

[Link to video](#)



Pozyx provides solutions for  
accurate indoor positioning



version 2020

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ACCURACY

**10cm**

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CUSTOMERS

**4000+**

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COUNTRIES

**80+**

# About Pozyx

## Ultra-Wideband Experts



- Ghent University spinoff dedicated to delivering hardware & software UWB solutions since 2015.
- Offices in Belgium & U.S.
- World-wide customer base.



**HITACHI**

Reliable solutions



**THALES**

**ABInBev**



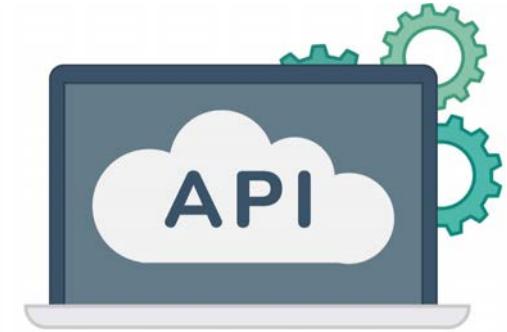
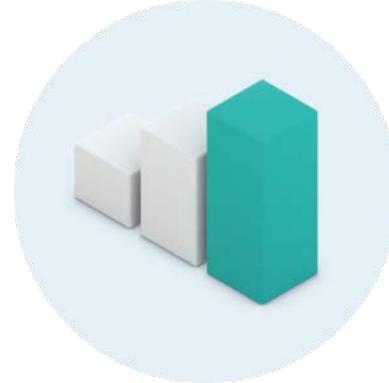
**colruyt**

**Bonduelle**



# The Power of Real-Time Positioning

What if you could?



