

Kulczyk Tradex: 500 000 parts in the SAP system

Spectacular scale, numerous benefits



Kulczyk Tradex – the general importer of VW and Audi has streamlined the biggest business area of the company: purchase, storage and sales of spare parts for the cars of these brands. The SAP solution implemented by BCC supports the management of about 500 thousand goods items.

Kulczyk Tradex is the general importer of Volkswagen and Audi cars and spare parts. KPI Sports Cars, the company recently divided from Kulczyk Tradex structures which imports Porsche cars, is also a part of the capital group. VW and Audi dealer chains belong to the company's customers for which KT is the main supplier.

The Kulczyk Tradex (KT) company, operating on market since 1991, is the general importer of Volkswagen and Audi cars and spare parts for these brands. Cars and spare parts are distributed through the authorized recipient network. The company is also liable for the warranty service for purchased cars.

Currently, the VW dealer chain consists of 68 car showrooms and 79 authorized car maintenance stations. Audi dealer chain consists of 24 showrooms and 33 authorized car maintenance stations. In Poznań and vicinity, the company has modern warehouses of total area over 32 thousand square meters.

About 500 thousand stock items which go through these huge warehouse buildings are spare parts and accessories for all VW and Audi car types sold in Poland. They include almost all parts used in the car construction, from large body elements and complete motors to the smallest elements, such as filters, gaskets and screws. Over 12,000 items are shipped to authorized recipients daily, and goods from the suppliers are received 24 hours a day.

SAP in Kulczyk Tradex

Kulczyk Tradex works in SAP from 2004 and since that time it has been systematically enhancing the system – from including the car sales, finance and controlling area in the implementation, through enabling a flexible reporting using reports in the SAP BW data warehouse, to the SAP implementation in the area of spare parts sales described in this article.

In business terms, purchasing, storage and sales of spare parts is the biggest and the most complex area in the company. The scale of activity and huge amount of data (only the database of material indexes includes about 500,000 items, and the number of price conditions is over 13 million entries per year) required a reliable solution, adjusted to the business needs of the company that could run in accordance with the best practices for the automotive industry.

One of the most important goals of the implementation of the SAP system to support the spare parts turnover was the improvement of the dealer support through the maximal automation of all processes in the whole supply chain, starting from the preparation of optimal purchase orders to suppliers who also use the SAP system, through monitoring of the purchase order processing progress at the suppliers, update of the information in KT's SAP system in order to transfer it to dealers, and the receipt of the inbound delivery from the supplier, including cross-docking, ending with handling the transport containing planned outbound deliveries to dealers.

Customer associate Volkswagen and Audi brands mainly with reliable cars, but also more and more frequently with an efficient and fast warranty and maintenance service. To meet such expectations, the importer and the main supplier of spare parts, such as KT, must continuously work on the improvement of related parameters, i.e. reduction of the processing time for spare parts purchase orders, quick and faultless deliveries to a dealer and settlements.

The dealer management parameters are determined in the guidelines of concerns and ISO procedures being in force in KT. Almost all ordered parts arrive at dealers the next day until 8 a.m. with electronic invoices. For parts brought directly from the supplier, the purchase order processing time does not exceed four days in majority of cases.

Spare parts turnover in KT

The participants of the whole spare parts supply chain include, apart from KT, parts suppliers (Volkswagen AG, Audi AG, Original Zubehoer Volkswagen, Original Zubehoer Audi), recipients (VW and Audi dealers and authorized car maintenance stations all over the country) and the forwarding agent delivering goods from Kulczyk Tradex to the customers. For all participants of this process, the most important parameter is time.

Every minute counts from the purchase order submission, through the preparation of goods for shipment and packing them for transport, to generating the shipping documents and sales invoices. If a purchase order is received at Kulczyk Tradex before 6 p.m. and a relevant part is available on stock, the order is fulfilled the same day.

In parallel to the fulfillment of dealer orders, parts from suppliers, that arrive at KT's warehouse practically 24 hours a day, are received. Therefore KT must have a reliable tool running without interruptions that will support logistics employees in this process.

