Economic success thanks to eBusiness standards

Entrepreneurs show how it works

PROZEUS – eBusiness practice for SMEs
Terms

BMEcat | Catalogue interchange format.
Datarn | A standard procedure for article and master data interchange which was published by the Data Standard Work Group for Suppliers of the Plumbing and Building Trades; article numbers, article names and price conditions are read in from the Datarn and can then be forwarded electronically.

DMS | Document Management System.
DUNS® number | Dun & Bradstreet identification number; DUNS® stands for “Data Universal Numbering System”.

EANCOM® | Standard for electronic data interchange which is derived from the official UN/EDIFACT standard and is used worldwide in the consumer goods industry.
eCl@ss | An international standard for classifying and describing products and services.

ECR | Efficient Consumer Response; joint initiative of manufacturers, dealers and other partners in the supply chain with the aim of improving processes through joint efforts and thus offering consumers the best quality, service and product variety at the best prices.
EDI | Electronic Data Interchange.

EDIFACT | Electronic Data Interchange for Administration, Commerce and Transport; international, cross-industry standard for exchanging electronic business data.

Eldanorm | Eldanorm is structured like Datarn, but this is used specifically in the electrical trade in particular.

EPC | Electronic Product Code in RFID technology; builds on the EAN standard; also common: EPC/RFID.

ERP | Enterprise Resource Planning; planning (use/application) of the corporate resources.

ETIM | ElektroTechnischesInformationsModell (Electro Technical Information Model) is a classifications scheme which is supported jointly by a cooperation of industry, the wholesale trade and handicraft in the “electrical” sector.

GIAI | Global Individual Asset Identifier; EAN object or container number.

GLN | Global Location Number (previously ILN). A numbering structure which is valid worldwide for unambiguous identification of physical, functional or legal units in companies and/or parts of companies, for example warehouse or goods receipt ramps.

GPC | Global Product Classification, an international classification system.

GRAI | Global Returnable Asset Identifier; identifier for reusable transport packaging.

GS1 DataMatrix | Two-dimensional code from the GS1 portfolio which encodes a great deal of information in a very small space.

GS1-128 | International standard for encoding basic and additional logistical information (e.g. batch numbers, best before date, GTIN of the retail unit)

GTIN | Global Trade Item Number (international designation of the EAN), ID number which is unique worldwide which identifies an article or retail unit in its specific version.

ILN | International Location Number (= GLN, Global Location Number).

MAM | Media Asset Management.

NVE | Number of the shipping container (English = SSCC, Serial Shipping Container Code). An internationally agreed, uniform 18-character number for shipping containers which is unique worldwide.

OAeGIS | Open Applications Group; was established by leading software companies in 1995 with the aim of developing an open standard for integrating B2B (Business to Business) and A2A (Application to Application).

ODETTE | Organisation for Data Exchange by Tele Transmission in Europe; a subset of EDIFACT.

openTRANS | An XML-based transaction standard; it can be regarded as complementing the catalogue interchange format.

PDM | Product Data Management.

PIM | Product Information Management.

POS | Point of Sale.

PRICAT | Price/Sales Catalogue, EANCOM® message for transferring article master data.

proficl@ss | Classification in the construction and tools sectors and in the plumbing/heating sector.
PZN | Central pharmaceutical number.


RosettaNet | The XML-based RosettaNet standard is mainly aimed at automating supply chain management in the information technology, telecommunication, electronic components, logistics and semiconductor products sectors.

SCOR | Supply Chain Operations Reference model.

UBL | Universal Business Language; it is developed by the technical committee of the same name at OASIS (Organization for the Advancement of Structured Information Standards).

UNSPSC | United Nations Standard Products and Services Code is a classification which comes from North America.

UPIK | Unique Partner Identification Key; identification standard.

xCBL | Common Business Library; xCBL is an XML business language which can be used to map complex business relationships.

XML | Extensible Markup Language; markup language for presenting hierarchically structured data in the form of text files.
PROZEUS – at a glance

Sponsored by the German Federal Ministry of Economics and Technology (BMWi), PROZEUS supports the eBusiness skills of small to medium-sized enterprises by means of integrated processes and established eBusiness standards. PROZEUS is operated by GS1 Germany – well known from standards and services dealing with all aspects of the barcode – and IW Consult, a subsidiary of the Institut der deutschen Wirtschaft Köln (Cologne Institute for Economic Research).

PROZEUS regards itself as the central point of contact for small to medium-sized enterprises from the industrial, consumer goods industry and trade sectors. eBusiness solutions recommended by PROZEUS are future-proof and reliable investments as they are based on cost-effective, neutral and internationally accepted eBusiness standards.

PROZEUS offers all interested companies in-depth, independent information free of charge – from the transfer website www.prozeus.de to a comprehensive portfolio of checklists, guidelines, practical examples, economic feasibility studies and other publications, right through to specialist events and a service provider database. The interactive PROZEUS website enables users to select the information they require both quickly and easily. PROZEUS also offers an insight into over 130 implementation projects, whose progress and results are made generally available via the PROZEUS website.

The PROZEUS know-how and the results of and experience from the projects have been collected in brochures for you, each of which covers a different sector:

- eBusiness
- Identification standards
- Classification standards
- Catalogue interchange formats
- Transaction standards
- Process standards

These series of publications support small to medium-sized enterprises in initiating and implementing their own eBusiness projects.

This brochure presents the experience and results of 15 companies from different sectors which, in the context of PROZEUS, implemented projects for process optimisation by the introduction of eBusiness standards. In the projects, which were implemented in the period from 2009 to 2011, the focus was on the introduction of eBusiness and the use of eBusiness standards.

The successes of the companies are intended to show other small to medium-sized enterprises that eBusiness is not just an important topic for large companies, but that complex projects can also be handled by a smaller team. The field reports will help other companies to avoid mistakes when setting up their own system and provide tips and help to permit realistic planning and successful project implementation.
PROZEUS – at a glance

Using eBusiness standards – speaking the “same language”

Economic feasibility survey 2011 on PROZEUS best practice examples from SMEs

hünersdorff GmbH
Exchanging electronic messages and master data with customers and marketplaces

REXIM Werkzeug GmbH
Product database with PIM functionality using eCl@ss and BMEcat

Auger Autotechnik GmbH
Standardising and optimising the logistical processes with the help of a hybrid product label

KWT Wärmesysteme GmbH & Co. KG
Supply chain tracking in the value chain China-Germany including quality monitoring with the help of EPC/RFID standards

ROWO-FOOD GmbH
Article labelling and use of auto ID for the incoming and outgoing goods using the GS1-128 barcode standard

Tardis GmbH & Co. KG
Systematised transport of information on chemical substances to ensure product and environmental compliance

AppliChem GmbH
Cross-media publishing based on a PIM system with eCl@ss integration

Bürkle GmbH
Central product data management system for single source publishing

FHF Funke + Huster Fernsig GmbH
PIM enhancement by new ETIM language versions and an ETIM-compliant picture database

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Using eBusiness standards – speaking the “same language”

Not infrequently, small to medium-sized enterprises in particular are obliged to handle their business processes electronically as a result of their (major) customers’ requirements. The advantages of and the need to use eBusiness are obvious: eBusiness facilitates a large number of business processes. The keywords are quicker, more transparent, more efficient and more flexible. To permit electronic and automated communication to take place between business partners, the partners must agree on a “common language” on which they base the exchange of information within their companies and between the companies: eBusiness standards. Standards provide the basis for electronic business processes, because only the use of standards permits the efficient exchange of information between companies; they promote transparency in processes and contribute to significantly reducing the costs for providing information and also the transaction and process costs.

In keeping with the basic rules for eBusiness, all articles must be identified unambiguously in accordance with recognised standards (barcodes), and must be classified and described in a uniform manner. As a result, every company should begin automated processing by recording the master data of its own products electronically. Identification and classification standards are required for this purpose.

When a company decides on electronic data interchange with as many business partners as possible, it should employ standard formats. Only companies which employ standards for exchanging catalogues, transferring business documents and for automating business processes on a cross-company basis permit efficient data interchange and ensure greater investment security.
Economic feasibility survey 2011 on PROZEUS best practice examples from SMEs

Before companies decide to change their processes by introducing eBusiness applications and standards, the question of the profitability of such a project is often raised. This question is understandable; after all, introducing eBusiness involves both a financial investment and an investment of time which should not take place without a preceding analysis of costs and benefits. But unfortunately the benefits of eBusiness and eBusiness standards are frequently difficult to measure.

However, to be able to specify what potential exists for companies in practice, in the second half of 2011 all 130 companies which conducted PROZEUS implementation projects between 2003 and 2011 were asked about the cost-effectiveness of their application. 69 companies replied. As the results are not representative and the numbers of participants are in some cases low, no statements can be made regarding the cost-effectiveness of eBusiness applications in general. The results do, however, show clearly that the companies which have already conducted an eBusiness project actually benefit appreciably from it.
Convinced companies are the best “ambassadors”

94 per cent of the companies surveyed are convinced of the importance of implementing eBusiness in their company. That is one of the most important results of the economic feasibility study. The companies state, for example, that they would decide to conduct this type of project again – even if they knew what effort this involves. The fact that no company – if it could take the decision again – would decide against the eBusiness project shows clearly that the companies are almost unanimous in their conviction that implementing eBusiness and standards is of great benefit for them.

“Would you once again take the decision to implement such a project even though you knew what work awaited you?”

