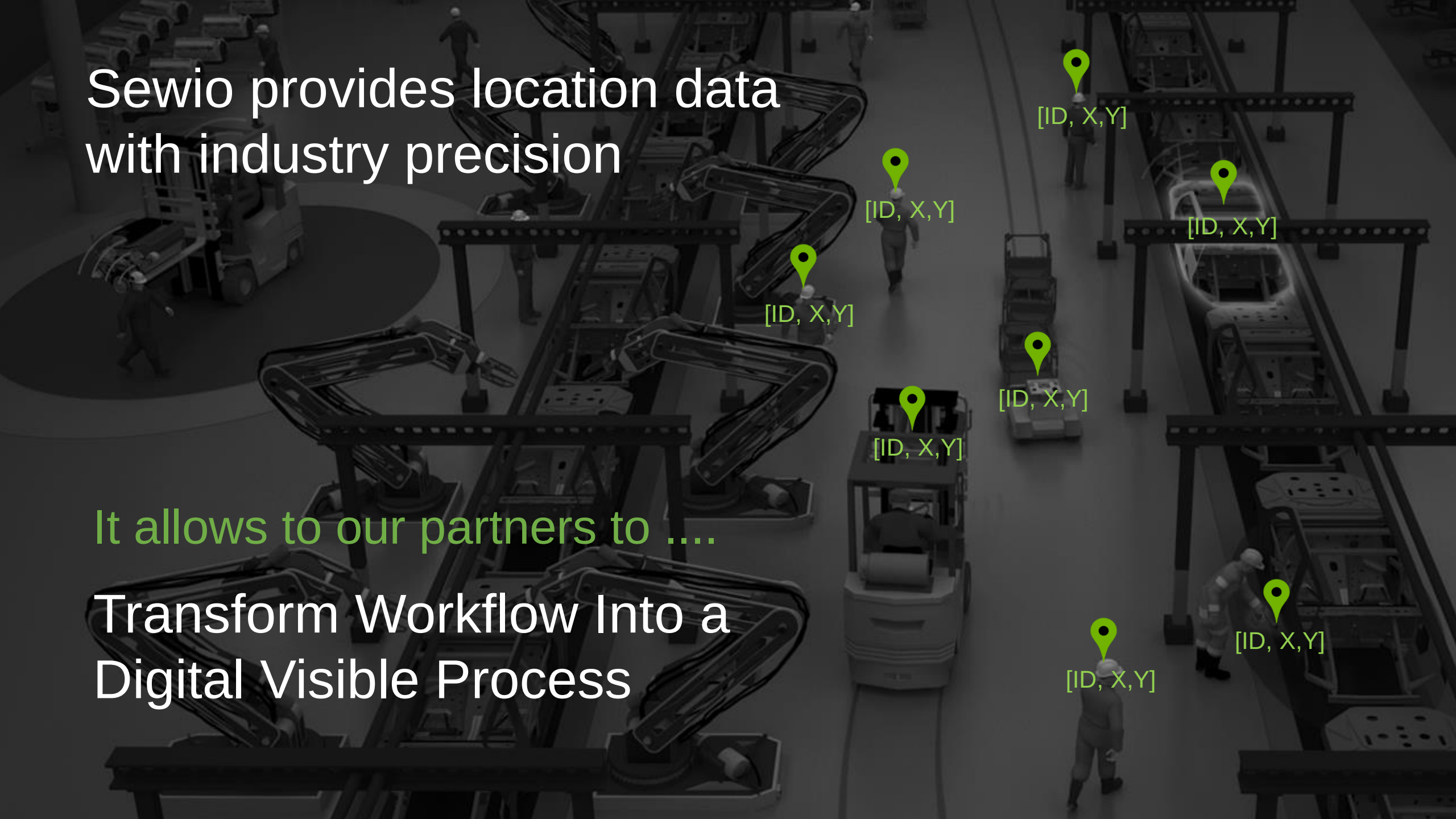
sewio

Webinar 09/2017

How precise indoor location data help to enable Industry 4.0.

Milan Simek, CEO

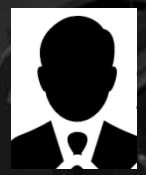


Sewio provides location data with industry precision

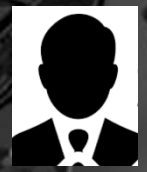
It allows to our partners to ....

