



WE MAKE WORLD

SMARTER

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[www.elkoep.com](http://www.elkoep.com)





# EDITORIAL

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## Jiří Konečný

Founder and CEO of the ELKO EP HOLDING

When I was twenty and freshly trained in electronics, and I engineered my first time relay, I had no idea that today I would be controlling it from a smartphone apps. The dynamic development of IT technologies as well as Internet of Things also permeated a bit later in controlling electrical installations, creating a whole new field called the "Smart Home".

What separates us from the competition is not only our flexibility and ready approach to custom modifications, but also the desire to "Always something more!" We invest a substantial part from this into developing

systems of intelligent electrical installations. Our iNELS, which either wirelessly or via bus covers now controls several thousand buildings throughout the world. In a few years of hard work of the entire development department we have elevated iNELS to a complex system involving not only the switching of appliances, dimming of lights or control of blinds, but also control of security, HVAC, the camera surveillance system, audio and video distribution - the list goes on... So right from your smart phone, you can control the washing or coffee machine, the A/C or home theater system.



## ELKO EP

We are a traditional, innovative and purely Czech development manufacturer of electronic devices and we have been your partner in the field of electro-installations for 25 years. Thanks to the many years of experience and our market activities we are able to say that we have become specialists in the field of electronic devices - relays, of which we produce more than 200 types. Our own production, modern tools and devices, research and development center. All these the intelligent electro-installation iNELS system. "in-house", you can be sure that everything functions as it should, and you don't need to work

out compatibility issues. Whether you are starting out or are well advanced in the field, our technical support team is available to you, from initial training to configuration, a price offer up to overseeing your installation. We will be always close to our customers, either with technical support or a well-stocked warehouse, you will find our branches in 13 countries around the world. Besides having our own branches, we have a constantly expanding network of reliable distributors in over 70 countries around the globe. It is our pleasure that you can be with us as we move forward.

# Facts and Stats



**2<sup>nd</sup> position  
in Europe**

**330**

EMPLOYEES

**13**

BRANCHES  
OVER THE WORLD

**10 000**

INELS INSTALLATION

**70**

EXPORTING COUNTRIES

**12 000 000**

MANUFACTURED PRODUCTS

## WE ARE



### DEVELOPERS

In the new R&D center, more than 30 engineers develop new products and extend the functionality of existing products.



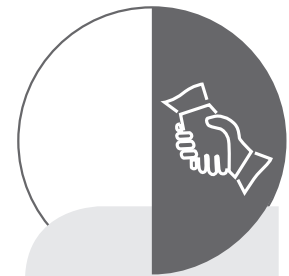
### PRODUCERS

modern antistatic spaces, 2x fully automated SMD production lines, 2 shift operations.



### SUPPORT

24 hours / 7 days / 360 days we not only provide technical support but also logistics.



### SELLERS

personal access to more than 70 sales representatives in ELKO EP Holding provides impeccable services and superior products at an affordable price.

# Attained awards



Jiří Konečný  
**Entrepreneur of the year**



**Company ranked among the 100 best Czech companies**



**Company of the year 2012**



Jiří Konečný  
**Personality of Smart city 2017**



**Visionary 2015 award For Energy Managements**



**Golden Amper for "INELS wireless"**



**ELA award for "RF Touch"**



**ELA award for "LARA"**

## Membership



### Custom Electronic Design and Association

Custom Electronic Design and Association is an international trade organization for residential automation technology with more than 3,500 member companies worldwide. It was founded in the USA in 1989 and now CEDIA is the world's leading authority in the field.

[www.cedia.co.uk](http://www.cedia.co.uk)



### The Electrical and Electronic Industry

The Electrical and Electronic Industry in the Czech Republic is a business and employer association that brings together legal and individual persons with similar product orientation or business interests. It was founded in 1992 and Jiří Konečný is a member of the Board of Directors.

[www.electroindustry.cz](http://www.electroindustry.cz)



### Smart Living Association

Smart Living Association founded in 2012 brings together experts from the field of Intelligent Electro-installation, architecture, audio-video technology, air conditioning and heat recovery, household appliances, cameras, security systems, lighting, etc. Jiří Konečný has stood at the forefront since 2013.

[www.achb.cz](http://www.achb.cz)



### Czech Smart City Cluster

The mission is the development of a unique partnership between companies, governments, local governments, knowledge institutions and city dwellers. Our members will focus on the integration of intelligent technologies. Jiří Konečný is a technology platform manager.

[www.czechsmartcitycluster.com](http://www.czechsmartcitycluster.com)



