



When the Wheels are Rolling, IT Has To Keep Up

These days you can't sell a screw without documenting the transaction using information technology. To manufacture a car, numerous individual transactions are required and hence many IT systems are involved. In a heterogeneous IT landscape, there is a need for an Enterprise Application Integration (EAI) concept. The Graz plant of the automobile manufacturer and supplier MAGNA STEYR uses the inubit BPM-Suite for system integration.



About MAGNA STEYR Fahrzeugtechnik AG & Co KG

MAGNA STEYR is the leading, brand-independent engineering and manufacturing partner for car makers worldwide. With highly flexible development and production strategies, MAGNA STEYR offers the OEMs solutions for a broad spectrum of service scopes. From individual systems like door modules or roof systems to complete vehicles, and from extra-low volume through peak shaving to volume production.

The motto for MAGNA STEYR's location strategy is: "Being where the customer needs us." MAGNA STEYR uses a very flexible, modular model that is transferable and can be used globally. From development to production to taking over the overall handling.

Requirements

The communication between more than 170 IT systems and sub-systems was to be processed via the inubit BPM-Suite:

- ▶ Processing of the data for and coming from the internal application system, transported via SAP
- ▶ Processing of the OEM data for SAP and the MAGNA owned ERP system called SAM

Approach

In comparison to most large and international software companies, the inubit BPM-Suite offered by inubit was the most flexible and innovative solution. Having accomplished the first pilot project in application processing successfully, the use of the inubit BPM-Suite was expanded to MAGNA's core business, namely purchase:

- ▶ Expansion of the IBM-Middleware Websphere MQ by the inubit BPM-Suite, upgrade of the mere data exchange to data processing which directly forwards the data to the according processes
- ▶ Individual problem solving on the part of inubit staff when limits in performance occurred due to the large data volume
- ▶ High system stability thanks to distribution across three servers

Results

Already today the inubit BPM-Suite is implemented in almost all areas. Further areas of implementation for its unique process continuity are planned:

- ▶ Use in the area of electronic data interchange (EDI), in human resources, for the integration of ERP applications, for the Engineering Data Base of vehicle development and for the complex and data intense transport management, as interface between the central production system and various sub-systems
- ▶ Future use of the inubit BPM-Suite as data platform between all other systems, expansion through SOA and Web Services

Within the Magna Group as whole, which is headquartered in Canada and employs 81,600 people at 250 locations worldwide, the Austrian plant in Graz is only one module among many. And yet it is more than just that. With more than 9,000 employees, the Steiermark branch, which is about as big as a small town, is the group's largest individual plant. The Saab convertible is manufactured here, as are the BMW X3, Chrysler Voyager, Jeep Grand Cherokee and others – about 230,000 cars in total per year. In addition, development work is done for the brand manufacturers. This is where the “4Matic” all-wheel-drive system was developed for Mercedes-Benz and the E class 4Matic was subsequently produced. For BMW, the Graz developers worked on a tank for hydrogen-powered vehicles. At the 2005 IAA, MAGNA STEYR introduced a very special in-house development: A one-seater sports car that runs on natural gas and can reach top speeds of up to 200 kph.

Of the 9,000 people who work at the MAGNA-STEYR plant, 150 earn their living in the IT department. 40 of these work in software development. A small portion of this group focuses on system integration. One of these is Senior Software Engineer Gerhard Reicht. He can tell you a thing or two about how tricky it can be to implement new ideas within a large institution. It was former EAI team leader Wilhelm Klambauer who initiated the acquisition of an EAI system three years ago. Something that might seem obvious since a company like the Graz Magna plant obviously has more than a handful of IT systems. No one has counted them yet, but Gerhard Reicht estimates that there are about 170.