From suppliers to recipients

Although the main project assumption was to organize the support of spare parts sales in the SAP ERP system, it had to be taken into account that it is one of several systems participating in the whole supply chain from suppliers to recipients. Therefore, in the new SAP solution for this area it was necessary to enable the data exchange with suppliers' systems – transfer of the information about parts purchase orders, registration of the data on received purchase orders and deadlines of the fulfillment of individual items from each order. It was necessary to create the mechanism for transferring this information to dealers so that they had complete knowledge of deadlines for receiving the ordered parts and could earlier plan the receipts of cars from individual customers for repairs.

Apart from the information on the deadlines for ordered parts deliveries, dealers needed the electronic sales invoices (generated automatically after the completion of shipment – at about 11 p.m. each day). An electronic invoice allows to quickly receive parts to stock at the dealers'. Additionally, invoices are the result of the transport process in which shipping documents are generated (in a paper or electronic form) for the forwarding agent responsible for parts transportation to all VW and Audi dealers and authorized maintenance stations in Poland.

Better, faster, simpler

Key points of the logistics process in parts turnover were at the same time the most important project challenges for the implementation of SAP solutions in this area.

The business goals set by Kulczyk Tradex for the solution implemented by BCC consultants can be shortly summarized as: better, faster, simpler and under control.

The most important task of the implemented solutions was reduction of the purchase order processing time and the time between the inbound delivery and the availability of goods for sales. From this basic goal derive the next goals which in effect contribute to the improvement of operating effectiveness and customer satisfaction.

First and foremost, the control over the availability of goods on stock had to be improved. This required the provision of current, always up-to-date stock information. This solution was also supposed to improve the goods rotation.

Simplification and optimization of internal stock processes was also expected to result in a better and more efficient processing of dealer and supplier/manufacture complaints.

Due to the environment protection requirements, it is important to increase the turnover of regenerated parts, and from the perspective of managing this business, a very good settlement system is indispensable. The project had to consider all rules applicable to the regenerated parts turnover.

Solid foundations

The SAP project for the VW and Audi spare parts management is the biggest challenge we have to meet so far. The new system, other processes and procedures, more precision, but on the other hand, the whole business environment – employees, their customs, shift-based work, structures, customers (dealers) and their systems, and finally the factory. For the second time it turned out that people are the most important to the implementation success. And this applies to all areas – starting from BCC consultants, through the key business KT employees, to the IT organization.

In KT, what I would like to emphasize with contentment, we succeeded to create the team of competent people, and at the same time such a working atmosphere that we were doomed to success. We all had the feeling to participate in the creation of something unusual. And this gave us a positive impulse in critical moments.

SAP blended in a specific IT landscape which is fed with the data from different systems and feeds other systems with data as well. Suffice it to say that we had to maintain and adjust over 40 interfaces to other systems. With SAP, the quality of used data increased significantly. Before, we had not used all the data transferred to us by the part manufacturer. Now it is available, what puts our business on a different quality level.

We are fully aware of the new development opportunities that we now have, but we had difficulty to use them before. In the nearest future, through the intranet portal we want to come out with additional information to our customers – dealers, so that they could continue to streamline their businesses, to the satisfaction of VW and Audi car users.

As people, we change, mature, start to value things that we had not appreciated before. I think that the similar process is also valid for businesses – they grow out from patching up the problems ad hoc, and choose the long-term development based on solid foundations. No doubt that efficient and flexible IT systems make up such foundations. And it is good when the Management understands this.

Mariusz Radosh

IT Manager, Kulczyk Tradex

The SAP system was supposed to enable the receipt and faultless processing of purchase orders for so called intelligent parts (keys, lock inserts, controls, etc.) for a particular body number.

Apart from purely logistical goals, the important part of the undertaking were tasks related to the customer transaction costs control.

In this scope, it was necessary to develop solutions enabling the control of the financial standing of individual dealers which would allow to evaluate and confirm the possibility to complete the transaction with a specific customer on a current basis.

