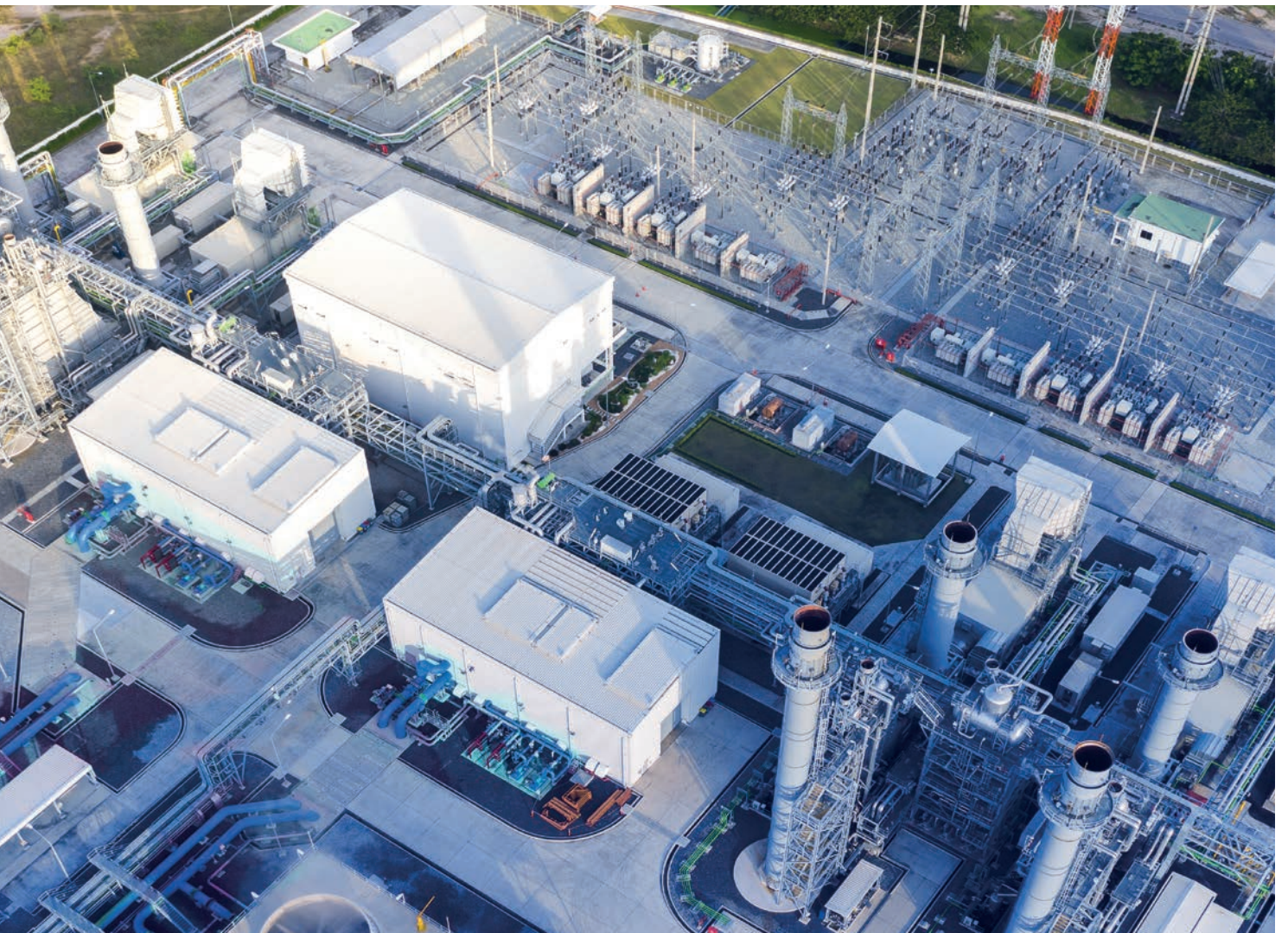![sbc SAIA BURGESS CONTROLS logo]

Your right partner to develop in the District Heating market

Higher efficiency with modern system technology

What is happening in the District Heating market?

