Work more efficiently tracking location and movement of everything

Is your worksite...

- Seeing storage get more and more complicated?

- Taking time to find things and their location?

- Short on labor, or seeing productivity fluctuate among experienced and novice workers?

Visual Warehouse, our location tracking technology
Solution for location management

✓ **Save time finding things, and improve accuracy in inventory control**

Use wireless tags to locate items without scanning, while managing their data.

✓ **Improve efficiency and prevent errors**

Systemized management of location and incoming/outgoing goods allows anyone to perform the same task accurately, to improve overall efficiency.

✓ **See inventory status in real time**

Digitized information on work procedures allows real-time traceability of inventory, e.g., how much of an ingredient was used when and for what purpose. No more need to stocktake.

Example of improvement

A film rollstock warehouse at Company A: Reduction in worker-hours and stock loss

Time to find materials

30 **hours/month (2 persons)** ▶ 10 **hours/month (2 persons)**

720 **hours/year** ▶ 240 **hours/year**
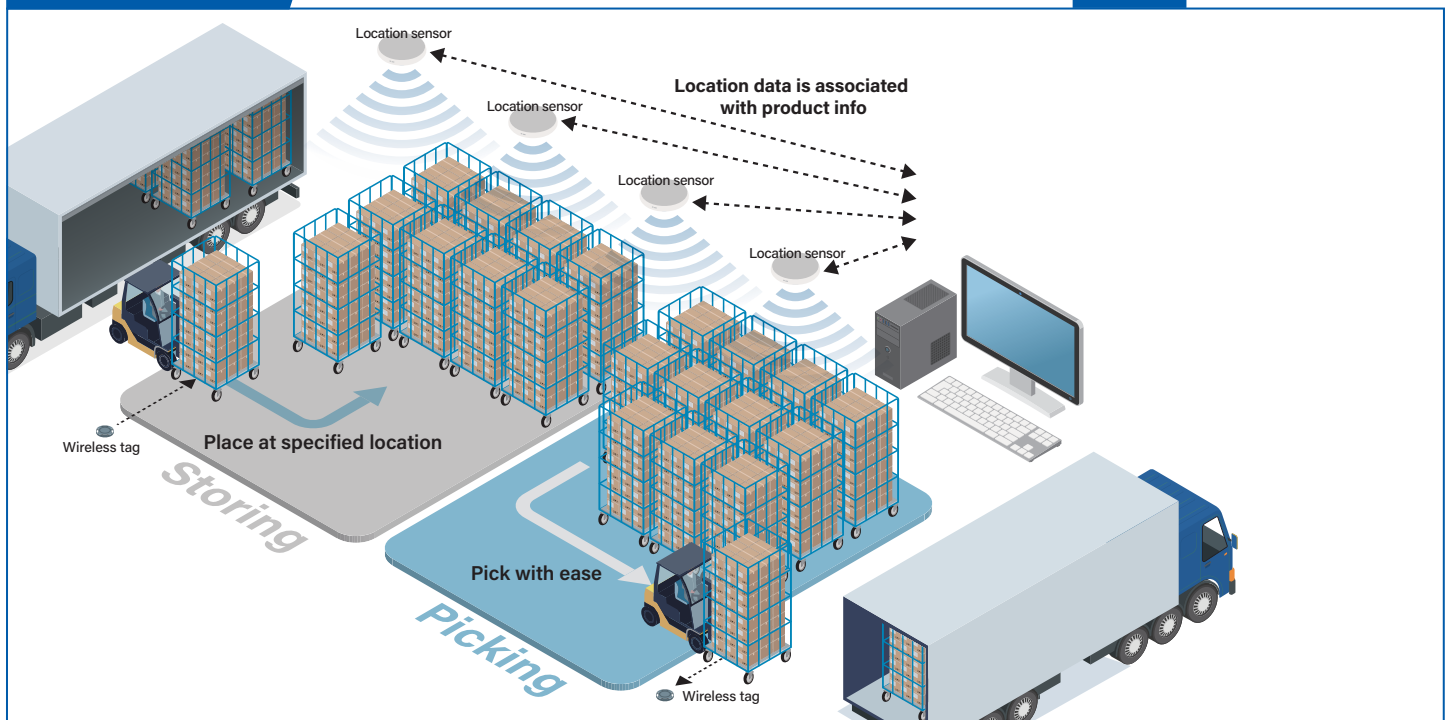
Time to stocktake 4 **hours/month (2 persons)** ▶ **None**
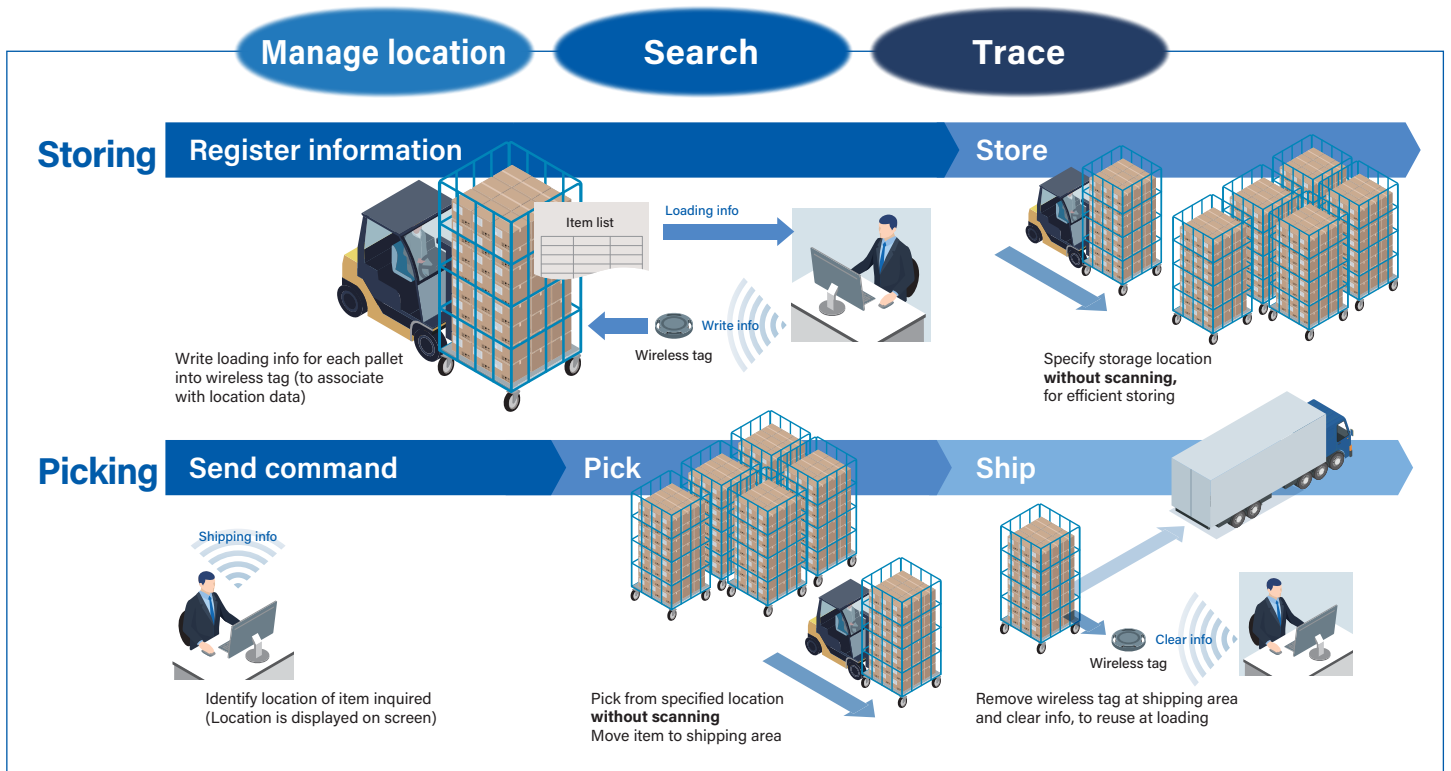
96 **hours/year** ▶ None

