**Explore the Kontron Group** 

We are a fast-moving multinational technology leader.

Press conference @ SPS 2023

November 14, 2023 11:30-12:00h Nuremberg, Germany





| 01 | Company Strategy Update             |
|----|-------------------------------------|
|    | Hannes Niederhauser, CEO Kontron AG |

- O2 **IoT Software Strategy Update**Bernhard Günthner, EVP Software Kontron AG
- O3 IoT Portfolio Update
  Michael Jacob, General Manager Kontron AIS GmbH
- O4 Q&A
  All participants

### **Explore the Kontron Group**

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## **Company Strategy Update**

Hannes Niederhauser, CEO Kontron AG

## Who we are

Pure-Play Leader of Smart Industrial IoT Solutions

4,740

1.2bn

Employees (9/2023)

2023E Revenue (EUR)\*

>72m

>10%

2023E Net result (EUR)\*

Organic growth p.a.\*

Member of SDAX®

Member of TecDAX®

HQ in Austria; listed in Germany



Focused on the large, diverse and growing Industrial IoT market (IIoT)

> Fully integrated technology platform

› Driven by customers success, blue-chip customers

Leading provider of disruptive IoT connectivity technology

## The New Kontron

## 7 divisions in 3 segments

## kontron

## Europe



Industrial, Medical and Defense

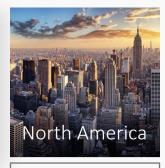


Adding 5G connectivity to IoT products



IT converted to Service contracts for IoT

#### Global



Sales channel for Europe products; Avionics



Sales channel for Europe products

#### **Software & Solutions**



susietec® & customized IoT software



Data for highspeed trains in Europe & China

Revenue\* FC 2023

€ 810m

#### **Targets**

EBITDA\*\* 11% GM 40% Growth p.a.: 10%

Revenue\* FC 2023

€ 260m

#### **Targets**

EBITDA\*\* 8% GM 30% Growth p.a.: 12%

Revenue\* FC 2023

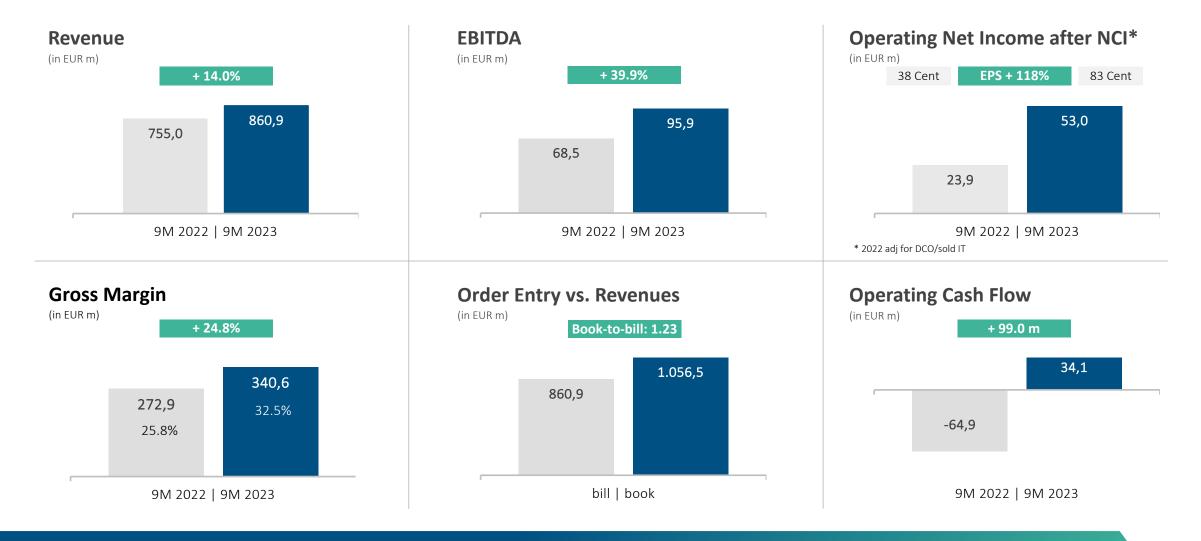
€ 230m

#### **Targets**

EBITDA\*\* 15% GM 60% Growth p.a.: 16%

## **KPIs 1-9M 2023**





## **AI Solutions – The Gamechanger**



## Focus on Al-Solutions – adding Hardware Accelleration & Application Know-How

- > Kontron AI platforms come with an AI Software Development Environment:
  - > Full IP HAILO integration, leading Performance-to-Power ratio Edge AI acceleration technology
  - > Low Latency Applications supporting multi camera, robotics, traffic monitoring, surveillance tasks, user identification and many more.
- > Full Service Approach:
  - > Hardware design—in Services & Full Stack Software Service Approach
  - > susietec® Service for AI edge devices e.g. AI model field updates, security updates, remote management.
  - > Data Scientists for providing tailored neuronal networks



Al Vision for textile Fabric quality management



Industrialization and consolidation of outdoor cameras for parking management

## Macro trends driving IoT business in the mid-term



5G

- Lower investment & lifecycle costs
- Intelligent modules offer security
- Shift from GSM-R/4G/Wi-Fi to 5G
- 5G private networks for factories

Autonomous Driving

- Unmanned trains, construction machines, harvesters save cost
- Increase security of traffic

Medical

- Aging population
- Pressure on healthcare systems
- Ambitious projects (e.g., US "Moonshot" for curing cancer)

Globalization

- China and USA show higher growth than Europe but compete with each other
- Kontron may serve both markets with leading technology

Europ

Globa

Software + Solutions

Smart Factories

- Nearshoring/factories coming back
- Robots increase automation budget
- Connected IoT production machines

Aerospac e and defense

- Recovery of travel
- Technological shift to orbit
- NATO goal: 2% GDP defense budget
- Perception shift in Europe

Highspeed trains

- EU "Green deal": expand high-speed tracks from 11,000 to 33,000km
- Technological shift from GSM-R to FRMC and from FRMC to 5G

Artificial Intelligenc e

- High computational requirements of running complex AI models
- Taking over human tasks like defect detection

## Strongest brainpower in the industry

## kontron

#### susietec® IoT software toolset

- > Extending susietec® portfolio by Bsquare SquareOne
- Release of KontronOS (highest security standard)
- > EUR 100m pure software revenues



**Excellent pool of engineers supported by lean organization** 

#### Mission-critical control systems for high-speed trains

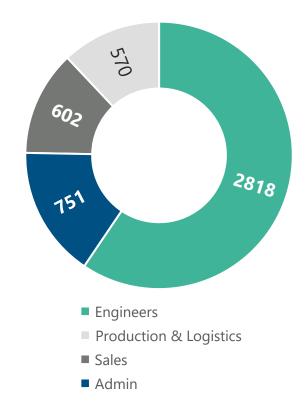
- > European Train Control System Level 3 Approval
- > New standard FRMCS will accelerate migration and requires 5G



#### **Artificial Intelligence**

- > HAILO chips for customized scalable applications
- > NVIDIA full stack standard solutions
- Full stack industrial applications: video surveillance, defect detection, response time edge cloud, robotics
- > EUR 29m in design wins





