PROZE[us]

PROZESSEundSTANDARDS

Master Data Alignment & Catalog Exchange

Catalogue Management with SA2 Worldsync

Practical Benefits · Efficiency · Project Implementation

PROZEUS – Practical eBusiness solutions for small and medium-sized enterprises

Content

Glossary of terms and acronyms

GLN | Global Location Number. Globally unique identi
fication for locations and trading partners.
GS1 Germany | Service and competence center for
optimization of business processes with trading part-
ners. Founding member of EAN International and
GS1, as well as the exclusive German representative
of EPCglobal. (formerly known as CCG, Centrale für
Coorganisation GmbH)

The PROZEUS Project

PROZEUS stands for 'promoting the eBusiness competence of small and medium-sized enterprises (SMEs) to participate in global purchasing and sales markets through integrated processes and standards' (German: 'PROZEsse Und Standards').

The aim of the project is to create transparency in eBusiness, to act as a clearinghouse of information, and to generate expertise. To this end, exemplary eBusiness business cases are transferred to trade and industry. Select small and medium-sized enterprises have developed these business cases in pilot projects. The findings and the experience that derives from these projects, which have their focus

upon globally usable processes and standards, now constitute the basis for a series of publications. This series is intended to support small and medium-sized enterprises in initiating and implementing their own eBusiness projects.

GS1 Germany GmbH – the new name of CCG – together with the Institut der deutschen Wirtschaft Köln Consult GmbH (IW Consult), have been charged with the realisation of PROZEUS for the consumer-goods industry jointly as an integrated project. It is supported by the Federal Ministry of Economics and Technology [Bundesministerium für Wirtschaft und Technologie (BMWi)].

GS1 Germany would like to thank the following companies for providing information and findings based on the pilot project:

Hitschler International GmbH,
Cologne, Germany

METRO AG,
Düsseldorf, Germany

What is the purpose of item master data?

Master data play a decisive role nearly every step of the way along the process chain between retail and supplier. Key core processes such as orders, inventory management and invoice handling are efficient only if the master data are of high quality. Today, many companies still draw up customer-specific item master data in the form of catalogues. SA2 Worldsync simplifies this catalogue maintenance considerably.

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SA2 Worldsync: The standard for master data

SA2 Worldsync is a central and standardised item database for the target markets of Food/ Non-Food, Catering, Textiles, Sport, Shoes, Deposit Goods, Agrochemicals and Construction, Living and Garden (DIY). SA2 Worldsync enables industry and retail to optimise their electronic data traffic: item master data are not only multilaterally reconciled in a time- and cost-effective manner, but they are also subjected to in-depth quality reviews. As a result, retailers can constantly and optimally cultivate their selling area. The benefit of the pool concept is that the data only need to be entered into the central SA2 Worldsync data pool once, and all of the participating interested parties (retailers, for the most part) are automatically supplied with the data. Via flawless implementation of all electronically supported EDI (Electronic Data Interchange) business processes, SA2 Worldsync is paving the way to ECR (Efficient Consumer Response). SA2 Worldsync was created more than 10 years ago as an independent service offering by GS1 Germany – previously the Centrale für Coorganisation (CCG). Partners in SA2 Worldsync GmbH are PIRONET NDH AG and GS1 Germany GmbH, both of Cologne, Germany.
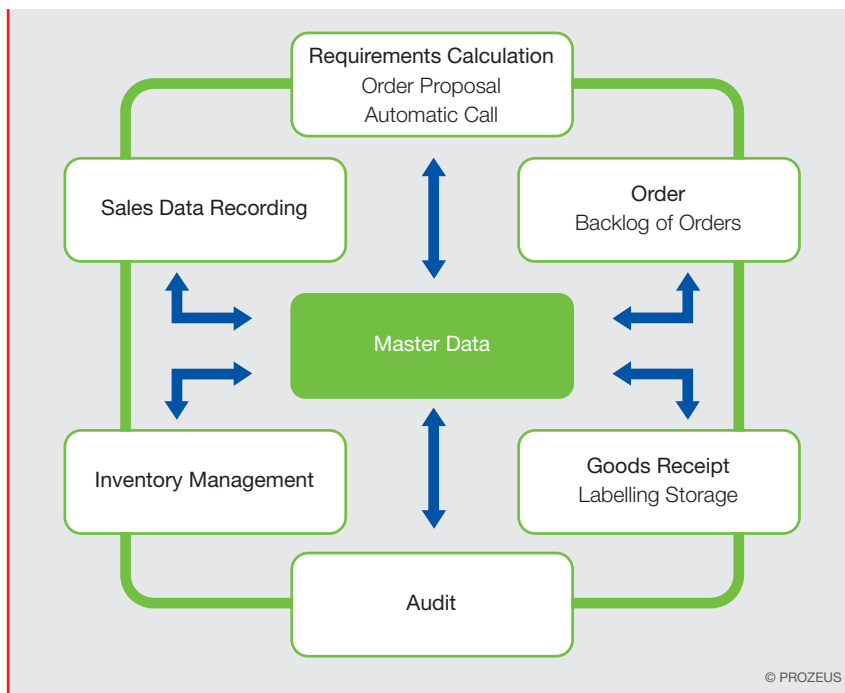
Data interchange with S2 Worldsync

