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# Smart Reel Storage Silo

## Are you facing the following problems?

1.Difficult to find materials, long time to prepare materials, affecting production
2.Error-prone
3.Difficult round-off work, the statement cycle is long
4.Difficult to implement “first in first out” principle
5.Poor traceability
6.Small batches, multiple models, high frequency of line changes, difficult management
7.Bulk materials are difficult to manage, and the return cycle of materials after offline is long, and bulk materials are not processed in time, resulting in sluggishness
8.Inconsistent accounts, low degree of informatization, and low operational efficiency
9.Inventory is time-consuming, labor-intensive, and costly
10. Employee experience required for management

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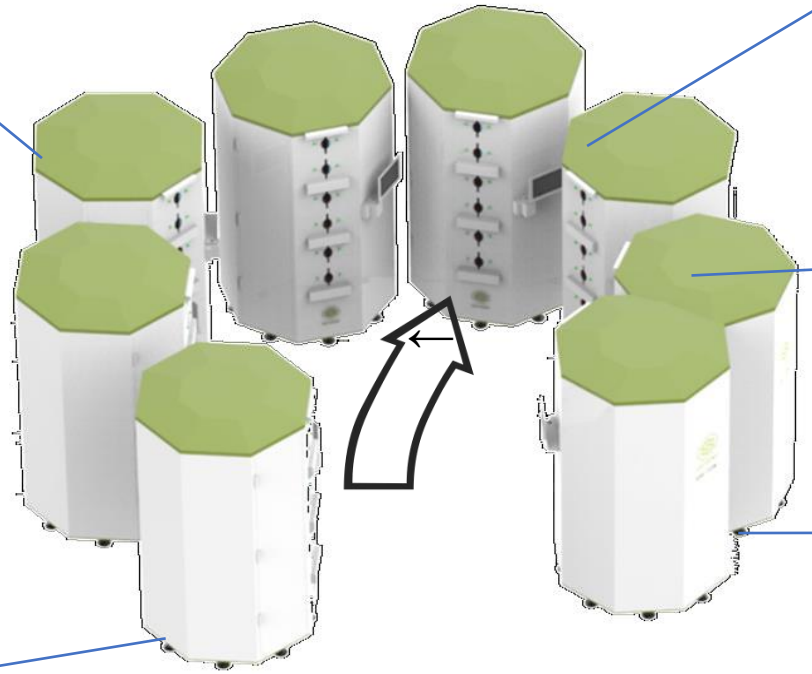
# Smart Reel Storage Silo

Real time information transmission

Improve storage high flexibility divisional management



Lower down counting cost

Reduce sluggish materials

Simplify the procedure, improving storage efficiency

Shorten line change time

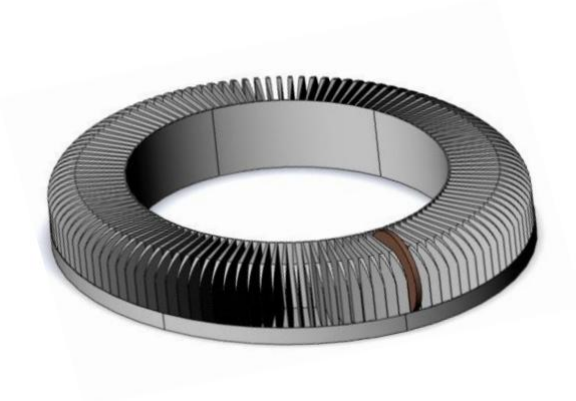
# Smart Reel Storage Silo

## Feature 1:

**Fast**: Independently rotating in layers

First-ever worldwide

Fastest<1S/Reel, Average < 3s/Reel



① Adopt servo motor for layered drive

② 360-degree bidirectional rotation

③ Incoming and outgoing materials nearby

⇨ Easily meet the needs of multiple work orders to issue materials at the same time.

# Smart Reel Storage Silo

## Feature 2:

**Reels find people**: High efficiency material taking in and out, saving labor and improving effect

- ☆ 5 Miles Walking Reduced
- ☆ 3-5 Times Work Efficiency Improvement
- ☆ Save labor by 60%

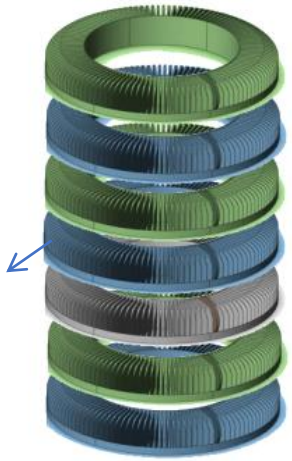
On-line networking, the main silo group to forms an organic whole;
The silo rotates around the operator, easy to get; efficient access to materials, save people efficiency!

