

**[stesi]**

***Automation Systems for Logistics  
and Production  
for real competitive value***



# [Topics]



[stesi]



*silwa*



Business Model



Case Studies



A blurred, black and white photograph of several people sitting around a table in what appears to be a meeting or conference. The image is out of focus, with the central area containing the text being sharper than the edges.

# [stesi]

[stesi]

 **silwa**  
Stesi Integrated Logistics & Warehouse Automation

# [stesi]



Since 1996 we have **specialized in the design, development and implementation of supervisory software for integrated logistics and production systems.**

We have developed our modular platform, silwa, that can transform the internal supply chain into a **strategic asset for the success of any company.**

Our strength is our people

## [stesi]



- We are a team of more than 30 people, with average age under 30, the vast majority of whom are technicians with degrees and diplomas in STEM fields
- Both Italian and international customer base
- Revenues 2022: doubled compared to 2019
- Revenues 2023/2024: confirmed growth trend

# [stesi]

## Chi Siamo



1996

Stesi Projects snc



1999

Stesi becomes a software house



1999

A software solution is developed to cover all stages of the product lifecycle, from Design to Engineering. After one year, Stesi Projects releases its PDM/PLM solution



2002

Three new partners join, and the company organizes into two Business Units



2004

Stesi becomes a true solution provider in the logistics and industrial automation market. The WMS and MES solution, silwa, is born





2006

Microsoft certification achieved, first Gold and later Silver in 2014





2007

ISO 9001 certification obtained





2010

Stesi Project becomes Stesi Srl



2014

Collaboration begins with Toyota Material Handling Italia, which over the years becomes a Preferred Partner





2018

Collaboration with the Politecnico di Milano starts





2022

Founding of Humason  
Inauguration of the new headquarter





2024

First fully cloud-based system

The Italian branch of Induvation GmbH, from Fraunhofer IML in Dortmund, certifies Stesi's silwaSUITE



# [stesi]

## Vision & Mission

### [ VISION ]

Our goal is to become the leading provider of advanced technological solutions made in Italy, helping our customers streamline their supply chains for greater efficiency and performance every day.

### [ MISSION ]

We are a team of professionals, a team of people, working with dedication and ever-increasing method and organization.

We value the relationships we have with each and every one of our clients, and we respect the agreed time and cost.

Every day, we develop solutions to have the best system on the market, make it evolve, enhance the user experience, and maximize the benefits.

We believe in ethical and sustainable business with respect for suppliers, customers, partners, and employees.

# [stesi]

## What sets us apart?



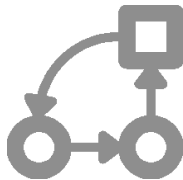
### Integration

with any automatic or semiautomatic technology and with other business information systems



### Knowledge

of the supply chain world through a 30-year history of referrals and continuous, ongoing training



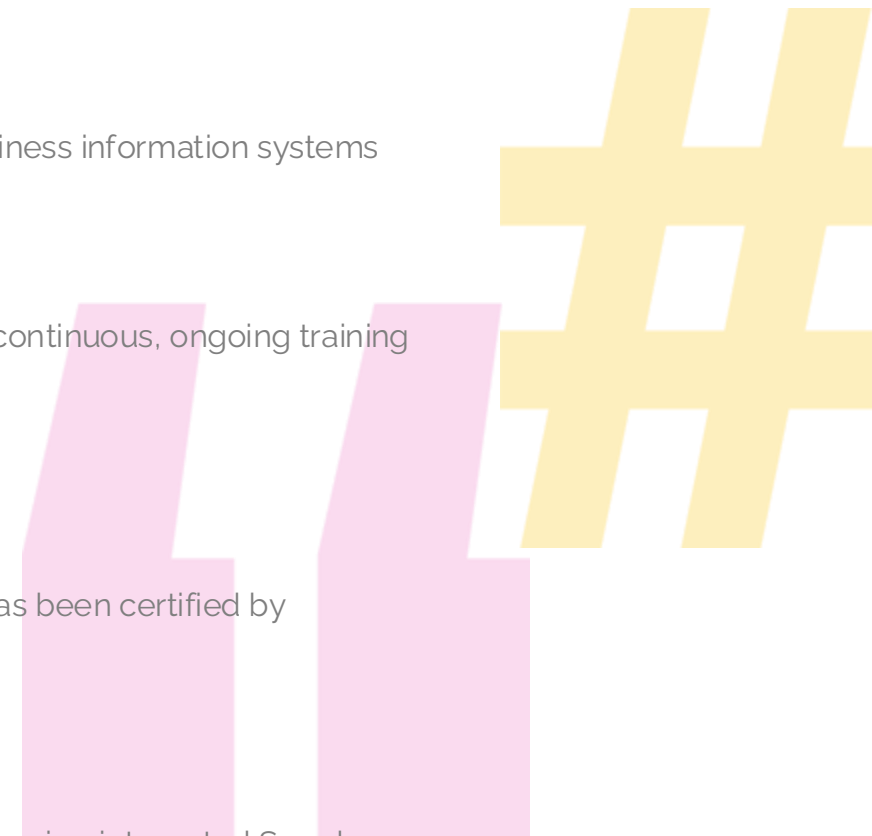
### Structured methodology

our processes have been ISO 9001 certified by SGS, and our WMS has been certified by Induvation, an Italian spinoff of Fraunhofer IML in Dortmund



### Proprietary software

we are independent developers of *silwa*, a software solution for overseeing integrated Supply Chain systems, continuously enhancing the *silwa* platform by incorporating top-tier features.





# [stesi]



General and detailed design of Integrated Supply Chain Systems



Independent developers of silwa, a supervisory software system for integrated Supply Chain Systems



Implementation and activation of the silwa system



Custom software development in «Project» and «Time & Material» modes

## [stesi] System integrator

Stesi positions itself as an integrated Solution Provider, offering a comprehensive “end-to-end” solution for your entire logistics and production system, regardless of any subsystems implemented or in the process of being implemented, ensuring full operational functionality.

**Following an on-site survey, we can offer:**

- ICT Infrastructure
- Semi-automation and automation devices



# [Who we are]

## Some of Our Clients

### [Food & Beverage]



### [Furniture]



### [Mechanics]



### [Packaging]



### [Chemical]



### [Construction Material]



# [Who we are]

## Some of Our Clients

### [Logistics & Transport]



### [Electronics]



### [Home Goods]



### [Healthcare]



### [HVAC]



### [Hospitality]



### [Textile & Fashion]



# [Chi siamo]

Some of Our Clients (for Semi-automation and Automation Technology)

## [ Picking ]



## [ eCommerce ]



## [ RTLS ]



## [ Radioshuttle ]



## [ Manufacturing ]



## [ TNS ]



## [ AS/RS ]



## [ AGV ]



## [ Mobile Racks ]



## [stesi] Partnership

Preferred Partner

# TOYOTA

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## MATERIAL HANDLING

**Toyota Material Handling Italy**, the world leader in integrated Supply Chain systems, has chosen Stesi as a Preferred Partner for the reliability and quality of its software solutions.

Currently, more than forty I-LOG installations are active, using *silwa* as the plant supervisory engine.

**I-LOG**

di Toyota MH Italia

**TOYOTA**

---

MATERIAL HANDLING

powered by

 **silwa**<sup>®</sup>  
Stesi Integrated Logistics & Warehouse Automation

di

**[stesi]**

[stesi]  
Partnership





[stesi]

# [stesi] Sponsorship



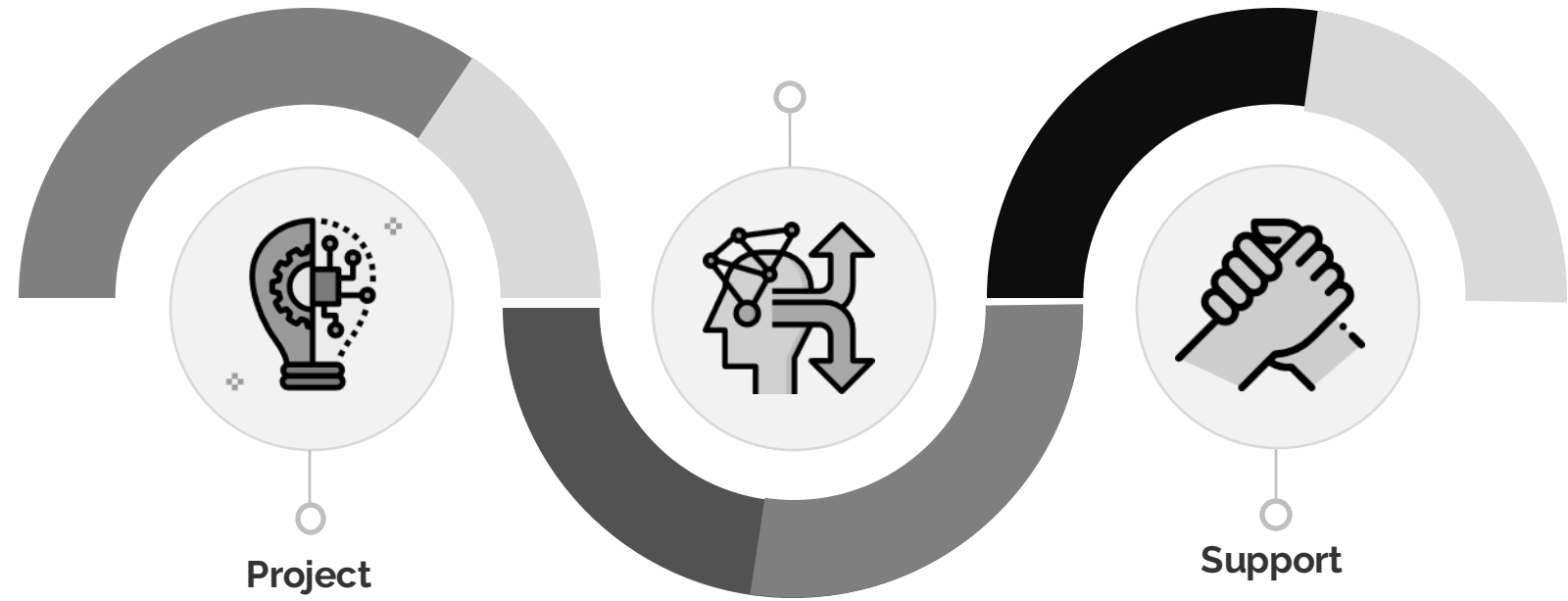


# [Who We Are]

## Our Approach

### Quality

Our **business processes are certified** by SGS to comply with the UNI ISO 9001:2015 standards, and **our products are periodically tested** to be included in the Microsoft Partner Network.



