

ZURICH, 2022 //



# ANYbotics – Investment Opportunity

**CREATING A WORKFORCE OF AUTONOMOUS ROBOTS**



**Dr. Péter Fankhauser**  
Co-Founder & CEO

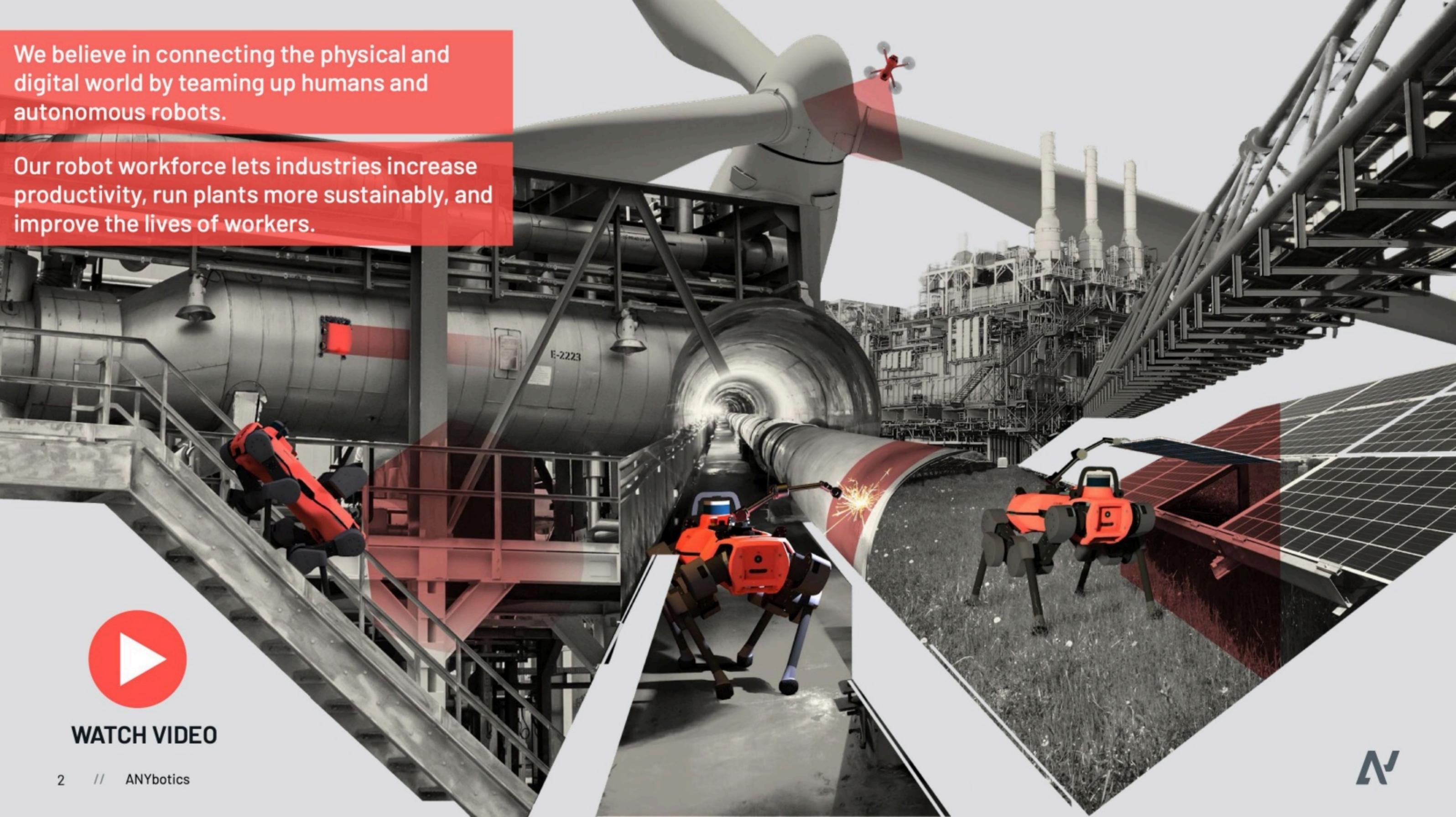


**Fredrik Isler**  
CFO

**ANYbotics**

We believe in connecting the physical and digital world by teaming up humans and autonomous robots.

Our robot workforce lets industries increase productivity, run plants more sustainably, and improve the lives of workers.



**WATCH VIDEO**



Today's industrial operations still rely on human presence, despite...



### WORKFORCE SHORTAGE

1.5 million unfilled plant operator positions until 2030 in the EU alone



### LIMITED PRODUCTIVITY

Undetected issues lead to downtime costs of \$270 billion each year



### HUMAN ERROR

Is the leading cause of most industrial accidents

But things are changing.

# We are on the verge of the next robotic revolution

AI-powered, agile robots enable the transition to the autonomous industry.