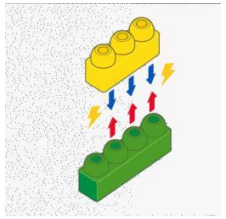
# Smart Reel Storage Silo

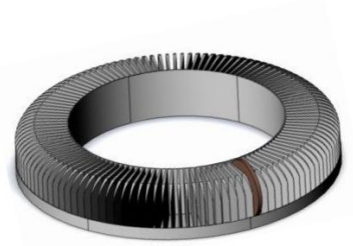
## Feature 3:

### Lego concept, modular design, high flexibility combination

Each layer
120-180 reels







- Can add layers based on the height
- Multiple silos can be matched freely, adapting the the site, production, and product changes

# Smart Reel Storage Silo

## Feature 4:

### Big and small reels matched freely in layers

**7 inches reels**:
Resistor, capacitor, inductor CHIP components

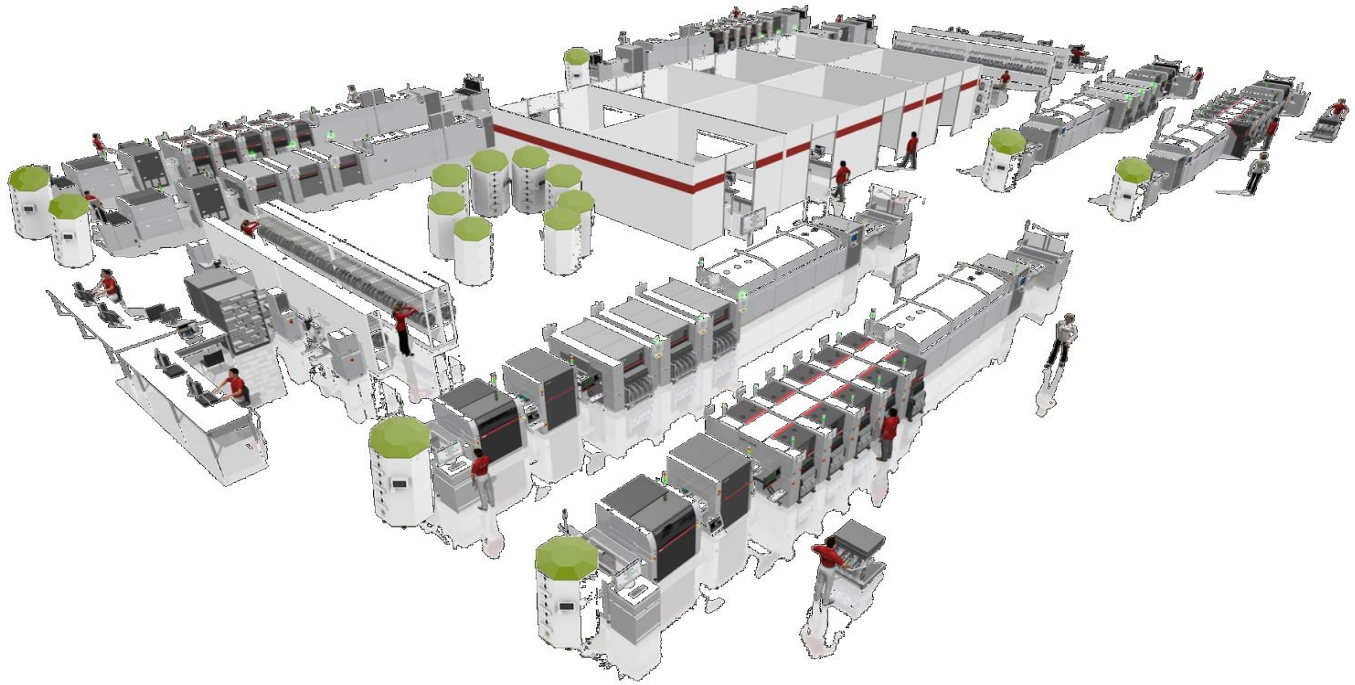
**13/15 inches reels**:
oddform components, IC type

- Meeting personal needs of flexible division in terms of customer, machine and status
- The storage seat changes with material change

# Smart Reel Storage Silo

## Feature 5:

## Flexible for area and site changes

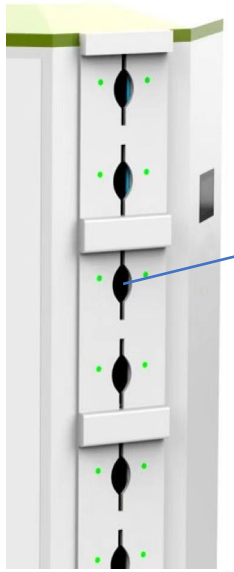


Can be applied in line area warehouse or the main warehouse
**The user can make adjustment anytime**.

