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High performance datamatrix marking with 100% quality control at Bristol-Myers Squibb

Postal services: Portuguese CTT explains how market deregulation presents opportunities

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editor's note

Dear Reader,

The pace of technological change is astonishing and Auto ID is no exception. In addition, some industries are adjusting to changing market dynamics, such as deregulation. In this Globe, we discuss change as a catalyst for new business opportunities.

Voice technology continues to advance and we review the latest untrained systems - which allow operators to start working immediately - with their 'trained' counterparts. Retailer Système U shares its experiences using the Voice Only Wearable, Motorola's latest voice-operated terminal, and the benefits of multi-modal working.

Operators in the postal services sector are adapting to deregulation and the challenges of new competitors. Diversification is key to future success but requires many internal processes to be optimised. José Leal, responsible for innovation at the Portuguese Post, explains.

In the pharma sector, all products distributed in France must now be Datamatrix labelled. Live ahead of incoming legislation, Bristol-Myers Squibb can currently mark, label, seal and check up to 400 containers per minute, thanks to Zetes.

For the food industry, Datamatrix's equivalent is Databar. The Visidot solution is now Databar compatible and pushing the boundaries to automate visibility and traceability. For its part, Coca-Cola relies on Print&Apply solutions to ensure traceability.

Traceability is also crucial for effective auto ID hardware management. Zetes' TotalCare portal gives companies better product visibility, allowing them to save time and money.

Finally, we turn the spotlight on developments in wireless infrastructure. Eddy Van Herburggen, a specialist in this area explains the key ingredients of a successful wireless infrastructure.

So as you can see, the pace of technological change in auto ID continues unabated. And Zetes is striving to ensure its solutions deliver the right business benefits.

Kind regards,

James Hannay
Senior VP
Northern Europe

WIRELESS IN INDUSTRIAL ENVIRONMENTS

HOW TO PREPARE FOR SUCCESSFUL WIRELESS NETWORK DEPLOYMENT

MANUFACTURING | 3PL | WAREHOUSING

The wireless network has come a long way. Over the years, problems have been resolved, resulting in wireless networks that now rival their wired counterparts. So much so, that wireless networks are increasingly becoming part of the standard office environment. Networks for professional industrial environments, however, have completely different requirements to those used inside an office. We are not talking about people working wirelessly on laptops and smartphones, roaming at low speed. In the warehouse it is truck mounted wireless terminals, constantly moving around, roaming at high speeds between different access points. Eddy Van Herbruggen, networks specialist at Zetes, highlights the benefits of and requirements for a successful wireless implementation.

Advantages of going wireless

Visibility: Real time communication with WMS and ERP allows for a better view on stock movement.

Security: Security levels applied to a WLAN environment are often higher than the protection on wired network infrastructure, amongst other things, thanks to the built-in firewall that separates the wireless network from the wired network infrastructure.

Quality: Quality and reliability of wireless networks are a lot better than in the past, whilst the effective throughput and quality of service are much higher.

Reliability: Today's wireless networks allow VoIP telephone applications, mission critical machine-to-machine communication and mobile users to communicate over the same network infrastructure in a reliable way.

“THE QUALITY OF THE SITE SURVEY AND NETWORK DESIGN ARE CRITICAL ELEMENTS FOR A SUCCESSFUL DEPLOYMENT”

Quality of initial site survey and network design defines success

The quality of the site survey and network design are critical elements for a successful wireless network deployment.

Site survey

A site survey is necessary to have a detailed view of environmental needs in terms of wireless network coverage, especially in industrial environments, where a standard approach doesn't always offer the right solution. When the IEEE802.11 standards were created in 1997, suppliers moved away from their dedicated



Networks for professional industrial environments have completely different requirements to those used inside an office

WLAN solutions to the new standard IEEE802.11 protocol. Some moved from narrow band solutions using 9600 bps to a WLAN environment of 1 Mbps. Working with a partner who has a broad knowledge of all solutions available on the market is therefore a must. It is also essential to have a good understanding of the specific requirements for mobile equipment used in industrial environments.

