



The communication platform
for the Industrial Internet of Things





Welcome



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2. Types of projects for vNode
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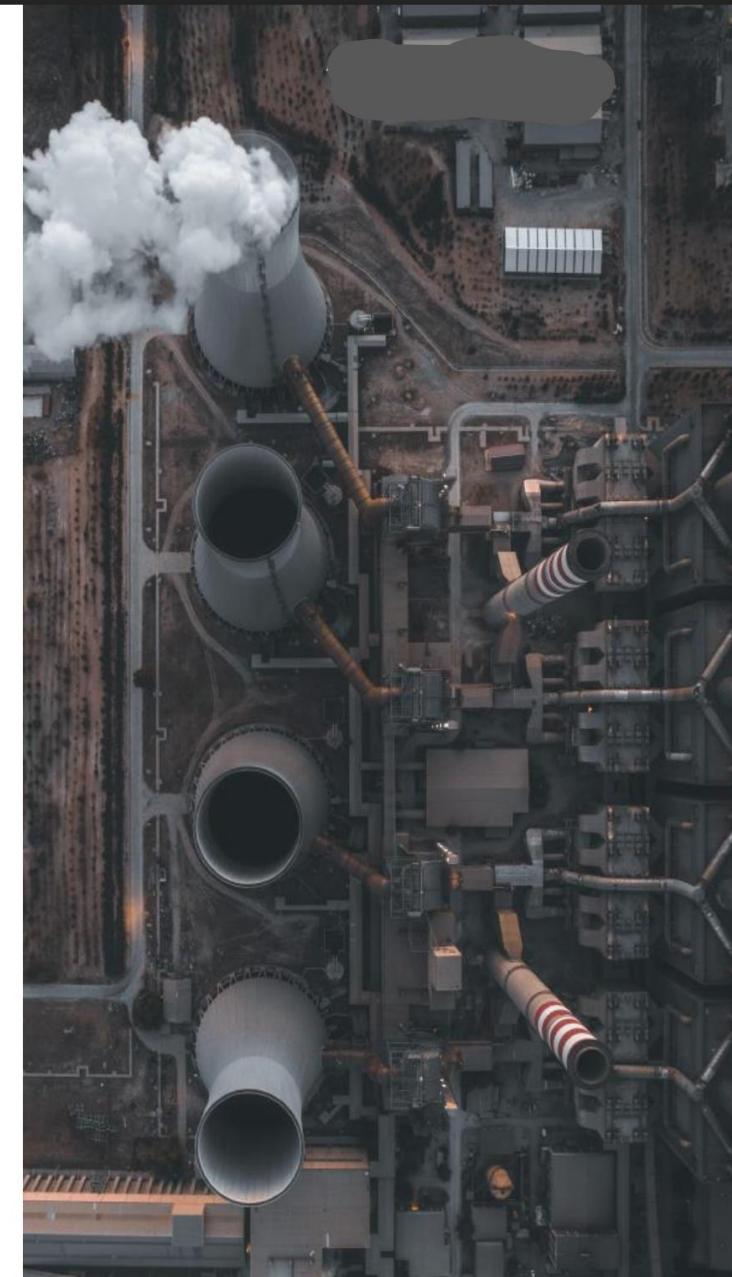
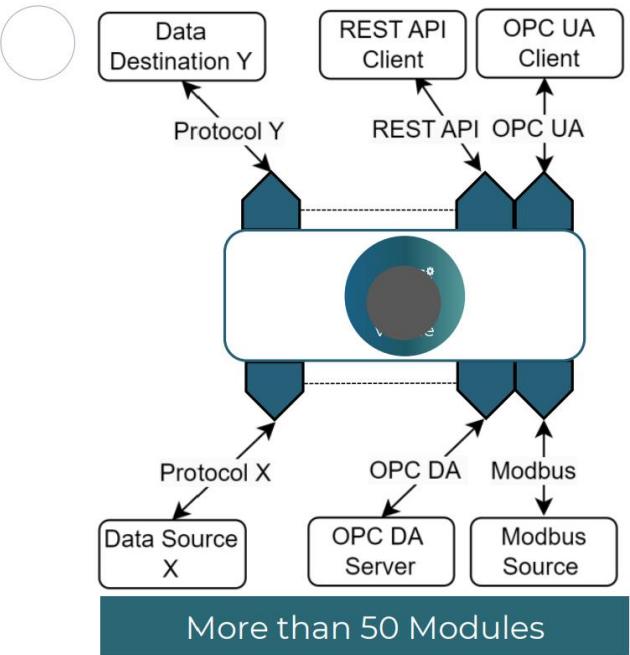
1. What is **ITC**?



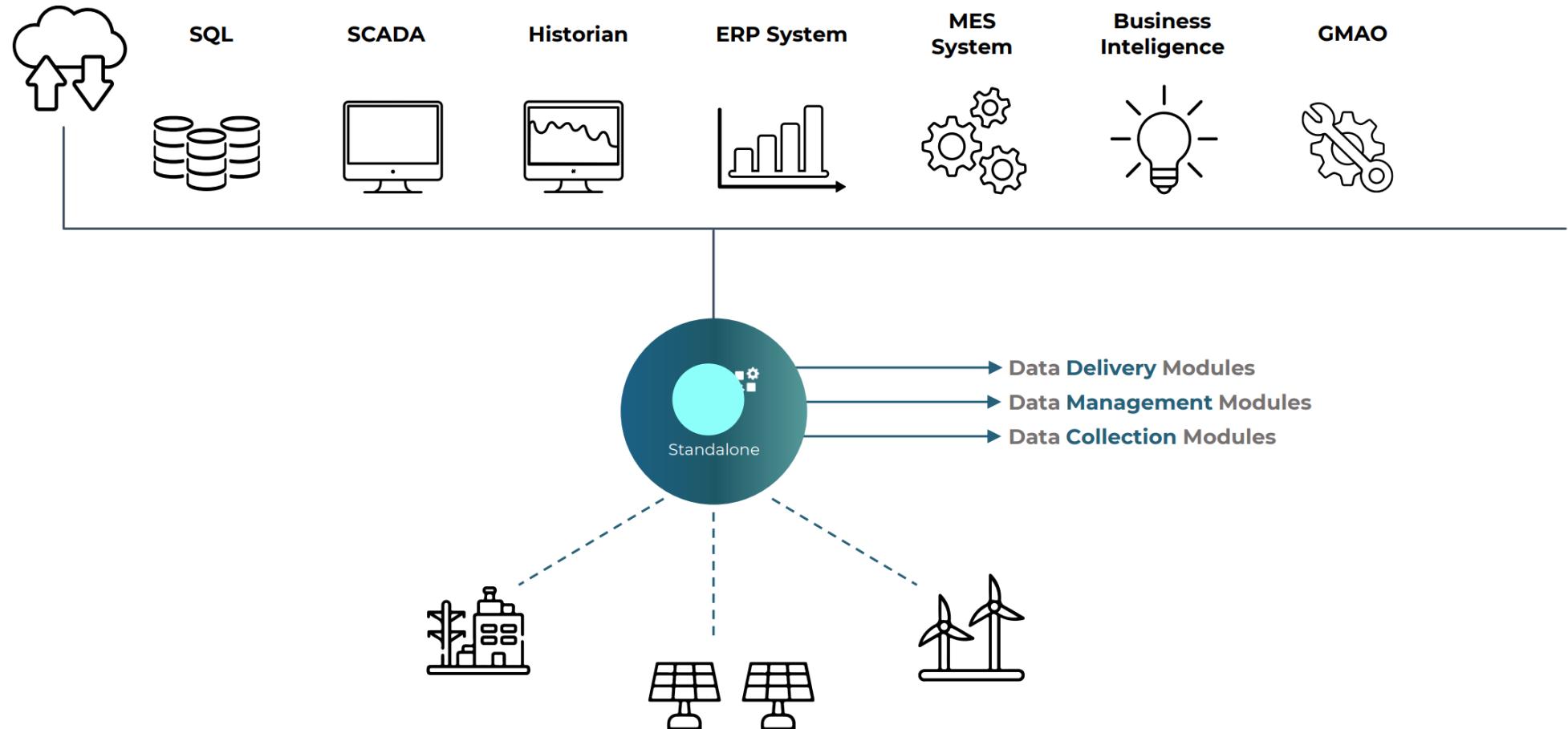
an industrial connectivity software platform.