Transform Workflow Into a Digital Visible Process

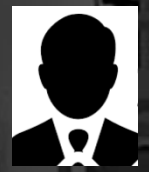
Most often manager’s questions



*“why forklifts have so high **stop** time?:*



*“how much time pallet spent in **repair zone** in average“*

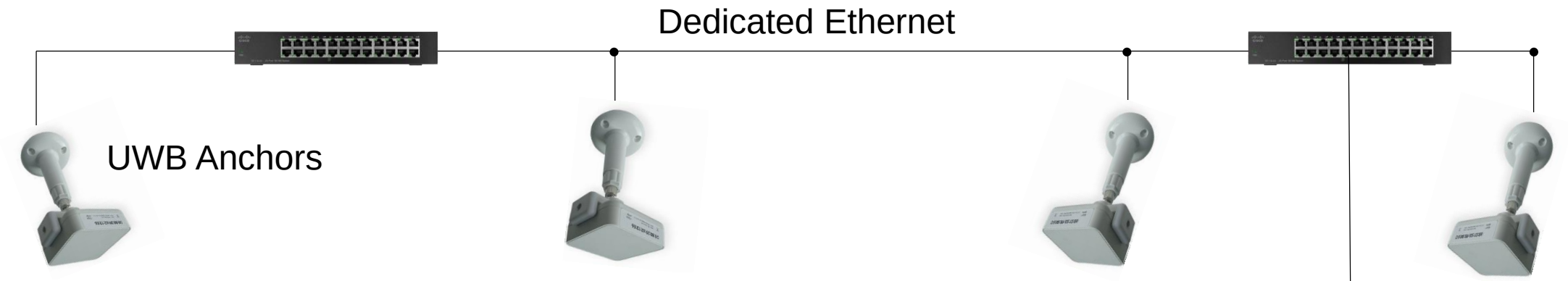


*“how many pallets are waiting **in queue**”*

*“it is quite common **to search** for pallet more than 1 hour*

*“generally, forklift waits **here** more than 2 minutes until the corridor is empty“*

SEWIO UWB BASED RTLS – SYSTEM ARCHITECTURE



RTLS Studio SW

Location Engine
Monitoring
Visualization
System management
Data Analytics

WHY SEWIO TECHNOLOGY?

Save time during deployment
No calibration/no fingerprinting

Industry level of
accuracy < 50cm

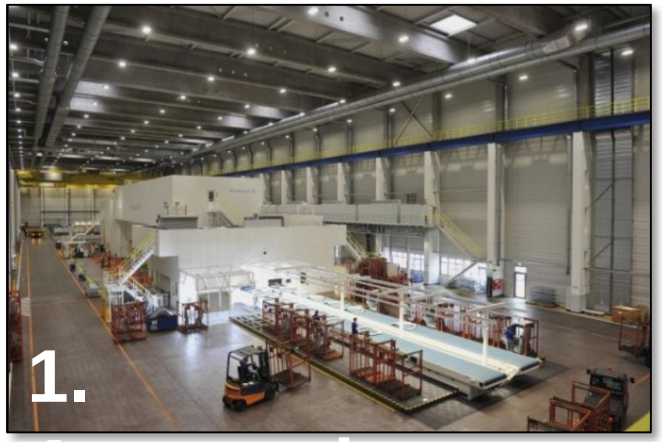
Easily scales in space.
Supports 1000+ tags