Network design

Assessing wireless network requirements is the first step in any project. Although the standard protocol enhanced the wireless network speed, it also made deployment more complex. Therefore network design needs specific attention as well. It is important to understand the needs of the WLAN user and adapt network design to meet these needs. The benefits of a cabled network can be compared to a meshed network, whereby access points communicate over the wireless network to the network infrastructure. There is no “one size fits all” solution. Especially for wireless networks, it is critical to identify best fit, for current and future needs. And projects in complex industrial environments require detailed analysis of the site survey and network design before deployment commences – that is the smartest approach for a successful wireless network.

| MORE INFO ? | to contact a specialist, see p11

TRAINED OR UNTRAINED? MAKING THE RIGHT CHOICE FOR VOICE

SATHISH SASTRY, HEAD OF THE 3i VOICE INNOVATION CENTRE AT ZETES, EXPLAINS THE PROS AND CONS OF TRAINED AND UNTRAINED VOICE SYSTEMS

MANUFACTURING | TRANSPORT & LOGISTICS | 3PL | WAREHOUSING | RETAIL

What is the difference between a trained and an untrained voice system?

Sathish Sastry An untrained voice system (speech recognition) is ready to use, right out of the box, without any registering of the operator's voice. A trained voice system (voice recognition) first needs registering the user's voice with the various commands.

Is there a difference in accuracy between a trained and an untrained voice system?

Sathish Sastry A trained system is by default more accurate, because the user trains the voice template before he or she starts using the system. However, untrained voice systems have made a lot of progress over the years, delivering results that are equal to those of a trained voice system.

Does this mean an untrained voice system can be as successful as a trained one?

Sathish Sastry It actually can. The new generation of untrained voice systems has a lot more information already built into

them. When using suitable grammar for the application that the untrained system supports, it can become even better than a trained one. For a trained system, it actually makes no difference whether or not the user speaks an existing language. As trained systems do not depend on an actual language, you can easily train it with sounds that are not real words. To extend the use of an untrained system, you need to add a new language set. This may be necessary to cover regional accents also.

What are the main drivers for choosing either a trained or an untrained voice system?

Sathish Sastry It all comes down to the environment the system is required for. A trained voice system is ideal for a stable environment, with a constant team of users. In reality however, quite a number of organizations are facing a high turnaround of employees who may be active for only a couple of days. As the registering of a new profile on a trained voice system can take up to half an hour then in this case the use of an untrained voice system with guided dialogue could be more efficient.

| MORE INFO ? | to contact a specialist, see p11

VISIDOT SUPPORTS GS1 DATABAR

ZETES' IMAGE BASE SOLUTION NOW OFFERS EVEN MORE ACCURATE SHIPPING VERIFICATION BY SUPPORTING THE GS1 DATABAR

MANUFACTURING | FOOD & BEV | RPC | AUTOMOTIVE

Visidot is Zetes' image based solution that accurately captures and recognises hundreds of barcodes. The solution now also supports GS1 Databar, a barcode launched by GS1 in early 2010, which is smaller and can store more information than the traditional EAN/UPC barcode.

The GS1 DataBar is particularly useful for identifying small and hard-to-mark items, such as fresh food and pharmaceutical

items, as it is able to store additional information such as serial numbers, lot numbers and expiration dates. Its extended capability perfectly complements the 100% accurate product authentication and traceability solutions offered by Visidot.

More efficiency

In a traditional shipping verification process, Visidot matches the identity information of goods being prepared for shipment with the original order, detecting missing or faulty items. Since the GS1 DataBar barcodes store more detailed information, Visidot simultaneously executes several other forms of verification, such as expiration date monitoring, during routine pre-dispatch data capture procedures.

This process guarantees an error free delivery and ensures that only products of the highest quality are shipped. Whenever Visidot detects a discrepancy, the item's exact location is visually highlighted, allowing the employee to take immediate action. Additionally, Visidot records an image of each pallet, offering visual evidence of the state the goods were in when they were shipped. These images may be useful in the event of any future query.

Easy upgrade

GS1 DataBar support is included in the new Visidot Reader version 4.5.1. The installed base of Visidot users and Visidot Readers can be easily upgraded to support the GS1 DataBar. Due to the advantages of the GS1 Databar, Zetes expects a growing number of companies that use laser scanners in their logistics operations, to shift to this new identifier. That is why it was essential for Zetes to prepare the Visidot solution to support the GS1 Databar.

| MORE INFO ? | to contact a specialist, see p11



Since the GS1 DataBar stores more information, Visidot can execute other forms of verification, such as expiration date monitoring.

BETTER MANAGEMENT OF MOBILE DEVICES

ZETES TOTALCARE HELPS ANY ORGANISATION TO KEEP COSTS MINIMAL FOR A 100% UP-TIME MOBILITY PLATFORM

MANUFACTURING | TRANSPORT & LOGISTICS | 3PL | WAREHOUSING |
RETAIL

The number of mobile devices keeps growing. With hardware prices decreasing, the investment in terminals has also become easier. But although purchase has less impact on capex, the rising number of devices puts extra pressure on an organisation's opex. Maintenance and repair may seriously impact IT budgets. With TotalCare, Zetes provides a management tool for monitoring these maintenance and repair activities, adding functionality for the centralized procurement of new devices and for remote management.

