



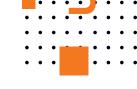
# aconno

IoT made easy





By 2025 aconno will be a leading solution provider for connected sensors delivering information and Data for predictive analytics, Al and machine learning



- for the IoT, Industry 4.0 and Smart City.





We Make IoT (HW) easy



We connect anything from beginning to end



aconno creates connected sensor solutions and custom hardware to solve customer challenges in digitalization, Internet of Things and Industry 4.0













# :: BUSINESS PILLARS









### DIY TOOLS

**SOLUTIONS FOR DIGITAL** LABS - EXPERIMENT AND **PLAY WITH IOT** 

**DEVELOPING ON ACONNO PLATFORM** 

### **CUSTOM SOLUTIONS**

**COMMERCIAL SOLUTIONS** FOR DIGITAL PRODUCT DEVELOPMENT

**ENGINEERED, DESIGNED (AND** MANUFACTURED) BY ACONNO

#### **IoT SENSORS**

STANDARD SENSORS **CLOUD CONNECTED READY TO USE** 

MEASURE, CONTROL PROCESS, AVOID STAND STILLS, ISSUES



### aconno



### acnSENSA Beacon – one of a kind

# Bluetooth 5 Sensor Beacon:

- Air-pressure
- Moisture
- Temperature
- Light Intensity
- Magnetic Fields
- Motion/ Direction
- Acceleration
- Complete SoC
- IP67 Case
- 2(-5) Years Battery







Because it SOUNDS different when a machine is not running smoothly

**ULTRASONIC SENSORS** by aconno





BECAUSE A MOTOR
VIBRATES DIFFERENTLY
BEFORE BREAKING

**VIBRATION-SENSORS** 

by aconno





**BECAUSE our digital data- sheets** are available for 97
Years\* in Stand-BY.

### **Beacons**

by aconno





BECAUSE we can also build full stack solutions.

"Cloud-Fuelling"

– Seppeler Gruppe aconno





**APPLICATIONS** 

CLOUD

**GATEWAY** 

CONNECTIVITY

SENSORS

### **OPTIMIZED HARDWARE FOR IoT:**

ULTRA Low power | good SoC performance | standards | open source



BLUETOOTH GATEWAY
PPOE | IPV6 | Easy configuration with mobile App

ARM based Bluetooth SoC | Ultra Low Power | Strong performance Bluetooth Smart, BT 4.2, Bluetooth 5, Mesh, Thread Mesh, (Sigfox)

Temperature | Barometer | Moisture | Light | UV Magnetometer | Accelerometer | Gyroscope | | solid borne/sound





### LARGE ENTERPRISES

### **GERMAN MITTELSTAND**

### **STARTUPS & KMUS**

### **EDU & INSTITUTIONS**



















University of Applied Sciences















UNIVERSITÄT DUISBURG ESSEN

Freie Universität Berlin

UNIVERSITY OF MANITOBA



























# Aconno evolution





. · Capital Increase?

Project Business

PROFITABLE

Global Distributor signed (Mouser)

Cloud Partnership with Cumulocity

First NB-IOT Projects

Development of standard beacons

Own production facilities

Boosting client range (BoschRexroth, SAP, Vodafone, EY, CGI, NKT)

Result: +50k (TBC) Revenue: 400-650k€ STAFF: 8 in DE+12F Strong growth of all 3 Pillars:

Project Pipeline as of now >1M€ (Modullst, Sap, NKT, Rexroth)

Strong growth of OTC Beacons

+15 Solution Partners "IOT in the box"

+10 Universities to develop with aconno

Result: >200k (TBC) Revenue: 3-4M STAFF: 20 in DE + 20

Result: -1.7k Revenue: 0€ STAFF: 2 in DE

**Sep 21st - 2015** 

**Products** 

Pre.Phase, Developing

Result: -3.8k Revenue: <5K STAFF: 2 in DE

@ YE

2016

First certified products,&

modules; Ready 2 Sell

2017

World first BT5 module

on Nordic nRF52840

Result: +8.3k

Revenue: 80K

STAFF: 3 in DE

2018

2019





### **Customers:**

MACHINE BUILDERS

LARGE INDUSTRY CONGLOMERATS MOVING FORWARD

ON IoT

### Partners:

SYSTEM HOUSES & SOLUTION PARTNERS

CONSULTANCIES IN IoT / INDUSTRY 4.0

### **Distributors:**

B2B Distribution of IoT/ Sensor components



**GIVE US A SHOUT** 

### **DÜSSELDORF**

Volmerswerther Str. 86 40221 Düsseldorf Germany

+49 211 93077809

### **ZAGREB**

Ul. Grada Vukovara 237C 10000 Zagreb Croatia



### GETTING THE DATA TO THE CLOUD

aconno => PS Systek => Cloud der Dinge







#### aconno acnSENSA Beacon

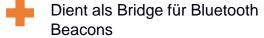
#### Bluetooth 5 Sensor Beacon:

- Luftdruck
- Luftfeuchtigkeit
- Temperatur
- Lichtintensität
- Magnetfeld
- Bewegung
- Beschleunigung

### **PS Systek SmartBox**

Mobiles 4G Internet Gateway

Optimiert für "Cloud der Dinge"





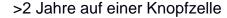
Cloud Lösung der Deutschen Telekom

Das "Gehirn"

Verbindet alle Geräte und Sensoren

Anzeige von Sensordaten,

Verarbeitung von Sensordaten,







# WIDE RANGE OF USE CASE:

- Track and Trace
- Freight monitoring
- Environmental data
- Indoor navigation
- Predictive maintenance
- Smart fuelling
- Asset tracking



# **ENVIRONMENTAL** CONTROL











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## **Mission**

**TRACK ENVIRONMENTAL DATA** IN TRANSPORT OR IN PRODUCTION FLOOR

#### **SOLUTION:**

aconno acnSENSA Beacon with mobile app and MQTT BT-WIFI/Ethernet Gateway







GET AROUND YOUR SHOPPING MALL INDOOR LOCATION WITH POSITION BEACONS ON ACONNO HW

# SMART **LABELLING**















### **Mission**

Create Digital Bridges support online-shopping list creation in store

#### **SOLUTION:**

Smart labels with beacons & NFC can pass information of the product to the appliction for future online purchase

# OFFLINE-ONLINE **BRIDGE**











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## **Mission**

CREATE A DIGTAL HANDOVER FOR **ADVERTISING** 

#### **SOLUTION:**

SMART ADVERTISING - adding a reprogrammable Bluetooth Beacon controlling an NFC TAG to provide smartphones with a link to the campaign

# FREIGHT **MONITORING**













## **Mission**

**ENVIRONMENTAL DATA** MONITORING DURING TEXTILE TRANSPORT FOR QUALITY **ASSURANCE** 

#### **SOLUTION:**

Freight-monitoring beacon tracking all relevant data (temperature, light, moisture and air-pressure)

# **ASSET DLIVERY MONITORING**











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### **Mission**

HOW HAS MY PACKAGE BEEN TREATED THROUGHOUT **DELIVERY? WAS IT THROWN** AROIUND?

#### **SOLUTION:**

SENSOR BEACON TRAVELLING MOUNTED TO THE GOODS/ IN THE **BOX AND MEASURING KEY VAUES** 

## FRESH? HOME **DELIVERY**











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### **Mission**

HAVE MY GOODS STAYED COOL **ENOUGH OR HAS THE CHAIN** BEEN BROKEN?

