



# SKYEBASE

## *Drone Inspection Services*

EPSC

04/05/21



YOKOGAWA 





# SKY/EBASE

Drone Inspection Services

Partnering with:  **START IT**  
@KBC

# What does the customer want ?

Critical assets are aging and need regular inspection and maintenance



## Increasing uptime

- Efficient drone inspections of hard-to-reach places
- Better and consistent inspections through automation
- Lifetime extension through preventive maintenance



## Actionable insights for preventive maintenance

- Intelligent defect tracking through AI
- Use of advanced cameras (e.g. thermal)
- Defect visualization on digital twins
- Maintenance suggestions via SaaS platform

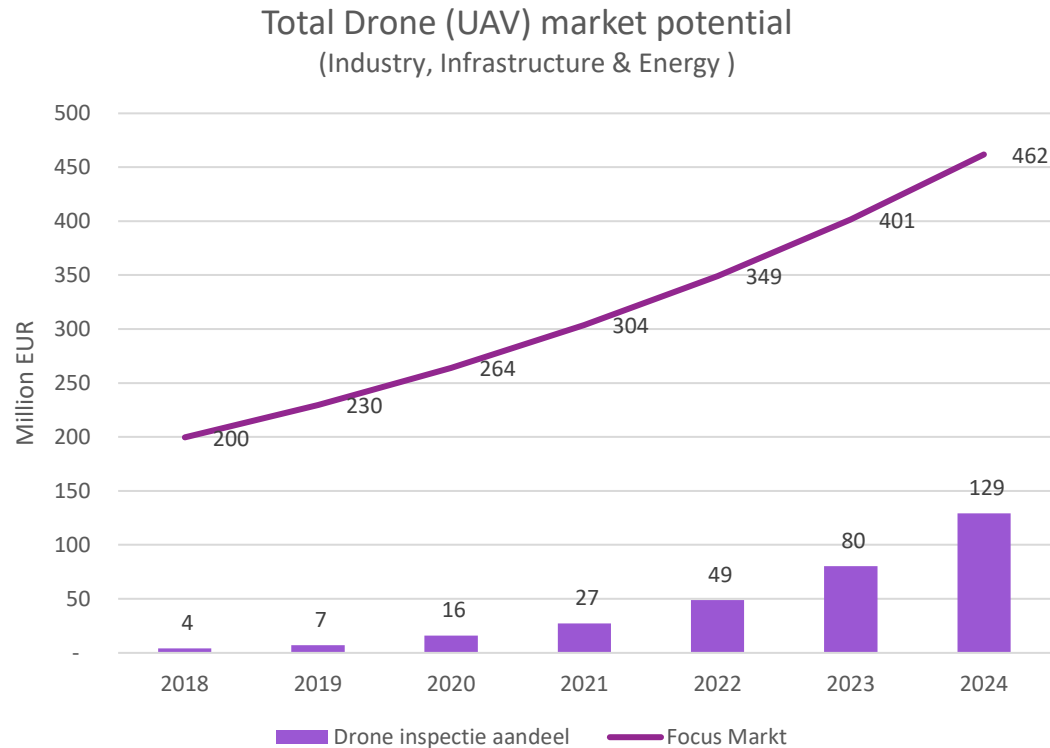


## Safer, better & faster inspections

- Combined offering for data capture & data analysis
- Wide range of professional robotic inspections (UAV, ROV, ...)
- Integrated reporting via platform solutions
- SPOC

# Total market potential of 450 Mio EUR in Belgium by 2024

A rapidly growing market !



- Estimation by PWC and Agoria of the value of businesses and labor that may be replaced by drone powered solutions
- Focus markets: Industry, Infrastructure and Energy
- Total potential of Focus Market in 2020 = **264 Mio EUR** in Belgium
- Annual **market growth of 15 -20% and**
- **Drone inspections will be 28% of the market**
- Dutch Market is at least the same size !

