ALTHEN

WOTS presentation 2022

VAN DATA NAAR KENNIS, KOSTENREDUCTIE EN KWALITEITSVERBETERING

Bernd Rietberg – Lead Althen Industrial IoT

WORLD OF ELECTRONICS 2022 WORLD OF TECHNOLOGY & SCIENCE

WORLD OF TECHNOLOGY & SCIENCE

We provide confidence for visionary engineers

ABOUT ALTHEN INDUSTRIAL IoT

The right sensor and measurement solution for your application

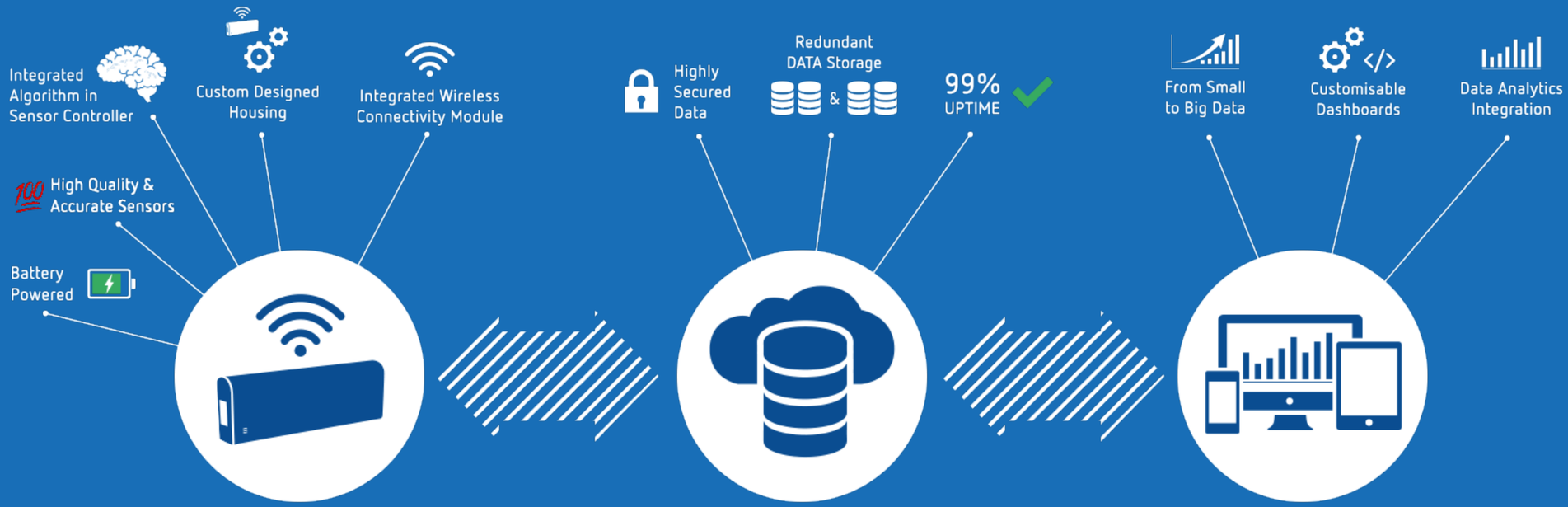
FOR MORE THAN 40 YEARS ALTHEN SENSORS & CONTROLS IS STANDING FOR PIONEERING MEASUREMENT AND SENSOR SOLUTIONS.

Our in-house production and design department, customer-specific sensors and measurement systems are created for almost all applications in many different industries. Our experienced specialists advise you professionally and with all necessary details needed.

YOUR BENEFITS

- Industry specific knowledge about requirements and certifications
- Development of customized sensors (also for low volumes)
- Experience with OEM development trajectories
- Lean project management for T&M applications

YOUR END-TO-END INDUSTRIAL IOT SOLUTION PARTNER



INVENTARISATION → DEVELOPMENT → INTEGRATION → CONTINUOUS IMPROVEMENT

- Reaping the benefits!

INDUSTRIAL IOT CONCEPTS

Example: Kademonitoring

IIoT Example: Slimme Bakstenen

We believe in your dreams. Together we build the future.