The most frequent eBusiness applications which the surveyed industrial companies implemented are: master data management, electronic data interchange (EDI), CRM system and an electronic catalogue. Companies from the consumer goods sector, on the other hand, most frequently introduced the following eBusiness applications: electronic data interchange (EDI), RFID, stock management and efficient consumer response (ECR). As the applications differ very greatly in function and application area, no clear statements can be made regarding the differences in benefit. Because while, for example, monetary savings can be demonstrated when an eCatalogue is introduced, it is difficult to measure how much a company can save in terms of time and costs by ensuring “clean” master data management. However, the latter is an essential requirement for many other electronic business processes.

It is much more difficult still to ascertain the (monetary) benefit of the eBusiness standards used here than that of the eBusiness applications. The former execute mainly in the background, which means that their significance is often barely noticed. Only after eBusiness standards have been introduced do companies recognise how these simplify the processes, are vital for electronic business communication to run smoothly, and consequently are of great value to the entire company.

“How important do you consider eBusiness standards for electronic business communication?”

Industrial companies mostly employ different standards from companies in the consumer goods sector. While the latter most frequently make use of GTIN, EDI, EANCOM® , EPC/RFID and GS1-128/NVE, industrial companies favour the eCl@ss, BMEcat, EDI and openTRANS standards (more information on standards is provided at www.prozeus.de).
Half of the companies reduce their costs by means of eBusiness

“Has the use of eBusiness (in total) led to a reduction in your costs?”

Frequently companies implement eBusiness projects because they want to optimise processes and save on costs. The results of the survey show clearly that these objectives can actually be achieved using eBusiness and standards. Not only were almost two thirds of the companies able to cut their process costs, but around half of the companies surveyed were also able to reduce their overall costs. As the survey shows, use of eBusiness brings with it potential for SMEs (small to medium-sized enterprises) to save a great deal on costs and time. On average savings amounting to 16,500 euros per year and around 48 hours a month were achieved. 27 of the companies also reported that the use of eBusiness and standards enabled them to boost their turnover by at least ten per cent.

The savings on time and costs plus the improvements in the company can be attributed particularly to enhanced data quality (97%) and expedited business processes (92%). Over 60 per cent of the companies also stated that thanks to the introduction of electronic business processes they now have more time for other things and that the employees are more satisfied than they previously were. Reduced personnel costs, expansion into new markets and reduced IT complexity also play a role in the time and cost benefits resulting from eBusiness.

“What advantages have you been able to gain for your company by using eBusiness and eBusiness standards?”

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Agree totally</th>
<th>Agree</th>
<th>Tend not to agree</th>
<th>Totally disagree</th>
<th>No comment</th>
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<tbody>
<tr>
<td>Expedited business processes</td>
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<td>Enhanced data quality</td>
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<td>Increased employee satisfaction</td>
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<td>More time for other things</td>
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<td>Reduced personnel costs</td>
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<td>New markets and increased turnover</td>
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<td>Reduced IT complexity</td>
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n = 60-63
When the effects of the use of eBusiness and standards on individual business processes in SMEs are examined, the picture is fundamentally positive. But it is recognised that the effects vary greatly. These differences depend on the type of eBusiness application. For example, an electronic catalogue has an effect on customer acquisition, but hardly any on the production process.

It is also noticeable that the level of this effect depends on the sector in which the company concerned is involved. While efficient master data management shows the most positive effects in industrial companies, warehouse and inventory management has this effect in the consumer goods sector.

“How have the individual processes in your company been changed by the introduction of the eBusiness application(s)?”

Both the considerable effort required to implement a project and the implementation costs are regarded as worthwhile by most companies and also as justifying the use of resources.
Companies must overcome challenges when introducing eBusiness applications

As with most changes and restructuring in a company, the introduction of eBusiness and eBusiness standards will not run totally smoothly. Not infrequently companies are faced with major challenges which they must master. The challenges mentioned most frequently were: comprehensive revision of the product master data was necessary (75%); the effort/investments were higher than expected (69%); insufficient internal knowledge of the standards available (52%); standard implementation is difficult (52%).

These hurdles certainly seem serious when the project is implemented. But the companies are almost unanimously (93%) of the opinion that the effort for conducting an eBusiness project is worthwhile. This is due not least of all to the fact that the majority (70%) were able to enhance their competitive position through the introduction of eBusiness applications and standards, and more than 40 per cent of the customers would have lost customers if they had not employed standards.

eBusiness applications and eBusiness standards …

… reduce costs
… lead to greater efficiency and increased flexibility in the company
… have a positive effect on many processes in the company
… are an important competitive factor
… are essential for smooth electronic business communication
Exchanging electronic messages and master data with customers and marketplaces

The company

Complete production and sales of plastic products for over 2,500 customers around Europe are handled from Ludwigsburg, the headquarters of hünersdorff GmbH. The company uses blow and injection moulding to produce customized, purpose-built items and over 1,000 articles in series production. hünersdorff is the market leader for fuel canisters.

Content of the project

Because of the international customer structure, the electronic data interchange (EDI) of structured EDIFACT messages had been discussed with a few customers for some time. By reorganising the departments the intention was to strongly promote the electronic processes in order to relieve the load in these areas. The customers’ demand for electronic catalogues and the transfer of master data also necessitated more efficient processes in the parts master data and customer master data sectors. This was to be achieved by introducing a PIM system, electronic catalogues and a CRM system.

Experience and successes

In view of the complex interdependencies of the subprojects it very quickly became clear that the planned project timeframe of 12 months could not be complied with. In addition, it became apparent that the company had underestimated the effort required for various subprojects in the extremely extensive overall project. Consequently not all items in the project could be implemented. For example, the openTRANS invoices (INVOICE) were sacrificed due to lack of time. It was also not possible to introduce an electronic order workflow or an electronic ordering system of a major customer.

hünersdorff GmbH

Ludwigsburg, Baden-Wuerttemberg
Plastics production
92 employees
12.5 million euros annual sales
www.huenersdorff.de
Complete project report (available only in German language): www.prozeus.de/prozeus/praxis/huenersdorff/

“By introducing the eBusiness applications and standards we offer customers and potentials the service which they have every right to expect today from a modern and innovative company. Streamlined and automated business processes enable us to increase our service quality while reducing process costs.”

Jochen Entenmann
Head of IT

Rubber/Plastic
The biggest disappointment was the delay caused by the printer in printing the catalogue from the BMEcat data. It turned out that the supplier of the software used by the printer was insolvent. However, an alternative was found shortly after the end of the PROZEUS project, which had in the end been extended to 21 months.

Today hünersdorff is able to provide optimum support for its customers from the sectors of trade and industry, especially as the company can for the first time make valid article master data available in a quality better than ever before. As a result, and with the newly developed website it is possible to open up new market segments and extend exports to countries which could not previously be reached. Classifying the data according to eCl@ss 5.1 and proficl@ss enables the purchasing portals of large companies to be served and sales potential to be opened up in this sector.

The TYPO3-based dynamic website and the connected partner shops are supplied automatically with new article data in accordance with the BMEcat standards and at present in four languages.

The newly introduced CRM system also plays a major role in the clear improvement to customer support. It is thus now possible to store all communication in the CRM system in a manner which enables it to be tracked and called, and to streamline work processes and structure them better. Specifying sales opportunities also permits adequate traceability of offers and inquiries and an overview of the turnover which can be expected.

Major savings were achieved in the invoicing sector by enhancing the EDI system. Together with PDF invoices bearing a qualified signature, almost 60 per cent of invoices are now transferred electronically as structured EANCOM® messages (INVOIC).

Person days planned and required for the project at hünersdorff
Adopting the openTRANS standard means that the message types ORDERRESPONSE and DISPATCHNOTIFICATION are implemented completely without paper on a large B2B marketplace, and tracking of their delivery is possible using the package number transferred in the DISPATCHNOTIFICATION. The existing EDI converter was brought up to date for these functions, and both EDI and openTRANS conversions are possible with software which was provided.

This increases the transparency and process security, while at the same time reducing the administration effort. New partners and message types can also be connected simply and cheaply by using XML and open standards.

The complex dependencies of the various software solutions made it necessary to revise the entire IT infrastructure. For instance, it was necessary to update the ERP software to the current release as a prerequisite for the new EDI software and the CRM.
The company

REXIM Werkzeug GmbH was founded in 1958, focusing on consulting for the metal machining industry and maintenance and sales of a wide range of high-quality machining tools. Today REXIM Werkzeug GmbH has approx. 55,000 articles in its range. Products are sold both directly to industrial customers and also to dealers, most of whom operate regionally.

Content of the project

At the start of the project the product information was available on different media and in different formats and versions, which repeatedly led to problems such as redundant data, errors in coordination with trading partners, enormous internal effort, complex exchange processes, etc.

In addition to this, REXIM was not able to serve the customers using the required interchange format BMEcat, but had to laboriously compile the product information individually.

The basis for the planned project was provided by the implementation of a central database from which both an online shop and also interchange formats and printed catalogues can be generated. All the product information was to be compiled and made available for further use in this system. Appropriate editing and structuring of the data was to enable the product information to be created in such a manner that it would later be possible to output standardised interchange formats using configured export routines. It will thus be possible in the future for REXIM to export the entire range or a selection thereof automatically and to forward this data to the market partners.

