

**SAVE**

**ANIE**  
AUTOMAZIONE



***La convergenza di IT/OT: l'OPC UA  
non solo un protocollo di comunicazione***

*Marco Zampolli  
Senior Product Sales Manager & solution architect*

**ADVANTECH**

*Enabling an Intelligent Planet*



## Organizational Overview

**Membership**

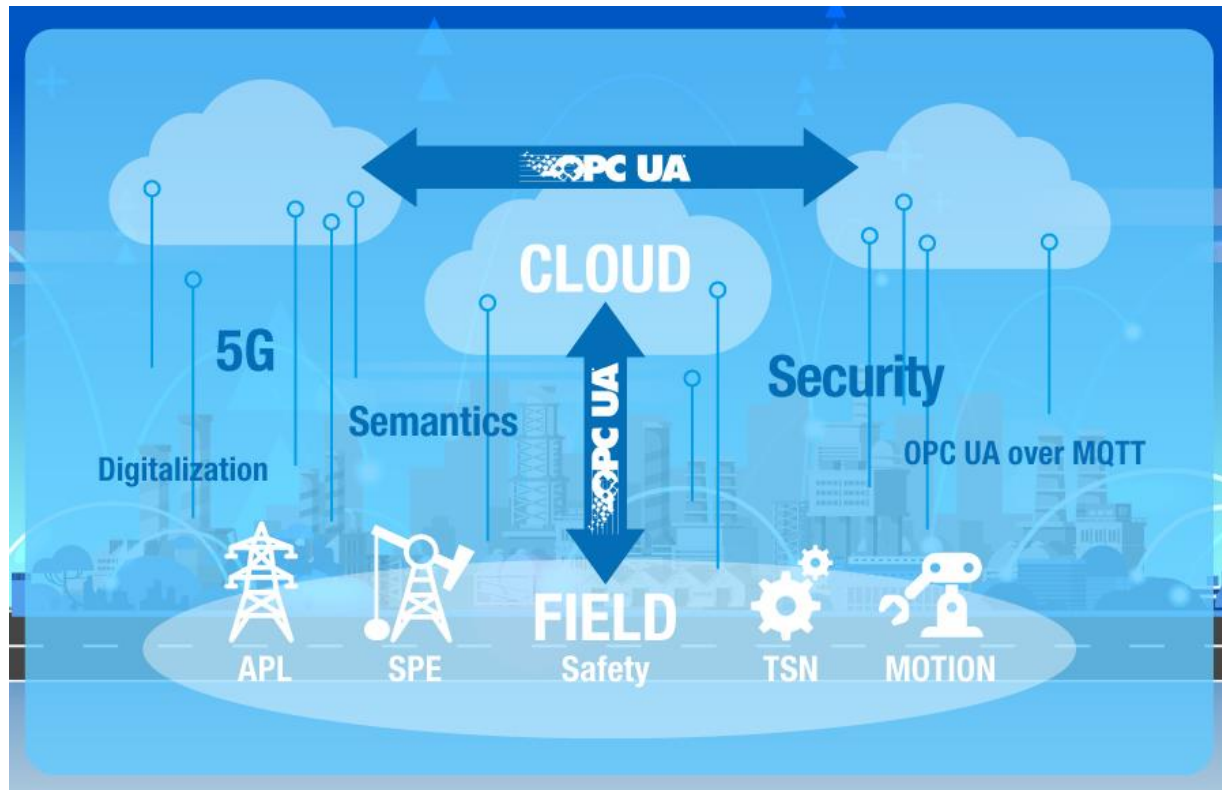
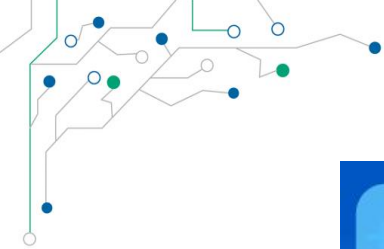
**829** (Status: July 1<sup>st</sup>, 2021)

