

Contents

Editorial	//	01
Eng. Ahmed El Sewedy message	//	02
In the spotlight	//	04
Together we can achieve more	//	26
Manufacturing the future	//	32
Shaping the future	//	37
Building excellent relationships	//	38
Human resources	//	40
Digital transformation	//	42
Sustainability	//	44
Commited to quality	//	48
Success stories	//	50
Elsewedy Electric	//	60
News	//	62



Editorial

Dear valued reader.

Together with our employees, partners, and customers, we are constantly searching for new ways needed to achieve and execute our objectives. As we seek to develop solutions to contemporary global challenges, numerous initiatives from various strategic directions are ongoing in Iskraemeco. The inflation that has occurred has further increased the complexity of the supply chain. Therefore, we need to remain cautious about cashflow and constantly strive to improve our effectiveness and efficiency.

Our main business, which consists of smart energy and water meters, data management, and services, compels us to rethink and adjust our strategy and demands a shift in our focus toward e-mobility and connectivity to meet current market expectations.

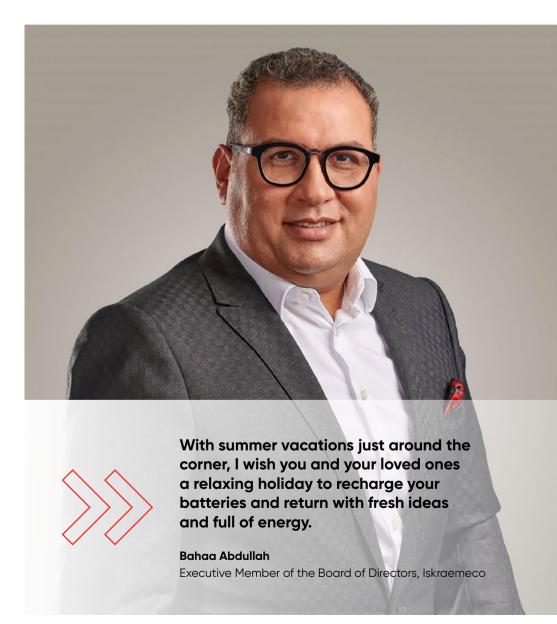
We are committed to expand our team's expertise, competencies, and capital expenditures, as our employees are the main driving force behind our organic growth. Additionally, we are focused also on inorganic growth, which includes extending our portfolio and increasing market presence. With the support of our mergers and acquisitions team, we were recently able to acquire Holosys, in order to increase our business value and provide even more comprehensive smart solutions. With this acquisition, we are adding high-value electronic IoT devices and information technology solutions to our portfolio.

One of our accomplished inorganic growth targets was Data2050 and its incorporation into Iskraemeco's strategy and vision. Data2050 is a unique incubator and accelerator that helps us expand and grow our portfolio, add new innovative solutions, supports the recruitment of exceptional talents, and provides our customers with cutting-edge knowledge.

As the famous saying goes, there is no planet B. The moment has come for us to deliver a holistic and sustainable solution to the market, a solution that will improve energy management while responsibly

managing resources. We will address this topic in the upcoming edition of Engage magazine, but all we can say for now is that after this acquisition, we will be able to offer the market an innovative eMobility solution and a smart EV charging experience.

Moving forward to the next challenge, overcoming obstacles by discovering new solutions, and mastering the art of ambition is all intertwined with our mindset and abilities. We will continue to work together and innovate to expand, succeed, and ensure a better life for future generations.





Message from Eng. Ahmed El Sewedy

We have had a challenging couple of years, facing some difficulties in the energy industry as a whole. The pandemic that caused global economic instability, followed by the Ukraine crisis, has greatly affected and changed our lives, forcing us to adjust our daily business several times. With so much happening, it was easy to lose perspective and momentum, but together we have overcome the obstacles thanks to everyone's optimistic attitude, energetic approach and continuous hard work.

We have showed what it means to be a team in such difficult times, how we can be more successful and push boundaries if we support, influence and understand each other, and work together as a team.

Before I continue to talk about Iskraemeco, our future, and what is important to us, I would like to express my appreciation for your efforts so far. I am proud of what we have achieved and the progress we have made. And I want to express my gratitude for the opportunity to work with you: my colleagues, partners, and customers.

At Iskraemeco, we continue to develop advanced solutions for smart grids, smart cities and e-mobility by leveraging new technologies that enable us, our customers and our partners to operate more efficiently and achieve our goals while saving energy and reducing the environmental impact. We will continue to focus on developing comprehensive energy and water management solutions that meet and exceed our customers' needs. While today's





challenges are likely to persist, we will continue to research and innovate next-generation energy products and solutions to pave the way for the future.

I believe that investing in technology and people continues to be crucial to our success. We can drive innovation, remain competitive, and stay relevant only by continually investing. Our main goal remains to provide our customers with the best possible products and services while achieving operational excellence.

Our course is set for 2022. We will accelerate the transition to decarbonization, digitalization and decentralization while developing our offerings that benefit our customers and help our markets thrive.

I look to the future with great optimism. I believe in both Iskraemeco and Elsewedy

Electric as a whole. I believe in the future of energy solutions. We have the power to seize boundless opportunities, the expertise to create trends, and the courage to drive change. Let us focus our efforts together on growth and a better future for each of us and the society we are responsible for. With your support, anything is possible.



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We warmly welcome Holosys, a new member of the Iskraemeco Group

At Iskraemeco, we view emerging communications technologies as a driver for strategic growth. They enable the creation of an interconnected ecosystem that uses machine-to-machine (M2M) devices, which are vital aspects of the energy and water value chain. This opens up numerous options for transforming business processes into value-driven solutions enabled by modern technology and concepts.

With the acquisition of Holosys, Iskraemeco has gained an important partner. With Holosys' solution-based strategy, new managed services business models, and robust end-to-end solutions, we expect to further strengthen our competitiveness and expand into new markets. Apart from the technological and economical synergies, Holosys' portfolio, and expertise in communication solutions, most notably low-power narrowband IoT, and services bring added value to Iskraemeco's smart metering applications for water, gas, and electricity. We will be able to pursue additional smart metering opportunities and continue to exceed our customers' expectations by translating our expertise, enthusiasm, and commitment into solutions that improve customers' performance, productivity, and efficiency.

Holosys is a provider of innovative electronic Internet of Things (IoT) devices and Integrated Control Technology (ICT) solutions. The company's primary focus is on research and development, as well as manufacturing AMR electronic devices and ICT solutions employing cutting-edge communication technologies and trends. Their product line includes a variety of devices ranging from pulse readers through repeaters, receivers, sensors, gateways, and antennas, as well as supporting software and platforms for remote reading of water, gas, electricity, and heat usage and their solutions are currently in use in more than 50 countries across five continents. Employee skills, enthusiasm, motivation, and a strong feeling of community will all complement Iskraemeco's beliefs.







In the light of this significant milestone for both companies, we had a privilege of interviewing Tomislav Lekic, CEO and co-founder of Holosys.



Opportunities for growth and development are key components of every business's success. What motivated you to join Iskraemeco?

We see Iskraemeco as a powerful and valued partner primarily due to its considerable experience in energy and water metering, meter production, and advanced software solutions. For us, the most obvious benefits of this acquisition are a broader market reach and a greater level and quality of customer service.

One of the main reasons for this acquisition is that the companies have complementary skills, particularly in the provision of battery-powered IoT devices. This is also an exciting time for our developers, as several new initiatives are in the works that will have a significant impact on the rapidly increasing worldwide IoT market.

What are the main benefits coming with the Holosys portfolio?

Holosys' AMR/IoT product portfolio includes a variety of pulse readers, repeaters, receivers, sensors, gateways, and antennas, and it is therefore reasonable to claim that we provide a comprehensive communication and monitoring solution for the Internet of Things. We design and manufacture over 30 electronic devices, as well as the supporting software and platform for remote water and energy consumption monitoring.

The primary benefits always boil down to the technology that powers the devices. At the moment, we are concentrating our efforts on our NB-IoT solutions, which provide numerous benefits to our customers, including increased power efficiency, data transmission dependability, cost savings, ease of maintenance, and signal stability.

Additionally, we are glad that our devices are environmentally beneficial by definition, as they contribute to optimal use of scarce resources, such as water, and enable detailed monitoring of energy consumption.

What role do you suppose Holosys will play in Iskraemeco's transformation? What changes do you anticipate?

In respect of our involvement in transformation, we are firm believers in the importance of sharing knowledge and expertise in any kind of collaboration. As a result, Iskraemeco will benefit from our experience with smart meters and energy saving technologies as it expands into new markets. Additionally, our diverse AMR product line will undoubtedly assist us in acquiring new customers in the water and energy industries.

And furthermore, businesses which provide a comprehensive, end-to-end solution and services add significant value to their customers. As a result of our extensive knowledge and diverse product offering, both Holosys and Iskraemeco have gained an essential strategic partner.

What can we expect from Iskraemeco and Holosys in the future?

We believe that this collaboration will enable both companies to strengthen their positions in the constantly growing AMR/IoT sector. Moreover, it will bring value to our customers by allowing us to broaden our portfolio of products and solutions. As a result, the acquisition strengthens our position in the global market while allowing us to continue focusing on and developing new, innovative IoT devices.



SYMBIOT is ready to transform the smart metering business, leading to a better future!

Aleš Glavina and Nouran Bahaa

From simple smart home connections to massive utility grids, creating and managing smart utility environments requires significant effort. Iskraemeco assures that our software suite, Symbiot, provides an up-to-date solution that is enhanced and tailored to our customers' needs.

Symbiot is a future-proof and adaptable intelligent software suite that enables easy, highly secure and automated management of any utility business, based on real-time data processing.

Strategic focus in meeting market demands

Our software suite Symbiot consists of three main applications that are created to meet customer needs. These applications are Head-End-System (HES), Meter Data Management (MDM), and FieldAssist.

As Iskraemeco, we provide two releases per year by incrementally adding or extending features headed towards the latest technologies. Improving energy efficiency is a major trend for the meter data management. Another continuous trend is the mobile field technology, which we are addressing through FieldAssist. It is a tool intended to support field-based meter operations like meter commissioning, meter

data reading, meter parameterization and meter firmware upgrade. Consequently, Symbiot's MDM and FieldAssist solutions are given a deliberate and strategic emphasis in response to market expectations. Prominent developments are necessary in the market of meter data management in order to improve energy efficiency. These developments are driven by price volatility and rising energy usage, as well as a growing preference for more efficient energy management systems.

We aim to address this matter with MDM functionalities, through a strategic approach. Our mission is to provide our customers with an ability to analyze data from numerous sources (multiple HES systems) and prepare it for use by other higher-level systems (ERP, billing, customer portal). Validation, aggregation, estimate, and prediction are all available at the consumption level.

However, there may be concerns regarding cybersecurity incidents that are nowadays quite common. In tackling these challenges, Symbiot uses a Key Management System and Public Key Infrastructure to ensure high-quality authentication and encryption methods for data transmission and to secure overall operations.

SYMBIOT offers a real-time value with detailed accountability and flexibility

Backward compatibility is guaranteed by the architecture and design, which is built on solid foundations of processing and assessing the product's quality. In addition, automated tests are implemented and executed with each build. When delivering new features, we commit to provide our customers with tests to ensure there are no unintended changes to existing functionality. Symbiot is developed using a modular construction, which makes the software suite adaptable to any market and capable of delivering the required models. In addition to the devices we already support by default, we enable external development companies to easily create integration drivers or integrate third-party devices into our platform. We do not solely bas on Iskraemeco's head-end-system; instead, we provide a head-end-system that is meter-agnostic. This enables the collection of readings from electricity, water, gas, and heat meters, as well as gathering of data from any data-gathering device or sensor.

SYMBIST

POWERED BY ISKRAEMECO

SYMBITFieldAssist

The power is in your hands





With Symbiot FieldAssist, the power is in your hands to gain a future-proof answer to your needs.

To discover more about this promising solution, we have recorded a webinar that covers FieldAssist's key features, architecture overview, live demo, and much more.

Check it out now!



Due to the increasing demand for mobile field technologies, Iskraemeco has worked to incorporate the latest trends into a final solution. We are excited to announce the launch of the ultimate tool for meter field operations, a tool that allows you to overcome any obstacle in the field.

Symbiot FieldAssist is a modern and user-friendly solution designed by Iskraemeco. It is intended for local meter operations in the field – meter commissioning, data reading, parameterization, and firmware upgrade.

The SYMBIOT FieldAssist in a nutshell

- Simple-to-use utility tool runs on Android platform. It is designed for field technicians and enables meter installations, readouts, and local maintenance tasks.
- Symbiot FieldAssist supports electricity meters and battery-powered wM-Bus meters (water/ heat/gas) using the efficient Walk-by/ Driveby readout method.
- The use of work orders gives a clear overview of daily tasks, ensuring efficient travel between meter locations using Google Maps navigation.
- The solution utilizes a two-way communication with the center for online exchange of work orders, commands, operational logs and collected data.
- The tool is highly secure. It enables seamless operation with any Key Management System without exposing the meter keys. Besides, it offers an offline operation mode when no internet connection is available, assuring the field technician to complete the mission under any circumstances.



SYMBIUT Water

Software suite for Smart Water

Mariia Iglova Andreuzzi

Iskraemeco offers single-point management access to water, electricity, heat and gas meters, using the same infrastructure for multi-utility devices. This reduces costs per metering point and increases overall efficiency, providing our clients with a comprehensive data flow that aggregates data from smart water meters as well as data management and analytics systems.

Symbiot Water consists of six applications:

- Symbiot Smart Metering Platform and Symbiot FieldAssist,
- NB-IoT device management center,
- LoRaWAN™ network management center,
- · Data visualization and analytics,
- Customer portal and application,
- · Billing portal.

