

EDGE COMPUTING SOLUTIONS

DIGITAL FUTURE OF ENERGY



EXIMPROD ENGINEERING



Eximprod is a group of companies that offers a complex portfolio of equipment, solutions, and services for the energy sector.

■ Innovation

Recognized for its innovative spirit, Eximprod constantly invests in new manufacturing, automation and development capabilities of new solutions and products.

Innovation is the main component of our business DNA that shapes our achievements, partnerships and vision of the future.

■ Professional solutions

Eximprod Engineering develops and implements professional solutions for energy infrastructure: electrical design and consulting, automation and smart grids, IT / OT solutions, software development, operation and maintenance, project management and developers of renewable energy power plants.

We aim to be our Customers' trusted advisers, allowing them to offer better services.



DIGITAL FUTURE OF ENERGY

Imagine a completely digital grid that supports all use cases and enhances stability, reliability and security.

■ The challenge

The utility grids are transitioning with the deployment of distributed assets into highly digitized and bi-directional networks. The growing DER integration demand calls for improved grid operations, better forecasting and efficient investments in infrastructure.

■ Our approach

To help the industry transition faster, more efficient, and securely, Eximprod has developed a set of edge computing software solutions on Cisco IOx to enable secure monitoring and control capabilities of the distribution grids and integrate with Utility ADMS / SCADA, power system applications and analytics applications.

EDGE COMPUTING SOLUTIONS

Smart grids use digital technologies and IoT solutions to intelligently respond and adapt to changes in the grid. Infusing energy intelligence with our edge computing portfolio is the key to leveraging the data in the grid. This allows operators to make grid operation more reliable, cost-efficient, flexible, safer, and therefore sustainable. Using modern and secure communication and automation standards, our software solutions are designed to efficiently operate power grids, oil and gas devices, manufacturing units, smart city solutions.

Depending on your devices, we offer a great variety of communication options. Standard Communication Protocols (Modbus, DNP3, IEC 61850, IEC 60870-5-101, IEC 60870-5-104, OPC, OCPP) and IoT Communication Protocols (LoRaWAN, MQTT) allow interoperability with any new or existing third-party equipment (protection relays, power quality devices, IEDs) and SCADA DMS dispatch.

Master/Client communication protocols are available on both Ethernet (TCP/IP) and serial (RS232/485) connections. Our software is deployed as a container, so it can be uploaded on any device, be it an industrial router or a simple computer.

Business needs

- Operational Technologies environment visibility & control
- Increase efficiency for maintenance operations
- Integrate Distributed Energy Resources (DER)

Benefits

- Quick deployment on several edge platforms
- Interoperability with legacy systems
- Low latency processing of local data
- State-of-the-art security features
- Simplified management



Solutions Portfolio

- ES200** - VIRTUAL RTU
- SIRIUS** - EDGE ENERGY MANAGEMENT
- PVS200** - LOCAL AREA PROSUMERS CONTROL
- SHG200** - SELF-HEALING GRID
- SSD200** - SMART SWITCH DISCONNECTOR
- HMI200** - WEB HMI
- COM200** - COMTRADE FILE RETRIEVER
- LW200** - LoRaWAN APP SERVER

Key Features

- **Cyber Security based on Cisco:**
Enterprise-grade encryption, Firewall, VPN, App signature verification
- **Runs on multiple hardware platforms :** All Cisco I/Ox-enabled industrial routers / switches / compute nodes
- **Legacy Devices Support:** Integrate multiple devices over several protocols (I/O, Serial & Ethernet)

Communication protocols

IEC 61850	IEC 60870-5-104
DNP 3	IEC 60870-5-101
Modbus	MQTT
OPC-UA	

ES200

VIRTUAL RTU



 Compatible

ES200 is a virtual Remote Terminal Unit (vRTU), a software platform that acts as a multi-protocol communication controller with industrial devices, especially in the energy industry. ES200 enables data extraction, concentration, processing and storage.

