

Linux Day 2022

Gli ingredienti di un approccio data-driven in applicazioni industriali: apertura e multi-coding

Massimo Grattieri
Application Engineer

Flavio Ronzoni
Product Marketing
Manager



Bosch Rexroth

Many technologies. One right solution



**Assembly
Technology**



**Electric Drive and
Control**

Technology



**Gear
Technology**



**Industrial
Hydraulics**



**Linear Motion
Technology**



**Mobile Hydraulics,
Electronics and
IOT**



**Mobile
Robotics**



**Moulding
and Casting
Technology**



**Production
Assistants**

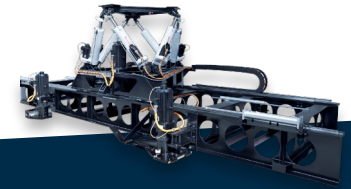
(ADAS)



**Resistance
Welding
Technology**



**Tightening and
Joining
Technology**



**Xtreme
Engineering**

Linux Day 2022

Agenda

01

**Scenari
nell'automazione**

Il mercato

Le risorse

La tecnologia

02

Architettura

I requisiti

Tecnologie open
e integrabilità

03

Case study

Primo approccio ad un
problema reale

Dalla programmazione
classica al multicoding

Diagnostica e interazione con
gestionali aziendali

04

Q&A

MARKET OVERVIEW

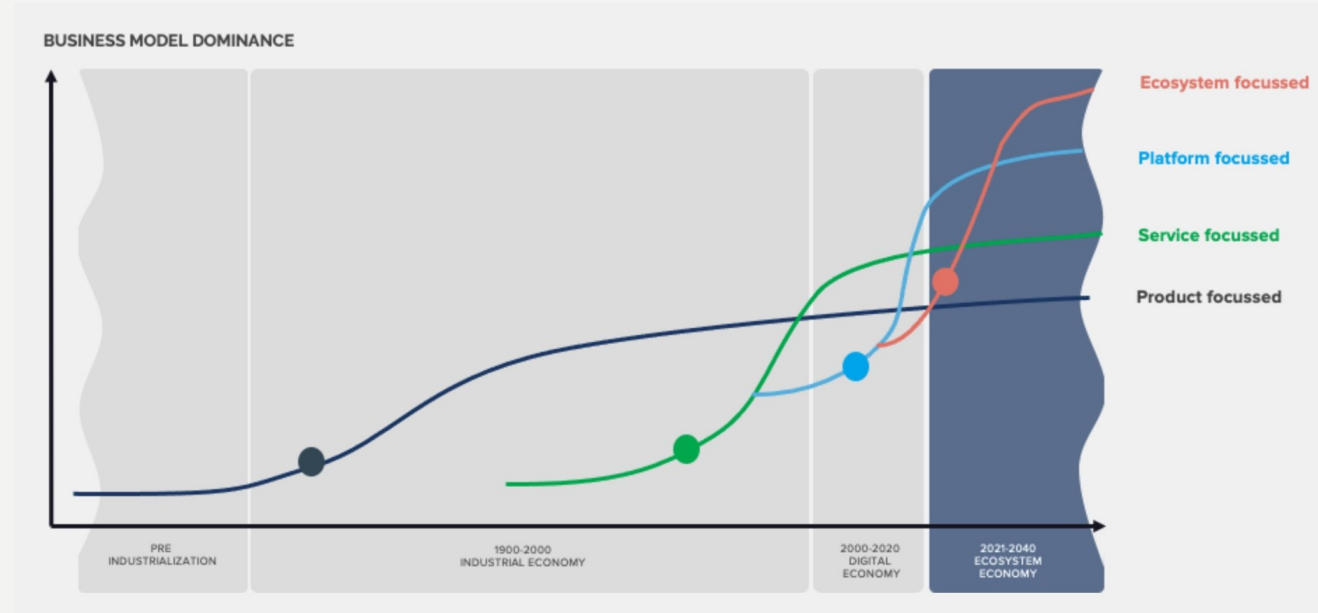
Dal prodotto all'ecosistema

Interoperabilità ha un ruolo chiave

- dall'OT all'IT

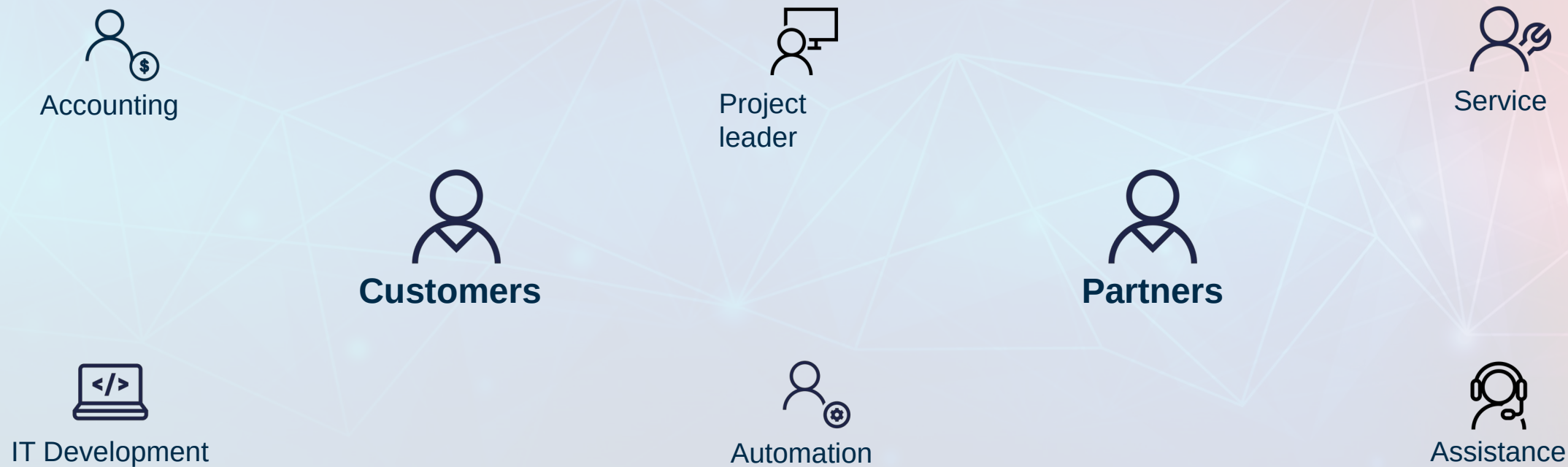
La differenziazione è valore aggiunto

- di servizi
- di competenze e risorse



Source: Platform Innovation Kit

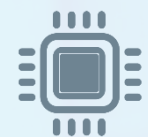
PLAYERS



PLAYERS



TECHNOLOGY



Performance



CPUs
& Memory



COMPUTING

Computing power doubles
every 18 months



Bandwidth



Wireless

5G

OPC UA

TSN
Industrial Ethernet

Uniform



COMMUNICATION

Bandwidth doubles
every 21 months



Data
analytics



IoT



Blockchain



Machine
learning



IOT & BIG DATA

20 billion networked devices in 2020,
Artificial neural networks double every
30 months