4th Generation DH Systems

Transformation of network to integrate all available heat sources and increase the share of sustainable energy (Ex: Waste-to-heat energy).

Public Funding

Increase of investments and large public fundings to decarbonize heating in Europe. DH networks now benefit from large subsidization in Europe.
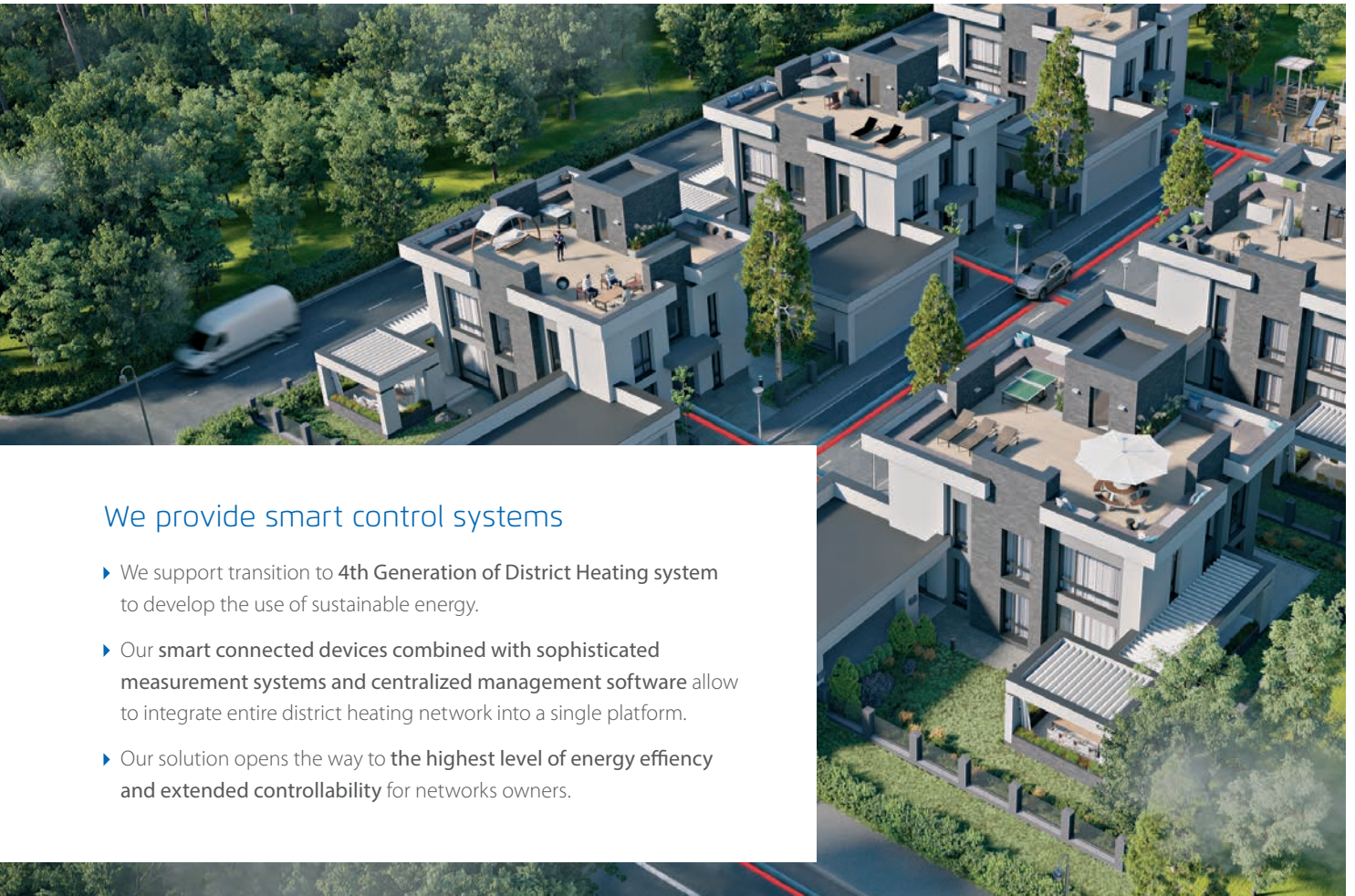
Refurbishement of Existing Networks