**A rapidly evolving and growing market !**

Source: PWC Overview of the Belgian UAV ecosystem & the development of commercial drone applications in Belgium, May 2018

# The new way of asset inspections – DT<sup>3</sup>

## Drone Technology, Data Technology, Digital Transformation

### DRONE TECHNOLOGY



60% more efficient and safer inspections lead to a saving of 77k EUR per crane per year (lower inspection costs and operations loss)



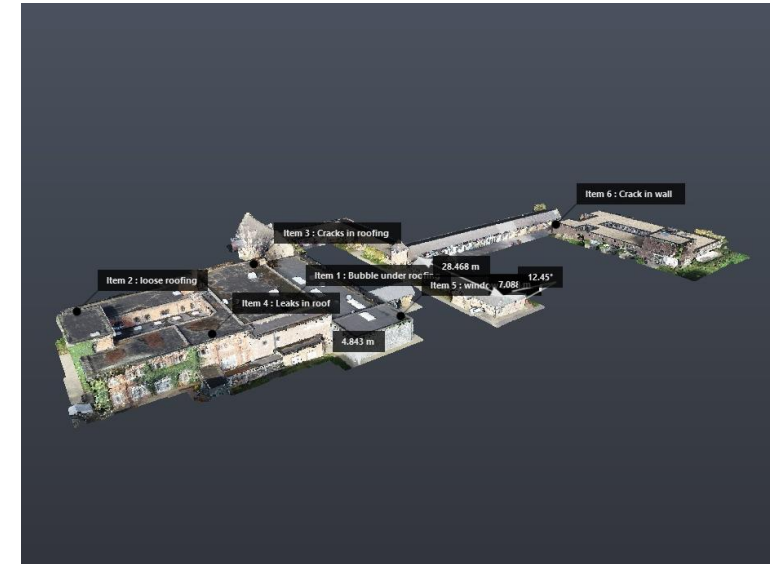
### DATA TECHNOLOGY



AI and Machine learning techniques will generate better & actionable insights for faster and more accurate maintenance decisions