SMARTBRICK FOR PREVENTING COLLAPSING QUAYS IN THE MUNICIPALITY OF AMSTERDAM

PROBLEM:

- The beautiful quays of the City of Amsterdam are in trouble: structurally, they are at their end-of-life.
- Collapse of the quays is increasingly occurring.
- There is no way to renovate fast enough or monitor the quay walls.

Current cost of inspection	Current solution
…. million	not scalable

OUR SOLUTION:

This smart brick is a low-cost, high-tech, stick-and-play monitoring device that can monitor structural health, preventing future quay wall collapse.

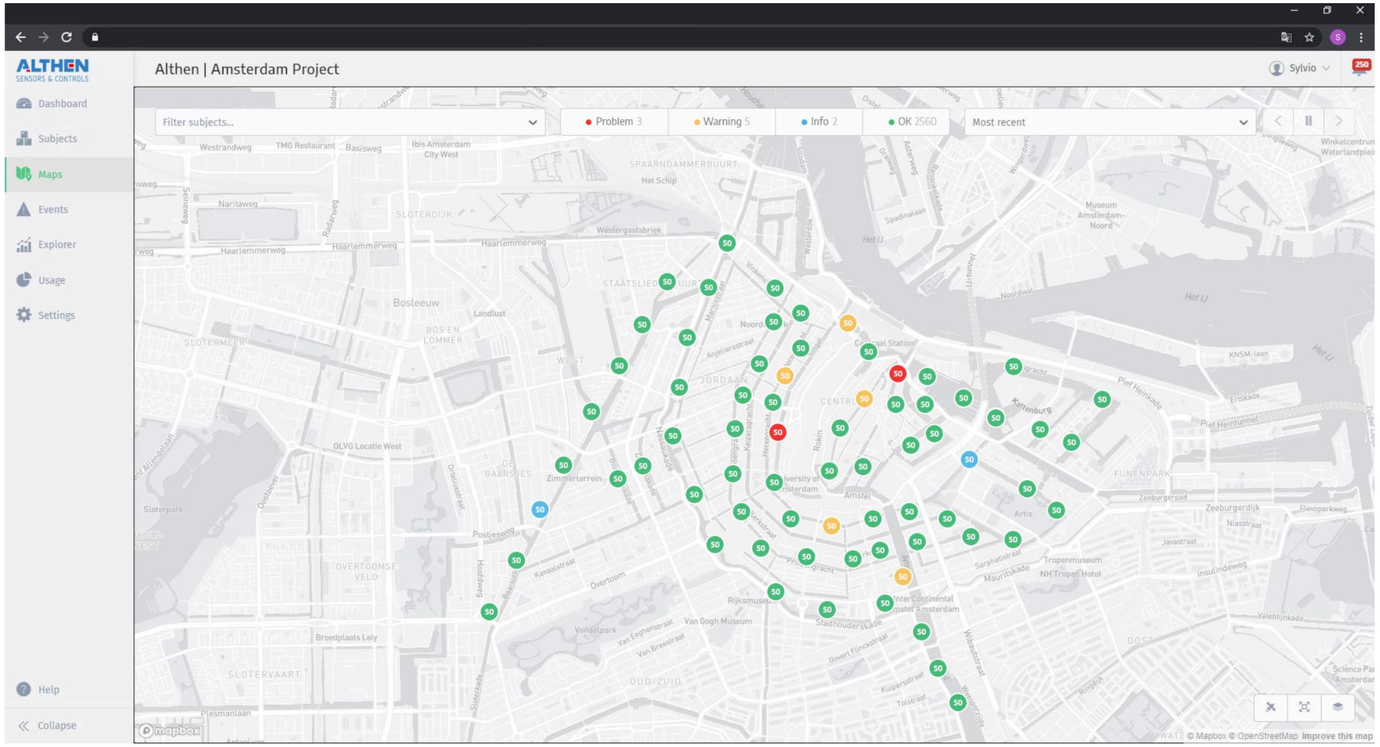
IIoT Example: Slimme Bakstenen

We believe in your dreams. Together we build the future.