# Smart Reel Storage Silo

## Feature 6:

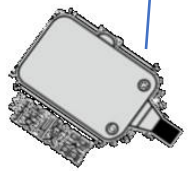
### Enclosed silo, fool/error proof



material status detection sensor

Signal emitter

Signal receiver

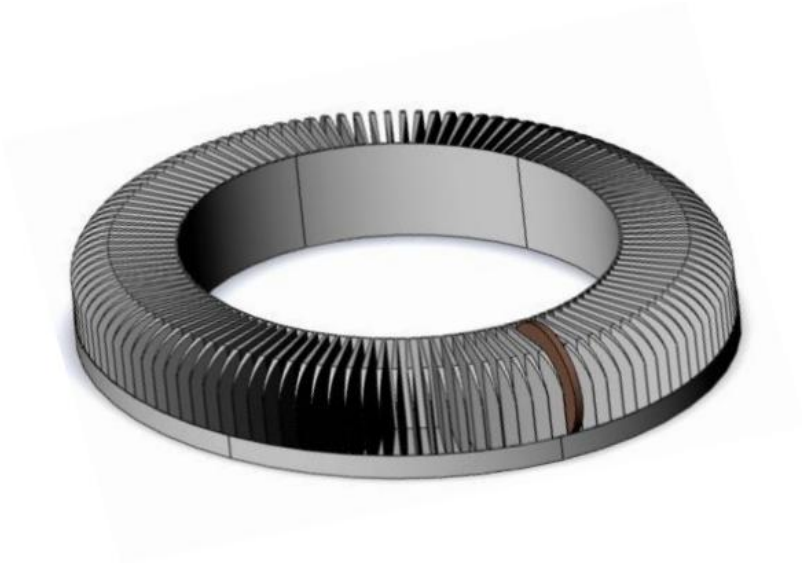


During the process of taking and placing materials, if the wrong pick or misplacement occurs, the system will alarm and it'll be locked.
The material can be taken only through the authentication.

# Smart Reel Storage Silo

## Feature 7:

### Small size, major capacity



1.Fan-shaped geometric die opening

2.Narrow inside and wide open mouth

3.Easy material in and out

4.Large capacity

◆The best balance point found between “easy material taking in and out” and “large capacity”!

◆According to SMT material specifications and characteristics, combining compatibility, handling, practical application scenarios and so on, continuously optimize and upgrade to maximize SMT material storage capacity.

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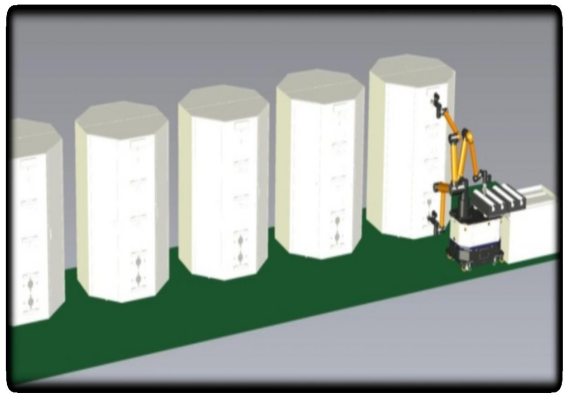
## Feature 8:

# Stable and reliable unmanned solution



Building block expansion to achieve unmanned operation(optional):
Smart combination:independent, loadable, and flexible configuration.
If the manipulator fails, it can be operated in a man-machine cooperation mode without affecting the production cycle.

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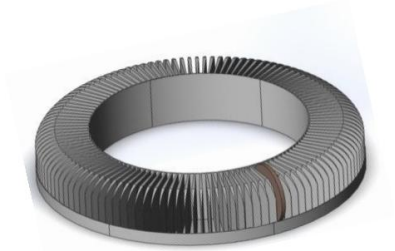
# Smart Reel Storage Silo

| Equipment Size | Model | Specification | Storage Capacity |
|---|---|---|---|
| Length: 1618mm<br>width: 1553mm<br>Hight: 2260mm<br>Area:<br>2.5 square meters | SZT8-6180 | 7 Inches 8mm | 1080 reels |
| | SZT8-8180 | 7 Inches 8mm | 1440 reels |
| | SZT8-8120 | 7 Inches 12-16mm | 960 reels |
| | SZT8-5060 | 13 Inches 12mm-32mm | 300 reels |
| | SZT8-4060 | 15 inches (12mm-32mm) | 240 reels |
| | Can custimize based on customer needs, maximizing the storage capacity | | |

- ◆Modular silo design brings users the FEEDER type experience.
- ◆Users can flexibly configure the type according to their own material structure and production capacity requirements, number and quantity.
- ◆A variety of specifications are optional.

# Smart Reel Storage Silo

## Flexible investment



◆120-180 reels per layer, 720-1440 trays per silo

◆Modular design, a small base, high investment flexibility

◆Single Cabinet 7000-16000 reels

◆Single warehouse capacity, easy to cause excess capacity and waste of resources, choose not flexible

