

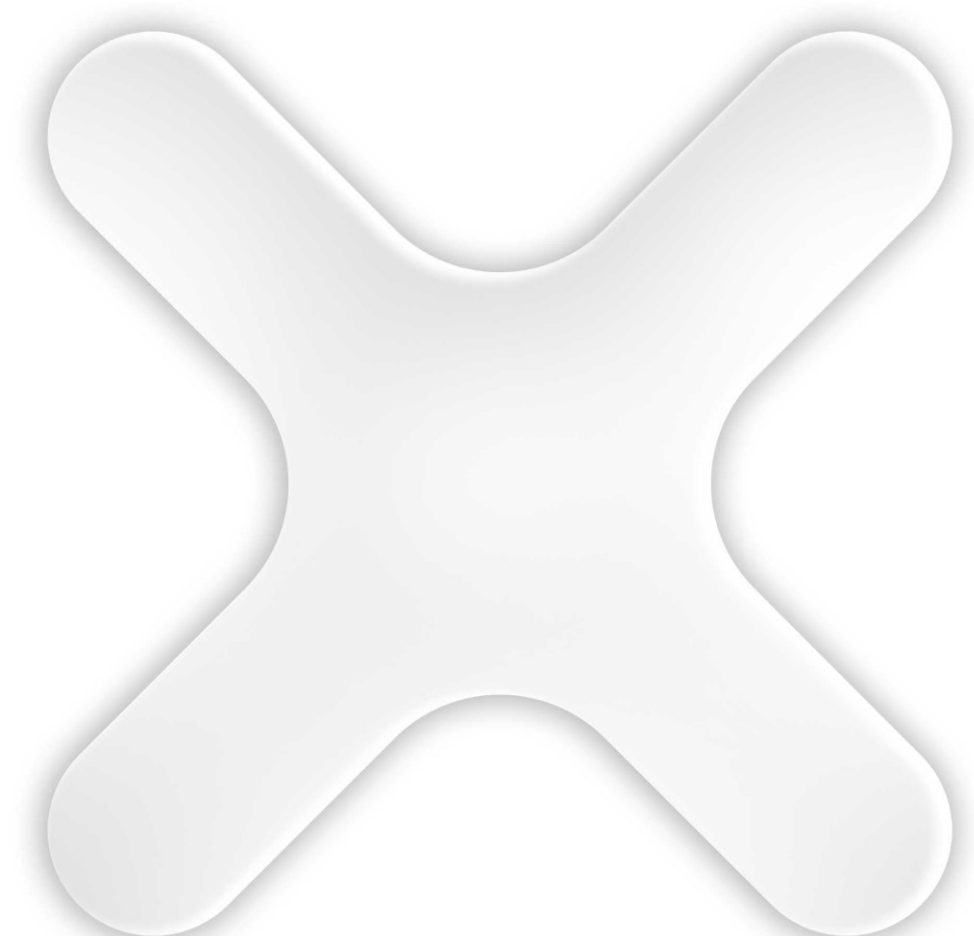
# Toekomstvisie



Our Journey in SMARTMachinery and  
SMARTFactory :

Digital Transformation

DEVELOPER DAY 2022  
Ridderkerk September,21 2022



**EXOR**

Sept. 2022 Updates



by the  
numbers

51+

Years in  
the industry

Exor International Corporate Financials

52,000,000.00

Forecasted 2022

42,000,000.00

Consolidated 2021

1.500.000+

Worldwide  
installed HMI  
products

2500+

Worldwide  
Machine  
Builders OEM

140.000+

IIoT Devices,  
HMI; PLC,  
Controller  
produced in  
2022  
(forecast)

350.000+

Embedded SOM  
produced in  
2022  
(forecast)

50.000+

Worldwide  
connected IoT  
Devices

276

Worldwide  
Employees

68\* (25%)

Development  
Engineers

\*(including EXOR India  
and Exor Embedded  
teams)

**EXOR**  
AMERICA

Exor America - Cincinnati USA  
12 Employees  
Sales – Technical Support

Exor gmbh - Wuppertal Germany  
10 Employees  
Sales – Technical Support

**EXOR**  
EMBEDDED CROATIA

Exor Embedded Croatia – Zagreb  
6 Employees  
Embedded Hw/Fw R&D

**EXOR**  
DEUTSCHLAND

**HIFLEX**  
STERK IN SUPPORT

NETHERLANDS. Exor  
partner since 2000

**EXOR**

INDIA  
EXOR India Pvt.Ltd - Mumbai  
(Sales)  
26 Employees - (15 R&D)

**EXOR**  
INTERNATIONAL

Exor International Headquarter Verona  
– Italy 180 Employees –  
R&D : 35 Dev. Engineers + CORVINA 32  
Engineers.

Manufacturing 200.000 pcs. x Year  
HMI / EDGE and IoT products

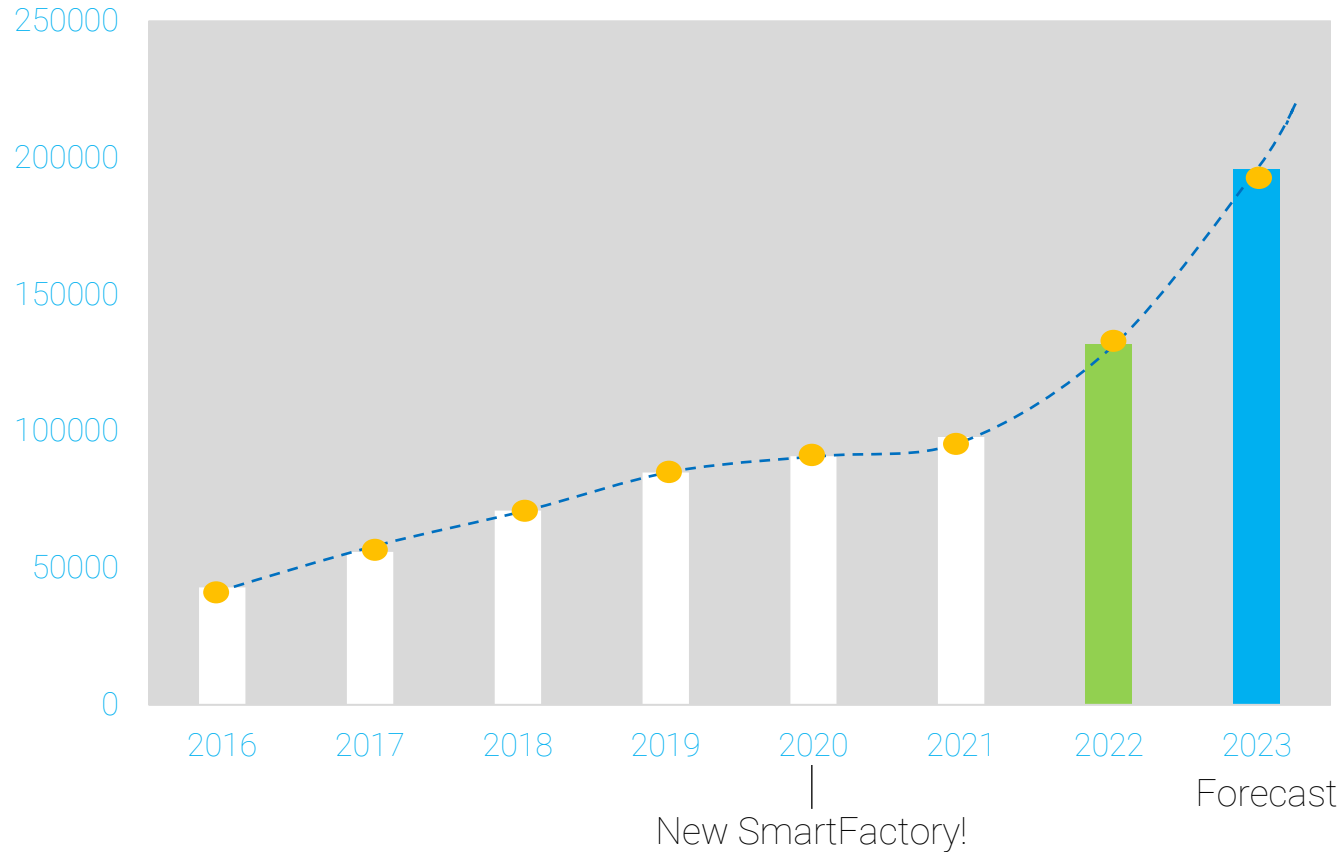
**EXOR**  
OCEANIA

EXOR Oceania Pty.Ltd  
Perth – West Australia  
6 Employees

Sales – Technical  
Support



EXOR SmartFactory Year produced units Qty.