Suppliers deliver data to SA2 Worldsync, and manufacturers submit item master data for their products – including the accompanying image data – to the central SA2 Worldsync data pool, where other SA2 Worldsync participants can call them up. The quality of the content provided, and regular updating of their data, are the responsibility of the companies themselves.

Item master data can be delivered as an EANCOM®/PRICAT message or as an SA2 Worldsyncplus•PRO message as an appendix to an X.400 message, as an email or via diskette. With SA2 Worldsyncplus• EASY, data delivery requires nothing more than assignment of an identifier – with a single 'click'.

Calling up and receiving data from SA2 Worldsync

SA2 Worldsync customers are entitled to call up specific item master data and image data from the SA2 Worldsync data pool.

This call takes the form of either an EANCOM®/PROINQ message or a manual entry on the SA2 Worldsync web pool search websites.
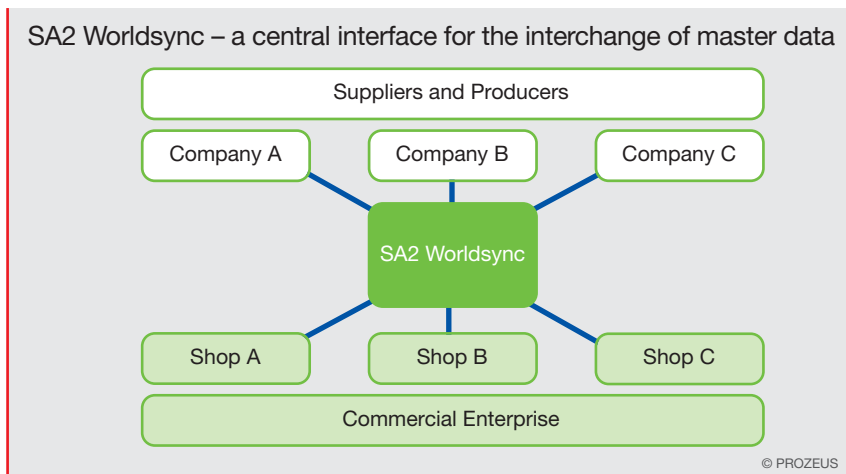
The SA2 Worldsync data pool transmits the result of the query in EANCOM®/PRICAT or SA2 Worldsyncplus•PRO format. Along with specific one-off calls, users also have the option of subscribing to obtain a continuous selection of master data. Either updated master data alone, or the entire set of master data, can be requested at any given time.

Basis for Efficient Consumer Response (ECR)

The electronic exchange of item master data via the SA2 Worldsync data pool constitutes an important basis for an ECR-capable company and is often viewed as 'the mother of all processes'. Efficient Consumer Response (ECR) describes the uncompromising orientation of the supply chain around the needs and demand of the end user.