Experience and successes

The project was launched with the preparation of the product data. As product data was available in various formats, it was first structured. This went hand in hand with the establishment of a central product database based on PiMagento. Different product information can now be taken

By exchanging standardised data formats we want to guarantee our customers a uniform and quicker interchange of information and make our cross-company business processes more efficient.”

Sabrina Beyer
Project Manager

Presentation of the REXIM project
from this database, both for customers and dealers and also for suppliers. In the course of the project it became clear that the effort for structuring the data had been significantly underestimated. It was also difficult to integrate the project into the work that had to be handled each day. Consequently the work on the project was frequently given low priority.

Although the personnel effort had been included in project planning, the personnel resources were not always available as planned. For example, too little time was allowed for vacation periods and time at trade fairs.

In order to be able to respond to customer requirements, the structured product data was classified according to eCl@ss. Furthermore, the option is now available of outputting the data in BMEcat format.

Catalogue production was automated with the help of the central product database and a database publishing tool. Different print media can now be created simply. It took a lot of time to coordinate the classification standards. Although customer requirements for classified product data existed, it was difficult to obtain the required information regarding the version used from the customers. It also turned out to be disadvantageous that REXIM Werkzeug GmbH had no experience in implementing such a project.

An online shop was also created based on PiMagento, and thus another distribution channel was generated. At the same time the website was revised and provided with a modern layout. TYPO3 now enables the site to be updated simply at any time.

Despite a few “stumbling blocks” the project was a great step forward for REXIM. The creation of new distribution channels (online shop) and the revision of old structures and strategies (product data, website and catalogue) enabled the service quality vis-à-vis the customers to be enhanced.
Standardising and optimising the logistical processes with the help of a hybrid product label

The company

Auger Autotechnik GmbH has been active as a retail company in the IAM sector since 2004 and has made a name for itself above all through its targeted customer acquisition and careful selection of suppliers. It focuses on the procurement and sale of spare parts for commercial vehicles around the world. The customers in Europe, Asia or Africa appreciate the company’s high quality standards, reliability and adherence to deadlines. Its convincing price level means that Auger is even competitive with respect to competition from the Far East.

Content of the project

The worldwide financial and economic crisis has also left its mark on the IAM sector and consequently also at Auger Autotechnik GmbH. The company used this situation to check its own business processes for optimisation potential and consequently to strengthen its position compared to the competition. Above all the logistics proved to be an important lever for safeguarding and expanding the market position in the long term: previously, along the supply chain in particular, manual, unstructured processes which had not been investigated properly led to long throughput times.

Consequently Auger decided to standardise cross-company communication processes with suppliers. The quality of the subsequent processes was to be enhanced, and in particular the error frequency in received and issued goods minimised and goods receipt expedited.

For the international and cross-company exchange of goods the company planned to optimise the interfaces with suppliers by means of direct, electronic communication via the existing ERP system using EDI and by switching to a hybrid label. The latter was to contain both the GTIN encrypted in the barcode and the GS1 DataMatrix in order to coordinate the interfaces.

Identification standards

The following information is mapped:
1. GTIN: Point of Sale and external processes
2. Auger article number
3. Fold
4. 2D-Code GS1 DataMatrix for internal process control

Draft of the hybrid product label at Auger Autotechnik for fulfilling upstream and downstream functions

“Optimising business processes on the basis of established standards is extremely important for every company. SMEs in particular have the opportunity to improve their market position on a long-term basis and to strengthen their competitive position. In the PROZEUS project we succeeded in making our company fit to face future challenges. Cooperation with experienced partners makes it easier to identify weak spots and to design solution approaches which make economic sense.”

Cüneyt Akbas
Managing Director

Photo: Auger Autotechnik

Complete project report (available only in German language): www.prozeus.de/prozeus/praxis/auger/
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The barcode and GS1 DataMatrix, which are both integrated into the packaging label, are read with the 2D barcode scanner.
Experience and successes

To permit the 15-month PROZEUS project to be implemented efficiently, initially a comprehensive process chain analysis was performed along the complete goods and information flow. The target system was derived on the basis of this status analysis. The solution strategies were included in specifications together with the other requirements. In addition to the technical requirements for the ERP system, implementation of the GS1 standards was also focused on. It was important above all to describe the future cross-company standard processes adequately. The IT service provider who had developed the ERP software put forward corresponding implementation proposals and enhanced the ERP system for electronic communication by means of EDI.

Development of the new product label was given top priority, however, because it forms the basis for all processes. The product label should comply with requirements of both the suppliers and Auger Autotechnik. A hybrid label in the cost-effective rectangular format was agreed on. This contains two different data carriers which do not obstruct each other, however: the GTIN required for the customer’s POS and other external processes was encrypted in the GS1-128 barcode. The GS1 DataMatrix is used for communication with the suppliers and for internal processes. In addition, the hybrid label contains an Auger article number. The information which comes from the ERP system is displayed, collected and read out using mobile data acquisition devices. This permits the products to be traced from end to end throughout the entire process.

Before finally being placed in service, the basic technical and organisational adjustments and implementations were tested exhaustively.

Omitting process steps and reducing the workload enables costs of up to €40,000 per year to be saved. Uniform communication standards in particular play a major role in enhancing process and cost efficiency. This permitted decreased use of external loan and temporary workers and enabled processes to be expedited. At the same time the administrative effort is significantly reduced. After just 18 months the investment costs were recovered. In addition, Auger has increased transparency and was able to improve its level of service – especially in the market for spare parts this is an increasingly important success factor.

<table>
<thead>
<tr>
<th>ID</th>
<th>ACTUAL process</th>
<th>Must</th>
<th>Can</th>
<th>Correction</th>
<th>TARGET process</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Create checklist for goods receipt (GR)</td>
<td>x</td>
<td></td>
<td></td>
<td>Process step omitted</td>
</tr>
<tr>
<td>2</td>
<td>Create input list for goods receipt</td>
<td>x</td>
<td></td>
<td></td>
<td>Process step omitted</td>
</tr>
<tr>
<td>3</td>
<td>Provide handling unit and unload truck</td>
<td>x</td>
<td></td>
<td></td>
<td>Process step will be taken over without modification</td>
</tr>
<tr>
<td>4</td>
<td>Enter the delivery and invoice in the ERP system</td>
<td>x</td>
<td></td>
<td></td>
<td>Process step will be taken over with modification</td>
</tr>
<tr>
<td>5</td>
<td>Unpack the delivery</td>
<td>x</td>
<td></td>
<td></td>
<td>Process step will be taken over with modification</td>
</tr>
<tr>
<td>6</td>
<td>Check the delivery</td>
<td></td>
<td>x</td>
<td></td>
<td>Process step omitted</td>
</tr>
<tr>
<td>7</td>
<td>Create warehousing lists</td>
<td></td>
<td>x</td>
<td></td>
<td>Process step omitted</td>
</tr>
<tr>
<td>8</td>
<td>Transfer delivery to stock, step I</td>
<td>x</td>
<td></td>
<td></td>
<td>Process step will be taken over with modification</td>
</tr>
<tr>
<td>9</td>
<td>Transfer delivery to stock, step II</td>
<td>x</td>
<td></td>
<td></td>
<td>Process step omitted</td>
</tr>
<tr>
<td>10</td>
<td>Enter deviating quantities in GR list/ ERP</td>
<td></td>
<td>x</td>
<td></td>
<td>Process step omitted</td>
</tr>
<tr>
<td>11</td>
<td>Enter deviating storage locations in the ERP system</td>
<td></td>
<td>x</td>
<td></td>
<td>Process step will be taken over with modification</td>
</tr>
<tr>
<td>12</td>
<td>Compare GR list with report from the ERP system</td>
<td></td>
<td>x</td>
<td></td>
<td>Process step omitted</td>
</tr>
<tr>
<td>13</td>
<td>Correct differences in the ERP system</td>
<td></td>
<td>x</td>
<td></td>
<td>Process step omitted</td>
</tr>
<tr>
<td>14</td>
<td>Final comparison of GR list with the ERP system</td>
<td></td>
<td>x</td>
<td></td>
<td>Process step omitted</td>
</tr>
</tbody>
</table>

Extract from the assessment of (sub)processes which were to be optimised on the basis of the detailed process analysis.
Supply chain tracking in the value chain China-Germany including quality monitoring with the help of EPC/RFID standards

The company

KWT Wärmesysteme GmbH & Co. KG was founded in 2009. The company is based in Eschweiler and produces free-standing stoves and pellet stoves which combine trend-setting combustion technologies, attractive design and optimum efficiency. KWT also offers complete heating systems. Sales are handled over the internet and through dealers, architects, chimney sweeps’ guilds and DIY stores. As a trailblazer in matters related to combustion technology, KWT, together with RWTH Aachen, has developed stoves which can be operated without a fine particle filter. Their emission values today already meet the strict regulations of the Federal Emission Control Ordinance Stage 2 which will come into force in 2014.

Content of the project

With the PROZEUS project KWT is aiming to increase the efficiency of all business processes and to guarantee that it implements challenging quality requirements in the combustion technology sector, especially in its production in China. In the long term this company wishes to grant business partners worldwide access to product and quality data. In the outsourced Service Centres, online inventory management is also intended to provide greater transparency for the customer.

Unambiguous product identification and complete worldwide product and batch traceability were to be ensured in a PROZEUS project with the help of GS1’s EPC/RFID standards. An account-protected tracking system was designed to make all the processes along the value chain transparent. Object status data was to be collected automatically using RFID technology, enabling the position of a product in the production process to be ascertained at any time.