## TRACK

- people, assets, equipment
- in real-time
- with 10-30 cm accuracy

## MEASURE

- how they move
- where time is lost
- where bottlenecks are

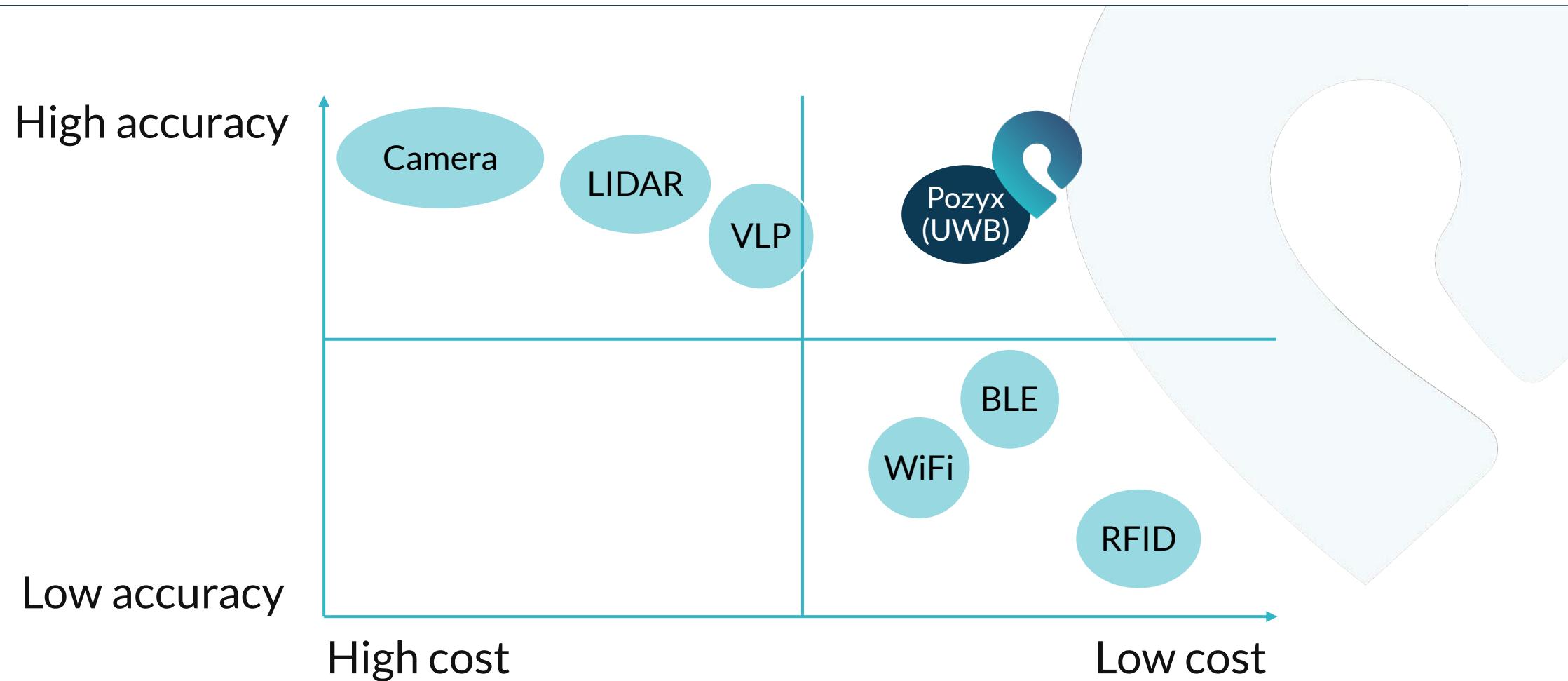
## IMPROVE

- the speed of work