SA2 Worldsync – a central interface for the interchange of master data

Suppliers and Producers

Company A — Company B — Company C

SA2 Worldsync

Shop A — Shop B — Shop C

Commercial Enterprise

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By linking their in-house merchandise management systems to the SA2 Worldsync data pool, companies can realise a variety of potential benefits. Within the framework of a project between Hitschler International GmbH and METRO AG, the following benefits were derived:

Savings in administrative and processing costs

Prior to the project, Hitschler (see right) issued an average of nearly 10 item passports per year, per customer (of 60 customers, 20 are now linked via SA2 Worldsync), with a time input of a full 4 hours per passport. Today, using the SA2 Worldsync systems now embedded within its own workflows, Hitschler needs to devote only 20 minutes to an item passport. This is compared to a one-time project input of nearly 50 in-house and nearly 30 external person-days. The details, and the resulting total expense, are shown in the figure below.

If the various items for maintenance input are compared with the investment costs of introducing SA2 Worldsync and the running costs for both options (using SA2 Worldsync versus bilaterally supplying all retail customers with item data) are projected out over the following years, it turns out that introducing SA2 Worldsync for Hitschler has already paid for itself in just under 1,5 years.

It should be noted here that Hitschler profits all the more as the number of retail customers supplied with item master data through the SA2 Worldsync data pool increases.

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Comparison of maintenance input, before and after

No.	Worksteps (item passport without SA2 Worldsync)	Time/passpt. (hh:mm)	
1	Compiling item master data	03:30	Work time per item passport 04:10
	For an item passport, specs. must be obtained from all relevant depts. This also affects Purchasing, Sales and IT. This process can drag on over 3 weeks.		
2	Entering the data	00:30	
	The data compiled are manually entered into the retailer's individual (paper) item passport.		
3	Sending the item passport	00:10	
	By fax		
4	9.6 item passports/customer/year	40:00	Per customer
	Each year, an average of 9.6 item passports are processed for each customer	04:10 x 9.6	
5	20 customers	100 days	Per year
	Time required to process all item passports for 20 customers in a year	20 x 40:00 = 800 h = 100 days	

No.	Worksteps (item passport with SA2 Worldsync)	Time/passpt. (hh:mm)	
1	Compiling item master data	00:10	Work time per item passport 00:21
	Structured item master data are already electronically available in Charisma, the merchandise management system. The only thing users need to ask is whether any changes have been made.		
2	Entering the data The data are centrally entered in the Charisma merchandise management system.	00:10	
3	Sending the item passport	00:01	
	By email to the SA2 Worldsync pool		
4	9.6 item passports/customer/year	03:22	Per customer
	Each year, an average of 9.6 item passports are processed for each customer	00:21 x 9.6	
5	20 customers	8.4 days	Per year
	Time required to process all item passports for 20 customers in a year	60 x 3:22 = 67 h = 8.4 days	

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Minimising the costs generated by error in the process chain

Suboptimal master-data quality may not come to light until the last link in the value-added chain, the audit, but when it does it can result in costly maintenance work (which must usually be carried out manually). The cost of error limitation climbs exponentially as each successive processing step in the business process proceeds based on flawed data (steps: catalogue maintenance, merchandise planning, ordering, delivery, goods receipt, sale, invoicing, auditing, payment). As a result, the following rule applies: the better the master-data quality, the lower the costs generated by error.

Competitive advantage through national and international standards

As the pool solution in the international data network (Global Data Synchronisation Network; GDSN), SA2 Worldsync offers its customers key competitive benefits. The fact that it is well known, combined with its general acceptance among retailers both within Germany and internationally, makes it easy to tap into additional sales channels.

Strategic benefits through superior service offerings

Difficult to calculate, yet by no means to be neglected, are the strategic benefits available through use of SA2 Worldsync. Hitschler reports a higher level of customer satisfaction and strengthened customer loyalty. Aside from the effects of the savings generated on both sides, primary among these effects are the competitive advantages it gives market players over their competition. Customers receive a professional supply of high-quality item master data electronically. This is a key element involved in successfully implementing Efficient Consumer Response.

Hitschler International GmbH

is a family-run manufacturer of sweets, with a product base of 300 products. In some cases, Hitschler covers important niches in these segments: chewable sweets, chewing gum, marshmallow products, wine gums. For decades, it has maintained a solid customer relationship with METRO. Hitschler supplies approx. 60 customer groups, and in the run-up to the SA2 Worldsync project, 20 of these have already indicated that they intend to obtain their item master data via SA2 Worldsync in future.

