The adaption of the product range to the particular requirements on site is fundamental to the success of the EasyMart Store

Screws "To Go"

Using an RFID system solution from Turck Vilant Systems, wholesaler chain ProMart developed the "EasyMart" shop concept – self-service containers or store rooms that make fixing materials and tools available at any time and on any site

A great deal of valuable time is lost in the procurement of materials, regardless of whether this is due to long wait times or unnecessary journeys to wholesalers or warehouses. The problem in a nutshell is this: if the right equipment isn't available, a worker has to drive

off to replenish supplies, thus having an immediate negative impact on employee productivity, building progress and overall project costs. These kinds of downtimes are even greater in shipyards or in large industrial areas outside of cities if the wholesaler is

»Turck Vilant Systems not only had the experience and a broad offering, but also a solution that we were able to jointly refine and develop in order to adapt it perfectly to ProMart's requirements.«

Hannu Pajula | ProMart

particularly far away. Avoiding these unfavorable effects requires the efficient management of material logistics and the building site has to have a continuous supply of tools and accessories. Different building sites also require different products, since the construction of a ship, for example, uses different equipment than required for the building of a street or hospital. ProMart, specialists in innovative service concepts in the technical wholesale sector, took up this challenge and looked for a solution that supplied customers with tools and accessories round the clock directly on major construction sites – without the need for personnel for complex billing processes.

ProMart developed the idea of the EasyMart store as a logical expansion of its multichannel strategy. EasyMart is designed to increase the range and thus the opportunity to open new sales markets in addition to channels such as static trade, e-business as well as telephone or in-person sales. The EasyMart store is an automated self-service shop that can be set up directly on the building site – for example, in a small store room or a standard container that can be transported easily to building sites. Users are able to serve themselves easily in the store. The stores provide a limited but sufficient range of products that can be adapted to each site, such as on shipyards or building sites.

RFID-based self-service concept
To implement this idea, ProMart looked for a system that could identify on site all the items taken as well as the several hundreds of users employed by subcontractors in a shipyard. This makes it possible to bill the consumed items without the deployment of personnel. RFID technology is particularly suitable for automated inventory management. With over ten years of experience in the design of self-service stores Turck Vilant Systems (TVS) was the ideal partner for this project. ProMart decided to make some adaptions to the standard package for self-service stores supplied by TVS.

Turck Vilant Systems is the specialist in the Turck Group for turnkey RFID solutions, particularly for the areas of production logistics and goods tracking. The company advised ProMart on all aspects of the

Housed in conventional ISO containers, the EasyMart Store can be set up easily anywhere – and transported on after construction

installation, operation and optimization of the Easy-Mart store and besides hardware, could also supply the software and IT infrastructure together with the server landscape for the permanent operation of the systems.

TVS's ready-to-business approach makes it possible to optimize the standard software to ProMart's require-
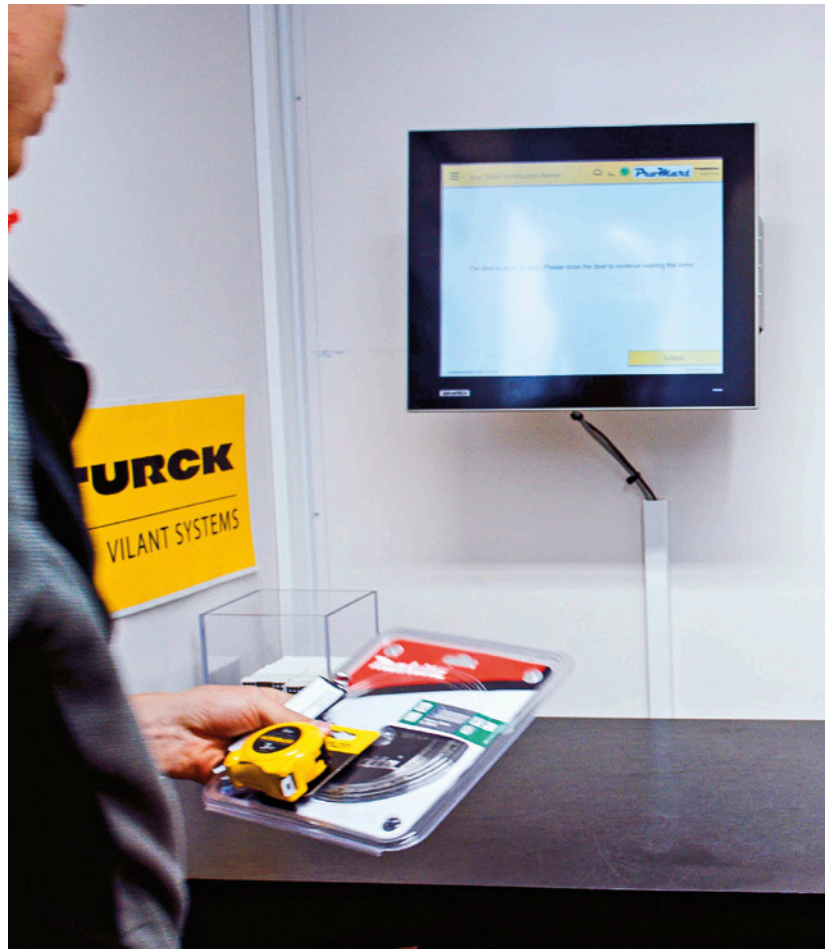
QUICK READ

ProMart is a wholesaler for tools, fixing accessories, protective equipment and chemicals, particularly for customers in the shipbuilding, manufacturing and construction industry. In order to save its customers from downtimes on building sites and trips to building suppliers, the Finnish company developed the "EasyMart" concept based on the turnkey RFID store solution from Turck Vilant Systems. The concept consists of automated self-service shops that are set up on building sites, in shipyards or extensive production plants and do not require any personnel. This provides the particular building site with a permanent supply of tools and materials without having to interrupt work processes.

