

Bi-REX_Bonfiglioli & IoTwins

20 Ottobre 2020

Paolo Cominetti

Bonfiglioli Product Research Center

From our roots, to new challenges

SINCE

1956



“FULL
SPEED
AHEAD!”

Clementino Bonfiglioli

A handwritten signature in blue ink, likely belonging to Clementino Bonfiglioli, positioned below the name. The signature is stylized and cursive.

We have a relentless commitment to excellence, innovation and sustainability.
Our team creates, distributes and services the world-class
power transmission and drive solutions that keep the world in motion.



Mobility and Wind

Gearboxes and gearmotors for applications in **Mobile Machinery** (wheels, slews, winches, cranes, concrete mixers) and **Wind applications**



Wind
36% Market share worldwide



Construction
60% Market share in Europe



Marine

Gearboxes, gearmotors for Marine applications
(winch drives, planetary drives, steering gears, jacking gears)



Electromobility

Gearboxes, gearmotors
for applications in Electromobility

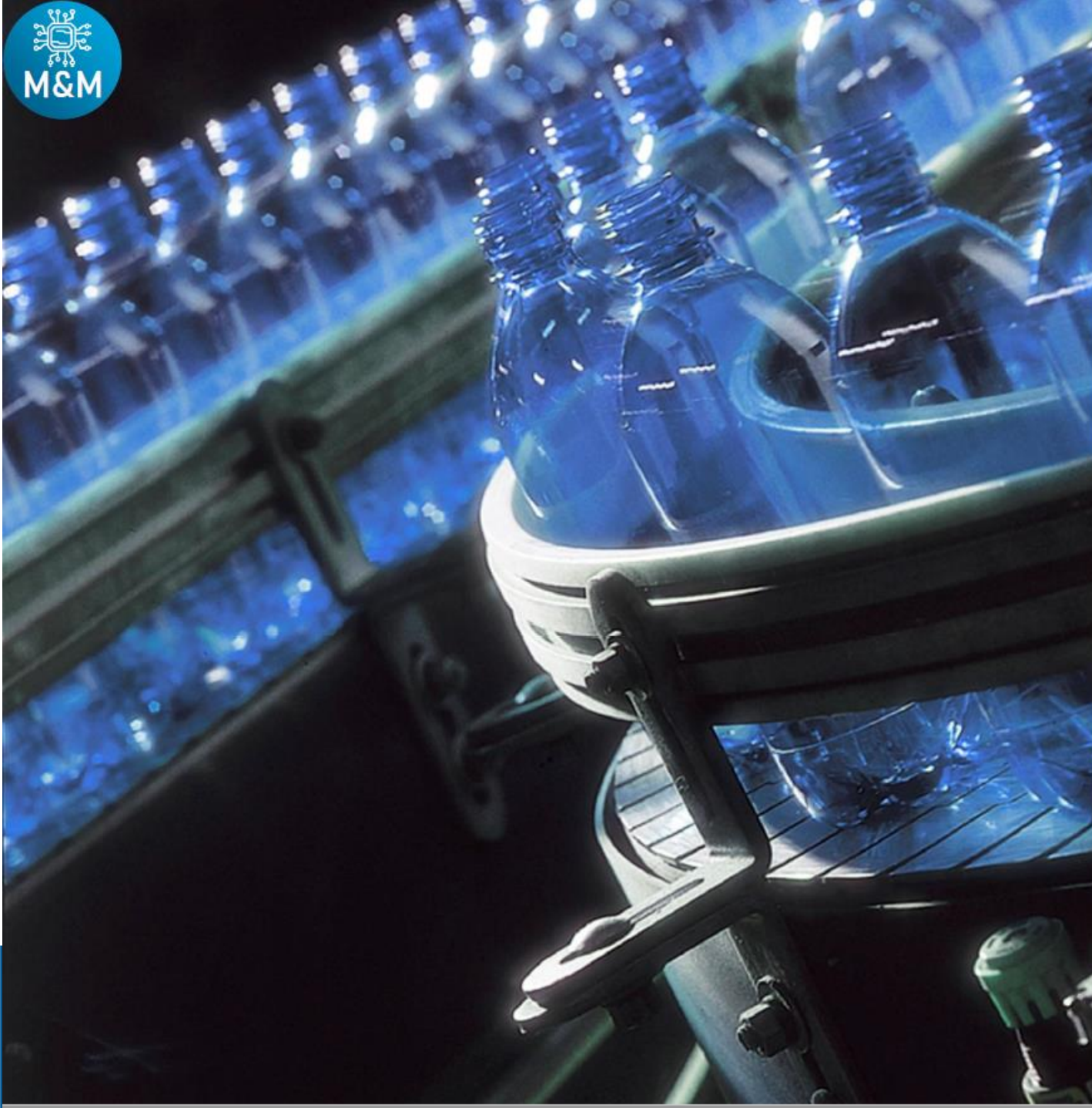




Industrial applications

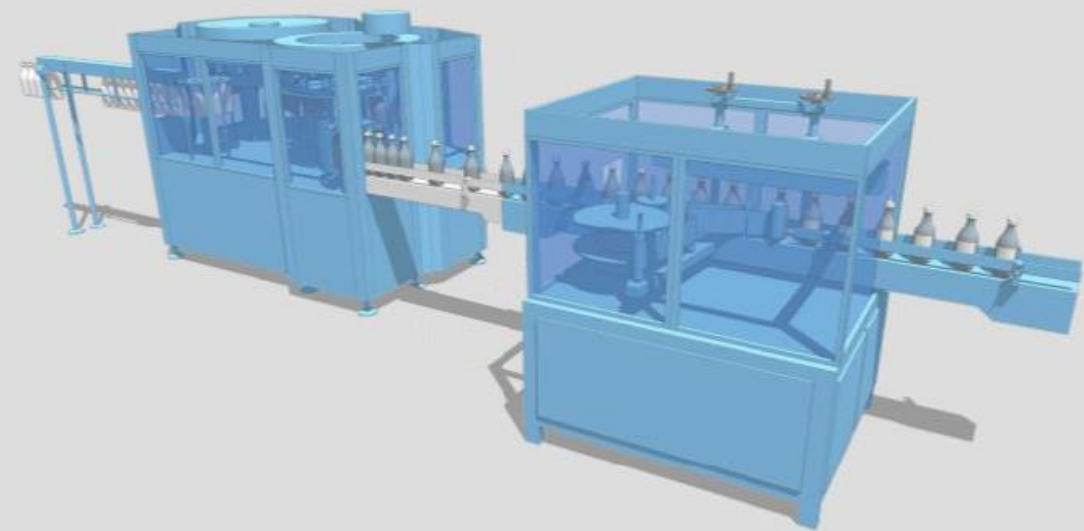
Gearboxes, gearmotors and electric motors
for Industrial applications
in more than 20 different sectors.



