[silwaSUITE]

The Integrated Solution for Warehouse Logistics and Production.

[Logistics and Manufacturing]

silwa (Stesi Integrated Logistics & Warehouse Automation) is a comprehensive Supply Chain Execution System (SCES) that combines the functions of a Warehouse Management System (WMS) and a Manufacturing Execution System (MES). It manages the complete flow of goods within a plant—from receipt to shipment—including production tracking and time monitoring.

By implementing silwa, companies can achieve:

- Reliable inventory management
- Reduced reliance on operators for task execution
- Optimal warehouse space utilization
- Complete and timely goods traceability
- Lot and serial number management aligned with business and regulatory requirements
- Fewer picking and shipping errors
- Shorter receiving and picking times
- Improved operator safety

[Application Features]

silwa is:

- Adaptable to various business environments
- Configurable and scalable
- Highly customizable
- Multi-company, multi-site, and multilingual

[Integration]

silwa is designed to integrate with any ERP system (e.g., SAP, IBM AS400, Zucchetti, TeamSystem) and with control systems for automated handling and production lines.

It is also Microsoft® certified and natively integrates with Microsoft® Dynamics ERP solutions (AX, NAV, 365, Business Central).

[User Interface]

silwa offers a user-friendly interface with a Microsoft Outlook-style Workstation for desktop users, and an intuitive, ergonomic, full-touch Mobile interface available on Android, iOS, and Windows.

[Mapping]

silwa allows the plant to be subdivided into functional areas and supports the creation of storage units and locations using a user-defined tree structure.

[Lots Management]

silwa handles naming, logistics, status, and physical information for batches (lots). It tracks both used and generated lots during operational flows, facilitating inventory and commitment analysis.

It ensures traceability from supplier to customer, monitoring all production chain flows.

[Logistics Flow]

MANAGING AND ORGANISING THE SUPPLY CHAIN CAN SEEM LIKE A NEVER-ENDING JOB

The application model used by silwa is the actual physical flow of goods within the plant:

- **ACCEPTANCE**

  Handles incoming goods from purchasing, production, returns, and consignment, including quality control and customs management.

- **PUTAWAY**

  Goods are stored in the warehouse according to custom storage logic, maximizing space usage and ensuring traceability.

- **HANDLING**

  Supports internal movements within the warehouse, transit management, and automatic transfers between stock and pick locations.

- **PICKING**

  Optimizes picking lists and routes based on custom logic, reducing times and eliminating errors.

- **SHIPPING**

  Generates packing lists, checks load accuracy with barcode scanning, and sends delivery notes and invoicing data to the ERP system.

[Production Process]

silwa manages production processes, including consumption tracking, progress updates, and bulk or detailed production declarations.

- **PLANNING**

  Production orders are assigned to validate upstream scheduling.

- **FULFILLMENT**

  Ensures the availability of goods for production, coordinating with other systems using models like kanban or batch processing.

- **PRODUCTION**

  Tracks consumption, progress, and production completions in real time.

- **REPORTING**

  Automatically collects data on production times, resources, and downtimes, providing insights into process efficiency.

- **TRACEABILITY**

  Generates serial numbers and lots during production, ensuring precise tracking of each item produced.

Commentato [EZ1]: silwa allows you to manage your production layout
integrated with logistics mapping,
progress by phase and level, picking lists from production
from production orders, the detection
processing times and the generation
final balances.

Commentato [EZ2]: Production orders are assigned to the lines/islands/users in order to validate the scheduling made in upstream systems.

Commentato [EZ3]: Based on the requested time window
the system guarantees the call of the goods needed for the production process
communicating the other systems to ensure the fulfilment of requirements according to the main models (kanban, batch...).

Commentato [EZ4]: Within the production area, the following are stated punctually\massively the consumption, the phase advances and the production carried out.

Commentato [EZ5]: Production times, resources used, downtime
and all data useful for process analysis are detected automatically, where possible through the machine interface, or by
explicit declaration via the user interface.

Commentato [EZ6]: During the production process, the following come to life batches and\or serial batches that allow for the tracking atomically the part produced.

[Automation]

Connects execution flow management with handling systems, automatic warehouses, and end-of-line operations. Allows monitoring of operations, machine status, and error management

[Forklift Guidance]

The FGS (Forklift Guidance System) module provides real-time vehicle position tracking and assists operators with a 3D interface, optimizing transport missions and reducing handling times. This results in significant cost savings and increased workplace safety.

[I Moduli]

[WMS]
Simplifies and optimizes spase management, goods handling, and resource utilization

[MES]
Controls and supervises production processes, optimizing time, costs, and resource management

[WCS]
Monitors and manages automated handling systems

[Mobile]
Supports and assists operators in executing operational tasks

[Mission Manager]
Automatically organizes tasks to devices and operators, maximizing the efficiency of logistics and production activities

[Analytics]
Optimizes processes, makes informed decision, and meets market demands by leveraging logistics and production flow data

[Yard]
Effectively manages the entry and exit of transport vehicles, schedules access efficiently, and maximizes automation

[Slot]
Coordinates and optimizes loading and unloading docks through planning and synchronization with warehouse activities

Commentato [EZ7]: silwa allows the interconnection between the executive flow management and the part of management of Handling, Automatic Warehouses Automated Warehouses, Edge and End of Line. The programme allows the querying of current operations current operations and machine status, the management of all handling systems (concentrators, PLCs, …) and any errors or anomalies.

Commentato [EZ8]: silwa, through its FGS (Forklift Guidance System) allows the detection automatic real-time detection of the position of handling equipment and provides assistance the forklift driver via a 'navigator'-type interface 'navigator' interface, with 3D visualisation of the warehouse and graphic indication of the operations to be performed and the load units to be handled. handled. Transport missions are optimised in terms of distance and the time for handling of the goods is reduced significantly reduced as it is no longer necessary to read the barcodes of the locations and loading units. With FGS from silwa achieves a significant reduction in logistics costs related to the number of handling number of handling vehicles and operators, combined with with greater respect for the environment and an increased safety at work and in the business processes.

[Connector]

Achieves exceptional efficiency by employing and coordinating automated devices and systems

[FGS]

Simplifies field staff activities by optimizing vehicles routes, handling operations, and ensuring safety

[Batch]

Traks batches throuhout every operational flow and effectively manages associated information

[B2C]

Ships high volumes in a shot time, ensuring maximum costumer satisfaction

[Label]

Defines and prints customized labels

[3D]

Visualizes the facility in virtual reality to accelerate operations

[4ERP]

Accelerates all logistics and production activities, from order to shipment, through synergy between silwa and your company's ERP

[Safety]

Enhances site safety and creates secure working environments by leveraging innovative technologies

[Technologies, Devices, Platforms]

silwa is built using Microsoft .NET and .NET MAUI and supported by technologies including:

- Microsoft SQL Server Databases
- Supported Server Operating Systems: Microsoft Windows Server
- Client Operating Systems: Microsoft Windows, Microsoft Windows Embedded
- Supported Mobile Operating Systems: Microsoft Windows, iOS, Android

Supported devices include:

- Handheld and vehicle-mounted RF (radio frequency) devices
- Smart devices (smartphones, tablets)
- Fixed workstations
- Cameras
- Sensors

Preferred Partner
TOYOTA
MATERIAL HANDLING

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Information classification: Internal