EPG® Ehrhardt Partner Group

Smarter Connected Logistics™

WHITE PAPER

PROCESS OPTIMIZATION USING LOGISTICS SOFTWARE

Digitizing master data = optimizing processes

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WHITE PAPER
Master Data in Logistics

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EDITORIAL

Industrial companies are optimizing their entire supply chain and logistics is increasingly becoming the focus of value creation. For warehouse management systems (WMS) to be used effectively, master data has to be entered consistently and updated regularly.

If you want to increase the efficiency of your logistics processes, generate savings and minimize the frequency of errors, you have to rely on smart solutions to enter, evaluate and pass on master data. This allows you to track every movement of a product across the entire supply chain and, if required, provide customers with the information they need. We explain what master data is and what data you need and give you some tips to set your company on course for properly functioning master data management. Happy Reading!

Yours,

Marcel Wilhelms,
Managing Director EPC

MASTER DATA –

THE DEFINITION

Master data is information that describes a stock item and helps to classify it and find it again later. It describes the specific characteristics of products, which affect how they are handled within the supply chain.

- **How many parts do I need in stock?**
- **How many parts can be kept in the warehouse?**
- **When do I need to replenish stock?**

You cannot answer these questions without complete information for your inventory. Item information, such as dimensions, weight and – in the best case scenario – a photo that can be used to identify the item also tell you about the suitable storage location. Fast movers (items included in 80 percent of orders) need to be particularly easy to access. There are also legal restrictions to be followed, not least for safety reasons. Rules such as bans on mixed storage or the requirement for batch splitting, for example, specify what goods must be stored where and how. Once such information on products and storage locations is carefully documented, the WMS can optimally manage the logistics processes.

Master data describes the specific characteristics of products, which affect how they are handled within the supply chain.

WHAT ARE THE CONSEQUENCES IF

MASTER DATA IS NOT PROPERLY MAINTAINED?

The worst case scenario in the warehouse is that an overloaded shelf collapses. Obviously, the shelf has been filled incorrectly. But how did it happen? One possible reason is that the shelf capacity or the weight of the items were not stored in the WMS. The second possible explanation is that the company is not using a WMS at all to enter and coordinate the weight of goods and the capacity of handling units.

Properly functioning warehouse planning is not possible without access to the master data, such as the weight or the size of items/warehouse objects. IT systems can only be used appropriately when the master data is available. The majority of the functions and options provided by a WMS are left unused while basic information is missing. A suitable WMS can considerably simplify and shorten the time-consuming process of data entry. For example, you can run a preliminary calculation on a sample with analysis functions for maximum efficiency when using the data.

Accurate master data in the warehouse is the basis for efficient processes.

The key point is that

processes to optimize intralogistics workflows are only possible when the master data is available. Below are two examples of how master data can be used.

1. Maintained master data can be used to calculate handling units in advance, so that trucks and picking trolleys are utilized most effectively. If the required data is available, handling units can even be calculated so that they are placed in the correct order. This makes the unloading process at the destination much more efficient.

2. Replenishment levels and reserves can be set dynamically using master data as well. This is especially important for businesses that carry a lot of seasonal items. If demand varies by season, it is important to have enough goods in stock during the peak and also important to avoid dead items off-season.

WHY

DO LOTS OF COMPANIES PUT TOO LITTLE EFFORT INTO MASTER DATA MANAGEMENT?

Entering and continuously updating master data is time-consuming. And it is precisely what puts off a lot of companies. Master data management is perceived as an annoying task, and logistics managers often recruit students for the job. The result is incorrect and incomplete data.

The potential benefits of properly functioning master data management are often overlooked. Master data is really the basis of Logistics 4.0 – a field in which a lot of businesses still have catching up to do, as a recent DHL report on digitalization in the supply chain demonstrates. Of 350 supply chain and operations professionals surveyed, 95% are not making optimal use of the possibilities of digitization, for example in the area of information technology and analysis tools. Over 75% of professionals recognize the potential cost reduction and process optimization benefits of information technologies, but feel they do not have sufficient support in their company.

Of 350 respondents, 95% are not making optimal use of the possibilities of digitization.

The potential of networking has already been recognized in highly competitive sectors such as automotive spare parts and retail, but the full potential is still far from exploited in such sectors – because no master data is entered. One reason for this is that many companies do not know how and where to start with master data management.

What are the first steps?

MASTER DATA MANAGEMENT –

THE FIRST STEPS

Define the goals of master data management and use those goals as the basis for defining the master data and the analysis tools you require.

Explore the various options for master data entry and select the options that suit your purposes.

Give your logistics employees the task of entering master data, as they are the ones who have to work with the data later on.

WHAT DATA
DO I NEED?

For properly functioning master data management, companies have to know what master data to enter and what measures to implement for regular data entry.