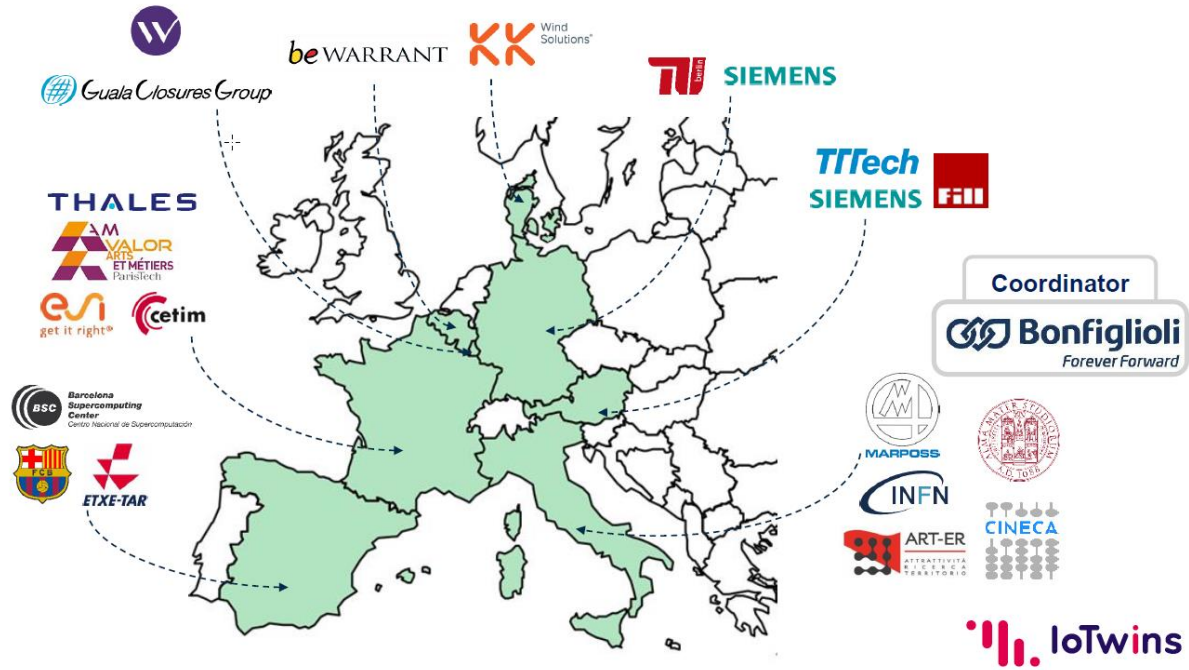


Mechatronics

Integrated mechatronics packages
(Precision gearboxes, Servo motors and Drives,
Motion and HMI)
for Industrial applications.