A flexible approach

TotalCare is offered as a hosted solution, which, as with any other web application, does not need any upfront hardware investment. The organisation can choose the functionality it prefers, tailored to its specific needs. The core of the application is the RMA tool (Return Material Authorisation) which highlights issues encountered with individual devices. Following the analysis of the problem, TotalCare suggests the next step, for example sending the device to the supplier's repair centre. The tool also contains tailored information about SLAs linked to the device. This way, the organisation can monitor the maintenance or repair status

Smarter purchasing

TotalCare also allows multinational organisations to streamline their purchase processes. Local sites may acquire new mobile devices against centrally negotiated prices, choosing them from a predefined list which reduces the cost and complexity of managing



TotalCare allows for monitoring maintenance and repair activities, the centralized procurement of new devices and remote management.

a diverse device fleet. The purchase process is managed centrally but delivery and invoicing are carried out locally. This way, the organisation can keep its budget under control.

Remote management

Finally, Zetes TotalCare offers functionality for the remote management of devices. The organisation monitors the status and availability of its devices, automatically uploads or upgrades application software as well as the operating system. The portal supports any existing mobile device from all leading manufacturers, such as Motorola, Intermec, LXE, Psion/Teklogix, Honeywell, Zetes-IND and more.

Zetes TotalCare is a must for any organisation to keep costs minimal for a 100% up-time mobility platform.

| MORE INFO ? | to contact a specialist, see p11

HEUSCHEN & SCHROUFF PREPARES FOR THE FUTURE WITH RF

SEAMLESS INTEGRATION WITH SAP OFFERS REAL TIME MANAGEMENT INFORMATION

FOOD & BEV | MANUFACTURING

Heuschen & Schrouff Oriental Foods Trading is the market leading distributor of authentic Asian food products in Europe. To fully support its growth, the organization expanded its distribution center in Landgraaf, Holland with some extra 10,000 m², bringing the total warehouse capacity to 30,000 m². This expansion required the installation of a brand new RF system.

How did you assess the need for RF in the expanded warehouse?

Pascal Wetzels, Logistics Manager at Heuschen & Schrouff We decided to rip out the existing network – installed almost ten years ago – and have it replaced by a state-of-the-art RF system. We compared the offers of several suppliers. Zetes undertook a thorough assessment of our wireless network needs. Based on a detailed site survey, the network design Zetes suggested was clearly superior to those of the competition.”

What does the RF infrastructure look like?

Pascal Wetzels The wireless RF infrastructure is based on a Motorola Wireless LAN Switch RFS6000 and 25 mobile LXE MX7 handheld terminals and includes the use of LXE VX6 vehicle mount terminals, enabling use within the cold store sector of the warehouse.

What was the main business driver behind the project?

Pascal Wetzels Moving from traditional paperwork to RF picking was a big change for us. The RF system optimizes inventory management in the expanded warehouse, among other things, because it allows us to work based on dynamic locations.

The system also integrates with SAP.

Pascal Wetzels Correct, and that is a major advantage. Prior to the new implementation, we had access to inventory data only at the end of the working day, when all administrative work was done. Integrating with SAP allows us to follow up all warehouse processes – and manage the logistic flow in real time.

What is the next step you have in mind for the RF environment?

Pascal Wetzels We migrated to an RF system that is voice ready. In a next step – in about a year from now – we plan to migrate to voice picking. That will offer our employees some extra benefits. Using the voice system, they will gain productivity, working in a completely paperless and hands-free environment.

| MORE INFO ? | to contact a specialist, see p11

WHEN THE POSTMAN NEXT CALLS WE WILL PAY BILLS AND GET THE METER READ

MARKET DEREGULATION PRESENTS OPPORTUNITIES FOR POSTAL COMPANIES. JOSÉ LEAL AT CTT AND TIAGO CONCEIÇÃO, AT ZETES PORTUGAL, DISCUSS

POSTAL SERVICES | PARCEL DELIVERY

Why is it important for the postal services to diversify their business?

José Leal, Responsible for Innovation and Technological Development at CTT Society is changing rapidly and the new generation of consumers, Generation Z, have very different behaviours. CTT needs to reach out to this new “ultra connected” audience for our long-term future. But to do that successfully, we need to understand what services they need and the way they want to live their lives.

Tiago Conceição, Country Manager at Zetes in Portugal Some postal companies have been more forward thinking than others and CTT represents a good example of a provider that has recognised the urgent need to innovate and its diversification is well underway.