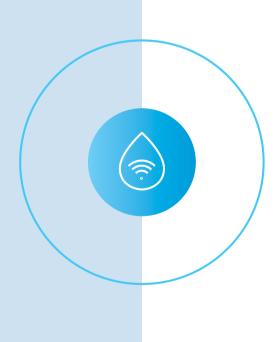
Each app can be used as a stand-alone tool or in combination with other products depending on the requirements (AMI or AMR).

The software suite and all its applications are designed to be used in the installation, remote reading, maintenance and configuration of smart meters and other devices. The apps are compatible with all Iskraemeco meters. Seamless integration with third-party meters is possible through a powerful SDK (Software Development Kit) or API.



Benefits

- Modularity and flexible licensing.
- The reliable and fully scalable platform with a possibility of system expansions, changes in legislation, and/or operational requirements.
- Open standards and technologies ensure effortless integration with existing legacy systems and minimize your custom development costs.
- The software suite provides instant notification of any exceptional condition on the water network, which means that any network issue can be quickly solved.
- End-to-end security using the most advanced methods available.



1. Symbiot Smart Metering Platform

The Symbiot Smart Metering Platform includes HES, MDM, KMS, integration, meter reading and optical reading functionalities for electricity, heat, and water meters. It is a modular, service-oriented and scalable head-end system solution. The solution enables access and analyses of massive amounts of data, providing insight, facilitating data-driven decisions, and improving the satisfaction of utility operators and end-users.

The platform performs Meter Unit setup, health checks, firmware updates, load disconnection and reconnection, and encryption key management. Additionally, it receives events and alarms from the meter units and handles and forwards them to target systems, e.g. MDM. The Symbiot Smart Metering Platform stores data, performs limited data validation, and ensures secure delivery of relevant data to the MDM and third-party systems.



Symbiot HES

Focused on multi-source data collection, Symbiot HES uses a meter-agnostic approach with the ability to process any device data (electricity, water, gas, heat meters). The solution is designed to simplify the management of the meter readout process. The application is available through the web portal (web server).

Symbiot MDM

Symbiot MDM is responsible for processing, storing, archiving, validating, estimating and analyzing the meter data, in addition to ensuring secure delivery of relevant data to target systems (such as billing, customer portal, CRM, BI, and analytics).

Symbiot FieldAssist

The solution is designed to simplify field work and give field workers a comprehensive overview of their daily duties. It supports drive-by and walk-by solutions for battery-powered meter data collection as well as the ability to configure field work and import work orders.

Consumption data can be recorded by field teams using mobile transmitters and mobile reading devices (Android tablet or smartphone). The reading device is then synchronized with the Symbiot software suite. Encrypted communication is used between the central data management software and mobile reading devices.





The main advantages of fixed meter reading using LoRaWAN™ and NB-IoT are:

- Automatic remote water meter readings.
- Higher frequency of data collection (e.g. twice per day).
- Higher resolution of consumption data (e.g. every 2 hours).
- In-depth analytics based on collected data.
- Quick detection of leakage and tamper alarms.
- Security of data transfer.
- Possibility to predict consumption and make forecasts on a daily or weekly basis.
- Predictive maintenance i.e. better organization of the working process (a smaller team is needed to manage water meters).

2. NB-IoT device management center

NB-IoT device management center is a web-based platform for remote device configuration for multiple tenancies and users.

The main function is device administration:

- Remote configuration
- OTA FW upgrade
- Locations
- Mass commands



3. LoRaWAN™ network management center

Our meter reading solution is designed to transmit the consumption data from water meters to a software platform by using LoRaWAN[™] technology. Data reading is performed over a public or private LoRaWAN[™] network. The data collection process is automated, eliminating the need for manual readings. The collected data provide a deep insight into the residential, commercial and industrial water consumption. Iskraemeco offers a private LoRaWAN[™] network supported by the management center.





4. Data visualization and analytics

Analytics aggregates data from different systems within the utility. It delivers reports and key performance indicators (KPIs) to employees at various organizational levels to enable them to make the right decisions and perform tasks efficiently.



5. Customer portal and application

Our web-based user-friendly application enables utility customers to check everything they need to know about their water consumption, see and resolve all water use related issues, create easy-to-understand water consumption profiles with various charts/graphs, estimate billings, and make more informed decisions about their future use of resources. Users can visit the portal at any time and benefit from fully customizable dashboards that ensure detailed control over water use and may potentially lead to optimized consumption and cost reduction, as well as long-term behavioral change.



6. Billing

The software module covers the supply invoicing process, automatic creation and insertion of reading sheets, procedures and activities for automatic generation of a large number of invoices, as well as all later phases of customer relationship management (communication, changing customer data and conditions, consumption tracking, payment tracking, data history tracking, etc.).



To learn more about Smart Water Software Suite please download our new brochure.









C&I + Grid meters are massively intertwined with Power Quality monitoring

Abdelhameed Qotb and Nouran Bahaa

As we dive into energy management, we see that the metering world is shaped by everchanging trends. To build a competitive edge, a company should be aware of these trends while maintaining the flexibility to apply them and meet customer needs. The recent industry trends include power quality indicators, which provide utilities with accurate information they need to make informed decisions.

Customers often take reliable and continuous electrical supply for granted, especially in developed areas, without considering what it takes to obtain high-quality power supply from distributed generation and maintain its quality level for consumers.

Diving into the importance of Power Quality

There are a variety of reasons that highlight the importance of monitoring power supply quality.

- Higher efficiency of power supply: under quality power supply, your equipment will operate efficiently and consume less, mainly due to the reduction of losses from overheating or a breakdown caused by unstable or low-quality power supply.
- Cost efficiency and sustainability: saving money and making a profit at the same time. Imagine investing in protecting your machinery by minimizing its wear and tear and lowering its consumption, thereby reducing your carbon footprint.

Identifying problems with Power Quality

Poor power quality can occur for a number of reasons. Service continuity concerns are the most common and easy to spot. However, there are other electrical issues that are more difficult to detect. Power interruptions, harmonic distortions, voltage sags and swells, current fluctuations or asymmetry, flickers, frequency and power factor changes are just a few of the most common risks.

Taking a deeper look into Voltage Quality

To gain a better understanding of power quality, it is necessary to take a look at how voltage quality works. The term voltage quality refers to a wide range of voltage disturbances and variations in voltage magnitude or waveform deviations from ideal values.

Every consumer connected to the power grid has the ability to influence the quality of the delivered voltage at their own connection point or at other connection points of the power grid. Any voltage quality control must take into account both the costs incurred by individual consumers due to equipment failure or damage, and the additional direct or indirect cost increases for strengthening the grid, which could lead to higher prices for all customers. Voltage disruptions, on the other hand, do not affect all consumers in the same way as interruptions.

For this reason, Iskraemeco meters provide both end consumers and utilities with comprehensive and time-stamped voltage monitoring capabilities, including:

- Voltage levels, sags, swells, cut detection and registration, under and over limits, with configured limits as per different standards or operation needs.
- Voltage maximum and minimum of present day and the previous day.
- · Voltage asymmetry detection.
- Phase voltage failure registration.

Once the voltage monitoring is under control, another perspective on other power quality components can be explored. These include: **Current Monitoring** (unexpected missing currents, overlimit current values, currents without voltage detection or negative energy flow), **Current Asymmetry**, and **Total Harmonics Distortion** for voltage and current waveforms, as well as frequency monitoring for values below or

above particular thresholds, followed by power factor monitoring for low values to identify the necessary corrections.

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Since voltage quality is the most technically difficult aspect of electricity supply quality, selecting appropriate indicators and setting thresholds requires close observation of each and every disturbance. Iskraemeco's meters are designed to provide power quality indicators that track voltage variations over short periods of time (up to 3000 samples every 10 minutes) and monitor the variations over a week, which provides utilities and customers with valuable insights into voltage behavior over time.

These include:

Slow Voltage Variation Indicator: a slow voltage variation indicator is implemented in the meter to present RMS voltage value behavior.

Voltage Distortion Indicator: the maximum voltage THD value within the measured period is represented.

Voltage Unbalance Indicator: the meter determines the unbalance of the supply voltage. The unbalance is calculated by measuring phase voltages and phase angles.

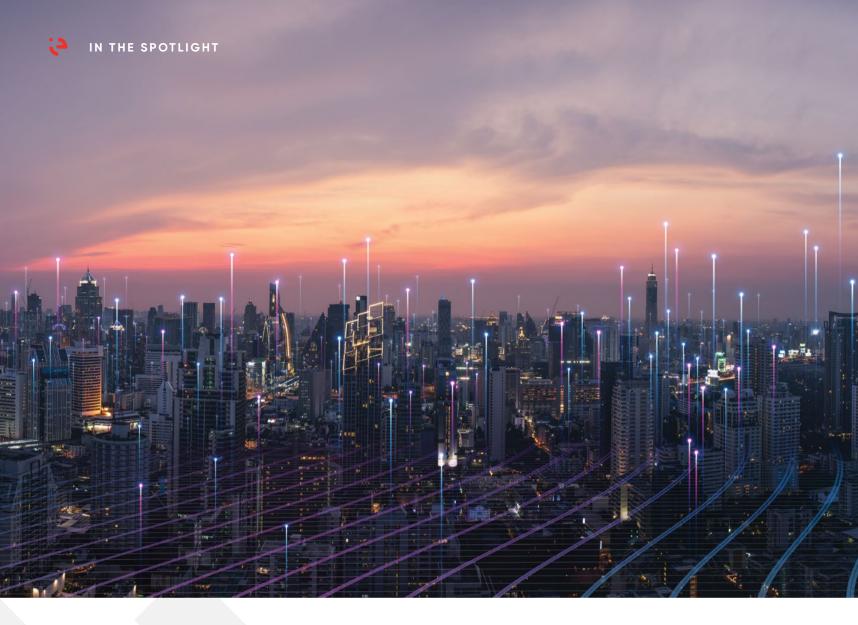
Voltage Fluctuations Indicator: long term and short-term flicker severity is calculated, as specified in the IEC 61000-4-15 standard.

Iskraemeco's C&I and Grid applications unleash greater connectivity

Power quality is not just a concern for end users. All grid stakeholders – from generation, suppliers, transmission, distribution, and the end user – place equal importance on power quality. Several international and local standards have been established to control and ensure a certain level of stable and high-quality power supply, and in most cases compliance with these standards is mandatory. Through precise monitoring procedures, we ensure that our customers receive consistent and reliable measurement data.

The architecture of Iskraemeco's C&I and Grid applications allows for multiple connections to the meter, whether it is a utility monitoring many nodes across the grid with a point-to-point connection, or a facility that wishes to seamlessly integrate the meter into its SCADA system. A hybrid connection, on the other hand, allows an integration into the customer's system while still connecting to a utility at the head end system.





Technology Design Center - reliable, agile, successful!

Primož Puhar and Nina Merše

The Technology Design Center at Iskraemeco is a hub for technological innovation, design, development, research and testing. Employees, customers and partners work even more closely together here to develop new products and solutions for the future, bringing together diverse ideas and concentrating on globally significant development initiatives.



Within Strategic Engineering, we identify and analyze brand new technologies that could help us in the future to maintain our competitive advantage in the market. We perform continuous technology scouting and manage opportunities as part of a strategic technology roadmap. At the same time, we look for synergies to collaborate and participate in research projects with other companies from different areas and industries.

Through Design House, we manage existing platforms such as smart residential meters, data concentrators, and metering software solutions. Understanding the customer's pain-points is essential for coordinating the content of a future project and develop optimal solutions for both parties. Already in the project planning phase, we work closely with product management to ensure that we are doing the right thing for our customers as part of the project, while expanding our product portfolio.

In the third stage, we start implementing the project and strive to complete the necessary activities as effectively as possible through the Embedded Systems and Software Development departments. As we are usually working on 30 to 40 projects simultaneously, a clear overview of present and future activities helps us to be constantly aware of potential risks and to take prompt action.

At this stage, it is very important that we identify the most strategically important projects for our company at any given time, coordinate all stakeholders on an ongoing basis, and are highly agile, i.e. we respond proactively to constant change.

In the last stage, our Test and Validation Center ensures that the customer receives exactly what is required. The implementation of this stage requires maximal agility. To this point, the center is actively involved in the review of activities and, in order to meet the deadlines, sometimes even involved in the execution ahead of schedule.

The Project Management Office coordinates all four phases of development and the Technology Design Centers in Slovenia, India, and Egypt through centralized project management. The transparency of the overall execution of all projects depends on the project managers' ability to successfully organize and communicate the content of an individual project. They are also responsible for managing the risk of the projects and reporting on the status to the various stakeholders in the company.

However, none of this would be possible without a dedicated team. Recent initiatives concerning the shortage of material for our production have made this point abundantly evident. We collaborate and operate on a global scale, and we include new employees around the world to acquire new knowledge and additional skills. In addition to the central hub in Kranj, we have established technology development hubs also in Cairo and Calcutta, and we have several more expansions planned. The result is that the Technology Design Center has become more unified in all key areas including mastering key technologies, understanding and completing key activities for implementing projects for major customers, successfully implementing and validating projects, increasing expertise and, last but not least, improving the organizational climate.



Supply chain managament

Managing supply chain disruption

Gašper Binter

In recent years, we have been facing extremely challenging macroeconomic situations that have strongly contributed to the supply chain, logistical constraints, shortages of components and raw materials, price pressure on the market and, more recently, inflation. During this time, we have repeatedly revised and updated our scenarios to mitigate such risks arising from global challenges.



The Covid-19 pandemic, logistical bottlenecks, increasing shortages of rare earth components and consumption of electric vehicles, telecommunications issues, 5G, mobile devices, as well as natural disasters have produced what we call a 'perfect storm'.

