

CASE STUDY

Efficient production and warehouse management at P.P.H.U. POLIPACK S.J.

OBJECTIVES OF THE IMPLEMENTATION:

- Improvement of warehouse processes and production registration
- Implementation of automatic identification using bar codes
- Meeting the requirements of cooperation with partners regarding traceability

BENEFITS OF THE IMPLEMENTATION:



Increase in productivity and company credibility



Precise identification of raw materials and goods



Instantaneous (online) access to information



Quick and accurate execution of warehouse and production processes



Control increase over processes



Secure communication



Minimization of paper documentation



P.P.H.U. Polipack S.J. is a production enterprise founded in 1992 in Gościcino, in the Pomeranian Voivodship. It specializes in the production of high quality plastic packages: polypropylene, polystyrene, polyethylene and PET, which are used for cosmetic products, medicines and dietary supplements, as well as for tobacco and food products. A modern machine park enables the company to carry out complex projects. Packages are manufactured both according to company's own designs and individual client's orders.

The high quality of the packages and the standards applied in the company are confirmed by certificates. These are: Attests of the National Medicines Institute; ISO 9001: 2015 Quality System Certificate, ISO 14001: 2015 Environmental Management Certificate, ISO 15378: 2015 Certificate: Direct packaging materials for medicinal products - Particular requirements for the application of ISO 9001:2008, taking into account the Good Manufacturing Practice (GMP); BRC Certificate: Global Standard for Packaging and Packaging Materials.

Polipack consistently realises the vision of its development expressed in the motto: Packaging co-creates the product.

The dynamic development of the company and the investment related with it – construction of another plant – resulted in the need to improve and modernize warehouse and production processes. The construction of a new plant has been taking place in Gościcino and it was meant to be the third Polipack factory - next to the first one, also in Gościcino, and the second one, in Kościerzyna, about 90 km away. The aforementioned need resulted also from the necessity to fulfil the requirements of strategic partners from the pharmaceutical and cosmetic sectors concerning products genealogy (traceability). Another requirement was to integrate the new solution with the ERP system operating in Polipack.

The company opted for proven technology, i.e. automatic identification using bar codes. At the end of 2015, after market offer analysis, it chose the comprehensive solution proposed by SKK S.A. The fol-

lowing elements consisted of it:

- SKK Warehouse – WMS-class software
- radio network enabling data transmission via radio
- portable terminal units with built-in bar code readers
- thermal transfer printers for labels printing
- plates for warehouse localizations marking.

SKK's engineers started the implementation from building the radio network in the first plant in Gościcino, because the existing network had covered a small part of it. The new network included the whole warehouse area, office and production departments. In order to work it properly, already at the design stage the fact that the warehouse is partly composed of mobile shelving and it partly constitutes a high-storage warehouse had been taken into account.



The implemented network solution is based on the Cisco infrastructure. It consists of access points, centrally managed by the controller, which provides automatic configuration, monitoring and supervision of the network. In practice, the network was equipped with two controllers, one of which functions as a spare one - in the case of any failure of the first controller, the spare one automatically takes over its role. Such a solution increases network security and ensures continuity of its functioning.

Warehouse of raw materials - production - a warehouse of finished goods and semi-finished products is a logistic chain functioning in the Polipack company. Until now, paper documents were used during receiving raw materials or issuing final products. Then, the data was manually entered into the enterprise's IT system. Currently, the registration of individual warehouse operations takes place via barcodes. In the SKK Warehouse system, execution of a given operation is recorded by scanning the code with a terminal unit equipped with SKK Smart online application. In turn, thanks to the data exchange module (SKK WebTransfer), the read data is automatically sent to the ERP system by radio. It is possible accordingly the integration of the new solution with the parent system. The integration was carried out in cooperation with SKK S.A. and Asseco Business Solutions S.A.

Marking of raw materials and goods in the warehouse and in the production departments takes place by means of labels printed with special-purpose printers. When it comes to the signage of warehouse localizations, which are important in the whole logistic chain, dedicated plates were delivered by SKK.

The new system supports receiving, issuing, stock-taking, manages warehouse space and records raw materials consumption in individual batches of intermediate product and finished goods. All these operations are carried out with product genealogy in mind (traceability module), what allows to track the whole production process at any moment - from the moment of raw material receiving until final product dispatch to client.

While the system was being implemented in the first Polipack plant, the construction of the new factory had already been finished. The factory had been equipped with innovative production and warehouse facilities, i.e. new generation mobile shelving. After the pilot tests and process stabilization, the whole SKK solution was moved to the new location and, due to several times larger area of the building - adapted and extended with additional devices and licences.

The system extension also consisted in an addition of another functionality, i.e. support for quality control warehouse. Product prototypes are stored in this warehouse - they are analyzed in terms of quality required by Polipack and its customers. The system allows interlocking, because every new product is thoroughly checked before being sent to a customer. When the inspection result is , the system interlock is removed and the products belonging to a given batch can be dispatched. Additionally, product samples may be lent for internal or external tests. Thus, next system element concerning quality control keeps record, interlocks and lending history of goods prototypes.

Next stage of the system extension was to include Kościerzyna branch. The factory functioning there had previously not had an electronic system for

warehouse management and production process recording. The new system was successfully put into operation taking into consideration the structure of the Kościerzyna plant and its smaller area. The important attribute of the SKK solution is that both plants work within one system, which allows them to "see" their stocks and production processes in both locations; they automatically exchange documents between themselves and dispatch goods.

Thanks to the implemented project, Polipack gained an effective tool for warehouse and production management which allows quick and accurate execution of processes. Further benefits of the implementation are fast access to information, increase in data reliability and, thus - a noticeable reduction of errors, reduction of paper documents, full control of raw materials and goods flow between the plants, and cost optimization.

A modern, professional way of product history tracking (traceability) means an increase of credibility and an improvement of company image for business partners - both existing and future ones.

As part of the implementation, SKK conducted training in the field of network operating for the administrator, key users and system operators in the warehouse and production departments. The delivered devices, i.e. Point Mobile PM450 and PM260 terminal units, Datamax E4205 and M4206 printers were covered by the one-year manufacturer's warranty,

while the Cisco AP1702 access points have lifetime warranty. On the basis of a separate agreement, signed for an indefinite period, SKK provides technical support services for the system, thereby ensuring a quick assistance to users in case of failure.

It is worth adding that Polipack's satisfaction with the solution implemented by SKK results in the continuation of cooperation between the both companies, as talks and works on further extension of the system's functionality to meet the needs of the Pomeranian enterprise are in progress.

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Production and IT Coordinator
in Polipack



New, automated solution is a significant improvement in the functioning of our plants, it is measurable benefits not only for the company, but also a great satisfaction from performed tasks to our employees. We appreciate the post-implementation technical support for the system - we can always count on prompt and competent response by SKK.