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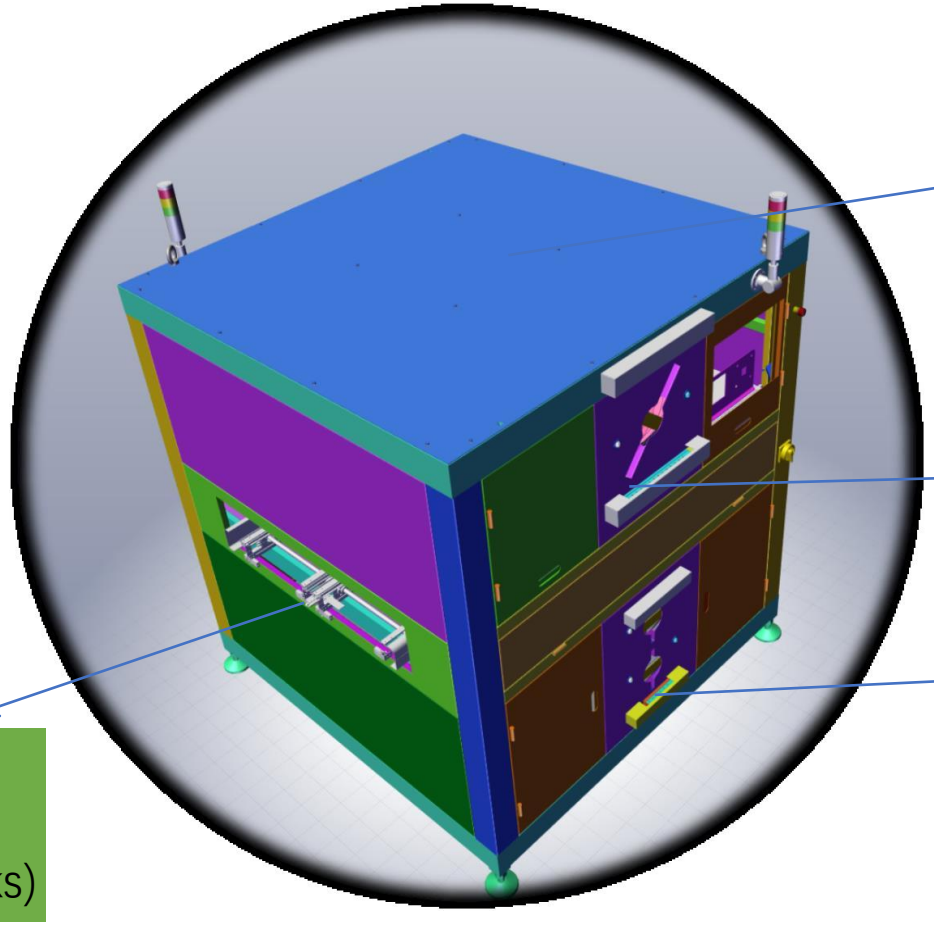
# Smart Reel Storage Silo

## The world's first double-sided on-line smart reel storage silo

- Placed in line:
Do not occupy the passage, solve site constraints.
- Two-side feeding:
two-side feeding, reduce walking distance
- Networking Online:
pull-type feed, timely and adequate supply
- Thoroughly error-proof:
the machine calles the material, one reel at a time, thoroughly error-proof
- On-line unwinding:
simplify the process, save people efficient
- TWO-TRACK TRANSFER:
International Standard two-track design, and SMT equipment perfect docking

# Smart Reel Storage Silo

## Appreance



Color, form factor, storage layer number, single/double-sided material discharge, etc. can be customized

13 inches reels

7 Inches reels

Transfer track (double tracks)

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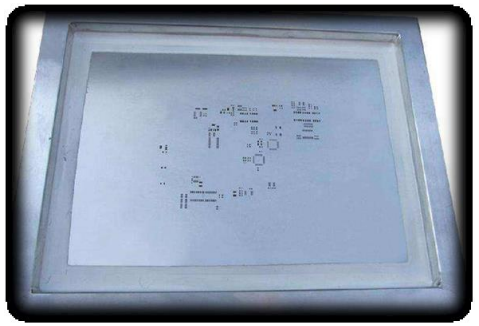
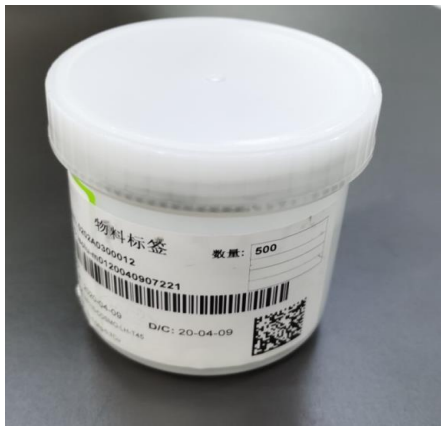
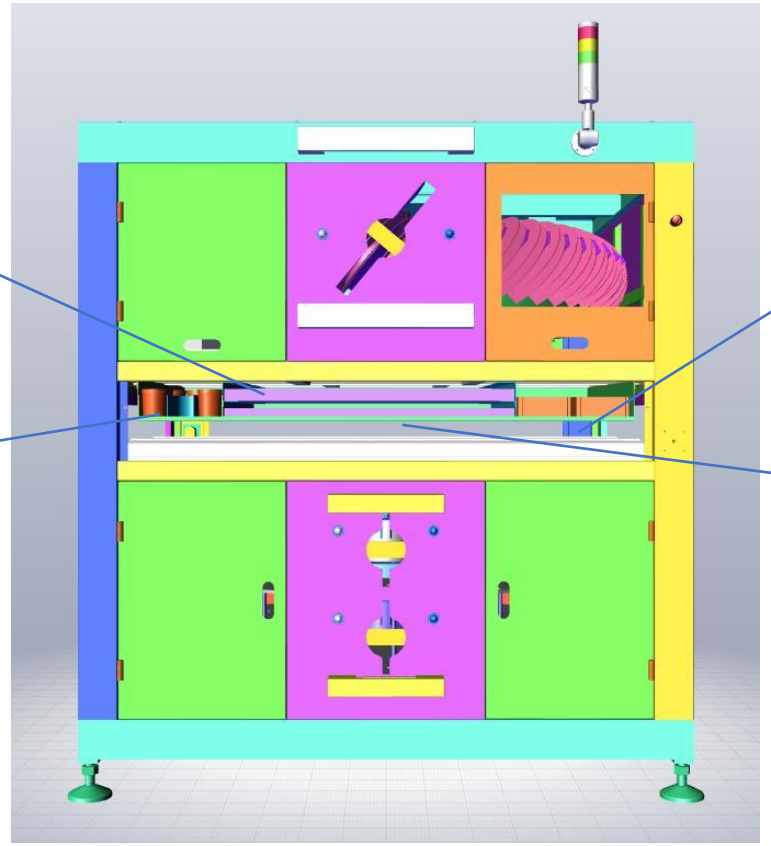
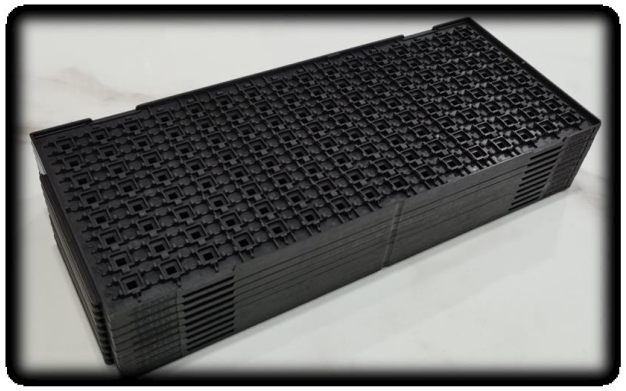
# Smart Reel Storage Silo

