

# Logistics eXecution



## Warehouse logistics for the modern business

In the modern world, reliability, efficiency and a capacity to innovate are fundamental to the success of any company. Warehouse logistics brings its own special, often competing demands: constant pressure to cut costs while, at the same time, increasing operational flexibility, reliability and efficiency. Comprehensive tracking and tracing is essential, and this requires the availability of reliable realtime information on the movement of goods in an easily understandable format. Moreover, while the number of items handled is increasing constantly, consignment sizes continue to fall.

To meet these demands, modern warehouse management software has to offer key client requirements as standard, while at the same time remaining flexible enough to offer innovative, customer-specific solutions.

The logistics eXecution system **LX**one copes effortlessly with this challenge. It is a sophisticated, professional solution that provides the perfect foundation for successful logistics management.

## Solutions that make your warehouse more efficient

**LX**one is a future-proof solution suite witch a high integration potential that offers a broad array of benefits to the user. A high level of stock security and excellent control and monitoring systems will improve the quality of any logistics operation, resulting in error-free delivery handling. Such is the efficiency the of **LX**one solution that you can exceed the expectations of even the most demanding customers.

**LX**one is comprehensive and highly integrated solution that will meet all your requirements in terms of both security and efficiency.

## **Built-in flexibility**

Each warehouse has its own unique layout, organization and structure. **LX**one meets this challenge using a flexible modular architecture that can adapt to any warehouse structure. Additional modules can be added as necessary to perform specific tasks, forming a single unified solution.

The handling of both individual tasks and complex multi-stage processes is smooth, easy, and optimized for the specific logistical environment. The system is fully scalable, and its state-of-the-art technology will be compatible with future innovations in logistics handling. As a result, you can be sure of long-term improvement in speed and efficiency.

## LXone meets growing demands

#### Inventory and warehouse management

Constant availability and total transparency are absolutely essential in modern warehousing. **LX**one provides a high level of **stock reliability and maximum transparency**. The system's detailed configurability ensures compatibility with any organizational structure in the warehouse. Storage units such as shelving, block storage, open spaces, flow-through storage racks, satellite and high-bay racking can be defined and managed flexibly and easily.

Goods can be managed using clearly identifiable loading units (i.e. pallets or bins), each with a unique identifying number. Multiple loading units can be assigned to a single storage location, and multiple items can be assigned to a single loading unit. Alternatively, several items can be assigned directly to a storage location, or a number of separate loading units can be grouped together into a single unit. **LX**one can cope with different units of quantity simultaneously, making it suitable for all kinds of goods.

Monitoring **use by dates, batches, lots and serial numbers** is built into the system, and parameter setting enables this to be applied to specific items. Further options include stock reservation for individual customers, sales orders, logistical control at individual unit level and stock management using variable quality criteria and customs clearances. In addition to inventory management in defined units of quantity, weight and volume can also be included.

The **Stocktaking management** allows for both constant and periodic inventory monitoring, with built-in spot check procedures. Stocktaking empty storage locations can be activated in combination with picking using mobile terminals.

For the purpose of **Tracking & Tracing** all stock changes and movements are recorded and can be displayed in a readily understandable format.



#### Receiving



The LXone receiving process works in close combination with the ERP and/or merchandise information system of the user. Information flows in both directions to keep receiving scheduling and operations in step, while receiving notifications from the host support the logging and identification processes. These can of course also be carried out manually if preferred. **Quality management** features include test batches, spot checks and test orders. On the systems side, LXone enables users to create storable units, and **cross docking** represents another important element of LXone's receiving functionality.

Data capturing for **supplier rating** can be configured as part of the receiving process.

#### Put away

Proper identification of stored goods is key to effective operational warehouse management. Different methods can be used, both with and without the application of materials handling technology or mobile. A simple scanning process is often used to identify goods.

Should the user not choose a storage location, **LX**one will select the best location using flexible strategies based on a number of configurable criteria. Whether it is the first time a new warehouse has been filled or simply a continuation of everyday operations, whether according to efficiency criteria or in response to bottlenecks in warehouse capacity, whether joint storage is prohibited or desirable, **LX**one will always select the best storage location for every item using experience drawn from a wide range of industries.

#### Picking

Picking requests in the form of orders are recorded by LXone, or taken direct from the order processing system. LXone can cache and process the orders. When it is time to allocate the goods, stock stored at the appropriate location is reserved and the necessary tasks created.

Various strategies are used to determine storage locations: FIFO, LIFO, FEFO, best before, use by dates and quantity considerations such as picking full pallets or boxes play an important role here.

## Wave Picking

The core feature of **LX**one is complete control of the picking process. All forms of organization are supported, with single or multi-stage picking catered for using methods such as RF data transmission, **Pick-by-Voice**, **Pickby-Light** and RFID in automated warehouses.

The aim of picking is simple: to get the right item from the right place at the right time. However, to achieve this, a number of criteria have to be fulfilled. Issues such as the combining of pick positions also have to be taken into account.