IT & Web
technology



Mobility



Virtualization

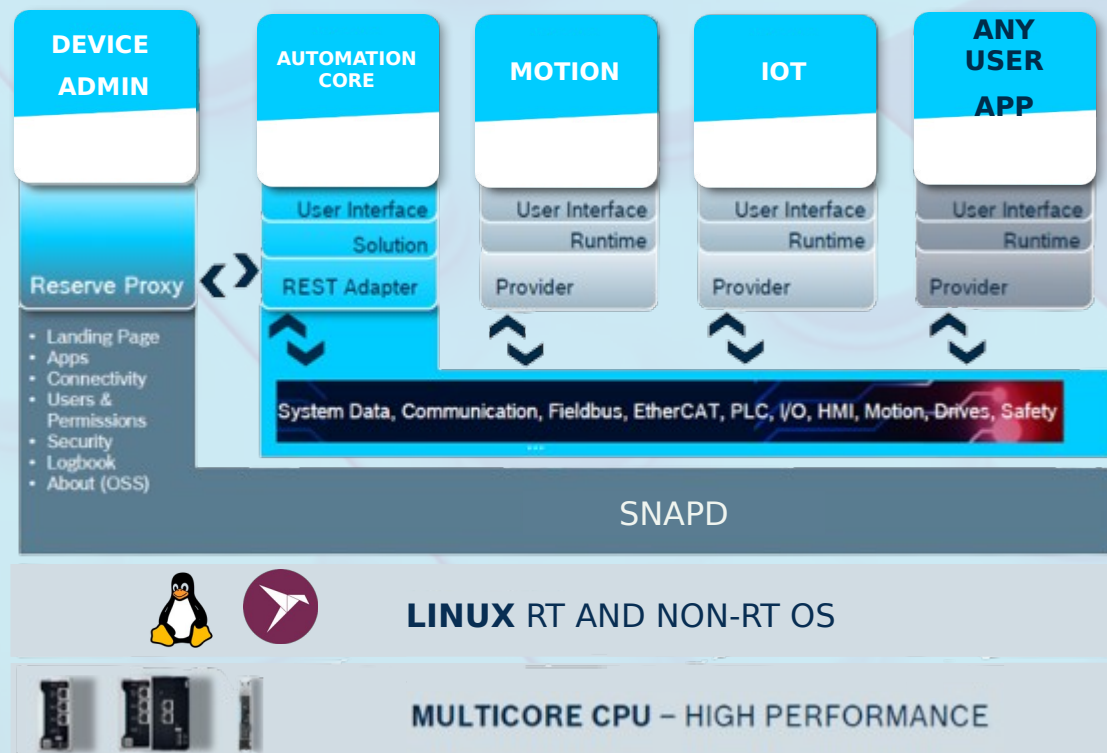


Smart
end devices



EVERYTHING DIGITAL & MOBILE

ARCHITECTURE

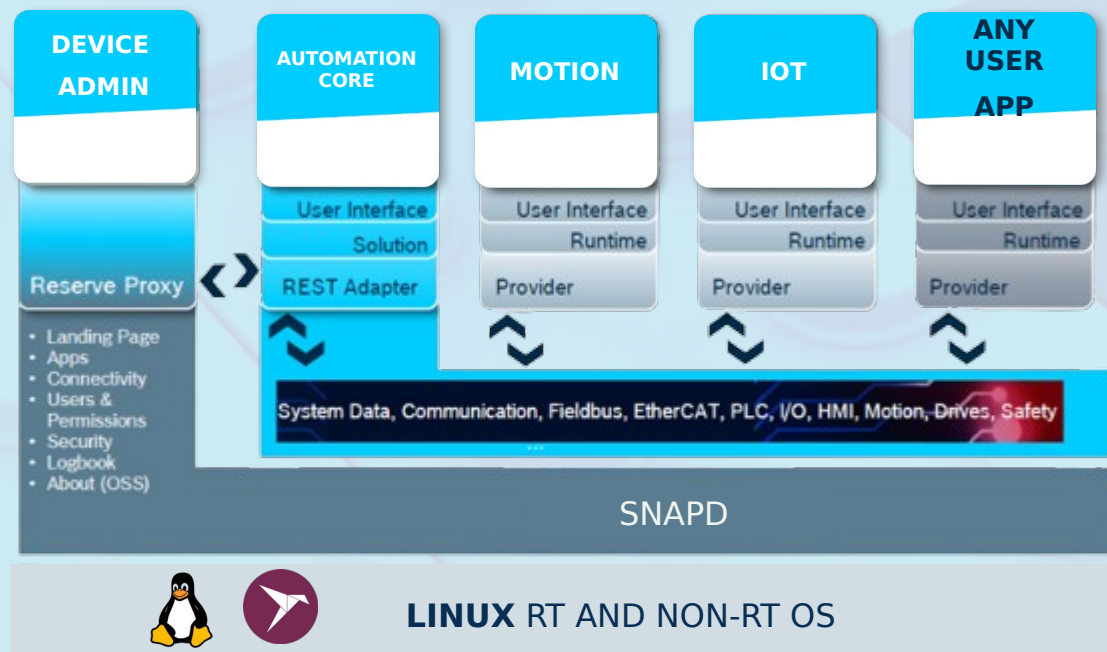


App Technology

Microservices:

