

Case Study: Minerva Implements Senior Flexonics Czech's ERP

PERSPECTIVE

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IN THIS PERSPECTIVE

This IDC Manufacturing Insights paper takes an unbiased view of an innovative and business-changing implementation at Senior Flexonics Czech (SFC) in the Czech Republic, which took place in 2010. The QAD enterprise resource planning (ERP) implementation carried out by Minerva helped SFC to improve its supplier rating and achieve the highest possible rating, an "A" (according to MMOG/LE – Global Materials Management Operations Guideline/Logistics Evaluation), from SFC's most important customers, Renault and Ford. Moreover, SFC reduced its inventory, decreased the time needed for monthly physical inventory checks, and reduced unproductive time thanks to more efficient production planning. SFC also reduced the costs connected with the rental of returnable packaging.

Overview of Senior Flexonics Czech

SFC was founded on March 23, 2001, under the name Senior Automotive Czech, s. r. o. Manufacturing started in July 2001. SFC is part of Senior plc, a multinational group with operations in 11 countries worldwide (U.S., Canada, Mexico, Brazil, Republic of South Africa, India, the Netherlands, France, Germany, the Czech Republic, and the U.K.) and 4,800 employees.

SFC's activities focus on the design, manufacture, and sale of steel and aluminum pipes for the automotive industry. SFC had 146 employees and a total turnover of CZK 300 million in 2012.

IT Challenge for Senior Flexonics Czech

The main reason SFC implemented the new QAD ERP system was that it needed to improve its supplier rating. The goal was to achieve the highest possible rating, an A (according to Global Materials Management Operations Guideline/Logistics Evaluation, or MMOG/LE), from SFC's most important customers, Renault and Ford. Moreover, SFC aimed to reduce its inventory, decrease the time needed for monthly physical inventory checks, and reduce unproductive time owing to more efficient production planning. SFC also aimed to reduce costs connected with the rental of returnable packaging.

The functionality of the previous ERP system did not allow for the support of processes, especially those related to logistics and production, which would have enabled SFC to achieve the abovementioned business goals.

To find the right supplier of a new ERP system, SFC first set implementation goals (initially, without specific improvement metrics) and then approached IT vendors that, based on references, were capable of achieving those goals.

The call for tenders for the ERP supplier included only vendors with verifiable references. Only three vendors (out of the nine approached by SFC) took part in the final stage of the proceedings; all of them had to submit a pre-implementation study. SFC studied their solutions and examined possible cooperation with the bidding companies, taking into account the professionalism and experience of each company's consultants. The selection process was performed in a strict manner by a committee consisting of managers from individual departments of SFC, using weighting coefficients to create scores for the companies. The references and experience of the vendors in SFC's field of business carried the highest weighting coefficient in the scoring system.

SFC chose Minerva primarily because it had the highest number of successful projects in mechanical engineering in the Czech Republic at the time of the tender proceedings; thus it had the most experience in the given sector. Due to these factors, Minerva posed the lowest risk to SFC as an implementation partner. The experience and professionalism that Minerva's consultants showed during the proceedings also contributed to winning the contract.

After Minerva was chosen, the two companies fine-tuned specific percentages (metrics) related to improvement in specific areas, which formed a part of the implementation contract. Certain pricing expenditures were bound to these indicators and were paid to Minerva only after the fulfillment of implementation goals, evaluated after 6 months of operation of the new system.

SFC did not have to change its IT platform substantially. One physical server, which runs the ERP system, was installed. Users log into the application using a client that runs on Windows.

System Implementation

In terms of project management, implementation was divided into the following stages:

- Training the implementation team (2 weeks)
- Process analysis and optimization (2 months)
- Data preparation (2 months)
- Stress tests (1.5 months)

- Start of standard operation

The full QAD ERP implementation took 6 months to complete; it was finished in January 2011. The first milestone for the implementation team was the start of the stress tests, approximately one and a half months before starting the system, which included the first testing of real processes on real data. The most important moment of the implementation for the company as a whole was the date of putting the system into standard operation.

During the ERP implementation, SFC optimized processes, especially those related to production and logistics. In doing so, it utilized Minerva's knowhow and best practices related specifically to processes supported by the use of barcodes in warehouses, in the distribution department, and in keeping production records. SFC also gained significant know-how from Minerva in electronic data interchange (EDI).

The ERP implementation in SFC was carried out solely by Minerva. The only exception was EDI, with the communication and conversion component provided by a different vendor.

Implementation Risk

Legacy Environment

The IT infrastructure changes connected with the implementation of the new ERP system were not extensive. SFC did not have to change substantial hardware components or to change processes related to IT management significantly. The new server on which the new ERP system runs was fully integrated into the existing IT infrastructure.

The implementation of the system provided SFC with the opportunity to analyze, adjust, or completely implement new processes into the organization. Processes related to production, logistics, and distribution were areas of particular focus.

