



Remoska launches a revolution in manufacturing with modern IT systems from Soitron

“The digitalization included building a network communication infrastructure, establishing an on-premise data centre with cloud integration, deployment of energy monitoring (IoT), implementation of cyber security measures, implementation of IP telephony, coordination and integration of systems such as ERP, MES, warehouse management, and attendance.”

Zbyszek Lugsch
Soitron, Infrastructure Architect

1. BACKGROUND AND REQUIREMENTS

- The traditional Czech brand Remoska needed to build a new greenfield plant to **expand their capacity** and maintain competitiveness.
- The intention of the company's management was to use **cutting-edge technologies** for **industrial automation, robotization and digitalization** in the new factory.
- **Strong security** was one of the key requirements.

2. SOLUTION

- Through a selection procedure, Remoska selected Soitron for the architectural design, project management, and the implementation of information, communication, and software technologies.
- Soitron experts designed a **modern and secure technology architecture** to keep costs under control, including virtualization, the use of existing servers, and the integration of Software as a Service (SaaS) services, such as Microsoft 365.

3. RESULTS AND BENEFITS

- The digital transformation has enabled Remoska to **increase its competitiveness** and sustain its production in Europe.
- Digital technologies and their integration allow process improvement, better production planning and **streamlining, and energy consumption optimisation**.
- High security and smart architecture **minimize the risks of downtime** and outages due to cyber incidents or technical failures.
- Choosing Soitron as a single integrator for architecture design and project management relieved the customer of the worry and responsibility for integrating and aligning all systems and technologies.

Digitalization is not reserved for large multinational corporations; even industrial companies can adopt advanced technology solutions to achieve high standards in control and security.

Remoska, a well-known Czech brand with roots dating back to the communist era, is recognized for its popular electric pan introduced in the 1950s, now adorning over five million kitchen counters.

Seasoned businesses understand that constant business model innovation and technology modernization are crucial for long-term survival in the market. This holds true for Remoska, whose production plant, after nearly thirty years, had become outdated in terms of modern digital trends and had limited capacity for expansion.

Digital enterprise from the ground up

While some companies might consider relocating their production to Asia under similar circumstances, Remoska wished to preserve its identity as a European manufacturer, maintain maximum control over production quality, and safeguard existing jobs.

The company management made a decision to construct a brand-new greenfield factory in Kopřivnice, near their former production plant in Frenštát pod Radhoštěm. The goal was not only to significantly increase production capacity, but also to leverage

the latest technological solutions for more streamlined production and storage processes, ultimately reducing costs.

“Our vision was to build a plant with world-class industrial automation technologies that is fully digitalized and well-secured against cyber threats, and potential technological failures that could disrupt production continuity,” says Petr Vaněček, CEO and Managing Director of Remoska.

The management’s vision for the new plant included, from the outset, the construction of a research and development centre, showcase and retail space, and a modern drive-in warehouse with intelligent software management for controlling warehouse trolleys and overseeing all operations from receipt to registration to dispatch of items.

Through a selection procedure, Remoska selected Soitron as the integrator for the implementation of information systems, hardware infrastructure, and communication technologies.

Modern architecture at an affordable price

Soitron’s specialists recognized from the outset that Remoska, despite gradual expansion, was not a large enterprise with a generous digitalization budget. The philosophy was therefore to design a modern and secure architecture while keeping costs under control.

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Remoska, CEO and Managing Director





In practice, this meant intensive use of virtualization. Many devices fulfil multiple roles, providing high infrastructure availability and outage resilience. *“Critical parts of the IT architecture are redundant and secured, so the architecture has no weak points,”* explains Adam Horník, Senior Network Presales Manager at Soitron.

Naturally, the foundation of digitalization is network technology. Today, the network is as essential for the functioning of IT as tracks are to a train. Connectivity needs to be provided not only to computers, but also to all production machines, trolleys, forklift trucks, cameras, the attendance system and building management systems.

The network is also required for IP telephony, which is mainly used for internal communication at Remoska. For example, when a truck arrives at the warehouse, with a push of a button driver calls the reception desk, which remotely controls the gate opening and allows the vehicle inside after identification.

Remoska’s new factory is equipped with both wired and wireless networks interconnected by servers. The 10-gigabit fibreoptic cabling is mainly used to connect individual technologies, while laptops and devices such as sensors and readers can connect to the Wi-Fi access points.