This is a novel low-cost, high-tech IoT inclination sensor:

- Measures inclination at 0.1 degree accuracy
- 5 year lifetime – Battery powered
- Telecom connections – No gateway needed
- QR-code for identification & start monitoring

Stick&Play: Record 30-seconds installation time



MONITORING VIA INTUITIVE IOT PLATFORM:

- Low-code platform provides notifications based on user input
- Easy API

Continuous Improvement

The right sensor and measurement solution for your application

Improve

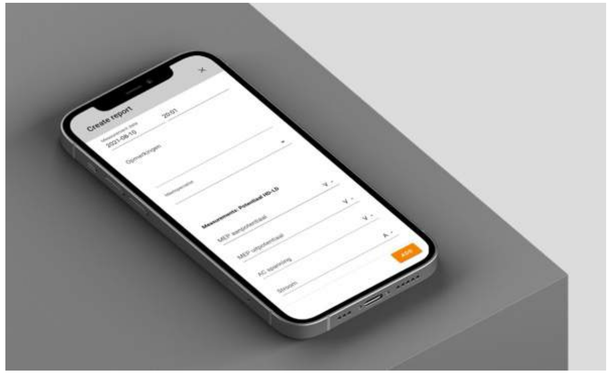
Change settings of Threshold and Alerts

Monitor & Plan

Inspect

Enrich

Upload inspection reports



INDUSTRIAL IOT VOORBEELDEN

Condition Monitoring

IIoT Example: Wireless Condition Monitoring

We believe in your dreams. Together we build the future.

PREVENT PRODUCTION BREAKS
BY MONITORING ALL MACHINES

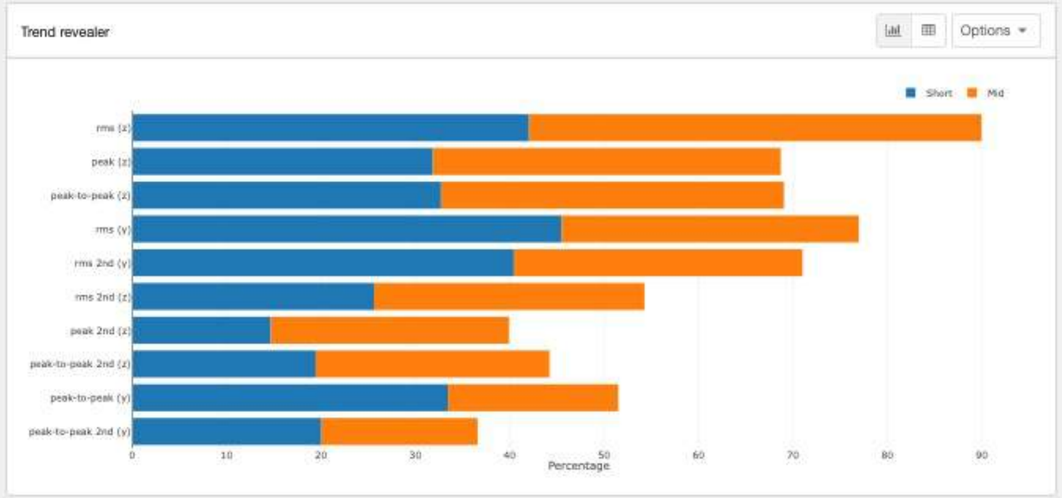
FOR DEMANDING INDUSTRIAL
CONDITIONS

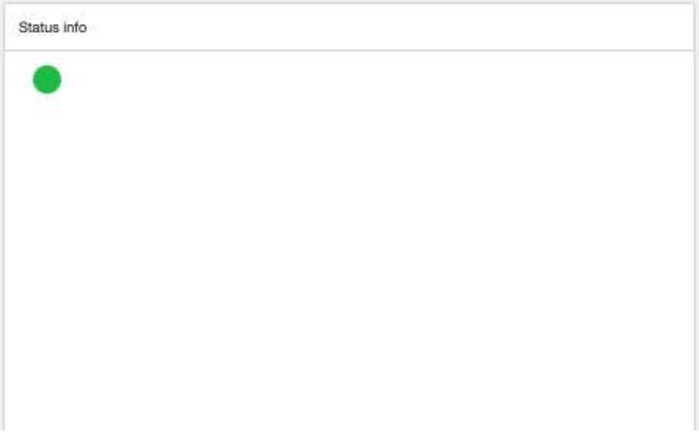
EASY AND COST-EFFICIENT
WIRELESS DEPLOYMENT