## **M&A** strategy

## kontron

## Replace sold IT segment by strategic IoT acquisitions

#### M&A is a core competence of Kontron

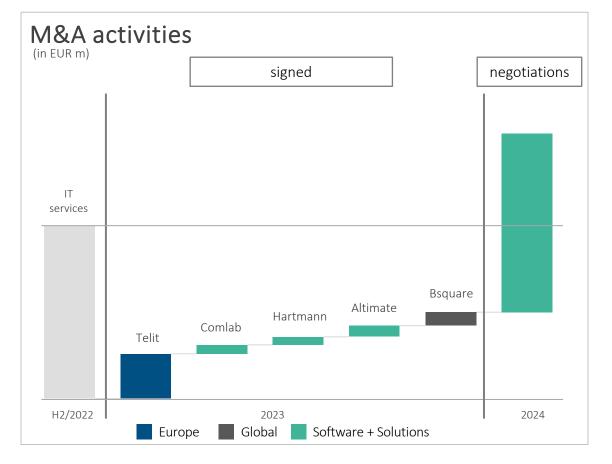
- > Replace EUR 387m of sold IT business with IoT acquisitions
- > Target: High synergies with Kontron → 12% EBITDA within 2 years
- > Complementary IoT technologies to improve portfolio
- Finance by existing cash and cash flow not shares

#### 5 IoT technology acquisitions signed in 2023

- > Carve out Telit (DE): 5G modules for data connection of IoT
- > Comlab (CH): Data repeaters and communication for trains
- > Hartmann (CH): VPX systems for the Defense market
- > Altimate (RO): Public transport solutions
- > Bsquare (USA): Software for IoT connections

#### Kontron M&A pipeline for 2024

> Currently 3 acquisition projects





We will replace our sold IT services by high growth IoT technology

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## **IoT Software Strategy Update**

Bernhard Günthner, EVP Software Kontron AG

## Kontron susietec®

## The toolset of software, hardware and expertise

Digital solutions from one source

We simplify access to digitalization - with the smart solution approaches from the Kontron susietec® toolset.



#### **Software**

Kontron software solutions for re-aligning your business

By applying kontron software solutions to existing structures, we create space for realigning your business.



#### Hardware

Customized hardware solutions for the IoT environment

Fast, reliable and ready to connect: The development of customized hardware solutions for the IoT environment is firmly anchored in our kontron DNA.



#### **Expertise**

**Experts in high-performance IIoT structures** 

We support companies with our expertise in creating powerful and professional IIoT structures.

## Secure connected devices



#### Equipment Cloud®

The Digital Transformation Solution for Service and After-Sales in Mechanical Engineering

#### Workforce

Workforce- and staff management incl. back-end-System and mobile apps



Device monitoring and administration



#### K-SYS

#### **CODESYS**°inside

SoftPLC according to IEC 61131-3 for technical control systems



Secure customized Linux OS for embedded devices incl. security updates



#### FabEagle<sup>®</sup>LC

Scalable solution for production control and monitoring



#### FabEagle® Monitoring

Shop floor management system for machine and operation data acquisition



#### FabEagle®Connect

Low-code interface integration solution



#### ToolCommander®

Open framework for equipment control and visualization



#### **QIWI Toolkit**

Sophisticated process visualization tool for web panels



Highly secure infrastructure for your applications







#### Regulatory:

- > Standards for IIoT and critical infrastructure moving from best practice to standards in law
- > E.g. ISO62443 & NIS2

## Operational:

- > The boundary between IT and OT is blurring
- > Always ON standardized solutions are required

## # Energy:

- > Critical need to reduce energy consumption
- > Rising energy costs require smart monitoring and management



## The Challenge NIS2



The vast majority of EU companies have been compromised by cyberattacks in the last 3 years. Therefore, the EU has adopted the Network & Information Security (NIS) guidelines and has released NIS2, these are currently being transposed into national law and industry-specific requirements.

- NIS2 requirements will become mandatory for EU in q4 2024 (ETSI EN 303 645 and NIST 8259A)
- They will become mandatory e.g. for Medical, Transportation, Industry, and other digital services

So many Kontron customers will face these tasks:

- How to prevent foreign software from running on my device?
- How do I ensure that the devices can be updated in the long term?
- How to implement intrusion detection and notifications?