Our technological solutions are developed with a **project-based approach** that starts with the **review of the client's business processes** and extends to the full **deployment of the system**.

We assist our clients during and after system implementation, providing user **training sessions** and **support services with guaranteed SLAs**.

# [Who We Are]

## Our Approach



### ISO 9001 Certified Processes Since 2007

Design and development processes are certified by SGS for the "Stesi" project methodology. All business processes are defined and documented.



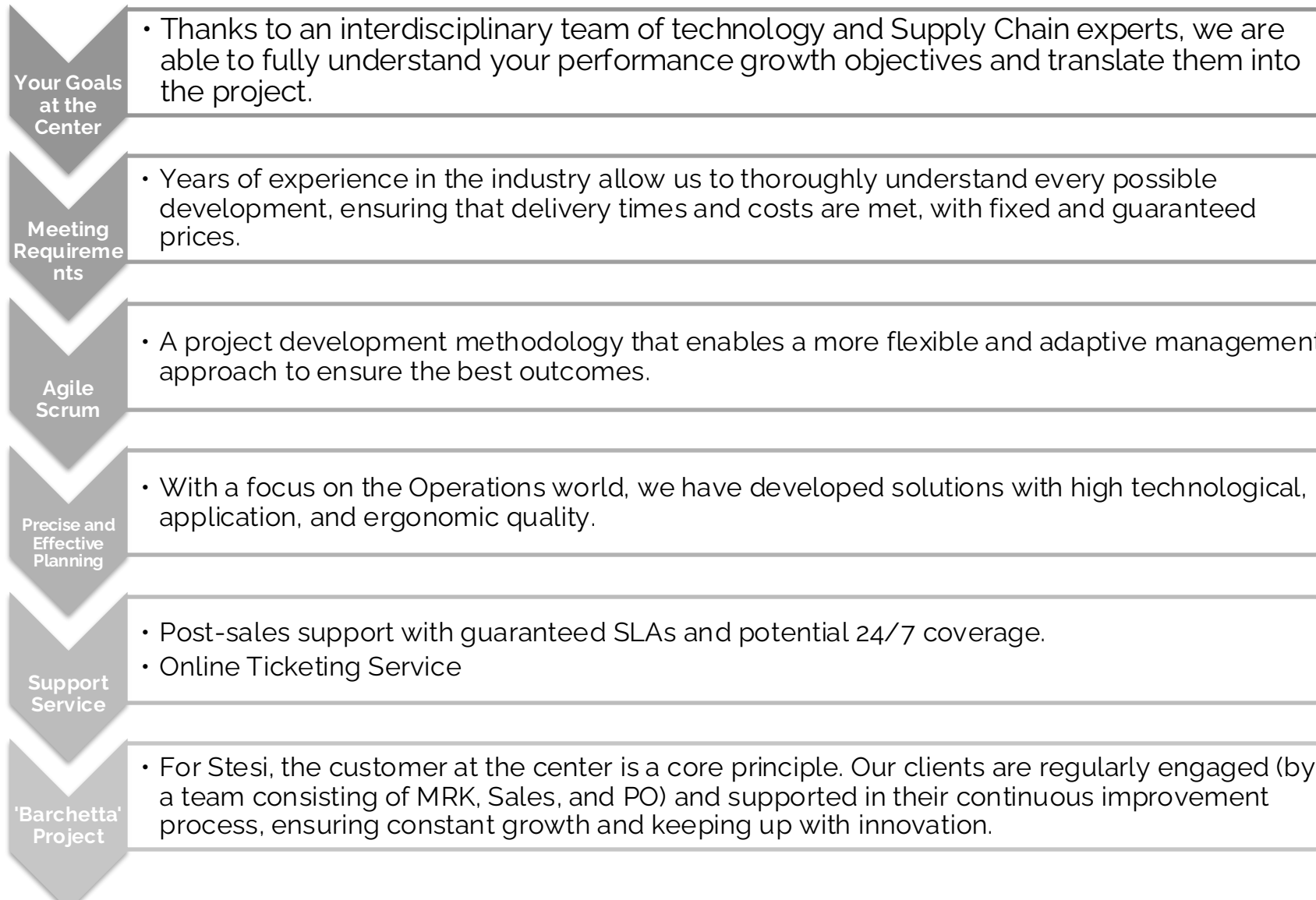
### Software Validated by Fraunhofer Since 2023

A **WMS** is **validated** when it is verified that the *functional requirements* it meets correspond to the **WMS** functional list of Fraunhofer IML, which is updated annually by approximately **10%**, with *new functionalities being added, updated, or eliminated* as they become industry standards.

[stesi]

# [stesi]

## Customer Centric



## Agile Scrum Methodology

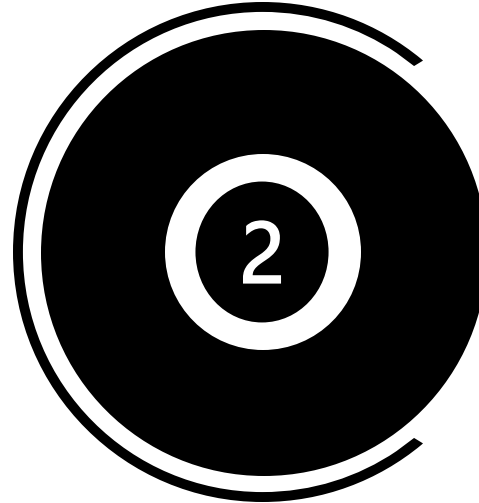
1.

Engaging each team on multiple projects simultaneously



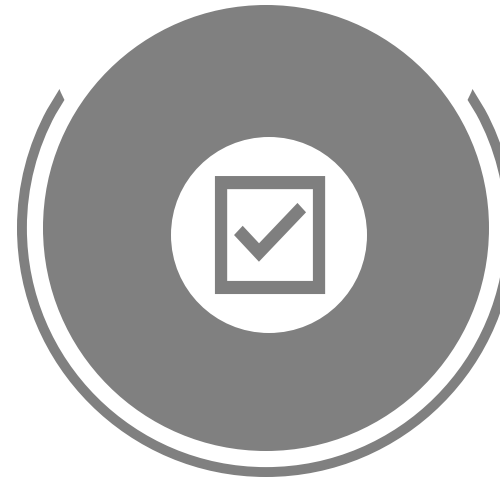
2.

Release of features after each sprint (every 2 weeks)



3.

Simple monitoring of team efficiency



4.

Competitive company





## ***Our silwaSUITE***

**[stesi]**

 **silwa**  
Stesi Integrated Logistics & Warehouse Automation

# [*silwa* for Sustainable Development]

117 Goals for Sustainable  
Development 2030

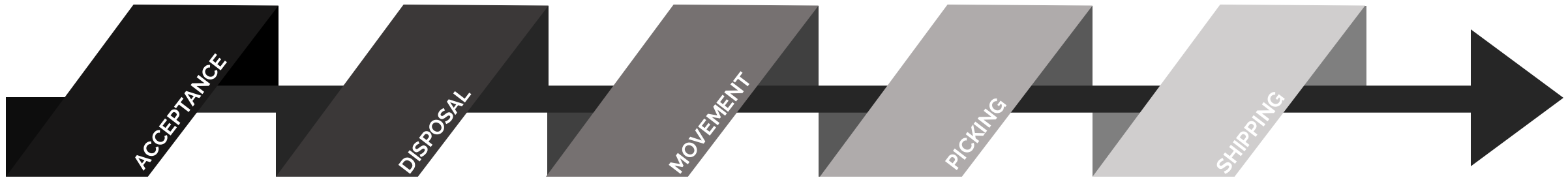


[stesi] 's *silwa*



# [Our software solution]

*silwa* is Stesi's **SCES** (Supply Chain Execution System) solution, which **combines WMS and MES functionalities into a single integrated system**. It manages all logistical and production execution flows, from acceptance to shipment, including lot traceability, production progress, and work time tracking.