R&D overall view



Manufacturing hall



Testing lab



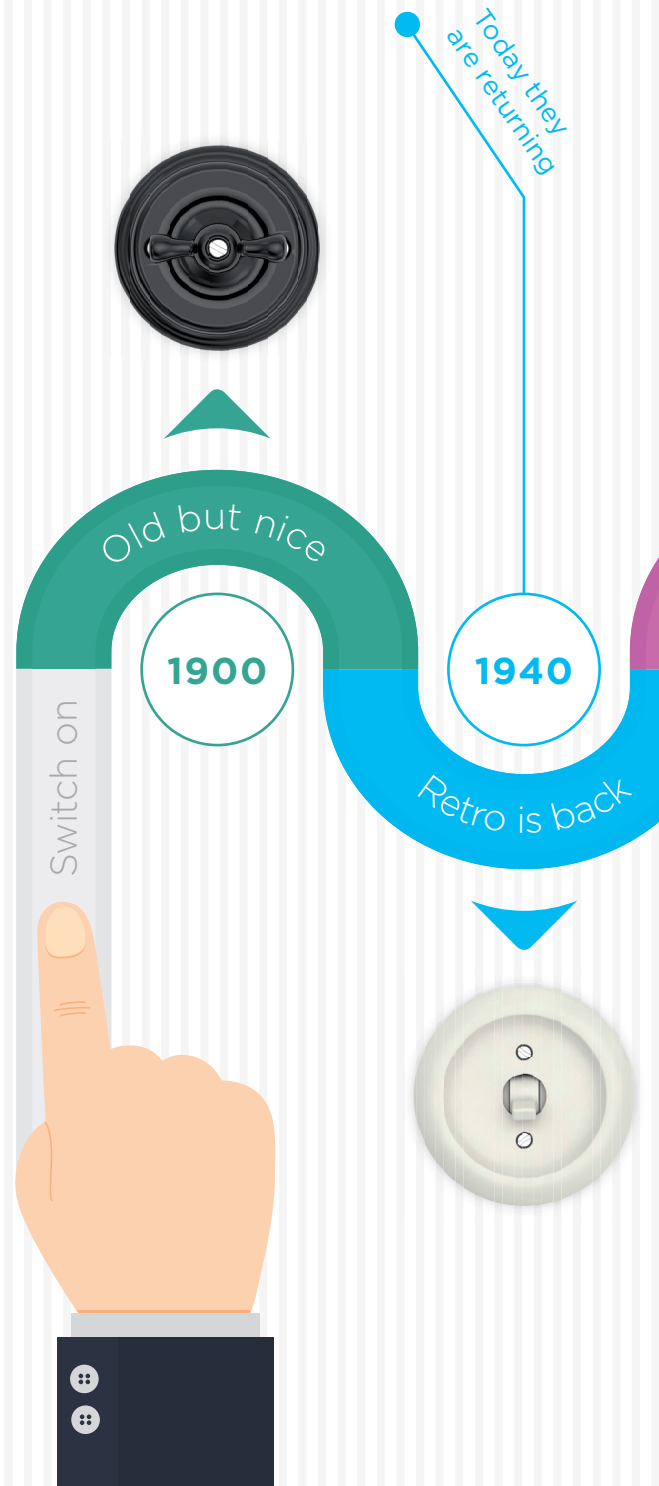
Finalization and dispatch



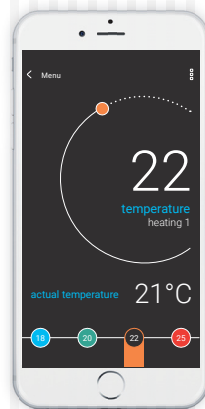
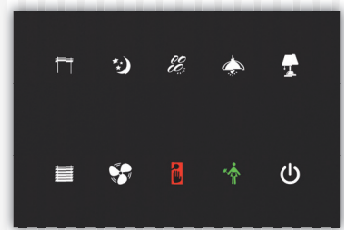
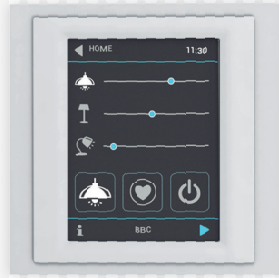
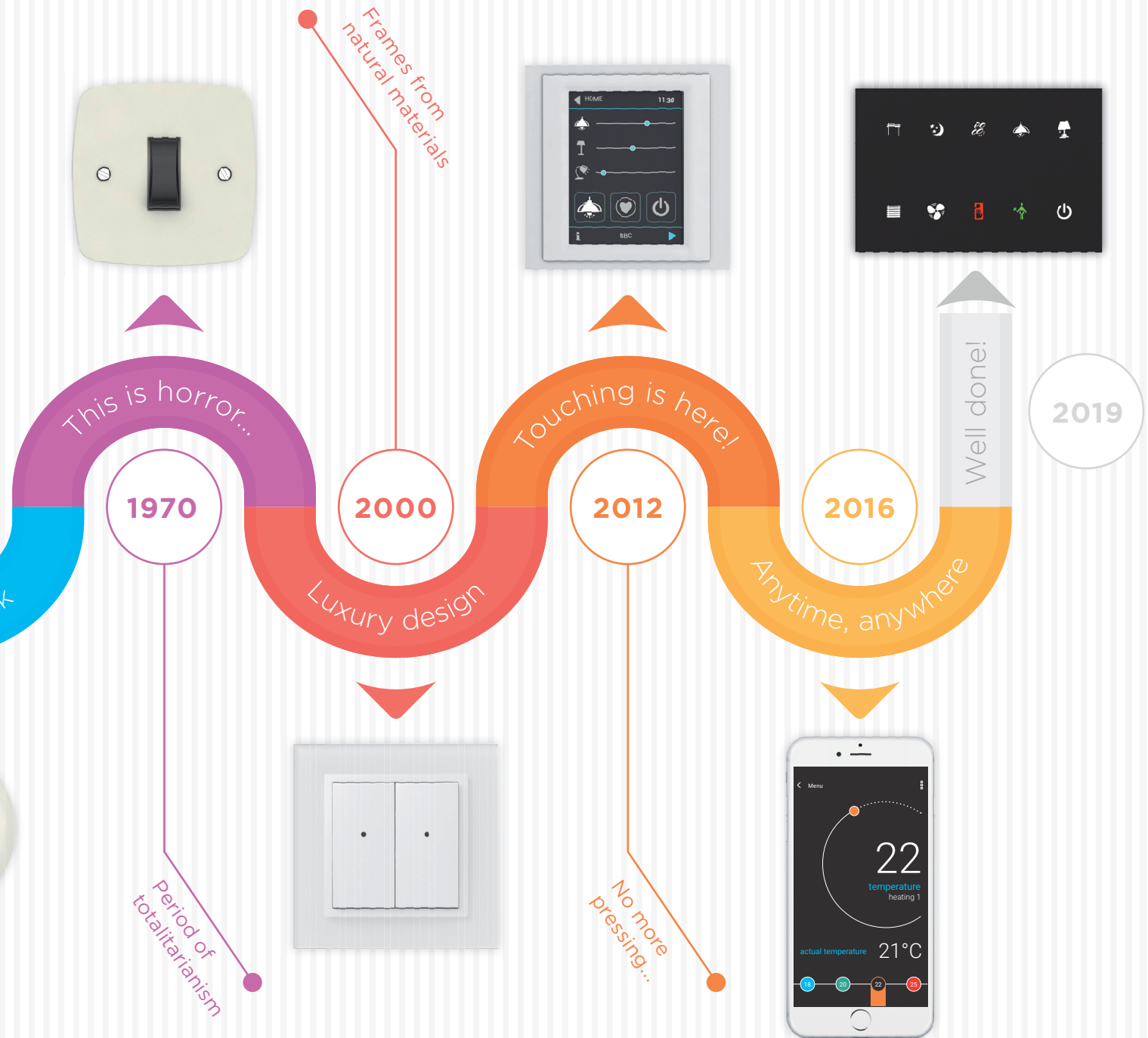
# EVOLUTION OF THE SWITCH

Einstein would be surprised ...

The switch - as we know it - has not changed considerably since its invention at the end of the 19th century, and we still use it in various forms today. It has virtually remained the same size, but in Smart Homes the force contact switches are replaced with low-lift buttons and safe voltages. The press or flick is replaced with capacitive pads or touch screen.