## AUTOMATED MANUFACTURING

Enabled by 3 million industrial robots in operation



- Workforce shortage
- Repetitive motions
- Structured tasks

## SMART WAREHOUSING

Enabled by 600'000 warehouse robots in operation



- Workforce shortage
- Repetitive tasks
- Structured environment

## AUTONOMOUS INDUSTRY

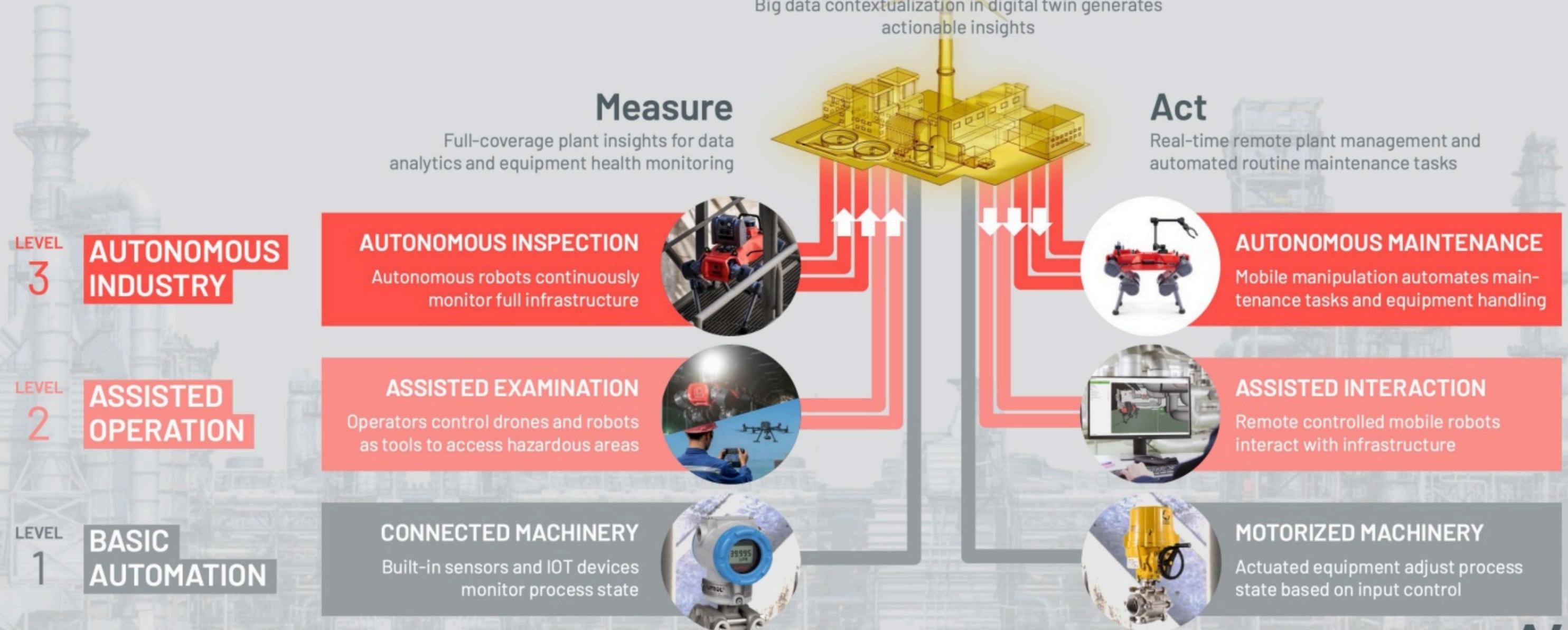
Enabled by autonomous mobile robots



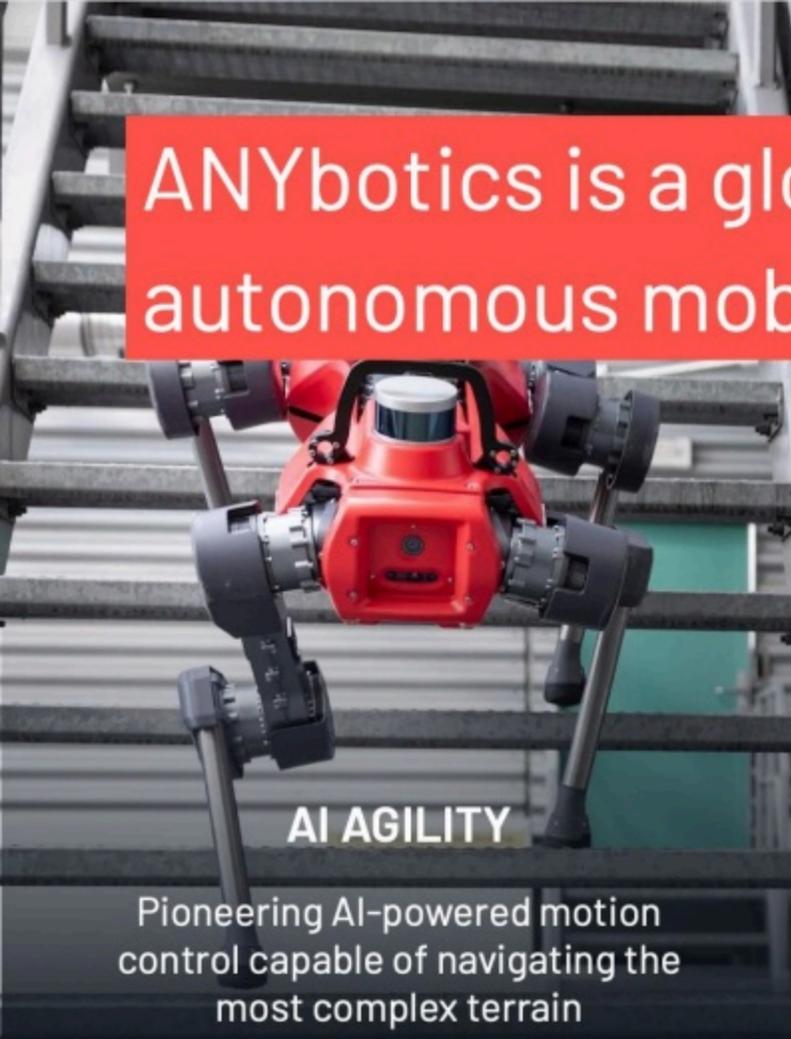
- Workforce shortage
- Repetitive work
- Structured problem
- Dangerous environment