# [Objectives]



## **Cost reduction in the Supply Chain system**

better utilization of space, resources, and personnel



## **Independence from operators**

for proper process execution



## **Increased safety**

incidents and injuries reduction



## **Reduced environmental impact**

Less emissions and consumption

# [Requirements]



Warehouse **Inventory** Reliability



Maximum utilization of **physical space**



Precise **traceability** of goods



Reduction in **transport routes**



Minimization of **operational errors**



Reduced **handling times**



Increased **operational safety**



Availability of precise **KPIs**



# [Measurable Saving]



Reduced number of vehicles/missions



Reduced number of operators/missions



Reduced vehicle maintenance costs and reduced number of vehicles



Reduced injury management costs/operators

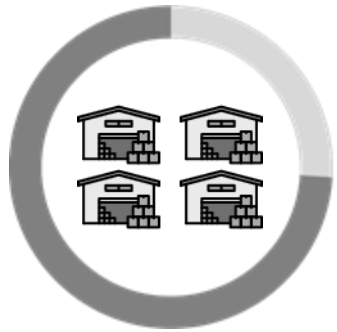


Reduced cost of operational errors (e.g., shipping)



Elimination of inventory time

# [Features]



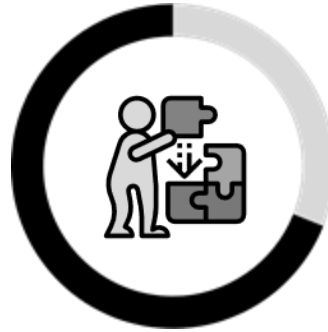
## Multisite

Multi-company, multisite, and remote warehouse management



## Configurable

Highly configurable operations, even for non-technical staff



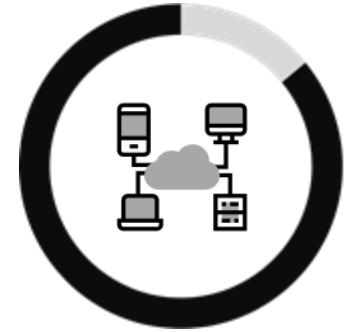
## Integrable

Designed to interface with any corporate information system



## Multilingual

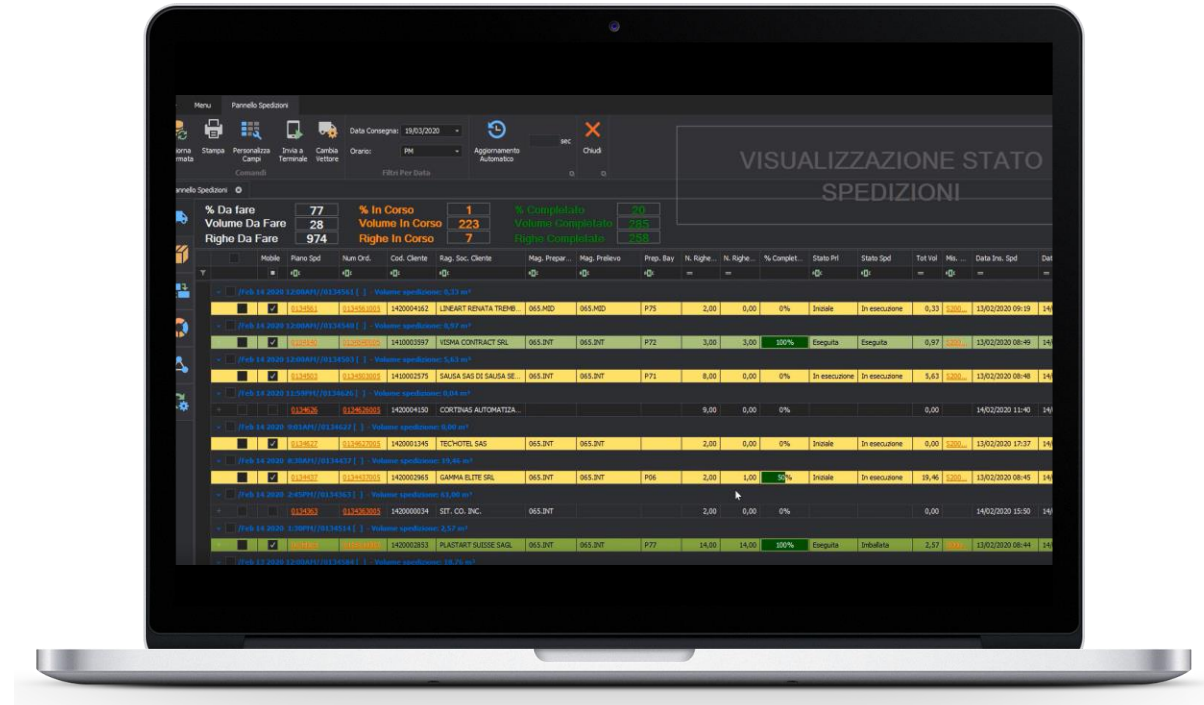
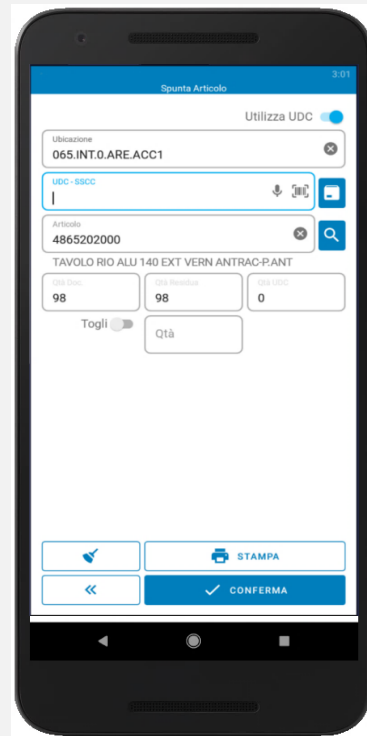
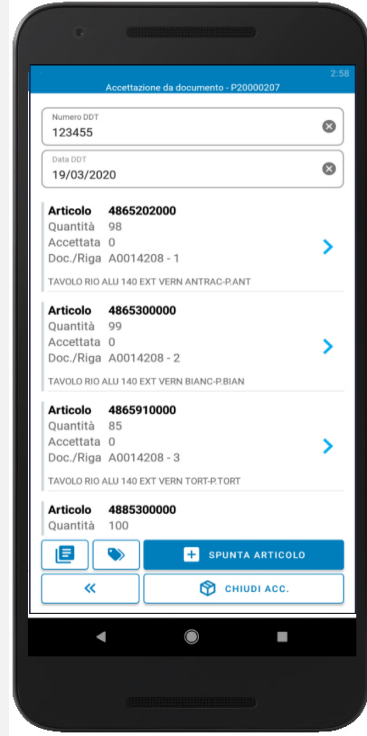
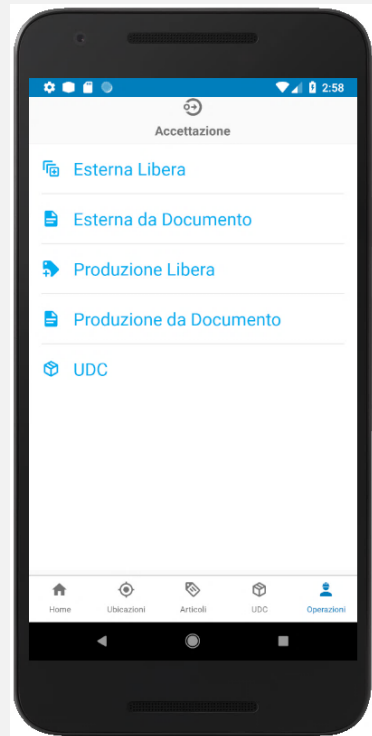
Available in multiple languages to adapt to different warehouse environments



## Remote Control

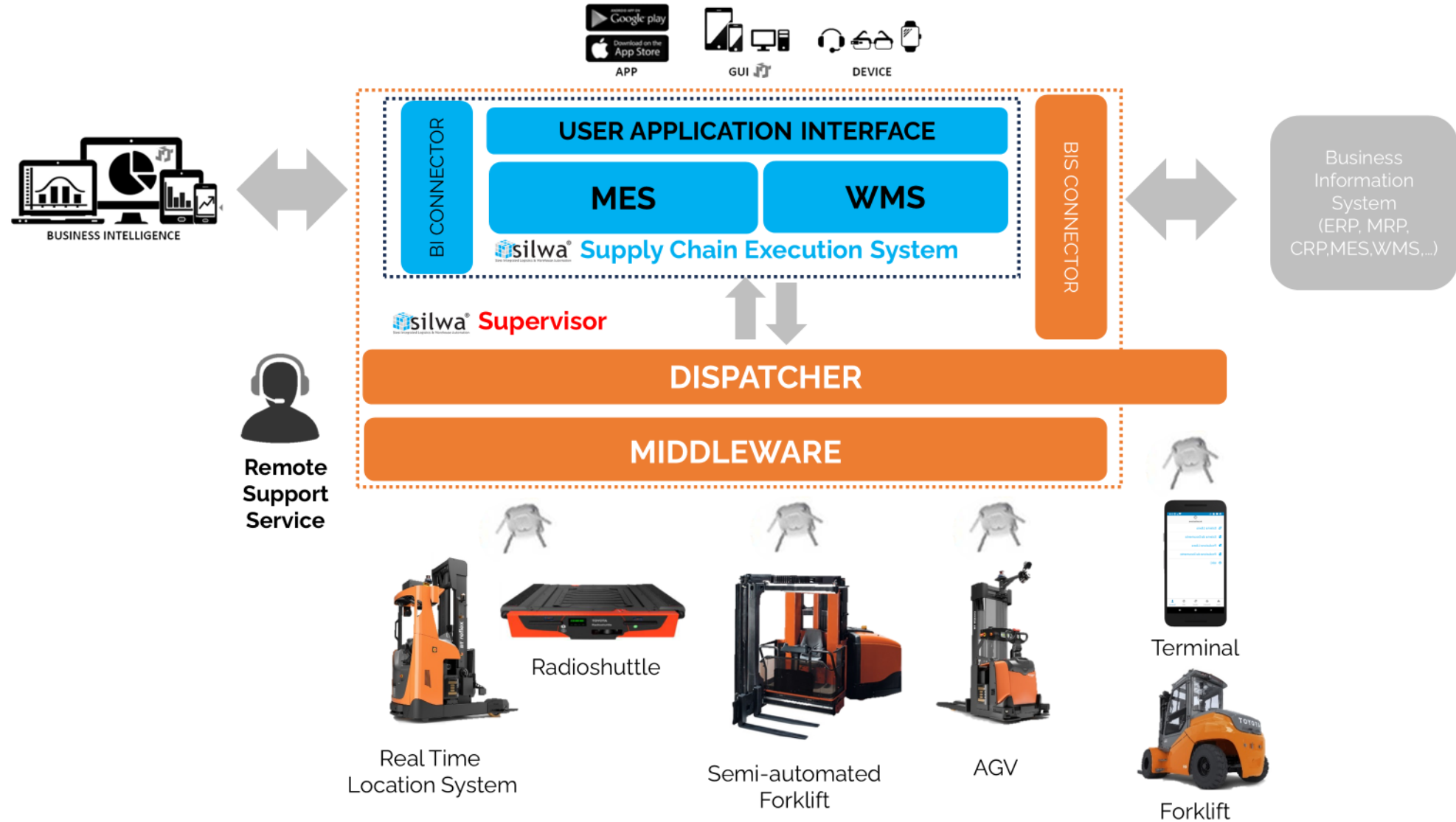
Operations accessible via web

# [User Interface]



- Easy and quick learning for company staff involved in the process
- Simplified and ergonomic mobile user interface (object menus, touchscreen mode, fast response times)
- Workstation user interface in Microsoft Outlook style