Searching for the Right EAI System

By nature, most of the different platforms cannot communicate sufficiently, or even at all. Until then, the IT department had developed most of the most urgently required interfaces itself. “Most of them are still in operation today,” notes Reicht, “but we use inubit for all new additions.” Reicht's boss Wilhelm Klambauer had discovered Berlin-based inubit AG at the EAI forum (now: “Business Integration Forum”). At that point, Klambauer and Reicht had already spent some time on research. They had also noticed that most large, international software providers were now offering system integration tools. So why did they choose the solution offered by a small German software provider? “The inubit software was clearly the most flexible and innovative,” states Reicht.

In hindsight, Dr. Torsten Schmale, Chairman of the Executive Board of inubit AG, thinks that the fact that the inubit solution is process-oriented was decisive: “At MAGNA STEYR they really noticed very early what sets us apart. Back then, in 2003, we were pretty much the first who had a product on the market that is not just a flexible EAI tool but works for the entire process chain. The large American providers have also

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recognized this by now. They, however, tend to expand their portfolio by buying additional products, which often has a negative effect on the continuity of the individual components. And often the difference between them and us is several hundred thousand euros.” – Gerhard Reicht confirms that economic considerations certainly weighed in. “One of the advantages of inubit was that we could buy a smaller test license for one computer. We used this license to implement our first project and then continued to upgrade.”

inubit Facilitates Procurement

This first project affected the formatting of data for and from the internal applications transferred via SAP – an ideal task for testing since the data frequency was relatively low here. However, the next project led straight into Magna's core business area, since it affected procurement. Data that came from other automobile manufacturers (who are usually called OEMs and for which Magna manufactures) was supposed to be formatted for SAP and Magna's own ERP system SAM. In this area, MAGNA STEYR, like all original equipment manufacturers, had previously used the IBM middleware MQ series, which ensures the transaction-secure exchange of messages between systems. Even today, MAGNA STEYR is still using the successor product Websphere MQ, but it is significantly enhanced with the inubit functionality, which turns pure data transfer into data transmission and directly integrates the data into the corresponding internal processes. Of course there is a lot of data to be transferred between systems, especially in the procurement area. “We soon reached a performance limit,” recalls Reicht. “But

it took inubit very little time to come up with a way to solve the problem and enhance the corresponding connector.”

In “normal” operation, MAGNA STEYR IT experts do not require any help from inubit but usually configure their own workflows. Today, there are three developers who look after EAI in the plant and also work for other Magna branches on a project basis. After introductory training, it did not take the developers long to be able to independently work with the inubit BPM-Suite. The software is primarily based on the XML data exchange language. “The technologies are accessible to everyone and every software developer knows them in principle,” says Gerhard Reicht. “Hence the main thing was to get used to the new interface of the inubit BPM-Suite.” To be on the safe side, the Graz staff booked ten workshop days per year with the Berlin software provider, which they can use as needed. If there are no specific problems, they like to use this inubit consultant competence for future-oriented further training.

A Powerful Vision

The EAI applications at MAGNA STEYR have now developed in many directions. The inubit BPM-Suite is now used in almost all areas: for EDI, in the Human Resources area, for integrating ERP applications, for the engineering database of the vehicle developers and even highly complex and data-intensive transport management, not to mention as an interface between a central production system and numerous sub-systems. “They have quite a system load,” notes inubit CEO Schmale.

For about one year now, MAGNA STEYR has had the Enterprise Edition, the powerful variant of the inubit BPM-Suite, and has just upgraded to an “unlimited” version that includes a license for all interfaces available to date. It is not just the amount of data to be processed here that is unusual but also the special stability of the system, which is spread over three servers. Even if two of these computers fail, the overall system still works.

The developers’ vision is to completely implement this seamless process continuity that the software supports with the inubit BPM-Suite as the central hub between all other systems. Of course this cannot be achieved at the drop of a hat since there are so many different applications involved. “We now have a great technological basis with which we can work without any restrictions for now,” states Reicht. What’s next? “We’ll see. We just had an SOA and Web Services workshop with inubit. We would like to do more along those lines.” MAGNA stays on the move.