Growing pressure to reduce CO_2 emission urging for the refurbishement of old inefficient DH networks in multiple countries. There is now a huge stock of networks with high fossil energy consumption to renew in Europe.

Digitalization, AI & Mac Learning

New technologies represent an opportunity to integrate all information across networks into single platform. It enables to anticipate heat requirement and to detect potential leakage for highest level of efficiency in heat production.
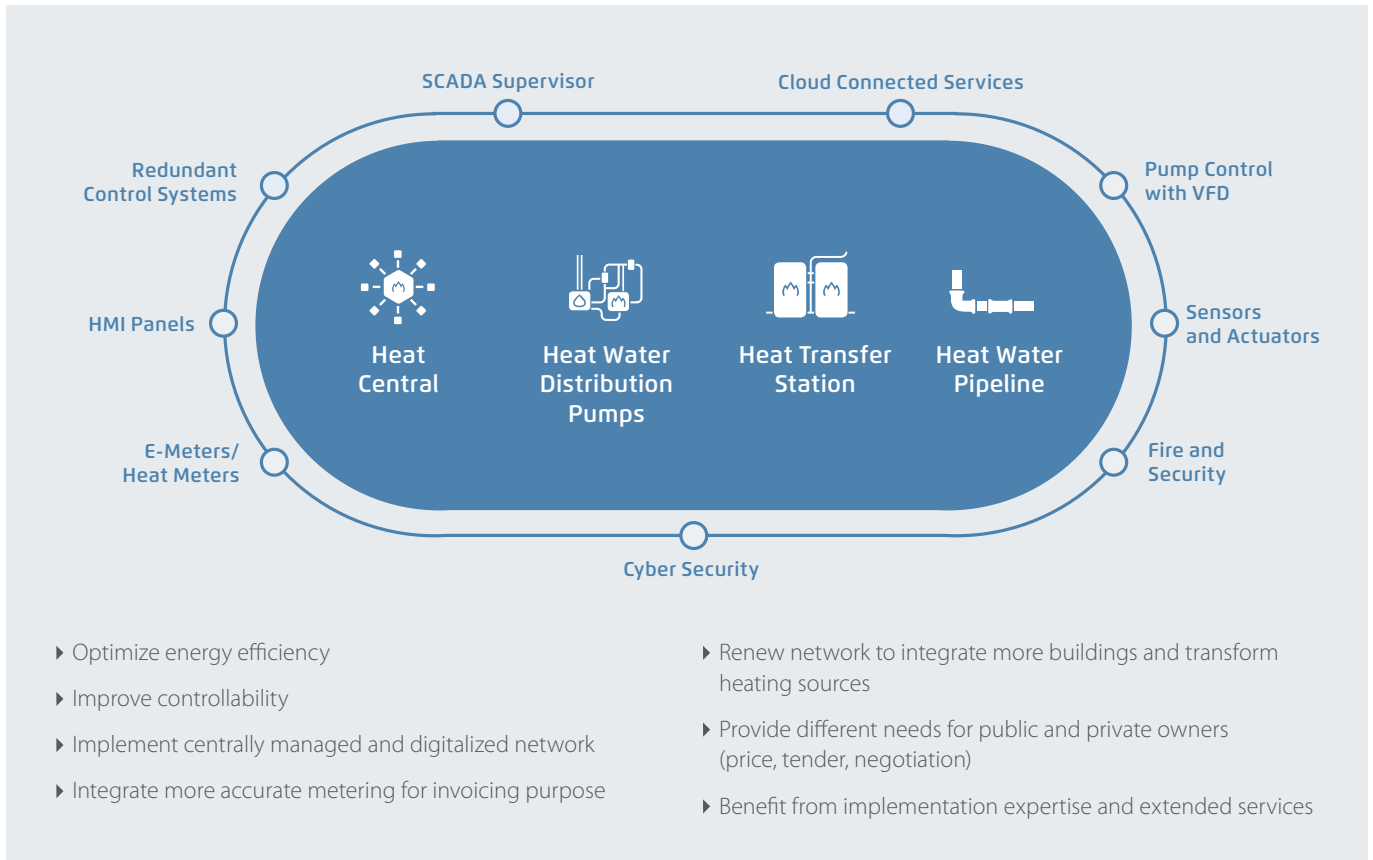
We provide smart control systems