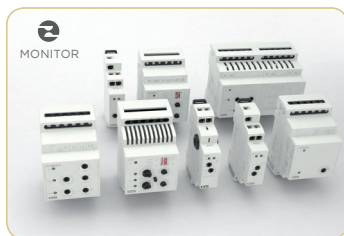




# Product groups



Timers / Relays



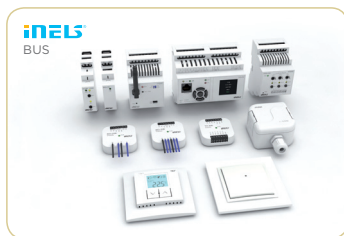
Protection monitoring relays



iNELS Air - IoT devices



Wireless electroinstallation (RF)



Wired electroinstallation (BUS)



Energy management



Wireless Retrofit Hotel (HRESK)



Hospitality Hotel (GRMS)



Building Management System (BMS)



Lighting control



Multimedia



Switching sockets

# Milestones

- 1993 ○ Jiří Konečný started business in this field, in his garage.  
First product was switching power units for electrical heating.
- 1997 ● **The company ELKO EP Ltd. was founded.**
- 2002 ○ First branch office **ELKO EP Slovakia**, export was started.
- 2005 ○ New production and office spaces in Holešov - Všetuly.  
New branch offices **ELKO EP Poland** and **ELKO EP Hungary**.
- 2006 ○ Intelligent electro-installation **iNELS BUS** launched to the market.
- 2007 ○ Establishing a branch office **ELKO EP Russia**.
- 2008 ○ Intelligent electro-installation **iNELS RF** (wireless control) launched to the market.
- 2009 ○ Branch office **ELKO EP Ukraine**.  
Exclusive distributor of sockets and switches **LOGUS<sup>90</sup>**.
- 2010 ○ **iNELS Multimedia** launched to the market / Awards of "Innovation of the Year" for **RF Touch**.
- 2011 ○ "Gold Amper" award for **RF Touch** / New warehouse.  
Establishing **ELKO Lighting Ltd.**
- 2012 ● **ELKO EP - The company of the year.**
- 2013 ○ 20 years on the market / New branch offices **ELKO EP España** and **ELKO EP Germany GmbH**.
- 2014 ○ Awards for **LARA** and **Smart RF Box**.
- 2015 ○ Wireless system **iNELS scores** - winning the prestigious award **Visionary 2015**.  
New branch offices **iNELS Smart Home LLC USA** and **ELKO EP Middle East** in Dubai.
- 2016 ○ Own test lab opened, award for **iNELS Future** office.
- 2017 ○ Introducing the product line **IoT iNELS Air**.  
Concept launched **iNELS Smart City**.
- 2018 ○ Establishing a branch office **ELKO EP Baltic**.
- 2019 ○ Smart pole deployment as a keystone in Smart City.



# SMART HOME

## Your house likes you!

The basic building block of Smart Home system is iNELS (Intelligent Electronic-installation System) - whether it's bus or wireless version. Both variants, however, allow control of appliances, dimming and lighting, control of blinds and shutters, heating control, A / C and other HVAC systems.

In addition, iNELS BUS includes a security system, an access system and allows integration of third party devices - such as A / V systems, home appliances, cameras ...

On the other hand, iNELS Wireless is ideal for existing flats and houses, when there is no need to make major building modifications during installation. Both systems can be combined to achieve maximum customer satisfaction.



Central unit



Wireless switch unit



Switching socket



72°F  
temperature



65°F  
living room



CHEN

LIVING ROOM

BEDR

# What can iNELS control?

In addition to basic functions, the system can be set up with even the most advanced functions. It's not just blinds that can be cleverly connected to the device. iNELS integrates all the technologies in the house so you can control them from one application.



## Heating / Cooling

It is possible to set the temperature in each room using a single button or application.