# [Architecture]



# [Architecture]



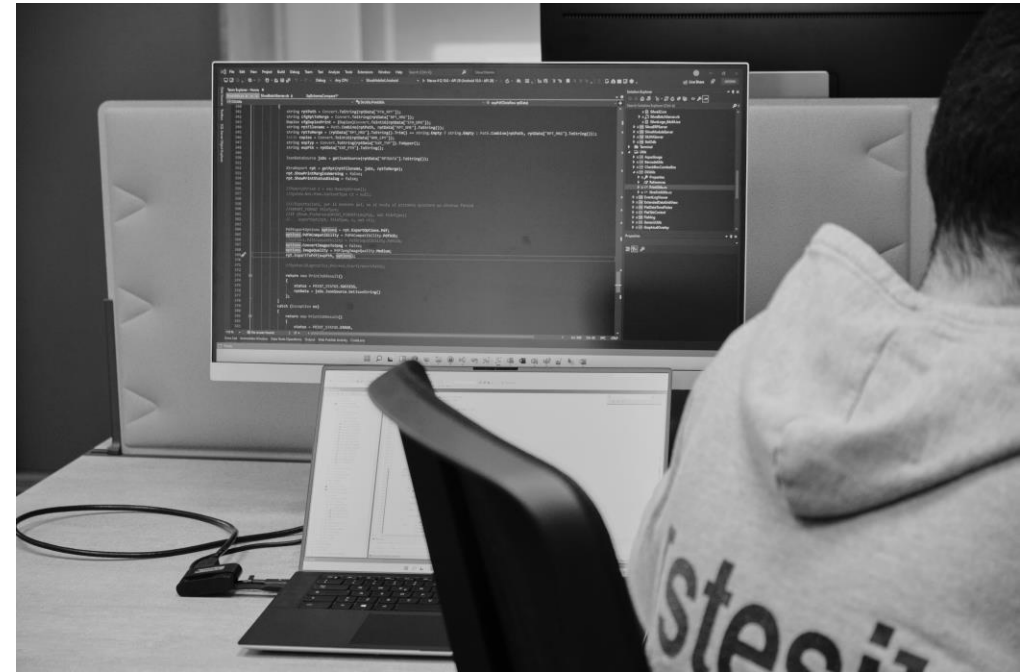
The system we propose has already been declared as fully compatible with the Transition 4.0 standard, as demonstrated in similar projects we've successfully completed for other clients.



Validation by your consultants is still required.



We are available to provide all necessary documentation.



# [silwa Modules]





# [*silwa* Modules]

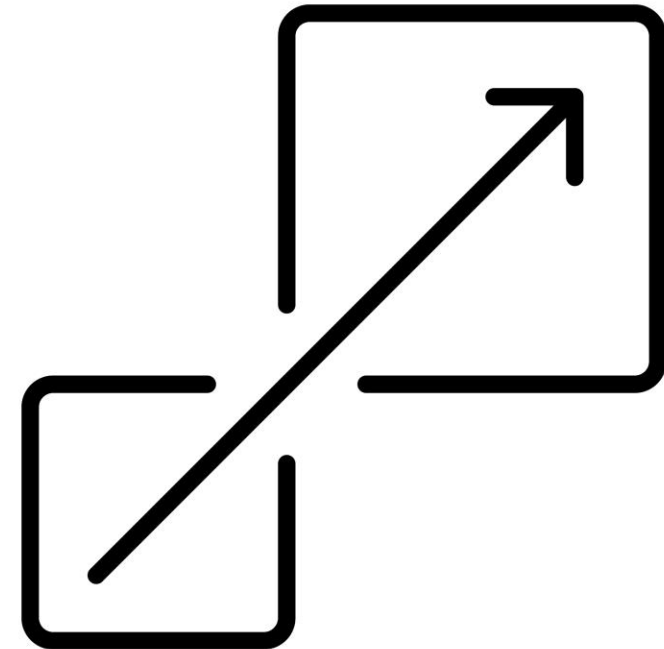
## Scalability



In Depending on the system's usage and performance requirements, which are not known at the time of initial deployment, one or more modules may be added to meet the necessary requirements.



Modules can be introduced in a "scalable" manner, fully preserving the active system and the investment already made.



# [*silwa* Modules]

## SilwaAISupport

Integration between AI and silwa Platform



**Dual accessibility:** the system can be accessed both by warehouse operators and from a workstation.



**Time and resource savings:** enables immediate responses without waiting for support services.



**Autonomy:** avoid the need to contact support, eliminating additional costs.



**AI AT THE SERVICE  
OF SUPPLY CHAIN**

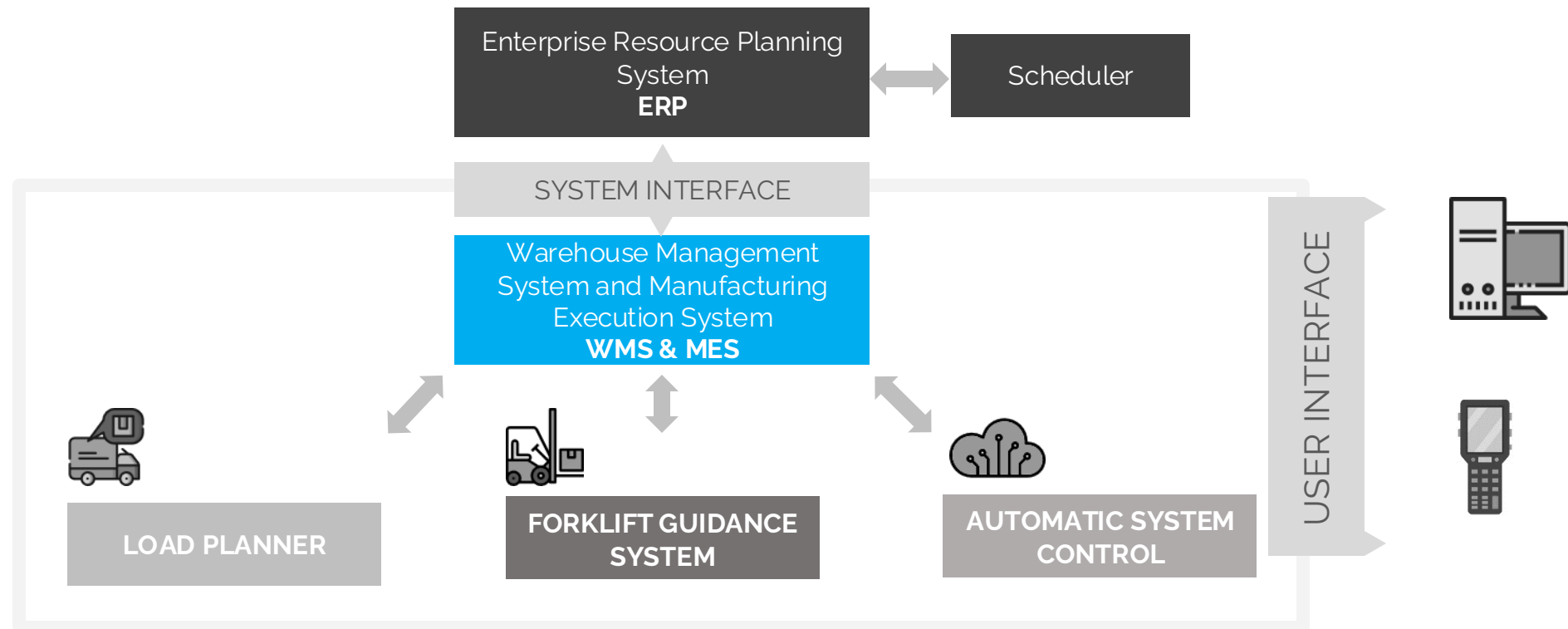
**[SilwaAISupport]** by [stesi]

**THE INTELLIGENT VIRTUAL ASSISTANT  
FOR WAREHOUSE AND PRODUCTION  
MANAGEMENT**

# [silwa Modules]

## 4ERP - Integration

**silwa** is a **real-time decision support solution**, capable of interfacing with all corporate systems, from ERP to automated storage and handling systems in the warehouse.



# [*silwa* Modules]

## 4ERP - Integration

*silwa* by Stesi:



Designed to interface with any corporate information system (integrations already implemented with SAP, Microsoft Dynamics AX and NAV, IBM AS400, Zucchetti, Sistemi, Teamsystem, etc.), as well as all automated material handling systems and production lines.