Fast delivery.
Made in Czech republic

3 X REAL USE CASES ENABLING INDUSTRY 4.0

Digitization of …

Intralogistics flow



Loading/unloading spots

Material flow

#1. DIGITIZATION OF INTRALOGISTICS FLOW FOR AUTOMOTIVE

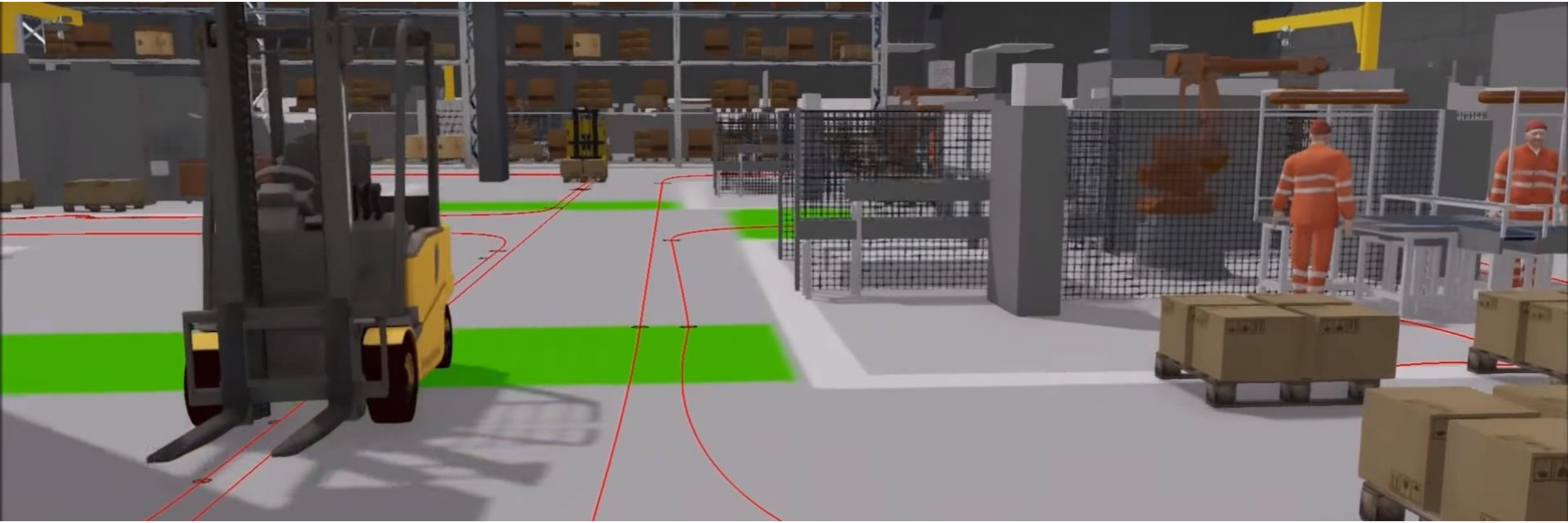


Illustration photo

#1. DIGITIZATION OF INTRALOGISTICS FLOW FOR AUTOMOTIVE