**Global Profile**

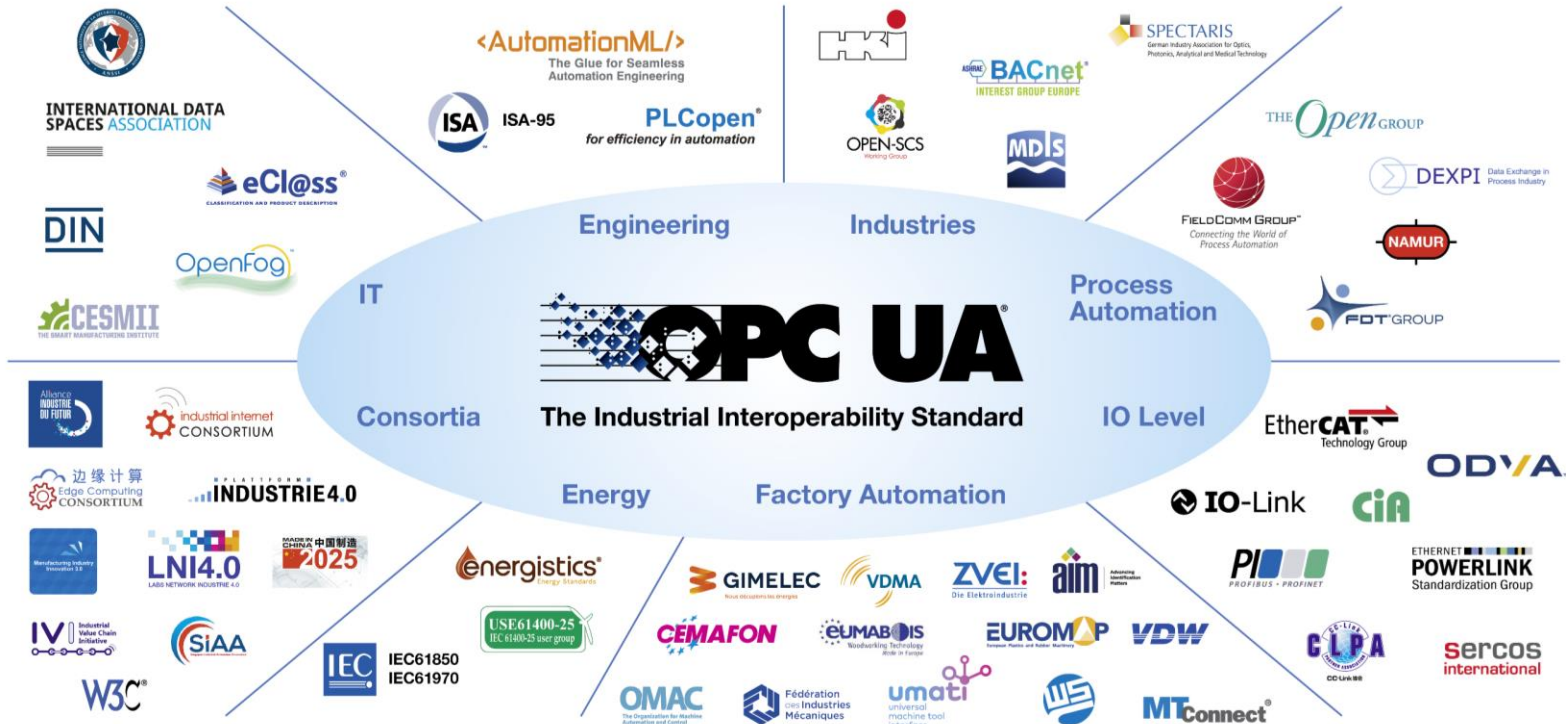
- **Non-profit organization (founded 1995)**
- **Companies from Automation & IT**
- **Internationally recognized: OPC UA is IEC62541**

# OPC Foundation Global Coverage





# OPC Foundation Eco-Partners



# OPC UA + Companion Specs = ANIE AUTOMAZIONE



## Promise for Industrial Interoperability

### OPC UA Framework: Collection of Technology Bricks

- IT Connectivity: different protocols like TCP, UDP, MQTT
- End-to-end security
- Semantics: global machine language
- Information modeling capabilities