Business needs

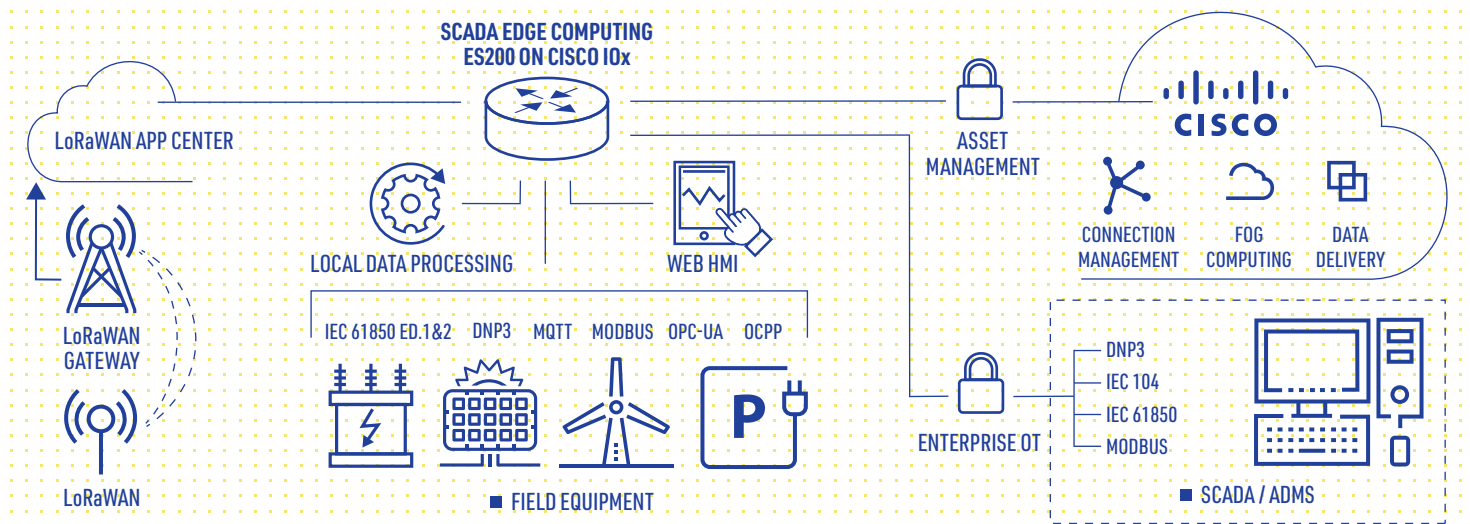
- Connect industrial devices installed in remote locations
- Integrate Distributed Energy Resources (DER)
- Operational Technologies environment visibility & control

Benefits

- Centralized management & control of field devices
- Advanced cyber security deployed in OT
- Upgradeable and multipurpose system



PROCESS OVERVIEW



SIRIUS

EDGE ENERGY MANAGEMENT



The **SIRIUS** software platform, having the concept of a Virtual Power Plant at its core, integrates intelligent power systems at the edge of the network. It allows for load shedding and demand response across the Smart Grid.

Business needs

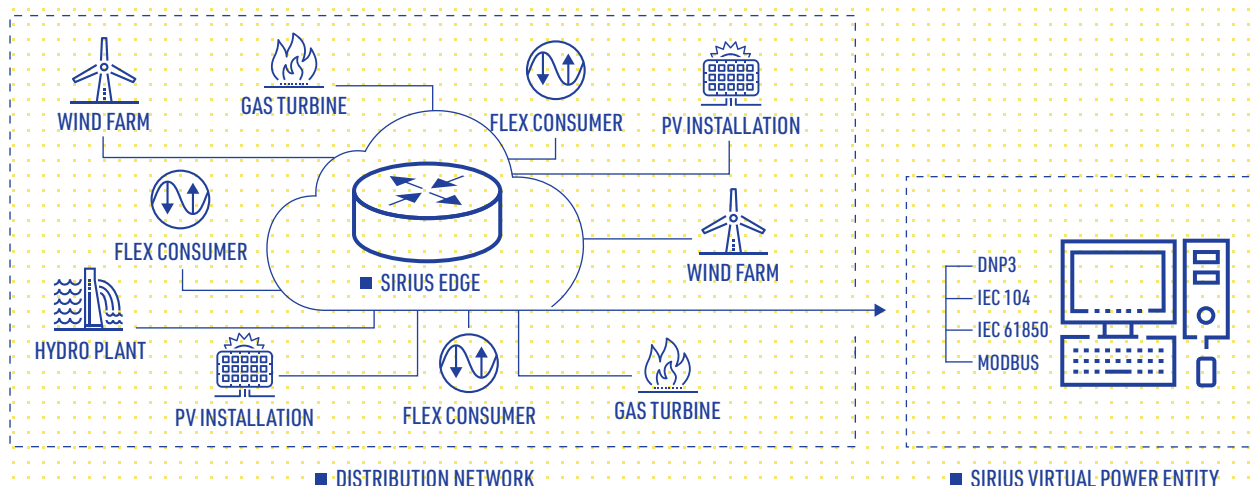
- Integrate production & consumption resources
- Centrally manage and control power plants
- Aggregate generation to connect to the energy market