Goal:

To create **Digital Twin** of intralogistics.

Digital Twin allows effective monitoring, fast planning, virtualization of daily operations, training of new staff in virtual environment.

Technical info:

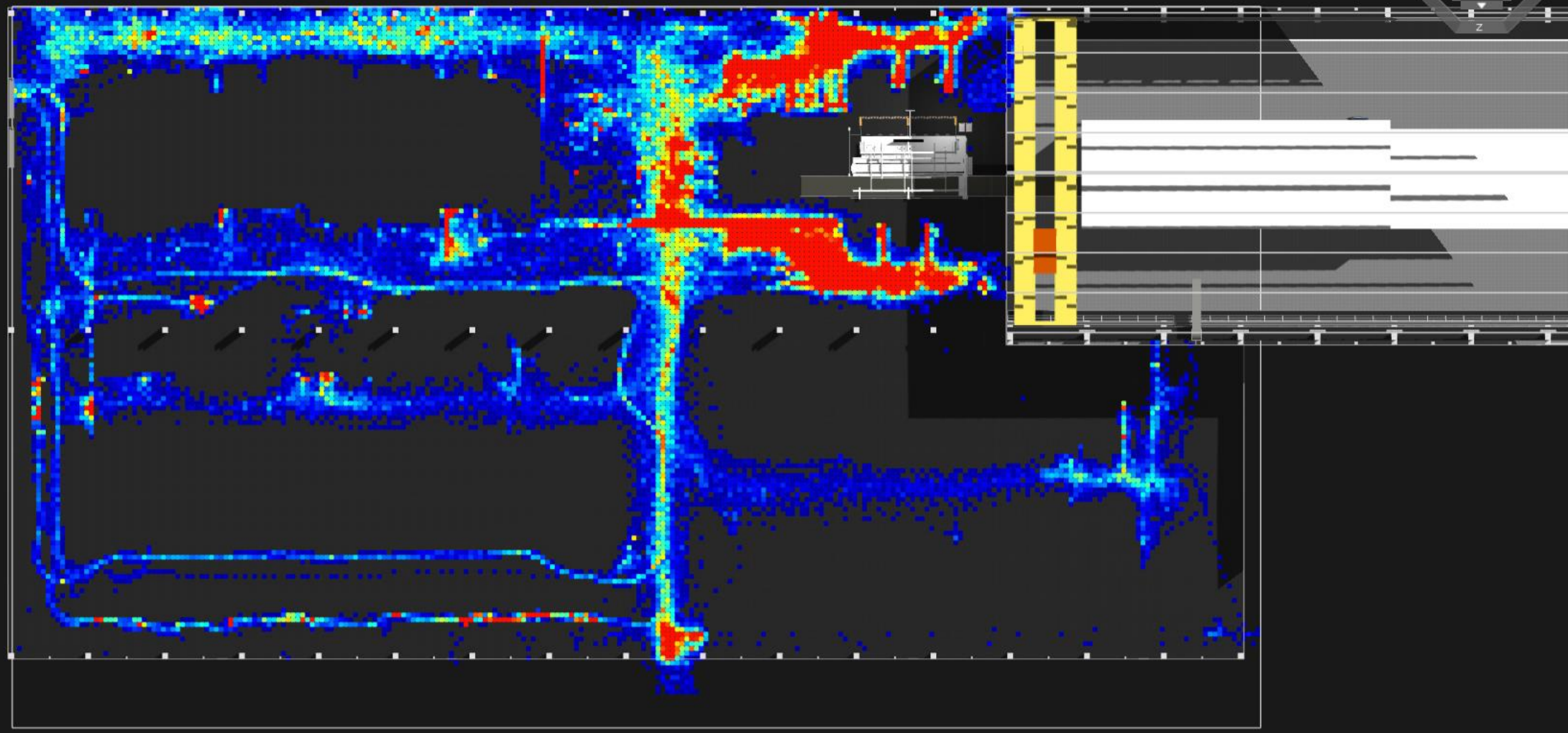
Facility: 11 000 m^2 , with aisles of shelves