Some of its features are:

- IIoT out-of-the-box → Plug and play
- Multiplatform
- Store & Forward built-in
- Object oriented configuration
- Creates a network of connected vNodes
- Minimum hardware requirements
- Affordable pricing



2. Architecture options – Standalone



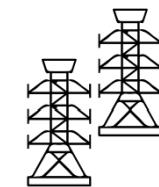
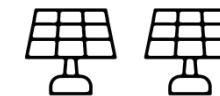
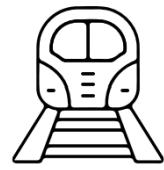
2. Types of projects for



1. Remote data acquisition

- Types of projects

Data acquisition on cranes, water management, renewable energy plants, ships and vehicles monitoring, power substations, Smart Cities, infrastructures, gas pipelines, and more.



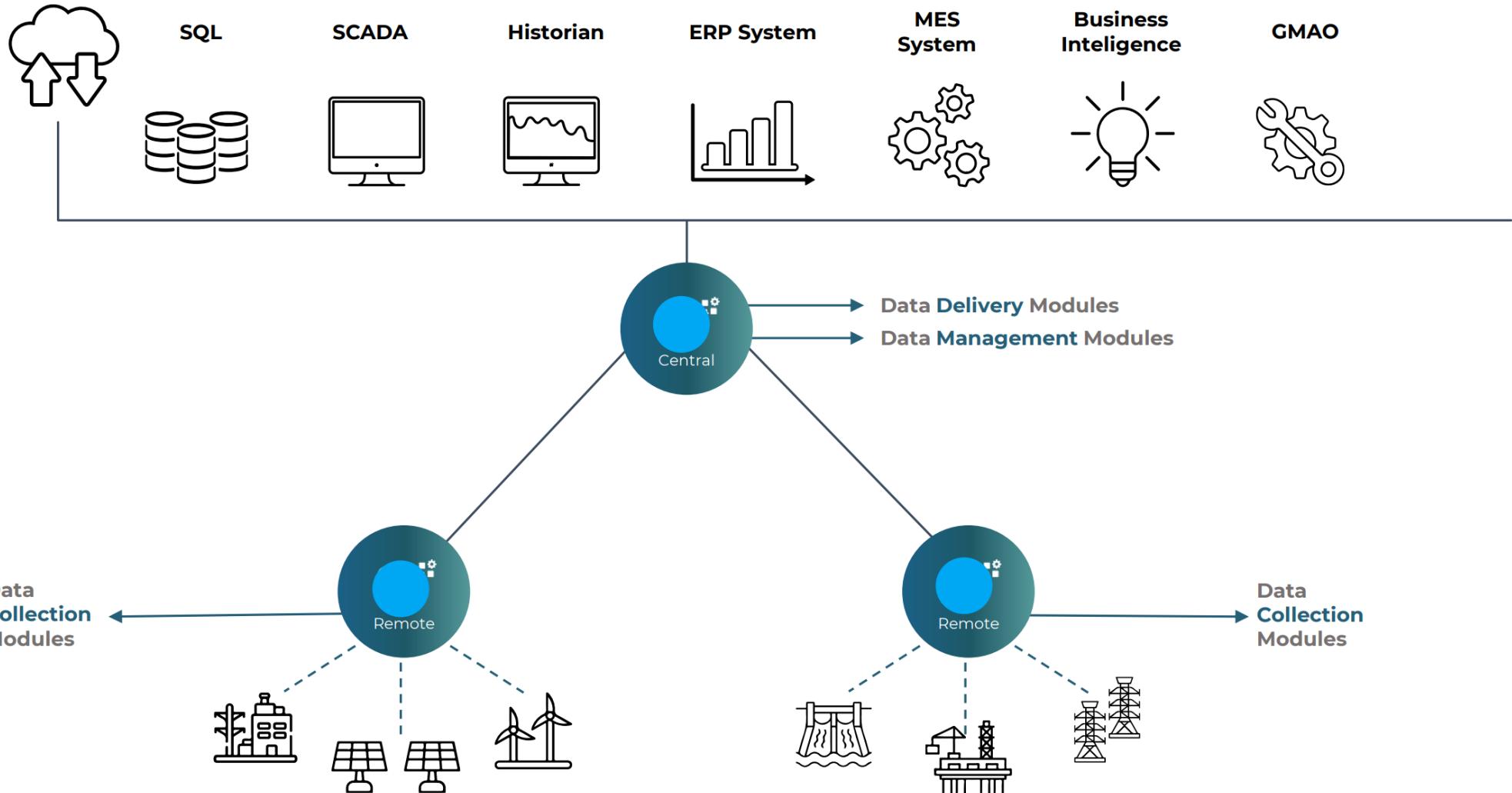
- Advantages

Works with any kind of connection: WiFi, 3G, satellite, GPRS connection → **Store&Forward**

Minimum hardware requirements

Very affordable prices for repetitive installations

2. Architecture options – Distributed



2. Types of projects for



2. Data grouping, calculations, cyber-security, scripting and delivery in data sensitive industries

- Types of projects

Grouping data from PLCs, expose tags to SCADA, MES or ERP systems, calculations and data logging into SQL or NoSQL databases.