To achieve higher security and availability, Soitron has separated the user part of the network from the industrial part, with all

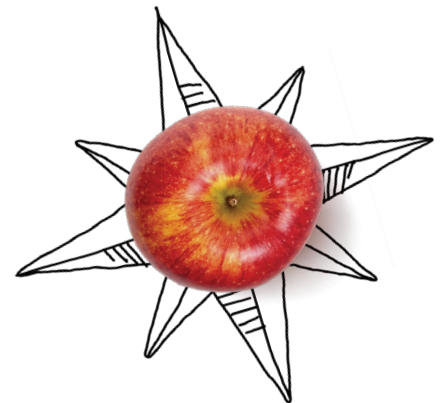
access strictly controlled and managed based on access rights. A matter of course is the use of Cisco industrial networking components, which are dust-proof and more resistant to moisture or high temperatures than standard devices.

Use of existing IT hardware

Alongside the network, the second fundamental building block of the digital enterprise is its server infrastructure. At Remoska, Soitron built it on the Cisco HyperFlex platform, Cisco UCS servers, HyperFlex Data Platform software-defined storage, and VMware vSphere virtual layer. *“Since the customer had existing IT hardware that could also be used in the new factory, we incorporated several older servers into the new solution, like backup for example,”* says Martin Kameniar, Infrastructure Business Unit Manager at Soitron.

Soitron was also responsible for the implementation of new systems, such as for production management, warehouse management, time and attendance, and ERP (Enterprise Resource Planning). One of the key implementations was the existing Microsoft 365 services, extended with Azure AD Premium to upgrade security.

In addition, the hardware infrastructure in the physical server room had to be integrated with the cloud, and make sure that both parts are scalable.



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Soitron, Senior Network Presales Manager



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Soitron, Infrastructure Architect

Flexibility and scalability are particularly important for the company in the context of the development of a new smart Remoska electric pan that can be controlled from mobile devices and collect telemetry data. As the number of electric pans connected at different times of the day will fluctuate considerably, the servers must have flexible capacity. *“Due to the varying number of electric pans connected at any one time, there was a need to provide flexibility in the use of server capacity. For this, the cloud is the best solution,”* adds Zbyszek Lugsch, Infrastructure Architect at Soitron.

Energy consumption under scrutiny

With a philosophy similar to that of designing the network – provide a modern solution at an affordable price – Soitron experts also designed an IoT-based energy monitoring system.

The solution is built on the LoRaWAN network designed for sensor connectivity. The first goal is to collect data on electricity, gas, and water consumption as easily and reliably as possible and send it to a central

SCADA system, where it is evaluated together with other data from the production process. The second task is to monitor various risk parameters from the factory that could cause extensive damage, such as increased condensate levels in compressors, signalling possible pump malfunction.

Security against cyber risks

As every digital enterprise is exposed to cyber risks, a key responsibility of Soitron was to ensure security for the new Remoska centre, both for IT and Operational Technology (OT).

Security is handled at the network level, where access to individual devices is strictly controlled using the Cisco ISE (Identity Services Engine). The system verifies what or who has the right to access the network and to what level. In other words, it doesn't just check the IP address, but also who is actually behind the device.

To enhance security, the IT part is strictly separated from the production environment technologies. Therefore, in the event

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of a security incident in the IT infrastructure, production may not be compromised. Additionally, the industrial part is segmented into nine physical and more than nineteen logical zones, protected by OT firewalls.

“Each zone in the industrial section can operate independently, so if an attack occurs and the machinery or equipment in one of them is compromised, it suffices to isolate the compromised part while the rest of the company can continue to operate,” explains Martin Vozár, Security System Specialist at Soitron.

The OT environment security complies with the ISA IEC 62443 standard, the most widely used and comprehensive standard for securing industrial control systems. To further enhance security, Soitron has implemented several additional security measures in the new factory, including two-factor authentication.

What’s next

The architecture also accounts for future development, such as the deployment of Cisco Cybervision. The current infrastructure segmentation with rigorous rule enforcement can expand to include content communication analysis and suspicious event detection. The company’s future plans also include the introduction

of location-based services to track the movement of production trolleys and monitor the movement of employees and other people within the factory premises.

