



## NISSAN EUROPE'S SOA JOURNEY DRIVEN BY CUSTOMER SATISFACTION

### Challenge

Nissan Europe is responsible for ensuring vehicles are delivered on time to the customer via each dealer across Europe. The company wanted to optimize its supply chain process with partners in Europe and provide direct access to Nissan dealers to order and update inventory – all while leveraging existing data and logic from Nissan back-end systems.

### Solution

Software AG helped evolve a mainframe environment into a state-of-the-art Service-Oriented Architecture (SOA)-based supply chain. This was done via a cost-effective, multi-phase modernization process. A data exchange solution provides online vehicle ordering and inventory availability that's automatically routed to integrated back-end systems for processing and delivery. Existing functionality was made available to trusted external partners via a secure, scalable and standards-based interface.

### Benefits

- Critical business information provided in real-time
- Improved vehicle pipeline forecasting
- Accelerated formation of productive commercial partnerships
- Enhanced development agility
- Faster response time and better service
- Increased customer satisfaction
- Contributed to an overall vehicle inventory reduction of almost 35 percent within three years



Nissan Europe is an international operation with a logistics partner network that encompasses western and eastern Europe. The company employs approximately 12,000 people in its European design, research and development, manufacturing, logistics, and sales and marketing operations.

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Steve Guss | Manager Systems Development | Nissan Europe

### Investment in core systems

Back in 2000, Nissan Europe still had independent systems across Europe for selling vehicles. It needed to link these up to be able to track each delivery and speed up lead times from customer orders through to delivery.

“There were issues with inaccurate inventory and order data,” said Ian Porter, section manager of Nissan Europe Architecture Strategy & Planning. “Real-time information on each vehicle wasn’t available between the different countries. Therefore, the same vehicle could technically be sold twice. This led to customer dissatisfaction as the car they had ordered wasn’t delivered on time.”

Nissan Europe was relying on a platform that its partners and dealers couldn’t access. This included core mainframe applications to support sales, supply chain planning, manufacturing control, logistics and distribution, and warranty management. It needed to find an integration program to open these up both internally and externally.

### Required evolutionary approach

Rather than replace these proven mission-critical applications, Nissan Europe decided to re-engineer them to support demand-driven manufacturing principles. At the same time it chose technology from Software AG to connect the applications to the offices across Europe.

Software AG’s SOA technology enabled Nissan to connect each office to the existing infrastructure and further build on top of the technology.

“The first generation implementation was very successful,” said Porter. “It served to establish our ability to exploit service-oriented design and open XML-based messaging to deliver real-time integration with back-end systems. This directly supports our business objectives.

“In 2005, we decided to implement a second-generation Service-Oriented Architecture (SOA) based on enterprise service bus (ESB) technology. Software AG was the obvious ESB partner for us, and we didn’t have to change a single line of code at the back end.”

### More flexible IT

In business terms, the impact of Nissan’s ongoing investments has been clear. “Since joining up our systems with those of our vehicle logistics partners across Europe, vehicle pipeline forecasting can be tracked live on a portal, without any further hardware or software implementation,” said Porter. “We now have faster response times and better service across Europe as a whole.”

Interfaces established with companies mean that when a vehicle is dropped off at a dealership, it is updated via radio in the cab of the delivery truck. Subsequently, Nissan is automatically informed via SOA.

“This technology was implemented across the UK, Portugal and in Russia amongst others, month by month,” said Porter. “It has been extremely reliable with key components remaining active for over a year with zero maintenance.”

For the systems development department, there has also been a significant impact. “Developers are pleasantly surprised with the speed with which they can access and use mainframe functionality,” said Steve Guss, Manager Systems Development, Nissan Europe. “This means that we spend less time on the mechanics of integration and can remain more focused on business requirements.

“We are reviewing the design of services to maximize the potential for re-use and to enable even greater return on our investment in SOA in the future. The business benefits by having better

quality deliverables and a more flexible response from IT.”

### Going forward

SOA technology has become Nissan Europe’s default choice for joining up systems and linking other offices to its infrastructure, rather than just a possible technical option. “We are intensifying our SOA activity,” said Porter. “The system provides us with flexibility to bring more partners on board more easily.

### KEY COMPONENTS

#### webMethods EntireX

The Software AG application modernization solution provided easy yet powerful integration of Nissan’s existing applications.

#### Enterprise Service Bus

Software AG’s ESB technology enabled the usability of Nissan’s mainframe technology by creating value-added Web services from available services in the back-end, wrapped by webMethods EntireX.

### ABOUT SOFTWARE AG

Software AG is the world’s largest independent provider of Business Infrastructure Software. Our 4,000 global customers achieve measurable business results by modernizing and automating their IT systems and rapidly building new systems and processes to meet growing business demands.

Our industry-leading product portfolio includes best-in-class solutions for managing data, enabling service-oriented architecture, and improving business processes. By combining proven technology with industry expertise and best practices, our customers improve and differentiate their businesses – faster.

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