Exponential growth in administrative expense as a result of faulty master data

Master data maintenance

Goods receipt

Clarification of differences

Invoicing conditions

Master data creation

Merchandise planning

Audits

Payment processing

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Amortisation Period, Item Master Data Maintenance

Investments	Traditionally	With SA2 Worldsync
Hardware, software	-	€ 5,000
Internal 48 PD[1] at € 350 each	-	€ 16,800
External 28 PD[1] at € 780 each	-	€ 21,840
Set-up fee SA2 Worldsync, one-off	-	€ 500
Total	€ 0	€ 44,140

Running Costs	Traditionally	With SA2 Worldsync
No. of PD[1] for supplying 20 customers (see p. 4)	100	8.4
=> Internal PD[1] at € 350 each per year	€ 35,000	€ 2,940
SA2 Worldsync fees, per year	-	€ 2,500
Total per year	€ 35,000	€ 5,440

Cumulative Costs in	Traditionally	With SA2 Worldsync
Year 1	€ 35,000	€ 49,580
Year 2	€ 70,000	€ 55,020
Year 3	€ 105,000	€ 60,460
Year 4	€ 140,000	€ 65,900
Year 5, etc.	€ 175,000	€ 71,340
Amortisation/break-even after		18 months

1) PD = Person Day

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Item master data are an issue for top management

Suppliers that distribute their product offerings to their business partners in the form of paper catalogues, via fax or in Excel lists, face a growing array of problems. This is the result of increasing automation of processes between companies, both for purchasing between suppliers and presuppliers, and between suppliers and retail. Without up-to-date item master data of high quality, automated processing of orders, deliveries and goods receipt is impossible, as is speedy issuance, review and payment of correct invoices.

Objective

To establish central catalogue management

Use of the central SA2 Worldsync data pool ensures that each supplier can distribute its product range to all of its retail customers in electronic catalogue form. The supplier uploads its entire catalogue, in neutral form, to SA2 Worldsync via a standard technical interface. SA2 Worldsync then sees to it that the catalogue is distributed. This lays the cornerstone for the realisation of additional electronic message types with the supplier's business partners, such as orders, invoices and delivery notifications.

Savings

Use of SA2 Worldsync improves economic efficiency within the value-added process. This is because time-consuming and error-prone manual data entry, or the filling-in of item data on 'item passports' individually for each trade organisation, can be replaced in its entirety by

SA2 Worldsync. This saves time and paperwork, while reducing the error rate for key follow-on processes such as orders processing, picking, transport, goods receipt and invoice handling.

To improve relations with business partners (ECR capability)

'Speaking a common language' is fundamental from an ECR point of view. Companies that communicate with one another electronically can work together more effectively and quickly on the basis of standardized interfaces and messages. This improves customer-supplier relationships.

To ease the burden on staff

When SA2 Worldsync accelerates process flows, the result is to ease the burden on staff, who can devote their attention to other activities within the company, such as enhancing customer loyalty in the sales and marketing areas.

Organisational requirements

To introduce an SA2 Worldsync-based item master-data management approach within a company, a small project group should be created (of at least two and not more than four members). In addition to the project manager and the in-house staff, external experts, either from SA2 Worldsync GmbH or from a select IT service provider, can be consulted – particularly for the 'Target Process Development' and 'Implementation' project phases.

The course of the project itself

The experience that Hitschler and METRO reported in connection with this project has shown that an EDI direct link via PRICAT to the SA2 Worldsync data pool, including in-house integration in the merchandise management system, can be carried out in roughly six months.

A considerably quicker method would be to create a link to the SA2 Worldsync item pool using SA2 Worldsync's own software products. This kind of link, which takes between two weeks and two months to establish, is a useful alternative for smaller and medium-sized enterprises, given the reduced complexity involved.

Project requirements

- The licence for a Type 2 global location number (GLN) (obtainable through GS1 Germany) serves as the basis for item-based EAN coding.
- A contractual agreement with SA2 Worldsync GmbH for use of the SA2 Worldsync data pool.
- A merchandise management system for corporate and process management that is capable of exporting item master data (for data exporters) or importing them (for data importers). Alternatively, the manufacturer can also generate the catalogue using SA2 Worldsync's own software.
- An EDI converter for the PRICAT format for companies that already have extensive EDI experience.