Dedicated applications previously used in KT for handling the purchasing area, warehousing area and spare parts turnover included a certain set of facilities which were retained and enhanced in the developed SAP solution. These included, among other things, collective purchase order processing, collective sales order processing, scrapping processing and regenerated parts turnover. These facilities were tailored to KT needs, therefore the implementation of a comprehensive solution replacing these elements was quite a challenge.

The success of the undertaking largely depended on the acceptance of the solution by key users, i.e. warehouse employees, therefore it was necessary to develop clear and ergonomic menu and screens for transactions of receipts, issues and handling stock using scanners. However, for employees responsible for the management of the entirety of processes it was necessary to develop mechanisms for the collective document management, and purchase and sales management.

Such approach to newly implemented SAP tools required the development of many enhancements to SAP solutions, applications for processing of non-standard processes, and facilities related to the necessity to handle a large amount of data.

Just in time project

The SAP implementation project in the area of spare parts turnover in KT started in November 2009. Aside from 20 BCC consultants, nearly 20 KT employees were engaged in the implementation works who spent a large amount of their standard working time (and very often worked overtime) on project-related tasks. Spare Parts Sales employees, Logistics employees, IT employees, Controlling employees, Financials employees of Kulczyk Tradex as well as the employees of a forwarding agent participated in the project both in the business area and IT area.

BCC consultants were responsible for the entirety of implementation and work coordination.

To enable the transmission of shipment and invoice data to dealer applications, the data transfer in the format acceptable by these applications had to be prepared. To do this, in the course of the project, we had to contact persons responsible for IT at the dealers and IT companies supporting the dealer solutions.

Because Volkswagen AG uses SAP as well, it was necessary to develop and prepare solutions for the electronic transfer of data to the supplier, e.g. the data on submitted purchase orders, ordered parts, processed complaints. This in turn required the cooperation with IT employees in Volkswagen AG Group in Germany.

The number of engaged parties in the project (the totals of almost 300 persons representing jointly over 120 different companies) and the scale of the undertaking as well as the number of necessary system enhancements put this project among the most complex SAP logistics undertakings executed in recent years in Poland.

The project took nine months. It took six months from the start of conceptual works to the go-live; the next three months were dedicated to the support and optimization of the system.

Employees of Kulczyk Tradex – accustomed to working just in time – raised similar requirements against BCC consultants. In the last project phase, it happened that requests to make necessary changes in the system configuration submitted until 10 p.m. were diagnosed and processed before 6 a.m. the next day.

The implementation covered SAP functionality in several modules, such as materials management and warehouse management (MM/WM), sales and distribution (SD), data warehouse (BW), adjustments in finance and controlling (FI/CO) and creation of enhancements to standard system functionalities in the ABAP programming language. Within the project, the innovative SAP functions were implemented to support the logistics processes, including but not limited to:

- Solutions to support warehouses using barcode scanners in the processes of receipt, packing and loading
- Custom BCC solution in the cross-docking area
- Integration with the solution of a logistics service provider
- Solution to support and manage dealer complaints
- Management of processes for regenerated parts.

Launched in May 2009, the solution supports the KT activity related to the VW and Audi parts, from the sales order registration and purchase of the item from the manufacturer, through storage, to sales and post-sales processing (returns, complaints, regenerated parts).

Actual data in real time

Currently, the entire activity of Kulczyk Tradex in the area of spare parts turnover is supported by the SAP system. While ordering the parts, the customer sends the parts list in a pre-defined format. Information from the customer is read and validated, and then saved to a relevant folder by an automatic process outside SAP.

Files containing verified and distributed purchase orders are automatically read by the SAP system. To do this, a dedicated solution that collectively creates sales orders based on purchase orders sent by dealers is used. An employee of the warehouse office supervises this fully automatic process and periodically checks its correctness.

Employees of Kulczyk Tradex who have access to this tool have up-to-date information on which sales order and which order item contains a specific part ordered by a dealer. Without this solution, an efficient preparation of sales orders and their further processing would not be possible – the number of sales orders runs into hundreds, and the number of ordered items in these orders exceeds 12,000 daily.