- Oil&Gas
- Pharmaceutical
- Power Generation
- Pulp&Paper
- Chemical&Petrochemical
- Food & Beverage

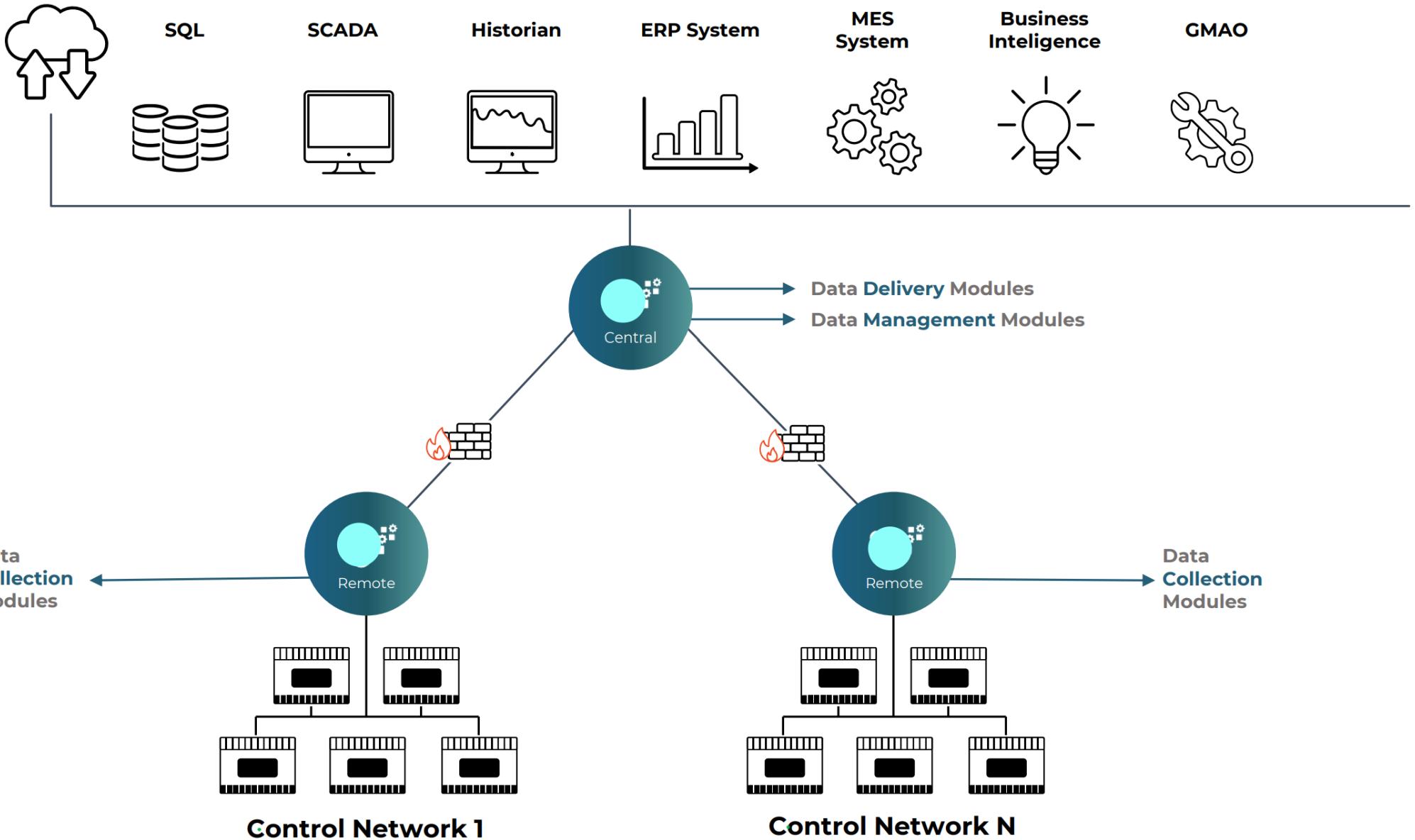
- Advantages

Information exchange among different manufacturers, multiple connections, easy configuration, easy calculations and history interface and **high security** (encryption, authentication, digital certificates).

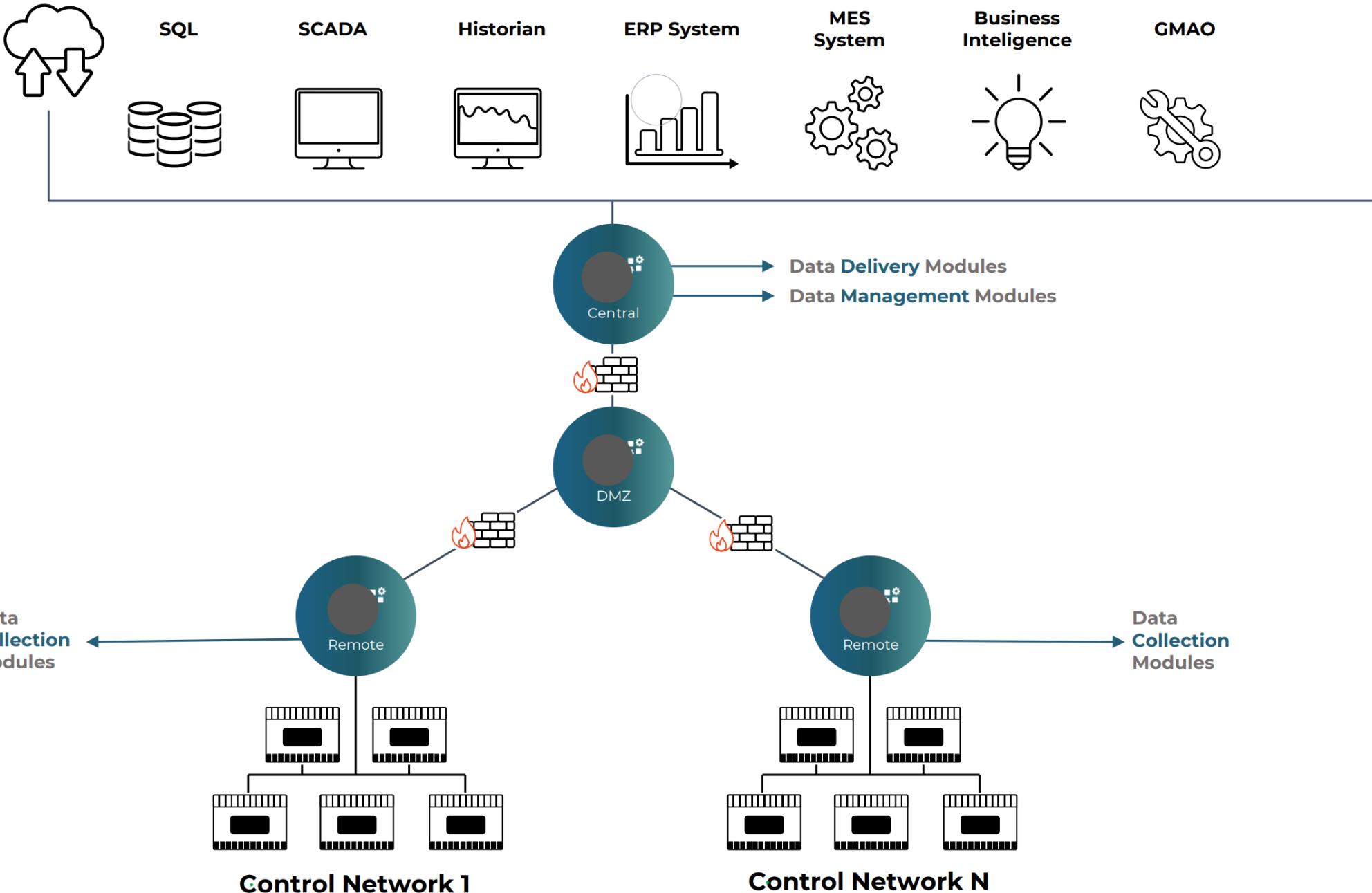
Never lose data on a network failure → **Store&Forward**