The Turck Vilant Client logs and manages the store user's entry, purchase and exit

On accessing the store, employees identify themselves with their RFID card

ments with only a few adaptions and thus considerably reduce the time required for commissioning. The software is designed to cover the most important requirements of automated warehouse management. This includes the management of multiple users as well as different user roles such as purchaser, borrower, storekeeper etc. with different access rights.

RTID real-time system replaces laborious stocktaking
The key to a fully transparent goods flow in this application is the fact that RFID read devices only log the relevant goods movements and send this data in real-time to ProMart headquarters for further processing. This real-time inventory keeping provides up-to-date stock level information for the store at any time without employees having to pick up items in stock, count them and enter them in lists. The system automatically creates fill lists and invoices based on the scans. This also eliminates shutdowns or cost-intensive overtime outside of opening times to fully complete an inventory.

In a first step, ProMart customers are given the chance – in this particular application; subcontractors in a shipyard – to put together an EasyMart store and agree on the optimum product range. Employees of the subcontractors are then entered as users in the system. The Turck Vilant RFID platform offers the option of managing user access rights and roles for each individual EasyMart store. This makes it possible to set

up user roles that also provide the option of borrowing as well as buying items. Reservations can also be processed by the system.
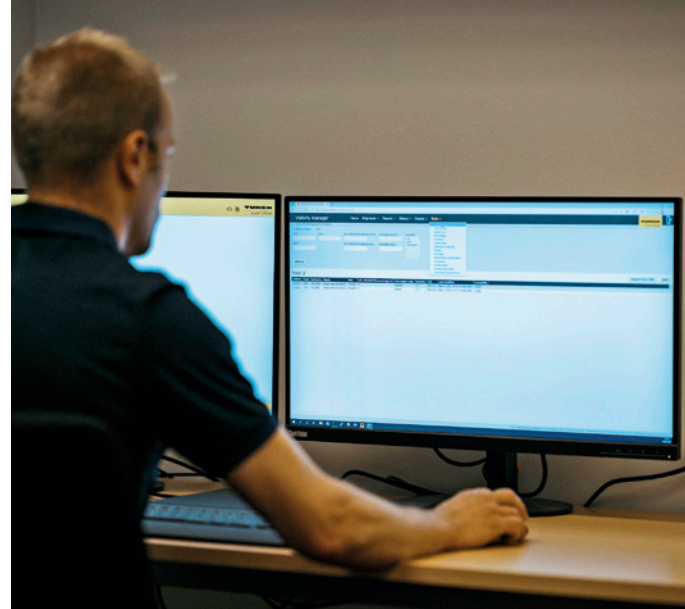
Recording of users and goods flow
During commissioning, each user is instructed in the system and is provided with a personal RFID card to enable access. When users enter the store, they log in with their card for identification purposes. The Turck Vilant Client only allows one user to enter the read area at a time in order for goods movements to be assigned uniquely. After entering the store, the user takes the required products from the shelves just like in a supermarket. The user then enters the checkout area where the goods are automatically scanned without visual contact and shown to the user on a display. After checking the list, the user confirms the taken items.

All products are fitted with RFID tags so that they can be logged automatically at the checkout. A major benefit of RFID identification is its ability to record at distance several products simultaneously. The user does not therefore have to enter any product codes individually.

The required technical infrastructure can be integrated compactly and inconspicuously in a store room or container. "In the beginning we had a concept about what EasyMart should be like," says Hannu Pajula, development director at ProMart. "Turck Vilant Systems not only had the experience and a broad

All products are fitted with RFID tags so that they can be logged automatically at the checkout

The system automatically creates fill lists and invoices based on the scans. ProMart thus controls its stock levels in real time.

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Optimized range for every site
Planning the ideal product range for the particular place of use that is tailored to the requirements of each user is fundamental to the success of the EasyMart Store. The turnaround data for the individual products and categories of goods provided by the TVS servers enables precise optimization of the product ranges and, for example, the creation of automated fill lists. The restocking process is initiated on the basis of this data. ProMart thus has continuous control of its inventory levels and can ensure that all products are always in stock in any store in sufficient quantities.

Easy to operate and multilingual
Compared to optical identification technologies such as barcode scanners, the solution is the simple RFID

based operating concept of the 24-hour self-service shop: the system is fully automated, and operation can be learned quickly. Users do not have to understand a user interface since they do not scan anything. Anyone can thus use the store easily in places where people often do not speak the same language, such as major building sites or shipyards. The use of RFID technology thus ensures the availability of all tools and accessories in a time saving and cost-effective way. "EasyMart Stores are located wherever a large number of people work," says Hannu Pajula. "The operation of our EasyMart Stores can be learnt quickly by anyone, and product selection is configured individually on site so that the solution is ideal for the professional user."

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