With a user-friendly interface and clear on-screen information, it is easy to determine the order processing status for one of thousands of ordered parts.

Additionally, using the prepared solution, it is possible to monitor the processing progress of the submitted purchase order, since not always all items ordered by the customer are directly available on stock. In such situations, based on non-fulfilled purchase orders, purchase requisitions are generated that are then converted into purchase orders by purchasing employees. With the solution for the collective processing of dealer orders, an employee can get the detailed information on which items from a specific purchase order still require processing.

For items processed in a shipment, an automatic e-mail notification to the recipient about the changes made to the outbound delivery document was implemented.

The cross-docking solution (described in more detail further in this article) ensuring an immediate shipment of the missing customer order item immediately upon the receipt of the delivery of the ordered part also deserves the attention. The system of priorities assigned to individual orders is in place, so that the items complained by dealers and warranty orders were processed first.

Scanner in the warehouse management

Operations in the warehouse building are executed using barcode scanners that – integrated online with SAP – send and receive the information in real time. With the menu especially prepared by BCC and enhancement of the existing scanner operations, it was possible to optimize the warehouse work.

Through the selection of scanner menu items, standard operations available in SAP, such as transfer order confirmation, as well as non-standard transactions created during the implementation for the needs of Kulczyk Tradex are executed (e.g. lead sealing of bins, repacking of packed bins, inventory, scrapping). To improve the speed in which a part received from the inbound delivery is available, it was very important to implement automatic postings immediately after the confirmation of the part deployment in the storage location.

The next important solution makes it possible to execute transfer posting of stock from the unrestricted-use stock to the blocked stock on scanner. This means that when it is detected that the stock cannot be sold, it is immediately blocked (by authorized persons) without having to contact the warehouse office on the other side of the building.

The additional advantage is the possibility to get full information about the reasons of return of the complained part and to enter the damage description on scanner.

However, the most important thing is that using barcodes on printers, labels on parts, labels describing the location, packaging labels and seals securing steel bins, the work with the scanner does not require too frequent usage of keyboard, but only a laser beam, and this means additional time savings in processes.

Cross-docking

To minimize the customer waiting time for the ordered goods, a non-standard solution, so called cross-docking, was prepared.

The part ordered by the customer is not always on stock. Then, it is necessary to get it from the supplier. Information about the customer order is registered in the system, and using the custom BCC solution, it is not necessary to deploy a part in the storage location upon the receipt of the ordered part, because the label received by the warehouse clerk already contains the dealer code.

It is possible to directly transfer parts from the receipt zone to the issue zone at that time, and the printed label is at the same time a sales label due to mapping of the data (transfer order to the outbound delivery) that didn't exist in the system while printing.

Thanks to that, the time between the delivery of a given part and its shipment to the waiting dealer is significantly reduced. Lower requirements for additional, put-away storage space are also of great importance.

Cooperation with the carrier

For the needs of the integration with the logistics service provider, the solution to generate shipping documents was prepared. Packaging materials prepared for transport (including returnable bins of the forwarding agent and KT returnable packaging materials), adequately sealed, are scanned upon loading – the shipment data is entered to a specific transport document.

After the completion of loading, the employee responsible for the supervision checks on the scanner whether all shipments created in the system were confirmed. After the transport check-out, the freight list is generated, which is the document for the driver, and shipping lists are generated for individual recipients within the goods shipment from a specific shipping point and an electronic file containing the shipment data (shipment number, weight, recipient, packaging name, seal numbers) is sent to the forwarding agent.

Information received from KT help the forwarding agent to manage the current transport. It is also important in case of a complaint, damage of the load or a transport delay.

Regenerated parts turnover

An important part of the Kulczyk Tradex business in the area of spare parts is the turnover of regenerated parts. This process is controlled particularly by the manufacturer of parts (VW AG), It requires a strict control of operations made within the process between Kulczyk Tradex and dealers, and enablement of reporting of a process status and a settlement status.

To manage this process, BCC prepared a solution allowing to precisely manage a whole process – to automate arduous and time-consuming operations of settlements and dealer notifications as well as to get information on statuses of settlements between Kulczyk Tradex and the dealer at any time.