Our consortium in a snapshot



Our consortium Our project

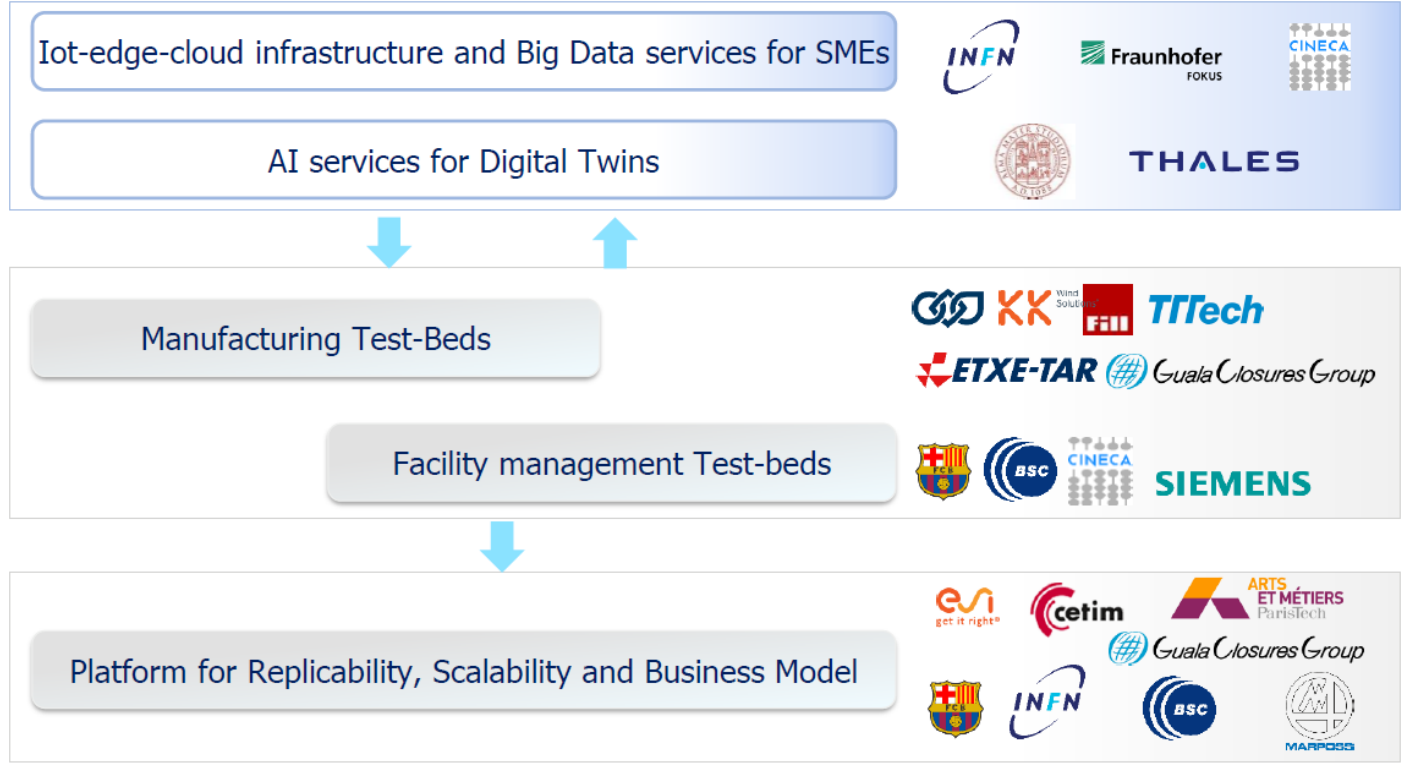


Our consortium in a snapshot



The project: a technological platform to feed 12 pilots

Technological Platform



Our consortium Our project



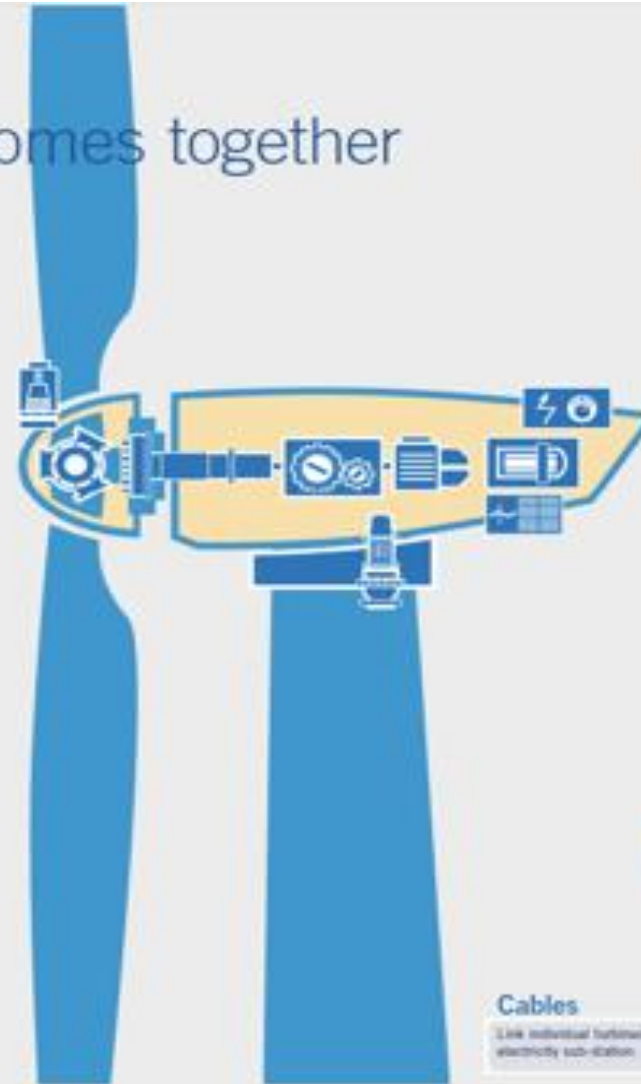
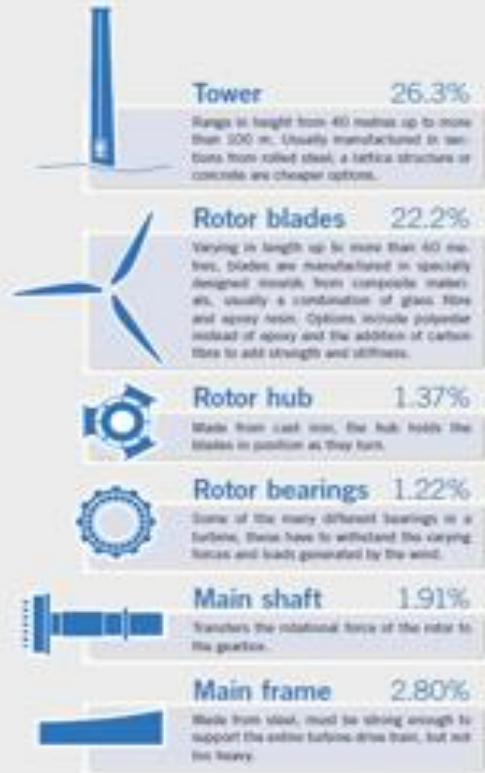


Predictive maintenance for wind turbine



How a wind turbine comes together

A typical wind turbine will contain up to 8,000 different components. This guide shows the main parts and their contribution in percentage terms to the overall cost. Figures are based on a REpower MM92 turbine with 45.3 metre length blades and a 100 metre tower.