# Building the Autonomous Industry

Autonomous mobile robots bridge the skill gap required to operate plants without human presence.



ANYbotics is a global leader in autonomous mobile robotics



**AI AGILITY**

Pioneering AI-powered motion control capable of navigating the most complex terrain



**LARGE-SCALE AUTONOMY**

Automates tasks in large-scale facilities while leaving the environment untouched



**SUPERHUMAN INSPECTIONS**

Brings AI to the real world to uncover invisible risks beyond human perception & accuracy



**INTEGRATED WITH ECOSYSTEM LEADERS**

Integration with digital platforms provides an end-to-end robotic automation solution

**World-leading robotics technology since 2009**

2009  
Robotics research  
**ETH zürich**



2012  
World's first agile electrical four-legged robot



2015  
Patented robotic drive technology



2016  
ANYbotics spin-off  
**ANYbotics**



2018  
World's first autonomous offshore inspection robot



2020  
First robot sales to industrial customers



2021  
Certified & industrial-grade inspection solution



2022  
World's first legged robot for Oil & Gas and Chemicals



## ROBOTIC PLATFORM //

# The world's most advanced industrial inspection solution



### Software

ANYmal OS software for all robots platforms. Desktop and mobile interface for mission planning and robot control.



WiFi and 4G/5G/LTE connectivity with enterprise WPA2 security



### ANYmal

Industrial-grade & safety certified autonomous robot. IP67 water- and dust protected. 5 patents pending.

### ANYmal X

World's only legged robot with Ex-certification for all Oil & Gas and Chemicals. 3 patents pending.

### Production

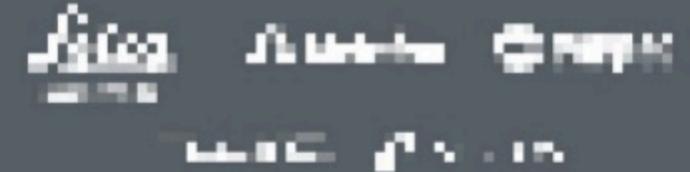


Robot sourcing and assembly outsourced to Zollner Electronics (12'000 employees, global footprint). Scalable to thousands of robots p.a.



### Payload partners

Specialized applications through modular third-party payloads (up to 15 kg).



# Integrating ANYmal – A better way to collect better data



## 01 PLAN INSPECTION MISSIONS

### One-day setup

Plan inspection missions in a digital plant model or by guiding the robot once through the facility.

### On-device autonomy

Performs inspections autonomously without constant data connectivity for low-cost integration.

## 02 SCHEDULE & EXECUTE

### Safely shares workspaces

Navigates complex facilities while reliably avoiding people and objects in its surroundings.

### Auto battery recharging

Operates 2 h on a single battery charge. Automatically returns to docking station for recharging.

## 03 PROCESS & ISSUE TRACKING

### Inspection analysis

Analyses visual, thermal, acoustic, gas, and 3D inspection data to detect anomalies in real-time.

### Integrated reporting

Reports inspection results through an API to integrate with existing plant management systems.

# Substantial cost savings through robotic inspection

5×

More insights

10×

Faster reporting

3×

Monitoring frequency

100%

Personel safety

100%

Accuracy & consistency

## CUSTOMER VALUE CASES



Unplanned downtime

**\$200-500k**  
cost per incident

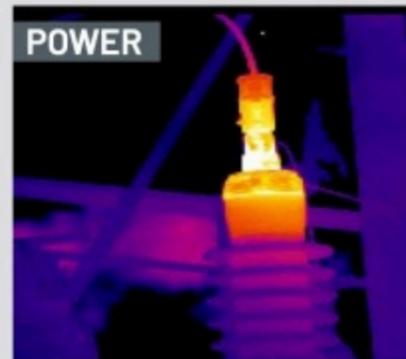
Early detection of anomalies prevents damages and unplanned downtime



Inspection during operation

**\$200-300k**  
revenue loss p. hour

Robot access during operation reduces need for planned inspection shutdown



Asset damage prevention

**\$0.5-1.5m**  
cost per incident

Regular thermal and visual inspection prevent severe damage of critical assets



Remote operation

**\$30-50k**  
cost per trip

Remote interaction reduces trips needed to gain situational awareness



Gas leakage detection

**\$5-10k**  
cost per day

Gas leakage monitoring prevents efficiency loss, env. impact, penalties, and risk of accidents