Despite all the precautions we had taken in the past, a certain degree of damage was inevitable. We had to adapt quickly and find new sources and solutions immediately.

As we tried to navigate our way through the 'storm', it became clear that our strategies, such as dual/multiple sourcing, contractual relationships, and partnerships with direct producers, have a really positive effect on mitigating unforeseen market challenges and supporting our business.

In addition, standardizing components across product families, tracking and localizing our manufacturers' production sites, and sourcing raw materials for key components, helps us understand the situation (neon gas crises) and change sources of supply when possible. But most importantly, it helps us to make the right decision in selecting new partners, components and solutions to be introduced in our platforms.

Understanding the technologies, knowing the sources required to produce components and the locations of our producers as well as our local market presence, improves our supply chain, reduces lead times, and ensures capacity with our partners.

A great relief has come in the form of cooperation and support we have received from our partners and Iskraemeco colleagues from Africa, China, Europe, India, the Middle East, and the United States. Today, we are present in all the most important material markets in order to obtain the best possible support and understanding of local market trends. In today's world, it is very important to identify and acquire the right data as quickly as possible in order to manage business successfully and prevent minor issues from escalating into uncontrollable situations. In order to provide the best possible service, Iskraemeco's team keeps a close eye on the situation and is tasked with finding new ways to manufacture and deliver our products to you as quickly as possible. As your partner, our ultimate goal is to ensure that you are successful and that yours and our business remain safe and secure.







The evolution of the supply chain: Shaped by global situation

Nina Merše





Interview with Janez Bitenc, Head of Component Standard Support, Iskraemeco

The market environment is becoming increasingly challenging. To adapt to ongoing change, companies need to ensure that their supply chain processes can be evolved and improved all the time. Cross-functional collaboration and implementation of best practices enable an efficient supply chain that creates value for the customer. Janez Bitenc, Head of Component Standard Support at Iskraemeco, spoke with us about the supply chain activities our company is engaged in, how we have adapted to the current situation, and what opportunities lie ahead.



The supply chain is a vital foundation of any company's operations. Could you explain how the supply chain ecosystem works in the metering industry?

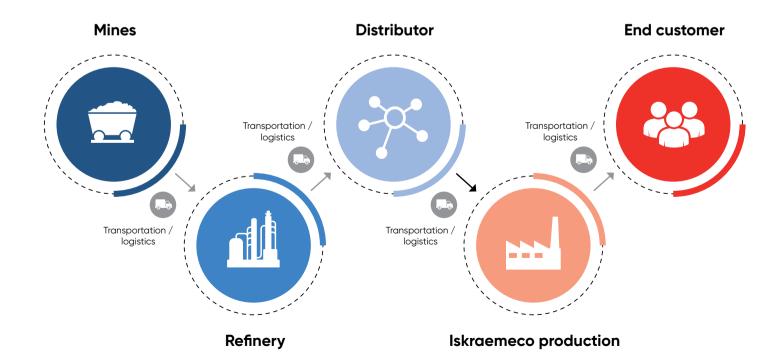
First, I will outline the typical elements of the supply chain. The supply chain starts with the mines, where raw materials are excavated and delivered to refineries, sub-suppliers, and finally to the suppliers who manufacture the parts among which we then select the most suitable ones to be used in meter functions. Typically, the material is delivered through distributors to one of Iskraemeco's facilities, where cross-functional teams consisting of staff from strategy, operational supply chain, planning, logistics, documentation, quality, finance, and other departments work together to ensure that the material is delivered to the production team on time. Once all production processes have been completed, the finished product leaves the company and makes its way to the end customer, either directly or via a distributor. Logistics services with their multiple modes of transportation such as train, ship, freight, or plane, ensure prompt delivery, acting as a glue between each production step or location.

Now imagine that the final product typically consists of 100 to 800 lskraemeco-specific parts, each of them made up of three or more alternative manufacturer parts, each of these again coming from its own supply chain. A truly interconnected world where a single global event may have a significant impact on supply arrangements.

Many stakeholders are included in the process. How does Iskraemeco manage to connect all of them?

Long-term success relies on strong relationships and the support of partners even during difficult times. Iskraemeco shares its internal policies and values with its business partners and provides them with support and training so that they can meet Iskraemeco's requirements. Manufacturer audits are a possible continuation of the initial contact, where the customer and the supplier meet in person to align or redefine the expectations from both sides.

As the number of stakeholders increases during the approval process of the manufacturer's, distributer's or Iskraemeco's internal part, this needs to be coordinated through well-managed processes and teamwork, which is a basis for a normal and effective operation. Acquiring and maintaining a minimum set of competences is an important task, handled mostly by managers. Any early investment in equipment, as well as people and knowledge, will pay off in the form of seamless operation on all levels, fewer production delays, and fewer complaints and quality-cases. We must nurture both internal and external relations in order to move forward as a team.





How does Iskraemeco manage supply chain risk?

Change is the only constant in life and in business and supply chain is no exception. Even the best prepared companies are nowadays put to the test.

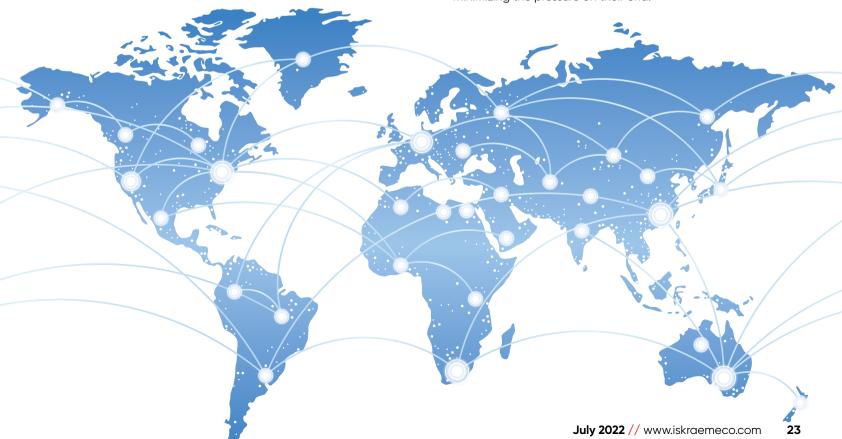
The recent global situation has shaken the world to the core, pushing it to spiral from crisis to crisis, testing the companies' responses and flexibility. As the uncertainty continuous, we are beginning to accept this a new normality, and adapt. There are quite a few events that are likely to (re)occur in the future and we must be ready:

- Production disruptions due to pandemics like Covid-19
- Logistic restrictions
- Energy crisis, limited access to energy resources, along with cold winters, leading to power reductions for production companies
- Disruptions in the availability of raw materials, such as neon gas, which is used in the lithography process of semiconductor manufacturing
- **Economic crisis**, shifts in global economic power, new trade agreements, limited access to advanced technology, inflation and attempts to establish a two-tier society
- Geopolitical changes, difficult access to certain markets
- Environmental challenges, climate changes, potential environmental migrations
- · Food crisis, production ability compromised

When all these factors are taken into account, it is no surprise that material lead times have increased from the typical 20 calendar weeks (CW) to now 50 CW or more, putting regular operating processes under considerable strain. As material availability becomes an issue, we are also seeing a significant increase in material costs and an increase in the supply of counterfeit material. Agility and teamwork aimed at finding the best methods to adapt to the new reality allow us to stay ahead of the competition. This approach is made possible by robust processes that allow us to work from anywhere while maintaining product quality. We have implemented a multi-source material policy as well as SMART planning and purchasing based on product order forecasts up to two years in advance. Sourcing high-quality materials from a single source is especially important, as we need to select a business partner who we can trust to support us even through difficult times. However, with the right approach, we can introduce a second source of supply also for main microcontroller - the brains of the electricity meter, as we did on platform for residential meters.

How do changes affect the price of a product?

Efforts are made on different levels to ease the price pressure. We have established new supply routes, optimised material selection, improved the manufacturing process and product design, reduced consumption of resources for our operations (heat, water) and worked hand in hand with customers to accept the changes related to disruptions in the supply chain. With all these measures combined, we can serve the customers in the best possible way, minimizing the pressure on their end.



How was it possible to organize work if you were not allowed to be on site?

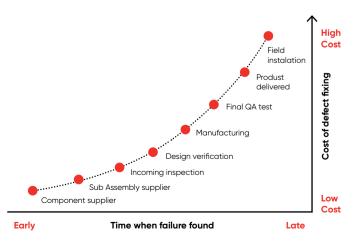
Presence in the company was still required and managed in strict accordance with the government requirements. But wherever possible, it was highly encouraged to provide services remotely – from home location at the time. Conducting large-scale tests from a home office was also a test for the IT services, which performed excellently and are now in use even more as Iskraemeco is opening doors to its teams in Egypt, India and Dubai, and welcoming new teams that will support us on our path through mergers and acquisitions.

How did Iskraemeco minimize the cost impact in case of failure?

Regarding the material approval process, the objective was to validate the material as soon as feasible throughout the product design approval procedure. The rationale was straightforward: the earlier a possible failure was recognized, the less financial implications and corrective activities were required.

For this purpose, we have established and strictly follow multiple-level approval processes:

- Manufacturer approval (checklist, validation, audits),
- Distributer approval (classification, minimum defined requirements, agreements, assurances, warranty, etc.),
- Manufacturer part approval (checklist, test specification and execution, history field data),
- Use of third-party lab (material counterfeit detection, material science).
- Manufacturer part extensive testing (based on critical classification, extending to design and production check points)
- Established incoming control, which supplement manufacturer outgoing quality check



We follow a zero-failure policy, which does not imply that no failures are allowed, but rather that each failure is analyzed, its root cause defined and that corrective and preventive actions are taken to ensure that the failure will not occur again.

Exponential data growth is generated throughout the product life-cycle. Is there a way to master data?

That is a good question. The complexity of the products has increased exponentially during the last 15 years. The amount of data generated during the design and production process or while collecting information from the field has increased exponentially as well. While excel spreadsheets are already a thing of the past, we now rely on Product Lifecycle Management (PLM) and Enterprise Resource Planning (ERP) systems to manage data, during the design or production phase. For all teams involved in the process, the systems provide valid data, versioning, traceability, and transparency. Relations and reports on demand are assured.

Due to the importance of timely and accurate data to our operations, we search for ways to collect data directly from their point of origin and assure their validity. It is important that each piece of data has an assigned owner that is responsible for data lifecycle, using workflows and processes.

What are the major challenges and opportunities for the future?

Providing solutions for measuring critical resources like water, electricity or heat is and will be even more important and I anticipate a significant growth in demand for Iskraemeco's products and solutions. We have the competences and resources to walk this path. Surely, there will be some bumps on the road, but we should see them as opportunities for improvement. If I had to name a few main challenges, I would say that it will be important to support the company's growth, connect design teams and production sites, address the global supply chain situation and material shortages, and invest in process digitalization, data analytics and artificial intelligence.



Any final words you would like to share with us?

Teamwork - we can do it together!



5

Optimize your system performance with services

Nina Merše and Islam E. Dakroury





What is the role of service management at a company like lskraemeco?

Iskraemeco is able to provide high technology metering solutions with an optimal level of service to ensure customer satisfaction worldwide. In the energy sector, it is important to support each customer with customized services. Customers want more and they expect more, and we can only stay ahead of the curve by meeting and exceeding those expectations. We have been evaluated not only on the value of the service, but also on the overall experience with us and the new technologies we offer.

Customers are the most important part of our business. What type of services do you provide?

I would like to highlight that service management at Iskraemeco consists of three core functions.

- a) Rollout/Installation: installation of different types of meters (electricity and water meters) for smart or prepaid meters intended for both the private and utility sectors.
- b) Field maintenance: daily on-site customer support for troubleshooting, configuration and training provided either remotely or on-site for all meter types and categories for both private and utility sectors.
- c) Service lead: monitoring and controlling all the above activities and ensure a smooth process for the mega projects from the initiation of the tendering process to completion. This function includes discussing each project with the appropriate manager to determine the service scope handling process.

Our team is capable of providing all of the above services to our customers. We believe in the workflows and processes we have implemented, as we are able to use our automated service desk system which facilitates our work progress and ensures a high level of customer satisfaction.

Can you briefly tell us about your most important projects or milestones?

There are several projects and achievements I would like to highlight. With our highly skilled rollout/installation team, we have completed numerous rollout/installation projects of excellent quality and are able to handle mega projects worldwide. Another remarkable achievement recently made in the Egyptian market was the installation of more than two thousand smart meters per day, which is equivalent to approximately four smart meters per minute. We are able to survey more than 100,000 smart meters per year, both for existing and tendered projects. Another big achievement is that we have been able to transfer all the old meters from the customer network without any loss of the utility customers' data and dismantled equipment. In addition to handling several SLAs (Service Level Agreements), end-to-end service projects with two of the most important private accounts in Egypt, EMAAR and Mountain View.

How do you support your customers?

We provide high quality, well-managed technical support and services to our customers 24 hours a day, 7 days a week, covering all utility electrical distribution companies as well as more than 70 private accounts such as EMAAR, Tatweer Misr, etc. For instance, we provided the Egyptian Holding Company for Water and Wastewater installation and technical support. The establishment of the automated service desk has greatly facilitated

the work of the teams, enabling them to resolve problems remotely and guarantee and maintain high standards of customer service.

You use various processes to optimize the team's productivity. Can you tell us more?

The efficient setup of Work Force Management from the design phase through the training phase and to the implementation of the solution has helped us manage one of the most important mega projects in Egypt. To improve even further, we set up an automated service desk to also include the ticketing system and the call center. Additionally, we set up a workload system that measures the contribution and effort of each team member and provides effective individual indicators. By eliminating all paperwork and streamlining work force management, we boosted data efficiency and greatly reduced human error, which is one of the most crucial benefits for any customer.