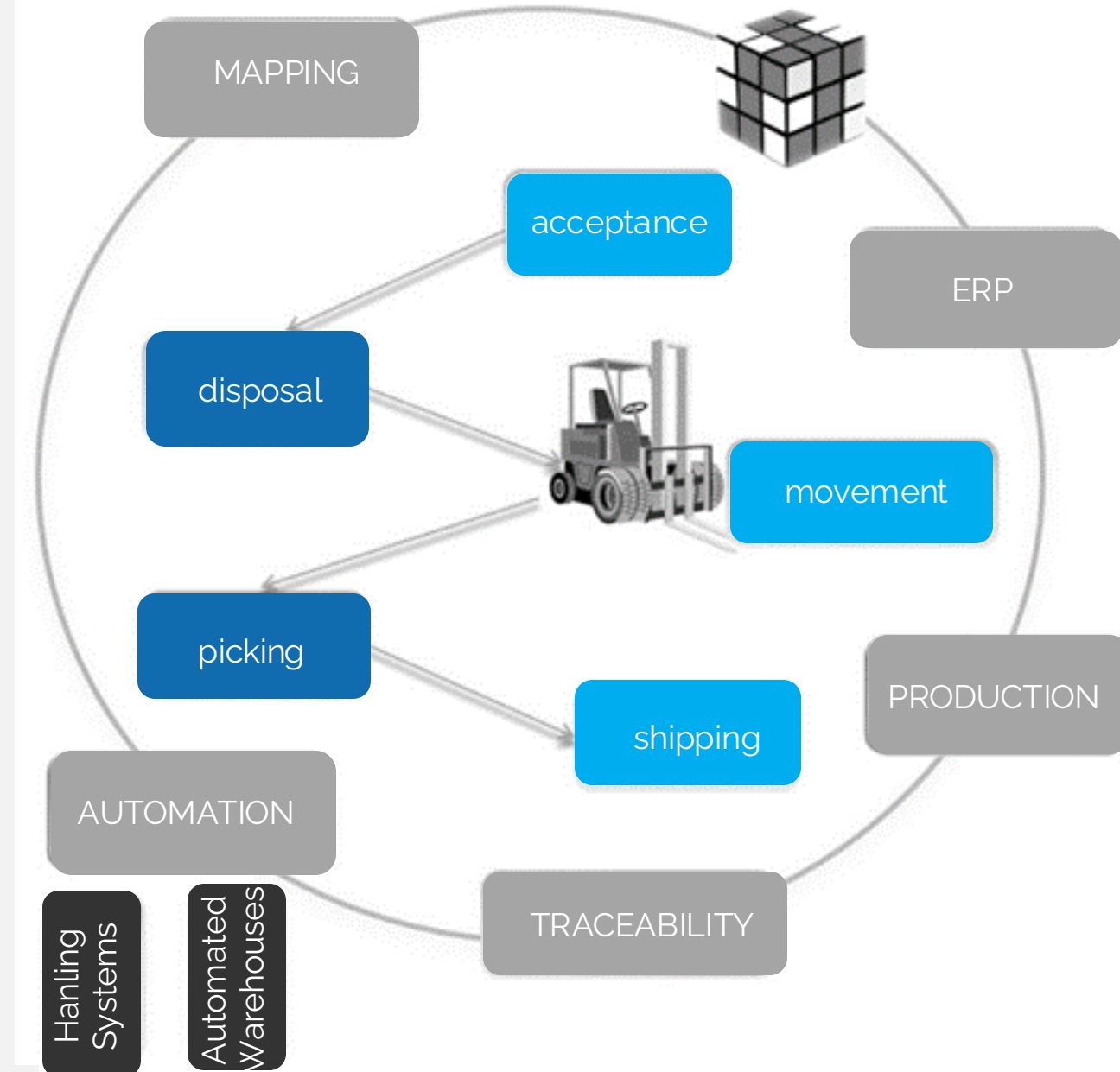
Based on Microsoft-certified software solutions, included in the international Microsoft Supply Chain application catalog.

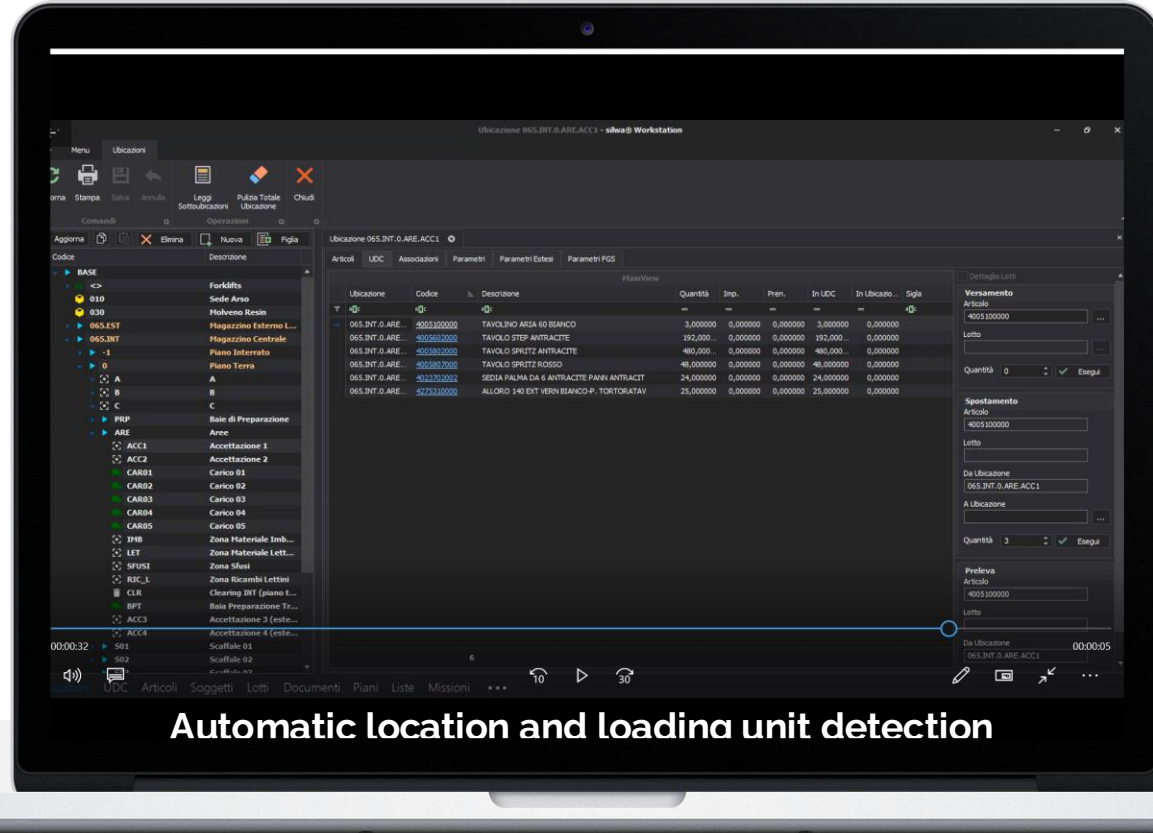
Our technicians are available to integrate different systems in collaboration with the client and their system suppliers.