What are the main drivers for the changes currently taking place?

José Leal Probably the biggest single change is the way communication processes have altered. Firstly as a result of email and now the proliferation of social networking. This requires careful consideration about how postal companies might reach out to the next generation of customers.

Tiago Conceição For postal companies adjusting to liberalisation and the decline of their traditional business, the preference for electronic communication has created a very interesting array of competitors from Apple and Google to Facebook and Twitter.

Which assets do the postal services possess and how will they help with diversification of the business?

José Leal People, our enormous reach and the trust we have across the population are our biggest assets. People work longer hours than ever and have increasingly less free time so we need to diversify by offering expanded opening hours and different services to help them become more time-efficient. Because our workforce is part of the community and understands these issues it can help us to understand how best to diversify with a range of what we describe as “mobile citizen” services.

How can auto-ID help the postal services with this diversification?

Tiago Conceição Recent years have brought a huge rise in the use of mobile devices which empower field based workers to become more efficient by giving the ability to capture data very accurately at source, reducing paperwork and improving customer service. For postal companies the improved efficiency and accuracy of field mobility solutions brings much lower operational costs. In other hand, Postal needs to “mobilize” new services in order to create postal value added and to increase the turnover.

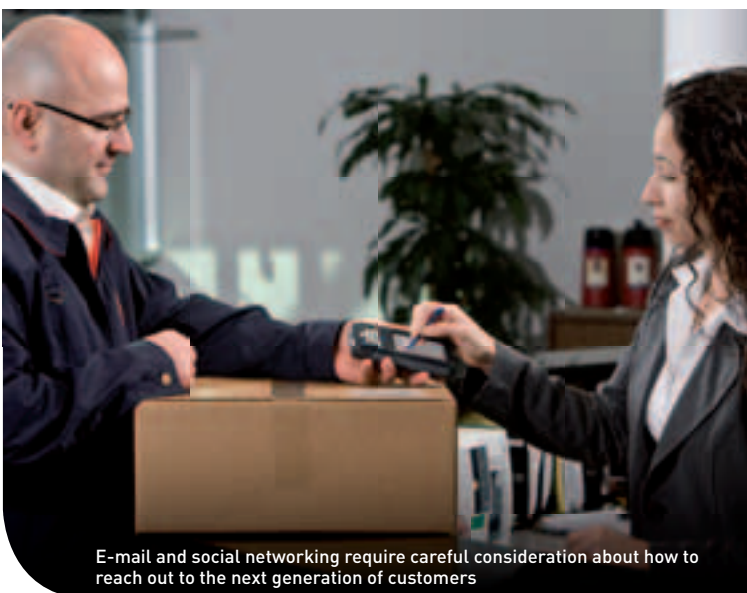
José Leal Through its existing network of post offices and postal workers is the ability for CTT to evolve into a “citizen services provider” with a range of offerings designed to make people’s lives easier by using auto-ID systems. We are in the process of piloting new mobile citizen applications to prove the concept.

What types of services do you envisage?

José Leal In the future we could pay our bills, have the electricity meter read or organise a range of other household services through CTT. And since most rugged smart phones include a powerful GPS and camera as standard, it is also feasible for postal companies to become local community wardens, helping to keep our towns rubbish and graffiti free.

“IN THE FUTURE WE COULD PAY OUR BILLS, HAVE THE ELECTRICITY METER READ OR ORGANISE A RANGE OF OTHER HOUSEHOLD SERVICES THROUGH CTT”

Tiago Conceição In fact, this idea has already been applied in London where the Mayor has launched a “Love Clean London” scheme ahead of the 2012 Olympics. Londoners can download a smart-phone application (app) and upload images and texts that alert local councils by email to problems like defaced buildings or illegally dumped rubbish. Postal companies are perfectly placed to diversify this and would be remunerated through cost savings made by the local authorities.



E-mail and social networking require careful consideration about how to reach out to the next generation of customers

Where else could auto-ID systems offer commercial benefits to postal companies?

Tiago Conceição E-commerce services are an obvious opportunity because when buying online, consumers have such high expectations. They assume, and rightly so, to get their goods delivered securely and at a time when it is most convenient for them. They do not want the bother of cumbersome returns processes so there is the potential to forge partnerships with retailers and offer a secure delivery and pick up for returns service.

What happens with traditional activities, are these evolving too?

José Leal Our traditional services have declined and continue to do so because of all the alternatives. Gradual liberalisation of the postal sector started some time ago in Portugal and has gone a long way to helping us evolve our business. Over the past few years we have transformed our culture to become much more customer orientated. With this, our ability to innovate has improved and we are already seeing the rewards of this changed mindset.