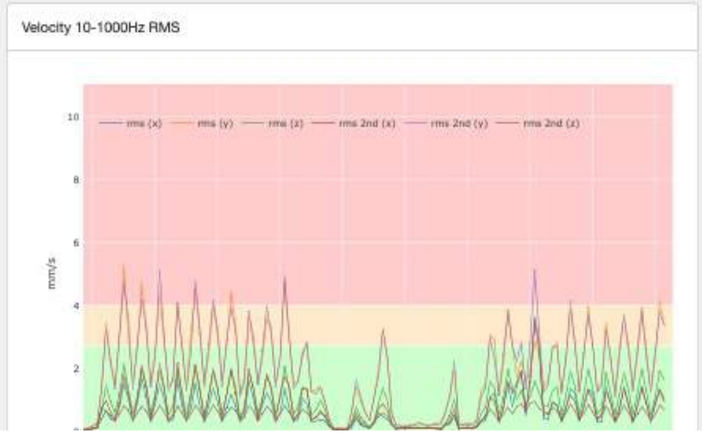
IIoT Example: Condition Monitoring

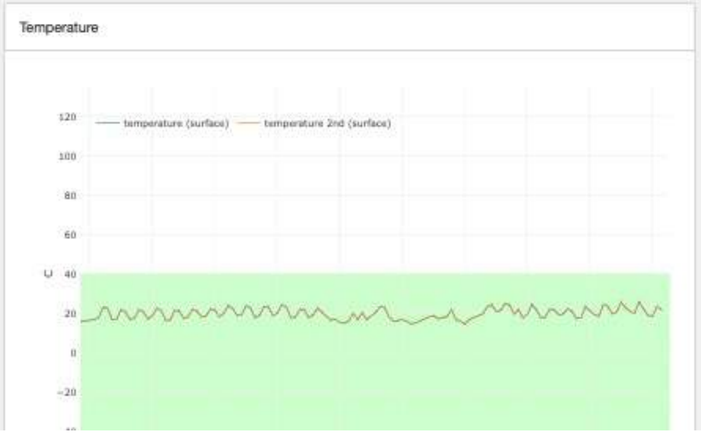
We believe in your dreams. Together we build the future.