## WMS - Logistics

- Acceptance
- Disposal
- Movement
- Picking
- Shipping



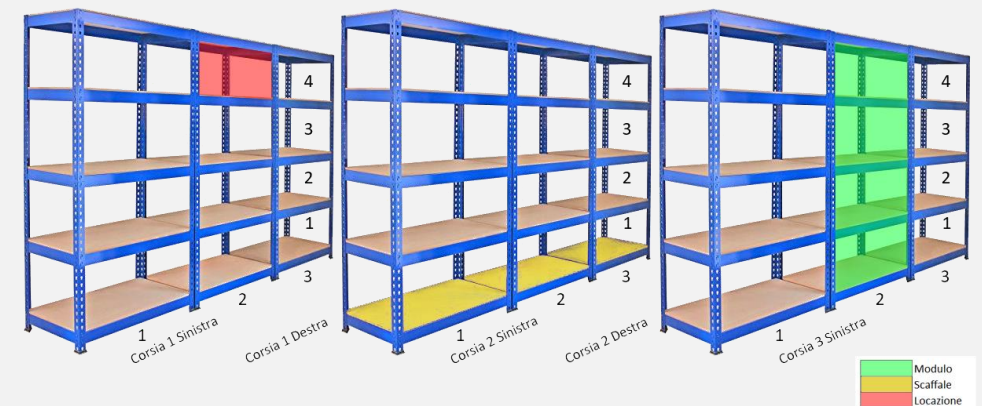


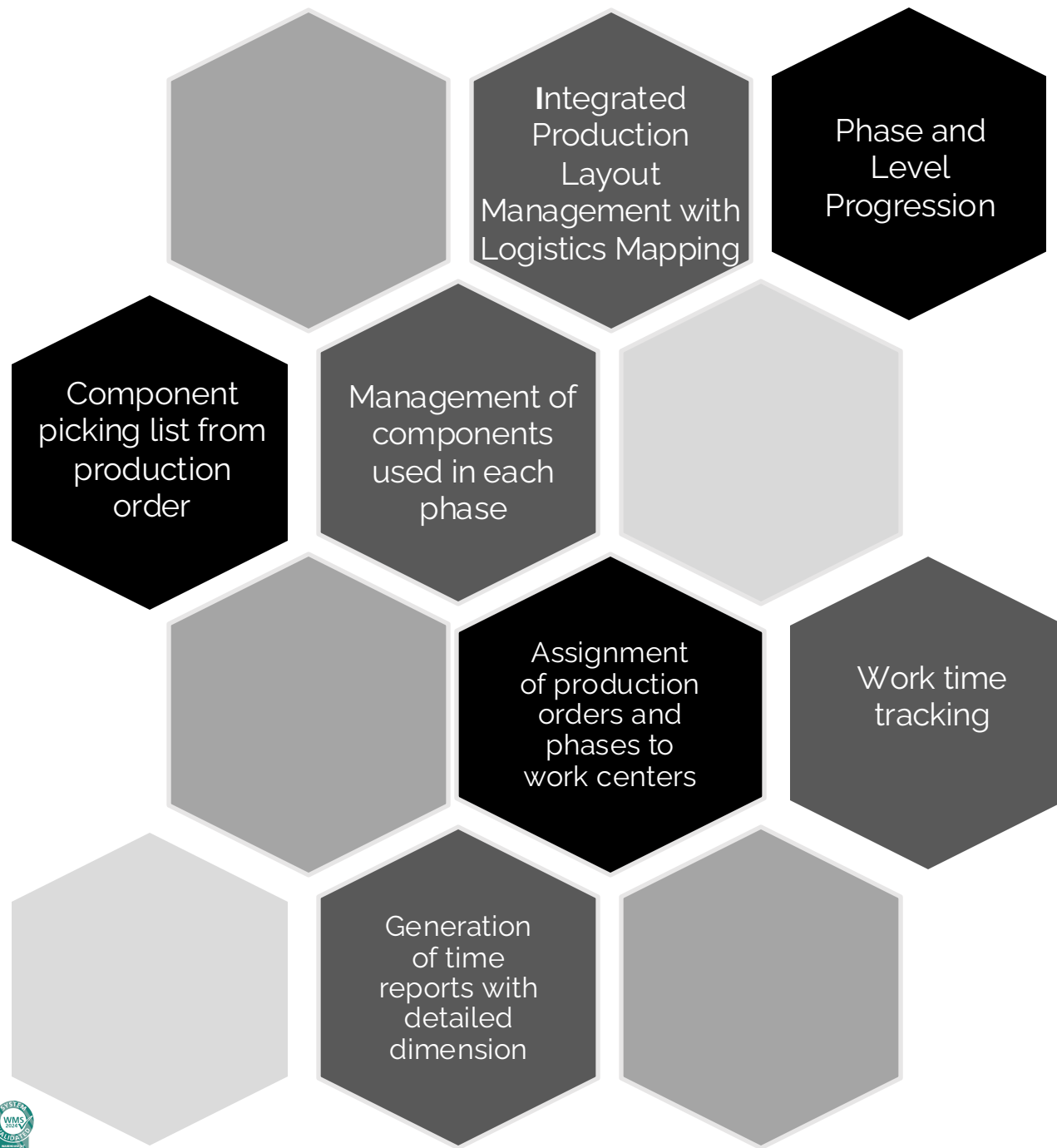
Automatic location and loading unit detection

# [silwa Modules]

## WMS - Logistics

- It is possible to freely define the tree structure of the logistics space mapping.
- For each location, parameters (size, scope, type, ABC class, Slow/Fast Access) will be defined and used to determine the deposit location.



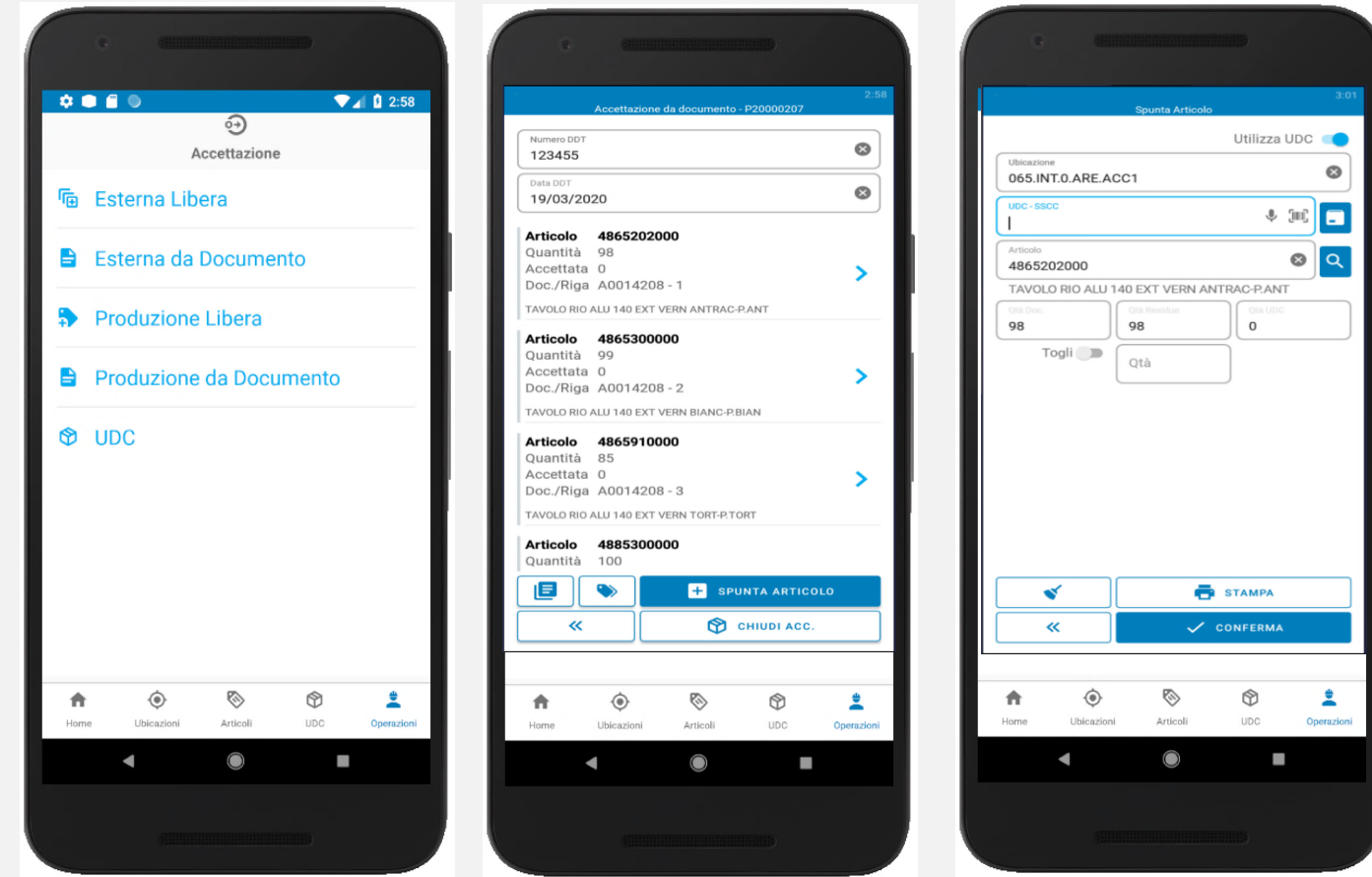


## [*silwa* Modules]

MES – Production

# [silwa Modules]

## Mobile – Operator Guidance



The operational activities are carried out using functions available as apps on Android and iOS mobile devices, with the possibility of using IoT devices (sensors, smart glasses, smartwatches, etc.).





# [silwa Modules]

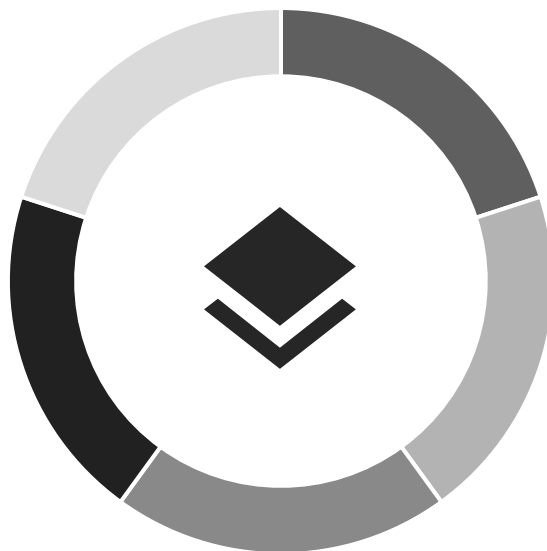
## FGS – Assisted Vehicle Guidance

1.

Touch-type vehicle user interface

2.

Graphical path guidance for forklift operators with a “GPS-like” system



3.

Graphical assistance system for picking and storage operations

5.

Automatic detection of location and loading unit

4.

Productivity analysis by vehicle/fleet



# [*silwa* Modules]

## Dispatcher – Mission Assignment



The logic of the entire proposed logistics model is the dynamic "**push**" **assignment of tasks to logistical resources** (vehicles and people), ensuring accurate execution.



The Dispatcher schedules and optimizes the assignment of transport missions to resources, considering: load unit characteristics (weight and volume), source and destination locations (position and access limitations), operators (qualifications), and resources (capacity, qualifications, and real-time position, if available).