Realization: 8 months

#Anchors: 66, # Tags: 70

500k location data/day

Data: ID, Battery status, X,Y position, Rotation

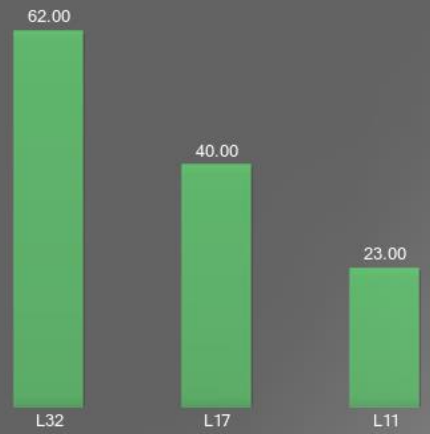

Z-
TOP
Z

DtClientProject : Default

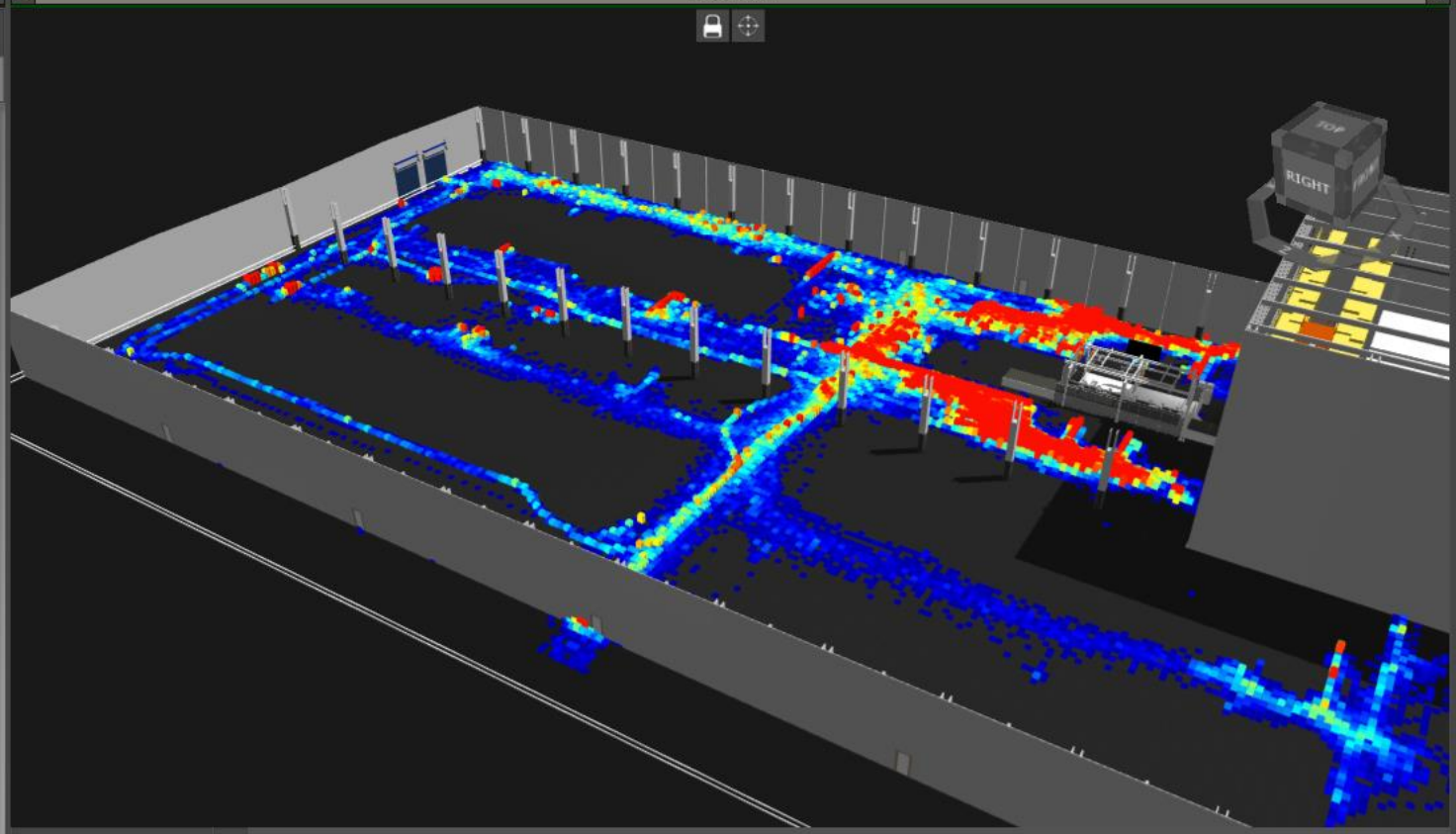
Digital Twin Inspector

Devices

Tables | Graphs



World View



Digital Twin

Monitoring control 2

Monitoring control

Server	
Start	
Spaghetti	

Intensity map settings

Min value	0
Max value	50 .0000
Max height	1 .0000

Clear data

Spaghetti setting

Max lines	5 000 .0000

Clear lines

Analysis

Devices

Name	Type	
L32	Forklift	☑
L02	Forklift	☑
NAN	Forklift	☐
12-1	Agv	☑
10-B	Agv	☑
12-3	Agv	☐
10-A	Agv	☐
12-4	Agv	☐

Digital Twin Resource List 1

L17

L31

L50

Type	Forklift
Overall time	11:22:14
Run time	04:46:01
Stop time	06:36:12
Distance	36 335 .7569

L11

Type	Forklift
Overall time	09:38:06
Run time	03:37:35

L32

Type	Forklift
Overall time	11:02:14
Run time	05:04:20

L02

Type	Forklift
Overall time	10:50:13
Run time	04:58:35

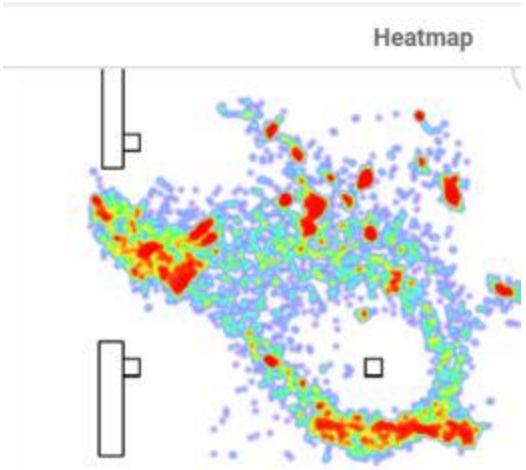
#2. DIGITIZATION OF LOADING SPOTS FOR BREWERY