Year 2022 Forecast +25%



**JMobile™**

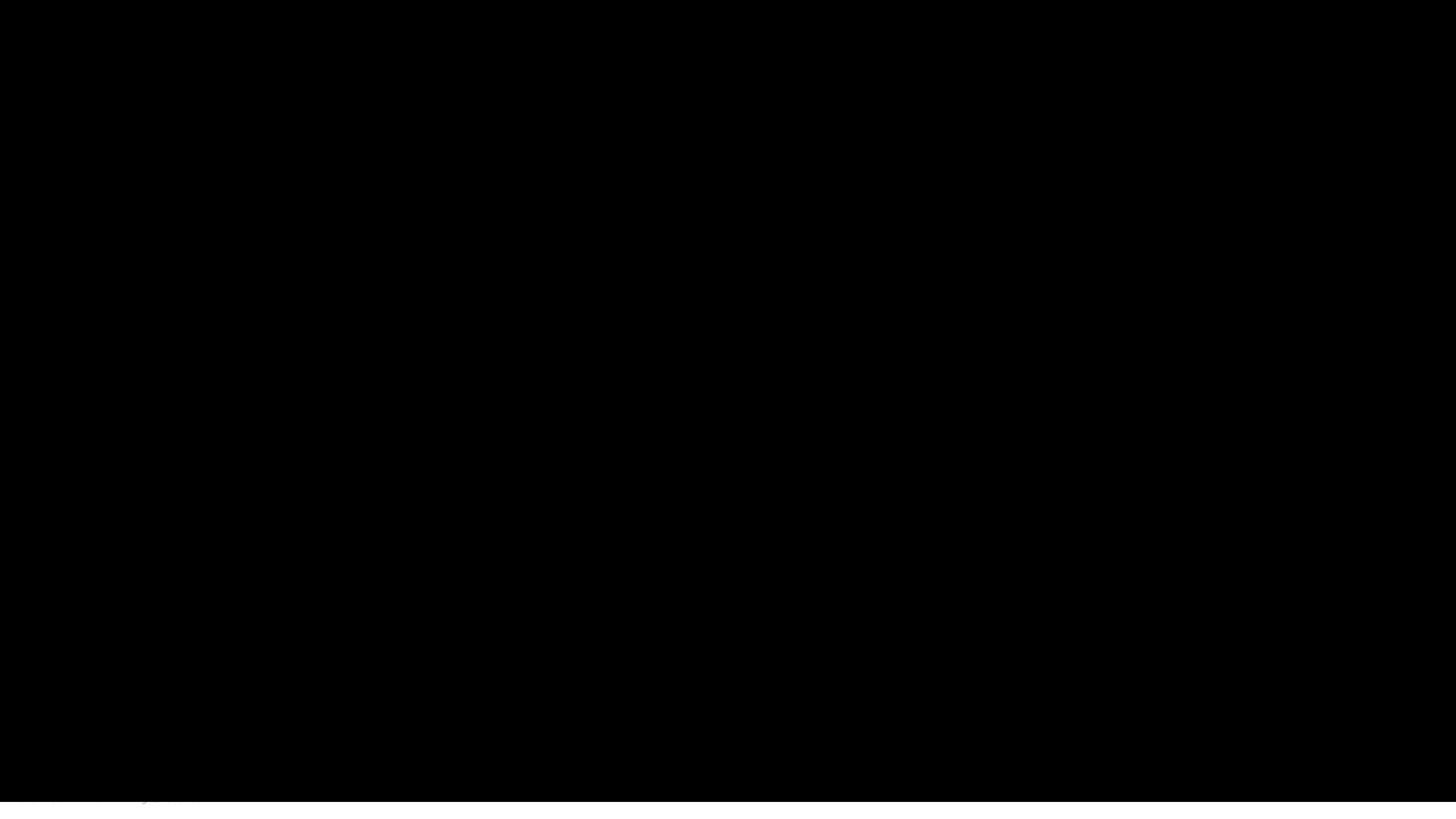


## Short Term EXOR actions 2022

- Production EFFICIENCY +20% in 2022 .
- BOARD Redesign for COMPONENT REPLACEMENT.
- Increase Stock of material +40%.

+10% increase in WORKFORCE in 2022 .

Component Purchase orders done until June 2024  
(20 months in advance).



TOEKOMSTVISIE **EXOR**

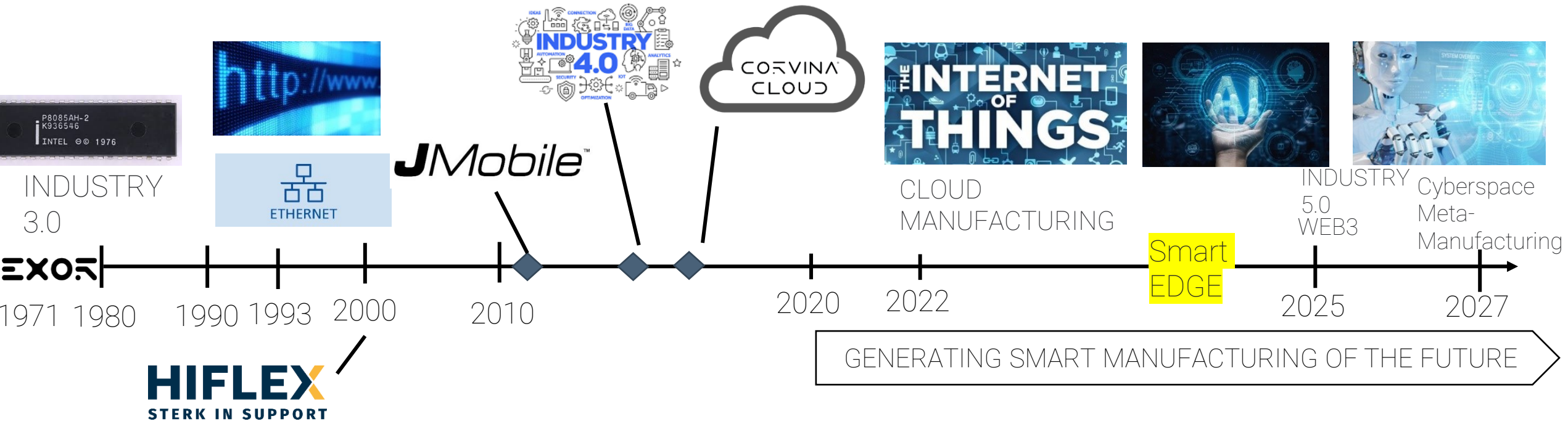
Industrial  
Automation



Digital  
Manufacturing



Autonomous  
Manufacturing



Between 2020 and 2030, it will be decade of **EDGE** computing — complementing the power of the cloud. Market researchers say it's going to be about 75 billion smart connected devices by 2025.