How important are electronic proof of delivery systems for you?

José Leal These solutions are key to ensuring the quality and consistency of our services. We have been investing in proof of delivery systems for the past 15 years and were the first postal service provider in Portugal to implement both a proof of delivery system and online track and trace for customers. Although other companies have now adopted electronic proof of delivery, we are the only postal company to offer it across the entire country and not just major cities. Now we are trying to simplify the way to authenticate the recipients of parcels we deliver and see the new chip-based ID cards as a key part of the solution. It is an important part of our brand promise to can guarantee the right goods are delivered to the right person.

Tiago Conceição We have been working with CTT for a number of years, initially with the implementation of its electronic proof of delivery system. Most recently we were selected to be their partner for the prototype mobility project in which we are exploring the feasibility of new services where some of them are based upon the concept of a mobile citizen portal.

What are the benefits you are getting from auto-ID solutions?

José Leal One of the biggest is from track and trace and the ability to verify with the greatest degree of accuracy possible, recipient identity. As well as giving a better service to customers, this makes life easier for employees by improving data capture accuracy and ease of collection.



José Leal, Responsible for Innovation and Technological Development at CTT: "It is an important part of our brand promise to can guarantee the right goods are delivered to the right person"

What benefits do you expect them to deliver in the future?

José Leal Once you start implementing auto-ID projects and begin to appreciate the benefits, you uncover many other possible opportunities for applications which ultimately lower costs and help us become closer with the customer. That has been our experience and we do not anticipate it will change.

“ONCE YOU START IMPLEMENTING AUTO-ID PROJECTS AND BEGIN TO APPRECIATE THE BENEFITS, YOU UNCOVER MANY OTHER POSSIBLE OPPORTUNITIES”

Tiago Conceição Lower costs and the ability to widen customer reach and access are intrinsic benefits of using auto-ID solutions and will ensure the long term survival of postal companies.

How will you track the results?

José Leal We anticipate a 3 to 4 year return on our investments in electronic data capture technology through a reduction in the need for administrative resources and business expansion, by being able to reach customers which we cannot currently. Already as the organisation has become more sustainable, we have improved our profitability and in the past 5 years, generated significant returns for the Portuguese government, our primary investor. So now we are actively contributing to the economy and wealth of the country.

| MORE INFO ? | to contact a specialist, see p11

HIGH PERFORMANCE DATAMATRIX MARKING WITH 100% QUALITY CONTROL

FLEXIBLE MARKING AND LABELLING SOLUTION HELPS TO IDENTIFY EXTREMELY HIGH VOLUMES FOR PHARMACEUTICAL PRODUCER BRISTOL-MYERS SQUIBB

PHARMA | MANUFACTURING

Bristol-Myers Squibb is one of the largest biopharmaceutical producers in the world. At its production sites in France (Agen), 400 million boxes of medicines come off the conveyor belt every year, including analgesics such as Dafalgan and Efferalgan. In order to comply with French legislation, which requires every pharmaceutical product distributed on the French market to be marked with a Datamatrix code, BMS has equipped its packaging lines with new machines. Zetes was the partner who, in record time, designed, produced and installed 25 machines. The machines were constructed in line with BMS' strict requirements with regard to marking, labelling, sealing, quality control and performance. They handle extreme volumes, up to 400 containers per minute per packaging line, and enable BMS to control the quality of the identified products 100%.

“IN ORDER TO COMPLY WITH FRENCH LEGISLATION, BMS ACQUIRED 25 NEW HIGHLY PERFORMANT MACHINES FOR MARKING, LABELLING, SEALING AND QUALITY CONTROL OF SECONDARY PACKAGES”

Designed to cope with extremely high volumes and high quality standards

The identification of secondary packaging and the related marking machines occupy a mission-critical position in the company. Consequently, the specialists at BMS had extremely high requirements as regards the design and integration of the systems. Sylvain Ballesta, Project Manager at BMS: “Our site is the biggest in the world for effervescent products - it has a production output which is extraordinary. The stoppage of a machine on a line interrupts the entire production, so we wanted machines that were extremely robust and adapted to our needs. What's more, we have very high quality demands.” Another requirement was a design in balcony-style, whereby, in line with the standards from the pharmaceutical industry, the mechanical components are all located behind the machine. This provides extra ease of use for the operators, easy maintenance of the machine, and prevents the line having to be stopped when the machines are being serviced.