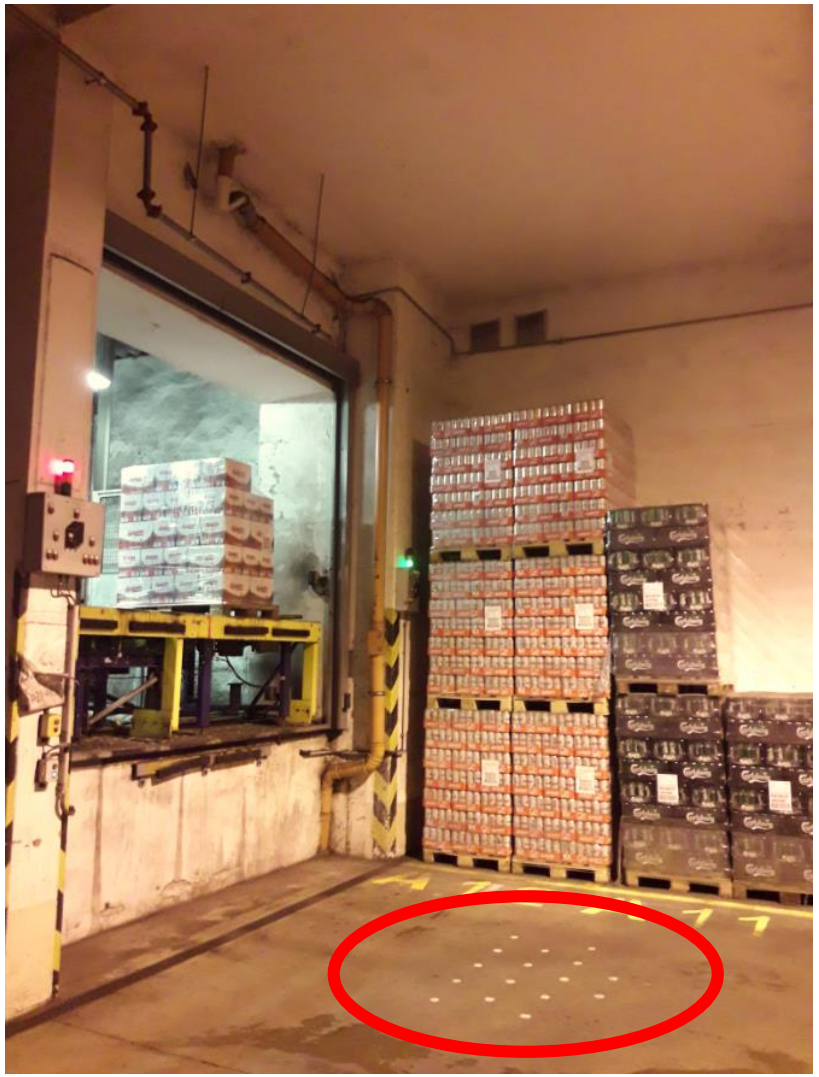
Illustration photo

#2. DIGITIZATION OF LOADING SPOTS FOR BREWERY

Goal:
To detect accurate position of forklift at loading and unloading spots and provide this position to WMS

Problem:
Actual solution of passive RFID solution requires frequent forklift antenna calibration, failed readings.





Technical info:

Facility: 15 000 m^2 , indoor/outdoor

#Anchors: 120, # Tags: 20

Realization: 7 months/in progress

#3 – DIGITIZATION OF MATERIAL FLOW FOR CABLE COMPANY

Illustration photo

Problem:

- Significant material losses throughout the production process
- Insufficient ways of tracking cables within factory

Estimated annual loss of copper
caused by insufficient tracking of specific wire and cable weights

1,1 mil EUR

#3 – DIGITIZATION OF MATERIAL FLOW FOR CABLE COMPANY

Goal:
To digitize process of handling with metal coils,

Challenge:
Full metal environment, coils hit each other, high rotation.

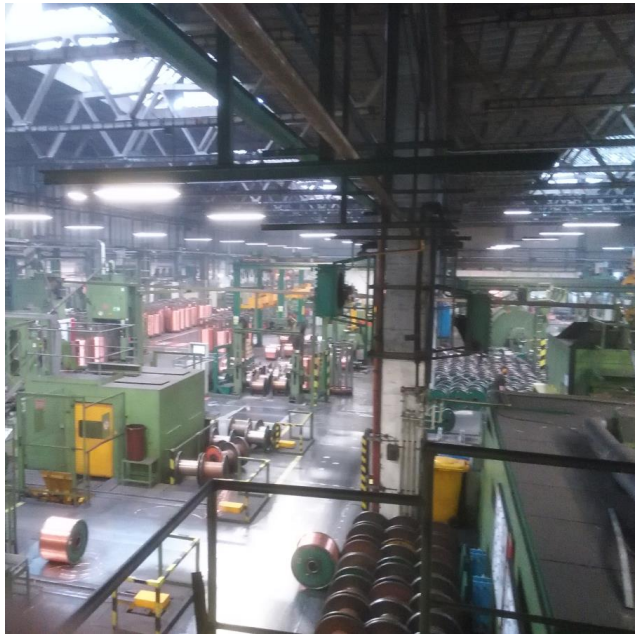
Technical info:

Facility: 10 000 m^2, indoor

Realization: 4 months

Special resistant housing of Tags,

#Tags: 200



#3 – DIGITIZATION OF MATERIAL FLOW FOR CABLE COMPANY

Project's main outcomes and benefits

1,1 mil EUR

Annual loss

0,5 mil EUR

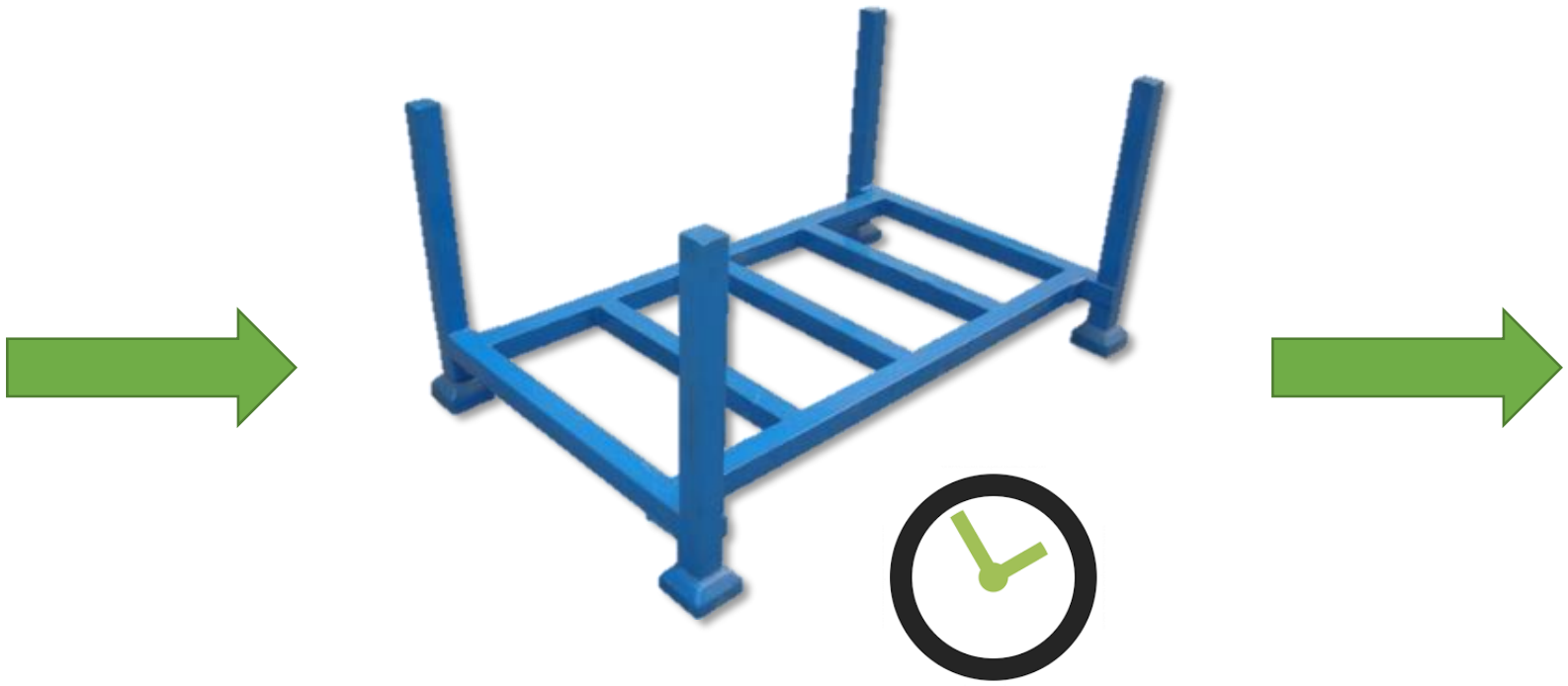
Initial investment

1,0 mil EUR

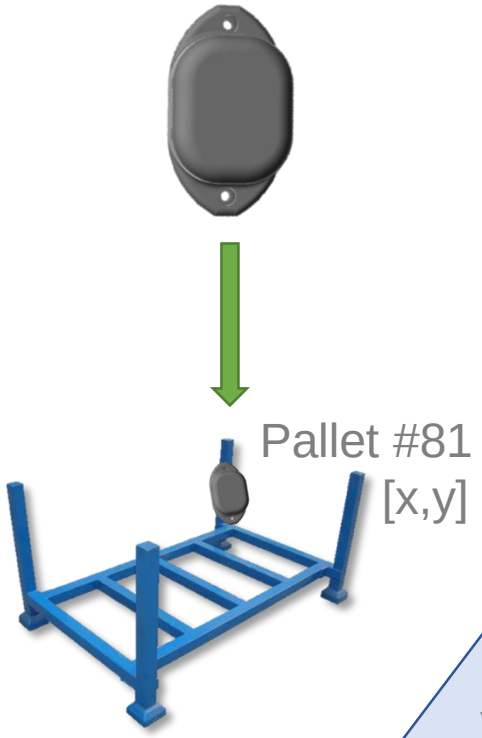
Expected Annual savings

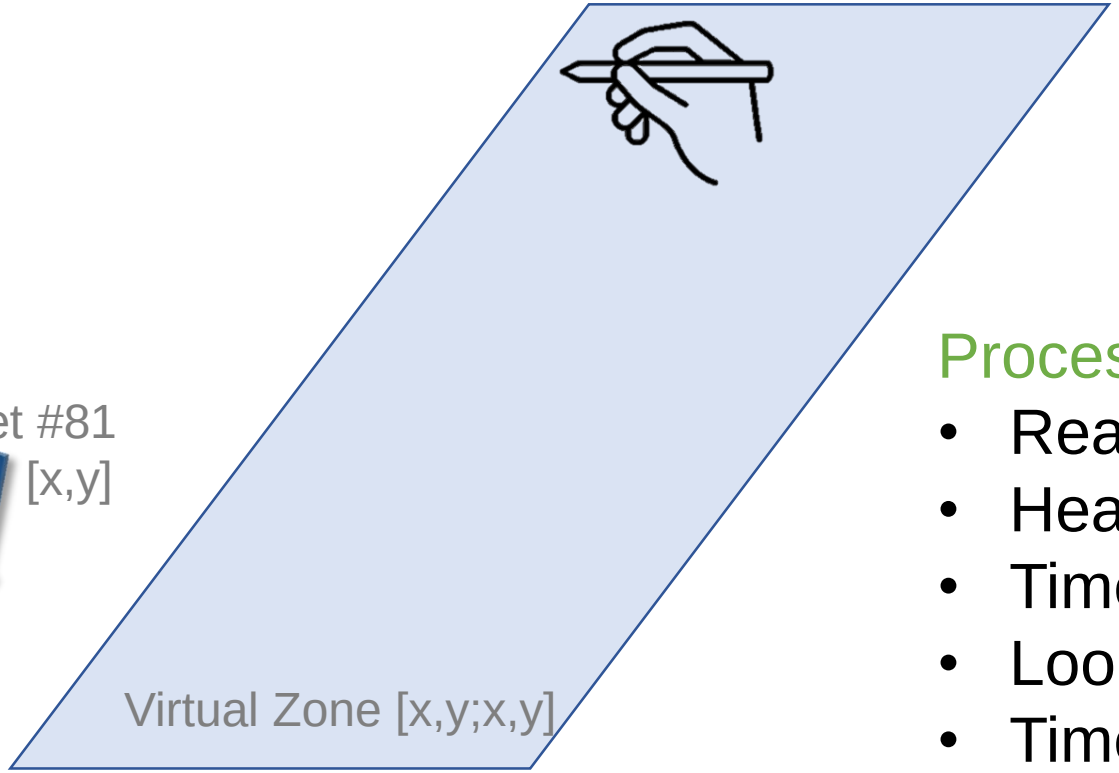
DEMO TIME