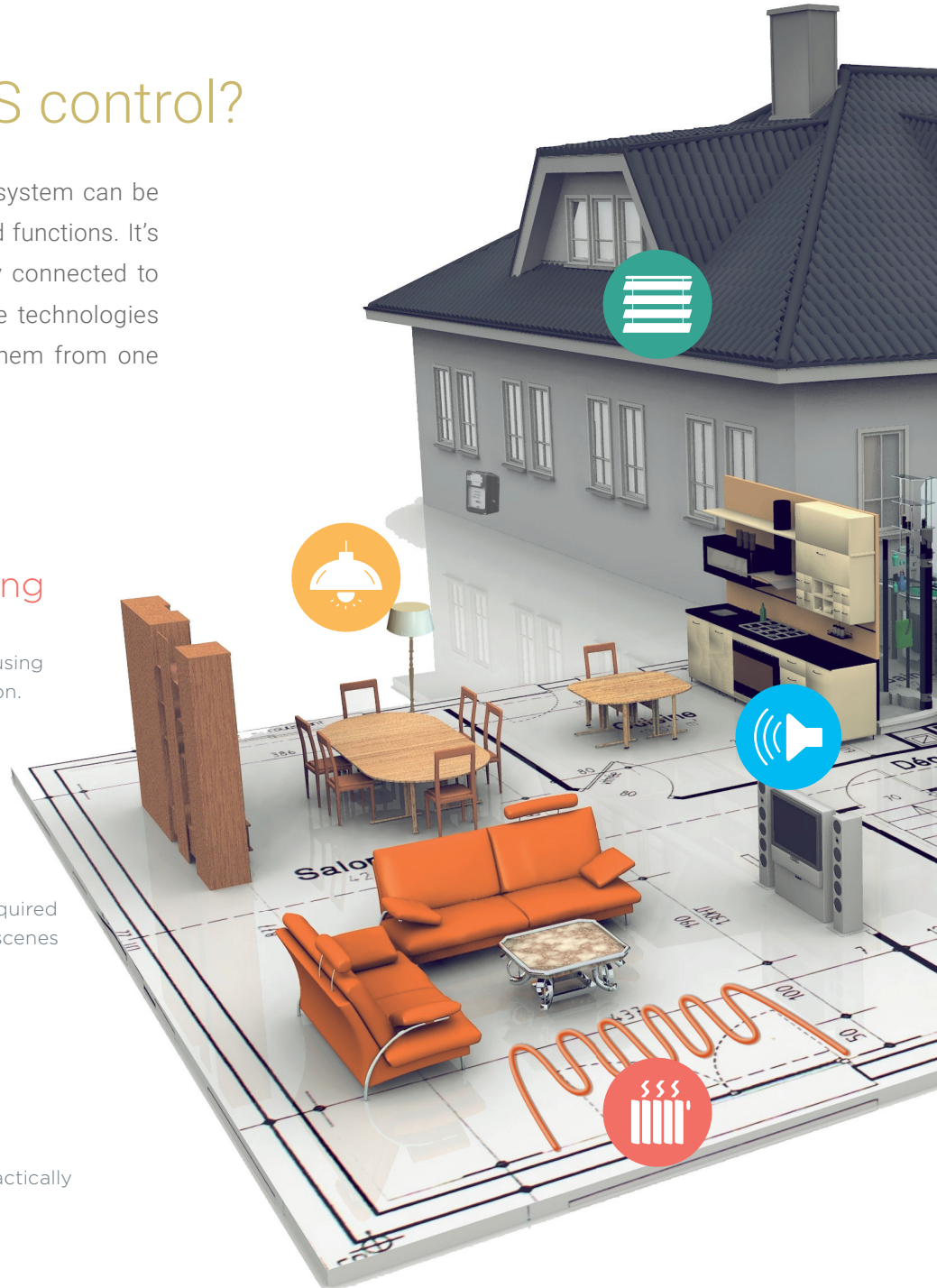
## Lighting

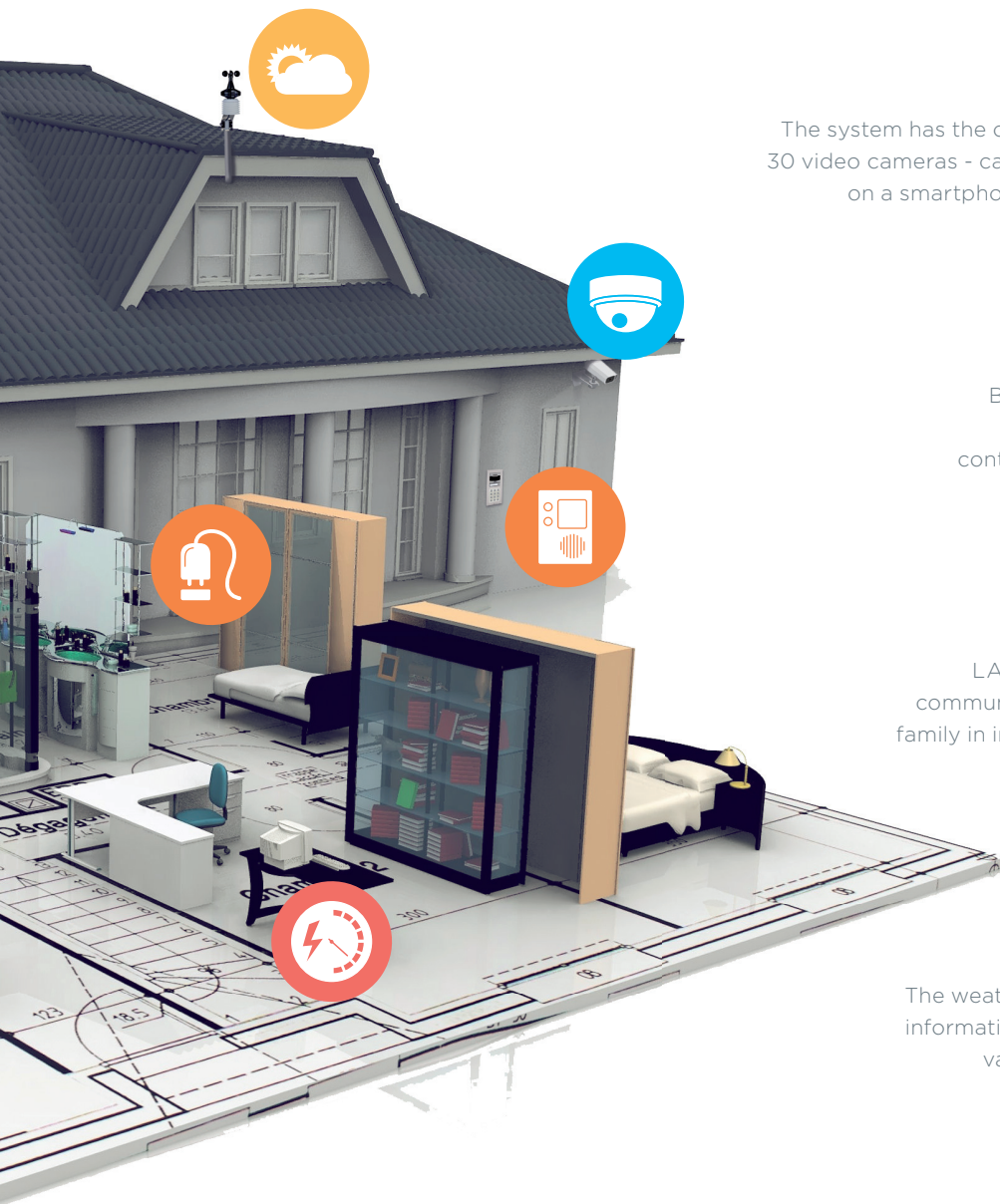
Not only dimming to the required level, but also setting light scenes for every occasion.



## Switching

You can switch on or off practically any electric appliance that is connected to the socket.





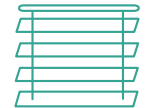
## Camera

The system has the capacity for connecting up to 30 video cameras - can be watched in applications on a smartphone or tablet, and even on TV.



## Blinds, Shutters

Blinds, gates and awnings can be controlled by any system controller, including applications.



## Intercom

LARA iNELS offer the option of communicating with members of the family in individual rooms of the home.



## Weather station

The weather station not only provides information, but also allows measured values to be used for control of functions in the home.



## Multimedia

From one place of house it is enabled to share a music over the whole house.



## Energy management

iNELS allows you to measure consumption of electricity, water and gas. Based on numbers, it adopts regulatory measures and avoids waste.





# HOSPITALITY SOLUTION

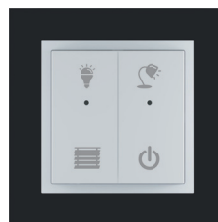
## For new & existing hotel rooms

Whether a hotel or a guest house, iNELS smart system is ready to fulfil its function of security, clarity and comfort for the guest. The card, chips or phone access system provides on-line access to the room and motion sensors can then be set directly to the home environment. The clear glass panels at the bed or the central touch panels at the entrance can control everything the guest may want. Interconnection at the reception and the hotel's service is a matter of course.