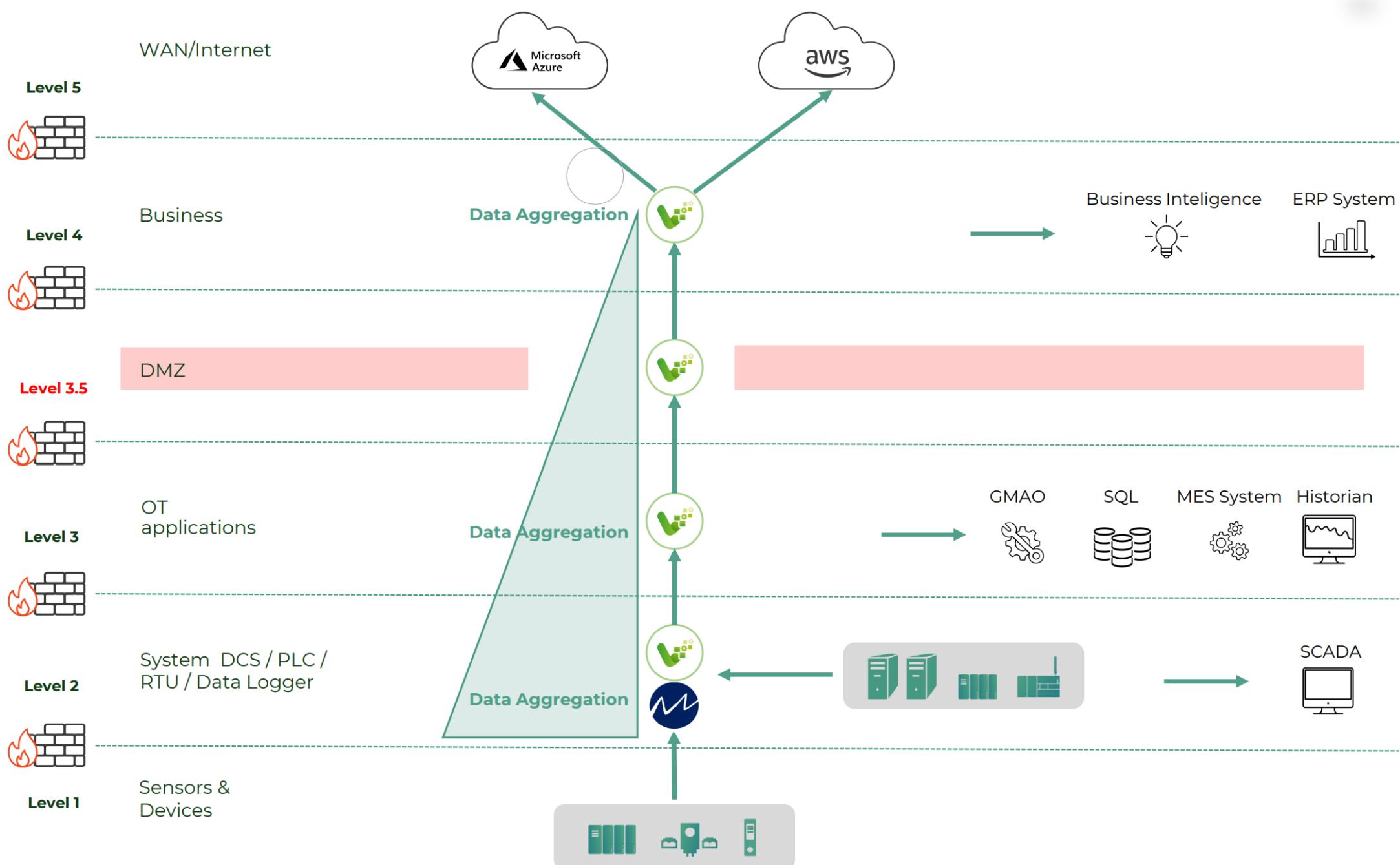
Utilization of new technology OPC UA, Industry 4.0 and IIoT.

2. Types of Projects – Distributed



2. Types of Projects – Distributed with DMZ





2. Types of projects for

3. Solving specific need



- Types of projects

Collecting data from a very specific Data Source and delivering data to a specific application/destination

Examples:

- a) Reading a text file and sending the content to a SCADA
- b) Reading data from an OPC Server in a specific data type and converting into something different
- c) Reading data from any data source and creating a CSV file to upload to ftp
- d) Reading data from a PLC to make inserts into SQL Server
- e) Reading from Redundant OPC Server and send data to an OPC UA Client
- f) Reading data from PLC, run logic and write a result back

- Advantages

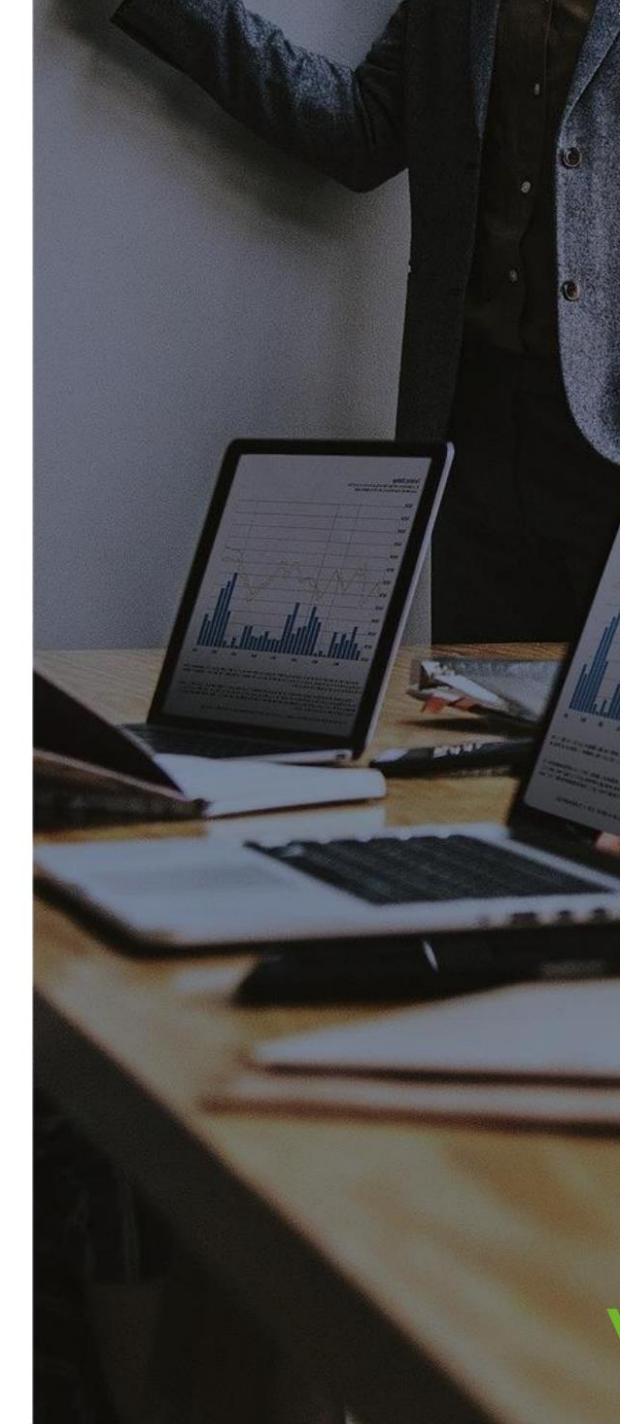
Cheap solution, quick implementation by the end user, easy to **replicate** and unattended (no support or maintenance needed).