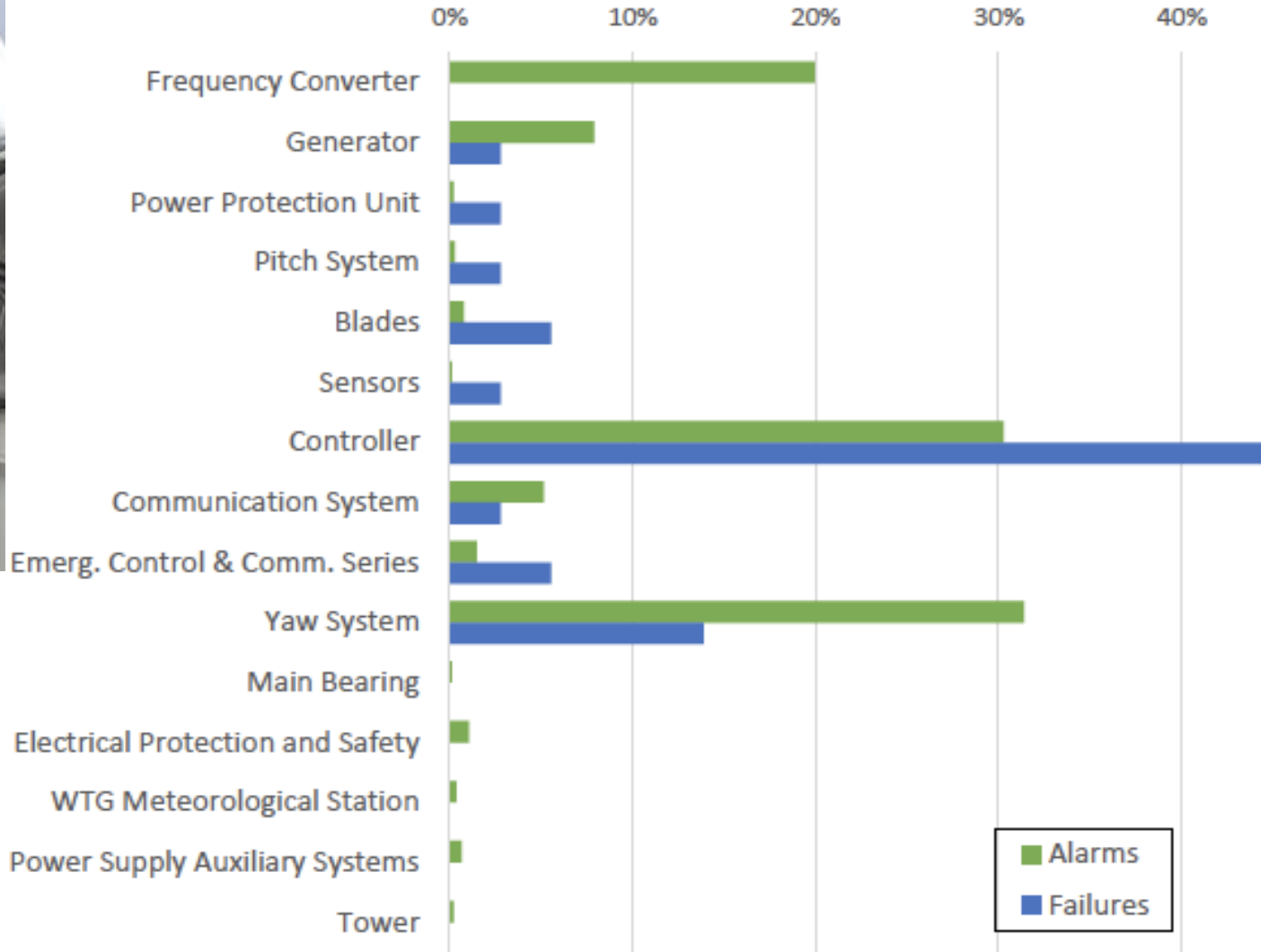


Source: EWEA

Predictive maintenance for wind turbine



Contribution to Total Number of Alarms and Failures Turbines B, C



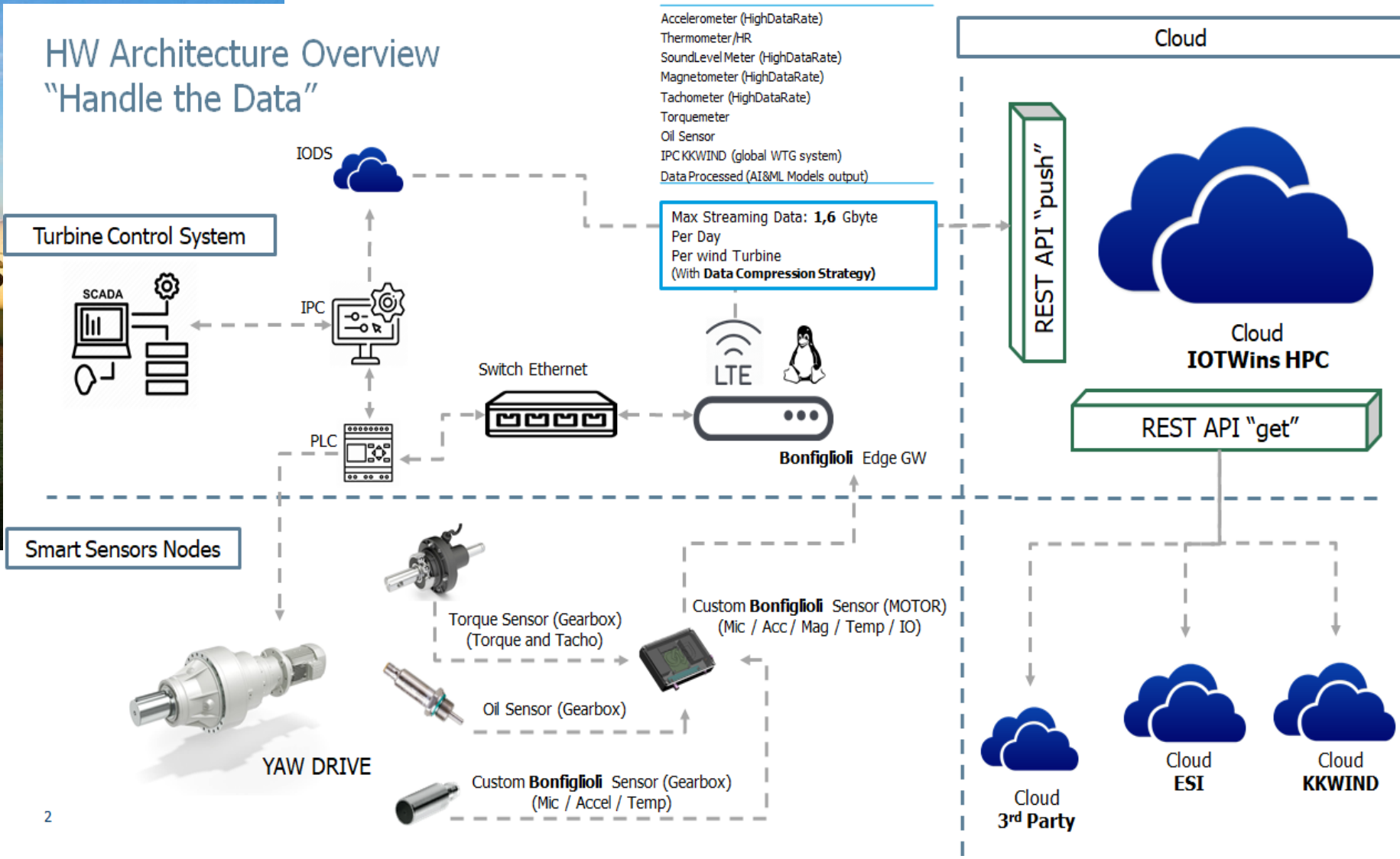
Predictive maintenance for wind turbine



Predictive maintenance for wind turbine

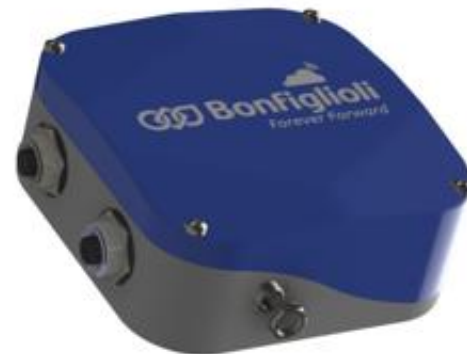
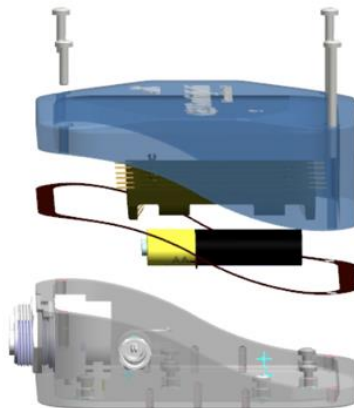


HW Architecture Overview "Handle the Data"




Multi Sensor Node prototype design and manufacturing

- The system is able collect external sensor input and stream to the Edge
- The Multi sensor Node is equipped several sensors like:
 - Vibrometer
 - Accelerometer
 - Microphone
 - Magnetometer
 - Temperature
 - Relative Humidity
- It transmits to the edge data via WiFi



Predictive maintenance for wind turbine



Q & A
Grazie per l'attenzione