Loss of expensive raw materials

3 million **yen x 1–2 bottles/year** ▶ None

How it works

Location sensor

Location data is associated with product info

Location sensor

Location sensor

Location sensor

Wireless tag

Place at specified location

Storing

Pick with ease

Picking

Wireless tag

What it can do

Manage location → **Search** → **Trace**

Storing

Register information → **Store**

Loading info

Write info
Wireless tag

Item list

Write loading info for each pallet into wireless tag (to associate with location data)

Specify storage location **without scanning,** for efficient storing

Picking

Send command → **Pick** → **Ship**

Shipping info

Identify location of item inquired (Location is displayed on screen)

Pick from specified location **without scanning** Move item to shipping area

Clear info
Wireless tag

Remove wireless tag at shipping area and clear info, to reuse at loading

---

Sensor & tag

Location tracking technology QUUPPA

Tracks location of people and objects in real time to support data analyses and operational improvements

Sensor technology that can locate a tag in a production site within error margin of 50–100cm. Can be paired with the best analysis software for the customer's needs to use collected data for streamlining operations and improving productivity.

Locator

Quuppa Positioning Engine

Angle of Arrival

Tag

Tag

SATO group presence worldwide

We have offices in 27 countries/regions worldwide.
Our business is expanding in more than 90 countries/regions.