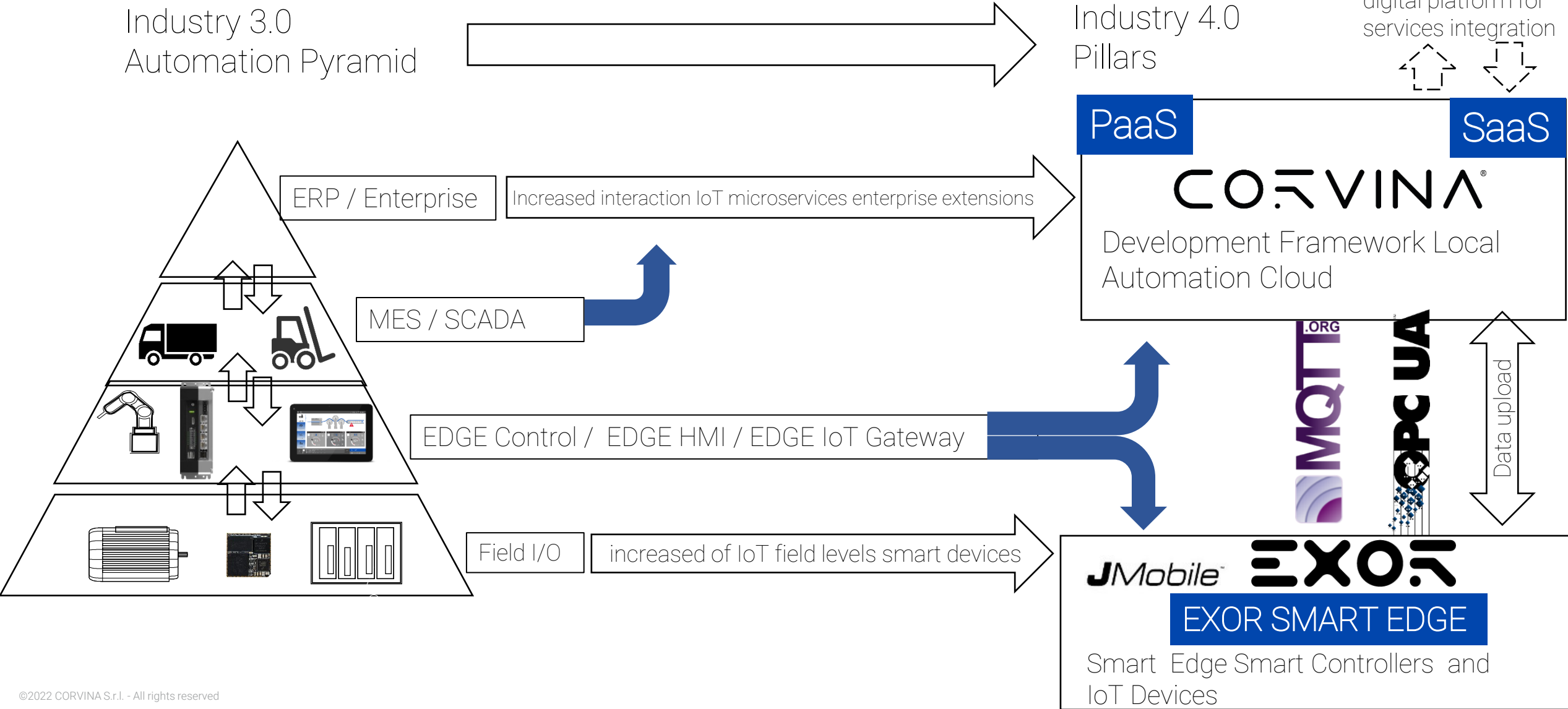
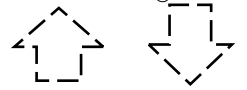


EXOR - CORVINA OPEN SMART EDGE INDUSTRIAL IOT AUTOMATION PLATFORM ARCHITECTURE

Industry 3.0  
Automation Pyramid

Industry 4.0  
Pillars

Any Cloud and other digital platform for services integration

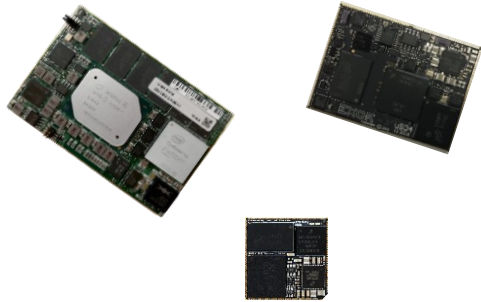


# JMobile™

Development Framework Platform for App  
Development Management and App  
Deployment.

# EXOR

EXOR SMART EDGE



Embedded HW&FW  
libraries and components

# CORVINA® CLOUD



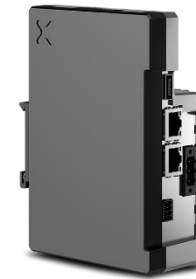
X5  
Mobile HMI



XA5



eXWare IoT  
Gateway  
EDGE  
Family



eSMART Serie  
eX700 Serie  
eX700M /MG Browser Panel  
Serie  
JSMART Serie  
eX700-AI Serie