## Comprehensive management of workshop, realizing more orderly workshop



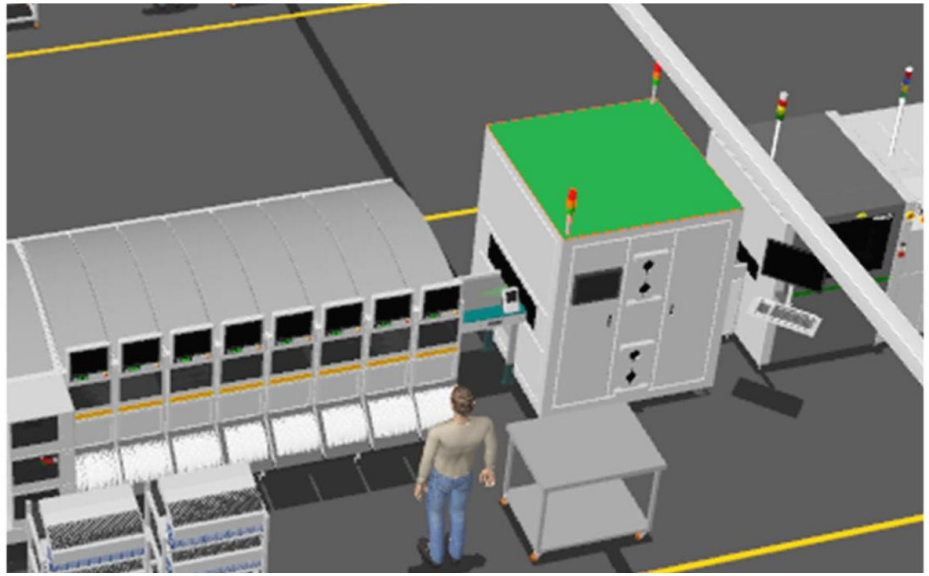


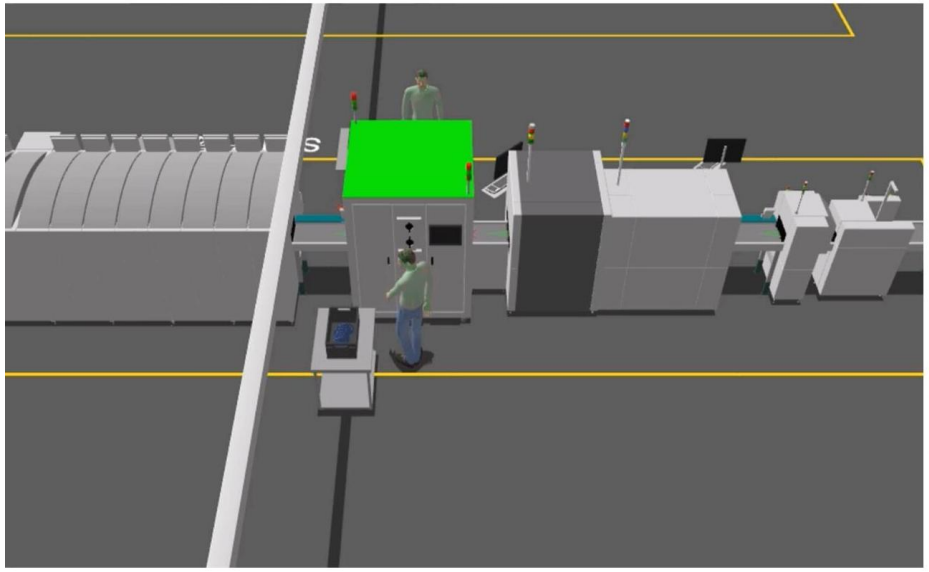


# Smart Reel Storage Silo

## Save space, take material on both sides, reduce the distance of personnel walking



The online silo is placed in the line; save space and do not affect the logistics channel.



Both sides take material, man, machine, material closer to reduce personnel walking distance.

