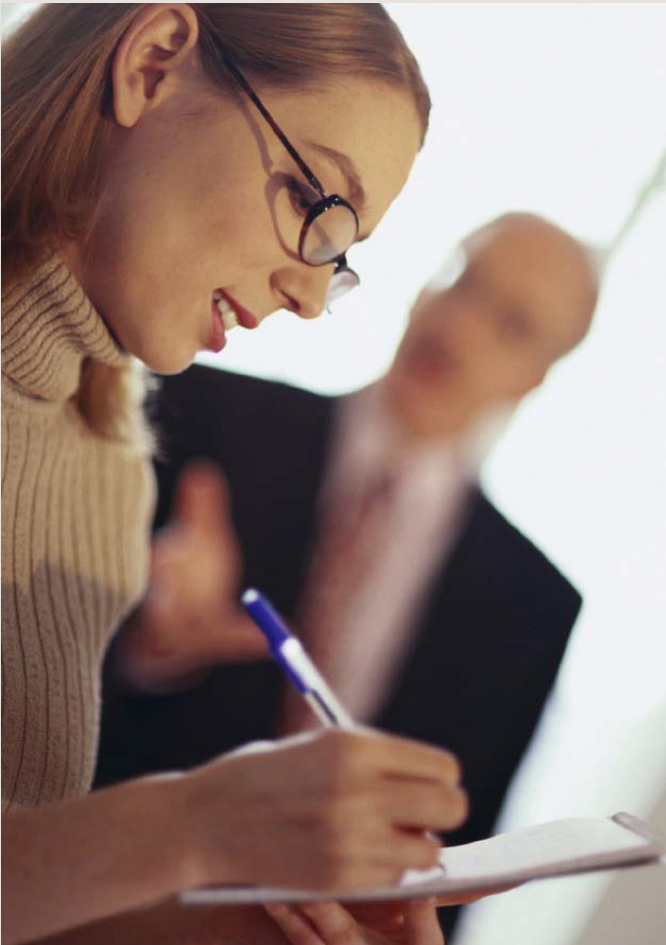


## Case Study



## State of Washington Department of Licensing Successfully Re-Hosts HP3000 Platform to Server-Based Microsoft .NET Environment

### Profile

The State of Washington Department of Licensing (WADOL) had two mature applications running on a midrange HP3000 PA-RISC system. These applications, developed over 28 years, comprised more than 0.5 million lines of TRANSACT and COBOL code and were accessing more than a thousand programs, modules and files, ten TurboIMAGE databases, hundreds of user interface screens and 20 computer interfaces. The applications supported WADOL's mandate to administer laws relating to the licensing and regulation of vehicles, vessels and heating oil.

### Client Challenges

- On November 15, 2001, HP announced that the end-of-life for the H3000 would be December 2006. This upcoming lack of support brought with it the risk of disrupting WADOL's statewide vehicle title and registration issuance activities and the collection of \$1 billion in biennial revenue. WADOL needed a robust option for future development and consolidation.
- PA-RISC systems are expensive to purchase and maintain – often an order of magnitude greater than similarly-powered Microsoft Windows server configurations. WADOL wished to reduce the cost of IT operations, maintenance and replacement.
- Because of the inflexibility of the HP3000 environment, WADOL was challenged to reduce the time taken and costs involved when responding to business, legislative and federal mandates.
- WADOL needed to increase the number of customer service delivery channels, such as using the Internet.
- To meet increasing service level requirements (currently 30,000 – 60,000 business transactions per day and growing), WADOL needed to enhance security, reliability, availability and performance.
- WADOL wished to increase efficiency by sharing data and systems between state, local and federal governments.
- WADOL's goal was to standardize on commodity hardware running in a Windows server-based environment, as used in an earlier Unisys mainframe migration.

## Solution and Benefits

In 2004, WADOL decided to make the move from their HP3000 PA-RISC system to a server computing platform, to implement upgrades to the network and to transform batch update transactions into immediate online updates. This solution produces the following benefits:

- HP3000 applications moved from an obsolete legacy platform to low-cost, mainstream servers
- Almost complete reuse of the original programming code and business logic
- Significant flexibility gains from the .NET environment in conjunction with reductions in the development time and cost, which allows WADOL to improve its responsiveness to change
- Elimination of the need for specialized HP3000-related skills, so that common staff skill sets in modern software development languages and tools can now be fully leveraged
- Better integration with other WADOL systems and data, removing the need for awkward workaround processes
- Improved information access through the tools and functionality available with the new Microsoft SQL Server databases (indeed, both the usability and quality of data are expected to improve)
- Enhanced system security, reliability, availability and performance
- Significant savings through reduced operations, management and purchasing costs

## Migration Requirements

Key requirements for the migration project were:

- Migrate two mission-critical WADOL applications, Vehicle Field Systems (VFS) and Heating Oil (HOAP) to a Windows/.NET/SQL Server environment.
- Perform the migration quickly with the lowest risk possible – if VFS were unavailable, for example, WADOL would be unable to issue driver's licenses and car registration license plates.
- Items to be migrated included:
  - 1,023 programs, modules and files
  - 483,802 lines of TRANSACT code
  - 17,322 lines of COBOL code
  - 635 screens
  - 10 databases with 1.7 GB of storage
  - 12 external and 8 internal electronic interfaces

## Approach

The project would start with a Proof of Concept on the smaller and relatively simple HOAP application (13,350 lines of TRANSACT code within 23 program modules) to demonstrate that Fujitsu Consulting could perform the migrations successfully, and to demonstrate that the technology would perform as expected. The Proof of Concept would be followed by the migration of the VFS system that handles all vehicle and driver licensing throughout the state.

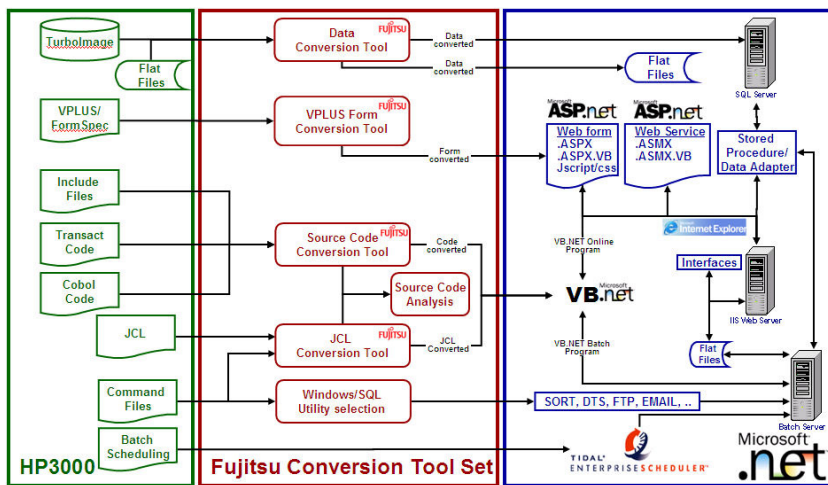
## The Fujitsu Solution

Fujitsu Consulting's winning proposal met WADOL's criteria in a way that allowed them to preserve their investment in their existing code, while new industry-standard server platforms delivered the capacity and performance they needed. The basis of the solution was to convert the legacy TRANSACT and COBOL code to VB.NET, which Fujitsu Consulting believes to be the language of choice for this type of project. The simplicity, adaptability and flexibility of VB.NET minimize any risks associated with the conversion, requiring less redesigning of the original program structure and logic.

The key advantages of the Fujitsu approach were to:

- Preserve WADOL's investment in the business logic embodied in VFS and HOAP while minimizing conversion risk through Fujitsu's COBOL to VB.NET automated source code conversion.
  - This enables staff to build and leverage skills in new areas like VB.NET and web services without making current application knowledge obsolete.
- Use Fujitsu's conversion toolset to migrate legacy VPLUS screens into ASP.NET web form to create a thin-client web application that uses the familiar Microsoft Internet Explorer browser. See diagram below.
- Transform legacy TurboIMAGE databases to SQL Server 2000, allowing data to be shared with other WADOL systems and state, local and federal governments.
- Reuse the basis of the earlier WADOL re-hosting project successfully performed by Fujitsu: VB.NET, SQL Server, Microsoft Internet Information Services (ISS) and Tidal Enterprise Scheduler.
- Upgrade the communications network and transform legacy batch update transactions into immediate online updates.

**Fujitsu Migration Solution for HP3000 to .NET at WADOL**



In April 2005 Fujitsu Consulting began work on the project. The pilot HOAP re-platforming was completed and implemented into production in July 2005. At the time of this writing (June 2006), Fujitsu Consulting is completing the VFS re-platforming, which is scheduled for implementation in October 2006.

## Experience the Fujitsu Consulting Difference

Fujitsu, together with Microsoft, brings years of experience, credibility, skills and the tools to help you move forward with confidence to accelerate a migration process. Fujitsu Consulting's Legacy Modernization solution offering realizes the fundamental value of IT through measurably lowering the total cost of ownership. The company utilizes its award winning methodology with the latest technologies that are most responsive to a client's requirements.

A trusted provider of management and technology consulting to business and government, Fujitsu Consulting is the North American consulting and services arm of the \$40.6-billion Fujitsu group. Fujitsu Consulting integrates the core expertise of the Fujitsu companies and its partners to deliver complete business solutions in the areas of IT governance, information management, legacy systems modernization, application outsourcing and business process outsourcing. Through its full range of consulting, implementation and IT management services and its industry-recognized strategic approach, MacroScope®, Fujitsu Consulting enables clients to build more value into their IT investments and drive their leadership in the marketplace.

*We work with you to create solutions and produce results that drive your business.*

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