Experience and successes

In the first step all existing processes and the associated optimisation potential were analysed. The analysis showed that each product had

Diagram of the value chain between China and Germany

“The intelligent linking of identification, localisation and communication technologies with central data management considerably simplifies all process steps and offers up-to-date, transparent information. By using eBusiness standards such as EPC/RFID we guarantee ourselves the decisive advantage which enables us to survive alongside national and international competition.”

Dipl. Ing. Karl Heinz Wollersheim
Managing Director

Photo: KWT Wärmesysteme
already been assigned an identification number in the form of a barcode sticker. In addition to the serialised sGTIN, a specific data sheet in accordance with CE labelling on the product was also used to ensure machine-independent readability of the product information during processing and on the end consumer side.

Employees had to complete detailed test logs by hand. These were collected and sent to the administrative centre and handed to customer service staff when requested.

In order to enhance the efficiency of the entire value chain and to improve data management, KWT decided to use a web-based solution and to introduce EPC/RFID technology. View- and contact-free data transfer by means of radio frequency identification (RFID) enables objects to be registered without interrupting the flow of materials. To permit this they are equipped with transponders which serve as carriers for the electronic product code (EPC) in which data such as the serialised GTIN is encoded.

After a stove has been completed, it is thus labelled with a barcode or an EPC/RFID tag including the sGTIN. Each status change to the product can now be recorded and documented systematically. Following identification with a hand-held device, employees in the production department create test logs and load these in the system. These are then displayed both on the hand-held device and on a web platform.

During the next steps, the order status is automatically recorded and transferred to the system managing the inventory and the web platform. This guarantees complete documentation in real time. The current status of the production order can be ascertained at any time and anywhere in the world via a web interface, a computer attached to the internet or a smartphone. Finally, after it has arrived in the German distribution centre, the product can be assigned directly to the customer order using the sGTIN and shipped.

When the product has been accepted, a final status message is posted in the system managing the inventory.

Within 10 months KWT succeeded in implementing the EPC/RFID technology, including introducing and adapting IT systems. KWT encountered particular challenges as a result of the cross-location supply chain between Germany and China, because numerous complex processes must be mastered along the supply chain involving different countries and companies. EPC/RFID as the interface technology enhanced the efficiency of the cooperation between the partners and opened up a whole new world of potential for added value.

Optimising the business processes enabled KWT to reduce the error quota by 20 per cent, to shorten the processing times by 10 per cent and to decrease the costs for complaints by 15 per cent. With annual savings of 28,667 euros, the project sponsored by PROZEUS will have paid for itself in 2.13 years.
Article labelling and use of auto ID for the incoming and outgoing goods using the GS1-128 barcode standard

The company

ROWO-FOOD GmbH, which was founded in 1992, imports air- and freeze-dried raw materials from all over the world. After they have been refined and prepared, the products are marketed exclusively throughout Europe by WOLF Naturprodukte GmbH to the food processing industry. In complex variety trials ROWO-FOOD develops high-quality seeds and makes these available to producers worldwide. In addition, the company stands out on account of its high-level consulting skills and fair cultivation agreements. This ensures that ROWO-FOOD obtains the best raw materials from the locations where they flourish.

Content of the project

With its new project partner WOLF, ROWO-FOOD wanted to use the PROZEUS project to enhance the in-house and cross-company flow of information on a long-term basis. Above all details of current production statuses were to be provided in real time and manual, error-prone processes were to be reduced.

For the solution strategy, the company selected a logistics standard which is recognised around the world: the GS1-128 barcode standard, which is as easy to use as it is cost-efficient. It is able to encrypt a wide variety of information and important additional logistical information, such as ‘best before’ date, batch number and weight details.

All palletized goods were to comply with this GS1 standard and thus be unambiguously identifiable – from goods receipt to production to shipping. This end-to-end labelling standard was intended in future to achieve greater efficiency in the processes for the in-house flow of materials. It should always be possible to recognise the production progress in the ERP system.

Experience and successes

In order to define the tasks and responsibilities in the PROZEUS project, ROWO-FOOD created a detailed project and work schedule. The division of labour was also taken into account in this. With this realistic project planning ROWO-FOOD set a first important milestone for the success of the project. Within one year the switch-over from manual processes to auto ID (automatic identification) had been achieved.

First the receipt of the raw materials is confirmed at the gate concerned. Then employees reload the goods, generally from containers onto pallets. Each individual pallet is assigned a batch number and GTIN. The goods are actually placed in stock on the relevant storage shelf by means of a scan process which triggers a booking in the ERP system. The inventory released after a quality check can thus be recognised immediately in the ERP system.

“By using auto ID we optimise our goods receipts and issues and also the in-house transparency.

Whether in the intralogistics or in cross-company processes – real-time information and transparent shipment tracking are decisive competitive factors today.

Switching to electronic business processes enables us to position ourselves even better on the market and to offer our customers a considerably better service.”

Rainer Kaske
Head of Organisation

ROWO-FOOD GmbH
Stadelhofen, Bavaria
Food
40 employees (2010)
Annual sales: 11 million euros (2010)
www.rowo-food.com
Complete project report (available only in German language):
www.prozeus.de/prozeus/praxis/rowo/

www.prozeus.de
ROWO-FOOD uses a scanner for all mobile recording work. This virtually excludes irregularities when operating and also incorrect entries – whether on the stacker or on the production system. Each employee can consequently perform all kinds of activities in accordance with their task and authorisation without any problem. The “one-device strategy” reduces the effort for future enhancements and adaptations and at the same time increases process flexibility.

As soon as, for instance, an article’s batch is assigned to a customer order in the ERP system, the information required for on-schedule provision appears directly on the scanner in the so-called “job list.”
The stacker driver selects the relevant job and can pick the goods required from the relevant storage shelf and make them available in the dispatch station.

Labelling complies with the GS1-128 barcode standard taking into account the individual customer requirements. Different content defined by the GS1 data indicator concept and which is encrypted in the barcode can be specified for each article.

The use of the auto ID in the logistics sector leads to considerable savings compared to existing manual process steps: The time reduction alone results in annual savings amounting to around 33,600 euros. This means the payback period is less than two years. The qualitative benefit should also not be underestimated: The increased transparency, especially in the production procedure, permits greater flexibility and therefore improved ability to deliver. The ERP solution with real-time capability, including a traceability function, also enables complete batch tracing without complicated paper documentation.

<table>
<thead>
<tr>
<th>Batch</th>
<th>Quantity</th>
<th>From LF</th>
<th>To LF</th>
<th>By</th>
</tr>
</thead>
<tbody>
<tr>
<td>33257</td>
<td>2.500</td>
<td>A4EG</td>
<td>ZWL</td>
<td>14.12.10</td>
</tr>
<tr>
<td>34987</td>
<td>1.450</td>
<td>104051203</td>
<td>103000000</td>
<td>14.12.10</td>
</tr>
<tr>
<td>30456</td>
<td>720</td>
<td>104010700</td>
<td>103000000</td>
<td>14.12.10</td>
</tr>
<tr>
<td>29828</td>
<td>950</td>
<td>106070402</td>
<td>A1OG</td>
<td>16.12.10</td>
</tr>
<tr>
<td>31258</td>
<td>750</td>
<td>106070800</td>
<td>A1OG</td>
<td>16.12.10</td>
</tr>
<tr>
<td>31258</td>
<td>750</td>
<td>106070801</td>
<td>A1OG</td>
<td>16.12.10</td>
</tr>
</tbody>
</table>

You will also find this project report in the form of a presentation in the PROZEUS Mediathek at www.prozeus.de (available only in German language).
The company

Tardis GmbH & Co. KG, which was founded in 2004, is one of the leading special providers of glass systems. The product portfolio includes high-quality shower cubicles and glass elements such as partitioning systems and glass facades with patented technology. Further business sectors include cold and warm facades which are based on the same technologies. The offering stands out on account of its compliance with stringent environmental standards in the product design, procurement of raw materials and production.

Content of the project

REACH, the regulation on chemicals of the European Union (EC Regulation No 1907/2006), demands that substances of very high concern (SVHCs) in a concentration of more than 0.1 per cent in a product must be pre-registered at the European Chemicals Agency. According to REACH, consumers have a right to find out whether SVHCs are contained in a product. With the three-month PROZEUS project, Tardis wanted to comply with the obligation to provide information on chemical content in its shower cubicles vis-à-vis the German authorities and systematically implement the REACH regulation. At the same time, where possible Tardis wanted to exclude SVHCs from its products. Complementing the product information by voluntary, substance-related information and ecological product design is designed to sharpen the profile of the Tardis brand.

Tardis analysed the materials in all of its upstream products and packaging which are required to produce shower cubicles. The parts lists of all completed Tardis shower cubicles were adjusted accordingly. Each shower cabin was assigned a GTIN and can consequently be identified unambiguously both inside and outside the company. The upstream products were also assigned a GTIN. As a result it can at all times be seen from the parts list whether a finished product contains SVHCs. Tardis placed all the information on materials in its shower cubicles on the service platform of CS Compliance. Customers can now access it at any time. All interested parties can now obtain reliable and up-to-date information in a matter of seconds via CS Compliance or directly from Tardis.

Experience and successes

Within three months Tardis switched from complicated single-case searches to a functioning system for managing product information which is relevant to REACH. Customer enquiries regarding substances of very high concern in shower cubicles can now be answered „at the press of a button“.