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# Smart Reel Storage Silo

## Types

SMT Line Area Silo

SMT Main Silo

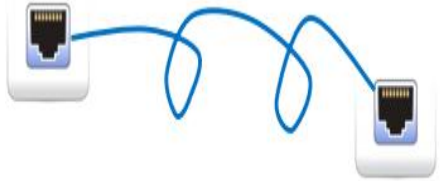
SMT Online Silo

Applicable for multiple scenes

At the same time, products open cooperation, perfect integration of third-party software and equipment.

# Smart Reel Storage Silo

## MES Material Issuing



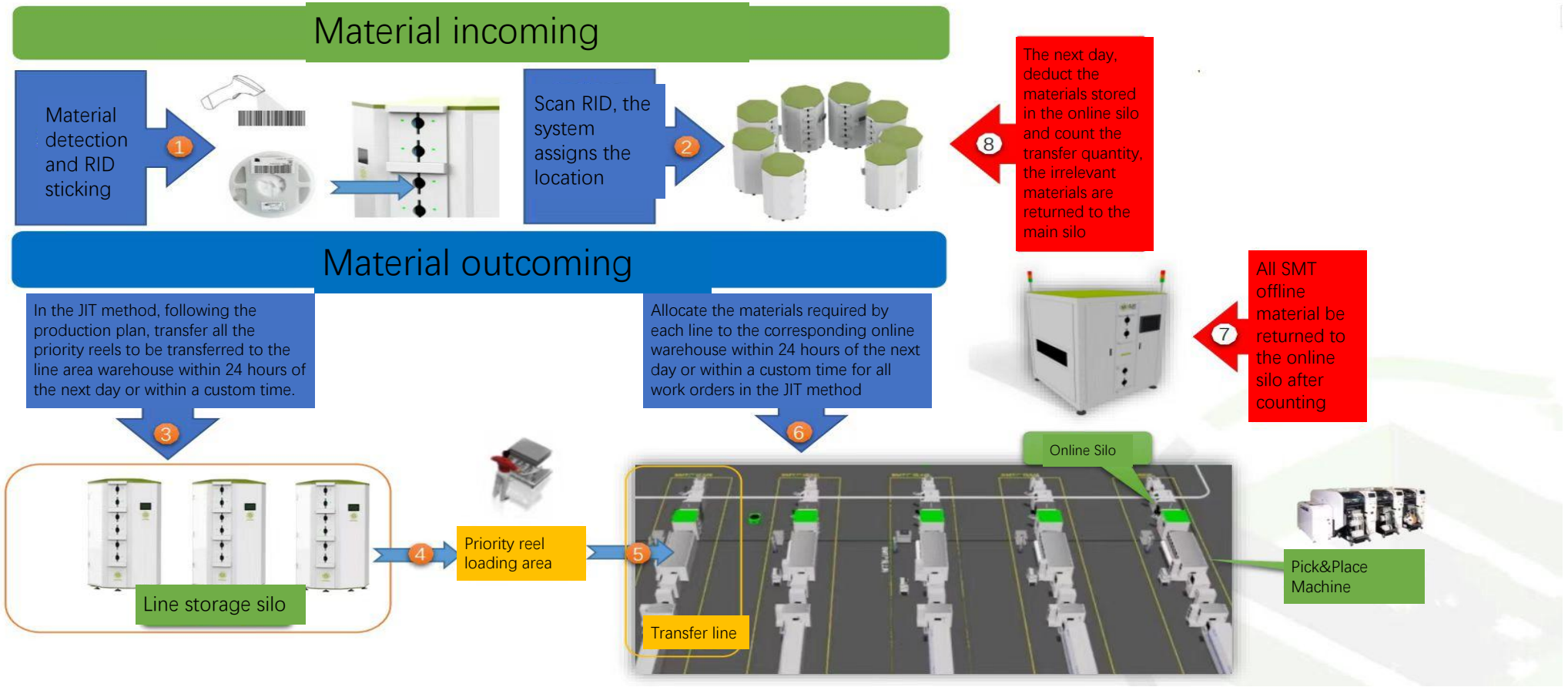
Futile work time reduced by 75%

Improve back-to-warehouse returning counting efficiency by 75%

Material searching and loading time reduced by 45%

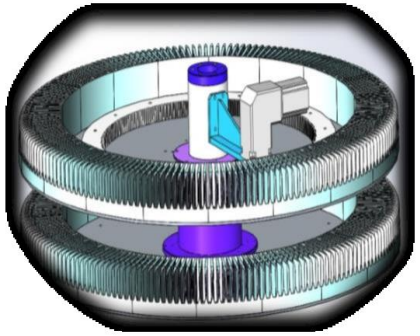
# Smart Reel Storage Silo

## Technical workflow



# Smart Reel Storage Silo

## Substantial quality



1.**All lines are of fixed design and are not bent during operation**, prolonging their service life and reducing the occurrence of failures.

2.The key components use the world's most trusted brands **Schneider, Mitsubishi, Keyence, Omron**, etc.

3.**Modular design**, minimizing impact.