3. **itc Yanbu** strengths

itc yanbu is an industrial connectivity software platform.

Some of its features are:

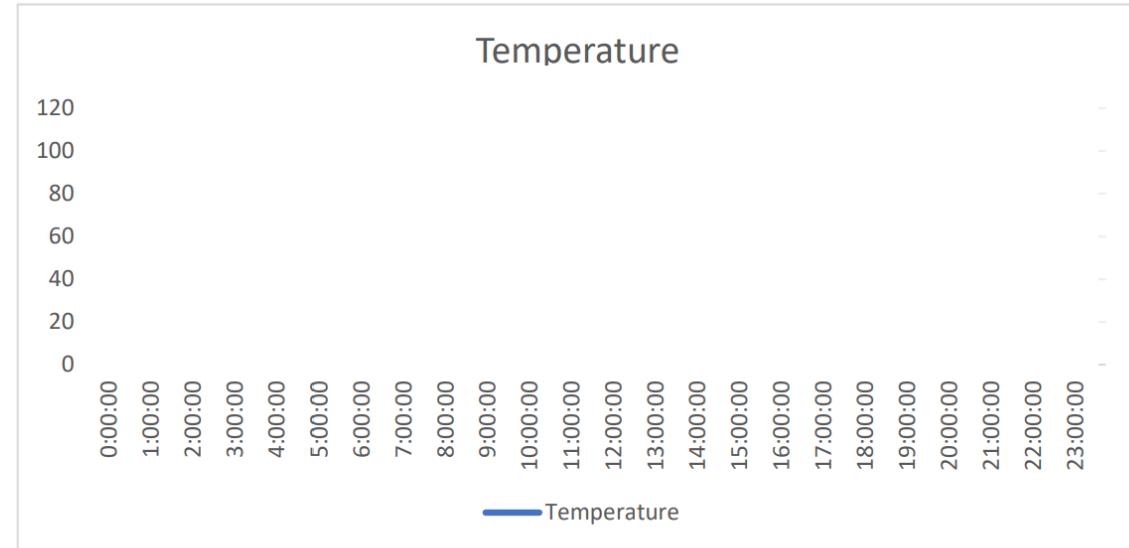
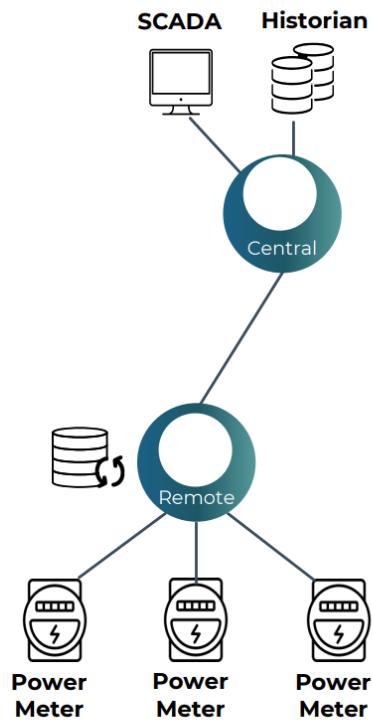
1. Store & Forward
2. Reverse Connection
3. Redundancy
4. High Security
5. Easy integration and configuration
6. Minimum hardware requirements
7. Data acquisition
8. Integration with multiple client platforms



3. strengths

1. Store & Forward

 always **guarantees data delivery**, even in scenarios with intermittent connectivity, low bandwidth or unstable networks thanks to:

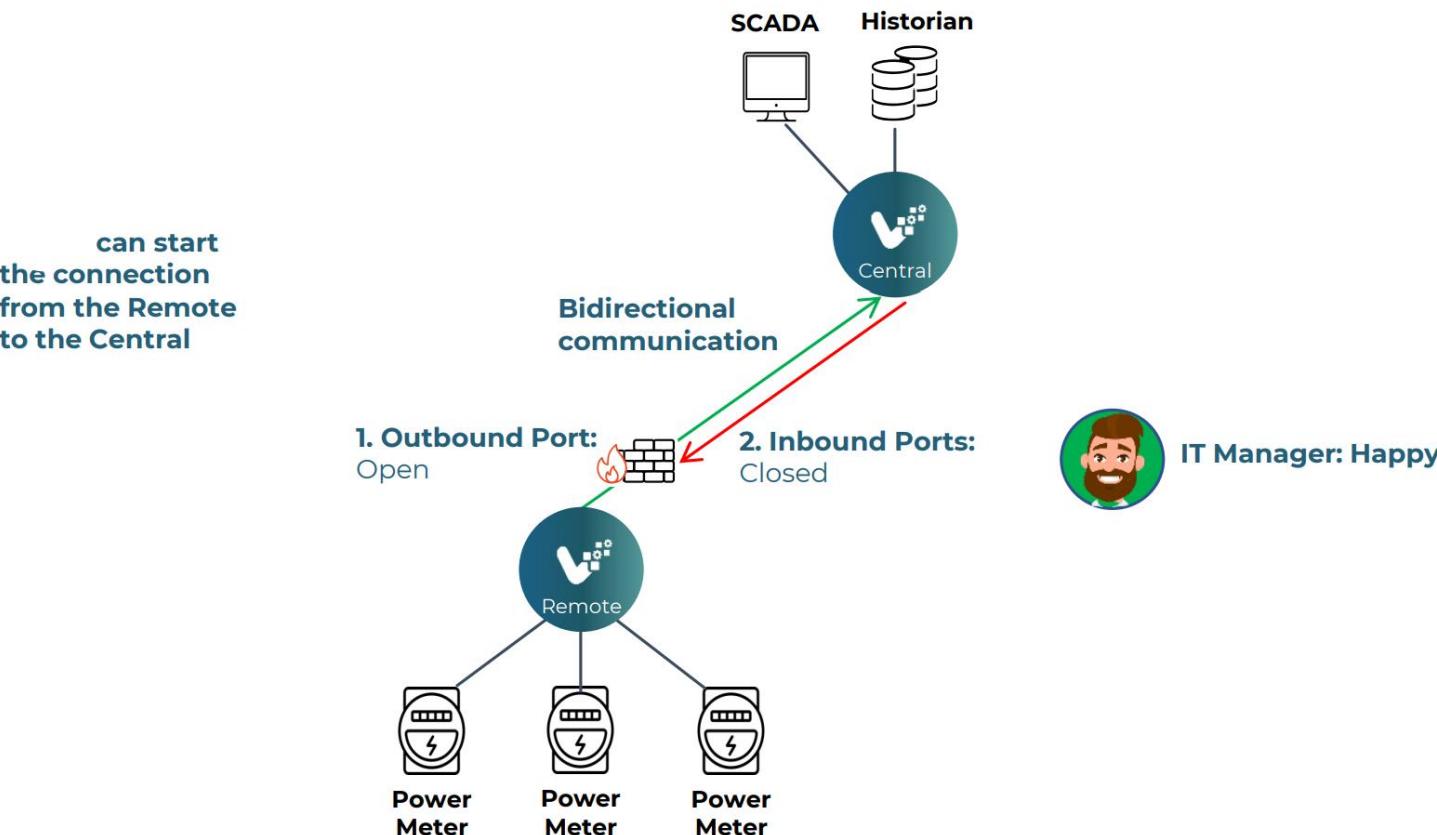


3. **ITC** strengths



1. Reverse Connection

No open ports needed in remote locations because it is possible to set which **ITC** node starts the communication

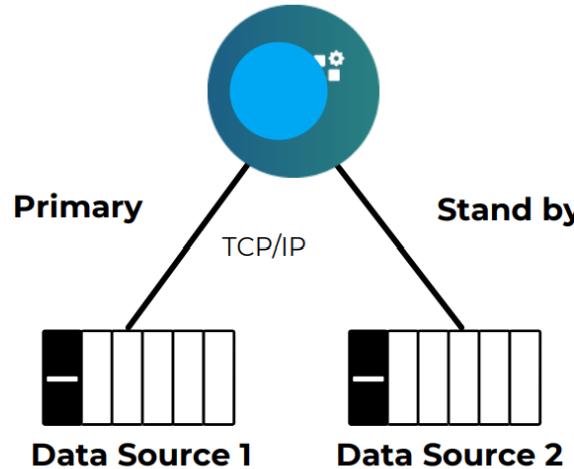


3. strengths

2. Redundancy



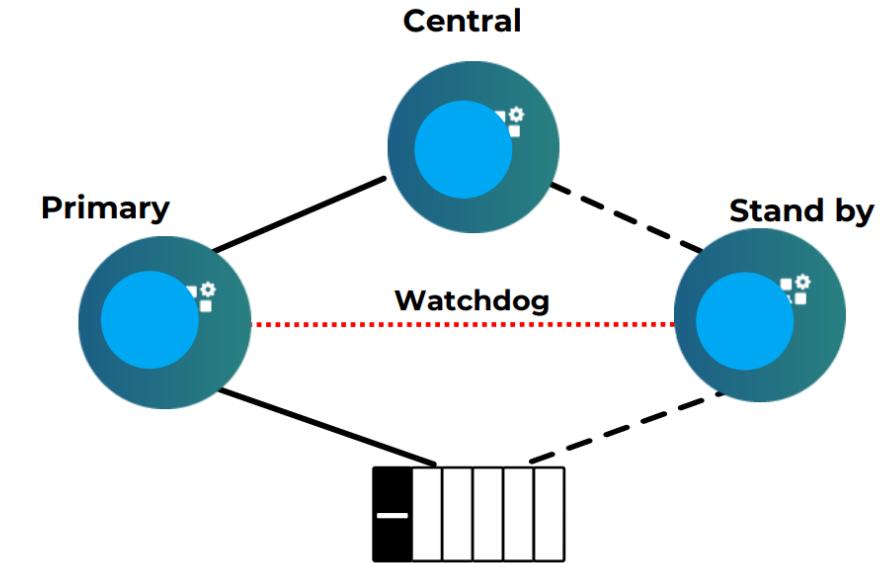
guarantees high availability in critical environments over data sources and the platform itself.



Redundant Data Source



can perform TCP/IP redundant connections with data sources.



High Availability



Two **ITC** can be synchronized with each other in order to guarantee maximum availability.

3. strengths

3. High Security



has the following security mechanisms built-in:



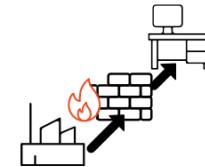
Encryption through SSL protocol.



Node authentication based on **digital certificates**.



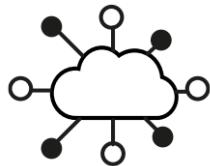
Firewall Friendly: No open ports needed in remote locations because it is possible to set which  node starts the communication.



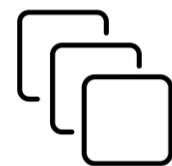
Data-Diode functionality for **secure UDP unidirectional Communication**.

3. ITC strengths

4. Integration and configuration

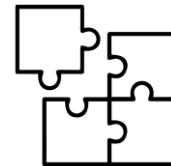


IIoT out-of-the-box:
 is not a SDK, it is
an IIoT solution ready to
use: Plug and Play.



Object oriented configuration:

Web configuration interface
based on templates in order
to save lots of integration
hours.



Scalability: is 100% efficient as
in small local systems as
in large distributed
architectures.



Unlimited:
There is no limit of tags or
connections.

3. ITC strengths

5. System requirements

One of the most outstanding features of  is its high performance using low resources.

HARDWARE

ARM

Intel x86-64

AMD x86-64

OS

Windows 

Any version from XP and Server
2003 until Windows 10, server
2016, 2019 and server 2022.

Linux 

Ubuntu, CentOS, Debian
6, 7, 8, 9 and 10.

