



Mazda shops run smoothly on intranet from IBM.

Mazda North American Operations has launched a first of its kind in the automotive industry – an Electronic Service Information (ESI) intranet that allows Mazda's 850 dealerships in the United States and Canada to replace thousands of pages of printed repair manuals with easy-to-use, searchable, electronic documentation. Developed by IBM Global Services, the ESI intranet is helping Mazda to increase customer service and brand loyalty, lower costs by increasing operational effectiveness and achieve compliance with U.S. Environmental Protection Agency (EPA) regulations.

“We looked at a number of intranet systems developers, but we were confident that IBM understood our business needs and how to get where we wanted to go.”

– Mike Radulovich, Service and Parts Publications Manager, Mazda North American Operations

“Great service helps sell the next Mazda,” says Service and Parts Publications Manager Mike Radulovich.

“Customers value our ability to get them back on the road fast, at minimum cost and without the need for a return visit. Their satisfaction depends heavily on how quickly and accurately our service people can identify, diagnose and fix problems as well as how well we perform warranty- and recall-related service.”

According to Radulovich, the intranet has gone a long way to addressing these issues. “It was taking seven to ten days from the time a repair procedure was OK'd until it was printed and distributed,” he says. “Now we can do it in a matter of hours. We're also saving as much as \$75,000 annually on printing and mailing costs. We'll soon cut costs by another \$230,000 per year when we completely phase out our previous documentation service.”

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| Application | Intranet for reference, operations and training in Mazda repair shops |
| Business Benefits | \$305,000 annual savings in printing, mailing and documentation costs; up to 30% faster information access; improved customer satisfaction; EPA compliance |
| Hardware | IBM® RS/6000® IBM PC workstations |
| Services | IBM Global Services Enterprise Document Management Solutions & Services |



Mazda's service information intranet gets drivers back on the road faster.



Based on the successful pilot, which involved 100 dealers, the ESI system is being rolled out to all 850 dealers throughout the U.S. and Canada.

Combining advanced technologies

IBM Global Services' Enterprise Document Management Solutions & Services group led the development project. Based on its knowledge of automotive industry standards and Mazda's practices, the IBM group performed document analysis and design, developed the Web site application, reengineered Mazda's authoring systems for HTML documentation and migrated the content.

Service manuals, bulletins and newsletters are now prepared centrally, posted to an IBM RS/6000 server and are instantly available on the intranet Web site through a T1 Internet connection. Remote dealers access the intranet by simply dialing a local telephone number to gain access through their Web browsers to the security-enhanced server.

The intranet gives service personnel access to workshop manuals, service bulletins, repair tips and training information. They can search the entire online service information library by vehicle identification number, year, model, symptom, category or keyword. They can also submit questions and suggestions or report procedure updates through an online feedback form. "Instead of searching through piles of paper or trying to find misplaced bulletins," Radulovich explains, "technicians simply enter a few keystrokes. They get the information they need 25 to 30 percent faster, so they can finish the job and return the vehicle to its owner sooner."

"Our ESI intranet gives us a real competitive edge," says Radulovich. "It helps guarantee that accurate and timely information is available to our technicians, supporting our 'fix it right the first time' initiative. In fact, our customer surveys show that over that past 12 months we've improved our first time repair success rate by 14 percent."

XML extends information sharing

Due to regulations in the automotive industry, all data posted on the ESI intranet is encoded according to standard generalized markup language (SGML) specifications. The Society of Automotive Engineers (SAE) defined the J2008 standard to support these regulations, and IBM Global Services tailored the standard to Mazda's needs.

The ESI intranet leverages SGML to provide flexibility in tagging, linking and retrieving data. For example, a repair procedure referenced in a service bulletin could link to the workshop manual for more detailed instructions required to complete the repair. With the emergence of new extensible markup language (XML) tools, IBM is poised to deliver additional data integration capabilities. One of the enhancements such integration could enable is the linking of the workshop manuals to the parts catalog and the catalog to the inventory system, so service personnel working on a vehicle could be advised if the parts they needed for the job were available.

Mazda will continue to rely on IBM in its future development efforts for the same reasons it chose the company in the beginning of the ESI intranet project. "We looked at a number of intranet systems developers, but we were confident that IBM understood our business needs and how to get where we wanted to go," Radulovich points out. "We had the concept, and they had the expertise on how to get it done. They brought some good ideas of their own to the table and stayed on track."

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