### Companion Specifications: Collection of Bricks for Different Markets

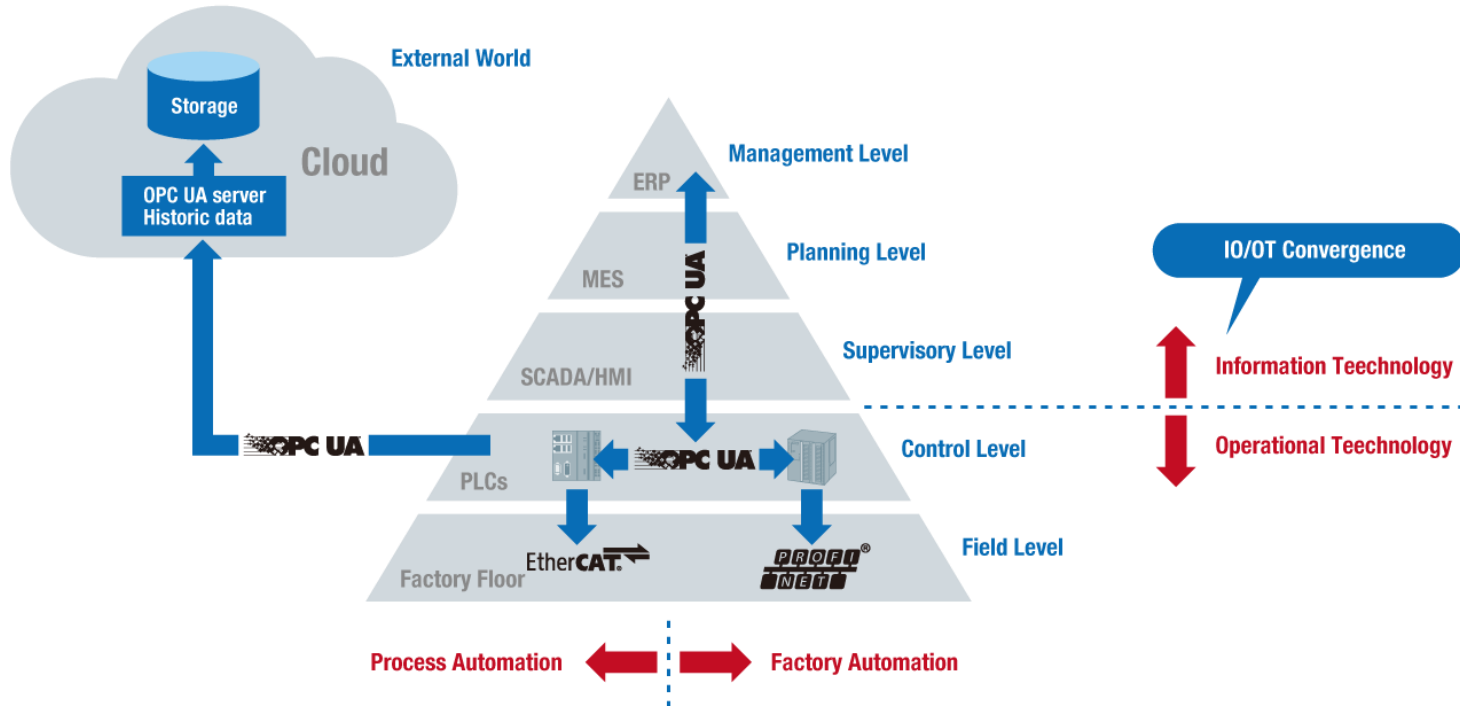
- Information modelling to describe specific market
- Field devices need TCP, UDP, safety, motion, real-time, ...
- Gateway & cloud services need UA over MQTT, 5G

### OPC UA + Companion Spec Guarantee 100% Interoperability

- Mandatory bricks guarantee interoperability
- Optional bricks allow flexibility
- OPCF: Tools and infrastructure for certification