How can you as a team support customer business? What are the benefits?

Our team of experts is capable of managing numerous large-scale projects. Each structured function implemented in the Service Management Department is ready to provide the required support in their area of expertise. We can provide several sub-functions for all service-related projects, including evaluation, trainings, monitoring, and supervision, which offers customers a holistic solution. Additionally, Iskraemeco can also provide service desk support for customer projects, enabling greater efficiency and responsiveness. We also support and explore other opportunities and projects around the world, where providing services can add value to Iskraemeco's business and our valuable customers.



Training customers to assist them in achieving their business objectives and, in turn, achieving our own

Davor Mikulić and Nina Merše

Having delivered millions of devices over the past several years, our team has gained extensive knowledge and expertise, allowing us to support our customers throughout all phases of smart metering projects, from planning to implementation, and continue to provide high-quality support services after the delivery of the project. Experts with extensive field experience are ensuring that our tailored solutions will be implemented professionally, efficiently and on time.

We know that in today's business environment, attracting and retaining customers is a major challenge and of utmost importance for any company. Customer trainings, regular company updates and joint workshops therefore provide excellent opportunity for customers to engage with Iskraemeco and feel as part of the team. With the training program our customers and partners receive updates on new products, as well as customizations and upgrades for existing ones, which leads to long-term partnership. Product complexity

has increased and various trainings that we offer, are just one more step towards maximizing the value of our products and providing best possible experience.

To support and ensure the long-term success of our customers, we have developed and trained local teams of technical experts. Adapting to the different levels of participants' prior knowledge has been shown to increase the effectiveness of training, which is vital given that the audience diversity in lecture halls is always changing.







Building skills and confidence through training

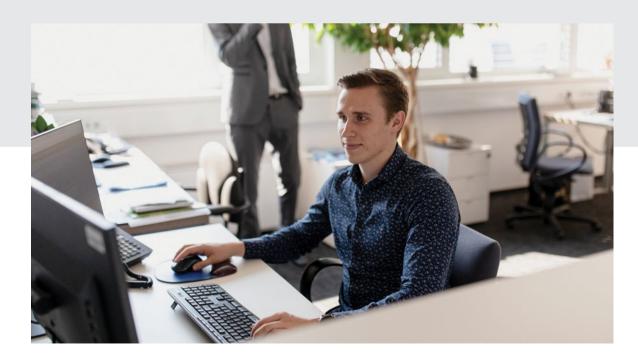
Preparing and delivering customer training is an educational process that aims to expand the scope of activities and improve customer satisfaction by enhancing the role of the professional services. As a first step, we familiarize ourselves with the customer's requirements, the desired content, the duration of the training and the number of participants, as well as the professional level of the audience.

The basic tasks include theoretical and practical training of the customer or partner to facilitate effective use of products and equipment, including preparation of proposals and offers, teaching materials and product demonstrations. We make sure that our customers always get the necessary information and assistance.

Another benefit of our training is that the venue is tailored to the customer's preferences. Training sessions can therefore be carried out at Iskraemeco's premises, at the customer's location, or remotely.

Depending on the requirements of the customer or the project, we develop and conduct the training exam and evaluate the customer's level of technical competences regarding our products. Upon successful completion of the training and at the customer's request, we issue two types of certificates: certificates of successful completion or certificates of attendance.

The participants' satisfaction with the training implementation is measured using a customer feedback questionnaire, the initial responses to which we receive on site. Measuring customer satisfaction is required to comply with the ISO 9001 standard, and in the future, we will automate this process by sending survey to customers' e-mail addresses and evaluate their responses.





Customers can choose one of the

three training modules

Professional

I know

Professional training

A professional is a person who does a job requiring a high level of knowledge and training.

Content

The professional training module provides general knowledge about Iskroemeco products and gives basic insight into its main features and communication options.

Targeted attendees

Employees of utilities or people working in metering who would like to learn about the properties and features of Iskraemeco products and software tools.

It is recommended that attendees have some basic knowledge about metering processes prior joining this training module.

Specialist

I understand

Specialist training

A specialist is a person highly skilled in a specific and restricted field who concentrates primarily on a particular subject or activity.

Content

The specialist training module provides detailed knowledge about a specific product and covers product functionalities and operation, communication possibilities, data reading, software installation and usage.

Targeted attendees

Utility workers or people working in metering who would like to learn how to operate, install and use Iskraemeco meters, communication devices and software tools. Before joining this program, attendees should complete the professional training module and have knowledge about metering processes and protocols.

ExpertI can apply

Expert training

An expert is a person with extensive knowledge or ability based on research or experience and who is skillful in a particular area.

Content

Expert training module provides knowledge about the setup and management of various metering use cases and covers parameterization administration and security management. This training module is based on practical work.

Targeted attendees

Meter and system operators seeking detailed knowledge and who would like to learn how to setup and modify Iskraemeco products parameters, headend systems and meter data management functionalities.

Prior to joining this module, attendees should complete the relevant specialist training program and have basic knowledge about database usage.





Expanding our manufacturing footprint in India

John Arnold and Nina Merše

The key to building a global manufacturing network that can withstand rapid changes in the world market, provide opportunities, and deliver competitive advantages for customers to solve their challenges is to focus on global flexibility, growth and continuity of supply.

Manufacturing has always required fast decision-making, dynamic change, and data collection. Automation and digitalization developments are persistently making manufacturing smarter and more dynamic. In an effort to meet the customers' rising expectations for faster delivery times, customized products, and transparency, Iskraemeco is bringing manufacturing closer to where it is needed, developing regions and their people, and mitigating threats to mission-critical infrastructure by localizing production.

As Iskraemeco expands its manufacturing capabilities, we are exploring additional plant locations to support local markets through our 'Local Content Supply Strategy'. India is rapidly becoming a solution-driven market, and Iskraemeco's primary strength and point of differentiation in the Indian market is its emphasis on local presence. In order to support our customers with complete solutions and meet their requirements, we opened a dedicated factory under contract manufacturing in Mysore, India.

In recent months our Indian manufacturing facility has overcome many technical challenges. For example, the manufacturing engineering team produced its own test equipment and adapted the existing equipment to offer complete manufacturing standardization throughout the production process.

"We are now running at planned rates of servicina our new local customers. In addition, we intend to further increase our capacity over the next few months in order to meet increasing demand. This includes expansion of the factory floor, a new, leaner layout, and additional test and calibration equipment, as well as redesign of the factory acceptance infrastructure to ease our customer verification process. I am more than pleased how well our newly formed team is functioning. The overall ethos is more family oriented, and the team members are not just working extremely well together, but also coaching and supporting each other, which is the key to successful business," said John Arnold, Chief operational officer of Iskraemeco.







Iskraemeco's newest team member is Rajeev Kumar, Director Supply Chain and Operation at Iskraemeco India. Rajeev will be supporting our growth strategy and will be responsible for manufacturing, supply chain, engineering, and quality within the production facility in India. Rajeev's extensive expertise in meter manufacturing compliments the team and local operations approach. Rajeev provided us with interesting information regarding the strategy and manufacturing in India during a brief chat.

What are your top three priorities as the Director of Supply Chain and Operation?

To fulfill the current market demand, we need to increase production, stabilize the supply chain, and expand the team.

In the future, I would like to focus on organizational mechanisms other than structure that contribute to success determination. These include the quality of end-to-end coordination, the harmonization and clarity of decision rights, a cross-functional performance system, and the professional support to employees provided through social cohesion, mobility, and competence development.

What is your mission?

With a lean, state-of-the-art production facility, make Iskraemeco the most trusted, technologically advanced, and inventive metering brand in India.

What are the biggest challenges you are facing?

Current global supply chain constraints are our biggest challenge.

What are the advantages of having local manufacturing facility in India for our customers?

The facility in India gives us better control of the production process. We will be able to manufacture our product according to the customer's desired specifications, quality standards and delivery schedules. Lead-times will be shorter since there will be no back and forth between the customer and the manufacturer and no more waiting for the order to fit into production schedule. Also, we will be able to prioritize the work in a more appropriate way.

The demand for customized products has increased dramatically. Having its own manufacturing process enables the company to provide tailor-made products to the customers and allows us to save up on storage costs and avoid the risk of retaining dead stock. The last advantage I would like to highlight is that we can immediately test our customers' ideas for new products or improvements. Additionally, we can also develop a product, produce a sample, and ship it to the customer.

How would you improve operational efficiency?

To improve the efficiency of our operations, we need to identify operational inefficiencies and address them before they can impact the bottom line.

1. Understand your business.

Managers often neglect the importance of routinely assessing labor-intensive or high-traffic areas. In addition to this simple step, formal audits, metric analysis and even business intelligence technology can be used to assess operation efficiency.

1. Train, train and train some more.

Regular training (incl. cross-training) on systems and processes is essential to ensure efficient operations for employees and management. Best training practices include implementation of cheat sheets, documenting SOPs, and coaching.

2. Put people first.

The company should never forget that this is a people-centered environment where relationships are important. Establishing five key metrics as common ground can keep the workforce's focus on productivity. To retain employees, we should train and develop them, reward high performers while discouraging behaviors that are not effective.

3. Focus on order fulfillment.

Increasing order volumes and SKU types give your operation the necessary tools to handle the challenges. From regular MHE maintenance and system design evaluation to mobile devices and golden zone slotting, the objective is to establish an atmosphere that encourages pickers to perform at their best.

4. Improve customer service.

In a service-oriented industry even the slightest details can make a measurable difference. This can be accomplished by reducing internal backlogs and assuring vendor compliance, both of which are simple to implement.

Remove barriers to success.

Conduct process analysis to track problems and identify opportunities for improvement. Pareto charts are useful for uncovering extremes and determining where changes need to be made. This is not a "set-and-forget" attitude, but an ongoing process.

6. Raise the bar.

Even after making improvements, it is important not to settle for a new status quo. Instead, always strive to incrementally improve performance and increase the productivity of low-performing colleagues.

7. Review processes.

It is surprising how many e-fulfillment centers do not have adequate process documentation. Once implemented, these processes can be examined and modified to continually improve, or they can be entirely rebuilt to incorporate new workflows or automation.

8. Benchmark against your peers.

The purpose of networking within the MHE industry is to gain insights and learn tactics that others have already successfully deployed. When you interact with your vendors and suppliers, they have the opportunity to add value to your operation.

9. Evaluate the power of your system.

Conduct a technical evaluation to review the efficiency of your MHE system. Ask yourself if it is delivering the throughput your operation requires. Then familiarize yourself with the offerings available on the market and decide if an upgrade is necessary.

What are the key initiatives in the current supply chain setting?

A proactive approach and taking calculated risks when making purchasing decisions, as well as finding alternative components and/or sources for essential components.

How do you manage costeffectiveness through strong connections with suppliers?

To build strong relationships and improve overall efficiency, we must consider our suppliers as partners, not as mere vendors. We need to improve technology and automation, adhere to payment terms, develop a stable communication plan, differentiate between price and value, have a dedicated Supplier Relationship Manager (SRM) and establish alignment between Procurement and Supply Chain Category leaders internally.

To conclude this interview, a slightly different question. Who do you look up to?

All my life I have been a firm believer in the teachings of Swami Vivekananda, a 19th century Indian monk, philosopher and author. His following statement is my motto in life: "Arise, awake and do not stop until the goal is reached." I always admired him because he never stopped questioning situations of which he was not convinced. He always questioned the status quo and was always very observant, with an eye for detail. Another quality I admire was that apart from being an excellent speaker, he was also a superb listener.

If I try to relate my life's philosophy with my profession, I would say that the best way to overcome uncertain times is to keep on learning, experimenting, calibrating, questioning with a continuous focus on evolving better processes apart from responding to macro and micro-environment challenges.

In everyday language, this means that time always brings changes. We cannot just keep on patting ourselves on the back for past achievements nor we can feel doomed by recent disappointments. Having a fighting spirit is the key and the use of the right technology is the tool.



Innovative ideas shaped into comprehensive solutions

Nina Merše

New trends, customer needs and rapidly-changing technology require companies to embrace change, build agility, and respond fast. In Iskraemeco we have used our innovative power to create modern energy services – eloT (Energy IoT), which uses emerging technologies such as artificial intelligence, rapid data transfer and reliable communication.

Iskraemeco's diverse customer offering is one of the pillars of the company's shortterm and long-term growth strategy. We have effectively diversified our product portfolio and reduced our reliance on a narrow range of products by adding turnkey AMI solutions in the energy and water segments. Moreover, our portfolio has been expanded to include the new modular eloT platform and the innovative software suite Symbiot, which guarantee the company a competitive edge on the global scale. Using our innovations, we can expand our market from the existing power distribution segment to new market segments associated with smart grids and smart communities (e.g. smart cities).

Each year is culminated with a series of awards to mark the company's trustworthiness and reliability, its focus on sustainability, and innovation. At Iskraemeco we are aware that the only way to achieve green and digital transition and the set

climate goals is through collaboration of technological and societal innovations. Iskraemeco's project 'Green Penguin', which earned Iskraemeco the 2021 European Entrepreneurship Award in the category of supporting sustainable transition, is a digital solution for cities, based on the capture and analysis of energy consumption data, which motivates schools, pupils and through them the residents to actively contribute to the CO₂ reductions and develop new habits.

Last year we set up a new Technology Design Center, which will strategically manage future technology trends, improve design processes, innovation and creativity, and channel and steer the global development of new smart solutions. Our goal is to bring together diverse ideas and perspectives and to focus on key development activities around the world. The Center enables us to pool the best resources in a more efficient way and align these functions across all Iskraemeco development hubs around the world. Fundamentally, our aim is to promote the use of new energy technologies that play an important role in translating the results of the new solutions and services approach into changes in the energy system.