- the number of errors
- overall efficiency

## OPEN DATA

- API's available
- Seamless integration
- Combine our data within your organization

# Technology Space

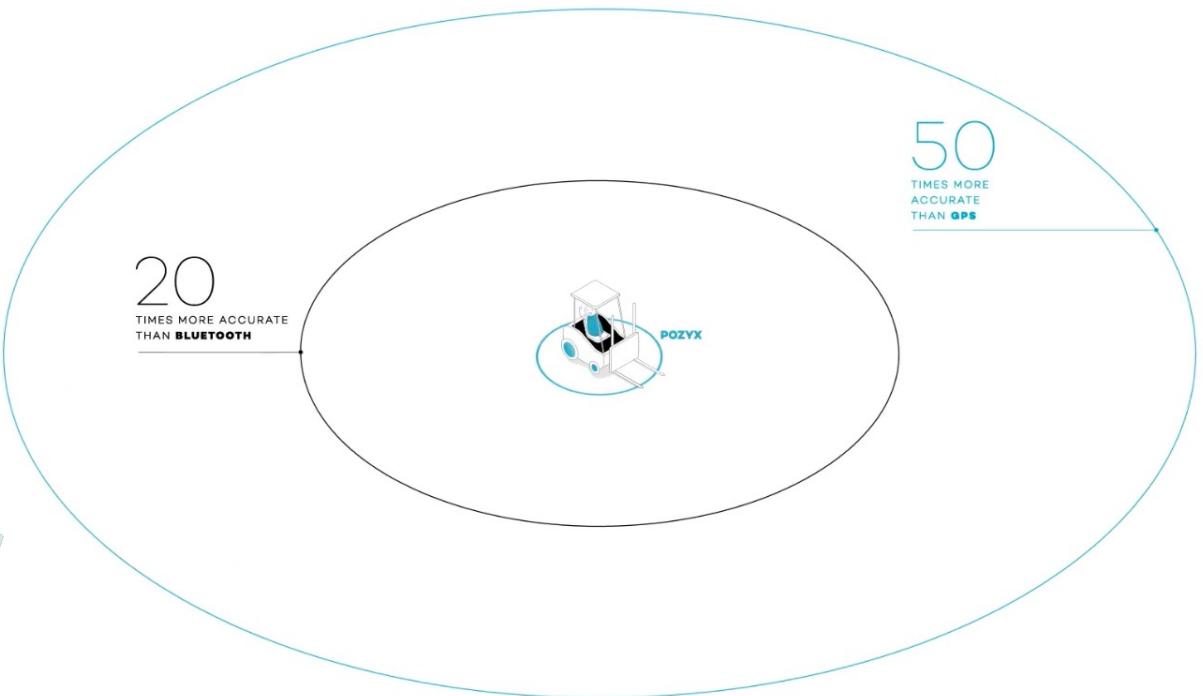
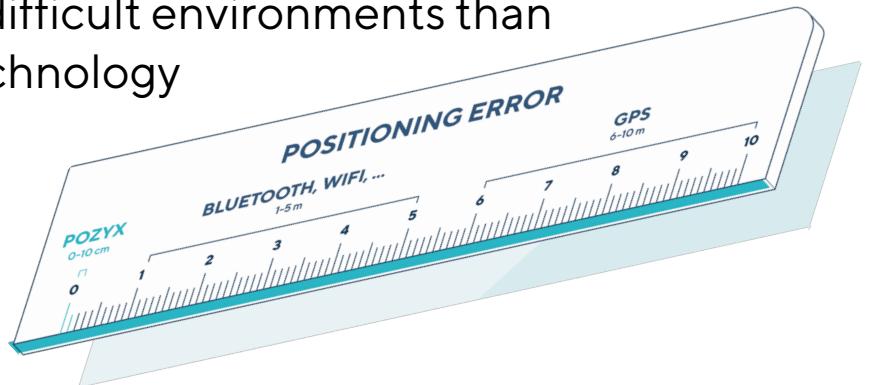