Better organization, more effective business

The most important business benefits from the SAP solution implementation in Kulczyk Tradex include the introduction of two settlement accounts – between KT and dealers and between KT and Volkswagen concern.

New functionalities ensure greater security for KT, because currently dealer orders are subject to the credit control before the start of delivery processing. The provided tools allow the comprehensive business analyses based on a wide range of reports.

General deliverables of the project include an optimized warehouse stock value.

SAP tools to handle the spare parts turnover led to many changes in the organization of this process. The most important include:

- Optimization of warehouse stock management in different, often remote, warehouses.
- Support for the receipt process for inbound deliveries through the implementation of the algorithm for the receipt of a part to a specific default location, the receipt as a part redundantly delivered or an incomplete part allowed to automate the complaint process to the supplier.
- Usage of mobile scanners in the receipt process and multiplication of the number of barcode printers allowed the warehouse clerks to work on unpacking deliveries, which directly caused the improvement of the organization of receipts and acceleration of parts rotation in the warehouse.
- On-scanner control whether the location code corresponds to the location being the target of the transfer order reduced the number of errors during the distribution.
- Control of the number of prepared shipments in relation to the number of parts packed for transport.
- Control of the correctness of the preparation of shipments for transport and the correctness of loading according to the transport direction.

- Faster every-day inventories through the use of custom solutions while entering the number from counting and maintaining the results.
- Faster preparation and settlement of complaints from the supplier.
- Control of complaints through a comfortable, transparent and fully algorithmized system for dealer complaint management which is a BCC solution.
- Automation of purchase order receipts from dealers reduced the labor consumption in the warehouse of office.
- Greater control of shipment packing correctness and completeness in transfer order conformation for a given date of loading.
- Supervision over the work of more than 100 warehouse clerks through monitoring of creation and / or confirmation of transfer orders.

For dealers and drivers

SAP tools prepared for KT and the improvement of delivery organization achieved thanks to them directly affected the quality of dealer service and in effect – car users.

Currently, dealers are informed about each change of delivery status and new planned delivery date resulting e.g. from confirmations from part supplier. This allows them to precisely control the processing progress of their purchase orders.

Purchase order processing time was reduced through the cross-docking system and, among other things, monitoring of temporarily unavailable goods, e.g. distributed to storage locations, for which the purchase order just arrived. Currently, KT can receive and send over 15% more goods on the average.

Just after several months of work with new tools, the number of complaints regarding the purchase order fulfillment decreased by over 20%. Issuing of corrections to the complaints also takes less time. Dealer returns goods with the return delivery number which allows the warehouse clerk who receives the return to manage the process directly. After the completion of the process in a warehouse (without participation of the warehouse office), the correction is generated automatically.

Additionally, ability to monitor individual stages of the complaint process allows to detect the forwarding agent errors in the return transport, and this in practice accelerates the completion of the complaint (correction).

Entered freight lists to the prepared and delivered packaging materials provide the dealer with a better and more complete delivery information.

A flexible purchasing process of regenerated parts reflects the expectations of dealers in this scope and allows to precisely settle the purchases of these parts.

Returns management, including returns linked to the return to the supplier, is currently made automatically in a clear and time-dependent system.

From purchase order to invoice in several hours

Currently, the whole process of spare parts turnover – from order receipt, through picking and packing and shipment, to the invoice issue – is completed in several hours which additionally is challenging for the system which is expected to reliably support over 12,000 such transactions daily. Customer orders are received every day from the morning until 6 p.m. (Saturdays until 2 p.m.), however, the first transport departs already at 7:30 p.m., and the last one at 10 p.m.

Many times, the dealer orders parts for the customer who arrived with the damaged car at their maintenance station just before the closing time in order to start the repair at 8 a.m. the next day. The implemented system must allow to manage this process and it does.

Also a round-the-clock management of receipts of deliveries from manufacturers is currently in place in the SAP solution, which is possible thanks to the reliability, intuitive interface and complexity of the solution developed by BCC.



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