Situational Complexity

SFC created a dedicated implementation team to manage the project; it consisted of five members and a project leader. This team reported directly to the project management board, consisting of SFC's and Minerva's management representatives. This provided a well-rounded team, incorporating different perspectives and approaches to challenges and solutions.

The project management board checked the project on a monthly basis. Checks for standard operation of the system were more frequent as the date for going live neared. For example, each stress test was evaluated. The members of the evaluation team were released from their regular work duties, with work on the implementation taking the highest priority. SFC set individual financial bonuses for the members of the team; these bonuses were tied to the success of the system's start.

After SFC had evaluated the implementation process, it was clear to the manufacturer that the intensive informal support of its top management, the selection of truly motivated and experienced members of the implementation team, and the effective organization of the implementation process were the most important and most positive aspects of the successful implementation.

IT and Business Transformation

Impact on Business

SFC's customers conduct a supplier evaluation on a yearly basis, and SFC has consistently achieved its goal of an A rating, according to MMOG/LE, since Minerva's QAD implementation.

The new system also reduced inventory levels at SFC. The company had required a three-day decrease in average inventory turnover, which was accomplished and even exceeded (the actual decrease was 8.3 days).

SFC also aimed to reduce the time required for monthly physical inventory checks by at least 15%. The new QAD ERP system proved extremely supportive here, as this goal was far exceeded, with an actual reduction of almost 30%.

Another area in which SFC required improvement was the reduction of unproductive time and the reduction of overtime and unscheduled work shifts by at least 15%. This was to be accomplished by optimizing the production plan. Again, Minerva met this criterion and slightly exceeded it, with an actual improvement of 15.5%.

Last, SFC aimed to reduce costs related to the rental of returnable packaging by 15%. The new QAD ERP system implemented by Minerva reduced costs by 15.7%.

The evaluation of the abovementioned metrics was performed after 6 months of standard operation of the system. Above all, SFC's customers value the comprehensive accuracy of deliveries, adherence to agreed shipping dates, the provision of flawless shipping documentation, and the confirmation of orders via EDI, all of which were improved by Minerva's ERP.

Security aspects were also addressed during the implementation; the process of assigning and approving access rights and ERP recovery was reorganized to support the new system and processes. The principal element of improved data security (complete ERP recovery after failure within a defined timeframe) is guaranteed in an ERP backup and recovery contract with the supplier. Minerva has met the contracted conditions. QAD data is backed up offsite on a daily basis and is thus available even in the event of a total failure in the local server room.

The biggest innovation driver connected with the QAD ERP implementation was the massive implementation of barcodes and

barcode readers in the logistics and production areas. The gathering of data during the production process enabled the work of individual employees to be displayed on a big screen on the shop floor. Everyone can see the productivity of each individual worker in the current work shift, indicated by a color scale. The display of this information has a substantial motivating effect: The employee is more involved in reducing unproductive time owing to maintenance, machine setup, and so forth.

During the project, it was of paramount importance that SFC's management provided informal support during the implementation so as to assure successful completion. SFC also came to the conclusion that the selection of a motivated and experienced team was of high importance. SFC's implementation team members became thought leaders in their respective departments and greatly facilitated the acceptance of the changes by the other employees. The changes to a new QAD ERP system and a new user interface were definitely accepted in a positive manner by SFC's employees.

If given the chance to carry out the implementation again, SFC would place more emphasis on boundary areas (quality control and production maintenance) in the implementation process. Although these modules were included in the QAD ERP, SFC focused more on core business areas related to logistics and production. However, it has to be pointed out that SFC found no substantial issues during the implementation process that would need to be addressed if SFC carried out the implementation again.

Conclusion

SFC's primary benefit from the QAD ERP implementation is that it has reached its goal of a repeated A rating during the annual evaluation from its core customers, which has strengthened the company's market position as a stable and reliable supplier in the automotive industry.

SFC has optimized processes substantially, specifically those related to production and logistics. It was able to reduce inventory, decrease the time needed for monthly physical inventory checks, reduce unproductive time, and reduce the cost of the rental of returnable packaging.

The new ERP system also enabled the introduction of an innovative aspect – the implementation and usage of barcodes and barcode readers in the logistics and production areas of SFC. Real-time data gathering during production enables the graphic display of work performed by individual workers on the shop floor. This has had a substantial motivational effect, as factory workers are now more involved in reducing unproductive time.

During the implementation, SFC also installed terminals for online production reporting. This installation was carried out for a fraction of the price of the solutions then offered from renowned vendors. As a

result, accurate and current production information is now available, which enables SFC to plan more efficiently.

Overall, SFC's expectations from the implementation were realistic, effectively mapped out, and connected to specific metrics for achieving the goals set out in the contract with Minerva. SFC stated that Minerva had made the very positive impression in the communication of its consultants; the benefits derived from its ERP system were thoroughly examined in the vendor selection process and were thus expected. SFC confirmed that these consultants consistently worked to find the best solutions supported by the new ERP system. The professionalism of Minerva's consultations was far above average, according to SFC.

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