# Technology

## Accuracy is key



- Accuracy makes the difference (10-30cm)
- Up to 20 times more accurate than BLE and even 50 times more accurate than GPS
- Technology is better equipped to function in difficult environments than other RF technology



# Enterprise solution

## System architecture



A network of Pozyx anchors picks up the signals and forward them through ethernet



POZYX  
TAG



POZYX ANCHOR  
NETWORK

Pozyx tags send out an UWB signal to update their position



PoE  
SWITCH

A PoE switch manages power supply to the anchors and connects the anchors with the gateway



POZYX  
POSITIONING  
GATEWAY

The gateway calculates all positions in near real time, applies filtering and runs analytical insights in a practical software platform



POZYX  
CLOUD



CUSTOMER  
APPLICATION



MQTT

Functional API's provide the possibility to **seamlessly integrate the position data in third party platforms**, or customers can use the Pozyx platform offering visualizations and insights

# Pozyx Anchor



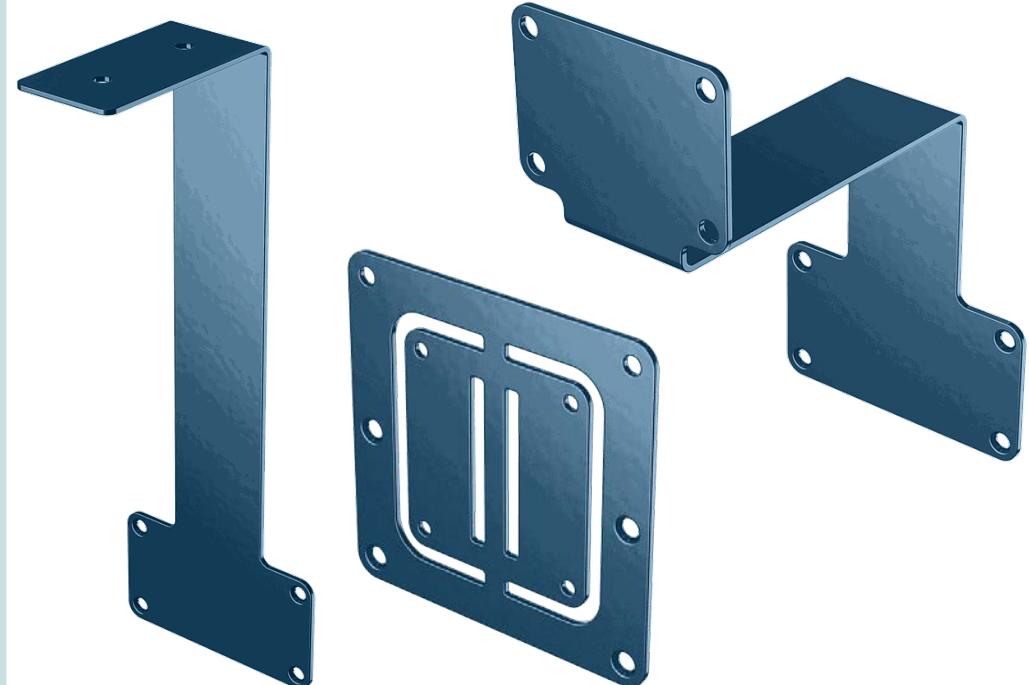
Industrial anchor IP67



Anchor IP20



VESA mounting brackets



# Enterprise Solution Hardware



Tags



Anchors



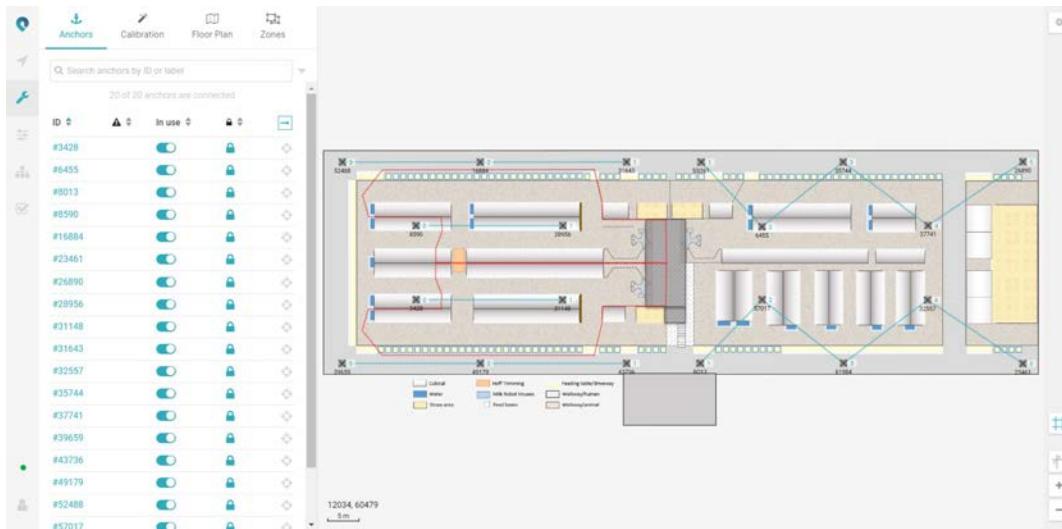
Local Gateway



# Enterprise Solution Software

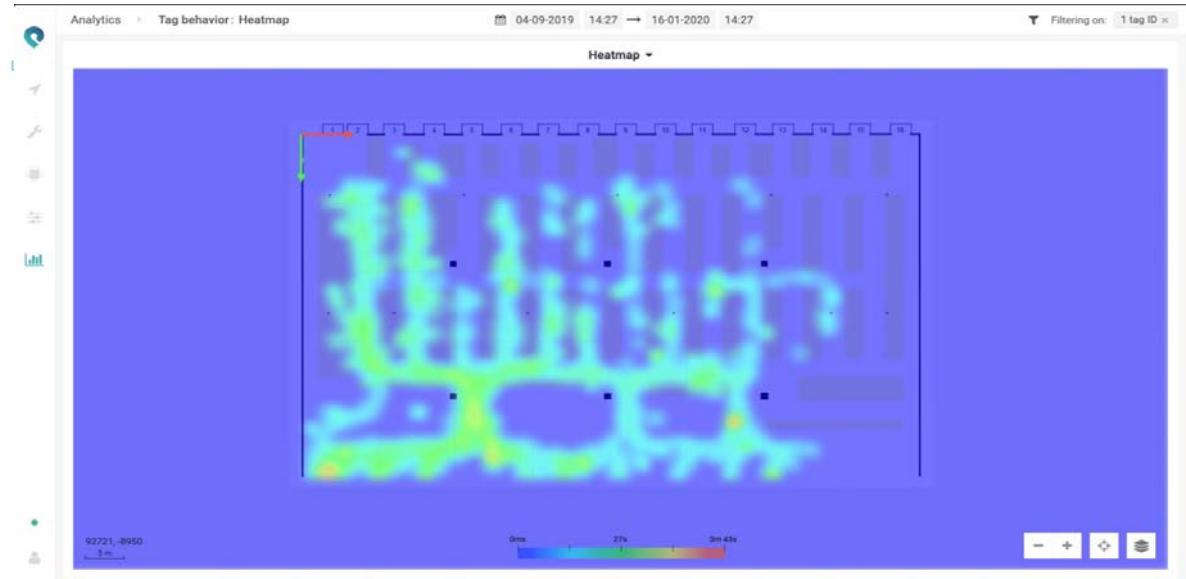


## Easy Deployment & Setup



- 📍 Setup system (floorplan, anchor connectivity, configuration,...)
- 📍 Monitor live activities in your tracked area