3D asset scanning

**\$100-150k**  
cost per year

Up-to-date 3d models enable efficient maintenance planning and plant extensions

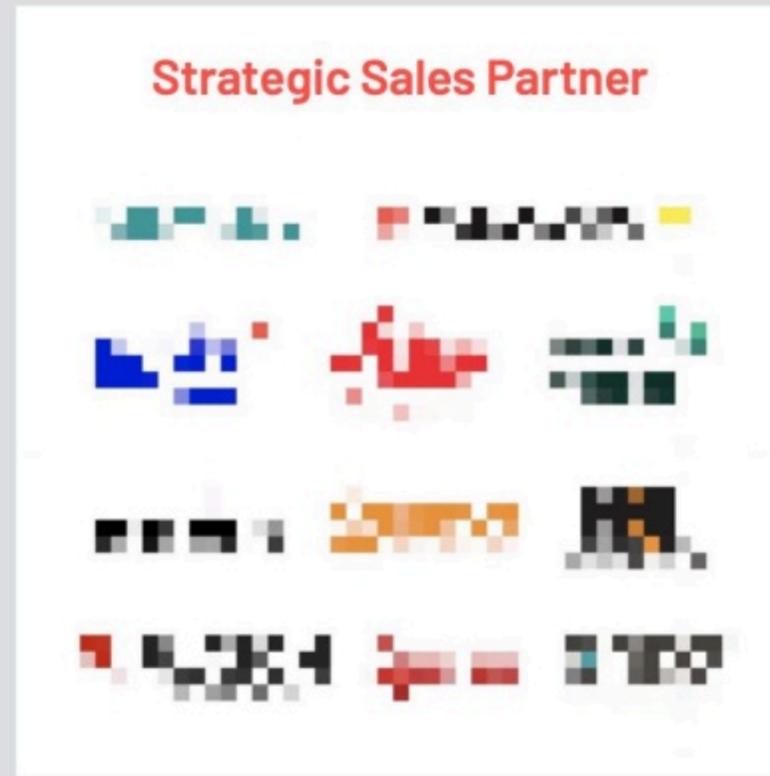
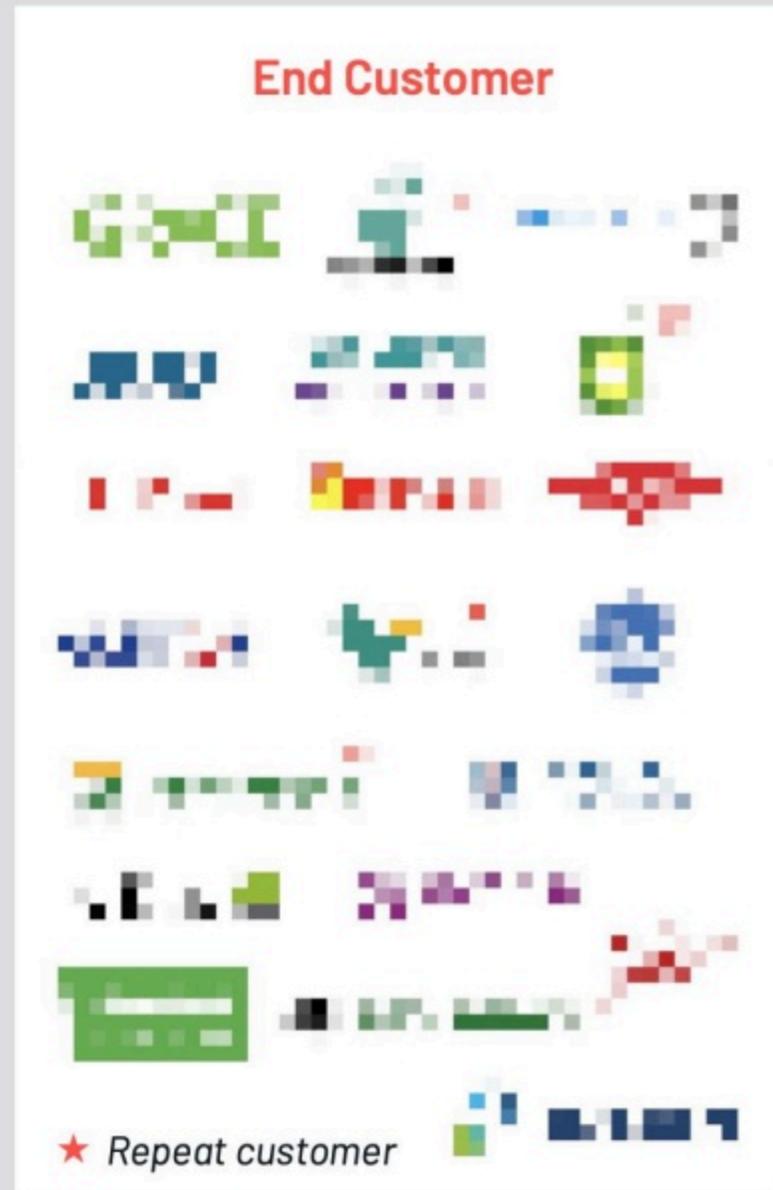