Benefits

- Integrations of smart meters in billing & SCADA platforms
- Optimized energy management
- Improved response behavior



PROCESS OVERVIEW



PVS200

LOCAL AREA PROSUMER CONTROL



Compatible

CERTIFIED BY

DNV-GL



PVS200 enables automatic control of the power generated by all connected prosumer sites based on energy metrics established by the DSO. It ensures stepwise regulation of the power delivered by an energy producer based on grid stability criteria.

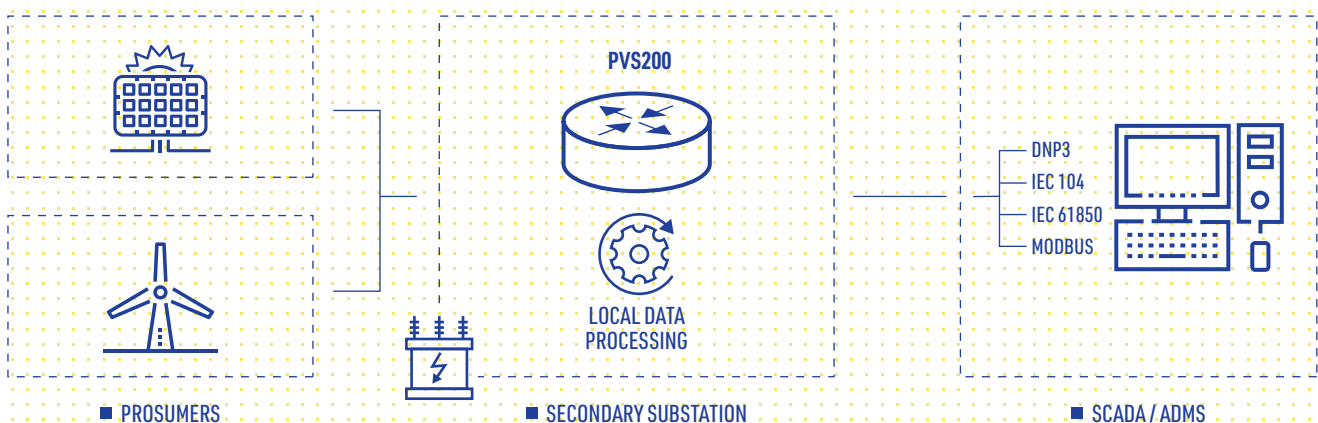
Business needs

- Protect and maintain the stability of the power network
- Monitor and control power flow
- Improve DER penetration rate

Benefits

- Advanced management of local area grid
- Improved network resiliency & quality of service
- Increase the hosting capacity of the existing grid

PROCESS OVERVIEW



SHG200

SELF-HEALING GRID



 Compatible

SHG200 allows Fault Location, Isolation, and Service Restoration (FLISR) for the grid affected by a single-phase or polyphase short circuit. Our solution can automate power restoration, reducing both the impact and length of power interruptions.