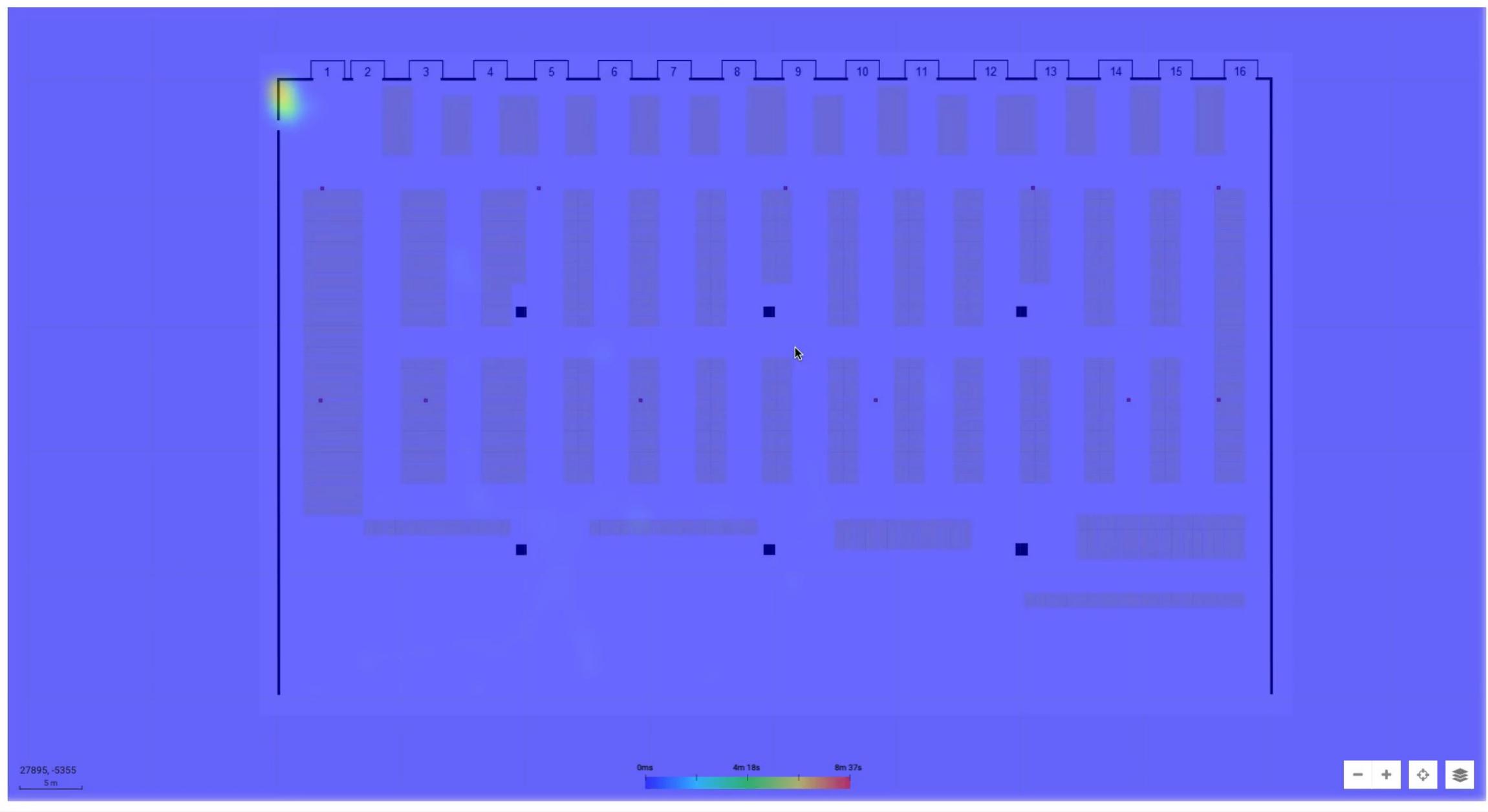
## Fine-grained Analytics



- 📍 Heatmaps, time budgets, spaghetti charts and zone analytics based on algorithms.
- 📍 Tangible insights