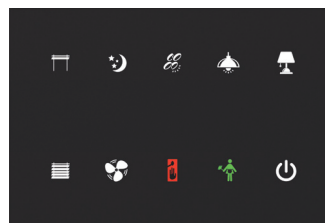
**iNELS**<sup>®</sup>



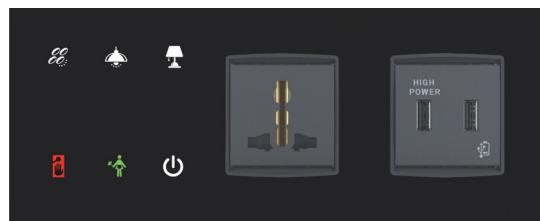
Glass card reader



Wall button



Glass touch panel



Glass bedside panel



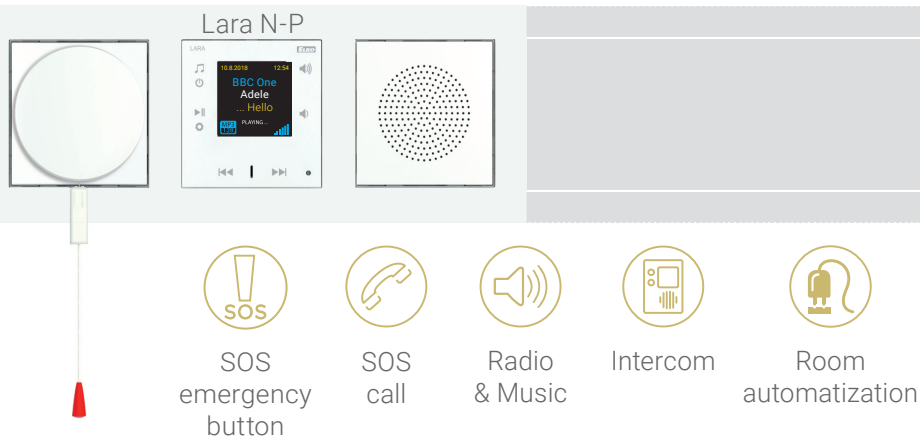




# HOSPITAL SOLUTION

## Nurse-Patient call communicator

LARA multimedia unit is also well designed for hospitals. Patients in hospital rooms are sometimes bedridden with limited or no movement at all. At such time, any relief is appropriate and valuable. It connects five great functions into one product – with radio player you can simply play favorite radio stations, multimedia player to listen music from external sources, intercom for communicating between patient and nurse, videophone provides closer monitoring of patients, audiozone serves for controlling of multimedia in patients room. SOS Emergency Button that you can place anywhere. Even wireless control key fob for lighting control. All these elements lead to safer, easier and more comfortable stay in hospital.





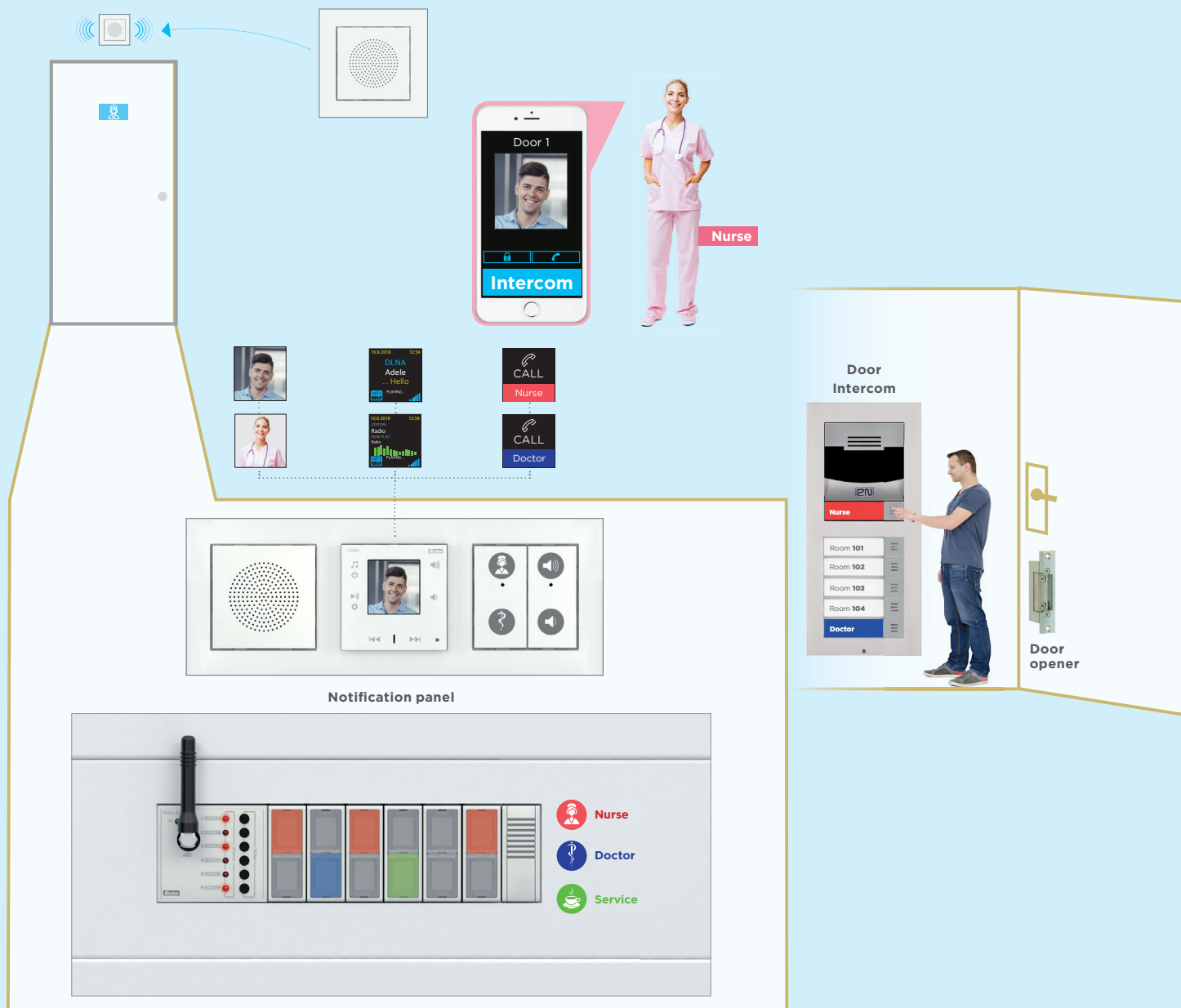


## Patient's room





## Nurse room





# BUILDING MANAGEMENT SYSTEM

It is an integral part of any modern building. In addition to managing it, it integrates the different technologies into the building into one unit. Contemporary buildings focus on energy consumption, safety, a healthy work environment, quality and fast service, maximum use of IT technology and automatic operation. This can be guaranteed by completely linking the sensors and actuators of different systems.

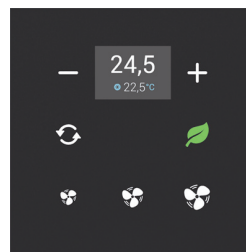
iNELS uses Tridium's BMS under the name Niagara, which allows all of the above.