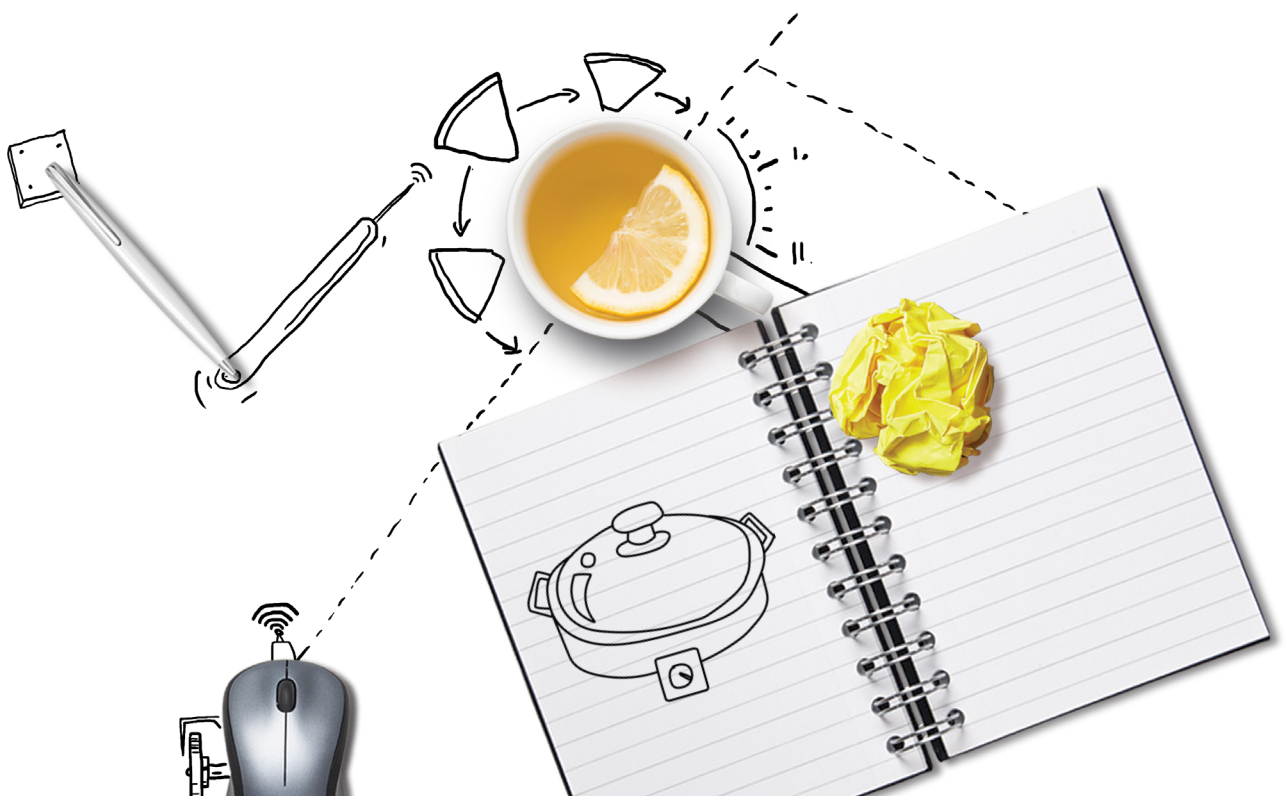
Expected benefits

The new Remoska manufacturing plant provides not just the opportunity for the traditional Czech brand to increase production capacity and expand its product range but, equally important, the modernisation of the plant in line with the Industry 4.0 concept, emphasizing automation and digitization.

Digital technologies – from cutting-edge connectivity and communication between IT systems and production machinery, to data collection and utilisation in production and warehouse management – enable the plant to better manage processes, plan and optimise production, and streamline energy consumption.

With strong security against both cyber incidents and technical failures, the company can prevent unwanted and costly downtime.

Ultimately, Remoska has increased its competitiveness in the international market and opened the door to new business opportunities, including possible production for third parties.



REMOSKA

MANUFACTURING



Soitron played a crucial role in the entire project, serving as the main integrator responsible for designing the entire technological architecture and coordinating systems from multiple suppliers, as well as project management. This model is particularly beneficial for companies that do not have a strong inhouse team of IT experts.

Soitron also provides training to Remoska and ensures post-implementation care and support through an IT systems service agreement. Thanks to this agreement, Remoska can be sure that any technology operation or change requests will be addressed by Soitron's staff quickly, reliably, and securely.

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REMOSKA s.r.o.

Remoska is a traditional Czech producer of quality kitchenware with more than 65 years of tradition. It produced its first baking pan as early as 1957. Later, production expanded to include a new line of pots, pans, kitchen accessories, stainless steel cookware and electrical dishes. Today, Remoska is a renowned brand that offers new trends in modern cooking. In Kopřivnice, it built a new production plant with top technology. A new division of the company - EFC Design, dealing with OEM production, was also created. They organize their own cooking school in the professionally equipped culinary centre.

www.remoska.cz



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Soitron is a Central European integrator operating in the IT market since 1991. The company's philosophy is to constantly move forward, and that is why it is a leader in implementing unique technologies and innovative solutions. It offers its clients products and services in the field of robotization and process automation, cybersecurity, data centres, IoT solutions, IT outsourcing, communication and network solutions, IT support and advisory. Its product portfolio includes smart police car solutions – Mosy and cybersecurity services – VOID Security Operations Center.

Soitron is a part of the Soitron Group and employs more than 850 international experts. The group brings together professional teams in Slovakia, the Czech Republic, Romania, Turkey, Bulgaria, Poland, and the UK.