# [silwa Modules]

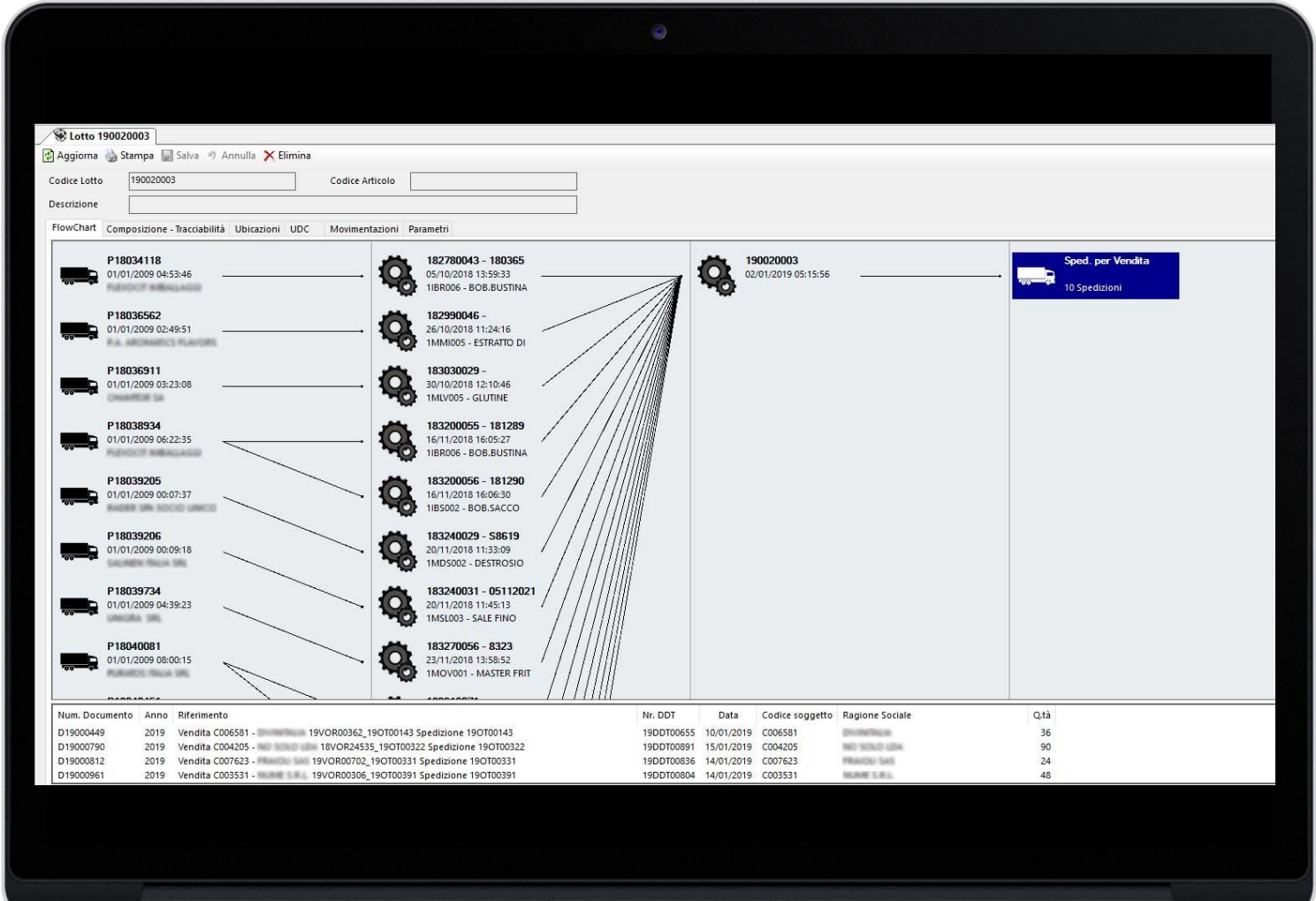
## 3D – Virtual Reality

- 3D "Virtual Reality" visualization of logistical areas
- Real-time tracking of goods and vehicles



# [silwa Modules]

## Batch – Lot and Serial Number Traceability



# [silwa Modules]

## Analytics – Business Intelligence

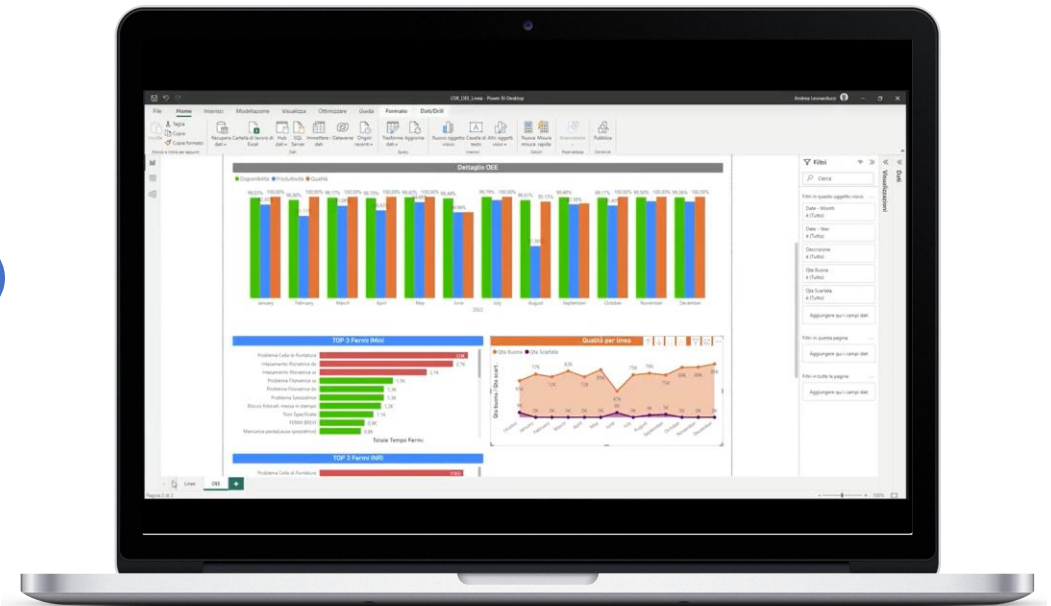
### Diagnostic Analytics

- Correlation between Handling Capacity / Picking errors and picking types (single row, order, batch)
- Correlation between Handling Capacity / Picking errors and picking logic used
- Correlation between Handling Capacity / Picking errors and worker seniority
- Correlation between Handling Capacity / Picking errors and shifts, seasonality, etc.
  - Correlation between staff presence and seasonality (e.g., illnesses)



### Descriptive Analytics

- Reception capacity
- Space usage (e.g., CU, capacity saturation)
- Handling capacity = Mission Rate
- Missions per hour, segmented by categories
- Per row/order/batch
- in vs. out
- Operator experience, stable vs. temporary staff



# [silwa Modules]

## Middleware - Interconnection



### Automation

Integration and control of handling lines, robots, stacker cranes, automated warehouses, AGVs, and production machinery. PLC integration using TCP/UDP protocols.



### Sensors

Integration with sensors and measuring devices (size, weight, pressure, presence, etc.)



### Safety

- Integration and control of safety devices and alarms.
- Management of anomalies and exceptions.



### Data Integration

Compliance with Industry 4.0 standards, both technical and regulatory, using international standard protocols.



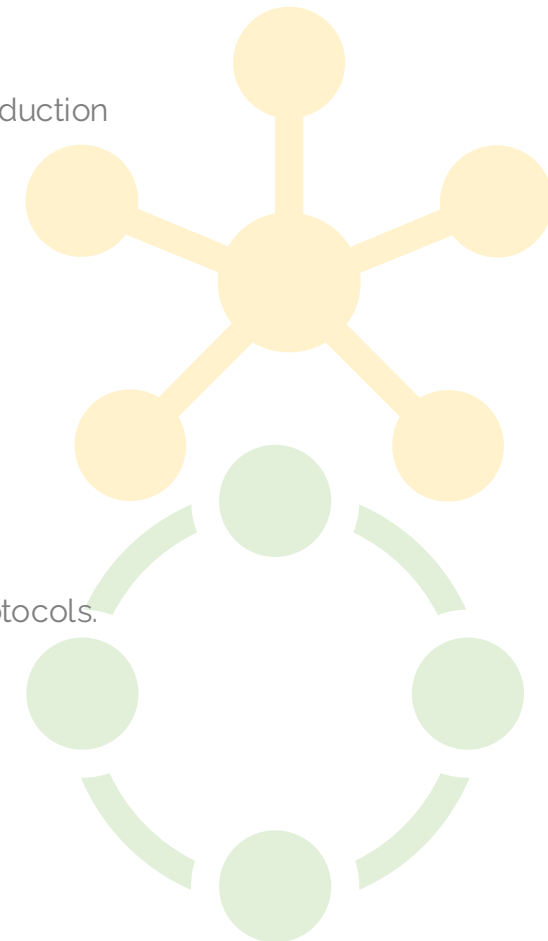
### Monitor

- Configuration and acquisition of operational parameters from devices.
- Querying ongoing missions and machine statuses.
- Real-time KPI monitoring.



### RFID

- Integration and control of RFID reading systems and gates.





# [silwa Modules]

## Slot - Docking Bays



### Organization

Temporal slot management for warehouse operators in charge of moving vehicles, distributing the work in loading/unloading bays, optimizing space and resources.



### Efficiency

Reduction of truck waiting times in the yard, lowering costs and avoiding penalties for long stops by transporters.



### Control

Monitoring transporter performance and the delivery performance of suppliers and customers. Identifying inefficiencies and anomalies and developing strategies to reduce errors and recover productivity.



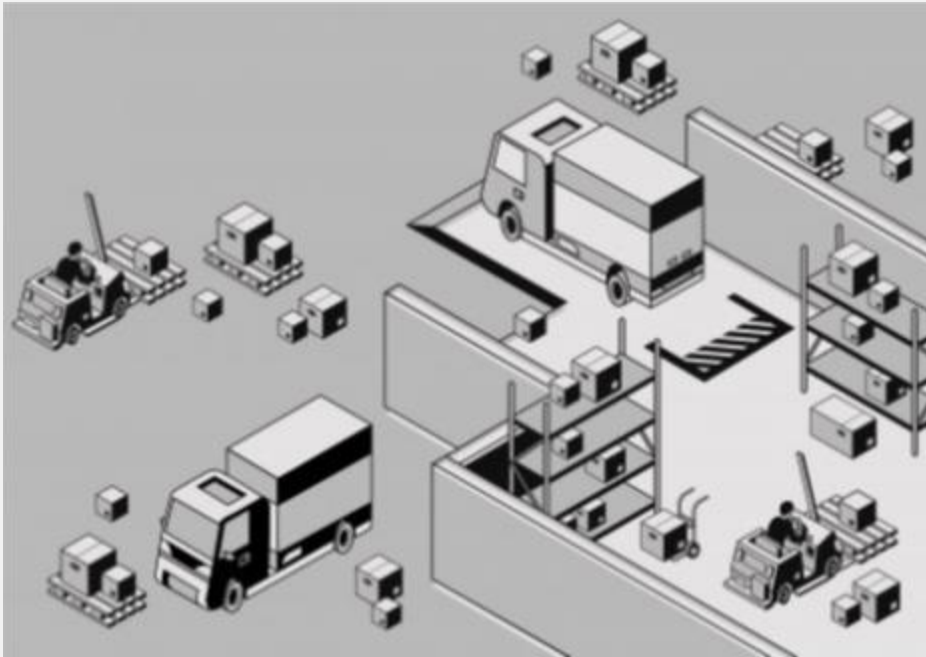
### Integration

Configurable data interface for complete integration with existing systems (ERP, WMS).