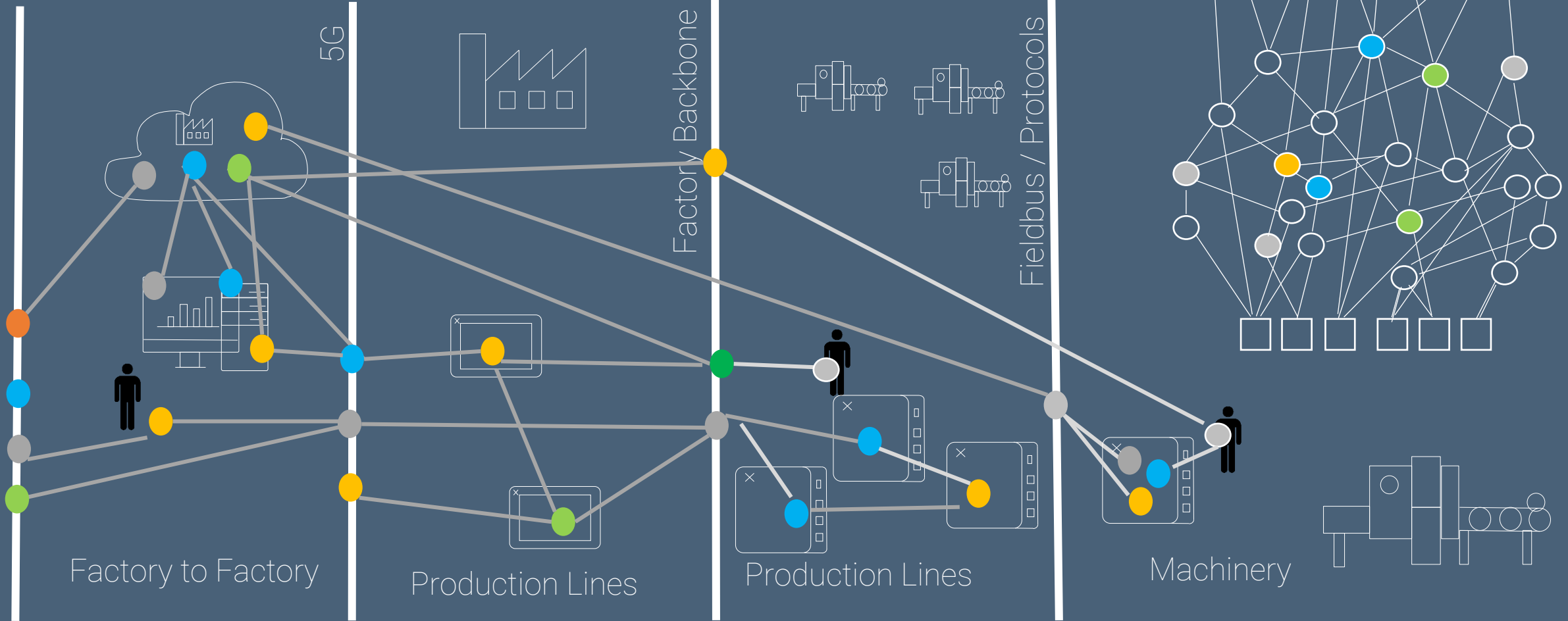
# SMART EDGE

Factory  
SMART  
EDGE

Factory  
SMART  
EDGE

Production  
Line SMART  
EDGE

Machinery  
SMART  
EDGE



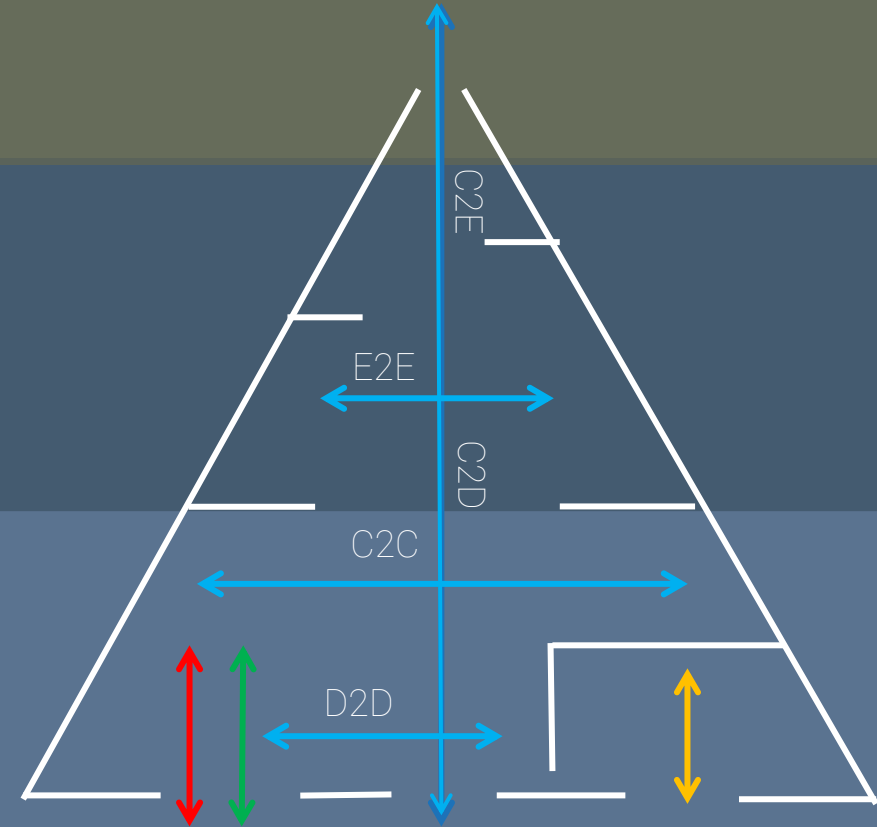
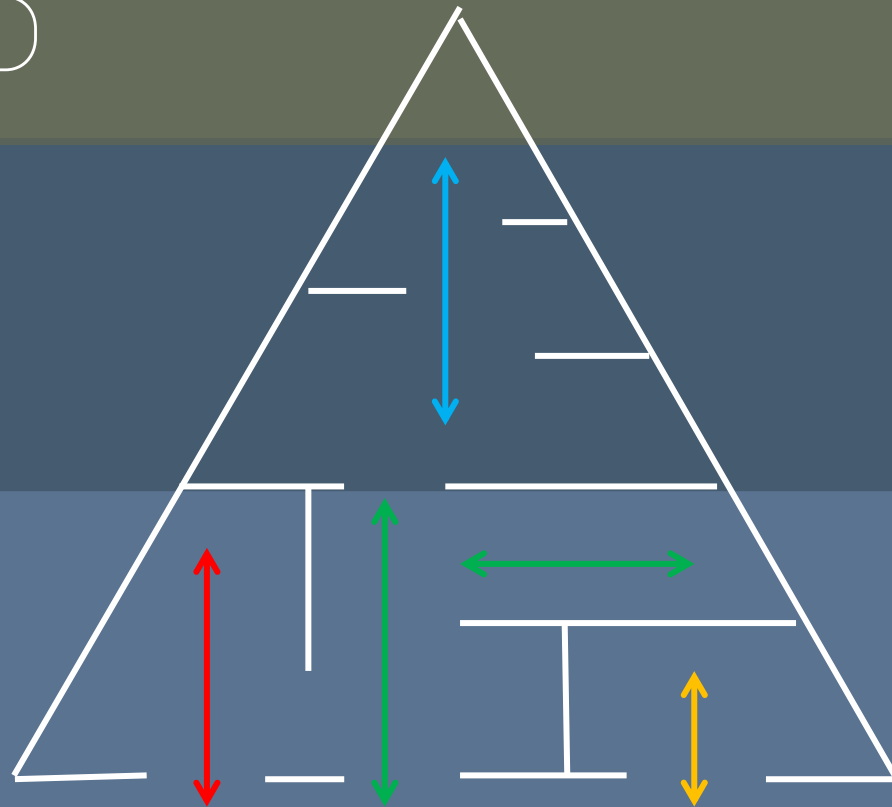
# Vertical IT/OT Integration

# Fully IoT scaling from field to the cloud

CLOUD

EDGE

FIELD



- OPC-UA
- RT-Ethernet
- Fieldbus
- Analog / Digital I/O

- OPC-UA
- RT-Ethernet
- Fieldbus
- Analog / Digital I/O

IoT Information Technology and Operational Technology convergence

C2C: Controller-to-Controller  
 C2D: Controller-to-Device  
 D2D: Device-to-Device

E2E: EDGE -to-EDGE  
 C2E: CLOUD -to-EDGE

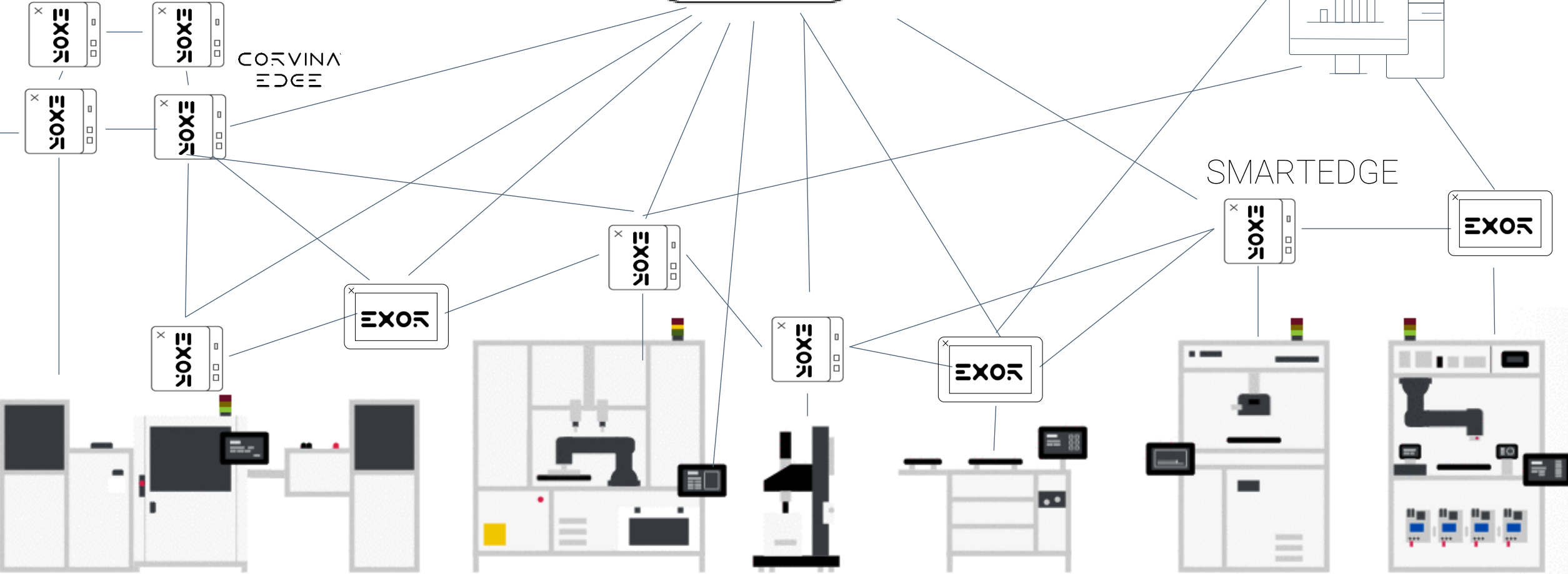
Public Cloud / Privat  
Cloud , Hybrid Cloud and  
On Premise installation