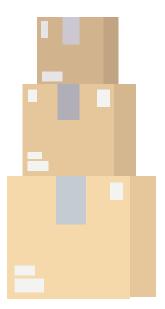
LXone's efficient grouping of picks makes possible a high degree of process optimization: routes, planned departure times, and different order types and priorities determine the nature and time of the picking. Route optimization, order combining, and flexible management of replenishment to the pick positions are also important elements. Easyto-use confirmation procedures with support for mobile users are the key to operational success. Allocation of the pick positions to identifiable picking bins makes the process easy, both in the packing and dispatch areas

## Packing / Dispatch

**LX**one can suggest the most efficient form of packaging for any item, calculating the op-

timum weight and pack size for the chosen shipping method. Packing stations equipped with scanners or RFID readers make for improved security and order verification, and the use of mobile devices including speech recognition is also supported.

**LX**one manages your dispatch area and loading gate, again using scanners or RFID readers to ensure that each package finds its way on to the right truck. Once loading is complete, **LX**one can interface with the systems of courier services, hauliers and shipping companies to track its progress, making your supply chain more efficient and transparent.



### Your warehouse is an asset



#### **Control panel**

The graphical web-based control panel brings together all relevant, up-to-date data in one place, allowing possible bottlenecks to be seen in advance before they develop into critical problems. For example, users can intervene to keep dispatch dates within required limits and thereby keeping deliveries on schedule and increasing both efficiency and customer satisfaction too.

All the standard logistics **key performance indicators**, as well as any user-defined process parameters, can be called up and compared online with target values. If the workload is unevenly distributed across picking areas, you can adjust the level of staffing in each area accordingly.

Should any key performance indicators fall below a target value, users receive instant notification by SMS or e-mail. The **LX**one control panel gives users all the information and control they need to make and implement the right decisions at the right time.

#### **Logistics services**

**LX**one offers **multi client handling** on all levels in relation to items, storage locations, receiving and picking order and user access. In the area of consignment handling, remote access using the internet is kept strictly separate for each user.

Efficient **return/repair** and quality processes are becoming more and more important. The status of all these processes can be tracked on the web.

Production-related services such as packing, the setting up of displays and contract manufacturing are also supported. Such services are increasingly called for within the world of logistics services as they can help reduce inventory levels.

The exact **fulfilment** of orders in terms of both time and content (e.g. for promotional campaigns) is handled by the order control center. The system also supports the creation of combined shipments made up of a number of individual orders, and handles billing for the services carried out.

#### **Task & Resource Management**

Task & Resource Management (TRM) is gaining in importance, particularly in combination with mobile online data capture systems. TRM ensures that the right actions are carried out and resources allocated at exactly the right moment. Attributes are recorded in the profiles of each resource, thus enabling the assignment process to be controlled. The process is flexible and managed in a priority- based way. Efficient TRM enables users to make optimum use of their available capacity.

TRM is often used in storage optimization. As part of its TRM functionality, the **LX**one **forklift management** system takes into account resource profiles including distance and specific storage conditions. This enables optimum management, particularly of stacker cranes in high bay storage systems.

#### Identification

Data capture is handled wherever possible using scanners/readers. **Mobile RF systems** are used to scan barcodes and read RFID information. Of course, all international standard labels can be produced and processed.



In combination with materials handling technology, **LX**one provides for automatic labelling. Fixed bar codes – for example on palette tags and container labels, as well as **RFID tags** – can be used to identify and track goods moved internally. The same is true for items or storage location labels, which **LX**one can produce from the master data.

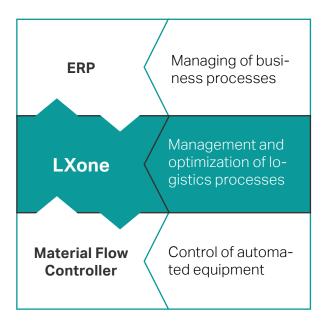
With **LX**one, you have the security of knowing that the most up-to-date, manufacturer-independent technology will be employed. Hardware components will be selected on the basis of your individual application needs.

#### Integration

Generally **LX**one is not a standalone application. It communicates with your existing ERP environment using standard interfaces. Whether you use IDOC, RFC with SAP, MQ Series, Edifact, PeopleSoft/ OneWorld XML, Navision, JBA or your own proprietary solution, **LX**one is a future-proof system.

LXone communicates via standardized interfaces with the underlying operational level for materials handling technology, **automated warehousing** and other automatic components, thus making it a comprehensive solution for the entire materials flow process.

It can also be linked to external systems such as OMS, the internal systems of courier companies or customs, route planning tools, spot check inventory processes and online shops.



## System environment – independent and flexible

**LX**one can easily be integrated into existing and new systems environments. The architecture enables distributed environments using LAN, WLAN and internet connections. The **LX**one client requires an internet-browser only and therefore can run with a minimal footprint on many devices i.e. pc, laptop, tablet, smartphone and handheld

The **LX**one server is available on Windows Server, Linux, IBM i5/OS and various Unix versions.

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