The following master data is required for optimal warehouse management:

- Item number
- Item photo
- EAN number
- If applicable, the best before date (BBD)
- Batch number
- Serial number
- Replenishment level
- Maximum stock
- Material group
- Dimensions: Length, width, height
- Weight
- Container size
- Item location
- ABC class
- Special quality assurance requirements

MASTER DATA –
TAKING STOCK

According to a survey conducted by the market research and consulting company, Lünendonk, **85%** of the 155 industrial companies surveyed rated themselves as mediocre at best when it comes to master data. **60%** of respondents saw potential for improvement in terms of data quality. A clear majority of respondents also believe that data quality is an increasingly important factor for business success. The following positive effects are associated with properly functioning master data management:

- FASTER ANALYSES
- BETTER DECISIONS
- REDUCED COSTS
- SHORTER LEAD TIMES
- GREATER TRANSPARENCY

DATA ENTRY

MADE EASY

There are two ways to enter master data: Manually and automatically. Manual entry is still widespread, although it has several disadvantages. These include that the error rate is higher, the process takes considerably longer and ongoing operations are often disrupted. When master data entry is automatic, the data is captured at goods incoming by cameras and sensors, after a WMS has calculated the size of the sample for data entry. The items are weighed, measured and assigned to an item master using a barcode. For items that require a best before date, the shelf life and the batch are recorded as well.

Relying on *automatic* master data entry means saving time, reducing the number of errors and benefiting from consistently high quality.

Special quality assurance requirements are also possible. For example, hazardous goods must be separated from other items and assigned to a permanent bin location, which is often specified using the master data. The entered data is aggregated in databases for Product Information Management (PIM), transferred directly to the WMS, and from there it is passed to the ERP system via an interface. The location and route of an item can therefore be accessed at any time.

PIM DATABASES

Product Information Management (PIM) databases act as the linchpin between the ERP system and the warehouse. In the food sector, for example, the information maintained in a PIM database includes the ingredients and allergens for an item, as well as the country of origin and the suppliers. At first glance, this data is not relevant for warehousing. However, it is important for other areas such as purchasing and sales.

More and more customers are asking logistics provides and industrial companies to print out PIM databases. Transparency and documentation across all supply chain routes will be increasingly important in the future.

LOOKING TO THE FUTURE:

MASTER DATA AS THE BASIS FOR NETWORKING LOGISTICS PROCESSES

In highly competitive sectors, such as the automotive spare parts and retail, many businesses are now networking their logistics processes. And you cannot benefit from networking in the long term without master data. In the future, data entry will also become increasingly important in production and mechanical engineering. As a result of the increasing automation of production plants, logistics is more and more a locus of added value. The focus is on the following goals:

- **Optimum use of storage capacity**
- **Compliance with documentation policies**
- **Transparency, when needed**

These goals allow logistics providers to achieve savings, increase their efficiency and strengthen customer loyalty. All relevant master data has be continuously entered and digitally evaluated to achieve these goals. The ideal scenario is that you only handle each product once to get all the data you need. In the near future, smart glasses and artificial intelligence could be used as a method to photograph items, detect their size, and count quantities. This data is then accessed by the members of a value and supply chain via a supply chain platform, which docks with the various information management systems of all partners.

CHECKLIST:

HOW GOOD IS MY MASTER DATA MANAGEMENT?

We have put together eight questions for you below, which you can use to take stock of how master data is entered and evaluated in your logistics processes.

	Question	Yes	No
1	Do you have a concept for entering master data that includes software service providers, as well as internal departments and external partners?	☐	☐
2	In addition to material master data, do you enter other information relevant to storage, such as ABC classes, auxiliary handling units that are used, and packaging information?	☐	☐
3	Do you use a standardized process to record morphological data, such as length, width, height and weight in goods incoming?	☐	☐
4	Do you use standardized units of measurement and standardized number formats?	☐	☐
5	Do you update your master data regularly?	☐	☐
6	Is material master data updated by employees who have to work with the data themselves and therefore have a great interest in its accuracy?	☐	☐
7	Do you make sure that items you no longer need are removed from the master data?	☐	☐
8	Do you pay your employees to maintain master data on a performance-related basis?	☐	☐

Have you answered "No" to more than four questions? Then you should urgently optimize your master data management. The independent logistics consultants at EPG | CONSULTING will be happy to answer any questions you may have regarding master data management.

COMPANY PROFILE

EPG – Smarter Connected Logistics

EPG is one of the leading international providers of comprehensive Supply Chain Execution Systems (SES) and employs 700 people at 19 locations worldwide. The company supplies its more than 1,500 customers with WMS, WCS, WFM, TMS and voice solutions to optimise logistics processes – from manual to fully automated logistics environments. EPG solutions cover the entire supply chain, from warehouse and road to ground and cargo handling solutions at airports. EPG's comprehensive portfolio of solutions is complemented by logistics consulting, cloud services and managed services, as well as logistics training courses at the company's own academy.

EPG IN NUMBERS

MORE THAN **1,500 CUSTOMERS**
ON ALL CONTINENTS WORLDWIDE

700
EMPLOYEES AT
19 LOCATIONS
WORLDWIDE

OUR SOLUTIONS
ARE AVAILABLE IN
50+ LANGUAGES

LYDIA® VOICE
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AND SECOND LARGEST
VOICE SOLUTION IN THE WORLD

30+ YEARS
LOGISTICS EXPERIENCE

SUPPLY CHAIN EXECUTION SUITE
INTERNATIONAL LEADING LOGISTICS SOLUTION

TOP 5
WAREHOUSE
MANAGEMENT SYSTEMS
WORLDWIDE

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