▸ We support transition to **4th Generation of District Heating system** to develop the use of sustainable energy.

▸ Our **smart connected devices combined with sophisticated measurement systems and centralized management software** allow to integrate entire district heating network into a single platform.

▸ Our solution opens the way to **the highest level of energy effiency and extended controllability** for networks owners.

Our uniqueness
OneSystem Solution

SCADA Supervisor

Cloud Connected Services

Redundant Control Systems

Pump Control with VFD

HMI Panels

Sensors and Actuators

E-Meters/ Heat Meters

Fire and Security

Cyber Security

Heat Central

Heat Water Distribution Pumps

Heat Transfer Station

Heat Water Pipeline

▸ Optimize energy efficiency

▸ Improve controllability

▸ Implement centrally managed and digitalized network

▸ Integrate more accurate metering for invoicing purpose

▸ Renew network to integrate more buildings and transform heating sources

▸ Provide different needs for public and private owners (price, tender, negotiation)

▸ Benefit from implementation expertise and extended services

Solution architecture
Open, scalable, end-to-end solutions

Cloud

HONEYWELL FORGE

Integrated Software

Plant Controllers & PLC

HMI Touch Panels

ETS Controllers

Controls Gateway

Heat, Water & Electric Meters

Valves & Actuators

Temperature & Pressure Sensors

VFDs

Field Devices

Solutions that bring value to all involved parties

To investors, developers, building operator and managers

- Optimization of your operating costs
- Improvement of user comfort and network rialibility
- Precise invoicing thanks to accurate metering devices
- Design for long-term availability with life-cycle above 20 years

To specialist planners and consultans

- Experienced support during tenders
- Highest level of flexibility during and after implementation
- Adherence to deadlines and budgets despite uncertainty

To installers, system integrators and technical service providers

- Complete solution portfolio for the installation and commissioning of our automation technology
- Highly efficient engineering
- Reduction of wiring effort with our systems and control solutions
- High level of flexibility for retrofits and migration
- Complete network centralized and managed in a single software

Transform your network into efficient and connected platforms

We are involved in refurbishment of existing networks to transform heat sources, reach higher levels of energy efficiency, and implement best-in class controlling infrastructure. We help the digitalization of entire networks through machine learning and AI technology predicting heat load with multiple data sources integration, thus reducing day-to-day energy consumption, and preventing energy leaks.