### DIGITAL TRANSFORMATION

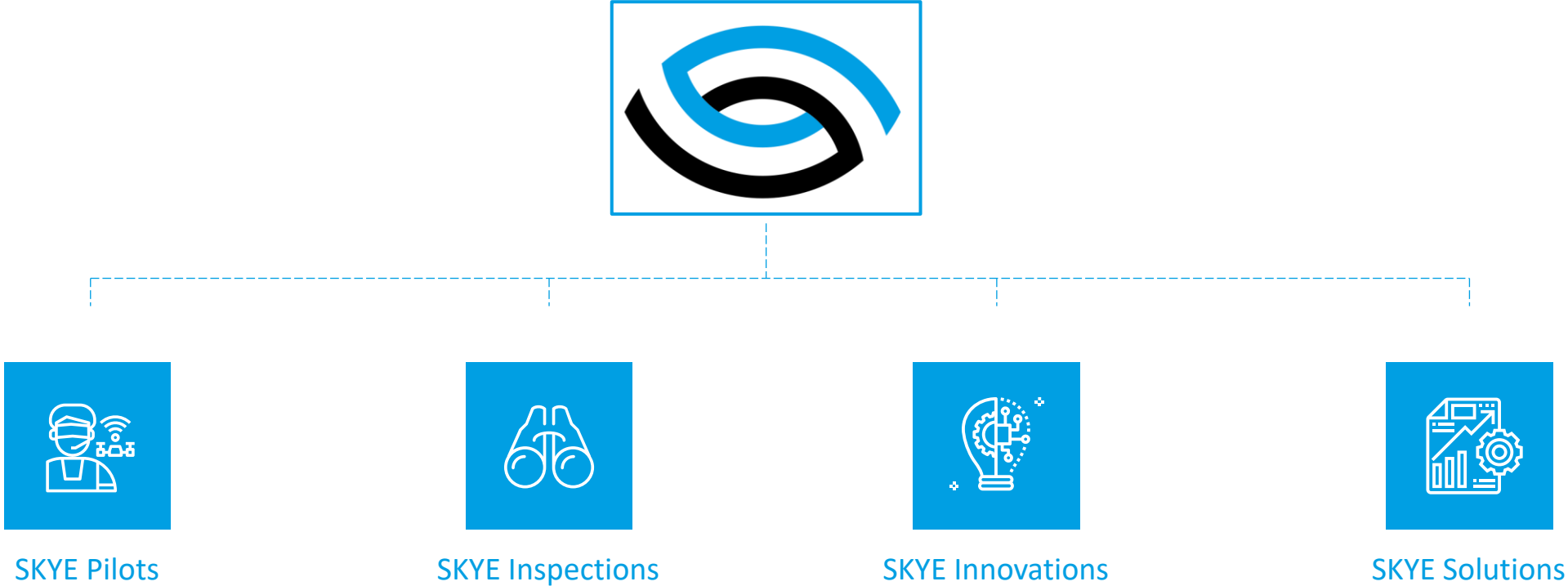


Digital reporting will result in better preventive maintenance planning saving 2 Mio EUR per crane per year due to higher uptime



# The unique Skyebase proposition

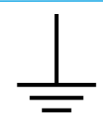
A professional partner for drone inspection and innovation





# SKYE Inspections

Intelligent technology helps to capture more consistent data





# SKYE Inspections

Safer, faster and better monitoring of the asset health



corrosion



cracks



leaks



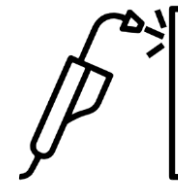
3D modelling



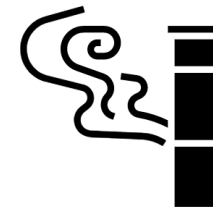
deformation



connection



weldings



emissions



# SKYE Solutions

A custom made reporting tool



**CONTAINER CRANE 1 - LOCATION A**

3 SPOTS REQUIRE ATTENTION

- 4 +30% corrosion vs average
- 6 +5% corrosion vs last inspection
- 7 45% chance no loose connection

INVESTIGATE  
REPORT  
LIVE STREAM

**CONTAINER CRANE 1 - LOCATION A - SPOT 7**

Select Date Range: 08/03/2020  
Select Crane to compare: CRANE 1


KPI's versus selection = CRANE 1 - 08/03/2020

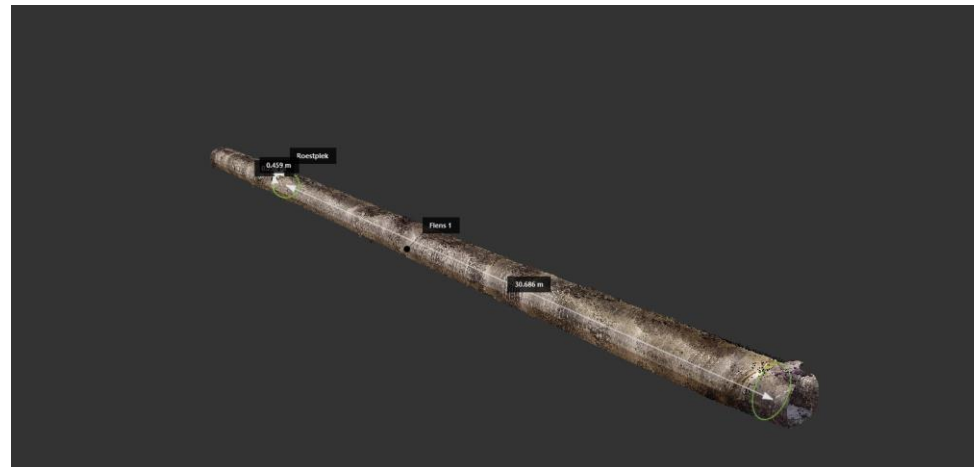
- +30% corrosion
- +10 % chance on loose connection