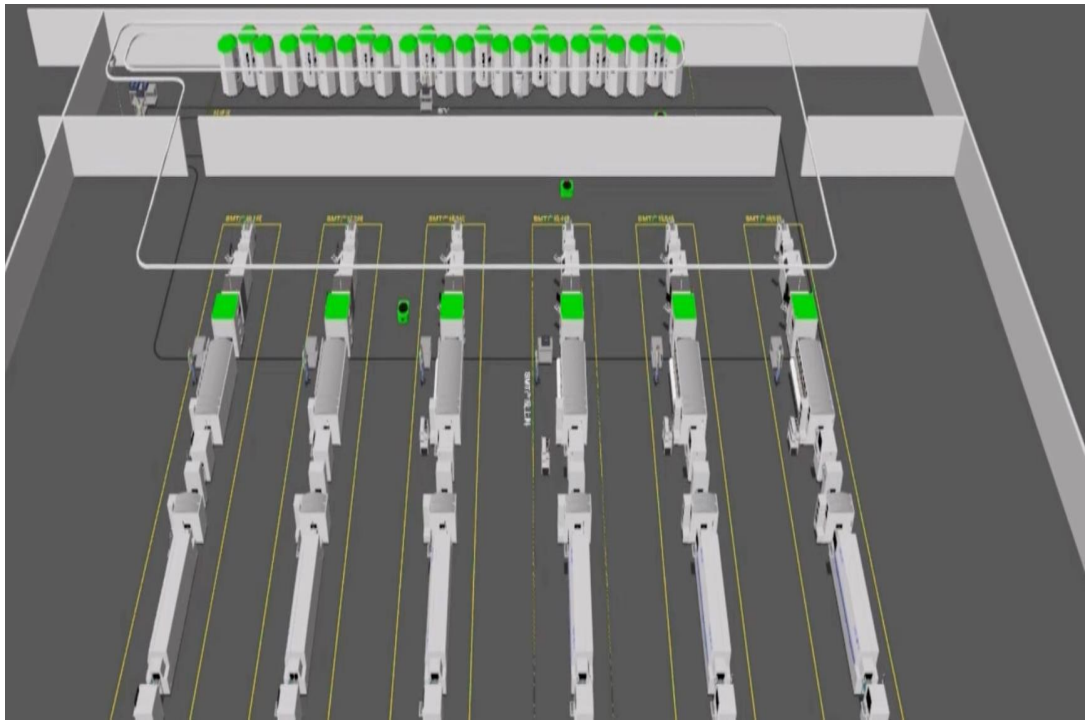
4.**Quickly remove risk**
The storage location is marked with a QR code, which can be scanned by a scanner gun to extract materials and related storage location information, and quickly transfer them to adjacent silos.

# Smart Reel Storage Silo

## Application examples

# Smart Reel Storage Silo

## Layout



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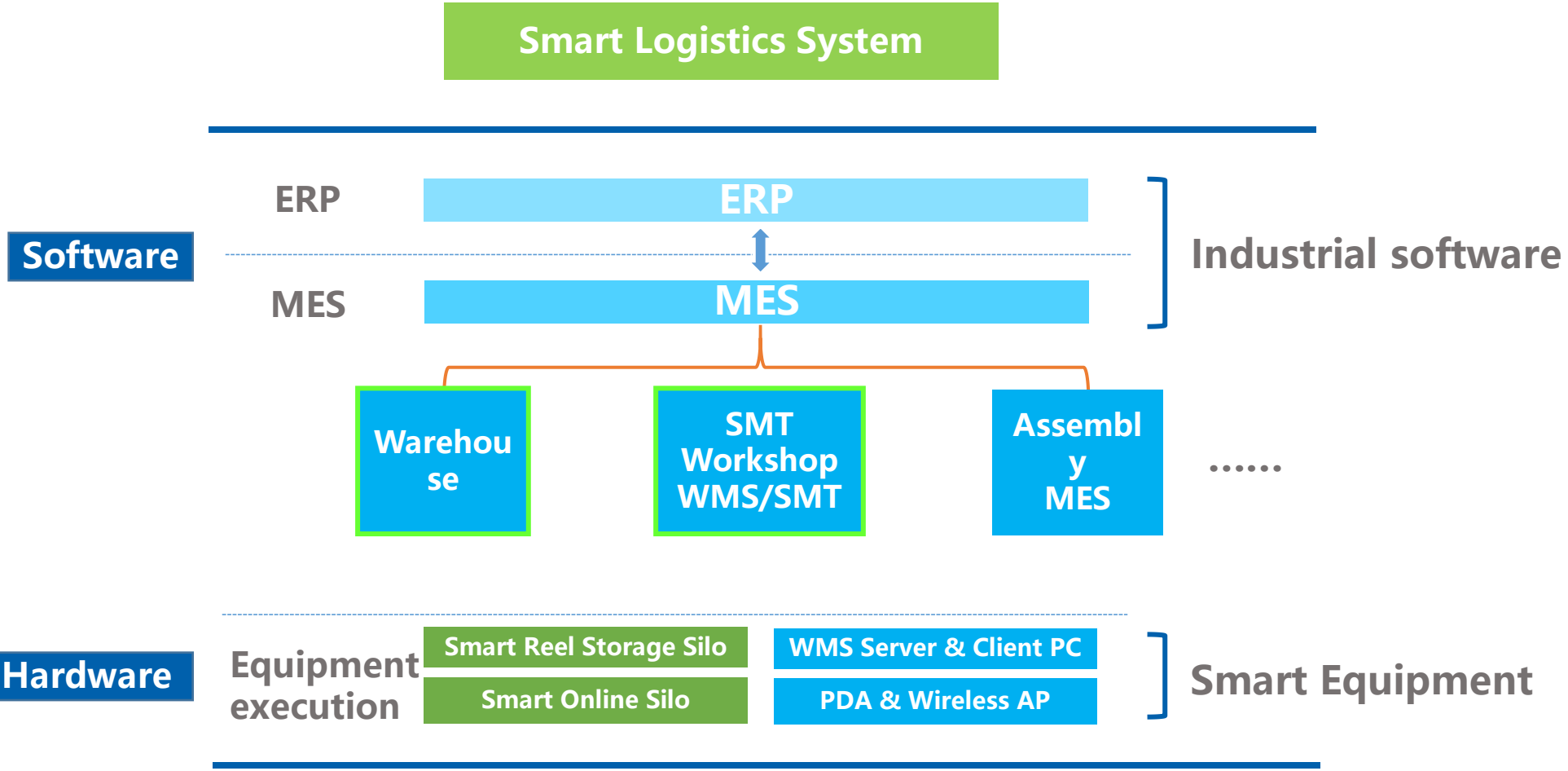
# Smart Reel Storage Silo