FACTORY FIELD CLOUD

CORVINA  
CLOUD

ERP  
MES

SMARTEDGE



Conformal Coating

Plasma Treatment / Silicone Gluer

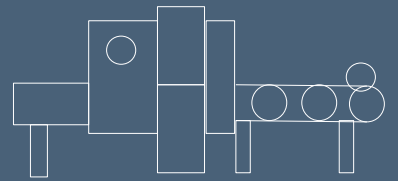
Vacuum Test

Laser Marking

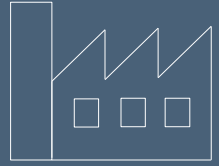
Final Test

# WHERE ARE WE WORKING?

SMART  
MACHINERY



SMART  
FACTORY



## JMobile™

V.5.0

IT/OT  
CONVERGENCE

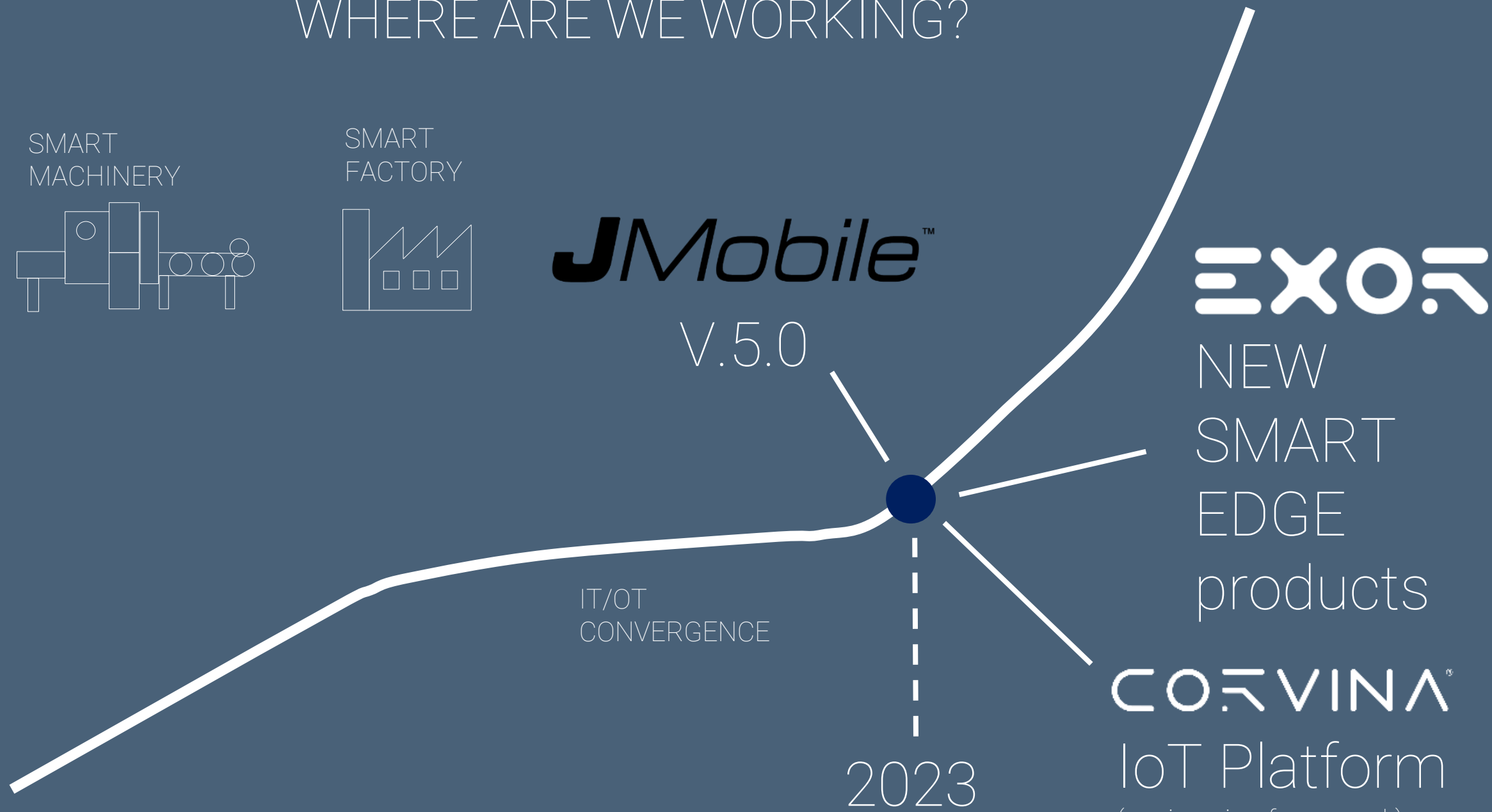
2023

NEW  
SMART  
EDGE  
products

### CORVINA™

IoT Platform

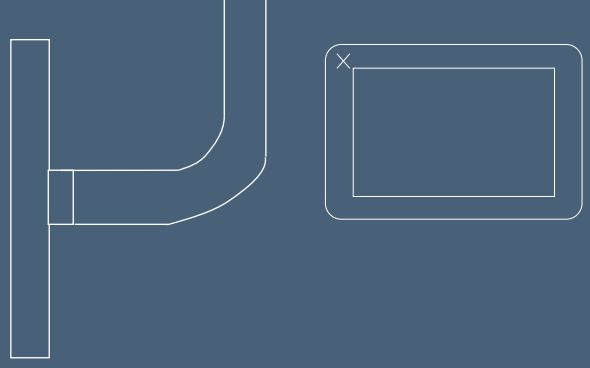
(engineering framework)



# EDGE HMI

FIELD LEVEL  
HMI

JSMART 700M



ROAD MAP  
2023-2024

CABINET  
MOUNTING HMI

ESMART



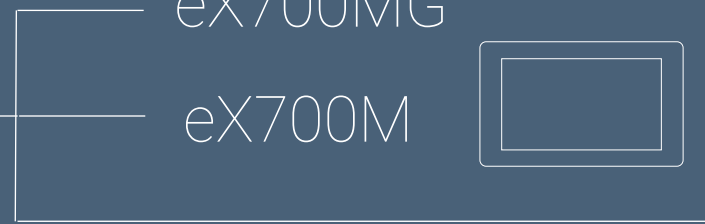
eSMART200

CABINET  
MOUNTING IoT  
Controller  
(PLC inside)