By putting in place an idea incubation and acceleration program Data2050, we are focused on identifying novel ideas, speeding up their realization, and collaborating with projects, companies and teams that deal with the Internet of Things, e-mobility and other innovative data fields.

To meet increasing customer expectations for faster delivery times, product customization and transparency, Iskraemeco's constantly implementing digital technologies at all production plants to support the change process in terms of communication, standardization and flexibility. By localizing production, we are closer to our customers, we help develop regions and their people, and we mitigate risks to mission-critical infrastructure.

Long-term and stable cooperation between Iskraemeco and various educational, scientific and research facilities (universities, schools, startups, etc.) is of key importance for research and development of cutting-edge technologies, knowledge and talent development, and the impact of young innovative individuals on the changes in the environment and society. Through collaboration with different institutions, we have successfully completed several research and development projects that are part of Iskraemeco's updated portfolio.

By using new technologies, we will continue to develop appropriate and advanced solutions for smart grids, smart cities, and e-mobility, which will enable us and our customers to engage in effective business operations and achieve the set goals while making energy savings and reducing the carbon footprint. We will continue to focus our knowledge and experience on the development of integrated solutions designed to meet and exceed specific customer needs in the energy and water management sector and to preserve the quality of life for future generations.







An important milestone was reached in a project to modernize and digitize the electricity distribution networks in North Cairo

Smilja Dolgan Paternoster and Sara Saleh

Elsewedy Electric supports Egypt on its way to an ambitious digitalization goal. The signing of an EPC contract with North Cairo Electricity Distribution Company (NCEDC) is an essential part of Egypt's digitization efforts.

Iskraemeco is part of the project, providing smart meters, a data concentrator, a data management suite and accompanying services as part of its energy IoT solution, and thereby contributing to a stable and efficient electricity supply.

A team consisting of people from NCEDC, TEPSCO, EEHC and ELSEWEDY ELECTRIC T&D recently spent a week at our premises in Kranj, where it conducted a FAT (Factory Acceptance Test) during the initial phase of the project implementation. Iskraemeco's new generation smart meters IE.5 and IE.7 that will be installed within this

project boast certain features that were developed exclusively for NCEDC, including communication modems and Symbiot, our advanced data management system. We are pleased to announce that the FAT of IE.5 single-phase meters has been successfully completed and the use of Iskraemeco's new generation meters has been approved in one of the largest smart metering projects in Egypt.







We are pleased to have had the opportunity to speak with Engineer Noha Mohamed AbdElWahab, the project manager for the metering area of this strategic project. Eng. Noha has been working at North Cairo Distribution Company for 25 years as General Manager and for the last seven years as Head of the Meters Sector. She has almost seven years of experience in the metering area.

Can you provide a brief summary of the project? Why was the inclusion of smart meters crucial to the project?

We started the metering project in Egypt in 2015 with the installation of 250,000 meters across the country. NCEDC's share of this project was 53,000 meters. At that time, several countries around the world had already started using smart meters, which gave us the idea for the project. The government and the Ministry of Electricity began to discuss the proposal seriously when they finally learned about the technological advances of smart meters around the world. As a result, the minister issued a tender for 250,000 devices, and I was the project manager for all phases of the project until the installation was completed. The project is now running smoothly. The success achieved encouraged us to consider a new project with the same scope of smart meters, which led to the signing of the JICA project. The aim of the project was not only to provide smart meters, but also to build a comprehensive smart grid including distributers, smart panels, an AMI system, and smart meters. Helmia in Cairo was one of the districts chosen for the project. Of course, these are only the first steps in the transition to a smart system. Our goal is to gradually build a comprehensive grid that will allow Egypt to become wholly reliant on the smart grid within seven years.

From the perspective of the Ministry of Electricity and from your perspective, how would citizens benefit from this transition?

In my experience in the metering industry, we have encountered many challenges in managing, maintaining, readouts, and billing, all of which can be solved through the use of smart meters. I believe smart meters can easily justify the time, effort and cost required to deploy them. Moreover, we will be on the right track to realize digital transformation in line with the country's vision and goals, and we will no longer rely solely on human resources. I strongly believe that the implementation of this system will be beneficial for both residents and the Ministry, as it will result in significant cost savings, improve compliance, and allow for accurate analysis of the network through reports. Once we stop relying on predictions, we will be able to make informed decisions based on the needs of the grid. We will understand how to manage the grid, and most importantly, the changes will help customers by reducing their engagement with the company and its staff, as the meter will be responsible for the entire billing process and remote resolution of specific issues. This change will also lead to improved device management, as many consumers do not want frequent visits from

the utility. From my point of view, and based on the experience of the first project, the benefits will be significant, and I hope we will continue until the whole of Egypt is covered by smart meters.

Can you describe your experience with Iskraemeco?

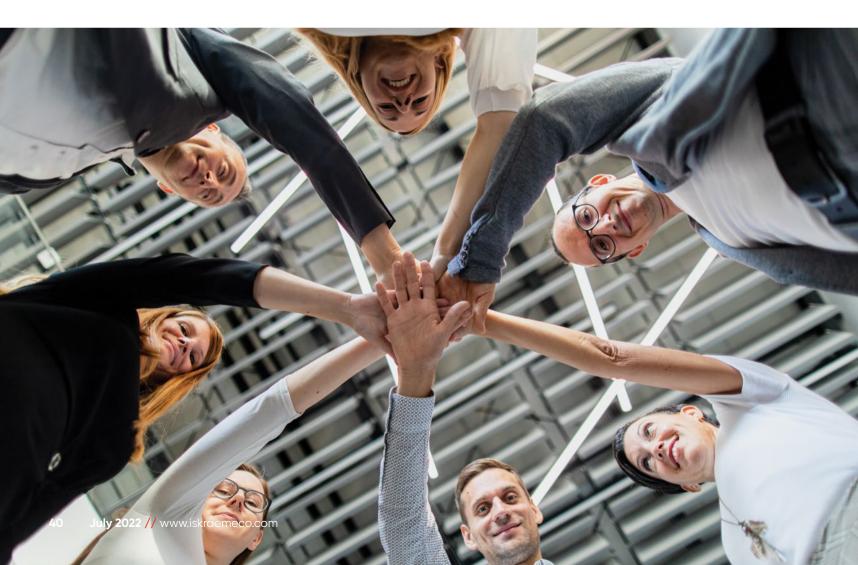
My collaboration with Iskraemeco in the field of smart meters is still ongoing, as we are currently in the design phase. I have been in position to observe young developers performing their tasks with great precision and taking our proposals with professionalism. The first time I visited the factory in Slovenia, I was more than impressed by what I saw; it was outstanding. I appreciated the factory's quality control of all procedures and the quality department. It is obvious that all these aspects affect the final result, because if the process is good from the beginning to the end, the final product will also be good. Based on my experience so far, this partnership will be mutually beneficial. I had the opportunity to visit the Egyptian plant during one of the phases of the project. It has excellent processes and modern, well-developed equipment, and I believe it is highly competitive with other meter companies in Egypt.

How do we envision the future of human resources and what steps are we taking to become the employer of choice

Manca Ramovš Kovačič and Nina Merše

Through time the HR function in Iskraemeco has undergone a profound transformation. Once primarily an administrative function dealing mainly with personnel files and documents, the HR is increasingly evolving into a global corporate function with a focus on organizational development, talent management, digitization, process optimization, people and their wellbeing in the organization.

Job satisfaction and happiness in the workplace are not only dependent on the workplace environment. An individual is driven by intrinsic motivation, which is manifested through employee engagement and behavior. Employees feel a greater sense of belonging when their effort is recognized. Their work becomes more meaningful and their self-esteem grows. Therefore, HR department in Iskraemeco places particular focus on building high-performing and motivational teams, conducting periodic employee satisfaction and engagement surveys and corresponding action plans, providing continuous education and trainings, as well as supports employee development. An individual's performance is determined by intrinsic, i.e. internal, factors, and the business environment (superior, team members, external partners, etc.)







One of the strategic objectives for the Group is to steer the teams from different geographical areas in accordance with the Group's strategic objectives, foster collaboration and leverage diversity, but at the same time remain sensitive to cultural differences and respectful of local environments. "Only by acknowledging differences we can fully benefit from contributions people can bring to our growth".

Maks ProkopGlobal HR Director

The current labor market is currently brimming with opportunities and for a company losing a key employees can be very painful. We are trying to implement innovative and agile approaches -by empowering our employees and building their skillsets to ensure development of high-quality solutions and innovative products and services that will become a vital part of our portfolio and a link to the energy industry in the future. In the end, our employees use their knowledge and expertise to develop these solutions and products and adapt them to the needs of the customers.

In Iskraemeco, we encourage employees and provide them with diverse training options, international exchange programs and opportunities to participate in multiple projects within the company, with external organizations and various partners. Our aim is to help employees maintain their high-level professional competence and strengthen the company's readiness for change.

Iskraemeco's HR key development activities are focused on:

- Identifying key employees and talents and helping them grow their recognized potential - Business Academy, Talent Academy.
- Targeted leadership development programs - basic and advanced.
- Mentorship programs transfer of knowledge and competencies.
- Creating a more stimulating work environment workplace upgrades, flexible working hours, performance-related pay.
- Strategic collaboration with educational organizations joint projects, programs.

The HR department is a strategic partner that is faced with constant challenges. It is responsible for continuous monitoring and implementation of HR development and retention trends, innovative performance

management solutions, and supporting the development of employees as individuals and teams. In the future the HR will play an important role in leadership assessments, teamwork and global cooperation, acquisition of feedback, and promotion of the culture of dialogue. We must be aware that the quality of our relationships has a strong impact on the increased overall satisfaction of our employees, customers and business partners, as well as the reputation and success of the company.

"It is imperative that the company puts in place a strategic HR development process to ensure that talents are groomed for promotion and ready to assume the key job positions. The highly competitive and rapidly changing business environment requires us to remain innovative and ready to embrace change. We are committed to developing the employees' competencies and knowledge that will be instrumental in securing the future growth and success of the company," says Nena Hribar, Head of Human Resources Sector.



Digitization and information security on a global scale

Robi Zorman and Anže Zaletel

The IT industry has undergone major changes in recent years. In addition to digital transformation, companies are faced with the challenges of globalization and the growing demands on information security.

Iskraemeco has completely redesigned its internal processes in the era of global digitalization to better support our customers and partners and adapt to the market. As a global company, we have adopted cloudbased systems that enable our employees to work smoothly and without interruption anytime, anywhere, and on any device to best support our customers and provide a high level of service. In recent years, we have invested more in our employees so that they can focus more on the needs of customers and acquire technical and specific expertise in the areas of information management and digital technologies.

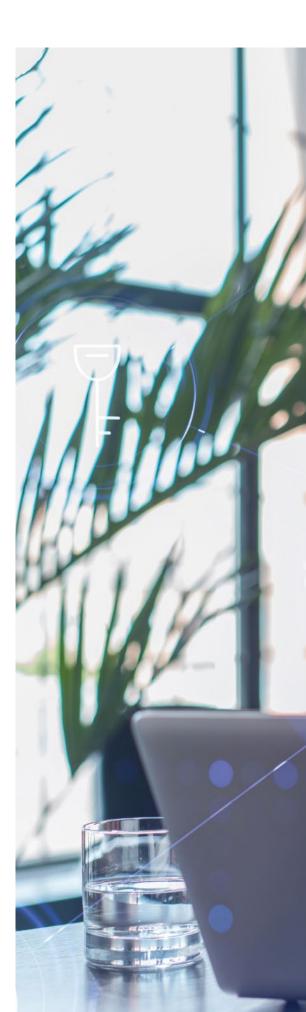
However, achieving a high level of support requires a change in internal processes. In response to the radical changes undergone by markets and companies over recent years, two of the key factors determining modern approaches are digitalization and a high level of agility. Digital globalization and unification contribute to a better user experience, as we are able to support our customers in the same, fast and efficient way wherever they are and whenever they need assistance. We help our customers gain technical expertise and optimize their use of our products and services, which

helps them be more productive and flexible in their analytical decisions.

Global digital transformation brings with it a broad range of threats and risks that we may face as a company or as employees. Iskraemeco has made significant progress in recent years across all pillars of information security, including people, processes and technology. Strategic investments in these pillars provide a high level of protection against the increasing external threats posed by the growing use of digital resources and the globalization of the economy.

With the implementation and certification of the ISO 27001 standard in Iskraemeco Slovenia, Egypt and India, we have taken an important step towards ensuring the highest level of security in a globally growing company. Due to globalization, the effects of security standards are implemented at the level of the entire Iskraemeco Group. Since its ISO 27001 certification, the company has been subject to regular audits by certifying organizations and customers, which demonstrates the company's high level of maturity in the area of information security management. The company is committed to a high level of information security, both internally and for our customers' information, as this is the only way we can justify the trust that customers place in us.

With global training programs, employees are also continuously trained in information security to ensure smooth and secure work with information resources and information, regardless of where they work.









Iskraemeco's alignment with sustainability trends

Mojca Markizeti and Lara Šarabon Štojs

Sustainability is no longer just an option or added benefit but rather a business imperative for every company and a hot topic in boardrooms. The economies around us are speeding up their sustainability projects and measures, aware that this will be an important benchmark among competitors and a meaningful factor in terms of brand reputation and access to capital. The stakeholders in the energy management value chain have yet to live up to their promises to deliver the green and digital transitions of the energy sector with an emphasis on energy efficiency and empowering consumers, which will enable decarbonization of our societies and aid society in effectively managing the 'Earth overshoot' risk.

Iskraemeco believes that sustainable development is a philosophy and a vision that must be lived and realized. It must be firmly anchored in the company's culture and strategy. The global status and risks clearly show that the time to act is now. Through our operational activities, supply chain, and partnerships, we take responsibility for moving towards a sustainable society.