# OPC UA Applications in Digitalization & Digital Transformation





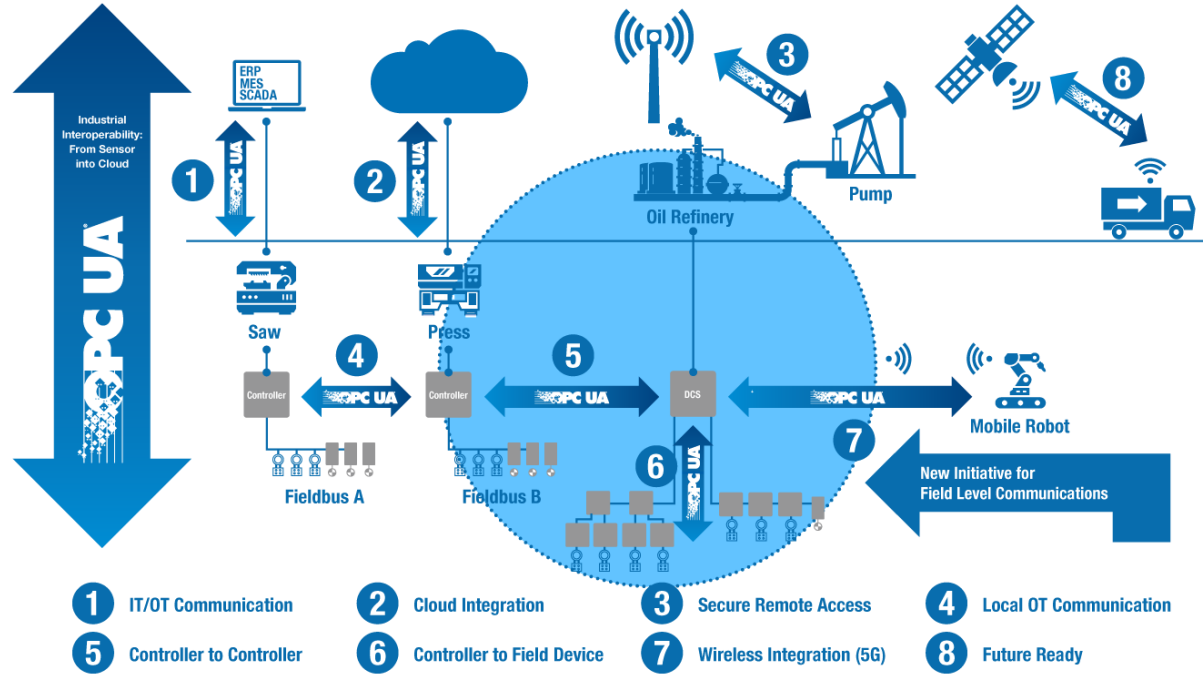
## OPCF Field Level Communication (FLC) Initiative Supporting Industry Players

- 27 automation & technology companies are represented in the steering committee of the FLC initiative
- Overall, more than 320 technical experts from more than 65 member companies of the OPC Foundation are active in the different technical working groups.





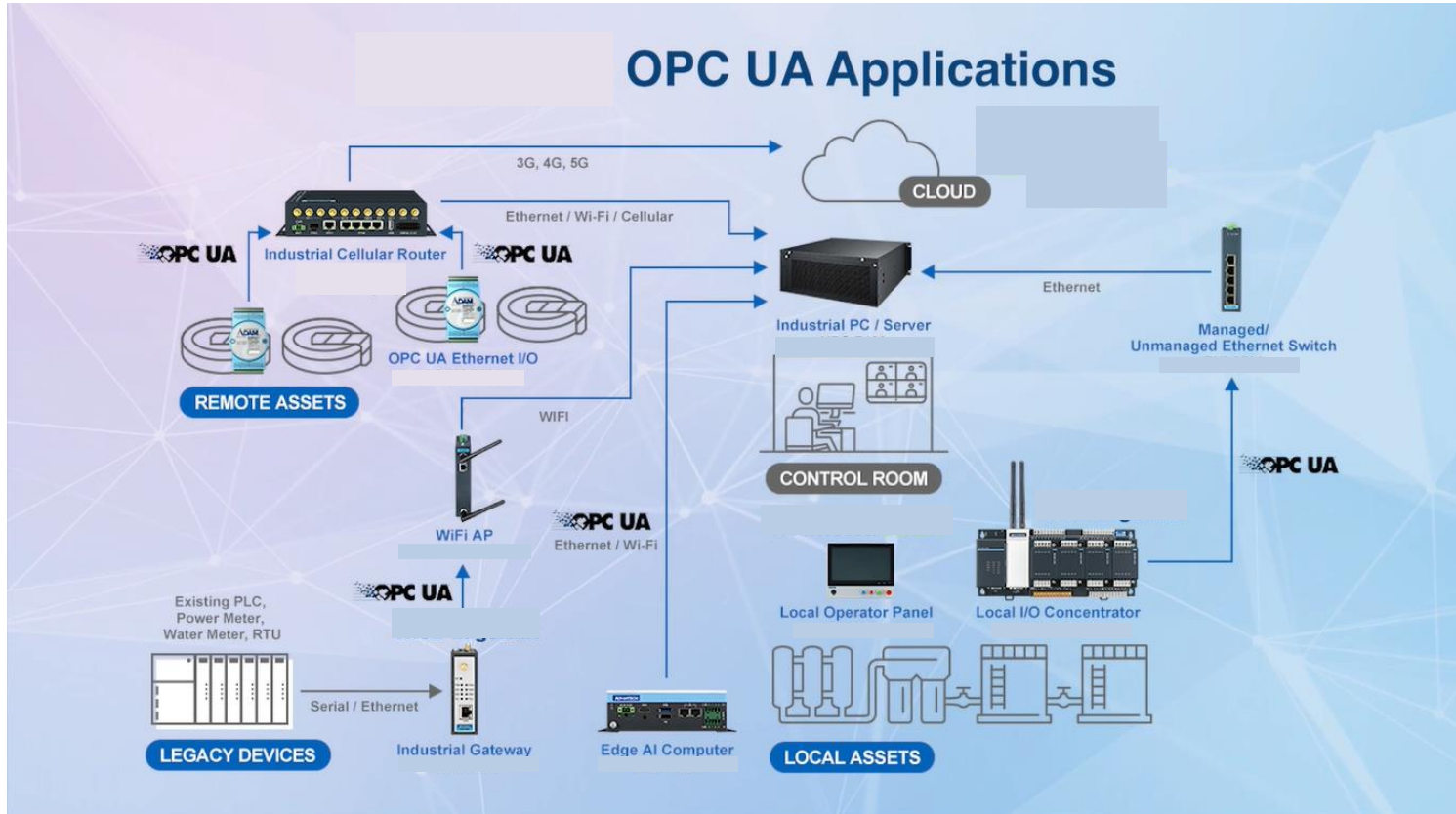
# OPC UA Field Exchange: Including Determinism, Safety & Motion