Europe

Germany	Netherlands	Spain
France	Poland	Sweden
Italy	Russia	UK
Switzerland		

Asia

Japan	Philippines
China	Singapore
India	Taiwan
Indonesia	Thailand
South Korea	Vietnam
Malaysia	

Oceania

Australia
New Zealand

Americas

USA
Mexico
Brazil
Argentina

as of Nov. 2019

Contact our sales representative for more details

SATO
Powered On Site

# Visualize work effortlessly

Is your factory having trouble...

- Tracking who worked when, where and for how long?

- Collecting worker data without giving workers more to do?

- Obtaining reliable data, as workers may not log data consistently?

Visual Warehouse, our location tracking solution
Tracks worker status automatically

✓ Location tracking technology (sensors & tags) **tracks worker hours automatically per procedure**

✓ Exclusive software **visualizes traffic & workload for analysis and improvements**

✓ Automated collection frees workers from task of logging hours, while **generating reliable data**

A typical factory: Workers scan barcode before and after every procedure

組み立て | 縫付け
ピッキング | 塗装
研磨 | 休憩
開始 | 終了
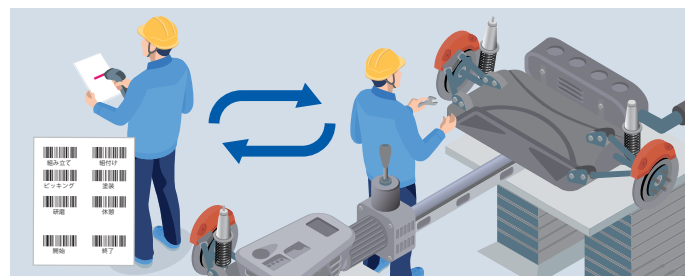
Issues:
- Worker has to scan at every procedure
- Workers may not always be consistent in how they log data
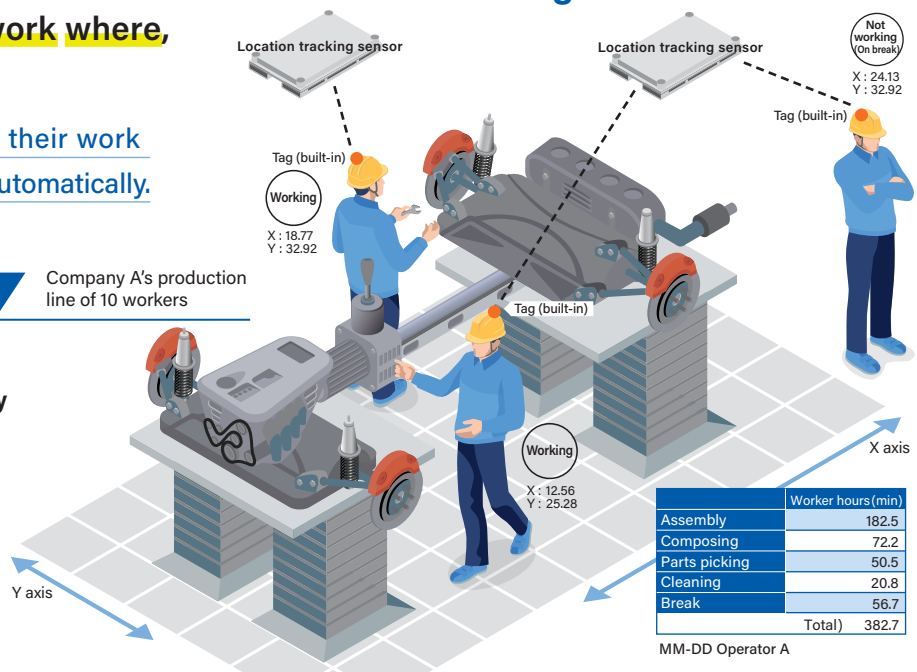- Workers may forget or make mistakes

Data is not accurate despite all the effort that went into collecting it

With our automated data collection solution

Sensors and tags track location in X-Y coordinates to **identify who did which work where, when and for how long.**

Workers can simply go about their work while the system keeps track automatically.