JACE 8000 controller



22 channel Switching actuator



Thermoregulator



DALI Occupancy sensor

# SMART BUILDING



Lights



HVAC



Energy management



RTLS  
(Real-Time Location System)



Payment terminal



Smart street lighting



Waste management



Information



Healthy park



IoT



Environmentally friendly  
(Green Building)



Software, applications,  
platforms



Conference and meeting  
rooms booking



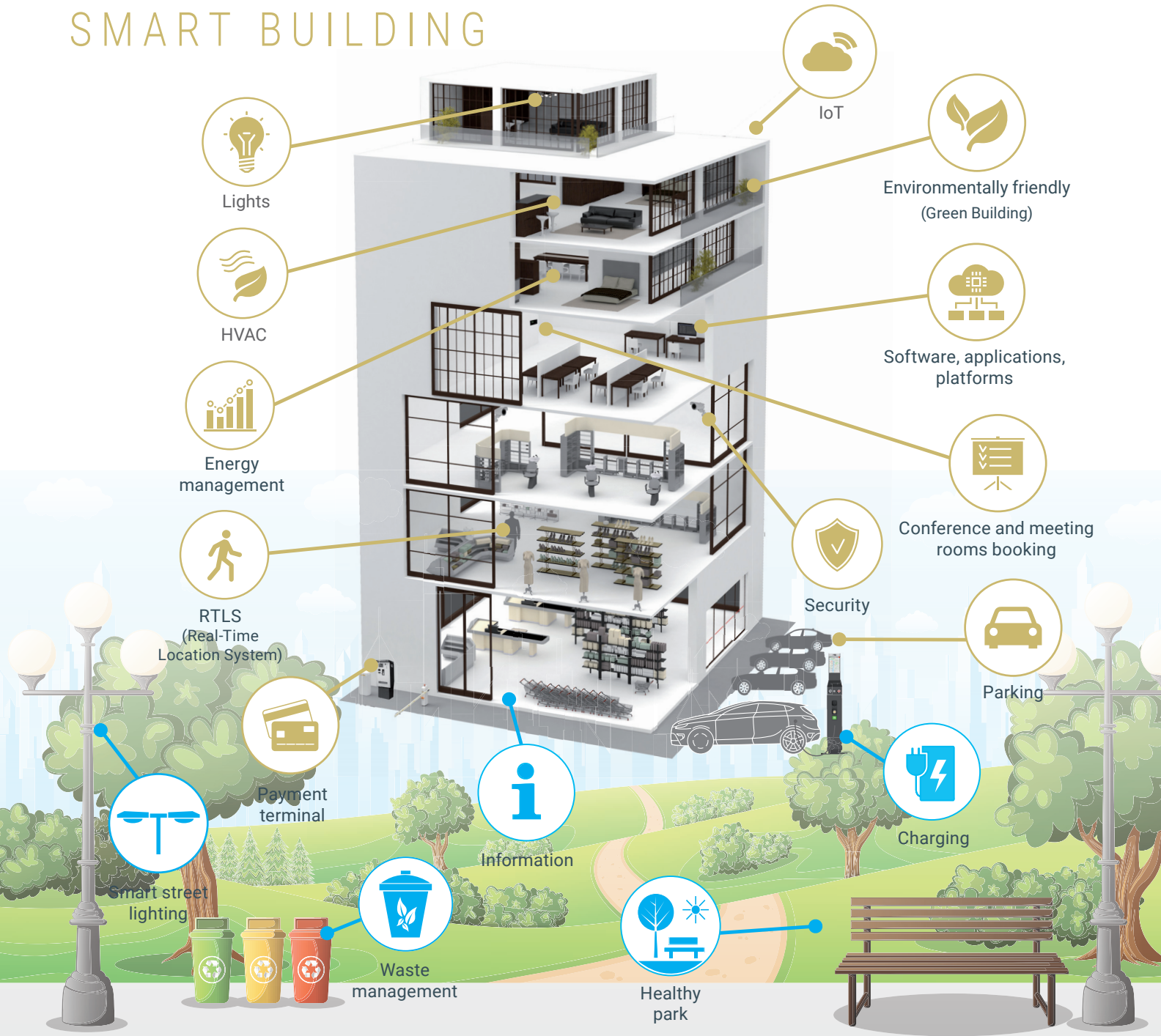
Security



Parking



Charging

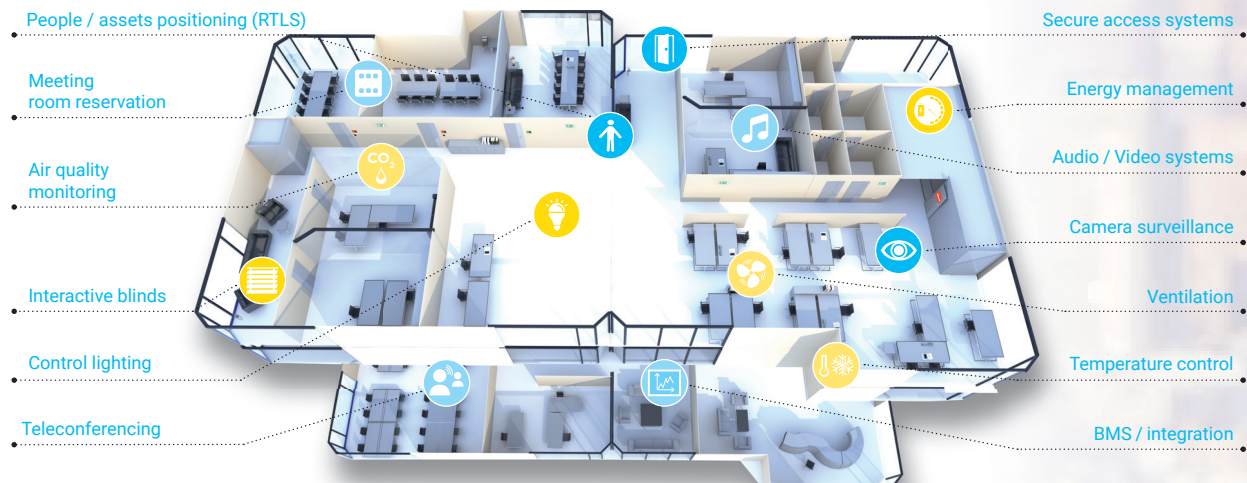




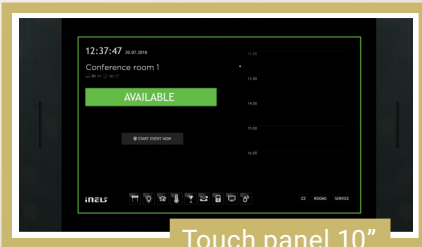
# FUTURE OFFICE

The work environment is the second home for most of us, and these are our offices - whether single or open space and clean desk. An approach to accommodate all the staff in one building is a lot. However, they all have one thing in common: everyone wants to work and spend their time in a good, healthy and modern environment. The Future Office concept, built on iNELS, provides

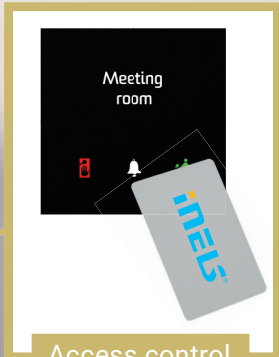
not only familiar functionality, such as an access system, booking session or room temperature, but also adjusts and changes light levels and temperatures based on daylight and outdoor lighting. It also measures the CO<sub>2</sub> and VOC levels and, on the basis of these results, it evaluates and controls the air conditioner so that the air is always fresh.