Name of the work package	Number of in-house project employees	Number of days' work involved	Project period, in months					
			1	2	3	4	5	6
IRough planning	1	2						
Actual analysis	2	5						
Generation of target process	2	10						
Detailed planning & documentation	1	10						
Employee training	1	5						
Implementation	1	5						
Quality assurance	2	4						

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Instructions

The first steps

Management makes the initial decision that electronic item-data exchange should be introduced and designates a project manager. The project manager's qualifications would include

- Insight into in-house and cross-company processes
- Experience in the sales and IT areas
- At least a passing familiarity with item master-data management

In consultation with in-house experts such as the head of IT, the project manager then analyses and plans initial activities. The following worksteps should be completed during the early stages of the project:

- Rough planning for the entire project
- Analysis of the business processes affected (actual processes)
- Listing of the effects on planned processes (target processes)
- Detailed planning of project scheduling terms and resources

Controlling changes

When introducing new procedures, it is important that all persons involved accept and take responsibility for them. For employees, changes in a company's structures and processes mean that they must modify their accustomed work routines, thinking habits and behaviour. To reduce internal friction, a procedure should be drawn up that specifies how changes will be prepared, planned, managed and reviewed. Within this framework, employees are regularly kept informed, and where appropriate those affected are brought into the change process in the form of project teams.

Training sessions, offered early on to familiarize employees with the new process or technology, can help mitigate uncertainties and fears among staff.

Once the actual project has been completed, it is important to ensure that the new, optimised processes have been sustainably put in place. In this regard, in-house

workshops have proven helpful in which process participants have an opportunity to present the new processes to colleagues from other departments. Here, the project manager should visualize the overall electronic catalogue management process and emphasize the benefits of the new approach. This smoothes the creation of a common understanding of the factors involved among all those involved in a particular process.

Likewise, the job descriptions of employees involved in maintaining item master data should also be updated in the near-term. After all, six months after project conclusion, the benefits of the new, SA2 Worldsync-based catalogue distribution should be polled and the findings communicated in-house. This helps make the noticeably improved processes transparent for all of the employees of the company while heightening their awareness of business-critical topics such as process optimisation and customer orientation.

Further information

When using the PRICAT EANCOM® message type:
• SA2 Worldsync compendia: 'Food/Non-Food', MEDIA (for the image data pool) and 'The Bilateral Process Price as a Value-Added Service' [Mehrwertdienst Bilateraler Prozesspreis (BiP)]
• EANCOM®/PRICAT interface description

When using the SA2 Worldsyncplus•PRO software:
• User's manual, software documentation
• Installation and configuration description
• Import/export interface description

Important Internet addresses:
www.sinfos.de, www.sinfosweb.de

Contact
SA2 Worldsync GmbH, Maarweg 149-161, 50825 Cologne, Germany
Tel: +49 (0)2 21 7 70 23 00, Email: info@sinfos.de

Project implementation at a glance

The main steps to successful introduction of catalogue management with SA2 Worldsync are set forth in the following checklist. It reflects the experience of the pilot companies and is designed to assist in practical implementation of the project.

1st Step: Rough planning

Work Packages	Status	Remarks
The management designates a project manager		
Rough preliminary planning of the key milestones for the project and assembly of the membership of the project team, involving all of the partners taking part in the process		
Creation of a project manual by the project manager to facilitate planning and checking of the individual tasks		
Preliminary information to all employees of the company regarding aim, content, benefits and time frame of the project		

2nd Step: Actual analysis of existing processes

Work Packages	Status	Remarks
Sketch of the organisational structure (organigram) of the company, highlighting the processes to be observed		
Analysis and graphic depiction of the in-house and intercompany (direct and indirect) process flows and of the interfaces, including time input for each event		
Listing of the persons, involved in the internal processes, along with their departments and respective tasking		
Identifying the most important customers		
Determining the relevant process costs, for instance average payroll cost rate, costs for forms, printing or postage, as basis for an investment decision		
Listing existing hardware and software components and the IT communications interfaces		

3rd Step: Specifying and drawing up target processes

Work Packages	Status	Remarks
Exchanging views with other business partners that use the SA2 Worldsync standard for electronic management of item master data		
Collecting all of the requirements for catalogue management (company, business customers, GS1 Germany and SA2 Worldsync recommendations)		
Devising a process structure that meets future requirements		
Documentation and graphic presentation of the new process flows		
Assessment of the planned process changes by employees of the affected areas (for instance in-house sales)		
Drawing up the software alternatives (use of SA2 Worldsync's own software versus adaptation of existing systems), with assessment of the respective advantages and disadvantages		