- lightweight, reliable, with RT support

ARCHITECTURE



App Technology

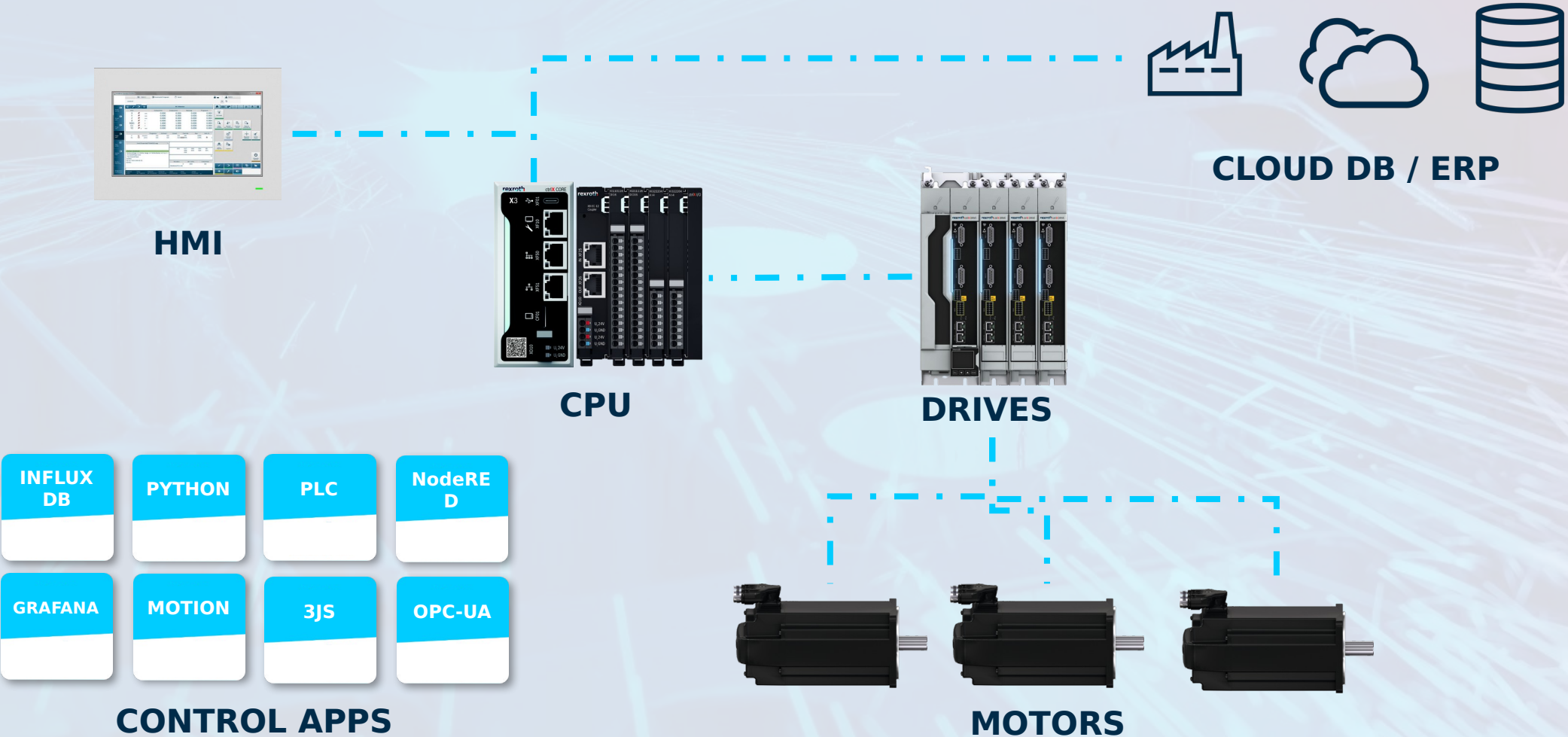
Microservices:

- lightweight, reliable, with RT support

Hardware as a commodity

- cross-platform
- No dependencies

USE CASE TOPOLOGY



USE CASE DEMONSTRATION

LIVE DEMO 

ctrlX
AUTOMATION

Q&A

Massimo Grattieri
Application Engineer

Flavio Ronzoni
Product Marketing
Manager