Iskraemeco's quality products, solutions, and services enable efficient use of energy and water worldwide. Digitized solutions based on IoT, digital networks, smart cities, utilities, infrastructure, and communities provide the data needed to manage energy and water consumption, forecast demand, and optimize costs. We employ our solutions to help users operate more sustainably thereby contributing to a better and safer future for the world. For us and our children.





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Environment and energy management

Iskraemeco is committed to protecting the environment by preventing or mitigating adverse environmental impacts, and to improving energy performance to create added value for us, our customers, and other stakeholders.

Aware of the importance of our carbon footprint, we have performed a complete energy, logistics, and operational renovation of all business premises, including the office building, the factory development center, and laboratories during the past two years. The investments and renovations followed the company's vision and ambition of carbon-neutral production and other supporting operating systems. Since 2013, we have reduced our total carbon footprint by 70%. In 2021 the total electricity consumption decreased by 9% compared to 2020, and the total amount of waste (packaging, electrical and electronic equipment, plastics) was 2% less than in 2020. With all investments in energy efficiency, renovation and optimization, we managed to decrease Iskraemeco's overall energy consumption by 15% from the previous year. A comparison with the pre-renovation year 2019 shows that our energy consumption decreased by 23% as a result of various optimization and efficiency improvement projects.



We reduced the total carbon footprint by

70%

since 2013

In 2021 the total electricity consumption decreased by



9%

In 2021 the total amount of waste decreased by



2%

We have decrease Iskraemeco overall energy consumption by



15%

Product development

We innovate and implement sustainable new materials into our products. We confirmed the usege of two recycled plastics, resulting in a significant reduction of "virgin" plastic and energy consumption. Replacing 10% of the plastic with approved recyclables would reduce the use of plastic by 400t per year, which would result in 798,000 fewer liters of oil consumption.

We annually increase our demands for the use of recycled material inside our components. Currently, 10% of our components are made from recycled metal and 10% are made from post-industrial recycled plastic.

Iskraemeco services

Our solutions are designed to help sustain the environment and are important building blocks for smart city communities.

Urbanization and digitalization present countless opportunities and challenges, which contribute to the sustainable development of cities and a higher quality of life. As the density of users and infrastructure in cities rises, so does the potential for cross-sector integration and complex infrastructures, such as smart grids. Connecting smart homes, smart grids, and smart cities with energy IoT solutions is way to achieve many sustainability goals. As a society, we are entering a decade where we will either make it or break it. The time for action is now.

Iskraemeco's Smart City approach is an ecosystem of solutions connecting all vertical and horizontal ecosystems with various stakeholders such as residents, societies, local utilities, municipalities, and businesses.

Digital solution Green Penguin was created by Iskraemeco specifically for smart cities as it supports the pursuit of carbon neutrality through education and citizen involvement.

Working with young talents, co-shaping the future

Iskraemeco invited students from the Academy of Fine Arts and Design, Faculty of Electrical Engineering, Faculty of Computer and Information Science, and Faculty of Economics, all of which are part of the interdisciplinary Design Management program, to take part in the Iskraemeco Challenge. They were given an interesting task – they were asked to use energy management data to support decarbonization.

Students conducted comprehensive research with our industry partners, communities, industries, and energy end-users to gather as much knowledge as they can about smart metering solutions, technology challenges, and global and societal challenges. The Iskraemeco team, with, Technology Design Center, and its Innovation, Product Management, and Sustainability

departments, provided the students with needed support throughout the process, including access to our equipment.

Finally, the students developed four amazing proof-of-concept solutions. We were amazed at how much time, effort, creativity, and knowledge went into their projects. Their solutions were ambitious and ready for the future.

Even though the project's results were great, that is not all that matters. We made new connections, and created an environment where everyone involved has a chance to develop their knowledge and competencies. It's great to learn that many talented individuals are interested in improving the energy management system and take it to the next level of the digital and green transition.

PLM (Product Lifecycle Management) collaboration portal

We are continuously working on transparency across our supply chain. Our main focus is on materials (especially conflict and critical materials), their origin, and labor standards. Together with our partners we continue to raise the standards in our industry, lower our exposure to risks in volatile material markets globally and create a world where there is little space for exploitation of resources and people. For this reason we started a global supply chain digitalization project. We designed a PLM collaboration portal, which will engage our suppliers in the first phase of implementation. The portal will function as a benchmarking tool, providing us with an even better overview of risks, documented compliance and comparisons, and enabling faster decisions. We are now able to perform due diligence throughout our whole supply chain and ensure faster and better development after having set roadmaps with our suppliers.

Endorsing sustainability through partnerships

Iskraemeco is an active member of UNGC - the United Nations Global Compact. Our suppliers and business partners are expected to commit to UNGC's 10 principles, which include the areas of human rights, labor, environment, and anti-corruption. The company adherence to the Code of Business Ethics is audited annually and applies to all our employees and suppliers. We also ensure compliance with FLA (Fair Labor Association) Code of Conduct and ILO standards throughout our supply chain. In Slovenia we are partners with GZS (Slovenian Chamber of Commerce and Industry), AMCham, CER (Sustainable Business Network Slovenia). Internationally, Iskraemeco is part of ESMIG (European association of smart energy solution providers) and a member of IDIS. We are also present in many other professional and business organizations, where Iskraemeco professionals, as members of expert groups, are involved in the development of standards and creating trends.



Committed to quality. Committed to our customers.

Gregor Kita and Smilja Dolgan Paternoster

The reality is that every responsible business aims to provide products, solutions and services of the highest possible quality. The consistent high quality of products and solutions is always a product of several factors: structured, interconnected and controlled business processes; effective supplier management; validation and final inspection; and consistent compliance with customer objectives, needs and expectations.

Quality is not, nor will it ever be, random. It is always a product of methodical and auality-driven performance across all activities and processes inside the organization. Regardless of its industry or size, any business that has been functioning in the market for an extended period of time will eventually encounter substandard products, solutions, or services. When this moment comes, all businesses find themselves in a similar situation, but with a few key differences. The first is the number of such undesirable occurrences, but the critical differentiator is the relationship with the consumer and the company's response to

poor quality. If a business genuinely cares about its customers, it will react promptly and with appropriate empathy. In the business-to-business sector, a customer will become a supplier in the next iteration and is therefore acutely aware of the importance of quality and dedication to their end clients. Therefore, response speed and resource assurance are critical components in resolving quality issues, and it is in these critical moments that we are able to test the correctness of our decision to work with a particular provider.

Iskraemeco has been investing in qualitv for vears and had developed a culture centered on transparent customer relationships. The complexity of products, solutions, and services continues to grow, as does the risk connected to the applicable quality standards. We can only fulfil our customers' expectations and requirements by optimizing quality throughout the company's processes and increasing the complexity and number of validation tests and final inspections. As a result of quick responses and a 'lessons learned' loop, customers will trust the Iskraemeco brand and be more confident that they made the right choice when they chose Iskraemeco as their metering and energy solutions provider.

At Iskraemeco, quality means that we continuously challenge ourselves, checking how our every activity and process works to meet the customer's expectations and requirements. In the creation, manufacture and delivery of our products and solutions, the term 'high quality' is used as a promise of solutions and products that operate flawlessly, accurately and economically. This, however, is only possible if all elements are deliberately and thoughtfully chosen, if cutting-edge technology is used to connect them, and if environmental responsibility is a value that pervades all operations. The role and perception of energy is evolving with the concept of e-mobility and diverse energy sources. As a result, electrical grids are becoming more unstable. Their rising volatility requires fast and precise decision-making, which can only be facilitated by high-quality solutions and products. It is no coincidence that energy has developed into a critical infrastructure. Of course, this means that all of us who support the energy system through our solutions and products share some of the responsibility for ensuring its effective operation. At Iskraemeco, we are aware that such accountability necessitates premium quality. We understand metering and our solutions are used by the most discerning customers in the most demanding situations. We treat quality as a respected and cherished voice from the customer, and we use our expertise and years of experience to make things even better in the future.

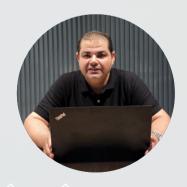






"At any given time, we are faced with the challenge of preserving and enhancing the reputation of a dependable and trustworthy partner. Finally, the way we react to unpleasant occurrences and crucial situations is a critical aspect that determines the nature of our relationship with the consumer. Our goal is to respond quickly, strategically, and transparently, ensuring that consumers receive priority attention and an efficient solution to their challenge,"

Gregor KitaQuality director of Iskraemeco



"Top management is committed to the implementation and development of an integrated management system. Iskraemeco's management structure provides the necessary support for the creation and implementation of processes that are important for achieving our goals and policies by applying the PDCA approach. Iskraemeco strives to identify current and future customer needs, meet their requirements and exceed their expectations. An integrated management system is part of a larger strategy and has established, documented and implemented our processes, integrated policies and objectives. In the future, we plan to obtain PTB approval for direct supply to the German market, expand the scope of our laboratory to accommodate all anticipated requirements of future customers, expand the scope of our ISMS to ensure the security of all our information and data, and expand the scope of our MID 2014/3/EU."

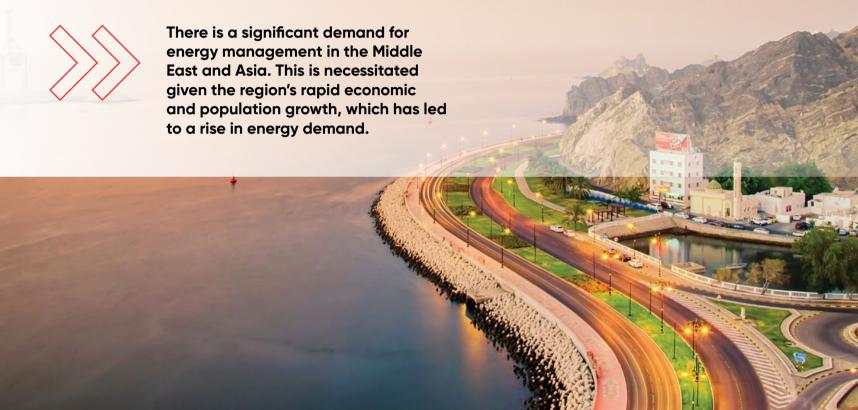
Mohamed Selim

Quality director at Iskraemeco Egypt



Iskraemeco's tailor-made solutions in the United Arab Emirates and Oman

Smilja Dolgan Paternostei



As the economy booms and technological integration increases, smart meters become instrumental in coping with the growing electricity demand per capita. Iskraemeco is leveraging endless opportunities in such emerging markets in order to provide the right products and solutions

to meet the pressing need for regulating the rising energy consumption. Smart meters in particular are becoming increasingly popular in the region as they contribute to better and more efficient utilization of gas, water, and electricity resources. With two successful events in the United Arab Emirates and Oman, Iskraemeco is strengthening its position and growing its global influence in Middle East. The company's experts from around the world joined forces and shared their years of experience and expertise with our partners and customers in Dubai, showcasing





our latest solutions in the energy industry. The presented solutions included our new Symbiot software suite, the latest enhancements to the AM550 residential and commercial smart meters, success stories from across Europe, live demos, and Iskraemeco's strategic approach to the smart water segment.



By exposing our most up-to-date communication infrastructure and services, we were able to spark an interesting discussion among the audience who were looking for answers on certain perplexing notions. After an interesting and lengthy exchange of information, the captivating last session led to an interesting conclusion and a promise of future partnership.

Omani utilities have awarded the contract to Iskraemeco Middle East

One of the event's highlights was the closing of one of the largest smart metering deals in the region. The signing ceremony of the deal, which also included the first wave of smart meter rollout in Oman, was carried out in the presence of Iskraemeco, Omani utilities and our service partner. The AM550 series at the heart of the deal features outstanding meters with modular technology designed for different types of communication technologies such as LTE and NB-IoT. Iskraemeco's commitment and dedication is to improve the overall experience of Omani consumers and fulfil the Sultanate's vision for the transition to a smart grid.

Connecting with people

The reliable Middle East team is eager to assist our customers in overcoming any challenges that may emerge during their transformation journey. With the help of our loyal partners and customers, Iskraemeco's global expansion and success will continue. We think that 'technology is at its finest when it connects people together,' and that is precisely what we intend to accomplish by delivering world-class connectivity and solutions.

Mahmoud Mouaz, Managina Director Iskraemeco Middle East and Central Asia states: "Iskraemeco has always been a leader in the smart metering industry. Our goal is to be the preferred partner for smart metering solutions in the Middle East and Asia. We are responsible for providing a future-proof product to our customers and partners in the Middle East. Two tough years have passed since the start of the pandemic, and the turbulent situation has affected everyone on a professional or personal level. With the Iskraemeco Middle East team working closely with all utilities, we are able to offer the highest level of technology, support and delivery of a comprehensive smart metering solution."



Smart grid solution for monitoring substations in Chile

Luciano Gonzalez and Nina Merše







Iskraemeco signed a contract with ENEL, the largest 's electricity distribution company in Chile to implement a smart grid solution across their network. The solution will have a significant impact on the electricity landscape in Chile. The C&I and G meters MT880 with Ethernet communication will be installed at the head of Enel low-voltage (LV) substation in the capital Santiago de Chile and will enable the smart grid and substation power quality monitoring.

With over two million consumers, Enel Distribution Chile represents 44 percent of the country's distributors' total revenues. As part of the project scope Iskraemeco delivered C&I and G meters MT880, technical support for meter configuration and driver development, and conducted internal training for the Symbiot MeterConfigurator software. With the support of the technical teams from Slovenia and Argentina, all meters were equipped with Ethernet modules and their communication protocol was developed and integrated into Enel's corporate software platform.