eX700

eX700MG

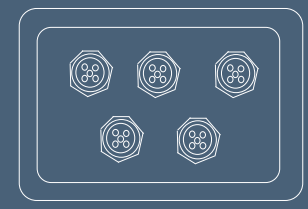
eX700M



eX700AI

IP67 HMI

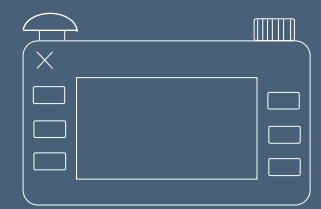
XA5



XA7

MOBILE HMI

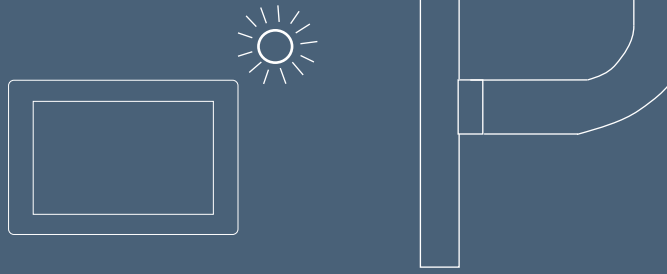
X5



X7 X10

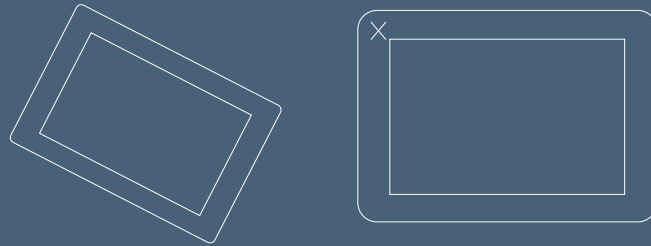
# EDGE HMI

More Connectivity



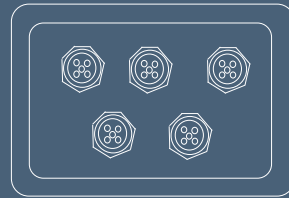
From 5 inch to 21 inch and more

More Cybersecurity



10+ Years Product Longevity

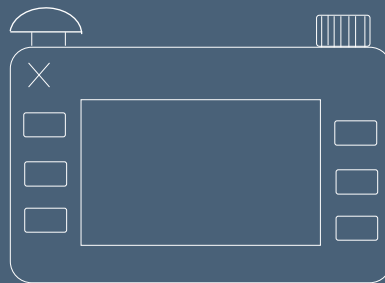
More performance



Wide Operating Temperature  
OPTIMAL MTBF

Sustainable products

Scalable and Modular



High Reliability.  
More durability

More Product Certification



SMART EDGE

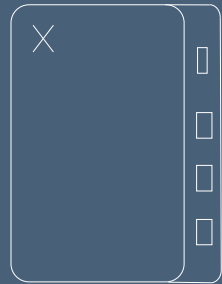
JMobile™

CORVINA®

EXOR

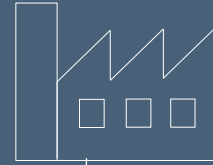


EDGE HMI



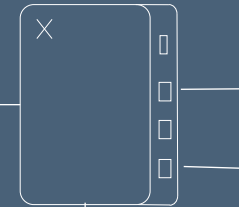
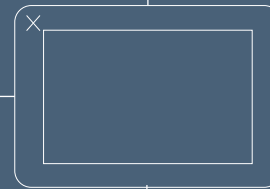
IoT EDGE