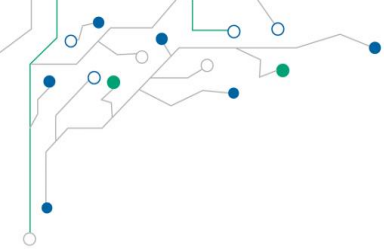


# Bridging the IT – OT Divide



# OPC UA Applications





**SCADA**



**Private Cloud**

**Public Cloud**

# OPC UA

**DNP3**

**IEC-60870-5-104**

**ODBC**

**LwM2M**

**FTP**

**MQTT**

**RESTful**

**Modbus/TCP**

**Modbus/RTU**

**JDBC**

Supports more than  
**200 I/O Drivers**



# Intelligent OPC UA Ready Solutions

IT Server  
(MES/ERP)

Telecom/  
Solution Provider

Public  
Cloud

## Plant & Enterprise

Integrated MES/ Increased Interaction/ Data Analytics



**OPC UA**

## HMI / SCADA

Centralized Supervision



Modular Automation Box PC



Intelligent Automation Controller



Intelligent Inspection System

## Edge Controllers

Distributed Control & Virtual PLCs

## Edge Gateways & Sensing Devices

Intelligent I/O Node

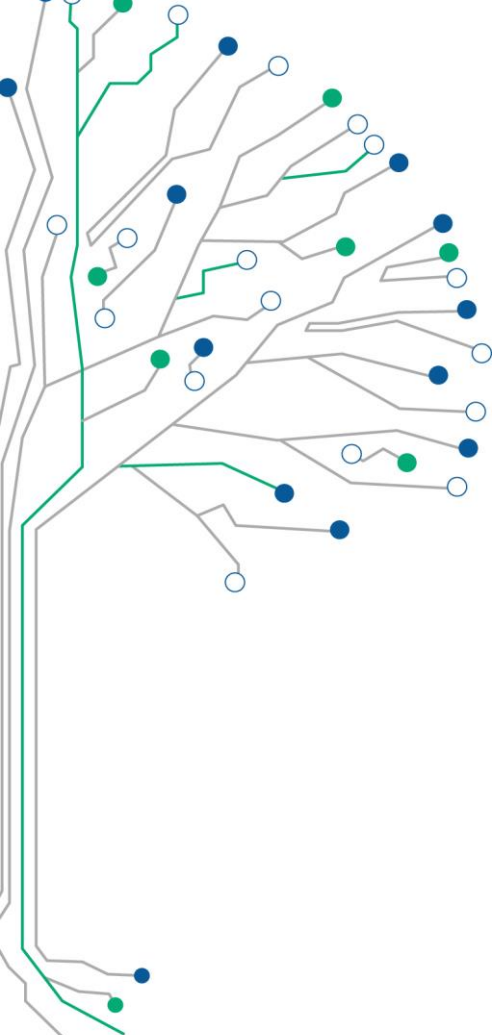
Intelligent Communication Gateway

IoT Edge Gateway

Modular Edge DAQ Gateway

Industrial Fieldbus Gateway

Open & Intelligent Integrated Sensing



**SAVE**

**ANIE**  
AUTOMAZIONE



***Grazie per l'attenzione***

*Marco Zampolli*

**ADVANTECH**

*Enabling an Intelligent Planet*