Frequent sampling

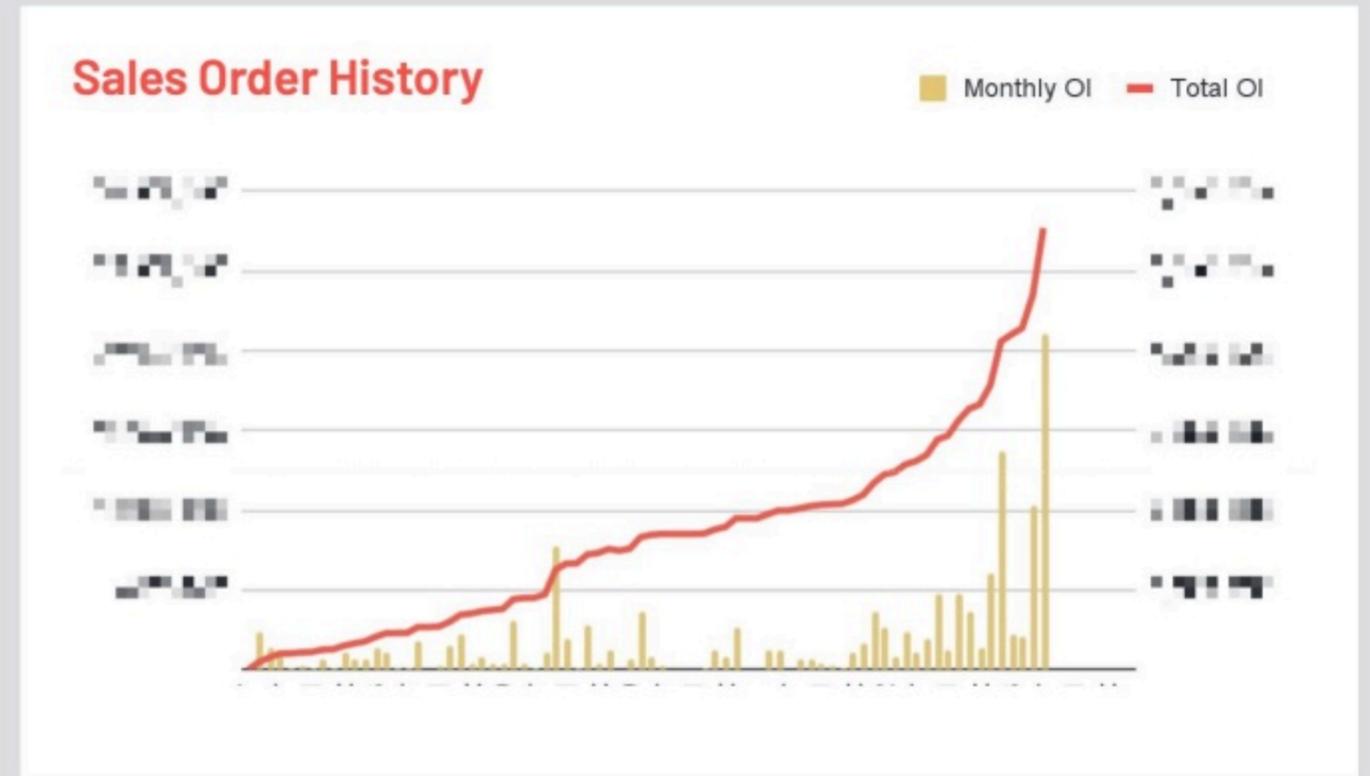
**\$200-300k**  
cost per year

Regular sampling during production prevents quality issues and non sellable output