- 📍 APIs available for seamless integration with other applications (ERP, WMS,...)

## Heatmap ▾



# Business cases

## Material flow



### Automotive OEM

#### Problem

No real time visibility of cars in the rework area (where are they, which workstations are available to receive cars, how long have they been there, who has been working the car,...). RFID is very expensive to implement, barcode scanning adds extra handlings for the operator



#### Challenge

Each car needs a tag placed in the cupholder. Infrastructure must justify the use case.

#### Solution

Pozyx tracks the cars in real time once they leave the assembly line.

*The numbers  
+- 15.000m<sup>2</sup>*

*100 anchors - 950 tags*

#### Results

Reduced labor costs of 2 FTE (reduced time spent looking for cars and available workstation)

*Salary reduction of 2 FTE*

*ROI of 1,5 years*

# Business cases

## Poka Yoke – Tool tracking



### Automotive OEM

#### Problem

Wireless power tools are used in assembly line to fasten critical bolts on the car body. The tools are configured with specific torque for specific jobs in a designated workstation. Manufacturer wants to fool proof the production process to avoid liability issues.

#### Challenge

- 📍 Harsh metallic environment  
*More difficult to have good line of sight. Luckily the Pozyx UWB solution is up to the task.*

- 📍 Integration with Power tool monitor & control platform

#### Solution

Entire assembly line is being equipped with Pozyx anchors and power tools with Pozyx tags, 12 workstations in total. Pozyx API allowed easy integration with monitor & control platform.



#### Results

Can be discussed under NDA.

# Business cases

## Continuous improvement



### Automotive OEM

#### Problem

Kaizen approach for dealerships:

- Instructions for faster car maintenance are not always followed
- Monitoring and data collection is done manually and is labor intensive

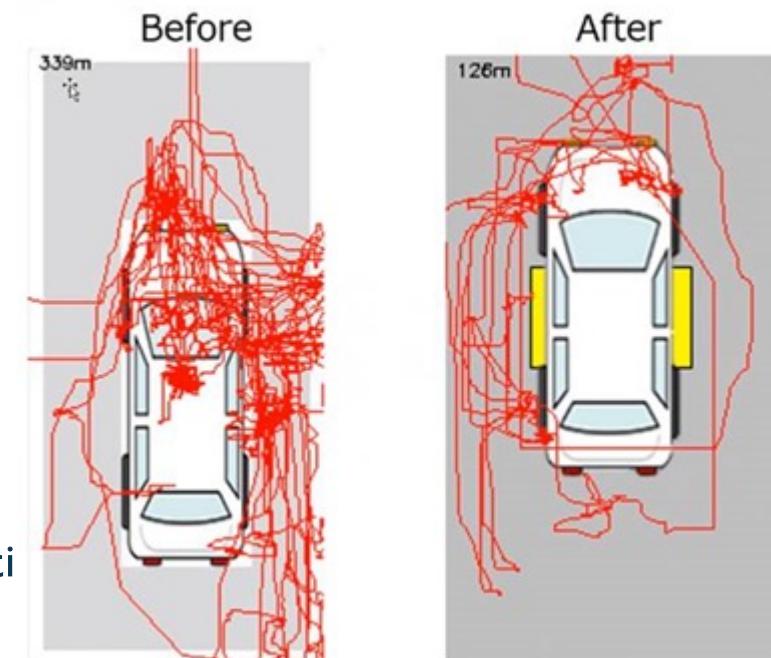
#### Challenge

- High accuracy required

*Accurate location around the car and under the car is needed to gather meaningful data for analysis*

#### Solution

Car Mechanic is given Pozyx tag and anchors are installed in the dealership to monitor movement of the mechanic around the car. The data is plotted in a spaghetti chart and analyzed to suggest continuous improvement.