A tailor-made solution

In order to meet all the requirements of BMS, the 25 machines were tailor-made. The majority of them consist of four different types of machine in balcony-style, combining varying degrees of functionality in a modular way. The Datamatrix marking can also be combined with labelling (application of a label required by the French health insurance authority) and sealing, depending on the packaging line. Cameras and an automatic positive ejection module ensure 100% quality control. On some production lines, a special conveyor-belt system ensures that the products are rolled to optimise packaging in boxes. On three of the packaging lines, there was too little space to install a completely new machine. ‘Retrofitting’ was done here, which means that the existing machines were fitted with the same elements (marking, control) as the new machines, as well as with the same operator's interface.

Close collaboration

At the request of BMS, there was close collaboration and a great deal of technological exchange between the technical teams of Zetes and BMS right from the start. Sylvain Ballesta, Project Manager at BMS: “We really appreciated the flexibility of the engineering by the Zetes teams – they provided us with machines that met our requirements perfectly. The machines have very specific and practical functionalities, such as modules to modify the height of the machine, conveyors that roll the products, a totally centralised and secured interface and so on”.

Delivery at very short notice

The project was rolled out in a very short space of time: the contract was signed in March and the first machines were to be



Sylvain Ballesta, Project Manager at BMS: “Thanks to Zetes, we are a step ahead on quality”

installed in June. From that moment on, two to three machines were installed every week. Because of the short delivery time, there was no time for a pilot phase. So Zetes was under considerable pressure to work out the design, development and installation in a record time. Alain Grandpierre, Project Assistant at BMS: "Rolling out a project like this in such limited time in the world of industry is really impressive."

"THE PROJECT WAS ROLLED OUT IN A VERY SHORT SPACE OF TIME: THE CONTRACT WAS SIGNED IN MARCH AND THE FIRST MACHINES WERE TO BE INSTALLED IN JUNE"

Quality Assurance through 100% control and automated data-input

Whereas only statistical checks were done before, now every box can be checked individually on the production line thanks to a camera. Datamatrix barcodes that do not meet the strict quality standards are evacuated by the automatic ejection module. Since the installation of the new machines, products destined for export are also marked with the inkjet modules (batch number, product number, expiry date). This ensures better legibility, and here too enables better checking.

Perfect management of all the components

Thanks to Zetes' management software, the data capture is reliable (scanning of product-line data) and the configuration of all the components (marking, labelling, control, robot) is automated. The client/server architecture centralises all the important data in a secure way. The application responds to all the quality requirements from the pharmaceutical industry.

A one-stop-shop partner

Zetes has provided BMS with a total project, from the design of the machines, through development, up to implementation, service and training. Pascal Longchambon, in charge of Unattended Automatic Systems at Zetes: "The biggest challenge was to construct a homogeneous park of machines that combined different functionalities in extremely short time. One of the success factors was the close collaboration between the local teams and the Zetes 3i Print & Apply Competence Centre, an international team specialising in the design and construction of industrial marking and labelling systems. This enabled BMS to benefit from Zetes' years of experience in the field of system integration and its engineering capabilities in the field of marking



Zetes' machines handle extreme volumes, up to 400 containers per minute per packaging line

and labelling, printing and process-control, PLC programming and ERP (SAP) integration."

Ready for the future

With its new fleet of machines, BMS meets the quality standards of BMS Worldwide. Sylvain Ballesta: "Thanks to Zetes, we are a step ahead on quality. This project has been highly innovative, which will enable us to make other advances in quality. So, we are ready for the future."

BMS worldwide

Activity: global biopharma company

Employees: 27,000

Production plants: 13

BMS in France

First branch of the Group outside the USA

Production plants: 2

Products: analgesics (UPSA)

Production lines: 27

Volume: 300 million boxes of medicines/year

Employees: ± 3000

| MORE INFO ? | to contact a specialist, see p11

TECHNOLOGY ADAPTS TO DELIVER FOR RETAIL SUPPLY CHAIN NETWORKS

THE TRADITIONAL SUPPLY CHAIN MODEL HAS BEEN TRANSFORMED UNDER INCREASING CUSTOMER INFLUENCE



Gerrit-Jan Steenbergen, VP of Zetes' 3i Competence & Innovation Centre, gives his insights into the latest developments within the supply chain

RETAIL

Visibility and traceability are no longer buzzwords and it is interesting to consider the reasons why this change has occurred. Gerrit-Jan Steenbergen, VP of Zetes' 3i Competence & Innovation Centre, gives his insights into the latest developments within the supply chain and outlines how companies can meet the new challenges.