# Industry-leading customers and substantial scaling commitments >\$150m



Install base  
**> 100 robots**  
in the field

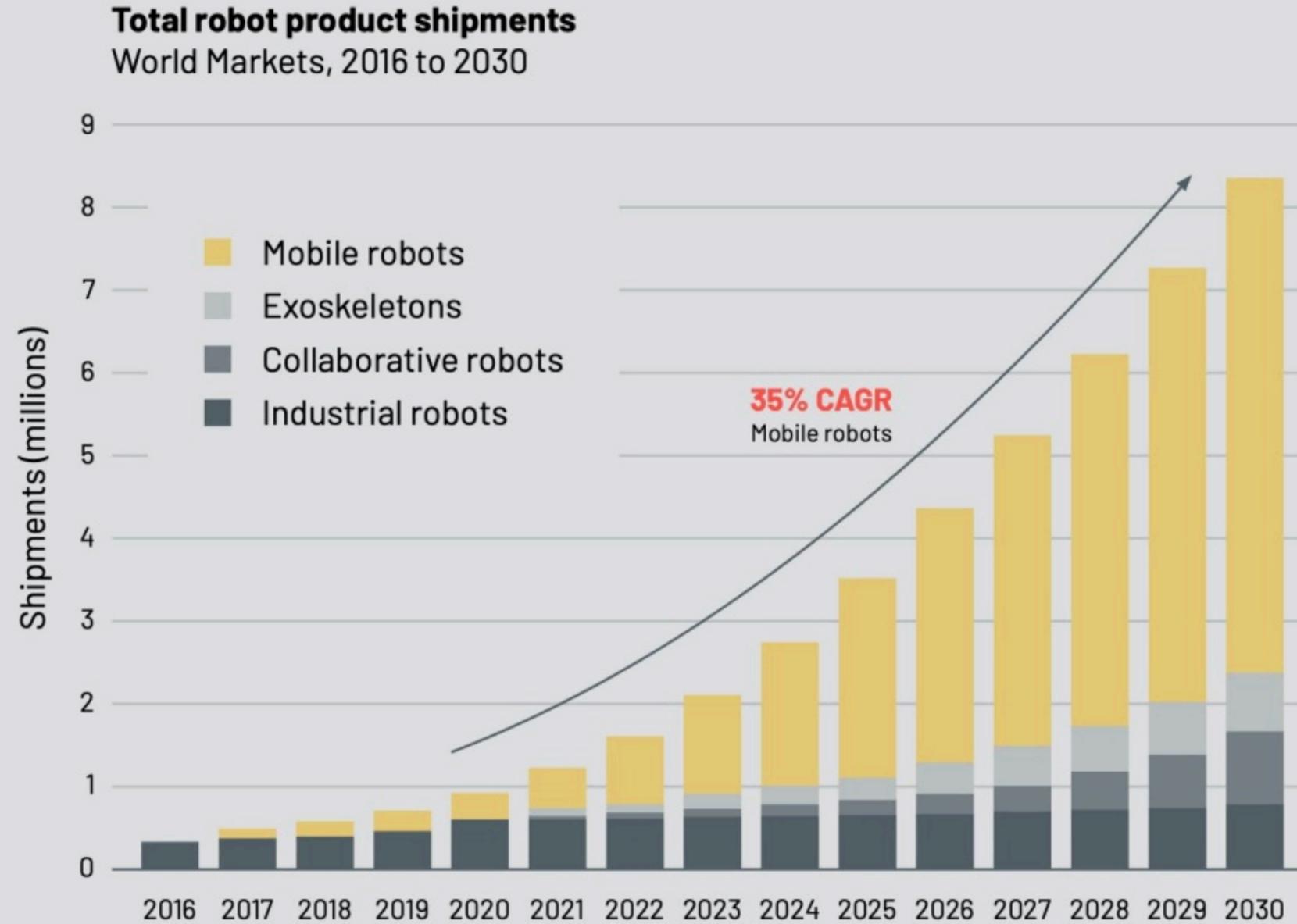


### ANYmal X Early Adopter Program

**>\$150m**  
LOI volume signed with EAP  
customers for scaling 2023-2025