#### Results

Distance travelled by the mechanic is reduced by 60%!

# Business cases

## Worktime registration



### International fish processing company

#### Problem

No clear data on processing times of different types of fish: how long does it take to process (clean – filet – portion – ...) and what is the labor cost? A lot is done now with manual, paper documentation. Alternatives such as fingerprint or RFID on each workstation is costly, prone to error and not practical in sterile environments of food processing factories.



#### Challenges

- Cold environment with high humidity and salt percentages  
*Refrigerated cells could impact the hardware installed if not properly protected with IP67 casings*
- Detailed reporting  
*Pozyx analytics provide great insights in labor times*
- GDPR restraints  
*Privacy legislation allows tracking of employees, worker unions where closely involved during preparation and deployment*



# Business cases

## Worktime registration



### International fish processing company

#### Solution

Workers wear a tag and production zones are visualized using the Pozyx zoning functionality. The time each worker spends at each workstation has been integrated by the Pozyx partner in the ERP system to overlay the location data with the ERP data.

#### Results

18 anchors and 110 tags have been deployed. More details can be discussed under NDA.

# Business cases

## Worktime registration - Work in process



### Industrial and cooling door manufacturing experts

#### Problem

- No factual data on labor cost
- Difficult to plan labor
- Hard to set product pricing

#### Challenges

- Tracking people and assets
- Different production flows, complex operation

#### Solution

- Tracking work in process carts
- Measuring employee work time at workstations
- Reporting the data

#### Results

- Factual data for better production planning and pricing



# Business cases

## Work in process



### Stainless steel parts specialist

#### Problem

- Big number of product SKU's
- Very small product batches, make to order

#### Challenges

- Lots of metal in the environment
- Small parts, multiple tags per job order
- Limited space in the facility

#### Solution

- Tracking carriers containing the parts
- Real time information on orders

#### Results

- Digitized order follow up
- Abnormal process detection
- Factual data for better production planning

# Business cases

## Warehouse inventory



### Bonduelle

*French family-run company and current world leader in ready-to-use vegetables, in all their forms*

#### Problem

**3-4% loss of annual production** due to not being ready for transport in time (misplaced goods lead to longer search times and goods missing shipment window).

#### Challenges

- ⌚ Low ceiling and dense environment  
*More difficult to have good line of sight. Luckily Pozyx UWB is up to the task*
- ⌚ Cold environment with high humidity  
*Refrigerated cells could impact the hardware installed if not properly protected with IP67 casings*
- ⌚ Highly accurate positioning (8 inches)  
*To identify right bin location*



# Business cases

## Warehouse inventory



### Bonduelle

#### Solution

Warehouse inventory control based on forklift tracking

- Fool proofing inventory process: reduced scanning actions  
Order picker scans the pallet, WMS couples forklift location with pallet ID and remembers pallet location
- Highly accurate positioning (4 inches) is required to identify right bin location

#### Result

Radical reduction of misplaced pallets leads to increased number of pallets shipped. **Production loss reduced to almost 0!**

Factual data available in the form of **spaghetti charts and heatmaps** for continuous improvement purposes.



#### The numbers

4000m<sup>2</sup>

22 anchors - 5 tags

1400 pallet operations/day

Turnaround time under 24hrs

Deployed in San Paolo and Battipaglia warehouses

# Business cases

## Health, Safety and Security



### Global steel processing company

#### Problem

Crane automation project is blocked due to safety issues. Crane is manually operated but will be fully automated. System is needed so crane know when people are in the area.

#### Challenge

- Harsh metallic environment
- Almost outdoor-like environment
- High uptime required

#### Solution

Workers wear Pozyx tags. The crane will only operate in the area where no workers are present. After successful pilot currently being deployed.

#### Results

- Reduced labor cost due to crane automation
- Higher operational time for the crane
- Reduced cost for safety training



*The numbers*  
+-6000m<sup>2</sup>

*42 anchors - 30 tags*

*99% uptime*

# Contact Details



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