To enable hazardous materials to be identified unambiguously, Tardis initially had to assess each individual product and obtain reliable information. This first project phase was underestimated during planning and took a great deal of time.

“...the flow of information was significantly accelerated by implementing the project. Far less personnel effort is required for SVHC inquiries as the information is already collected and available and does not need to be obtained first. Ideally the information process can even be completely outsourced. This only requires that the dealer uses GS1 standards and has a connection to CS Solutions.”

Thomas Breuer
Managing Director

Photo: Tardis
As the dimensions of the shower cubicles can be freely selected by the customer, the concentration of substances in finished shower cubicles of the same type vary. Consequently, Tardis calculated the concentration of substances for the smallest possible version of each individual product type in order to be on the safe side. The profile of each individual shower cubicle was then placed in the CS Solutions data pool. Tardis also identified all products with a GTIN which ensures unambiguous assignment both at CS Solutions and in the company’s own system. CS Solutions, for its part, updates the list of SVHCs automatically, thus ensuring that the product information on SVHCs is up to date.

In the future, Tardis would also like to use the GTIN to optimise the business relationships with suppliers. Some upstream products are already identified unambiguously now and can thus be distinguished from competitors’ products. This is an important requirement for minimising administrative effort in the long term. By introducing the GLN and GTIN, Tardis has also prepared the ground for using the GS1-128 transport label for goods issue and receipt.

The benefit of the PROZEUS project for Tardis lies primarily in improved customer service. Following the switchover, a large number of employees can provide information on the chemical composition of a shower cubicle or any hazardous substances it may contain in a matter of seconds. Ideally, the customers themselves would obtain the information – using the GTIN on the web-based platform provided by CS Solutions. The information process would then be completely outsourced and would not require any personnel capacity. Furthermore, the company would have greater legal security and can prevent any possible penalties before they are imposed.

In addition, the processing costs per enquiry are reduced by an impressive 92.7 per cent by saving on internal processing times, material and postage costs and calculated penalty conditions before the project is conducted.

<table>
<thead>
<tr>
<th>TARGET process “Customer enquiry regarding SVHCs contained in Tardis shower cubicles”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>End customer</strong></td>
</tr>
<tr>
<td><strong>Dealer e.g. Still</strong></td>
</tr>
<tr>
<td><strong>Field sales force</strong></td>
</tr>
<tr>
<td><strong>Office sales force</strong></td>
</tr>
<tr>
<td><strong>Enquiry regarding SVHC in shower cubicles submitted</strong></td>
</tr>
<tr>
<td><strong>Customer enquiry regarding SVHC in shower cubicles received</strong></td>
</tr>
<tr>
<td><strong>Enquiry has been received</strong></td>
</tr>
<tr>
<td><strong>Check whether customer (dealer) uses GS1 standards (GTIN) and has a connection to CS Solutions</strong></td>
</tr>
<tr>
<td><strong>Customer (dealer) uses GS1 standards (GTIN) and has a connection to CS Solutions</strong></td>
</tr>
<tr>
<td><strong>Customer (possibly end customer) does not use GS1 standards (GTIN) and is not connected to CS Solutions</strong></td>
</tr>
<tr>
<td><strong>Dealer ascertains the information relevant for the customer and informs the customer</strong></td>
</tr>
<tr>
<td><strong>Tardis ascertains the information relevant for the customer and informs the customer (dealer or end customer)</strong></td>
</tr>
<tr>
<td><strong>Customer is informed</strong></td>
</tr>
<tr>
<td><strong>CS Solutions - with the help of GTIN</strong></td>
</tr>
<tr>
<td><strong>Office sales force</strong></td>
</tr>
</tbody>
</table>
Cross-media publishing based on a PIM system with eCl@sss integration

The company

AppliChem GmbH has existed in its present form since 1994. Its business focuses on producing and marketing chemicals and biochemicals for laboratories and production. Companies in the pharmaceutical and chemical sector and suppliers for biotechnological research and production are supplied with these products worldwide. More than 8,000 products are involved which are contained in three to four sizes of package.

Content of the project

The project consisted of introducing a Product Information Management (PIM) System from the company jCatalog which was to serve as the central hub for all descriptive data on the products. The data, which had previously been entered at different locations and was to some extent redundant, was consolidated with the introduction of the PIM system.

Bidirectional or unidirectional interfaces were to be created for the following areas:

- merchandise management (SAGE Office Line Evolution),
- web presence (website implemented with TYPO3 with a webshop),
- catalogue printing currently implemented with the 3B2 publishing solution and
- possibly an Open Catalogue Interface (OCI) implementation.

In addition, the PIM was to be configured in such a manner that

- label printing,
- customised price list creation and
- CD creation

are possible from a central database and, as far as possible, also directly from the PIM System.

The PROZEUS project was completed in September 2011 when the AppliChem Catalogue 2011/12 was derived from the PIM. At the same time the eCl@ss standard was integrated into the Product Information Management as a classification. Hardly any of the competitors will have such a comprehensive comparison of chemicals with the eCl@ss standard. Redundant data maintenance was reduced as far as possible. Unfortunately it was not possible to convert all the specifications in the

Classification standards

Presentation of the AppliChem project

“...The introduction of the Product Information Management System as an eBusiness application means that we will have a more visible profile on the market than before with correct and up-to-the-minute data. Classification according to eCl@ss will contribute to this.”

Dr. Wolfgang Sipos
Business Development
time available, which means that reworking is now required with respect to the interfaces to the ERP system.

**Experience and successes**

At many times the project proceeded very slowly. In retrospect it can be seen that the initial planning was too ambitious. Because of the mass of data which needed to be imported and its complex structure, AppliChem and in particular the service provider had a number of obstacles to overcome. It would have made sense to take more time in order to develop the desired data structure in more detail.

Under the time pressure to produce a printed catalogue from the PIM, for pragmatic reasons data structures were taken over from the old product management system or an attempt was made to map these. It was hoped that this would reduce the risk during catalogue creation as the old, semi-manual routines were to be used for the publishing solution to generate the print layout and the printer’s copies.

In the past it had been recognised that in this case even minor changes to the data can lead to considerable problems. An attempt was therefore made to create an output from the PIM which was as identical as possible to the existing system.

However, it became apparent that this did not produce the desired result. With great probability it would have been more effective to use the new, state-of-the-art data to redesign the systems based on this cleanly and to structure the product data in the PIM on a media-independent basis.

The company recognised that only a clean data structure can lead to a simplification of data maintenance. The data now available in the PIM can, after a few outstanding corrections to the metadata concept have been made, be expanded in the future without any problem and without any danger of data being forgotten which was previously maintained redundantly at different locations. When the interfaces to the ERP system and the webshop have also been completed, a unique system will be available which enables the latest version of the product data to be displayed on any required medium. In particular the planned integration of the data into the customer systems via an OCI interface will offer AppliChem a competitive advantage which will be reflected in increased customer satisfaction and consequently in increased sales.
Central product data management system for single source publishing

The company

Bürkle develops, produces and markets manual samplers, pumps for aggressive liquids and laboratory equipment. The products are marketed through trading partners, via a mail-order catalogue and the online shop to industrial customers who are mainly active in the chemicals, pharmaceuticals, food and stimulants, and environmental sectors. Bürkle has been active on the market since 1950 and has established itself as the market leader in Europe.

Content of the project

The PROZEUS project for Bürkle GmbH took place in two phases. The basis was provided by setting up a central product data management system for single source publishing using eCl@ss and BMEcat. The data was primarily to be output in two different media, in the online shop/web-site (Phase 1) and in the DTP program for the printed catalogue and brochures (Phase 2). The new website (conclusion of Phase 1) was launched as early as October 2010.

Bürkle is extremely satisfied with the result. Both the access figures and the sales in the online shop confirm that the enhanced data quality and structuring of the information lead, among other things, to better navigation and the products in the shop being easier to understand. Direct transfer of the orders from the shop to the ERP system means that these orders can now be processed simply and quickly.

New products can now be offered online rapidly and in an uncomplicated manner. The data is then already stored for the upcoming catalogue. Phase 2 was completed when the product catalogue was created for the first time in June 2010. The first product brochures have already been created from the database.

Experience and successes

The biggest stumbling block during the course of the project was the quality of the product data. The main problem was that structuring of the data had to take place at the outset, and a lot of fundamental system definitions depended on this.

Classification standards

Bürkle GmbH
Bad Bellingen, Baden-Wuerttemberg
Medical technology
33 employees
Annual sales: 7.0 million euros
www.buerkle.de
Complete project report (available only in German language):
www.prozeus.de/prozeus/praxis/buerkle/

“We want to place our products worldwide. It is consequently important that we can offer our customers and partners high-quality, standardised product data in their national language both quickly and flexibly.”

Birgit Joos
Head of Marketing

Photo: Bürkle

Presentation of the Bürkle project

© PROZEUS
Bürkle was unfortunately forced to take as a basis a definition which at the time could not be checked with data and thus confirmed. This resulted in the system which had already been implemented being reworked. Another problem was that the three service providers (ERP connection, online shop, database) were dependent on each other. The interface between the database and the shop could only be created with existing product data definitions; the ERP and shop interface could only be implemented and tested with the existing shop.