Business needs

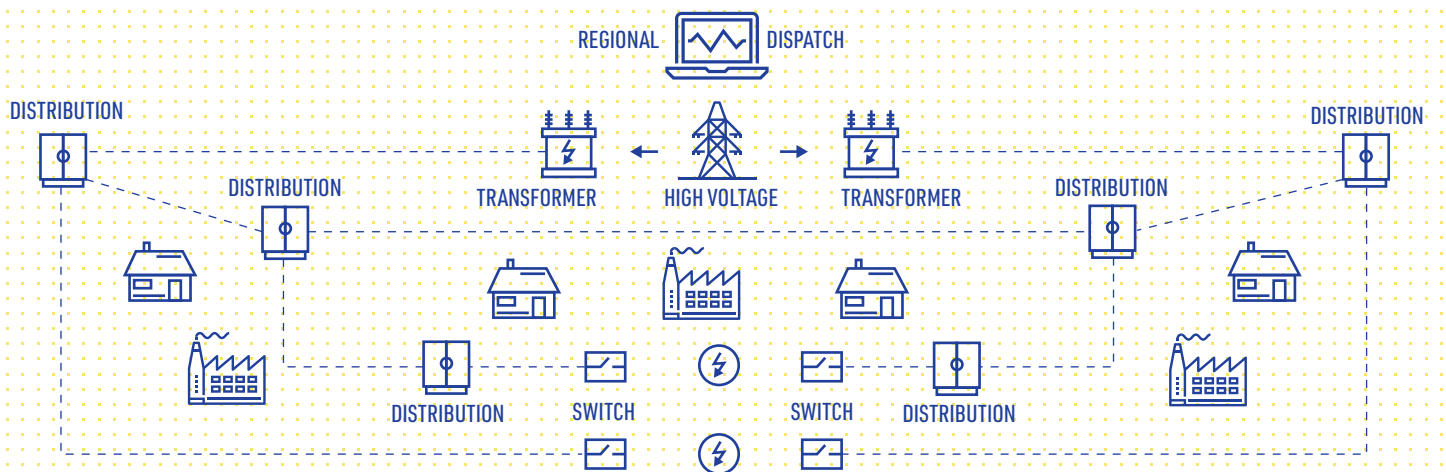
- Improve SAIDI & SAIFI
- Increase efficiency for dispatch operations
- Optimize workforce effort

Benefits

- Advanced Distribution Automation (ADA) of network
- Improved network resiliency & quality of service
- Reduced number of customers interrupted



PROCESS OVERVIEW



SSD200

SMART SWITCH DISCONNECTOR



Compatible



The **SSD200** software-defined solution can remotely control switch disconnectors for medium voltage overhead lines, enabling self-healing functions based on local automation. Our solution can automate power restoration, reducing both the impact and length of power interruptions.