ALTHEN SENSORS & CONTROLS



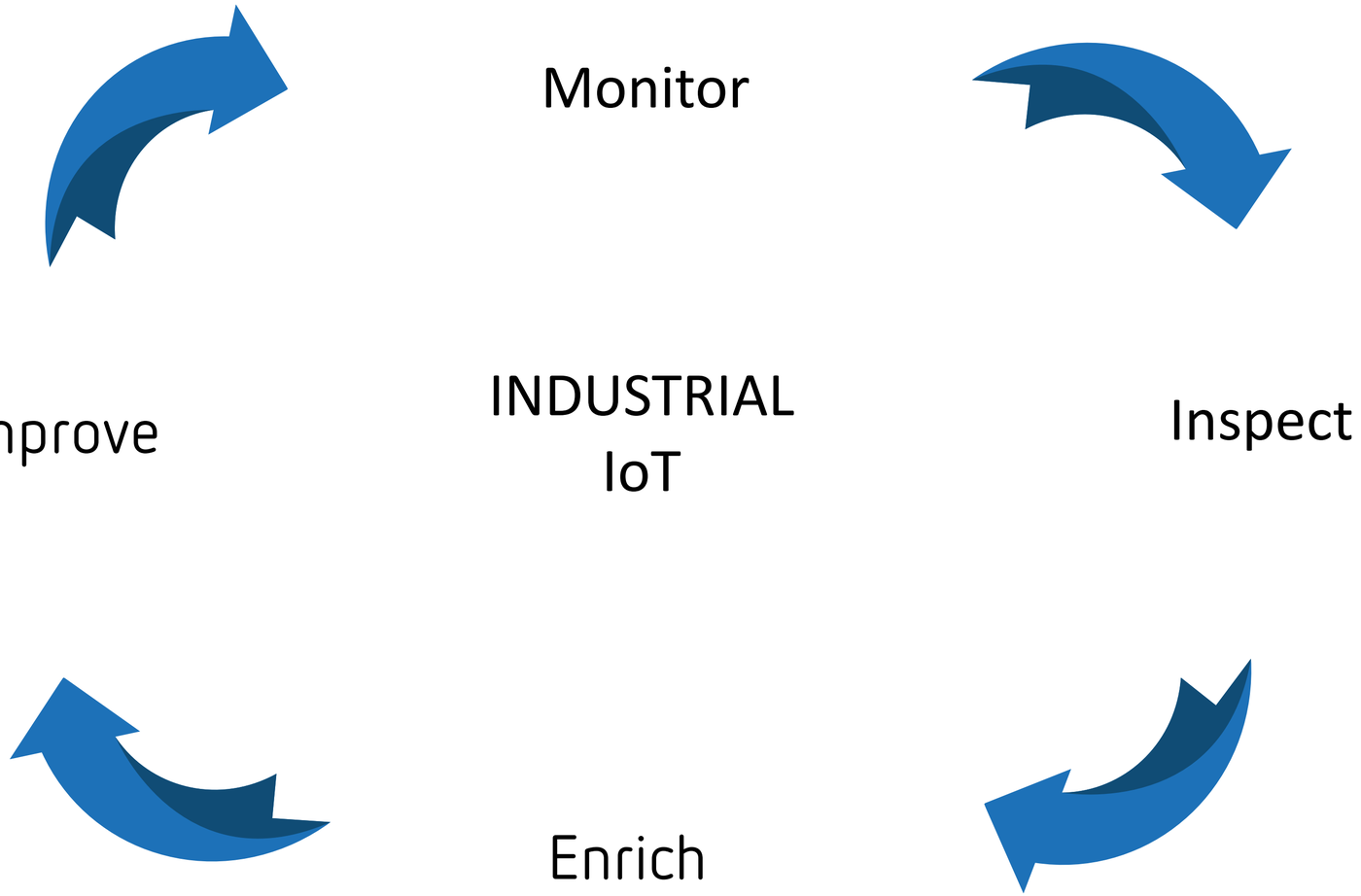






Making sure your business runs with an optimized Asset Management Process

The right sensor and measurement solution for your application



With Condition Monitoring, a lot can be saved!

We believe in your dreams. Together we build the future.

Example case study:

Company "ProSteam" supplies steam to textile companies.

A critical blower needs scheduled maintenance on its bearings.

This typically takes 2 days.

During those 2 days a backup steam generator system is used, which consumes €20,000 of fuel oil per day.

The Wireless Condition Monitoring System was installed here.

By viewing the vibration data in advance, it was possible to determine much more accurately which bearing required maintenance.

As a result the planned maintenance could be reduced to 1 day.

Cost savings: €20,000 in heating oil alone.

INDUSTRIAL IOT EXAMPLE

SLIMME MATRASSEN

SLIMME MATRASSEN

CONCEPT

Monitoring recumbency and other bioparameters of patient during sleep, especially in nursing homes and home care.

Software Unlock: Mattresses already contain sensors upon purchase.

STATUS:
Product development

SPINOFFS:
- More concepts possible, such as smart beds and smart wheelchairs

NEXT-STEPS
- Integrating first batch smart matrasses

INDUSTRIAL IOT

Fast Integration of IIoT

Integrating IIoT is easier than ever before

We believe in your dreams. Together we build the future.