"Together with transportation volumes, improved availability of online networks is contributing to traceability and visibility requirements. Another trend is the changing expectation for traceability among consumers who want information on the origin of their products, constituent raw materials and product components. Environmental concerns have also influenced companies to optimise their use of resources in response to social expectations. For suppliers, there is a demand for traceability to drive logistics efficiency, quality and visibility. The availability of 'always on-line' information creates an early warning system to reduce out-of-stocks, shrinkage or delivery problems and implement more targeted recalls.

Overall, the emphasis on improving the customer experience using technology whilst seeking to cut operational costs is a trend across Europe. Many retailers have already invested in self-service scanning, self-checkout, smart shelf labeling or queue busting systems.

From Supply Chain to Demand Pull Network

Increasing customer influence has transformed the traditional supply chain (source-make-deliver-buy) model from a push channel to a pull channel with the customer firmly in control.

This re-emphasises the right product, right place, right time, right price mix. Balance requires a dynamic interaction between information and physical flows to ensure customer demands are met with the right amount of stock. Decisions over which technology to use e.g. RFID, traditional barcodes or imaging, are mostly driven by a cost:benefit analysis and ease of integration to existing systems.

"INCREASING CUSTOMER INFLUENCE HAS TRANSFORMED THE TRADITIONAL SUPPLY CHAIN (SOURCE-MAKE-DELIVER-BUY) MODEL FROM A PUSH CHANNEL TO A PULL CHANNEL WITH THE CUSTOMER FIRMLY IN CONTROL"

The examples below highlight why visibility is important for a networked supply chain:

Flexibility

No longer can goods only be returned to the store of purchase. Now customers can choose to buy online and collect from a local store, or buy from one store, return to another or a repair centre or the web.

Forecasting

This can be an expensive activity and will not necessarily yield the corresponding value invested as data accuracy remains the biggest issue. As an alternative to planning from forecasts, "visible" networks can be built based on the ability to supply according to previous activity - creating a 100% demand driven supply network.

For example, Vendor Managed Inventory systems (VMIs) are straightforward to introduce whereby the vendor is completely responsible for the product, has direct access to the retailer's systems to monitor sales or stock levels and then creates

replenishment orders based on demand, stock levels and existing inbound purchase orders. Because the vendor is provided with direct access to real time data generated via picking or replenishment requests, which are in turn triggered by store sales, this can be a more accurate method. Working in this way can reduce inventory levels and eliminate out of stocks, significantly reducing costs for the retailer. In addition, it offers additional benefits to both stakeholders because the retailer does not need to allocate resources to manage merchandise as it is handled by the vendor, who in turn, benefits from having direct access to valuable information which allows them to smooth their own supply chain, thus further reducing costs.

Manufacturer driven vs. customer driven promotions

Many manufacturers are increasingly operating retailer and customer led promotions in which the promotion is tailored according to the preferences or shopping habits of the local clientele. And in return for co-operating and supplying the manufacturer with sales data, the retailer benefits with discounted stock prices. Alternatively, manufacturer and retailer work in partnership based on anticipated demand. So for example, after Kate Middleton wore a navy dress as her engagement to Prince William was announced, clothing suppliers to Tesco were fast to react with a near identical garment available in their stores within days.

Focusing on adding value to customers vs. straight cost-reduction

Cutting costs used to be the motivation behind investment in the supply chain whereas in the future, the emphasis needs to be on delivering added value to specific customer groups. For instance, retailers are starting to understand that customers buying premium products will value traceability information verifying the origin and quality of their goods above other customers just looking for the lowest cost products.

Building 'always on-line' visible supply networks

Traditional barcodes are still used for identification of products but slowly, interest in serialised packaging is creating applications for the 2D barcode. To reduce time to market, many retailers in Europe have implemented voice picking and are expanding their use of voice directed working in the warehouse. And smaller, more specialized retailers are following suit, but seeking 'out of the-box' voice solutions that are quick to implement and show an investment payback.

“INTERNET SHOPPING HAS BROUGHT INCREASED DEMAND FOR PROOF OF DELIVERY SYSTEMS”

Unlike voice, RFID is still not a mass-market technology and among luxury retailers, is mainly used for tracking returnable assets or to prevent counterfeiting. Internet shopping has brought increased demand for proof of delivery systems, and now, a newer market for 'payment on delivery' alternatives. Some retailers have also created innovative applications for RFID in the store - Prada for instance has created an RFID based personal shopping experience in which customers in the fitting rooms can see the garments they have selected being modeled on the catwalk.

In the end, picking a technology is the easy part. More challenging is enabling the retailers, suppliers and other network members to use technology to operate effective supply chain networks.”

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WHO'S BENEFITTING FROM AUTO-ID?