4th Step: Detailed planning and documentation

Work Packages	Status	Remarks
Creating a project manual for planning and checking of the Individual tasks		
Generating a project description containing the project aims and the efficiency-analysis concept, which also takes the results of the actual and target analyses into account		
Comparison of actual and target processes, together with drawing-up of the process changes and determination of the steps necessary to reaching the target process		
Listing the persons involved in the in-house processes, along with their departments and respective tasks		
Plausibility review of the future process flows and planning of implementation potentialities		
Personal meeting of all project participants for a thorough co-ordination of key features of the project		
Assessment of the software and hardware alternatives		
Determination of the process, investment and reorganization costs		
Selection of service providers and software components		
Where indicated, second personal meeting of all project participants for adoption of the project plan		

5th Step: Training of the employees

Work Packages	Status	Remarks
Participation in SA2 Worldsync training sessions		
In-house instruction of employees with regard to the modified process flows for catalogue management		
Designation of a technical official to respond in the event of problems – this person must be reachable at all times		

6th Step: Implementation of the work plan contents

Work Packages	Status	Remarks
Programming communications interfaces: setting up the converter or feeding SA2 Worldsync's own software with catalogue data from the in-house ERP system		
Carrying out test runs and trial operation		
Thorough checking and updating of required item master data		
Timely provision of information to business partners regarding start dates		

7th Step: Quality assurance

Work Packages	Status	Remarks
Carrying out workshops by key users for all employees working with item master data within the company itself, for instance Orders Receipt, Production, Marketing		
Updating job descriptions of the employees involved in maintaining item master data		
Six months following project conclusion: recording of benefits of the new SA2 Worldsync-based catalogue distribution and communication of the findings in-house		

About PROZEUS

PROZEUS supports the e-Business competence of small and medium-sized companies through integrated processes and established standards. PROZEUS is a non-profit initiative run by GS1 Germany, the service and competence center for inter-company trading processes, and IW Consult, a subsidiary of the economic research institute, Institut der deutschen Wirtschaft Köln. PROZEUS is funded by the German Federal Ministry of Economics and Technology. Providing comprehensive information material, PROZEUS aims to make decision-makers aware of e-Business topics and encourage them to take an active role in e-Business implementation. Free brochures (German language) addressing the topics listed below can be downloaded at our homepage, www.prozeus.de.

eBusiness

Electronic business describes business processes which are transacted by means of digital technologies. Solutions range from simple online shops or catalog systems to electronic procurement, sales and logistics processes. PROZEUS furnishes companies with guidelines, checklists and data sheets covering the selection of the proper e-Business standards, technical prerequisites and range of IT service providers.

Identification Standards

With the help of standardized identification numbers, each product can be unambiguously, globally identified. Under the umbrella of the GS1 System, EAN barcodes and EPC/RFID comprise the most well known numbering system in the consumer goods sector. PROZEUS addresses implementation, benefits and ROI in practical reports and application recommendations.

Classification Standards

By means of classification standards, products are not merely identified, they are described as well. This is accomplished by classification into product groups and subgroups. Examples of such standards include eCl@ss, Global Product Classification (GPC) and the Standardwarenklassifikation. PROZEUS provides implementation recommendations on classification standards, including practical reports and guidelines.

Master Data Alignment & Catalog Exchange

Electronic product data can be communicated accurately to suppliers or customers by means of standardized formats such as BMEcat or the EANCOM® message PRICAT. This is another area where PROZEUS offers diverse practical reports and selection criteria.

Transaction Standards

Business transactions such as orders, deliveries and invoices can be processed electronically with the help of transaction standards, such as EANCOM®, EDIFACT and GS1 XML. Application areas, benefits and ROI are addressed in PROZEUS application recommendations and practical reports.

Process Standards

Process standards such as Category Management provide the framework for the automation of complex business processes. They define the conditions under which processes such as replenishment or asset management are carried out, as well as which data is exchanged with which business partner at each step. PROZEUS offers concrete help for implementations by means of practical examples.

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