The project itself was assigned high priority from the beginning, which is the reason why there were few delays overall. But it could not be foreseen that it would tie up company resources to such a great extent. Despite everything the company has already been able to achieve the first positive results. Among other things – as already stated – in the online shop, in the rapid creation of the catalogue and brochures with consistent data, and in the first translations, e.g. new product information and an instruction manual in 20 languages.

The number of visitors to the website was increased by 100 per cent, and the orders placed via the online shop by 60 per cent. Further cost savings amounting to 40 per cent can be achieved in the translation of product data in the first step by means of standardisation and dispensing with post-formatting. Future translations will presumably be up to 60 per cent cheaper thanks to the Translation Memory System (TMS). The website and the product catalogue will in future be available in at least four instead of just two languages. Furthermore, time savings will be achieved when creating product information documentation, the amount varying according to the output format (post-processing): approx. 50 per cent for a catalogue, 70 per cent for brochures and 90 per cent for product information sheets.
The company

FHF Funke + Huster Fernsig GmbH produces equipment for optical and acoustic signalling in all sectors of industry. Extreme requirements are also satisfied here, e.g. for explosion protection, fire protection, moisture proofing and weatherproof protection, and comprehensive outdoor durability. In addition to user-specific integration capability, the modular design is characteristic of signalling devices from FHF. Benefits for the industry are: optimum availability of the products and thus great cost-effectiveness in production and storage.

Content of the project

As an international company, FHF struggles with massive pressure from competitors, above all from Asia and Great Britain. eBusiness standards consequently offer a great opportunity in the fight for customers and market shares. In order to be able to stand up to the increasing international pressure, it is becoming increasingly important to make all eBusiness multilingual.

Experience and successes

All German wholesale organisations are already supplied with product data which is based on the ETIM standard.

The eBusiness activities were limited to German and English before the project began. As eCl@ss and ETIM have become standards in the sector and multilingual capability is therefore available, FHF decided to create the basis for the company to offer other languages (in particular Spanish).

The ETIM standard (Version 4.0), which also provided the basis for the company website, was used from the start of the project. The ETIM data is based on the ERP system (SAP R/3). All the other information relating to ETIM is maintained in a PIM system (ac Pointer). Furthermore, all documents (operating instructions, authorisation documents, etc.) come from a DMS (Saperion). All these systems are networked with each other via corresponding interfaces.

“At FHF we employ standards because in the course of globalisation the structured interchange of data is the only way to implement the communication of the future. For our market eCl@ss and ETIM offer the best basis for both our national and international business.”

Norbert Hoffmann
Product Management – Marketing

FHF Funke + Huster Fernsig GmbH
Mülheim an der Ruhr,
North Rhine-Westphalia
Signalling and communication equipment
155 employees
Annual sales: 26.2 million euros
www.fhf.de
Complete project report (available only in German language):
www.prozeus.de/prozeus/praxis/fhf/
It required a great deal of effort to supply the pictorial material specified in the standard. One condition of the international electrical wholesale trade in the context of ETIM International had not been met when this brochure went to press because language versions were missing. Despite many minor delays, both in-house and on the part of the service provider, advanced concepts, the overall project was completed within the defined schedule. This was due in particular to the generous scheduling up front. It was possible to process all the planned project items in accordance with the specifications without additional days.

The picture database created has been online since February 2011 and is extremely popular. There are already indications that the desired time savings when transferring pictures will be achieved.

The Spanish version of the website was in preparation and was implemented directly after an unplanned update of the CMS (Content Management System). The project has achieved the following direct economic success:

- Reduction of the enquiries for pictures for extended use, estimated savings approx. 30 min./day
- Time savings in the procurement and transfer of pictures, anticipated savings up to two person months/year
- Pictures in company’s own marketing applications more up to date
- Transfer of pictures according to ETIM standard, expected savings of approx. 0.5 person months/year
- Conquering of new international markets by providing ETIM standards in additional language versions (Spanish). Additional sales expected in the entire Spanish-speaking regions approx. 250,000 euros within two years thanks to enhanced communication.

The experience can be assessed positively in every respect. Since an existing standard was taken as a basis, the problems which were to be expected could be solved quickly. One concern was that the promised Spanish mapping tables for ETIM 4.0 could only be made available with increased effort and only after several requests to the international organisation.
Befestigungszentrum Reidl e. K. was founded in 1992. The company operates with standard parts, tools and materials from the work safety sector. In addition, eBusiness solutions for trade and private customers and C-Parts Management for the industry and small-trade sectors are offered. Encouraged by the success of electronic trade, gradually further systems were developed which support the customers in their procurement processes. Befestigungszentrum Reidl obtains goods and services from around 30 primary suppliers which, in terms of catalogue and transaction standards, have a varying level of technical knowledge and skills.

Content of the project

In particular the increasing internet business in recent years and participation in open electronic marketplaces (Mercateo, Amazon) has played a role in considerably enhancing the company’s awareness in the sector of content management for product and catalogue data and with respect to the electronic and automatic handling of business processes. The aim of implementing a product data management system for product data was to create a content management system for product data which makes use of open standards and is designed to shape and strengthen the company’s own eBusiness and eProcurement skills on a long-term basis.

By implementing the eleven-month project “Product Data Management and Interchange in Industrial B2B with eCl@ss, BMEcat and openTRANS” the company is now able to handle product data flexibly. Both in processing supplier catalogues and in creating customised catalogue solutions, recourse can be made to the product data pool which has in the meantime grown to include over 200,000 articles. In-house development meant that maximum flexibility was provided for connecting the existing systems, such as merchandise management, and also for transaction standards.
Experience and successes

It is as a result of the wide range of qualities of incoming supplier catalogues that Reidl has created a solution to view and standardize data in the form of its product data management system. The maintenance and enrichment of data is also a principal task of the solution. Being able to react to customer requirements at all times and being able to provide high-quality product data quickly is a task for the export interfaces of the product data management system.

The standards mentioned have been combined and mapped in the solution or used as basic technology. The timeframe and budget specified were calculated very competitively and, because of the requirements which arose or were modified in the course of development, these parameters were exceeded by around 40 per cent.

The amount of work the company had to perform itself in this project is certainly rather unusual for a small enterprise. But in recent years it has repeatedly become apparent that a company’s own DP department can respond flexibly to customer requirements where previously indefinable service costs would have delayed the ROI. In many places it was also possible to react to changing or new user requirements during development. The constant demands and support from PROZEUS also contributed to the success of the project.

For the company, the project presented is basic technology for the future developments in the eBusiness sector. As a result, in the coming months and years more and more systems in the company will use the product data management system.
Product information management for generating the online shop and interchange formats

The company
With its comprehensive range of its own and bought-in products, Transparent Lagertechnik offers space-saving storage systems for different application areas. Because of the company’s history, the current focus of its business activities is in the HVAC sector, but sporadic enquiries from other sectors and projects resulting from these reveal there is potential elsewhere. The in-house products in particular, thanks to their transparent storage, offer a wide range of approaches for various application areas both inside and outside Germany.

Content of the project
The project was designed to place the existing online shop on a new technological platform on which, among other things, Eastern European languages can also be displayed (this was not possible with the existing solution). In addition, product data maintenance was to be made more flexible and simplified as HTML formats were still required for this purpose.

The restricted functional scope of the previous solution meant that no grouped or configurable products could be shown, and these enable pallet racks to be marketed more actively. On the basis of the product data maintained in the online shop, the aim was also to permit interchange formats (BMEcat) and classifications (eCl@ss) to be generated in order to make the product data available to the downstream sales levels on a standardised basis.

In August 2010 the new online shop went live and is now available to the customers, offering extensive functions such as product comparison, cross- and up-selling, product filters, and much, much more.

Experience and successes
A few hurdles needed to be overcome in implementing this project. At the beginning of the project no structured data was available. Consequently, first of all a basic product data structure had to be developed to permit all product attributes to be mapped. Entering and editing the data turned out to be considerably more complex than estimated up

Presentation of the Transparent Lagertechnik project
front and caused considerable delay in the course of the project.

Classification of the product data according to eCl@ss 5.1.4 was relatively unproblematic. However, it should certainly be noted that the structures in eCl@ss are only to a limited extent suitable for arranging products from intralogistics and an extension of the standard in this context would be welcome. Implementation of the online shop was delayed because of a few special tasks and the extensive product data preparation, which was difficult to handle. With the new features of the online shop the company offers its customers a considerably more user-friendly environment and hopes that this will result in increased acceptance on the customer side.

The simplified product data maintenance in the shop enables Transparent Lagertechnik to work on the products more quickly and using more than one person. In summary, an instrument is now available which will bring with it clear benefits for future marketing activities and will offer considerable additional benefit through the generation of classified interchange formats.

With PIMagento – the combination of online shop and PIM system based on the Open Source solution Magento – as its basis, a system is available which can be enhanced in the future. In addition to the standard online shop, further (for example industry-specific or language-specific) shops can easily be set up. Automated production of print media is also possible, for which the product data which has already been edited is used (single source publishing). In addition, the range of functions is also easy to extend by means of enhancements and can thus be adapted to cover increasing requirements. Particularly mention should be made of the fact that the system is used without a licence fee, the factor which makes this approach feasible in the first place.