CHRONOPOST

Chronopost's new mobility solution offers them ease of use, quality of real-time on-line information, autonomy and well defined procedures for the distribution operatives.

MERCK

Pharma giant Merck gained important benefits with just 8 voice pickers: increased productivity, improved operator satisfaction, reduced error rate and improved planning.

HEUSCHEN & SCHROUFF

Thanks to an RF-solution including hand-and truck terminals, together with wireless infrastructure and direct SAP integration, Dutch asian food distributor gets realtime stock management.

ALIMERKA

The use of voice in both dry and frozen warehouses has helped Spanish Food distributor to reduce errors, increase productivity and herewith to achieve their goal in less than one year.

DIARY

ZETES TECHNOLOGY DAY 2011

16 June
Küsnacht am Zürichsee
Switzerland

TRANSPORT & LOGISTICS FAIR

20-22 September
Antwerp Expo - Stand C4022
Belgium

POST EXPO 2011

27-29 September
Stuttgart Messe
Germany

APLOG - 14TH LOGISTICS CONGRESS

12-13 October
Centro de Congressos de Lisboa (Junqueira)
Portugal

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SEASONALITY UNDER CONTROL WITH UNTRAINED VOICE PICKING SYSTEMS

SYSTÈME U SUD, FRANCE'S EARLIEST VOICE ADOPTER, BENEFITS FROM THE LATEST TECHNOLOGICAL DEVELOPMENTS



Charles Chelayfa, Head of IT Production at Système U: "Zetes' untrained voice solution gives us more workforce flexibility during peak periods."

RETAIL | WAREHOUSING | 3PL

In 2004, French retailer Système U surfaced as an early voice champion by introducing voice picking on a huge scale in its warehouses. Then, in 2010, the southern region alliance of this group of independent traders developed its use of voice solutions even further at two locations in Vendargues and Agen. Today Système U is optimising warehouse processes with voice in both dedicated mode and multi-modally, using Zetes' 3iV solution set with Motorola's VOW (Voice Only Wearable) and WT4090 terminals. Philippe Mery, Head of Merchandise Traffic and Charles Chelayfa, Head of IT Production, explains the benefits of voice-directed systems.

Why did you go for voice picking in your warehouses?

Philippe Mery We wanted to improve the quality of order preparation and raise productivity at the same time. Système U Sud has always adopted an innovative approach to optimising working processes and was open to the idea of new technologies.

How soon did you get the results you were expecting?

Philippe Mery We saw results in the 3rd month, both in terms of quality – with a noticeable reduction in the number of errors – and productivity. In particular, we saved time by cutting back administrative tasks that would interrupt core tasks. Also, the pickers' enthusiasm and real desire to progress with the new system greatly contributed to the overall increase in productivity.

What were the reasons behind further developing your voice system?

Charles Chelayfa We wanted to standardise our fleet of equipment which needed a flexible solution. This is why we opted for 3iV,

because it offers great freedom of choice regarding both terminals and applications. We selected the Motorola WT4090 hardware because it supports multi-modal working – so pickers could switch between voice directed and non-vocal tasks. Specifically for voice dedicated tasks, we opted for a 'light' version of the WT4090, a voice only wearable (VOW), which is economical and yet robust. Système U-SUD were the first to implement the WT4090 VOW in France.

What added benefit does multi-modal working bring to your processes?

Philippe Mery Warehouse operations vary a lot during the year depending on the period and individual store requirements. This means we have to adapt and ensure staff focus the right activity, whether it's reception, ventilation, preparation or stock-taking. Both our staff and the technology they use daily need to be versatile. Multi-modal devices are perfect because we re-use the same terminals for different applications.

“BOTH OUR STAFF AND THE TECHNOLOGY THEY USE DAILY NEED TO BE VERSATILE.”

What type of voice recognition system are you using? Have there been developments here too?

Charles Chelayfa The new terminals are used with Zetes' untrained voice solution. This has the advantage of not needing the user's voice profile to be pre-recorded beforehand, giving us more workforce flexibility during peak periods. Because of seasonal variations, many pickers are temporary employees who can be fully productive immediately because we don't need to register their voices with the new system. We save a lot of time on training this way.

At the start of 2011, Système U Sud started using the voice system in its deep-freeze warehouses at Vendargues and Agen. Equipped with VOW terminals, 48 operators prepare orders at -28°C.

In addition, 100 VOW terminals, also operating with Zetes' untrained system, are currently being deployed in the new Avignon warehouse, run as a trade alliance between "Le Mistral" and Système U Sud.

| MORE INFO ? | to contact a specialist, see p11