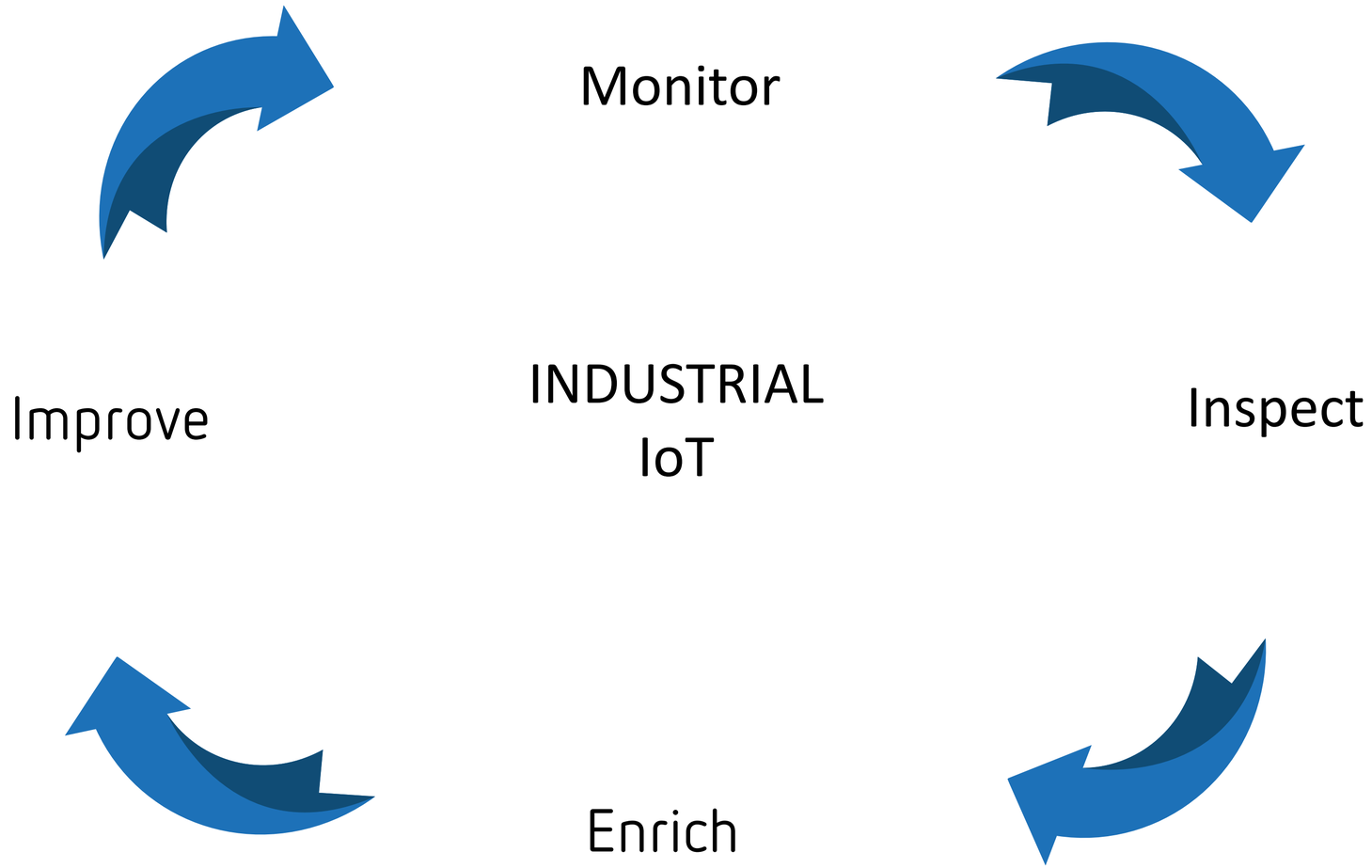
WORLD OF ELECTRONICS 2022 WORLD OF TECHNOLOGY & SCIENCE

PHASE 0	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
Exploration on IIoT, possible opportunities, and decision to start the adventure!	Outline the journey, timeline, and team.	Iterative Brainstorm on problems solveable with IIoT.	MVP Development.	Produce, Assess and Implement the solution.	Continue to improve processes using data.
OPPORTUNITY	INITIATION	CONCEPT DEVELOPMENT	ITERATIVE DESIGN	PRODUCTION & IMPLEMENTATION	OPERATIONS

Month 6?