Schedule for the project at Transparent Lagertechnik (plan and actual)

Person days planned and required for the project at Transparent Lagertechnik
Developing an eProcurement portal for connecting customers with BMEcat, openTRANS and eCl@ss

The company

alpha Büro-Organisation GmbH has existed for 25 years and, as a C-article supplier in the B2B sector with ten employees, mainly focuses on ranges of products in the office consumables and promotional items sectors. As a service provider not only the sales price of the product is at the centre of all considerations, but also the replacement costs, alpha has specialised in reducing the often high procurement, distribution, checking and booking costs for low-price C-articles to a minimum. As a result, the bulk of the customers are small to medium-sized enterprises and administrative departments.

Content of the project

With the development of its eProcurement system alpha can provide its customers with a B2B order platform for the electronic procurement of products and thus largely complies with the extensive market requirements (e.g. data protection, a versatile search function, extended rights system, order monitoring, budgeting, options for customers to make changes depending on their rights).

The SAP/OCI connection which was developed enables customers with SAP systems to connect directly to the eProcurement system. The introduction of eCl@ss 6.2 meant that the article data in the MMS was enhanced by the necessary eCl@ss data fields and import functions were created for eCl@ss information. As a result, alpha is able to maintain the eCl@ss data directly in the MMS article master and to start data searches in accordance with eCl@ss. Furthermore, eCl@ss article data can be transferred to the connected ePortal and be made available to the customer there in BMEcat files.

Presentation of the alpha Büro-Organisation project

<table>
<thead>
<tr>
<th>Customer portal</th>
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<tbody>
<tr>
<td>Article data</td>
</tr>
<tr>
<td>Customers</td>
</tr>
<tr>
<td>Customer portal rights</td>
</tr>
<tr>
<td>Customer A</td>
</tr>
<tr>
<td>Customer B</td>
</tr>
<tr>
<td>User 1</td>
</tr>
<tr>
<td>User 2</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>alpha MMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer base</td>
</tr>
<tr>
<td>Customer data, cost centres, Users (general rights), conditions</td>
</tr>
<tr>
<td>Ranges</td>
</tr>
<tr>
<td>Price lists</td>
</tr>
<tr>
<td>Article master</td>
</tr>
<tr>
<td>Article data, eCl@ss</td>
</tr>
<tr>
<td>Transactions/Documents</td>
</tr>
<tr>
<td>Order, internal</td>
</tr>
<tr>
<td>Order, external</td>
</tr>
<tr>
<td>Delivery notes</td>
</tr>
<tr>
<td>Invoice</td>
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</tbody>
</table>

Transaction standards

<table>
<thead>
<tr>
<th>alpha Büro-Organisation GmbH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baesweiler, North Rhine-Westphalia</td>
</tr>
<tr>
<td>Wholesaler for office supplies</td>
</tr>
<tr>
<td>10 employees</td>
</tr>
<tr>
<td>Annual sales: 2.2 million euros</td>
</tr>
<tr>
<td><a href="http://www.alpha-officestar.de">www.alpha-officestar.de</a></td>
</tr>
<tr>
<td>Complete project report (available only in German language): <a href="http://www.prozeus.de/prozeus/praxis/alpha-buero/">www.prozeus.de/prozeus/praxis/alpha-buero/</a></td>
</tr>
</tbody>
</table>

“We use eBusiness and eBusiness standards to enable us to offer a future-proof solution which takes into account the requirements of a wide range of customers by means of its uniform basic technology and offers both us and our customers great potential for increasing efficiency.”

Herbert Kleuskens
Managing Director
Experience and successes

In the course of the project it became clear that everyone is talking about eBusiness standards, but there are still companies which prefer proprietary solutions. The “eCl@ssification” of products from the office supplies sector is still in its infancy.

However, the German Marketingverbund (Marketing Association), to which alpha belongs, in future wants to publish catalogues with the product classification and thus show its support for introducing eCl@ss.

The company discovered that not making use of eBusiness standards is expensive and particularly for small and medium-sized enterprises represents a hurdle which is almost impossible to overcome, meaning that the use of eBusiness standards is indispensable for the company.

Efforts to attract new medium-sized customers which began as early as the implementation phase were successful. In the crisis year of 2009, sales were slightly increased, and by the end of August 2010 the planned sales figures had been exceeded by 13 per cent. The first steps taken were to increase the number of employees in Sales and to extend sales to neighbouring postcode areas. By the conclusion of the project the improved turnover and increase in sales had been achieved without increasing the in-house staff, and the important efficiency indicator (gross earnings / personnel costs) was increased by around six per cent.

But alpha also learnt that customer-specific differences in requirements and additional wishes, plus the test to which the system will be subjected in productive application which is now beginning, will necessitate constant further development.

Developing a website for high-class promotional items supports the staff’s sales efforts. How important the use of eBusiness standards is for customer retention – and consequently of direct relevance to sales, on which it has a stabilising effect – was demonstrated immediately after the conclusion of the project by a request for bids from an existing customer (a supplier to the automotive industry) who will in future handle procurement of office supplies via an external eProcurement platform: However, the article data that alpha must supply for this purpose must be classified according to eCl@ss. Without the functional enhancements implemented in the project, alpha would have lost this customer!
The company

FLO-CERT GmbH is an independent certification company which operates internationally and has customers in more than 70 countries. The main business comprises certifying producers and dealers in the context of the standards of the Fairtrade Labelling Organizations e.V. (FLO e.V.). These “Fairtrade Standards” are designed to ensure that products are produced and traded responsibly – in social, economic and ecological terms. Producers and dealers must comply with clear minimum requirements. Only then may their products bear the Fairtrade seal.

Content of the project

Sustainable consumption is in trend: more and more consumers regard it as important that producers and dealers should act in a socially responsible and environmentally friendly manner. Labels such as the “Fairtrade” seal are used for purposes of orientation – for example when buying Kenyan cut flowers. FLO-CERT has set itself the long-term goal of being able to trace compliance with Fairtrade rules by all partners in the value and supply chains efficiently and without any gaps. The GS1 standards were to be used here for identification and communication, and to replace the random manual checks of the dealers’ and producers’ business processes.

In the context of the six-month PROZEUS project it was clear from the outset that the total scope could not be implemented within the time scheduled. Consequently the electronic communication of structured messages in EANCOM® format between the dealer and certifying company was focused on.

For this purpose, all transaction information must in the first instance be assigned unambiguously to the dealer and the producers, and the Fairtrade product names used in the certification process and the trade names which are customary on the market must be unambiguously related to each other. The Global Trade Item Number (GTIN) proved to be the suitable translation standard. Open Source EDI converter software was used to permit the automatic dispatch and receipt of electronic invoices in INVOIC format. The INVOIC messages contain information which FLO-CERT requires to compare the dealer’s data with the data of the producer.

Beyond the actual project, a Kenyan rose supplier was finally supported by a dealer in switching their invoicing to EDI, too. In future real time operation this producer will be assigned their own Global Location Number (GLN) to permit the company and its products to be identified unambiguously. As a result, data comparison between the dealer and the producer in the context of certification and the subsequent inspections by FLO-CERT will in future be quicker, more complete and cheaper.

"Through the introduction of electronic data interchange in EANCOM® format between FLO-CERT and FAIRTRADE-certified organisations which are headquartered around the world, we have for the first time put ourselves in a position to collect, virtually free of charge, a major part of the information which is indispensable for certification in real time and in a form which is largely complete and correct. Because of the solution’s performance capability, we anticipate that the overall investment will have been completely repaid within two years."

Till Wille
Head of IT

FLO-CERT GmbH
Bonn, North Rhine-Westphalia
Certification in the sustainability market
95 employees (2010)
Annual sales: 8.2 million euros (2010)
www.flo-cert.net
Complete project report (available only in German language): www.prozeus.de/prozeus/praxis/flo_cert/
Experience and successes

Coordinating and harmonising processes in the international environment entails special challenges. However, the project participants overcame these themselves, not least because, in addition to a purely economic interest, great solidarity existed with respect to the Fairtrade concept.

A requirement for this was that a complete project analysis be performed at the start of the project. On the basis of this, all the necessary activity packages and coordination processes could be defined early on and taken into account in every step of the project.

The project participants are extremely pleased with the result – especially as more was achieved than had been planned. The pilot tests did show that fine-tuning is still needed, but the basic functional capability and the expected benefits could be demonstrated. Today the producer’s invoice is used to automatically generate an electronic confirmation of receipt, which is in turn written to the FLO-CERT database. The effort required to enter the data is thus significantly minimised, and errors are virtually excluded. The time savings per transaction for the Fairtrade transaction message alone amount to 75 per cent – both at the dealer end and at the certifying company.
Implementation of further EANCOM® messages and a roll-out of other products, producers and dealers are planned. “By providing, free of charge, the EANCOM® software which was created as part of the project, we also see an opportunity to enable all Fairtrade organisations without existing digitised communication to enter into business relationships with trading partners around the world on a more equal footing. The hurdles which will presumably need to be overcome to achieve this, such as international project management and remote analysis of business processes, were mastered in this trial project by means of our joint efforts and will present an interesting challenge in follow-up projects,” says Tim Will of FLO-CERT GmbH.
Electronic cross-border handling of transport jobs (IFTMIN) and invoices (INVOIC) based on EANCOM® at a medium-sized enterprise

The company

Spedition Martin is a medium-sized company which was founded in 1975. The company’s business activities focus on procurement and distribution logistics, above all in the fast moving consumer goods and general industrial goods sectors. The company aims for sustainable growth. Stable and partner-like business relationships are more important to it than short-term profits. The logistics company utilises all technical options to keep the strain on the environment as low as possible and at the same time to operate cost-effectively. The best possible price for the best possible logistics service – that is the guiding principle of Spedition Martin.

