

International Materials Data System (IMDS)

Material management made easy across the supply chain



Services featured

- Application Development and Support
- Web Hosting

Because participants use a centralized application delivered over the Internet, they face low implementation risks and can utilize IMDS without additional investment.

- With environmental concerns a priority, many countries require automobile manufacturers to keep close track of all materials used in production. Lack of a standard, however, made information exchange difficult. EDS stepped up to the plate, creating a materials management system accessible across the supply chain - and across the globe.

The business issue

Multiple legal restrictions related to environmental issues require manufacturing companies in Germany to precisely record the materials they use during their processes and in their products. In 1997, German car manufacturers realized the benefits they could reap by implementing a standardized format for exchanging material information across the entire supply chain. EDS was asked to carry out a study to ascertain the most cost-efficient data exchange environment, and determined a centralized IT-based approach made the most sense both economically and productively.

EU legislation proposed for 2000 went a step further to include an end-of-life vehicle directive that forces car manufacturers that sell in Europe to take back cars at the end of their life cycle and recycle a high percentage of the materials used to produce them. German car manufacturers volunteered to recycle 85 percent of the mass of each vehicle by 2002, and committed to recycling 95 percent by 2015. To reach that goal meant adopting a sophisticated materials information exchange system that would reach across the supply chain.

By 1999, with the 2000 deadline looming, other EU countries joined Germany in wanting a standards-based system they could all use - and one with the potential to be extended globally.

Our approach

EDS embraced the challenge. We began by designing a system that was accessible to all layers of the supply chain so that information could be procured from every vendor. A standardized, Web-based database provided the high degree of accessibility needed. We also ensured high-speed operations and absolute data security.

EDS operates the International Materials Data System (IMDS) on behalf of several leading automotive manufacturers. The Web-based system provides car manufacturers and their suppliers with information about the materials used in separately produced parts of a car.

Because participants use a centralized application delivered over the Internet, they face low implementation risks and can utilize the IMDS without additional investment. That same environment also means high efficiency, low operating costs and technology upgrades that can be rolled out to all participants simultaneously.

We released the first version of the IMDS in 2000 to correspond with the new EU legislative directive. By 2001, we were working on extending the IMDS into the United States, having to overcome many political barriers between OEMs (original equipment manufacturers) and parts suppliers in the process. And by 2002, we were extending the IMDS into Korea and Japan, with Japan quickly adopting the IMDS as one of two Japan Automobile Manufacturers Association standards. Today, we continue to improve the system with additional services and tools.



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Methodology and technology

The IMDS infrastructure is built on a four-layer architecture. The first layer is thin-client for presentation and data input. The second and third layers are application layers, based on Web servers and Enterprise Java Bean servers. And the fourth layer is the database server running an Oracle database.

The IMDS application is based on BEA. And to support the system, we maintain four globally distributed help desks in Italy, Hungary, Japan and India.

The results

What started out as a German-based project has rapidly developed into a global standard in the automotive industry. During its three years of operation, the IMDS has acquired more than 50,000 registered users in about 20,000 companies, and has generated more than 2 million data sheets. And its database continues to grow.

In addition, other industries have shown an interest in the technology, with discussions that may well lead to applying the concept and the standards in other venues around the world.



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