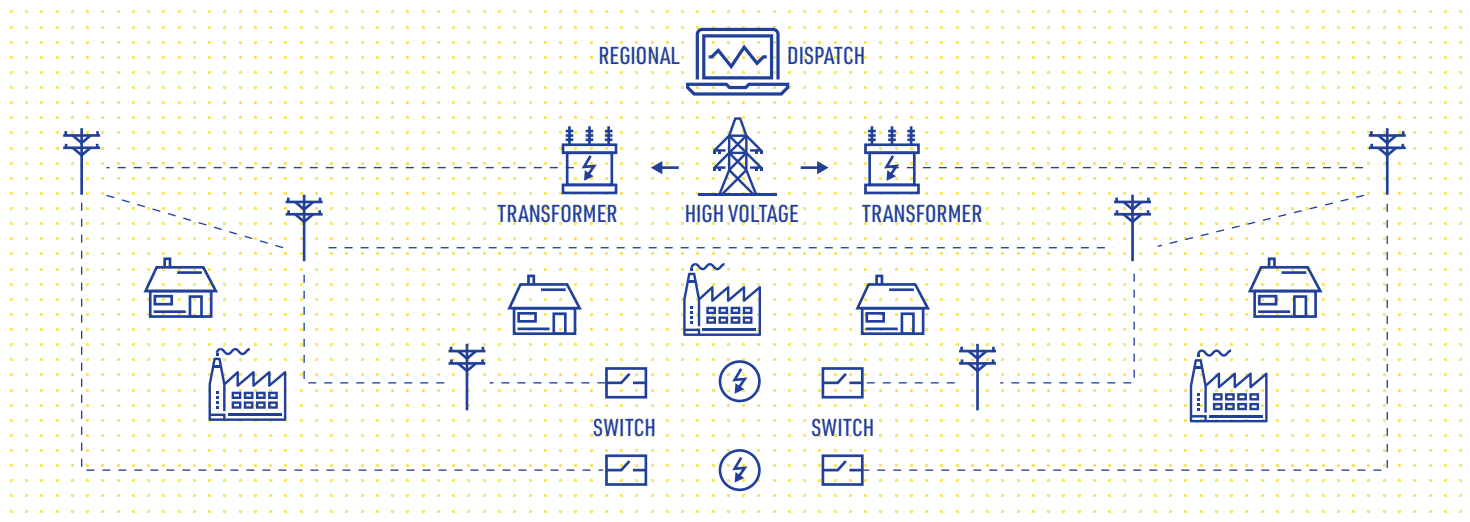
Business needs

- Increase efficiency in fault isolation operations
- Reduce the impact of faults in the network
- Improve the quality indicators of the electricity distribution

Benefits

- Advanced Distribution Automation (ADA) of network
- Improved network resiliency & quality of service
- Local process automation

PROCESS OVERVIEW





Compatible

HMI200

WEB HMI

HMI200 is a configurable Web-based solution for displaying graphics of energy network elements. It also supports operator commands. Control of renewable energy power plants & management of industrial platforms.



Business needs

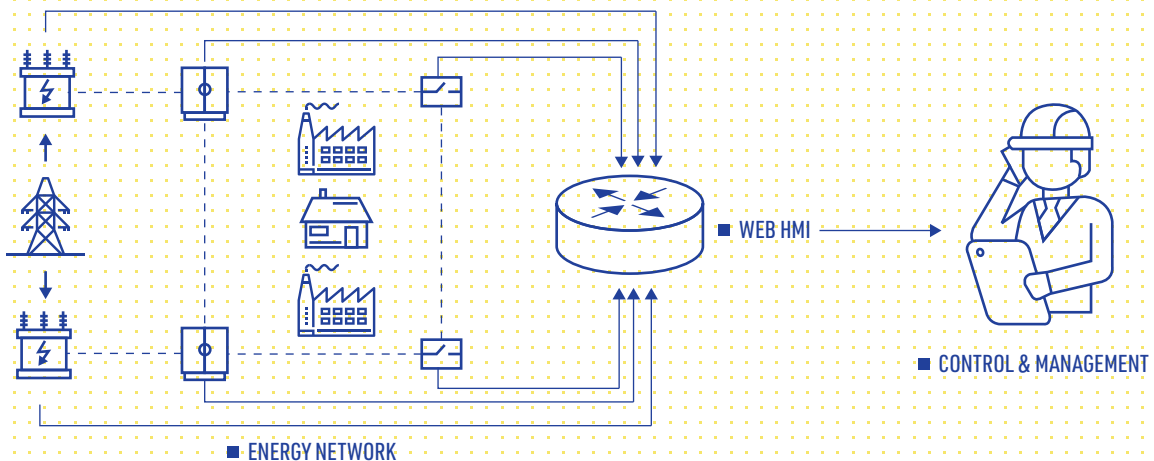
- Control of industrial processes
- Monitor the performance of assets
- Increase safety for maintenance operations

Benefits

- Cost-efficient management & control
- Integrated secure access
- Local dispatch solution



PROCESS OVERVIEW





COM200

COMTRADE FILE RETRIEVER

 Compatible

COM200 is a software solution that can retrieve and securely transport the IEEE COMTRADE formatted files from an IEC-61850 device. It supports a configurable event-driven data transfer using MMS and securely delivers the retrieved files needed to represent disturbances to any destination.



