

URL: [www.autostrade.it/en/](http://www.autostrade.it/en/)  
 Industry: Motorway construction  
 Country: Italy  
 Partner: Sempla



## Autostrade per l'Italia: Reusing 500 COBOL applications in new SOA environment

Enterprise Developer achieves time and maintenance cost savings

### Highlights

- Effective code reuse in a service-oriented environment
- Modernization achieved within eight months
- Simplified application infrastructure management

**"The time scale was crucial and the solution chosen, Micro Focus Enterprise Developer, allowed us to meet ambitious time goals. In just eight months, we went into production."**

**Alessio Romagnoli,**  
Traffic Systems Manager in the IT  
and Technological Development  
Department

### At a Glance: Autostrade per l'Italia

Autostrade per l'Italia is one of the leading franchise holders for toll motorway construction and management and related mobility services. In Italy, around five million travelers a day use the network run by Autostrade per l'Italia and its subsidiaries. This network covers some 3,095 km with the purpose of drawing the country closer to the social and economic center of Europe and guaranteeing effective coverage of the country and a vital mobility service in the major metropolitan areas.

### Solution

- Micro Focus Enterprise Developer

### Challenge

Evolving core applications to a more efficient delivery model without losing their functional features is not just a tactical solution guided by the need to save costs. Rather, it is the first step of a wider strategy of modernizing systems so that they are service oriented.

Autostrade per l'Italia wanted to maintain its mainframe strategy, but there had been a growing need to upgrade and simplify application infrastructure, through a structured process of moving programs from Micro Focus APS\* code to native COBOL, creating a standardized and well-supported environment.

"Specifically because of the quality of the APS code, an investment made 20 years ago, all the COBOL applications were developed in this language, using centralized structures as 'skeletons' and 'macros' to limit programming work and achieve an easy-to-maintain, standardized code. Over time," says Alessio Romagnoli, Traffic Systems Manager in the IT and Technological Development Department. "APS became less and less supported by the various companies and the introduction on the market of new migration platforms led us to reassess ways of solving maintenance problems."

"For us, business processes are fundamental and must ensure safety, quality and timeliness," continues Romagnoli. "Processing traffic data is the cornerstone of the company as this information feeds invoicing, debt collection and management of the inter-company allocation. Bearing in mind the volume of data captured by Autostrade per l'Italia, currently mapping approximately five million journeys a day, for performance reasons we wanted to keep the COBOL language as it guaranteed specific requirements and only required programming of a few specific sections."

**Secure modernization of applications in record time with Sempla and Micro Focus**

"Sempla, the IT partner of Autostrade per l'Italia, assisted us from the start of our '2012 emergency plan', through a preliminary study that examined the various options, including rewriting and redefining the code. "The challenge, emphasized Romagnoli, lay in the complexity and the significant number of programs involved: more than 500 applications; all of them batch applications, relating to two different areas: debt collection and consolidation of Telepass (Italian electronic toll collection system) data. It was important to identify a new tool that was well-established rather than 'home-made', with very high technical quality and compatibility capabilities but also price-competitive. With Sempla as our technological adviser, we identified the best solution for our needs."

"The time scale was crucial and the solution chosen, the AppMaster Builder—AMB—tool from the Micro Focus Enterprise Developer Suite, allowed us to meet ambitious time goals," says Romagnoli. "In just eight months, we went into production. After an initial month batch processing and consolidating the Telepass data, we entered a parallel test phase before starting an incremental roll-out program: this was all done without affecting our productivity."

Considering the large number and the complexity of the programs, Autostrade per l'Italia targeted very short time scales. Micro Focus, a leading company in the sector, has always followed a consistent policy of investment in R&D, specifically to offer solutions capable of drastically reducing service delivery time in mainframe development environments.

**A cohesive team and a winning roll-out strategy**

"We created a cohesive work team that included Sempla consultants, some of our own key contacts with a knowledge of our processes affected by the project together with our Micro Focus system designers and professionals for the specific solution features and to creating test environments," says Romagnoli.

A parallel environment was reproduced to run the programs recoded in Micro Focus COBOL based on logical processing chains, to carry out parallel production tests and receive immediate checks on results and sequential flows. The parallel environment was then fed with the production data, executing the functions of the original application and storing the output produced. From here the original data bank was restored and the modified application re-run. Comparing the stored output and that produced by the modified application provided an immediate view of any differences between the two environments.

"It is a project with an ideal balance between efficacy and efficiency," emphasizes Romagnoli, "with high productivity and performance in the mainframe environment, and risk reduction by modernizing the maintenance activity and perfect alignment with our budget requirements."

**Next steps**

"In the medium term, we might consider a similar move from APS to Micro Focus COBOL in other areas of the company where APS is still used," says Romagnoli in conclusion. "The urgency of this initial phase saw us concentrate on the traffic area, which includes the capture of data/images, the processing of traffic data for management, administrative and accounting purposes and its statistical management. However, there are other company processes, run by other organizational units, with similar features and performance requirements to those of the traffic area, which could be converted using the same methodology and the same tools."

**About Micro Focus**

Micro Focus, a member of the FTSE 250, provides innovative software that allows companies to dramatically improve the business value of their enterprise applications. Micro Focus Enterprise Application Modernization, Testing and Management software enables customers' business applications to respond rapidly to market changes and embrace modern architectures with reduced cost and risk.

\*APS was a Micro Focus mainframe application generator product. AppMaster Builder is its more recent PC-based equivalent, available within Enterprise Developer.

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