#### **SOLUTION:**

**DELIVERY TRACKING BEACONS** MONITORING LIGHT, SHOCK AND **TEMPERTURE** 

APPLICATION FOR CHECKOUT **BRINGS THE CUSTOMER BACK TO** THE ORDER-APP

## ASSET **LOCALIZATION**











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## **Mission**

SUPPPORT ASSET FINDING AND LOCALIZATION ON LOGISTIC **PREMISE** 

#### **SOLUTION:**

IDENTITY BEACONS AND ON PREMISE LOCALIZATION COMBINED WITH BAROMETER FOR HEIGHT LEVELING

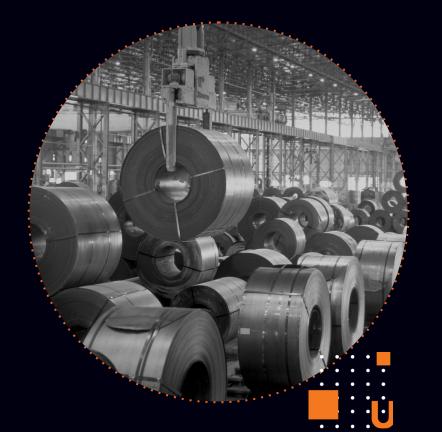
## ASSET **LOCALIZATION**











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## **Mission**

**ASSET FINDING AND** LOCALIZATION ON PREMISE

#### **SOLUTION:**

**IDENTITY BEACONS AND ON** PREMISE LOCALIZATION

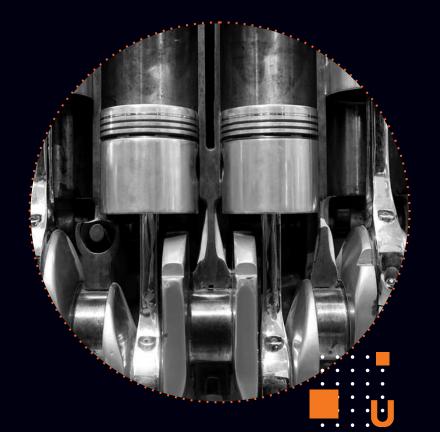
# PERFORMANCE **MONITORING**











### **Monitor Performance**

INDUSTRIAL GRADE SENSOR
BEACONS MONITORING MOTOR
VIBRATIONS TO VALIDATE
OPERATION WITHIN TOLERCANE

# DATA PREDICTIVE **MAINTENANCE**











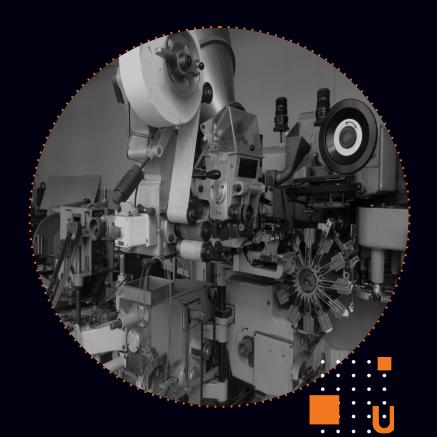
### **Real-World Data**

MONITORING BEACONS

**DELIVERING TEMPERATURE** AND MAGNATIC FIELD DATA FOR PREDICTIVE MAINTENANCE

# SENSING-RETROFIT MATERIAL NEED





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# Real-World EXAMPLE

MONITORING BEACONS
DELIVERING INFORMATION ON
THE REMAINING SUPPLY OF
FABRICS FOR TEE-BAGS

## SENSING FILL STATUS







# Real-World EXAMPLE

MONITORING BEACONS
DELIVERING INFORMATION ON
THE FILL STATUS OF BEER
CASKS AND GAS BOTTLES
USING ACCOUSTIC RESONANZ

# **RETROFIT SENSING OVERFLOW**











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### **Real-World EXAMPLE**

MONITORING SOLUTION **OVERSEEING CONVERBELTS DELIVERING INFORMATION ON** THE FILL STATUS/ OVERFLOW **ISSUES AND CLIMATE** 

# SENSING ANIMAL HEALTH







# POSSIBLE EXAMPLE

MONITORING BEACONS
DELIVERING INFORMATION ON
THE MOTION AND HEALTH OF
CATTLE

## SENSING FREE PARKING







# Real-World EXAMPLE

MONITORING BEACONS
DELIVERING INFORMATION ON
FREE PARKING USING A TIME OF
FLIGHT SENSOR

# **SMART FUELLING**











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## **Mission**

PREVENT FUEL THEFT ON **CONSTRUCTION SITES** 

#### **DELIVERED:**

anti-theft solution, at a 10% of original cost

+new data service proposition enabling re-occurring service revenues and differentiation

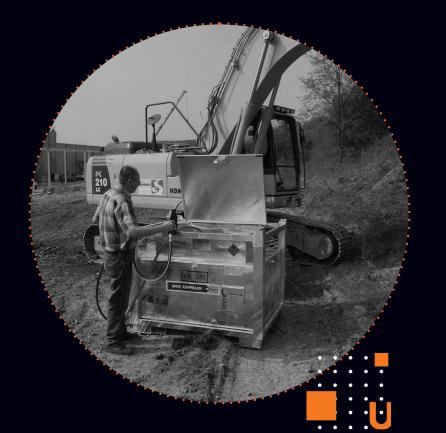
# **SMART FUELLING** REMOTE











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