed cost. The fixed price quoted for the EvolveWare solution was so cost effective that the County has begun to apply the remainder part of their budget to "dramatic improvements" in the system's user interfaces and SOA implementation.

From a performance standpoint, the converted systems continue to perform without any degradation whatsoever. From an operations perspective, the County estimates that the annual cost to operate the converted systems on Windows Server is significantly less than what it would have cost to run them on a mainframe, even if the cost of conversion is factored into these expenses. This will allow the County to invest the savings in other IT improvements.

With the target applications having no run-time dependencies, the County was assured of running these modernized systems without having to pay any recurring maintenance costs.

From a time perspective the solution was implemented in a time frame that allowed the County to retire their mainframe at least one year earlier than was anticipated. The cost benefit of this was a return on investment (ROI) in excess of 30% on the amount the County invested in the EvolveWare solution.

The primary beneficiaries are the County's members as they receive enhanced customer service from systems that can access resources of other County systems and departments. The public will recognize the efforts of the Government to implement technologies that will serve its constituents more effectively and efficiently.

Customer Comments:

"Through design, automatic conversion based on EvolveWare's automated legacy conversion product, manual coding, and testing, their team efficiently executed a well-planned process...the project began on 15 April 2009 and was completed at the end of February 2010, a very aggressive schedule, which was met on budget"

Applications Manager, U.S. County



Environments:

Source System:

- IBM 3090 MVS - MIPS 126
- VSAM/Flat Files and Datacom
- COBOL and CA-Ideal
- RACF Security
- MIPS

Target System:

- Windows Server 2008 R2 with IIS – Quad CPU 1.4 GHz Intel processor
- SQL Server 2008
- SQL Server Reporting Services (SSRS)
- Windows Active Directory

EvolveWare, Inc. has been awarded 5 U.S. Patents and 1 Australian Patent for the technology that is incorporated into Legacy Modernizer and its successor, Intellisys™. The U.S. Patent numbers are 7,769,704, 7,774,290, 7,917,457, 8,051,410 and 8,412,653 respectively. The Australian Patent number is 2007348312.

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