# Mobile robotics market growing 20x from 2020 to 2030

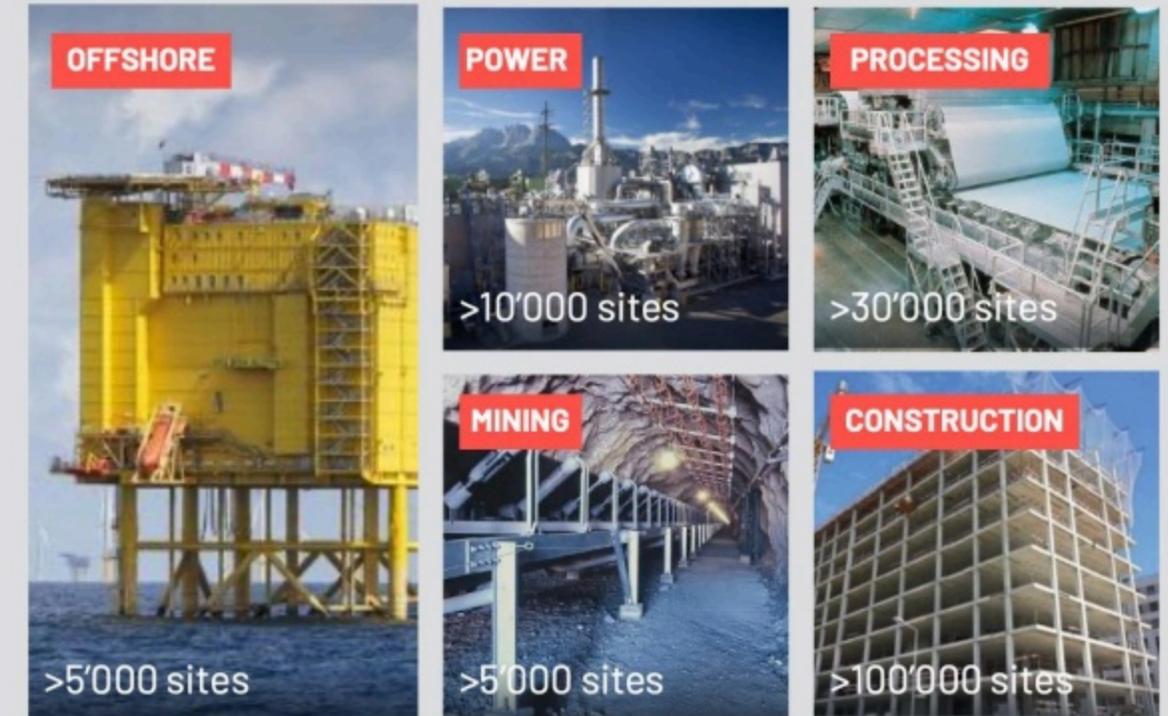


Source: ABI Research

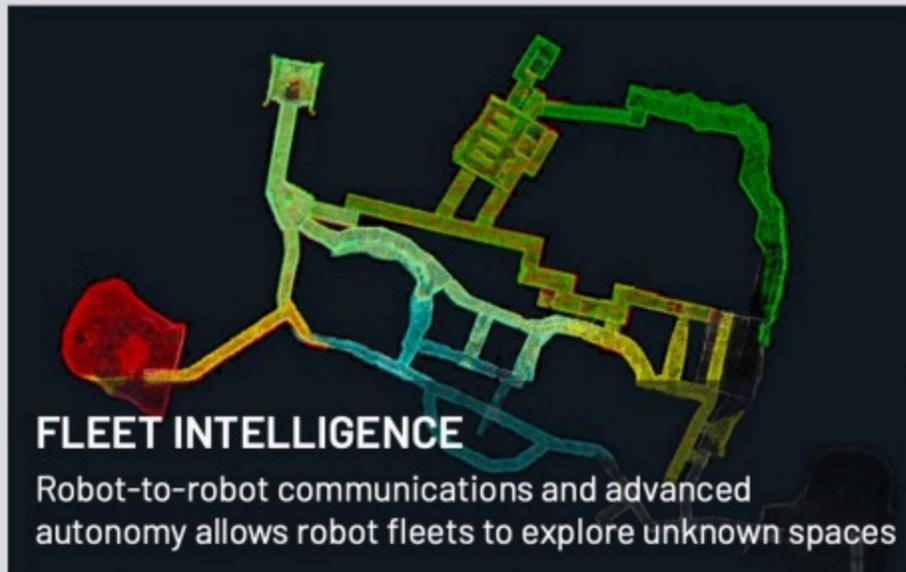
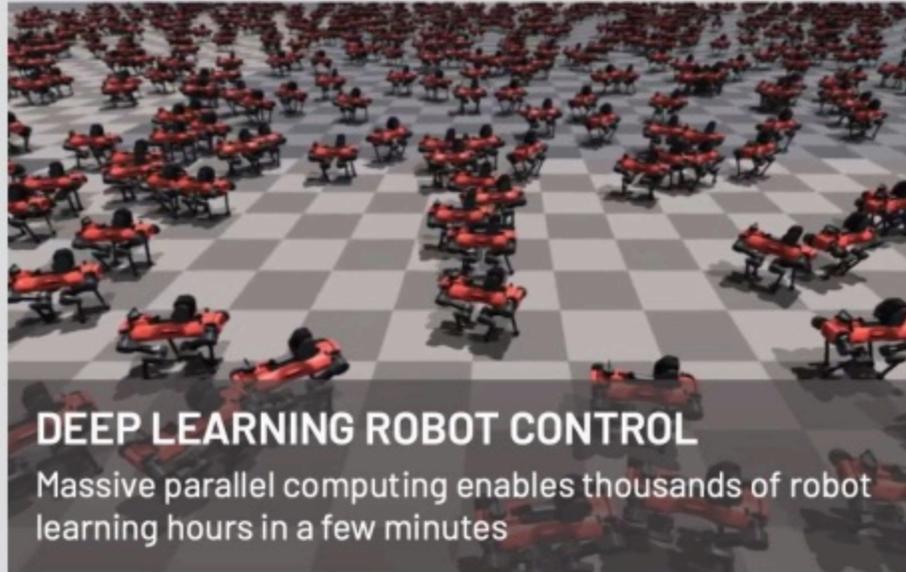
## Market for autonomous inspection robotics