This project represents Enel's initial move toward implementing a smart grid, with the aim of equipping 30 percent of secondary substations with smart meters by the end of 2022. Once installed, Iskraemeco's meters will improve energy efficiency across the city and provide the utility with accurate

and reliable measurements, detailed analysis of consumption and power quality, and advanced anti-tampering mechanisms.

As part of the country's strategy, Chile initiated a joint effort involving laboratories, manufacturers, regulatory entities, and IEC standard representatives several years ago to develop the first technical annex outlining all the technical requirements for developing smart grid monitoring and control systems for low voltage networks. Iskraemeco's solution met all technical requirements, including delivery times, pricing and local support. Enel chose MT880 as the preferred meter and is the major reference for the Chilean market as it is the first meter to be approved under the new protocols in 2022.

Luciano Gonzalez, Business Development and Solution Manager at Iskraemeco, stated, "Together with our agent José Eduardo Muñoz, we are developing a new market, a new customer, and a new meter. The project fostered a productive working relationship between the technical teams on both sides. We successfully overcome the project challenges with the help of our competent, customer-focused local technical team. - In the midst of the pandemic, it was difficult to satisfy production and delivery deadlines and logistical constraints, but we are pleased to report that we have succeeded."



Iskraemeco's meters will improve energy efficiency across the city and provide the utility with accurate and reliable measurements, detailed analysis of consumption and power quality, and advanced anti-tampering mechanisms.



Aware of the growing demand for smart grid infrastructure, Zimbabwe has been planning to deploy a smarter grid for several years. The Zimbabwe Electricity Transmission and Distribution Company (ZETDC) has a number of potential projects in the pipeline and is working to strengthen and expand the transmission grid with Iskraemeco's whole solution that includes smart meters for residential environments, i.e. AM550, and C&I + Grid meters MT880, as well as our software suite, Symbiot. In close collaboration with Iskraemeco, Zimbabwe's smarter grid will become a reality this year.

ZETDC, a subsidiary of the national electrical utility ZESA, began operations in 2021, building on actions taken in 2018.

The company is committed to securing its goal of efficient smart grid deployment and looking to benefit from its main determinants that include reduction of losses, revenue protection, energy efficiency, real-time monitoring, billing for postpaid customers, and management of distributed renewable energy resources.

Largest grid deployment

Iskraemeco is proud to have created a major footprint in Africa with the largest C&I + G deployment with MT880 meters. The main goal is to meet the accuracy class requirements for all the meters installed. Our company also deployed our AM550 smart residential and interoperable meters

that secure assets while also meeting grid needs in the future.

Symbiot's MDM and HES capabilities, as wells as a customized web portal and a demo license for MDM functionalities, have been effectively delivered to enable a personalized and successful solution across our software suite.

The project's unique and notable use cases

Transformer protection

Temperature sensors are connected to the MT880 meters' alarm input, which is connected to the transformers. When the temperature of an old transformer used in





Zimbabwe rises, MT880 sends an alarm. When the alarm is received, a direct signal is sent to the MCB (Miniature Circuit Breakers) to disconnect the device. This is known as transformer protection, and it protects the transformer from damage caused by high temperatures.

Tamper protection

Tamper protection includes alarms that occur on the meter itself or alarms that the meter can register for the environment. One of these alarms that occur outside the meter is the opening of the enclosure door, which can be achieved by the alarm input function of this meter. A limit switch can be connected to the alarm input of the meter,



which, when an intrusion occurs, records the event and immediately sends an alarm to Symbiot. The software suite then sends a command to disconnect the meter's relay and stores it as an alarm. It is also possible to program the meter to connect and disconnect. In addition, an operator can check on site to see what went wrong.

Prepayment

The main use case presented to ZETDC was a demonstration of MT880 as a prepayment meter for a flat tariff system. In this scenario, the wallet is available for credit, consumption and other operations.

When the credit drops to zero, the suite sends an alarm to the MT880 meter's external circuit breaker, which disconnects the customer from the grid. Since this method has proven successful in the past with flat tariff meters, ZETDC has decided to continue the rollout with MCBs installed in all the provided meters.

Integration

ZETDC's request was to integrate web services with the ICS (Industrial Control System) billing software, which was implemented at their premises. Following successful implementation, invoices are now automatically generated by the ICS software based on the readings collected by Symbiot. Another successful integration was made with the GIS (Geographic Information System) program, which is coordinated with our suite and allows work orders to be delivered directly from our system to their software via workforce management.

Translating needs into solutions

Our fundamental goal is to meet customers' needs by providing outstanding products and solutions. As a result, Iskraemeco's aim is to provide Zimbabwe with a smart grid that includes accurate loss detection, revenue growth and protection, real-time analytics, alarm reception and processing, and reliable billing.

Through excellent collaboration with our partners, paramount cables, and by delivering top-notch quality to our customers, Iskraemeco plans to continue modernizing and developing smart solutions to provide excellent energy management to the African market.

Moving boundaries in India

The future prosperity of India depends on affordable, clean, and reliable electricity and has enormous potential for additional expansion of energy consumption and infrastructure.



India is a major force in the global energy economy. Growing population, industrialization and continued urbanization are fueling the growth of energy consumption, making the country the second-largest energy consumer in the world. India is also the world's third largest producer of energy. In recent years, over 900 million Indian citizens have gained an electrical connection, which has considerably enhanced the quality of life for these people. To meet the rising demand for electricity, India will need to modernize its current infrastructure further and Iskraemeco sees a huge potential in accelerating and facilitating the transition in India's energy industry.











First project in India with end-to-end solution

Vijender Dutt Joshi and Nina Merše

Iskraemeco is proud to play an important part in transforming India's electricity grid with the country's first end-to-end solution project. Our goal was to support our customer with a complete solution. The project, to be executed in the north-eastern Indian state of Nagaland, includes the delivery of smart meters, an RF communication gateway, device installation, integration with Symbiot software suite, and the development of a prepayment application.

Our end-to-end solution will be highly advantageous to the utility in terms of billing and collection, as it will boost the utility's billing and collection efficiency, which has been identified as one of its challenges. Iskraemeco will also provide a stable RF based solution in the Nagaland area, which lacks good 4G mobile coverage.

Both Symbiot MDM and Symbiot FieldAssist have a great potential for ensuring the reliability and efficiency of the grid. In line with this project, a smart prepayment solution is being developed at our Technology Design Center in Kolkata, India. A consumer prepayment application that will be integrated with the utility's billing software is currently under development.

As the utility needed a single point of contact for this end-to-end solution, we will include the meter-to-billing and meter-to-cash processes in our end-to-end smart prepayment solution which will utilize the RF communication network with SLA up to 99,5% percent. The RF module facilitates the connection of the utility's communication network with a distribution automation solution. The extension of Symbiot HES and MDM licenses presents more commercial options.





Success is a journey, not a destination

Deployment of the largest worldwide Smart Metering Project with SYMBIOT

Payel Roy Chowdhury



Iskraemeco is the first company in India to be part of one of the largest smart metering projects in the world. Iskraemeco has signed a contract worth 40 USD million for supply and installation of smart meters with communication modules and a cloud-based head-end system for advanced metering infrastructure under an OPEX model with West Bengal State Electricity Distribution Company Limited (WBSEDCL), one of the leading Indian DISCOMs.

Santanu Basu, IAS, Chairman and MD, WBSEDCL, Luis Goncalves, Group CEO, Iskraemeco, and Madan Mohan Chakraborty, CEO and MD, Iskraemeco India, and other senior officials witnessed the signing of the contract.

Thousand of smart meters will be supplied and installed across West Bengal. The order includes single and three phase smart meters and grid meters for industrial and commercial users. This order accounts for nearly 42% of the total revenue of WBSEDCL, which serves a total of about 22 million customers in the state of West Bengal.

The first phase of the project involves implementation of infrastructure for the smart meter roll-out based on the Symbiot software suite. With a capacity of 5 million metering points, the robust Symbiot software suite represents a new era for regional grid stability and energy consumption management.

Utility WBSEDCL recognizes this as a very prestigious endeavor. According to senior officials, this is the first time in India that smart meters and MDM have been separately tendered under the OPEX paradigm. The customer is excited to work with Iskraemeco on this project and describes the company as one of the best smart meter manufacturers in the world.

A pilot project was already successfully implemented in Siliguri, West Bengal in the period 2015-2016 as part of the National Smart Grid Mission. However, for WBSEDCL, this is the first large-scale smart meter project, and they are aware of the challenges that will be faced during deployment. But in line with the saying, 'If the beginning is good, the end must be perfect', WBSEDCL is very confident. Its officials mentioned that the beginning of their collaboration with Iskraemeco's team in India was very good and stressed that this gave them great confidence in the successful and timely implementation of the project. They praised the competent and professional work of Iskraemeco and added that they relied heavily on Iskraemeco's ability to raise consumer awareness of smart meters and their deployment in the state.

Every day, Iskraemeco strives to make power distribution more intelligent. To reach this objective, it is necessary to utilize the benefits of Advanced Metering Infrastructure to achieve the pinnacle of power quality and reliability.





<u>د</u>خ

Sokhna 360, The Industrial City that Enables Sustainable Success



ELSEWEDY ELECTRIC

Serving the international growing industrial sector, Sokhna 360 offers unequivocal success factors for any investor. Built on the idea of a fully integrated city, Sokhna 360 incorporates industrial, commercial, residential, and education zones that synergize to deliver success. It is strategically located in the scenic coastal city of Ain Al Sokhna and covers 10 million square meters.

The project was thoroughly planned by Elsewedy Industrial Development in collaboration with Singapore based world-renowned urban developer Surbana Jurong. Elsewedy Industrial Development has a lengthy track record of developing and managing multiple successful industrial parks and communities, including Industria Sokhna, Industria Sadat, Industria Alamein, Industria Asher, Oula, and recently launched Egyptian Industrial City (EIC) in Tanzania.

Sokhna 360 is your home for next-gen advanced manufacturing plug-in spaces for all scopes of industries, which are complemented with an efficient logistics zone and smooth transportation infrastructure that facilitates easy access. The comfortable residential area makes it easier to attract and retain top talents, thanks to its top amenities and luxurious living elements all nestled within 70,000 sqm of lush greenery. The Active Zone will change the face of the area and add convenience and recreation facilities boasting world-class dinning venues, coffee shops, international and local brands, which makes Sokhna 360 a self-sufficient year-round destination for clients, residents, and visitors. Building on sustainability, the educational zone will empower its students with advanced technical education and necessary vital skills through Elsewedy Industrial Development and Elsewedy Technical Academy (STA), offering continuous learning experiences.



Built next to one of the world's most important maritime channels, Sokhna 360 gives you the keys to world trade routes reaching more than 1.8 billion consumers across Europe, Asia and MENA regions. Get ahead of your competition with SCZone incentives that allow for 100% foreign ownership of companies and control of import/export activities, full exemption from custom duties and sales tax, and fast track visa services. Egypt has multiple international trade agreements with various countries and continents spanning Africa, Europe, and the Middle East, which is a further guarantee of rapid global growth.

Numbers that tempt



A Fully Integrated City of

10 MILLION SQM

Creating Investments

OF AROUND USD 3 BILLIONS

Production zone

5.7 MILLION SQM DEDICATED INDUSTRIES

Logistics Zone Up

TO 470,000 SQM

Residence and Services

470,000 SQM

Open Areas and Landscape

700,000 SQM

Active Zone

UP TO 760,000 SQM

The first dry port in Egypt in full action, benefiting the logistic sector and Green Agenda

Spanning a massive area of 420,000 sqm, October Dry Port will have an annual capacity of 720,000 containers and will alleviate the logistical congestion off the country's largest seaports located in Alexandria and Dekheila.

It is the first dry port in Egypt and the first project to be implemented as a Public Private Partnership (PPP) between the General Authority for Land and Dry Ports, Elsewedy Electric, and DB Schenker. An extended gateway for sea port cargo being transported to inland destinations, the October Dry Port will help in the digital transformation of cargo movement and deliver important tangible benefits to the global supply chain and end customers.

The 100-acre project utilizes an internal transportation railway system and features large capacity container yards for all kinds

of containers whether standard or reefer, a 5,000-metre storage space, a custom inspection area, storage spaces for full and empty containers, terminal operating system, automated gates though OCR system, a container repair facility, and a zone for administrative offices for the different parties, customs, GOIEC, food safety, laboratories, civil defense.

It is connected to Alexandria and El Dekheila ports via a fast railway network further alleviating congestion on highways, reducing Co2 emissions, and speeding up the logistical operations.

The first phase will have a storage capacity of 8,352 containers, 120 reefer containers, and an inspection yard for 180 containers.

The project has won the prestigious award of IJ Global Transport Deal of the year for the MENA region.

October Dry Port is expected to drive economic development on many levels as it will accelerate the supply chain cycle of imports and exports and create direct and indirect job opportunities in the logistics sector

Elsewedy Technology, a subsidiary of Elsewedy Electric, will digitize the port with the latest technology needed to ensure its smooth operation, management, fast communication, and security.

The opening is planned during Q3 2022 and is expected to be attended by Lieutenant General Kamel El Wazir, Minister of Transportation, General Amr Ismail, Head of the General Authority for Ports and Dry Land, Eng. Ahmed El Sewedy, President and CEO of Elsewedy Electric, Amr Mansour, CEO of Elsewedy Ports Development, and Khaled Morsi, CEO of DB Schenker.

Green Penguin receives the **European Entrepreneurship Award**

Lara Šarabon Štois

At the ceremony for the European Entrepreneurship Award, the Green Penguin initiative by Iskraemeco was awarded first place in the category for supporting the sustainable transition. The ceremony took place during the European Commission's annual assembly for small and medium-sized enterprises. The Green Penguin is a digital solution for cities based on the collection and analysis of energy consumption data, which encourages schools, school children, and other residents to personally contribute to reducing their carbon footprint and develop new habits.