# [silwa Modules]

## Yard



### [Safety]

Real-time graphical map to always maintain visual control of vehicles and goods entering, parking, moving, and exiting the yard.

### [Automation]

Interface with yard devices (gates, scales, cameras) to automate and speed up check-in and check-out activities at the entrance, with alerts for missing or incorrect accompanying documents.





## **Some of Our Case Studies**

**[stesi]**

 **silwa**  
Stesi Integrated Logistics & Warehouse Automation

# [Some of Our Case Studies]

## Case History Quadrifoglio Group



"Without software like this, errors are only discovered at the picking stage, which is the point of sale to the customer, and by then it's too late to fix them."

Manuel Rizzo,  
Operations Manager at Quadrifoglio Group





# [Some of Our Case Studies]

## Case History BRN S.r.l.



# BRN

"It allowed us to unify all the individual automated machines under a common language, as each machine used its own before."

Paolo Pedrizzi,  
Strategic Marketing Manager at BRN S.r.l.



# [Some of Our Case Studies]

## Warehouse Management - WMS

KASANOVA®

### Problem to Solve

**2018:** Extremely ambitious project involving the complete **redesign** of the logistics system (comprising 8 B2B warehouses).

### Technology / Other Tools Used

- WMS
- RTLS
- Interface with ERP system
- Mission Manager
- BI
- E-commerce module

### How We Solved the Problem

Centralized logistics into two hubs: one in the North and one in the South.

### Benefits for the Client

1. **Delivery lead time** reduced from approximately 4.5 to 2.8 days.
2. **Transportation costs** decreased by 5% to 10%.
3. **Handling costs** were halved.
4. **The online channel** recorded orders 10 times higher than the old site.

### Problem to Solve

**2019:** Implementation of a departmental software for B2B and B2C logistics independent of the ERP system.

### Technology / Other Tools Used

- WMS
- Inventory Management
- Consignment management, customs warehouses
- Traceability - FIFE/FEFO
- E-commerce module
- BI

### How We Solved the Problem

Implemented software modules for B2B and B2C channels.

### Benefits for the Client

1. Significant reduction in **order preparation times**.
2. **Efficiency** optimization.
3. Improved **traceability**.
4. Strong increase in the number of orders processed.
5. Space **recovery**.



# [Some of Our Case Studies]

## Production Process Management - MES

### Problem to Solve



**2021:** Difficulty in using the existing WMS system and the need to track production activities.

### Technology / Other Tools Used

- MES
- Interface with management software
- Interface with vertical warehouses

### How We Solved the Problem

MES implementation for managing the production area, material supply, and production sequence.

### Benefits for the Client

1. **Feasibility order calculation** time reduced from 4 hours to 1 minute.
2. **Production supply management** based on material type.
3. Viewing assembly **manuals** via APP.
4. **Paper** reduction.
5. Precise **traceability** of goods.

### Problem to Solve



**2011:** Digitizing the company's production and logistics system, gradually enabling all the benefits of the Industry 4.0 paradigm.

### Technology / Other Tools Used

- WMS
- MES
- Intercompany goods exchange between different sites of a corporate group
- Traceability – FIFO/FEFO
- EDI

### How We Solved the Problem

WMS and MES implementation.

### Benefits for the Client

1. Complete functional coverage of **product logistics**.
2. **Integration** with the existing information system.
3. **Stock** reliability.
4. Maximum utilization of **space**.
5. Precise **traceability** of goods.
6. **Error** reduction.
7. Availability of accurate **KPIs**.

# Business Model

**[stesi]**

 **silwa**  
Stesi Integrated Logistics & Warehouse Automation

# [Organization]

## Support

Support Service with **Ticketing** System

1.

Provided directly by [Stesi]



2.

Hourly package with "scaling" model  
and monthly consumption report



3.

Option to extend coverage up  
to 24/7



4.

Guaranteed SLAs



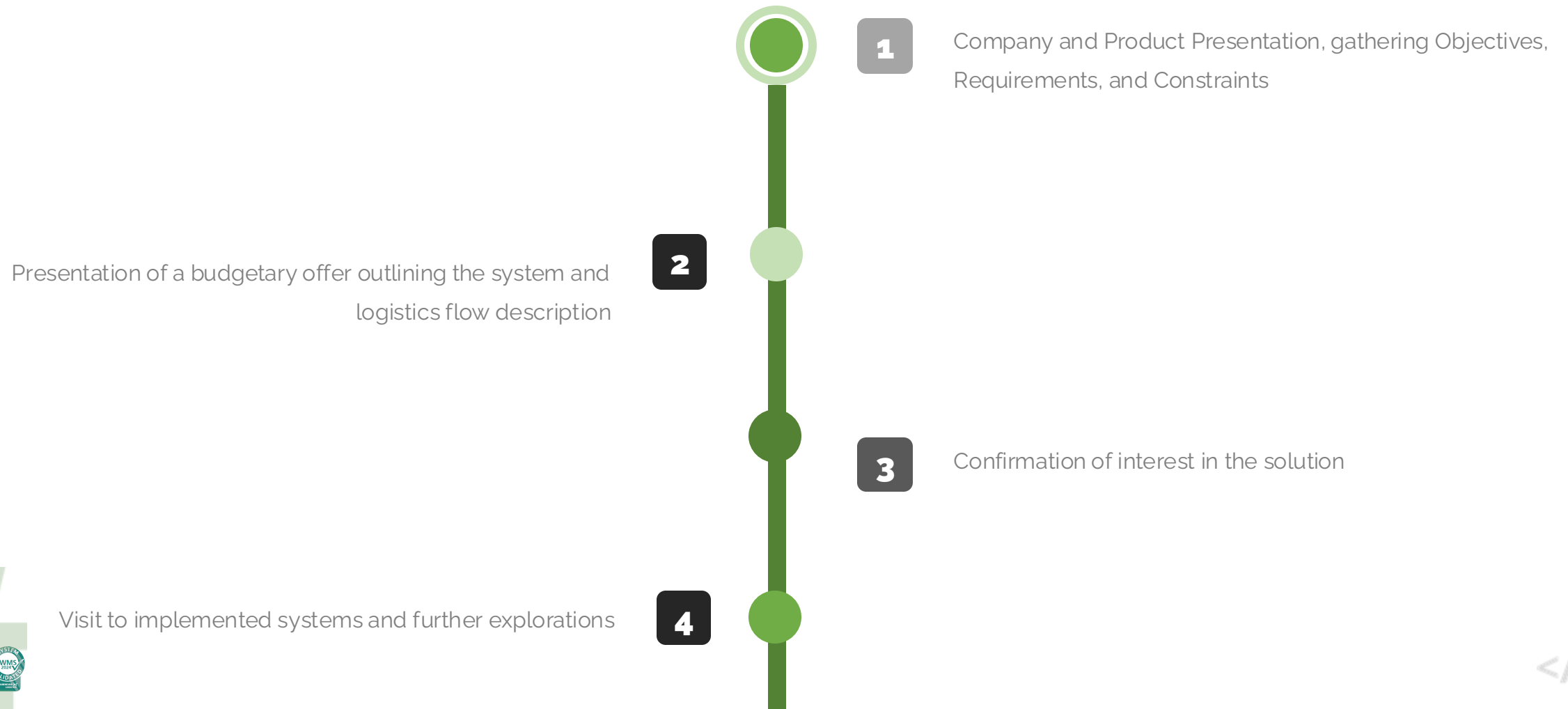
**Very High** – Callback within 2 hours

**High** – Callback within 4 hours

**Medium/Low** – Callback within 8 hours

# [Organization]

## Commercial Pipeline





Approval of investment and offer confirmation

Approval of Project Specifications

6

8

5

Presentation of a detailed offer listing all planned functionalities

7

Definition of detailed Project Specifications, including Activation Plan and target KPIs

9

System implementation and activation

# [Organization]

## Activation Plan

| Activity                       | 01/01 |  |  |  |  |  | 28/02 |  |  |  | 31/03 |  |  | 01/05 |  | 01/06 | 30/06 |
|--------------------------------|-------|--|--|--|--|--|-------|--|--|--|-------|--|--|-------|--|-------|-------|
| Infrastructure Activation      |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Analysis                       |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Design                         |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Project Acceptance             |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Configuration                  |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Customizations                 |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Installation                   |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| On-site Testing                |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| General Fine-tuning            |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| System Setup                   |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| KUser Acceptance Testing (UAT) |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Detailed Fine-tuning           |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Training                       |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| KUser Training                 |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Training                       |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Ottimizzazione                 |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Go Live                        |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Inventory                      |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| System Launch                  |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Post-GoLive Support            |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |
| Project management             |       |  |  |  |  |  |       |  |  |  |       |  |  |       |  |       |       |

# [Thank you for your attention]

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