Our portfolio advantages
A complete offering for all your needs

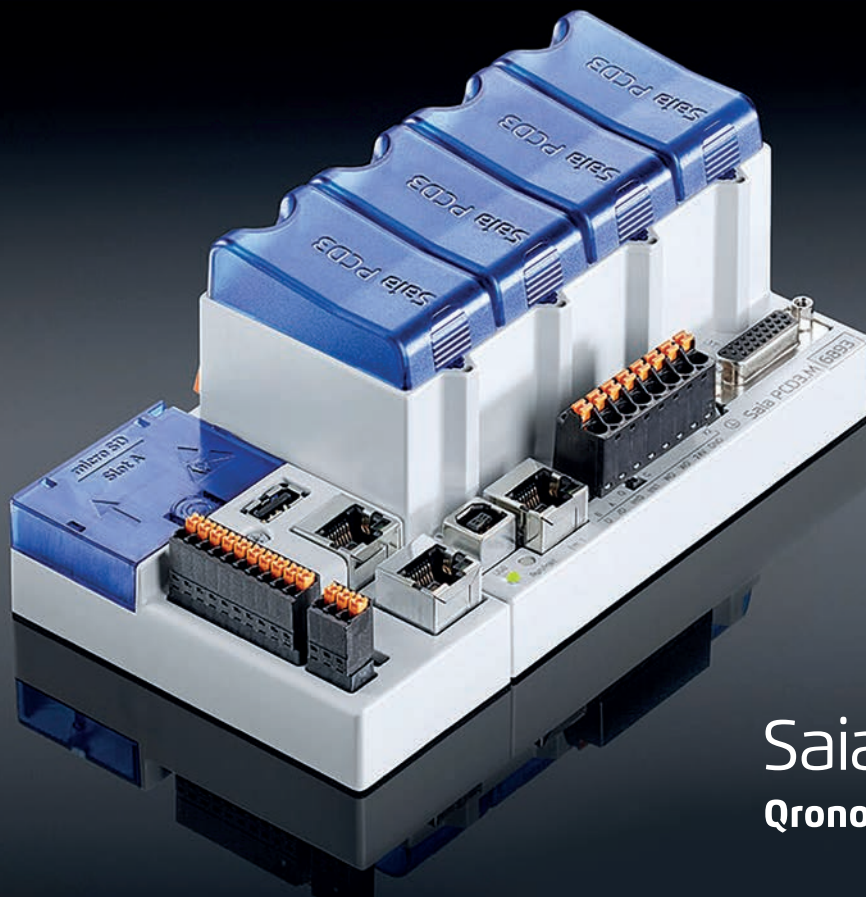- Complete offering including controllers, field devices and software to benefit from an "all in one" solution
- Open and scalable software to deliver a centralized system for operation, monitoring and energy optimization
- Flexibility and programmability
- Single pain of glass with cloud-based services
- Multi-brand portfolio generating flexibility per region
- Experienced partners with valuable networks
- Cyber secure & modular PLC with redundancy and application libraries for easy integration into BMS systems

QronoX IEC-Controller

Key features

1. Fully cyber secure PLC according to IEC62443 standard in combination with redundant CPUs to keep your installation secure without interruption for entire operations.

2. Open interfaces and specific communication protocols on Controller and Supervisor level to support the easy integration into BMS systems.

3. Single pane of glass with Supervisor and cloud based services for applications from HVAC, Power Supply, Energy Management, Fire & Security.

Saia PCD®

QronoX IEC-Controller

Cyber Secure operation for critical infrastructures

The QronoX IEC controller is developed and maintained according to strong Honeywell standards over the whole life cycle. It complies with the industrial security standard IEC62443 and is fully secured against cyber-attacks by:

▸ Encrypted communication

▸ Role based account management
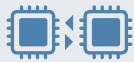
▸ Encrypted user filesystem

▸ Signed firmware

Powerful and efficient engineering tools provide flexibility and save cost

▸ PLC programming standard according IEC61131-3 industrial standard to protect your investment

▸ Benefit from a large programmer community to give you flexibility and independence

▸ Object-oriented high-level language programming for efficient engineering

▸ Comprehensive application libraries and templates for effortless engineering

Various network capabilities for full and seamless integration of all applications