OPC UA™



IT

MQTT



IoT Devices for  
IT/OT  
CONVERGENCE

Fieldbus communication

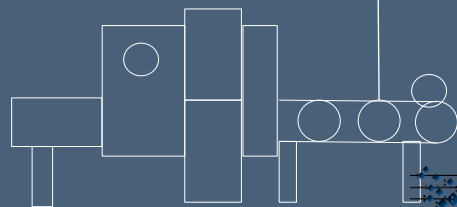
OT

EtherCAT®

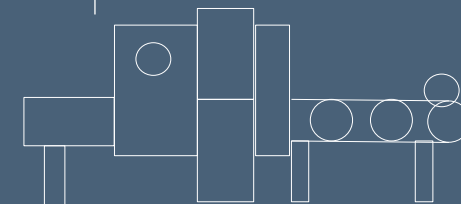
EtherNet/IP™

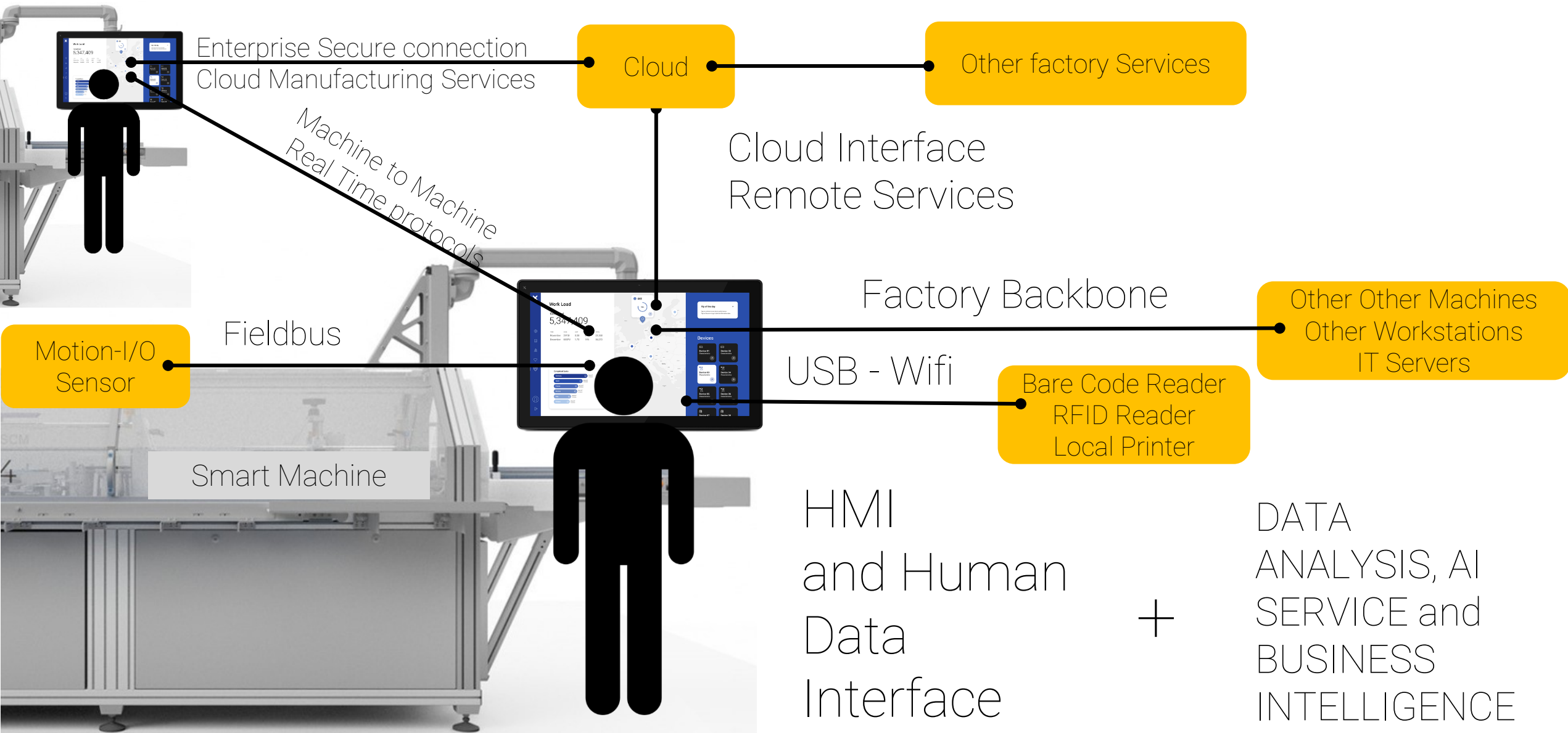
Modbus

PROFINET®  
INDUSTRIAL ETHERNET



OPC UA™



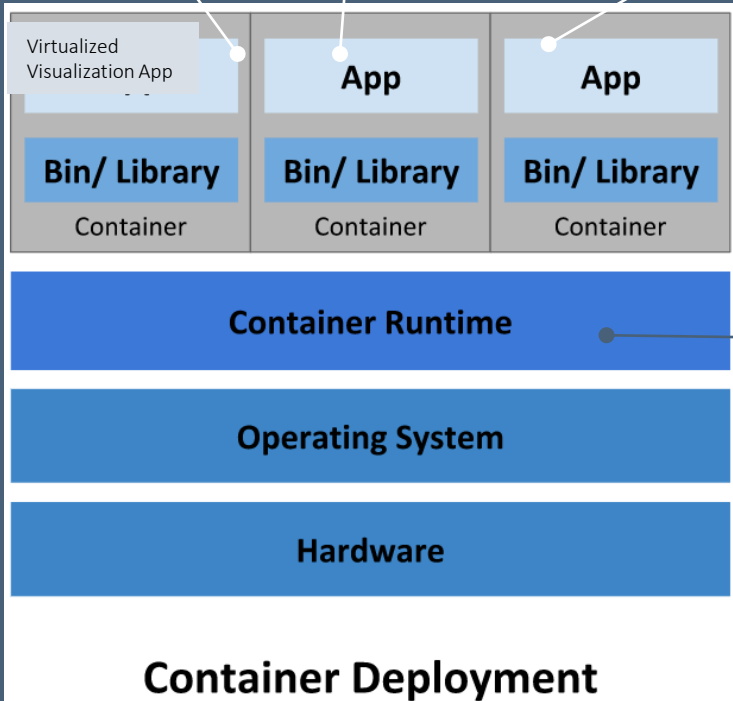


# HMI Technology

## Road Map



yocto  
PROJECT



**ARM**  
Quad Arm®  
Cortex-A53  
up to 1.6GHz

Smart Edge



Design and robustness

Simple and essential

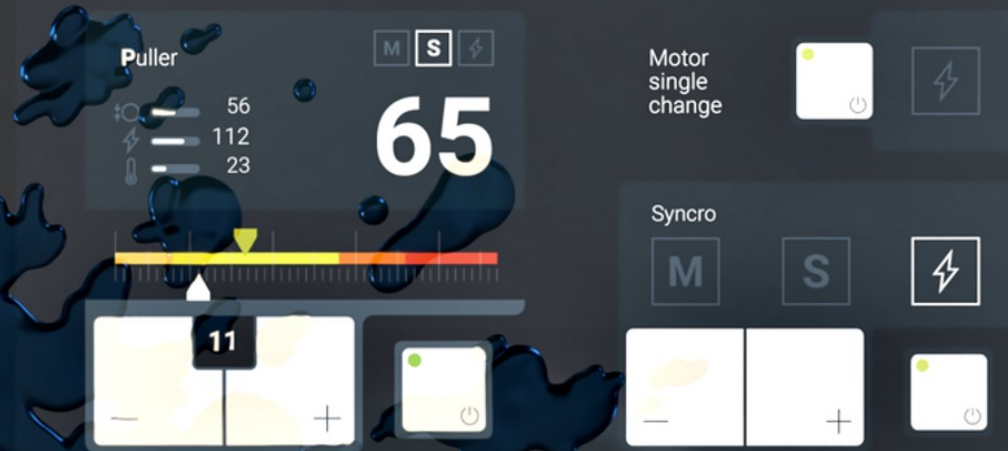
SMART SCADA approach

More OPEN platform

✓	05 December 2020	38,3452
✓	02 January 2021	23,3452
✓	02 February 2021	23,3452

#### Alert

AI005 - maximum temperature reached  
AI025 - extruder drive fault  
AI024 - emergency off



High immunity, Gloves usage and and moisture reaction. Design for ruggedized application.

Superior optical performance

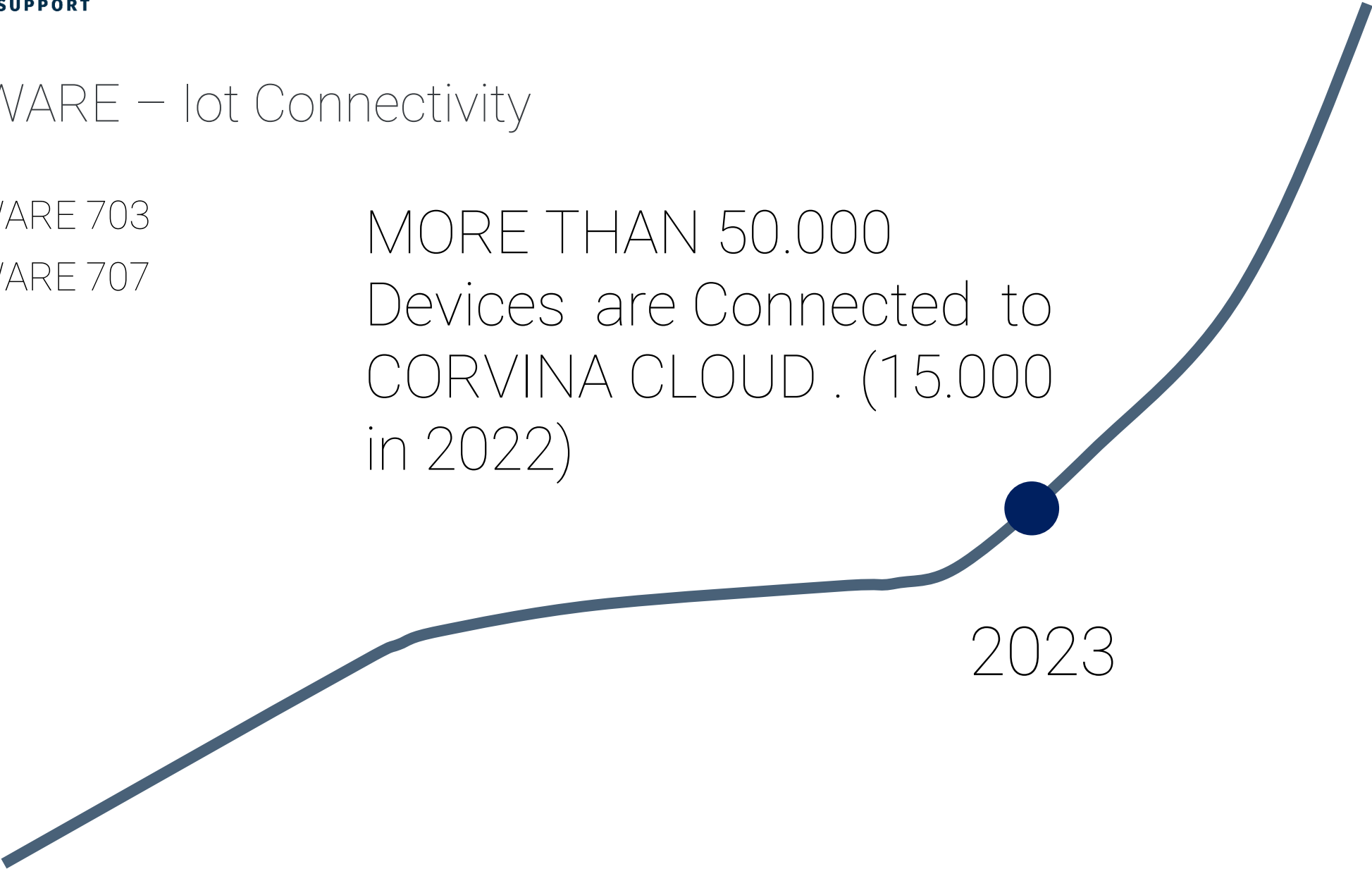
## eXWARE – IoT Connectivity

eXWARE 703

eXWARE 707

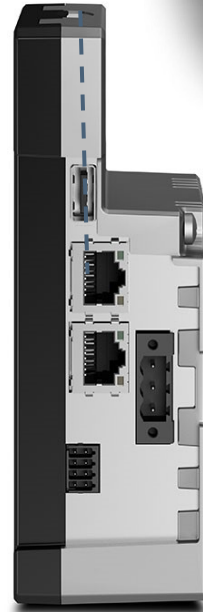
MORE THAN 50.000  
Devices are Connected to  
CORVINA CLOUD . (15.000  
in 2022)

2023

A line graph with a dark blue line showing exponential growth. The line starts at a low point on the left, rises to a plateau, and then curves sharply upwards to the right. A dark blue circle is placed on the line at the point corresponding to the year 2023. The text '2023' is written below the line at this point. The overall trend is one of rapid, accelerating growth.