INSPECT REPORT PREVIOUS SPOT NEXT SPOT



# USE CASE INDUSTRY

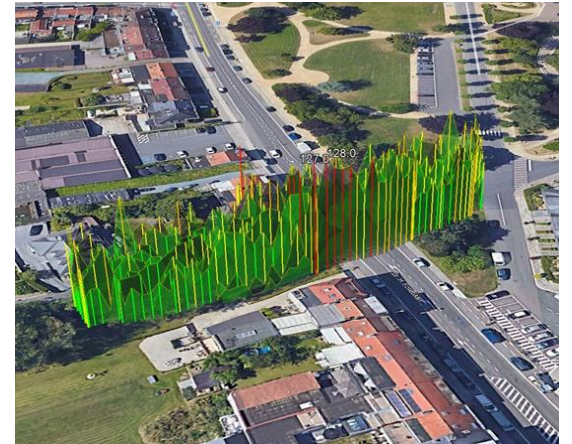
## Inspection of brackish water piping





# USE CASE ENERGY (Fluxys)

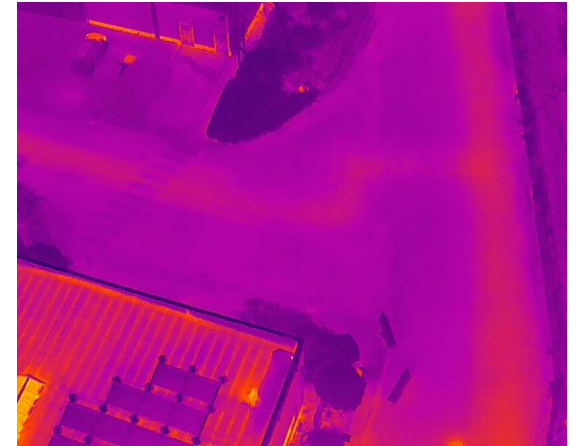
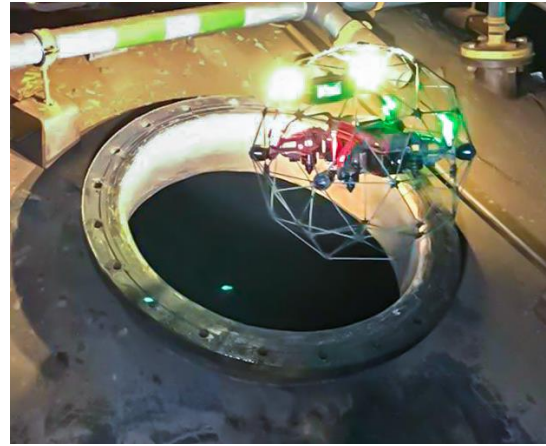
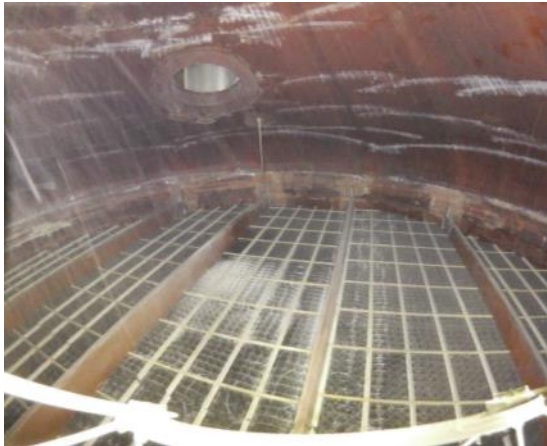
## Methane measurements





# USE CASE INDUSTRY

Inspection of flue gas duct and heating network



# 3D MODELLING

View and monitor defects digitally





# SAFETY FIRST

Safe and efficient execution of inspections on difficult and hard to reach places



# Cooperation

Two possibilities to start with a next step

1. Demo



2. Pilot case



Contact

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