Making sure your business runs with an optimized Asset Management Process

The right sensor and measurement solution for your application



We can help you with custom solutions, very quickly

The right sensor and measurement solution for your application

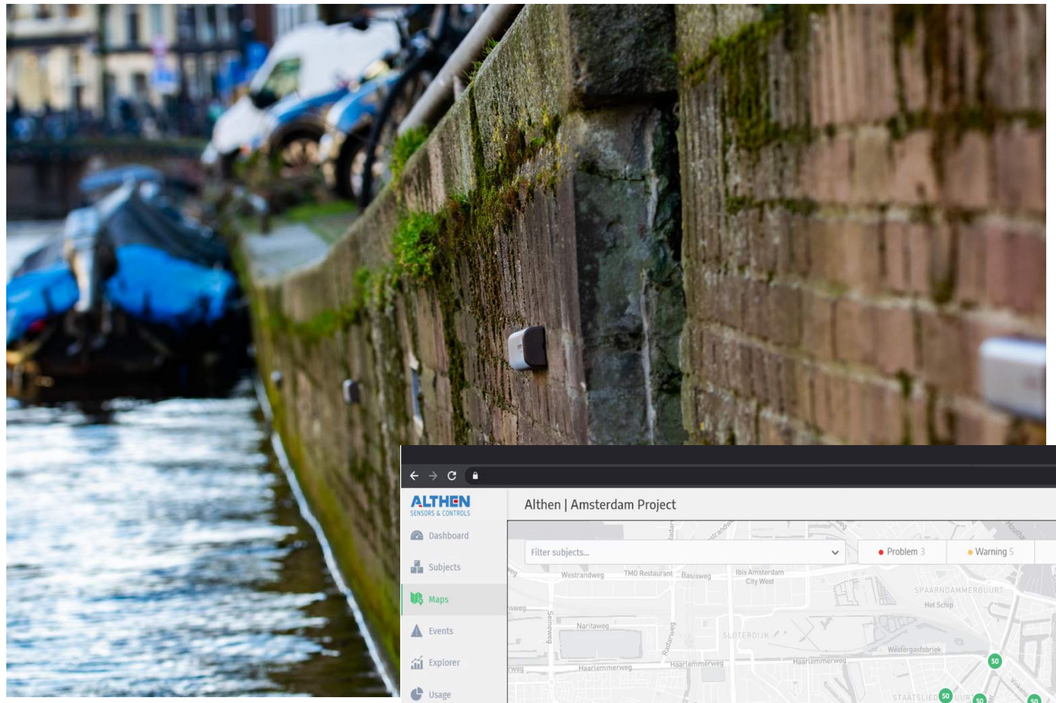
WORLD OF ELECTRONICS 2022 WORLD OF TECHNOLOGY & SCIENCE

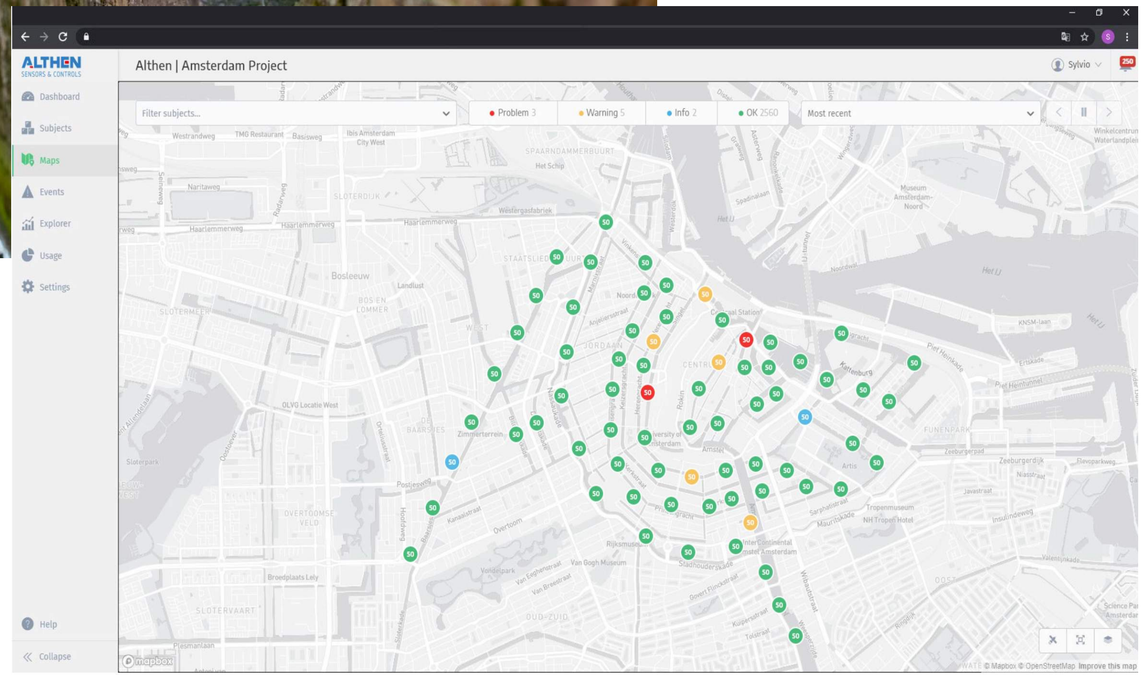
FAST IOT

PROCESS

Your IoT Solution, within 6 months:

- Custom Hardware Plug&Play ready
- Custom Platform Plug&Play ready
- Integration timeline: Your choice.

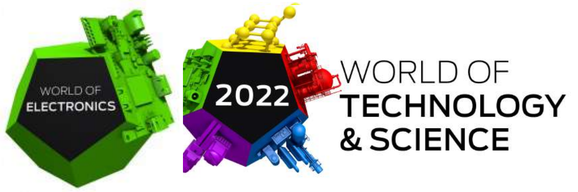




ALTHEN SENSORS & CONTROLS

Althen IIoT - Ecosystem

The right sensor and measurement solution for your application



HARDWARE PARTNERS

- PCB Designer & Producer
- Connectivity Supplier
- Casing Supplier

SOFTWARE PARTNERS

- Data Acquisition and Security
- Dashboard Implementation

OPERATION PARTNERS

- Customization
- Implementation
- Maintenance

END-TO-END SOLUTION DEVELOPMENT:

- Concept development
- Manufacturing and implementation
- Operations DaaS

A-TEAM PROPOSITION

CO-CREATION WITH END-USERS:

- Demand driven concepts
- Win-Win solutions!

IIoT Concept Development

We believe in your dreams. Together we build the future.