**JMobile™**

**CORVINA  
CLOUD**



**EtherCAT®**



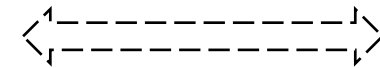
**PROFI®  
INDUSTRIAL ETHERNET  
NET**



**EtherNet/IP™**



**ETHERNET POWERLINK** 



**OPC UA™** **CANopen®**

REMOTE SERVICES, DATA CLEANING AND NORMALIZATION

Industrial Edge computing 200+ Fieldbus protocols

# ESMART200 – Advance information

# eSMART200

Advance info



# JMmobile™

Main Features	
CPU	Quad Core ARM Cortex A9 1,6Ghz
DDR Memory	1GBytes
FLASH DISK	8GBytes
RTC	SuperCAP Backup
Ethernet Port	(2) 10/100
Serial Port	(1) RS485
CAN Port	(1) CAN 2.0B
USB	(1) USB 2.0

Multitouch PCAP Touch Screen  
Black Printing color glass  
Brightness >300 cd/m2  
Operating Temperature -20:+55 °C

5 inch  
800x480

7 inch  
1024x600

10,1 inch  
1280x800

15,6 inch  
1366x768





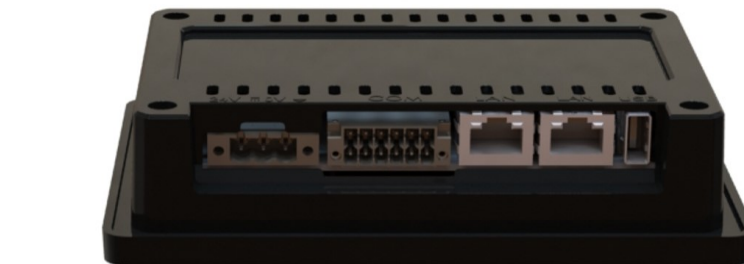
Dual Ethernet  
Ports



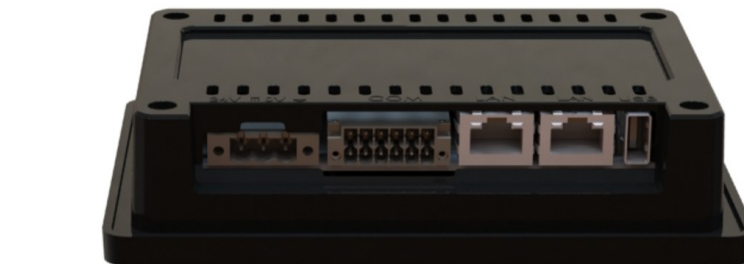
RS485 Serial Port



CAN Port



USB Port



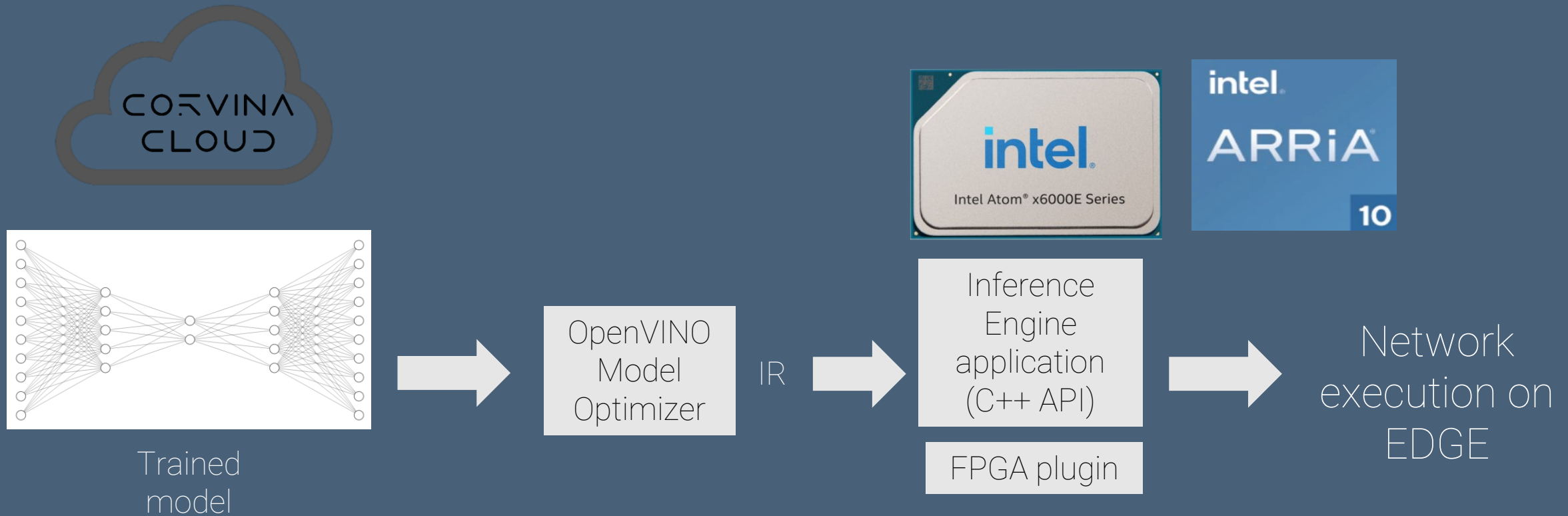
24VDC  
Power  
Supply

Interfaces to the Field in the definition of «Industrial HMI» standards.

eX700AI  
Advance Info



# Edge deep-learning inference simplified

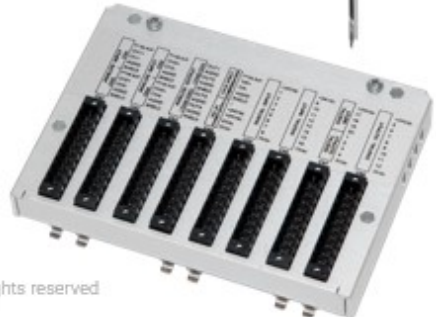
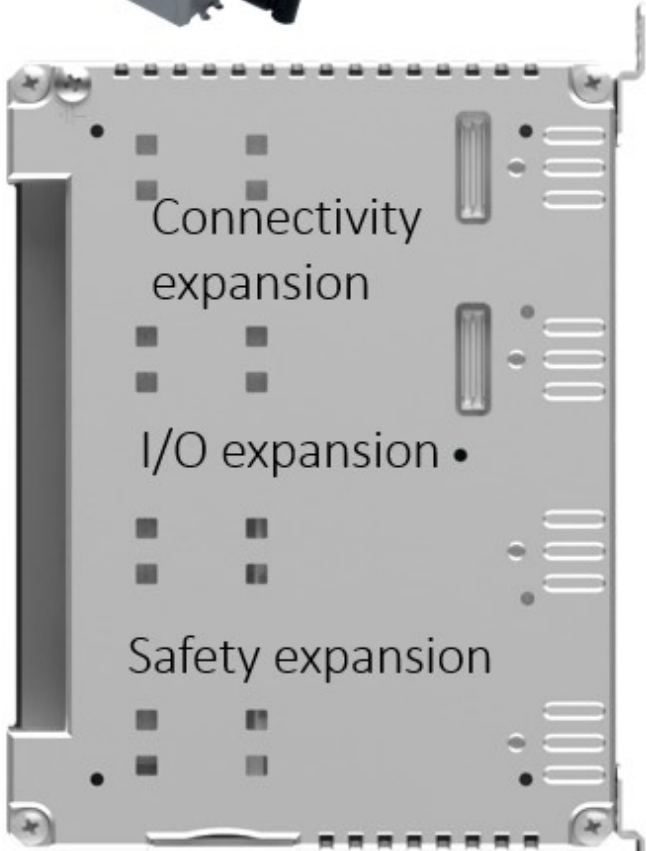




5G

# EXOR

eX700AI  
Advance Info



# CONCLUSION

# What are the HMI functions differences?

1970



2022



# CORVINA<sup>®</sup>

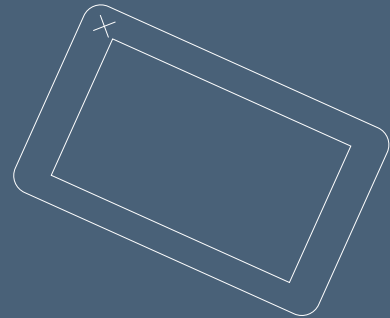
OPEN IOT AUTOMATION PLATFORM

IS THE INDUSTRY  
GAME  
CHANGER



# JM Mobile<sup>™</sup>

# EXOS



Thank  
You!



# HIFLEX

STERK IN SUPPORT

# EXOS