# KontronOS Susietec chronic of the control of the c

#### EquipmentCloud®

The digital transformation solution for service and after-sales in mechanical engineering

#### Workforce

Workforce and service staff management incl. back-end system and mobile apps



The Complete Fleet Management Solution for Edge Devices



K-SYS CODESYS® inside to IEC 61131-3

SoftPLC according to IEC 61131-3 for technical control systems



Secure customized Linux OS for embedded devices incl. security updates



#### FabEagle®LC

Scalable solution for production control and monitoring



#### FabEagle® Monitoring

Shop floor management system for machine and operation data acquisition



#### FabEagle®Connect

Low-code interface integration solution



#### ToolCommander®

The modular software framework for machine control and visualization

#### QIWI Toolkit

Sophisticated process visualization tool for web panels

#### The secure Linux OS for integrated devices

The specifications for embedded devices with an existing IoT connection go far beyond security updates in the field. Regardless of whether it's about software reliability and modifiability, atomic updates or low data consumption: With **KontronOS**, we deliver an industrial IoT-to-cloud operating system based on Linux that meets all these requirements.

KontronOS is every hacker's nightmare: Providing all necessary cybersecurity features — tailored to the customer's needs.

## **Secure Infrastructure for IIoT Applications:**





## Tailored:

- > 100% fitted to individual requirements
- > Dedicated experienced team for implementing turnkey solutions

## Fast deployment:

- > Based on Kontron's own IP
- > Based on proven technology
- > Based on preconfigured bundles



- > Highly configurable by customers
- > Extensions and upgrades with new functionality at any time



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Michael Jacob, General Manager Kontron AIS GmbH

## SUSIETEC® a brand of kontron

## **IoT Bundle K-PORT**



## K-PORT +



## **KontronOS**

#### Combination creates opportunities

- > IoT Bundle K-PORT for KBox A-250 & AL i.MX8M Mini
  - › KontronOS: hardened operating system
  - > Onboarding script: Easy onboarding of IoT boxes to the cloud
  - Agent for communication with Docker Registry and Cloud as well as integration of machine data
  - > Docker container with interface to the machine (optional)
  - > Pre-installed before delivery
- > Cloud-based software to manage devices in the field
  - Monetization of software licenses
  - > Remote support via command line or VPN
  - Secure and predictable mass updates
  - Device Management as a Service













AL i.MX8M Mini



## **K-Port Bundle Highlight**



**KontronOS Security & Stability** 



**Device Fleet** Mangement



K-PORT +





**KontronOS** 







**Docker** Managment





## **IoT Bundle Connect**



## FabEagle®Connect +



## **KontronOS**

#### Combination creates innovation

- > IoT Bundle FabEagle®Connect for KBox A-250
  - > IoT-Addon FabEagle®Connect for KBox A-250
  - > Pre-installed ex-delivery
- > Data interfaces out of standards
  - > OPC/UA, MQTT, Rest,
  - > Field busses (Profinet, Modbus, CAN...), PLC connectivity (
  - Data Sources (Databases, Parquet, JSON...)
  - > IoT Interfaces (Azure IoT, AWS...)
- > Value product of the KBox family with a good price/performance ratio
  - > Industrial-grade, 24/7 operation, high-temperature range, long-term availability
  - > Connectivity with ETH, Wi-Fi or GSM/LTE
  - Atom (Apollo Lake) performance class for many applications
  - > Further standard interfaces incl. Digital IO









**KBox A-250** 



## **IoT Bundle Connect**



**HMI/SCADA** 



BIG DATA
ANALYTICS



MES/ERP



**DATABASE** 



HISTORIAN ARCHIVING

**MQTT** 

REST

FTP

**CUSTOM CLIENT** 

TCP/IP



FabEagle®Connect



**OPC UA** 

**PLC** 

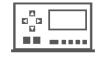
TCP/IP

**DATABASE** 

XML/JSON



**OPC SERVER** 



**PLC** 

DATABASE/ APPLICATION



SENSOR/ ACTUATOR



## SUSIETEC® a brand of kontron

## Portfolio focus















## **Industry verticals & expertise**















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Kontron online press kit:

www.kontron.com/sps2023