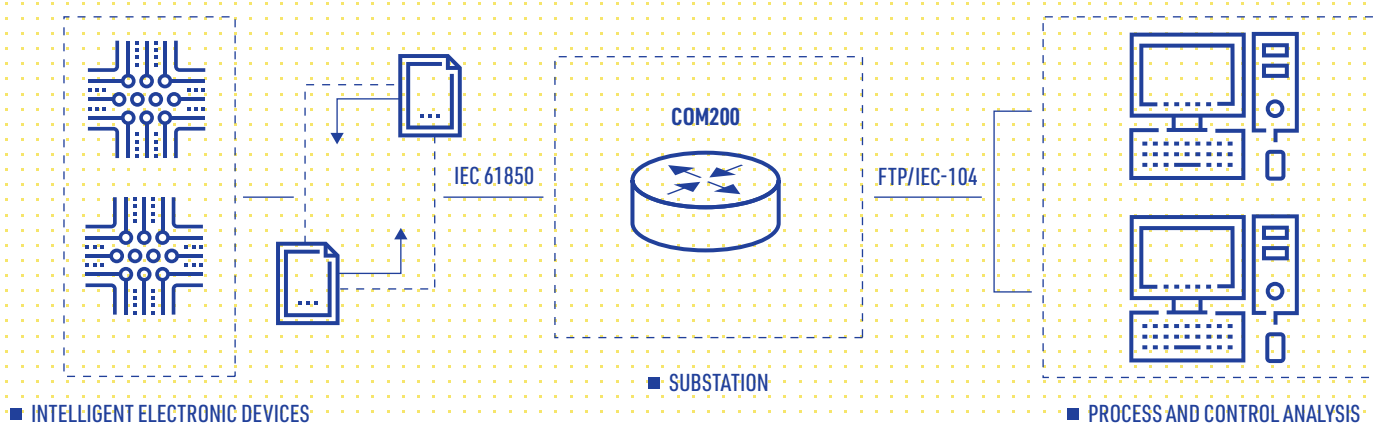
Business needs

- Simplify & centralize the management of disturbance records
- Increase speed of fault analysis process
- Exchange information with external analysis tools

Benefits

- Increased response time for maintenance and audits
- Automate retrieval and storage of COMTRADE files
- Notifications and reports

PROCESS OVERVIEW



LW200

LoRaWAN APP SERVER



LoRaWAN Application Server is designed to provide easy deployment with minimal hardware and network requirements. It handles the application layer, including uplink data decryption and decoding, downlink queuing, data encoding and encryption.

Business needs

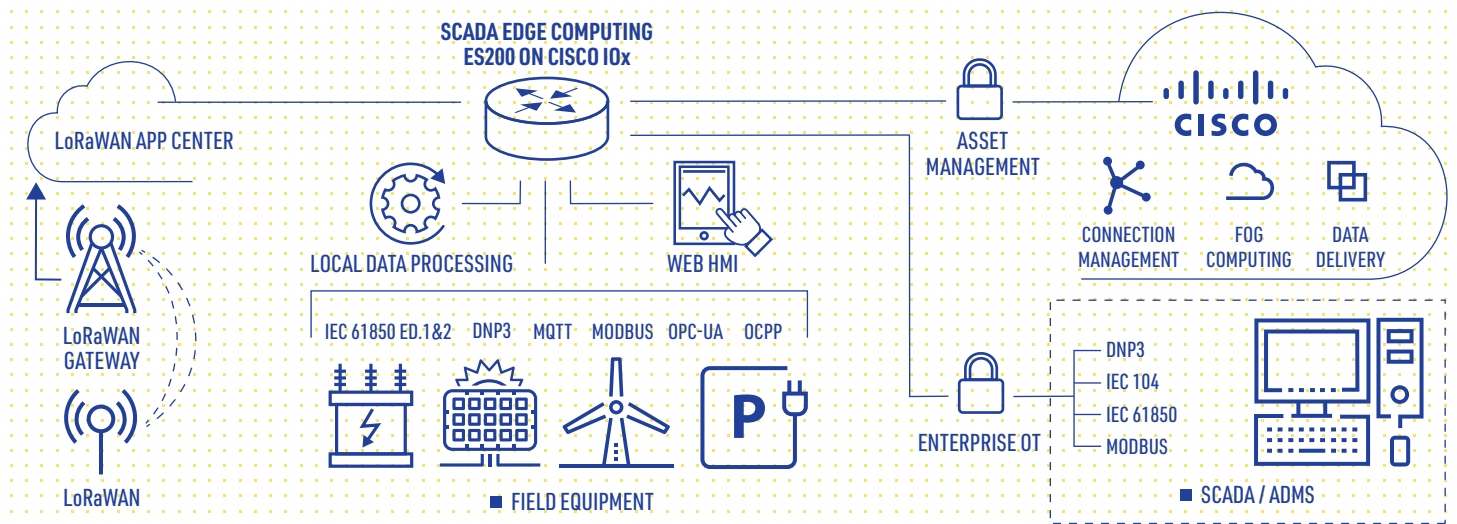
- Integrate LoRaWAN sensors and gateways in SCADA
- Connect apps over multiple protocols and mechanisms
- Support multiple external applications