VIRTUALIZATION SYSTEM

VMWare 

Virtual Box 

HyperV 

Docker 

3. strengths

6. Minimum Hardware requirements

Some **reduced PC's** where  has been tested:



XmartEdge

EG-1001-DIN



OnLogic

Model CL200 series



VS Vision Systems

Model FlexRunner 3435



Techbase

NPE X500



Advantech UNO

Model 2173AAF

3. **itc** strengths

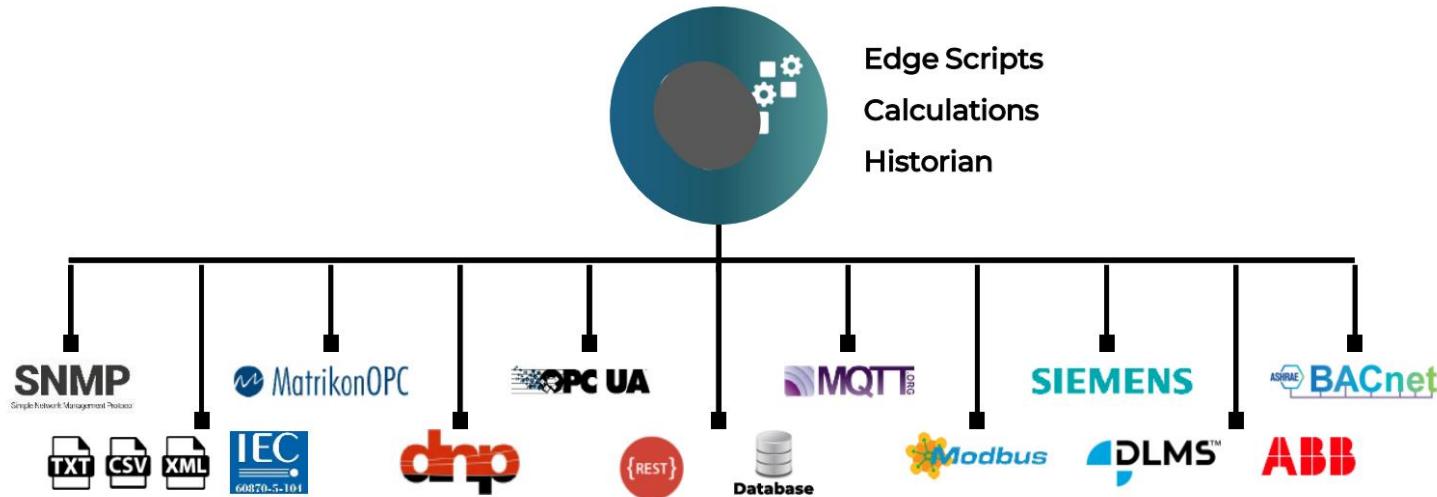


7. Data acquisition



has drivers for the next protocols and standards:

- Modbus TCP (and RTU over TCP)
- Modbus RTU
- Siemens S7
- SNMP
- ABB AC400/450/500/800
- OPC UA & OPC DA & XML DA
- D&A signals and frames
- REST API Client (Web Services through RESTful)
- Text files (historical and real time data)
- Electric protocols (DNP3, IEC 102, IEC 104, DLMS)
- BACnet
- SQL Client reading from all SQL Server, MySQL, PostgreSQL
- Pharmaceutical machinery (Marchesini, Laetus, Domino, Kanebo)
- Solar Power Inverters (Xantrex, Aurora)
- Food & Beverage Machinery (Mettler Toledo)



