> "With expertise, enthusiasm and proven technology we managed to fulfill the customer requirements and deliver a system that's forecasted to reduce their maintenance costs by 25 percent."

Anna Larsson
Senior Project Manager
Fujitsu

Fujitsu and Asysco migrated millions of lines of code using automation, reducing costs by 25 percent and providing a future-proof platform for digital transformation.

At a glance
Country: Sweden
Industry: Public Sector
Founded: 2009
Website: www.transportstyrelsen.se

Challenge
STA's road and traffic system relied on a UNISYS OS2200 mainframe, with parts dating back over 40 years. It needed to migrate millions of lines of complex code from this mainframe to a new C#/.NET environment within a strict budget and tight timeframe.

Solution
Partnered with Fujitsu and specialist Asysco to automatically convert code and batch operations to the new platform, based on extensive research, multiple workshops and a detailed test environment.

Benefit
■ Supports over 100,000 users, handling half a billion transactions every year

■ Maintenance costs are forecasted to be reduced by at least 25 percent

■ Most batch processes have sped up considerably

■ Provides the foundation for future digital transformation as STA continues to modernize its infrastructure

shaping tomorrow with you

FUJITSU

Customer

The Swedish Transport Agency's (STA) aim is to ensure good accessibility, high quality, secure and environmentally aware rail, air, sea and road transport. It has overall responsibility for drawing up regulations and ensuring that authorities, companies, organizations and citizens abide by them. The organization has four primary areas of concern: the Civil Aviation and Maritime Department; the Driving License Department; the Road and Rail Department; and the Vehicle Information Department.

Products and services

- FUJITSU Systems Integration
- FUJITSU Application Services
- FUJITSU Managed Infrastructure Services

Migrating millions of lines of code

STA's road and traffic system relied on a UNISYS OS2200 mainframe, with parts dating back over 40 years. During this time, the system had been built up in patchwork fashion with countless additions and tweaks to the software. This made it costly to maintain and difficult to keep and develop operative knowledge within the organization. When UNISYS declared support for the platform would cease, STA finally looked at migrating to a more modern environment.

The challenge was to migrate over 3.5 million lines of EAE code, 150,000 lines of COBOL code, 3,000 lines of Assembler code and around 900 ECL batch programs. These complex programs integrate across multiple organizations, including the police, tax authorities, insurance companies, car dealerships and many more. Untangling four decades of this sprawling development and moving it to a C#/.NET environment would require proven expertise.

STA set out to find the right partners for the task. As a public body, there are strict rules regarding procurement so the process had to be as transparent and balanced as possible. Following an invitation to respond to the project, three companies each presented a pre-study; with these then forming the basis for the RFP. The pre-study was based on multiple workshops across the organization that were held to fully understand operational and functional needs. Of utmost importance was the deadline enforced by STA, which would run out of MIPs capacity by the end of 2016. Investing in additional MIPs was too costly to consider.

Fujitsu partnered with modernization specialist, Asysco, to offer an automated migration pathway that would minimize disruption during the transitional phase. Asysco offers proven, turnkey technology solutions and expertise to deliver high quality transformation without failure, while Fujitsu has a wealth of experience and the local resources to manage the project. Together, they proposed the most cost-effective solution within the required timeframe.

Partnership leads to new platform

Asysco and Fujitsu formed a team that not only provided migration and essential technical tests, but also the required environments and tools to operate the migrated solution. They began with a proof of concept where a small amount of the code was migrated in only one month. The team then built a parallel environment designed to meet the requirements of the new infrastructure. Within six months, the first complete set of code was migrated and delivered to the new platform.

During the project five complete deliveries of the code were made, thus allowing the organization to continue development and maintenance of the old system up until a few months before the production date.

Apart from the Assembler code, the entire migration process was automated, minimizing the need for manual intervention and speeding up the project. Nevertheless, there was an expectation that issues would arise when the new environment went live. Over one hundred people from both customer and suppliers were dedicated to support the go-live, however, it was seamless and few incidents occurred, thanks to the careful planning involved.

A faster, more stable system

The platform is now supporting over 100,000 users, handling half a billion transactions every year. This ensures a stable, secure and highly available road and traffic system that will be future-proof for at least a decade. Although the original vision was to perform a strict one-to-one migration, in reality, Fujitsu and Asysco delivered equivalent functionality while removing many of the unnecessary and dated quirks in the system.

The new STA environment is forecasted to reduce management and maintenance costs by at least 25 percent, while also improving performance. For example, end-of-year batch production, which previously took seven hours to complete, now takes just 22 minutes.

Through switching to a more open, developable and cost-effective solution, STA can offer enhanced and expanded functionality that ultimately makes Swedish society more efficient. Vehicle Tax, for example, is subject to a strict time limit and cannot be issued when that window has passed. This process now takes minutes rather than days, making the organization much more productive.

The new system also provides the foundation for future digital transformation as STA continues to modernize its infrastructure. Fujitsu's flexible expertise, in tandem with Asysco's automation skills, has ensured that STA's business critical road traffic system has been transformed and future-proofed, ready for a 21st century environment.

FUJITSU

Email: info@se.fujitsu.com