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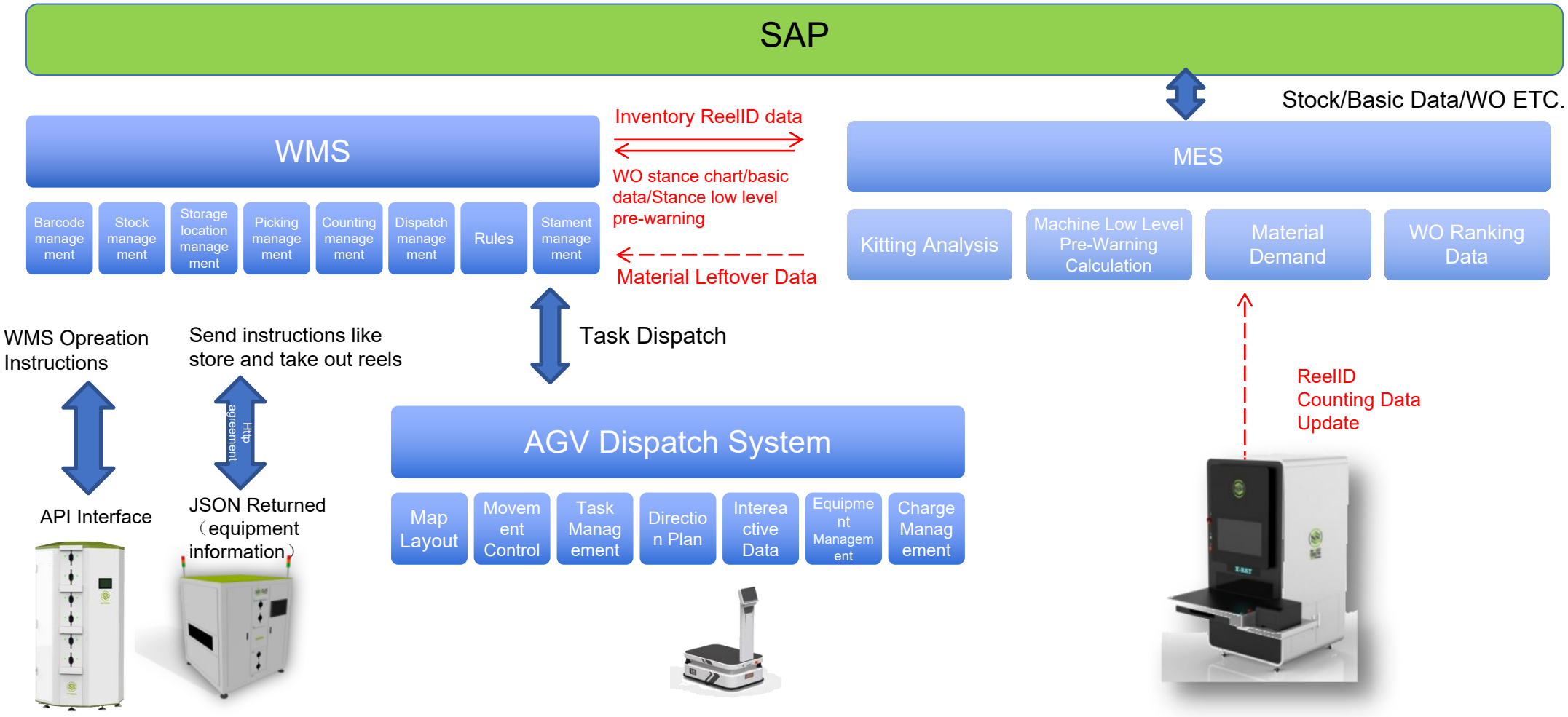


- WMS and AGV currently adopt butting methods like WebAPI, webservice
- WebAPI（HTTP Agreement+JSON data format）is adoped to for WMS and Smart Silo communication. WMS mainly send control command like storing and taking out reels to the Smart Silo to control its operation. The Smart Silo returns the equipment information to WMS.
- WMS communicates with WebAPI through WebAPI directly by applying API interface.

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# Customer Examples

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# Best After-sales service

— 7x24 Worldwide Support

— Free Installation/ Training

— 1 day lead-time (spare parts)

— 1 Month customize solution

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# Welcome Inquiry

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