▸ Smooth integration of industrial and BMS applications

▸ Support of industrial and BMS specific communications protocols such as Profinet, CAN, OPC-UA, Modbus, IEC60870-5-104, M-Bus, DALI, BACnet, MQTT

▸ Support for up to 14 modular communication interfaces per controller

High availability with CPU redundancy designed for mission critical applications

▸ Operating critical applications without interruption

▸ Investment protection and down time reduction

▸ Real time and secure operating system

▸ Hotstandby operation with bumpless switchover

Modular and flexible Input/Output for all type of sensors and actuators

▸ Fully modular I/O system

▸ Expandable up to 1024 I/Os

▸ Robust and proven PCD3 I/O modules

▸ Support of PCD3 remote I/O s for redundant CPUs

Maintenance free and large memory for application program and user data

▸ Large onboard memory expandable with optional micro SD card for up 32GB

▸ Battery-less operation

▸ Real time clock with >10 days clock retention

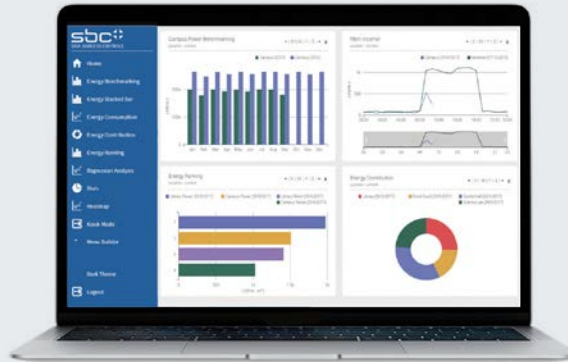# Cyber Security

QronoX IEC-Controller

Our promise
Peace of mind and efficiency

New or transformed network

Decarbonization has become more urgent than ever. The necessity to fight climate change led to transformations in many industrial sectors and the pace of public investments to decarbonize heating in Europe significantly increased. there is a real opportunity to reduce heating-related carbon dioxideemissions. District Heating will play a major role in coming years thanks to growing urbanisation, emerging cities, and the requirement to transforming heating systems in regions that have historically been extensively using coal as primary energy source.
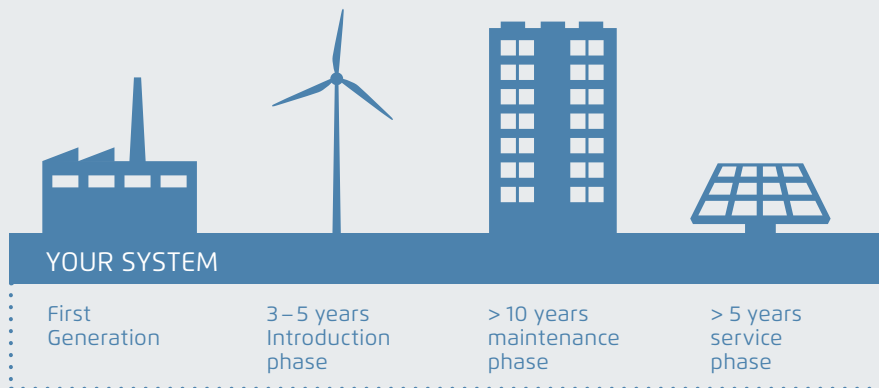
Next generation Supervisor

▸ **Openness**
Completely open system based on
standard protocols

▸ **Efficiency**
Seamless data migration – from all controllers
to presentation layers

▸ **Full Control**
Strong user rights management

▸ **IT friendly**
Compatible and secure system

Robust, compatible, and portable controls and field applications

YOUR SYSTEM

| First Generation | 3 – 5 years Introduction phase | > 10 years maintenance phase | > 5 years service phase |

Designed for long-term availability and innovations
compatibility 18 to 25 year life-cycle!

Case study

Large projects with experienced partners
across Europe

Sabur
Poland

Groupe E
Switzerland

TERMS CZ
Czech Republik

Wien Energie
Austria

Swiss
Design