The European Entrepreneurship Promotion Award recognizes the most successful promoters of entrepreneurship in Europe, showcasing best business practices, raises awareness of the added value of entrepreneurship, and encourages and inspires potential entrepreneurs.

This year, six competition categories were opened: promoting entrepreneurship; investing in entrepreneurial skills; improving the business environment and supporting the digital transition; promoting business internationalization; supporting a sustainable transition; and responsible and open entrepreneurship. This year, applicants from 28 EU Member States submitted more than 450 proposals to the national competitions, from which the European Commission selected category finalists.

In the category "Supporting a Sustainable Transition", Iskraemeco earned the European Entrepreneurship Award with its Green Penguin project. The Green Penguin



project has a positive impact on the environment and society. It combines smart technologies and gamification to promote environmental and digital literacy, starting with the younger generations and gradually expanding to all age groups, businesses and urban infrastructure. The project is particularly interesting because its activities engage people to reduce their carbon footprint and develop new habits.

Mojca Markizeti, the project's idea leader, views the award as an important recognition that opens up new opportunities for dialog and collaboration with European cities. "We are pleased that the positive impacts of our innovative idea Green Penguin won over the European Commission's expert jury. At Iskraemeco, we are aware that technological and social innovations are required to achieve green and digital transformation and set climate targets. In addition, the prize serves as extra inspiration and validation for our team, which is diligently working to bring the Green Penguin to European cities."



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The aim of the Phoenix project is to invest in security systems, that are also economically sustainable, and to use machine learning and artificial intelligence to develop protective mechanisms.



Iskraemeco at Energy Innovation '21

Alenka Bizilj Kavrečič

Energy Innovation '21 is an annual event that brings together creative and ambitious energy companies to discuss the future of green transformation. The event, which marks its 13th anniversary this year, features numerous speakers, a varied program, pleasant surprises, good organization and opportunities for networking and exchange of ideas.

Participants were able to listen to the speeches and presentations of more than 20 interesting speakers live or online. The international project Phoenix was presented by our colleague Tomaž Dostal, Head of Innovation Sector at Iskraemeco, and Uršula Krisper from utility Elektro Ljubljana. The project aims to improve cybersecurity in the complex technological and information environments of the EU's electrical infrastructure.

The aim of the project is to invest in security systems, that are also economically sustainable, and to use machine learning and artificial intelligence to develop protective mechanisms.

Tomaž Dostal said: "Iskraemeco's contribution to the project is mainly by developing a special Universal Security Gateway (USG), which will ensure that existing energy devices are connected to the Phoenix system. In addition, we are heavily involved in setting up a pilot environment in the BTC Ljubljana area, in which we are playing a leading role. As part of the pilot, we are demonstrating and evaluating the operation of the Phoenix system on our AMI, which is being upgraded with the USG interface. In case of a successful demonstration, the Phoenix features may be added to the Iskraemeco portfolio as an extra service."





Vision for Slovenia's future breakthrough at the Slovenian Business Summit

Alenka Bizili Kavrečič

Bahaa Abdullah, Executive Member of the Iskraemeco Board of Directors, outlined his vision for Slovenia's future success and prosperity at the Slovenian Business Summit hosted by the Slovenian Chamber of Commerce. He said Slovenia has been on the path of significant economic development since 2008, heading in the right direction in the areas of green economy and digitalization, but he also sees many opportunities for improvement. From his perspective, foreign direct investment should be viewed as positive and beneficial, as such strategic partnerships advance a company's know-how, infrastructure and technology, while benefiting local communities and bolstering the country's economy.

In his speech, Bahaa Abdullah also highlighted the importance of start-ups and their many amazing ideas. Start-ups require not only capital, but also experience in business management and marketing expertise, and are looking for support to expand into international markets. To prevent the brain drain, he advocated for greater relief on wages and the introduction of a development cap on contributions, as well as simplification and de-bureaucratizing all processes.



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Iskraemeco joins LoRa Alliance® and Bable Smart Cities

Mariia Iglova Andreuzzi

Municipalities, utilities and businesses are embracing smart technologies and IoT solutions to improve operational efficiency, lower investment and maintenance costs, increase data visibility, and provide better customer service.

Iskraemeco has joined the Bable Smart Cities community that drives innovation with and for cities. It is a ideal platform to showcase Iskraemeco's smart solutions developed to improve the quality of life in cities.

Our company reasched another important milestone by becoming a valuable addition to the LoRa Alliance® ecosystem, which is actively driving the deployment of the LoRaWAN® standard for Smart City and Smart Water Solutions.

To accelerate the implementation of IoT solutions, Iskraemeco has built a comprehensive communication infrastructure for remote data reading. Iskraemeco's LoRaWAN® network for smart metering

and smart management allows cities, utilities and companies to collect and analyze data from thousands of connected meters and devices. It is designed to support endless use cases ranging from smart metering, smart water management and energy efficiency to waste management and smart lighting.

Now, utilities are using the Iskraemeco LoRaWAN® network to obtain water consumption data. The network provides the communication infrastructure for smart water metering, energy and heat monitoring, and leak detection applications.

Our meter reading solutions are designed to transmit the consumption data from field water meters to a software platform by using the LoRaWAN® meter reading technology. The data collection process is automated, manual readings are eliminated, and the collected data provide an insight into the state of the water supply network.

Our goal is to connect thousands of devices to the Iskraemeco LoRaWAN® network, so we all can utilize the ecosystem and accelerate the development of smart cities and their infrastructure.

Iskraemeco is committed to facilitating the development of IoT solutions with utilities, municipalities, and industrial partners. Any project which requires secure, reliable, long-distance communication at a low cost can benefit from Iskraemeco's LoRaWAN® network. Apart from the commercial LoRaWAN® network, Iskraemeco provides end-to-end LoRaWAN® solutions ideal for smart city applications.

We understand that Smart City initiatives do not happen instantly, in a single project. Instead, we are talking about a series of projects, each providing a better experience for the citizens, businesses, utilities and industries, thereby making cities safer, more sustainable, and more efficient.





Significant efforts have been made to improve safety in the workplace

Nina Merše



Workplace safety is a top priority for Iskraemeco. We take great pride in providing a safe workplace for all of our employees. Our safety team examines techniques and provides activities to enhance the security and safety measures on a regular basis, therefore Iskraemeco's workplace safety has improved greatly in recent years.

An incredible achievement for Iskraemeco in Slovenia is 450 days without a workplace accident.

With 1000 days without a work-related accident, also the Iskraemeco in Egypt recorded an important milestone. This outstanding success is the result of years of focus, commitment and continuous training, as well as the dedication of the management, employees, and HAS teams, who have made safety a top priority in all aspects of the company's operations.

We are really proud to have reached this incredible milestone together, thanks to the exceptional performance of our health, safety, and security standards.



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Green Penguin solution at Expo 2020 Dubai

Concrete steps need to be taken and projects launched in order to achieve climate goals and to lay the foundation for building a modern carbon-neutral economy. Mojca Markizeti, Head of Sustainability and Regulation, provided an overview of the Green Penguin solution developed for smart cities. It provides support for achieving carbon neutrality through education and community engagement.





Iskraemeco was part of the EuroPOWER Energy Conference and OZE POWER

The conference discussed challenges for the future of the energy sector in Poland and the Central and Eastern Europe region. Our representatives had the opportunity to exchange comments and ideas with various stakeholders in order to influence and support decisions on the future of the energy sector in Poland. Iskraemeco is already actively engaged in the Polish energy industry, supporting our Polish customers with advanced solutions that contribute to the green and digital transformation plans and market development.

Taking remote external audit to a new level for our customers

At Iskraemeco, we are merging human and artificial intelligence to enable us to remain technology and knowledge leaders in the energy industry. The Hololens Reality Smart Glasses have a number of impressive features and allow us to view virtual 3D models of equipment in real time and to scale. The Reality Smart Glasses are a perfect tool for remote external audits, as they give customers the feeling that they are walking through Iskraemeco's smart factory. Field technicians can also use the glasses to make instant video calls and interact virtually in real space, which helps them diagnose our equipment faster.







ISO 27001 Certification at Iskraemeco Egypt

Iskraemeco Egypt has successfully passed the ISO 27001 certification audit, raising the Iskraemeco Group's information security maturity to an even higher level. Certified information security standards and best practice ensure that our customers have the highest level of confidence in Iskraemeco's products and services. In addition, the implementation of globally recognized security standards and solutions provides a secure environment for all employees without disrupting existing business processes.



Visit from representatives of Wiener Netze

Wiener Netze GmbH is Austria's largest operator of the electricity and natural gas distribution network and provides services to more than two million customers. The meeting was intended to provide an overview of the current development activities and processes in our company and to create joint projects for the successful future of both companies. We were happy to acquaint the representatives with how our company operates and the current processes. They also took part in a guided tour of the production facilities.



Our team won the regional IEDC Case Study Competition

The companies examined the area of sustainable development and the implementation of in-company solutions. As we are a highly recognized company in this field, the challenge was even more complex as the team had to think beyond the practice already established in the company. Our colleagues demonstrated a high level of 'outside the box' analytical, creative and collaborative thinking. This also earned them victory in the regional competition and a package of IEDC programmes or seminars of the winners' choice worth 20,000 EUR.



Hosting Iskraemeco owner Eng. Ahmed El Sewedy and an Egyptian delegation

The purpose of the visit was to assess the business, its current activities and strategic planning. Eng. El Sewedy addressed the employees during a live meeting and announced further investments in our company, particularly in the areas of new employment and employee development. The following day was reserved for interesting presentations as part of the Demo Day event, where we were searching for synergies and opportunities to connect with innovative companies.

Iskraemeco's HR team participated in Elsewedy Electric's global HR conference

The conference brought together best practice in human resources from the companies of the Elsewedy Electric Group to find synergies, joint initiatives and projects. Iskraemeco's vision is to be one of the best employers in our industry and we are overjoyed that our efforts are recognized as essential and that our owner, Eng. Ahmed El Sewedy, supports us in this endeavor. It is always a pleasure to participate in such a great event, to meet colleagues and gain insights into their experiences.



Constantly working on continuous improvements

Iskraemeco's global teams are aligning their processes and systems to increase efficiency in meeting customer needs and making operations between global teams smoother, with the ultimate goal of providing the highest quality of customer service, regardless of location. We keep customers in mind and translate their requirements into reliable products and solutions that are ready for future challenges.







Luis Goncalves, member of ESMIG's Executive Committee voted to Vice president of ESMIG

We are excited to announce that our Chief Executive Officer, Luis Goncalves, has been appointed as a member of ESMIG's Executive Committee and voted to Vice president of ESMIG. Luis stated: "I am highly honored to take on a role. My focus will continue to remain on the pressing issues of the green energy transition and digital transformation. The ESMIG association is an important stakeholder in the energy industry. With a united voice, Iskraemeco and the other members of ESMIG will continue its commitment and efforts to make Europe's energy systems ${\rm CO_2}$ neutral, more reliable and efficient, and will further inform, empower and engage European energy consumers."



An open door for new creative and proactive employees

At Iskraemeco we always strive for progress and to foster collaboration between students and companies at various career events with the aim of attracting new employees among students of the Faculty of Electrical Engineering. At the Days of Industrial Robotics event, our team showed students the robotization and automation of processes that have been implemented in recent years. At the EESTEC Job Fair and the MojeDelo event, we introduced our company, internship opportunities and scholarships to a number of curious students who were interested in working for our company.



Smart cities and villages for a prosperous future

The characteristics of smart cities and smart villages are different, however, common standards can nevertheless be identified. Digital technology, smart solutions and innovation can improve the quality of life, raise living standards, provide better public services, optimize resource use, reduce environmental impact and open up new opportunities for better products and processes. Mr. Franc Bogovič, Member of the European Parliament, visited Iskraemeco and participated in a fruitful and productive chat with our management team.





It all starts with the youngest generation

On the initiative of the Chamber of Commerce in Slovenia and the Kranj Chamber of Craft and Small Business, primary school children from neighboring schools were given a presentation to learn about Iskraemeco's manufacturing processes in order to encourage technical professions. We addressed a variety of technical career opportunities and opportunities for collaboration with our company during their education and as a prospective career path after graduation. The youngsters were very curious and engaged in the lecture and, based on their eagerness to learn, we are confident that that they could one day become members of the Iskraemeco community.



ENLIT AFRICA 2022 - New solutions, New products, New technologies

Our top-class experts with decades of experience shared their knowledge at the industry's most important event - ENLIT AFRICA 2022 in Cape Town, South Africa. The event theme is Africa's Energy Transition and we are so excited that Iskraemeco brought its innovation and versatile smart energy solutions for energy transformation to Africa Enlit 2022. Iskraemeco presented our products and solutions Symbiot software suite, Smart water, Prepayment, Energy IoT, Digital Grid and eMobility. Iskraemeco and Elsewedy Electric were also recognized for the Best Stand Award.



Sponsoring the first Egyptian Electric vehicle day

Iskraemeco played an important role in sponsoring Egypt's first Electric vehicle day event held at the Chill outstation in Sokhna road. Electric vehicle chargers and eMobility solutions were among our latest and most advanced smart solutions on display. Eng. Heba Farouk, Managing director Egypt Business Unit, said that Iskraemeco attracted the attention and admiration of visitors with its excellent presentation of electric vehicle chargers. The initiative was launched as part of the 'Egypt 2030' National Sustainable Development Strategy by the Ministry of Environment and aims to promote environmental awareness, change behavior and encourage citizens to protect the environment, natural resources and marine life to ensure their sustainability, thus protecting the rights of future generations.

// BRINGING INTELLIGENCE TO ENERGY

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