Content of the project

On account of the increasing international division of labour and the close networking of the global economy, logistics has developed into a central success factor for all those involved. In addition to the actual flow of goods, an optimum flow of information is called for to achieve significant process enhancements – above all also in cross-border transportation.

The aim of the PROZEUS project was to implement paperless handling of transport orders and invoices between Spedition Martin and its French trading partner LGCF. By switching to electronic data interchange (EDI) the companies wanted to expedite their communication processes and achieve significant cost and time savings for all parties involved in the process. In addition, incorrect loading and incorrect postings were to be avoided in the future.

The objectives in detail:
- Accelerating the processes
- Avoiding manual entries
- Saving on printing costs (paper and printing)
- Reducing postage costs
- Cross-border win-win situation through EDI

The solution:

The following GS1 standards were implemented on the basis of the GS1 application recommendations for EANCOM®:
- Electronic transport order (IFTMIN):
  Transport commissioned from France
- Electronic invoice (INVOIC):
  Invoice sent to France
The project was initially planned to last seven months, but because the project had to be coordinated across more than one country, it took a total of nine months.

Initially a cross-functional project team was formed which included two members of staff from Spedition Martin and two from the wine wholesaler LGCF.

With a comprehensive ACTUAL analysis at the start of the project the participants established the basis for sustainable optimisation of the processes. This began with the electronic ordering of the wine deliveries from LGCF and ended with the weekly, manual invoice dispatch (paper document) after the delivery confirmation had been received.

In joint meetings the companies recognised the potential of standardised cross-company processes for the entire value chain and agreed to primarily organise invoices and transport orders more effectively.

In order to permit the progress of the project, including the necessary technical changes, to be monitored and controlled, a detailed schedule was drawn up which was regularly checked and updated.

Another major step was taken with the precise definition of the interfaces for the cross-company data interchange in the form of EANCOM®. This precise definition helped the EDI Clearing Centre involved – a service provider for converting in-house data to EANCOM® and vice versa – in implementing the technical aspects and provided clarity with respect to data sources and data integrity.

On this basis the external IT service provider was able to implement the interchange of the EANCOM® message types INVOIC and IFTMIN without any problem.

Both project partners profit from the conversion to EDI in various respects. The saving on paper and the reduction of print processes are appreciable above all in dispatch at LGCF and in the bookkeeping and planning at Spedition Martin. The companies can achieve far greater savings by reducing manual data entry and more efficient entry of transport orders. In addition, input errors and thus also errors in further process handling are reduced to a minimum.

An economic feasibility study showed that the investment costs of Spedition Martin of around 20,500 euros will be paid back in the second year when electronic data interchange will be implemented with two further companies. Coupled with this are further quality enhancements:

- Improved customer satisfaction
- Strengthening business relationships
- Possible gaining of new customers through know-how in the eBusiness sector
- Strengthening competitiveness
- Increased productivity of the employees thanks to time savings
- Error-free data processing thanks to higher data quality

<table>
<thead>
<tr>
<th>Project company</th>
<th>Spedition Martin</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS1 standards introduced</td>
<td>IFTMIN &amp; cross border INVOIC</td>
</tr>
<tr>
<td>One-off investments (in euros)</td>
<td>20,470.00</td>
</tr>
<tr>
<td>EDI costs/year (in euros)</td>
<td>2,772.00</td>
</tr>
<tr>
<td>Partner companies</td>
<td>LGCF plus two further companies</td>
</tr>
<tr>
<td>Annual cost savings (in euros)</td>
<td>8,699.73 13,168.80</td>
</tr>
<tr>
<td>Annual ROI (%)</td>
<td>40.55 62.38</td>
</tr>
<tr>
<td>Payback time (in years)</td>
<td>2.47 1.60</td>
</tr>
</tbody>
</table>

Overview of ROI and calculation of payback time
The company

Founded in 1994, TSI GmbH & Co. KG develops innovative products for the food trade. The company’s guiding principle is to help provide high-quality, affordable food. TSI does not have any production capacities of its own, but has established a worldwide supplier network with more than 100 partners in 20 countries who produce food according to TSI’s specifications. Above and beyond product development, TSI organises the entire value chain, including coordinating production and logistics, and also worldwide marketing.

In the course of the eleven-month PROZEUS project TSI satisfied all the prerequisites to comply with customer requirements, for example for an electronic dispatch notification, and simultaneously to organise the processes along the supply chain more efficiently. Together with a project partner and an IT service provider, TSI developed a WebEDI portal to connect all suppliers with no EDI capability to permit the mutual interchange of EANCOM® messages such as ORDERS, DESADV and INVOIC.

The WebEDI portal is an EDI solution which customers and in particular suppliers can use to exchange simply structured messages with TSI in EANCOM® format by fulfilling just two requirements: All business partners have a PC with an internet connection and all business partners can be identified unambiguously by means of a Global Location Number (GLN). After all the information which accompanies the goods has been entered at the user-friendly, multilingual portal, a data converter ensures that the EDI standards of GS1 Germany are automatically complied with for message transfer. This also permits business partners who have no EDI infrastructure of their own to be effectively integrated into the electronic data interchange.
Experience and successes

Supported by the GS1 standards and the outsourced WebEDI, TSI GmbH & Co. KG was able to concentrate fully on the detailed planning and introduction of the new processes – an important factor in ensuring the long-term success of the project.

The benefits of the Software as a Service model were shown particularly clearly in the project. As the technical infrastructure was outsourced to an external service provider, TSI required only its own merchandise management system to set up efficient supplier communication.

To guarantee the project ran smoothly, comprehensive organisational preparation was also called for. The focus here was on developing a detailed project plan which defined the various activity packages and milestones clearly.

The benefits of the WebEDI portal are obvious: The user-friendly WebEDI solution enables above all small to medium-sized enterprises to participate in electronic data interchange without having their own EDI infrastructure – and that at very low cost.

In implementing this project TSI connected all its suppliers in accordance with the EDI standard. At the same time TSI satisfied one of the currently most important customer requirements of the food industry for an electronic dispatch notification DESADV, thus strengthening its competitive position.

But not just the customer service profits from this – so too does process efficiency. For example, manual operations at TSI were reduced by 90 per cent, and the running costs by almost two thirds – which amounts to savings of 65,000 euros per year. And the ROI is achieved after around one and a half years.

<table>
<thead>
<tr>
<th>Activity package (AP)</th>
<th>Implementation in calendar weeks (CWs)</th>
<th>Content of activity packages/Milestones (MSs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(9–11) 2,25 TW</td>
<td>Detailed ACTUAL analysis of the processes and corporate structure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 1: Presentation of the corporate structure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 2: Adding and describing the ACTUAL processes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 3: Defining success measurement values for the later TARGET/ACTUAL comparison</td>
</tr>
<tr>
<td>2</td>
<td>(9–11) 4,75 TW</td>
<td>TARGET – Process planning/definition of the project content and project planning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 4: Monitoring and description of the new TARGET processes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 5: Monitoring and description of the data model and interfaces of the existing IT systems</td>
</tr>
<tr>
<td>3</td>
<td>(7–12) 9,25 TW</td>
<td>WEB EDI system design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 6: Selecting hardware and software and relevant providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 7: Drawing up offer and approving of specifications</td>
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<tr>
<td></td>
<td></td>
<td>• MS 8: Controlling and planning the resources</td>
</tr>
<tr>
<td>4</td>
<td>(12–48) 82,45 TW</td>
<td>Implementing the work plan contents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 9: Implementing the solution according to the LogAgency specifications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 10: Test run, if required realignment and adjustment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 11: Go live</td>
</tr>
<tr>
<td>5</td>
<td>(46–49) 5,37 TW</td>
<td>Qualification of the employees (training courses – qualification – documenting knowledge)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 12: Organising workshop/Employee information event</td>
</tr>
<tr>
<td>6</td>
<td>(50–4) 8 TW</td>
<td>Project management and documentation (monthly reports and project documentation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 13: Result evaluation and measuring success (examining economic feasibility, ROI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MS 14: Project brochure, assessment report</td>
</tr>
</tbody>
</table>
Further PROZEUS best practice examples from consumer goods sector, trade and industry

Order and download for free at www.prozeus.de
Please note that these brochures are available only in German language.
What are identification standards and what benefits do classification standards offer? What data is transferred in a catalogue interchange format and how does electronic data interchange on the basis of transaction standards work? The five new interactive PROZEUS training modules answer these and many other questions by explaining complex information in a simple and comprehensible manner.

With immediate effect PROZEUS will offer a new information channel on the internet to present the use and benefits of eBusiness standards: five interactive training modules explain, in a succinct and neutral manner, the different modules required for successful electronic business communication. The contents range from the electronic identification and classification of products and services to their exchange in the form of eCatalogues and electronic messages, through to the specific definition of processes and procedures.

The various eBusiness standards are presented using an example from practical application and their functions and benefits for the users are made clear. Each module comprises one short film and an interactive game (only in German language each) which enables the users to repeat what they have learned.

This initiative thus offers another important information source for interested eBusiness newcomers and decision-makers from small to medium-sized enterprises. In the meantime users can obtain information on the comprehensive PROZEUS information offering either in printed form as a brochure, guidelines or leaflet, electronically via the PROZEUS Wiki and the assessment report database, in the form of recorded online events in the Mediathek and, last but not least, also in the form of interactive training modules.