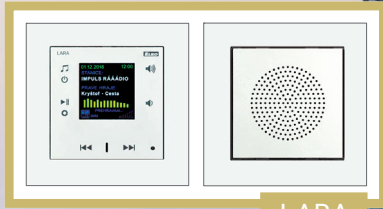




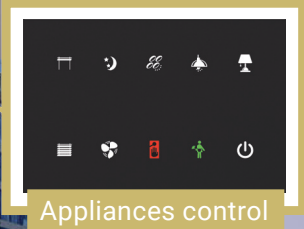
Touch panel 10"



Access control



LARA



Appliances control

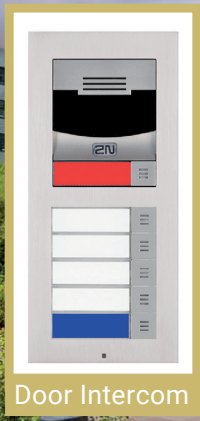


CO<sub>2</sub>/CO/O<sub>3</sub>/NO<sub>2</sub>

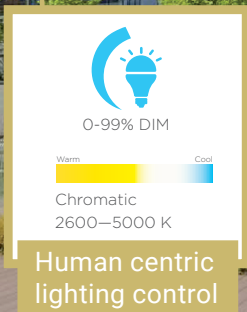
Air quality



Central unit



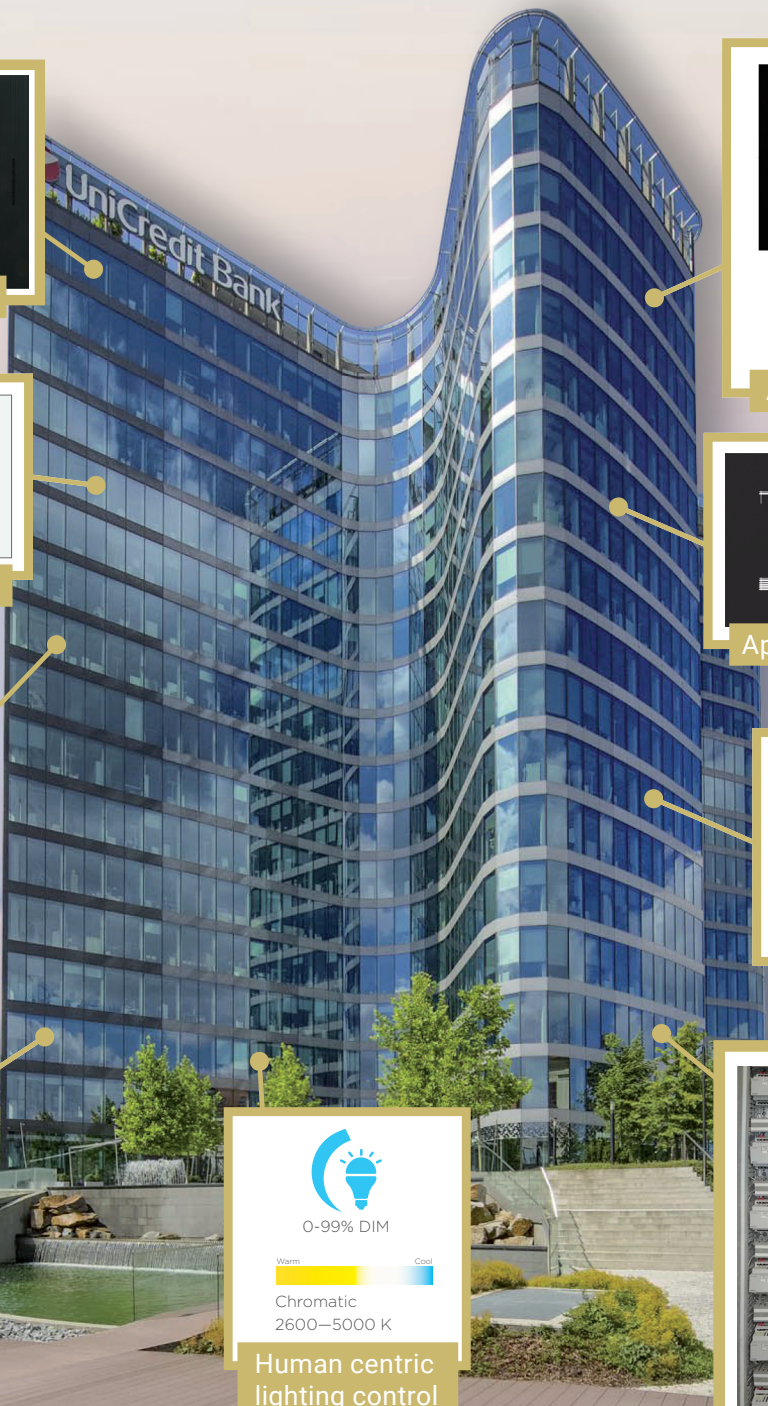
Door Intercom



Human centric lighting control



Switchboard





# ENERGY MANAGEMENT

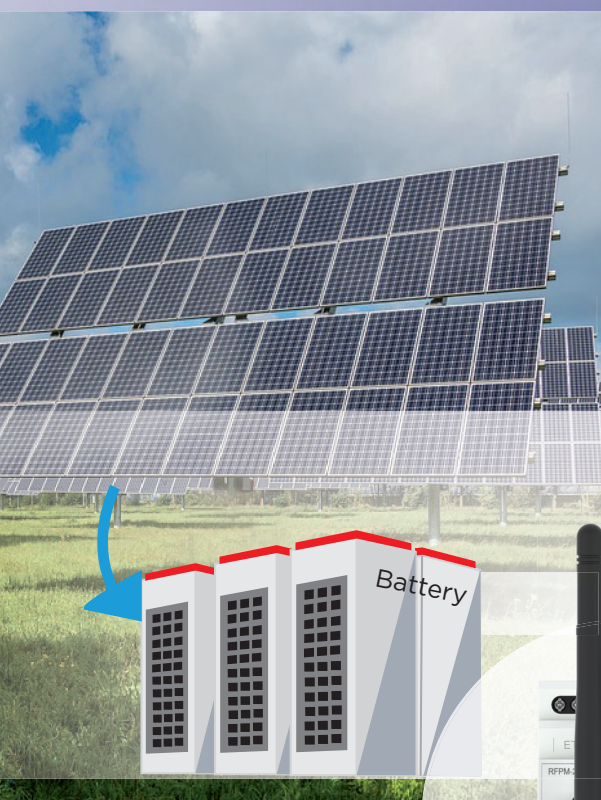
## Energy comes first

Under this concept, it is not just the measurement of energy, but also its optimization. In practice, when properly set up various dependencies of consumption can be significantly reduced.