# >\$ 30bn TAM

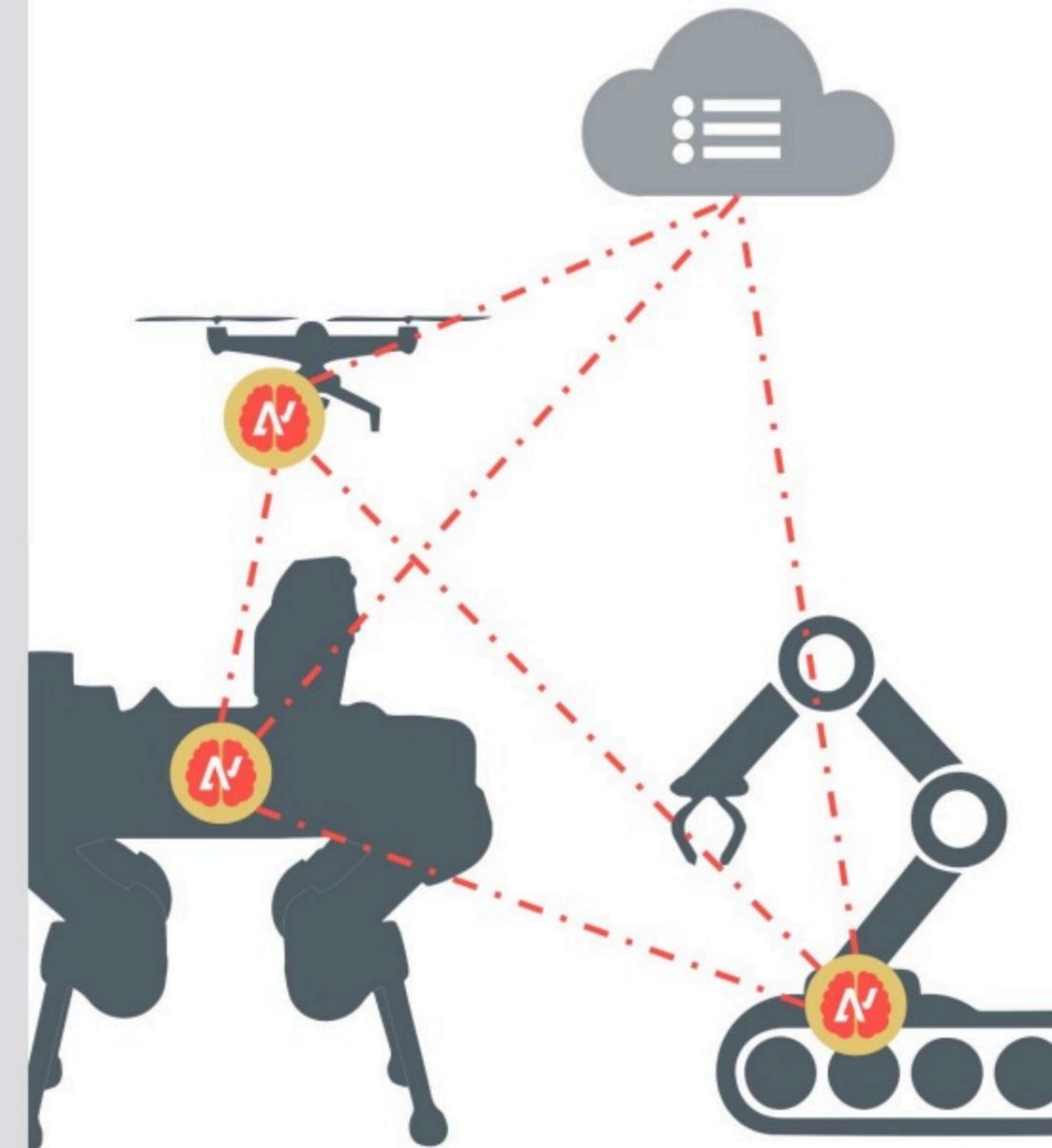
Based on 150'000 qualified sites in energy, chemicals, industrial processing and construction



# ANYbotics develops a powerful artificial brain for autonomous mobile robots



ANYbotics develops the technology to power a connected fleet of autonomous robots



# ANYmal is the platform of choice for world-leading researchers



## ANYMAL RESEARCH NETWORK

Research institutions base their work on ANYmal to develop cutting-edge algorithms and novel applications



## OPEN SOFTWARE ARCHITECTURE

Developers profit from the flexible and modular ANYmal software based on the open-source ROS framework



## DARPA CHALLENGE WINNER

The winning team of the DARPA Subterranean Challenge built on the ANYmal platform for autonomous exploration

### RESEARCH PARTNERS



# World-class team and company leadership

## LEADERSHIP



**Dr. Péter Fankhauser**  
**CEO, Co-founder**  
Robotics PhD ETH Zurich, IMD,  
12 years in robotics



**Fredrik Isler**  
**CFO**  
M.A. HSG, 9 years in M&A,  
finance and HR



**Enzo Wälchli**  
**CCO**  
M.A. HSG, 10 years in B2B  
strategy, marketing and sales



**Martin Bühlmann**  
**COO**  
EMBA HSG, 20 years in supply  
chain, operations and quality



**Dr. Robert MacKenzie**  
**CTO Solutions**  
PhD ETH Zurich, 12 years scaling  
high-growth tech companies



**Dr. Mario Maurer**  
**CTO Hardware**  
PhD ETH Zurich

## TEAM

**ANYbotics attracts world class talent and has one of the leading robotics teams in Europe**

**High-performance team**  
Lean, highly output-driven team of 90 FTE focused on development, marketing, sales and deployment

**Robotic expertise**  
35% PhDs in R&D, graduates from leading universities

**Awards**  
IEEE Product Innovation Award 2022,  
SPRINT Award 2021, Swiss Economic Forum Award 2020

**Diverse industry backgrounds**



## ROBOTS



# ANYmal is the leading inspection robot combining superior mobility & industrial-grade certification



## BOSTON DYNAMICS

**Market-agnostic mobility platform**

Requires 3rd-party hard- & software for industrial inspection

Weak ingress protection (IP54), no Ex-certification



## ANYBOTICS

**Agile & industry-certified inspection solution**

End-to-end solution stack

Industrial-grade design (IP67), only legged robot with Ex-certification



## UNITREE

**Low-cost legged platform**

Broad market focus with low price legged platforms

No autonomy, no CE and Ex-certification

Legged robots capable of moving on challenging terrain



Robots certified for use in industrial environments



## EXROBOTICS

**Ex-certified tracked robots**

Limited mobility, requires 3rd-party software



## TAUROB

**Ex-certified tracked robots**

Bulky, limited mobility & autonomy