DATA-AS-A-SERVICE

- Custom development and deployment of IIoT with a DaaS-proposition

END-TO-END SOLUTION DEVELOPMENT

- Development
- Production
- Implementation
- Operations

CO-CREATION AND VALUE SHARING WITH PARTNERS

- End user define problem statement
- Althen develops and implements sensor concept
- Althen operates in a DaaS

IIoT Custom Sensing Capabilities

The right sensor and measurement solution for your application

THE BUILDING BLOCKS FOR YOUR REQUIRED IIOT SYSTEM

bar
PRESSURE

N
FORCE

kg
WEIGHT

Nm
TORQUE

ε
STRAIN

mm
DISPLACEMENT

α
ROTATION

INCLINATION

g
ACCELERATION

m/s^2
VIBRATION

°/s
ANGULAR RATE

°C
TEMPERATURE

SIGNAL
CONDITIONING

1010
DATALOGGING

AUTOMATION

TURN-KEY SYSTEMS

IIoT Proposition

We believe in your dreams. Together we build the future.

WORLD OF ELECTRONICS 2022 WORLD OF TECHNOLOGY & SCIENCE

WHAT IS YOUR MEASUREMENT PROBLEM?

WHERE ARE BOTTLENECKS WHERE IIOT COULD BE A POTENTIAL SOLUTION?

WHERE ARE INEFFICIENCIES IN YOUR CURRENT PROCESSES?

Brainstorm your problems

Develop your vision

Thank You!

Bernd Rietberg – Lead Althen Industrial IoT

Stand HAL 9 A039

B.rietberg@althen.nl
+316 1112 9488

For more information:
www.althensensors.com

ALTHEN