HOW TO USE ZONES TO DIGITIZE MATERIAL FLOW



HOW TO USE ZONES TO DIGITIZE MATERIAL FLOW



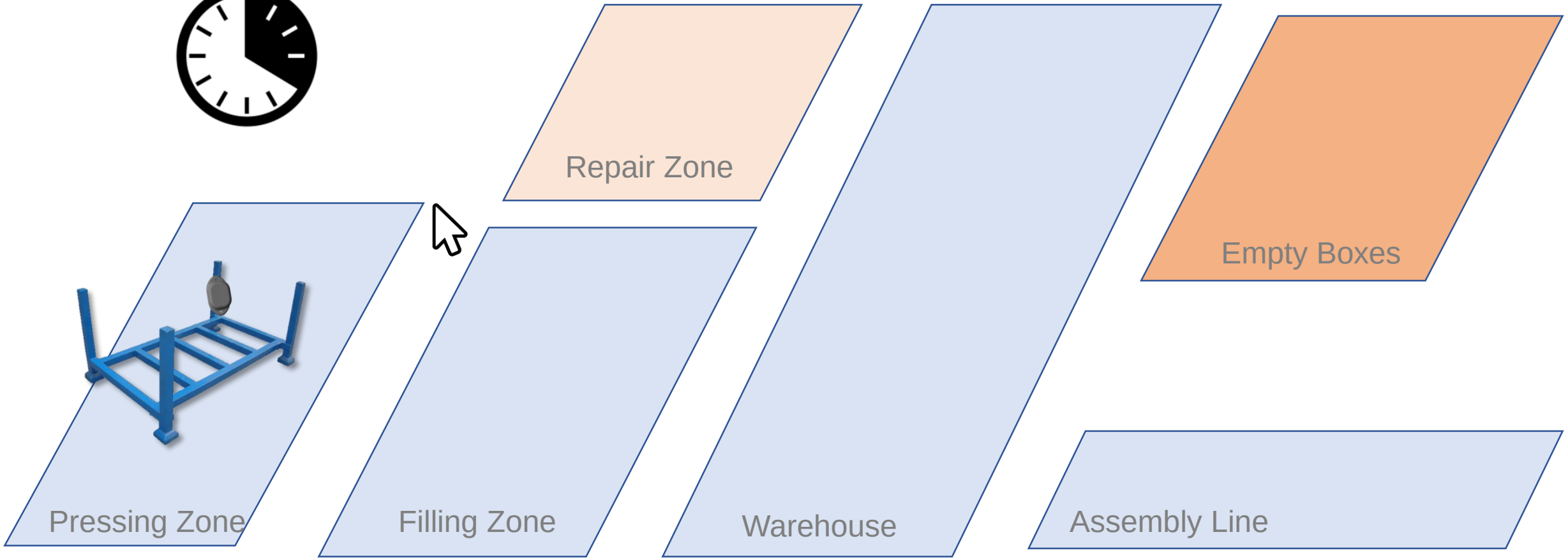


Process Visibility = Position +Zones

- Real-time material status → SAP
- Heatmaps
- Time spent in individual process
- Looking for pallet
- Time of entry/exit

HOW TO USE ZONES TO DIGITIZE MATERIAL FLOW

ONLINE DEMO



TRANSFORM WORKFLOW INTO A DIGITAL VISIBLE PROCESS

Thank you

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