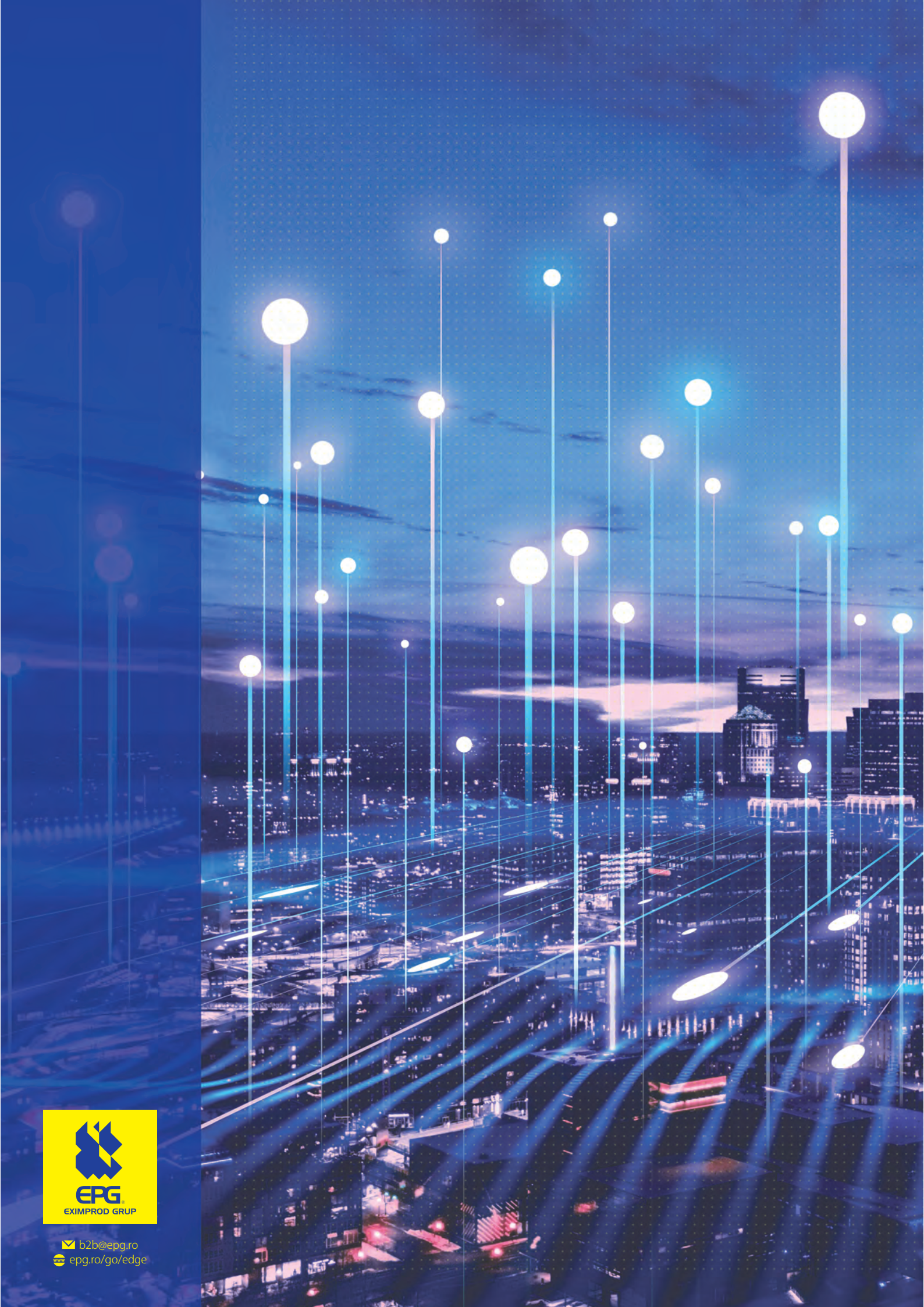
Benefits

- Centralize management of IIoT sensors
- Programmable interface for data exchange
- Flexible deployment models & rapid adoption



PROCESS OVERVIEW





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