No need to log hours

Location tracking sensor

Location tracking sensor

Not working (On break)
X : 24.13
Y : 32.92
Tag (built-in)

Tag (built-in)
Working
X : 18.77
Y : 32.92

Tag (built-in)

Working
X : 12.56
Y : 25.28

X axis

Y axis

Example of Improvement

Company A's production line of 10 workers

Before: Workers scanned barcodes
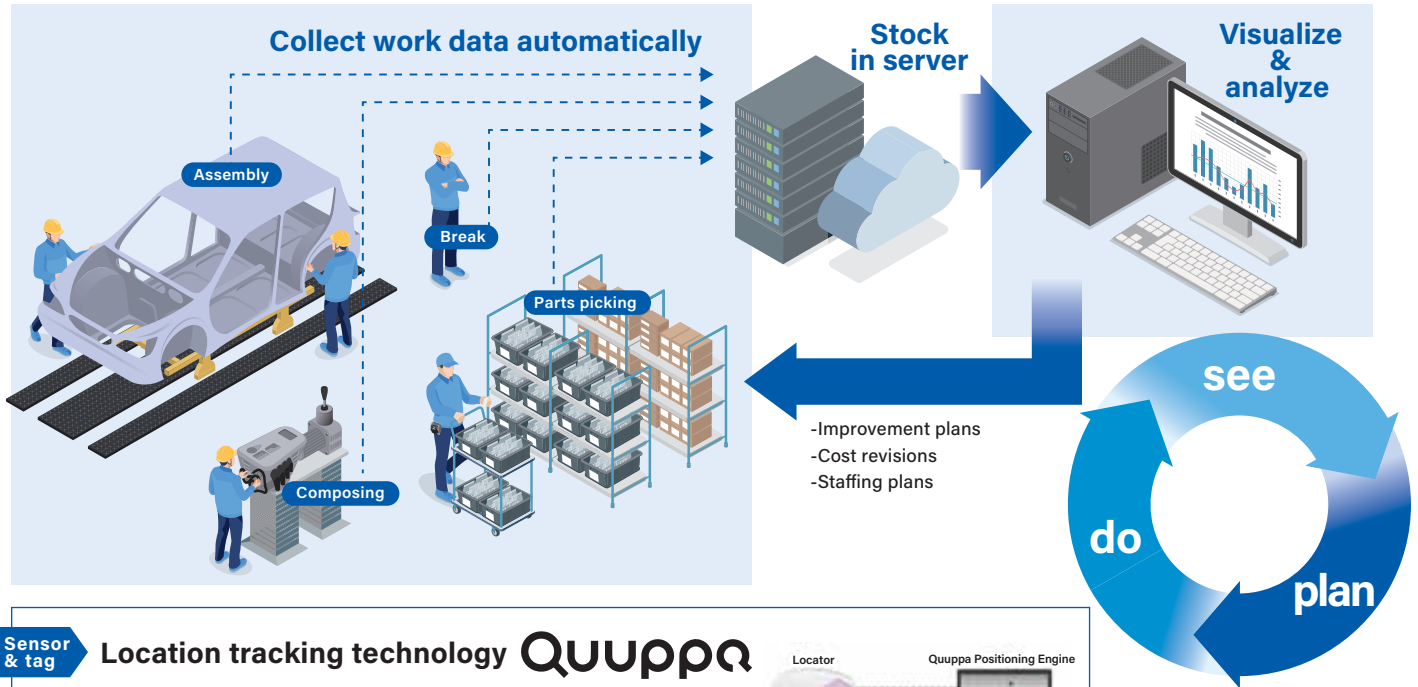**188** times/day = **6,457** sec/day

0 times/day = **0** sec/day

Collected data led to accurate staffing and scheduling

	Worker hours (min)
Assembly	182.5
Composing	72.2
Parts picking	50.5
Cleaning	20.8
Break	56.7
Total)	382.7

MM-DD Operator A

A complete package to improve your operations

We offer a full solution that lets you analyze the collected data on various systems to find ways to improve your operations.
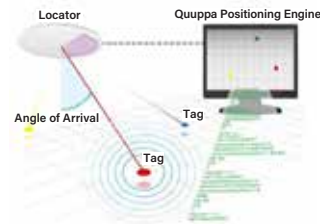
Automated data collection solution

Collect work data automatically

Assembly

Break

Parts picking

Composing

Stock in server

Visualize & analyze

-Improvement plans
-Cost revisions
-Staffing plans

see

plan

do

Sensor & tag

Location tracking technology QUUPPQ

Tracks location of people and objects in real time to support data analyses and operational improvements

Sensor technology that can locate a tag in a production site within error margin of 50–100cm. Can be paired with the best analysis software for the customer's needs to use collected data for streamlining operations and improving productivity.

Locator

Quuppa Positioning Engine

Angle of Arrival

Tag

Tag

SATO group presence worldwide

We have offices in 27 countries/regions worldwide.
Our business is expanding in more than 90 countries/regions.

Europe

Germany	Netherlands	Spain
France	Poland	Sweden
Italy	Russia	UK
Switzerland		

Asia

Japan	Philippines
China	Singapore
India	Taiwan
Indonesia	Thailand
South Korea	Vietnam
Malaysia	

Oceania

Australia
New Zealand

Americas

USA
Mexico
Brazil
Argentina

as of Nov. 2019

Contact our sales representative for more details