3. **itc** strengths

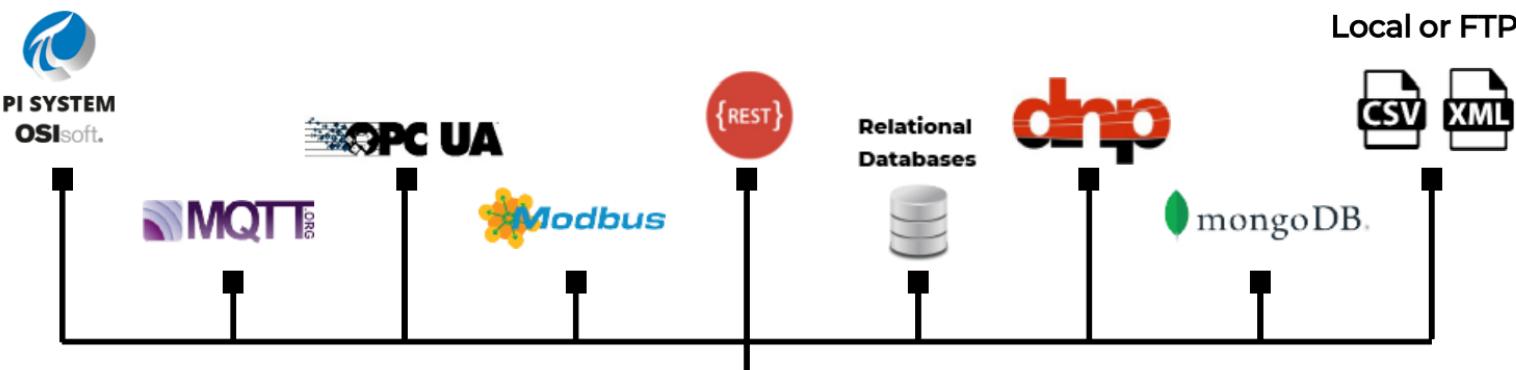


8. Integration with multiple client platforms

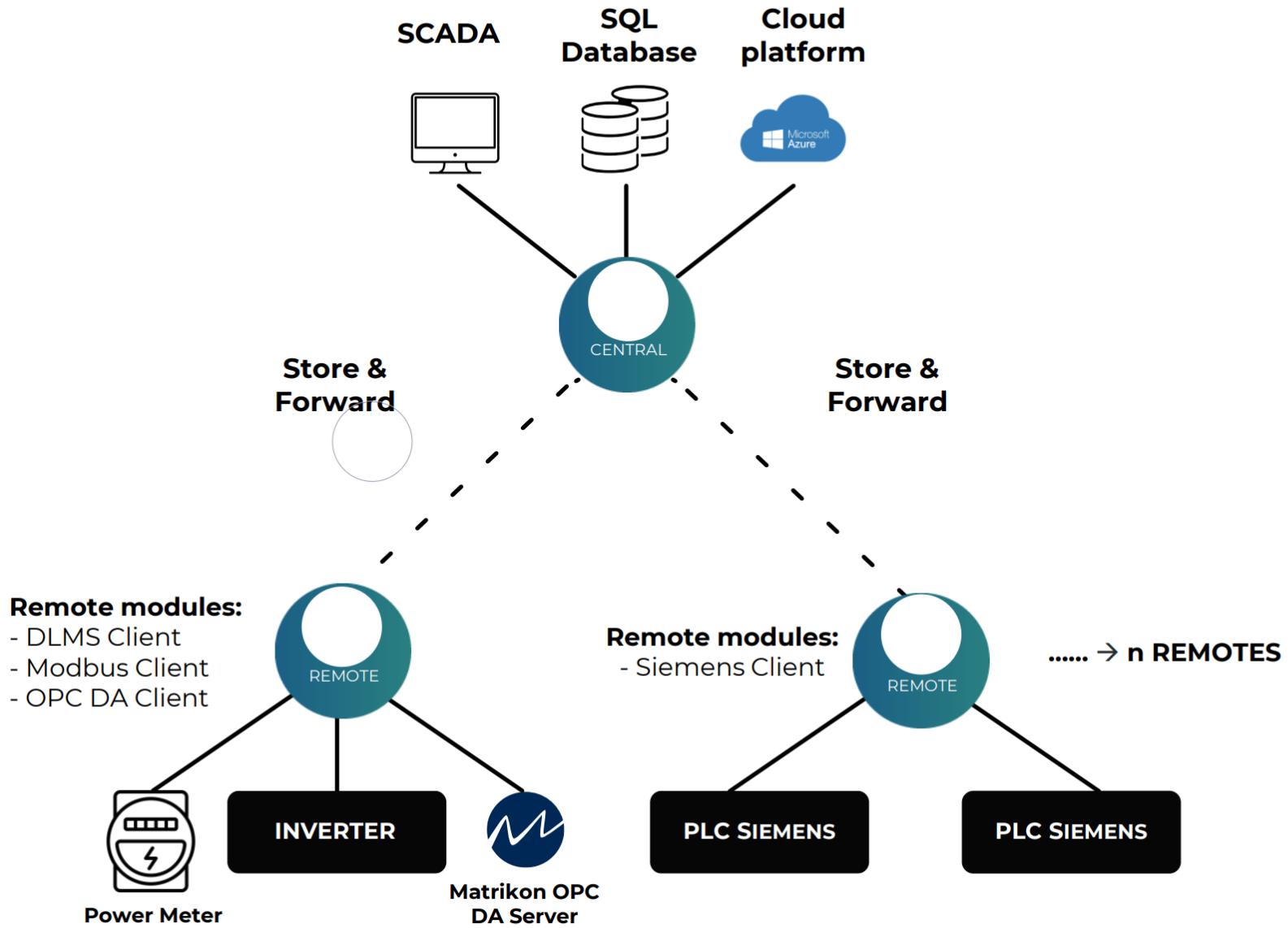


has connectors for delivering data to client applications:

- OPC UA server
- Modbus Slave
- REST API Server (Web Services through RESTful)
- SQL Databases
- NoSQL (Mongo DB)
- MQTT for AWS, Google, Azure
- DNP3 Slave
- CSV, XML or TXT files
- SCADA Apps
- UFL for OSIsoft PI



Architecture Example:



4. **itcyanbu** vs competitors in the IIOT Gateway market

- **itcyanbu is software, not hardware**

- Customer can install vNode in the SCADA PC → No need for extra hardware to maintain
- Customer can install vNode in an embedded industrial computer with 4G/Wifi connectivity → No need for a router
- Customer can install vNode in any Virtual Machine or Docker → Use the existing resources

- **itcyanbu runs in Linux and in Windows**

- In unattended locations an embedded industrial PC with Linux is recommended

- **itcyanbu includes Store&Forward**

- After a reconnection, data will end up in any of your chosen destinations → No need to open files or search data in a website

- **itcyanbu adds Cyber-security to customer's OT/IT infrastructure**

- Using a distributed architecture user can keep closed all incoming ports at the Firewall

- **itcyanbu can be configured from any remote location just having http/https access**

- Real-time and historical data can also be accessed just using a web browser → No need to install extra applications just to see data

6. References by Industry

Products working in plants all over the world for more than 17 years.



Pulp &
Paper



Chemical &
Petrochemical



Pharmaceutical



Power



Oil &
Gas

Types of Projects – Data Grouping & Cyber-security

Industries

- ▣ Pulp & Paper
- ▢ Chemical & Pharmaceutical
- ⚡ Power Generation
- ⌚ Oil & Gas / Water
- ▣ Mining & Cement

Advantages

- 🕒 Data grouping from multiple sources
- 🕒 Cyber-security isolation between networks
- 🕒 Reduced attack surface with DMZ architecture
- 🕒 Encrypted data transfer (SSL/TLS)
- 🕒 Firewall-friendly communication
- 🕒 Role-based access control
- 🕒 Audit trail and logging

Data Grouping & Cyber-Security

Types of projects

Grouping data from PLCs, expose tags to SCADA, MES or ERP systems, calculations and data logging into SQL or NoSQL databases.

Industries

Oil & Gas

Pharmaceutical

Power Generation

Pulp & Paper

Chemical

Food & Beverage

Advantages

- Information exchange among different manufacturers
- Multiple connections, easy configuration
- **High security** (encryption, authentication, digital certificates)
- Never lose data → **Store&Forward**
- OPC UA, Industry 4.0 and IIoT

References by Industry

Products working in plants all over the world for more than 17 years.



Pulp &
Paper



Chemical &
Petrochemical



Pharmaceutical



Power



Oil &
Gas



Water &
Recycling



Mining &
Cement



Food &
Beverage



Automation
Vendors



Iron &
Steel

itcyanbu - IIoT Communication Platform



6. Partner Program

What is it?

A commercial alliance model for all those integrators who want to increase the number of projects and obtain greater profitability for their business.



Benefits

- 🕒 **Joint marketing & sales strategy**
- 🕒 Specialized **technical and sales training**
- 🕒 **Discounts**
- 🕒 **New opportunities search**
- 🕒 **Work plan** execution in all areas
- 🕒 **Visibility and brand awareness**

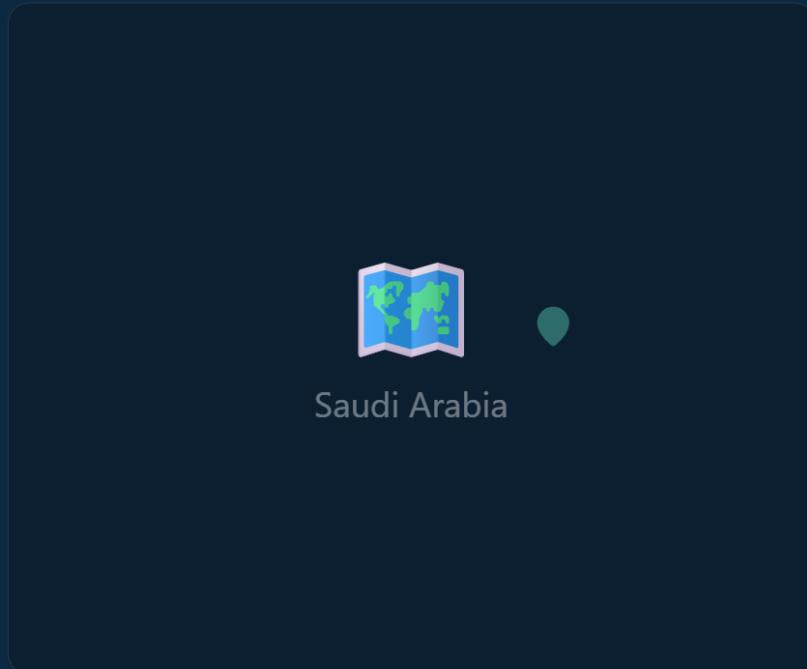
ITC



A collage of three images: a close-up of a complex mechanical engine with bright sparks flying; a hand holding a smartphone displaying a blue dashboard with various graphs and data; and a person wearing a hard hat in a dark industrial setting.

Thank You!

itcyanbu



itc

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Royal Commission Yanbu

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