It is also important to use renewable energy so that surplus energy is not thrown into the trash. This is an important issue for the Smart Grid.

The iNELS system, together with Energy Software EnMon, can define collision and redundant processes; set their optimization, so as not only to save but to save sustainably.







# INTERNET OF THINGS

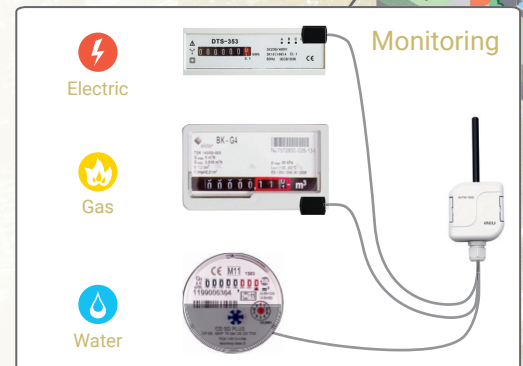
## iNELS Air

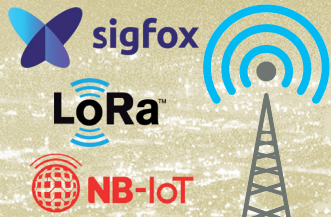
iNELS Air was designed in response to the dynamically developing network for IoT (Internet of Things). Describes as the Low Power Wide Area (LPWA). This technology is designed to provide full outdoor coverage even inside buildings.

The Future Office concept, built on iNELS, provides not only familiar functionality, but also adjusts and changes light levels and temperatures based on daylight and outdoor lighting. It also measures the CO<sub>2</sub> and VOC levels and, on the basis of these results, it evaluates and controls the air conditioner so that the air is always fresh.

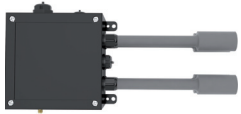
The product group includes sensors for communication on the Sigfox, LoRa and NB-IoT protocol. Linking sensors with ELKO Cloud and IFTTT (If This Then That) is ideal for a wide range of applications.

Individual products have the letter "S", "L" or "Nb" in their type designation. This distinguishes the way of communication. "S" stands for communication over the Sigfox network, "L" stands for communication over the LoRa network, and "Nb" uses communication via the NarrowBand network.





Air Quality



CO<sub>2</sub>/CO/O<sub>3</sub>/NO<sub>2</sub>

Appliances control




Universal sensor



humidity,  
temperature,  
current,  
voltage

BTS  
(Base  
Transceiver  
Station)


Rodent detector



Mobiliary monitoring



Parking sensor



Smart street lighting





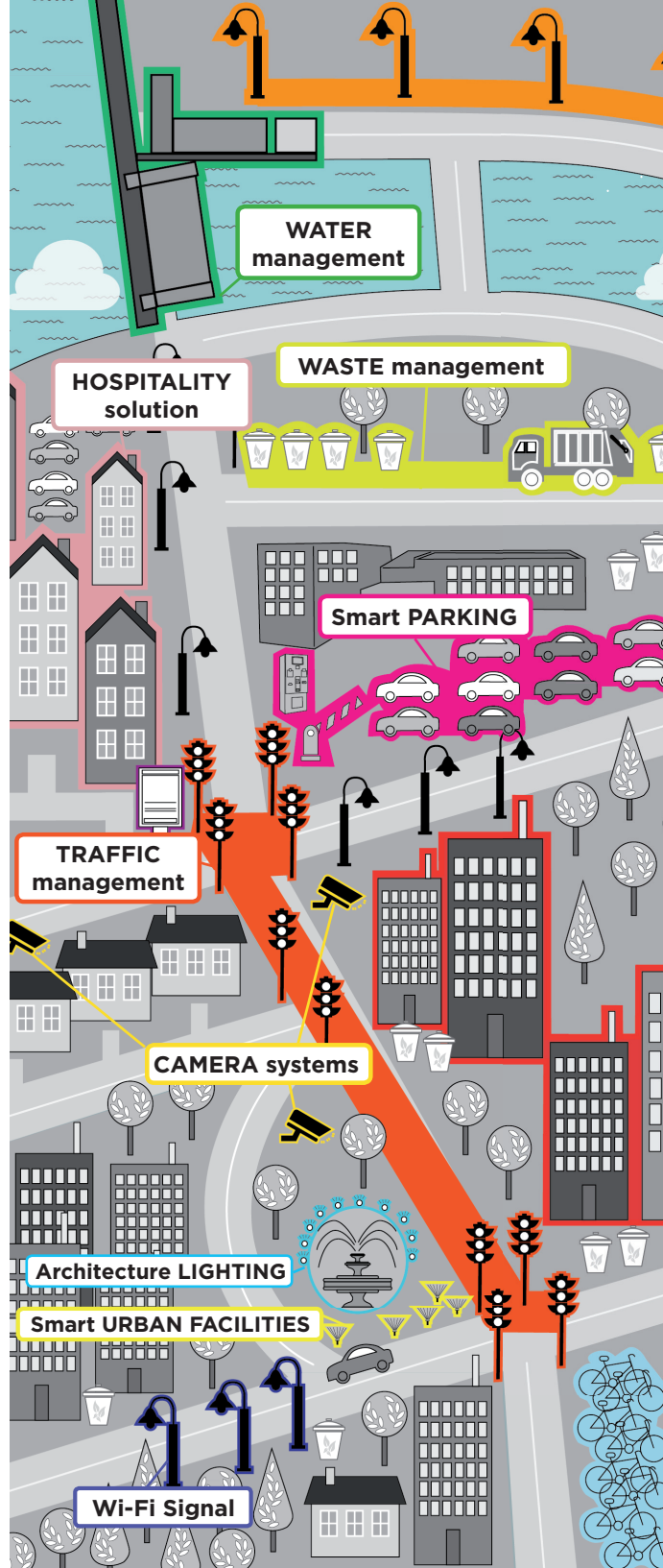
# SMART CITY

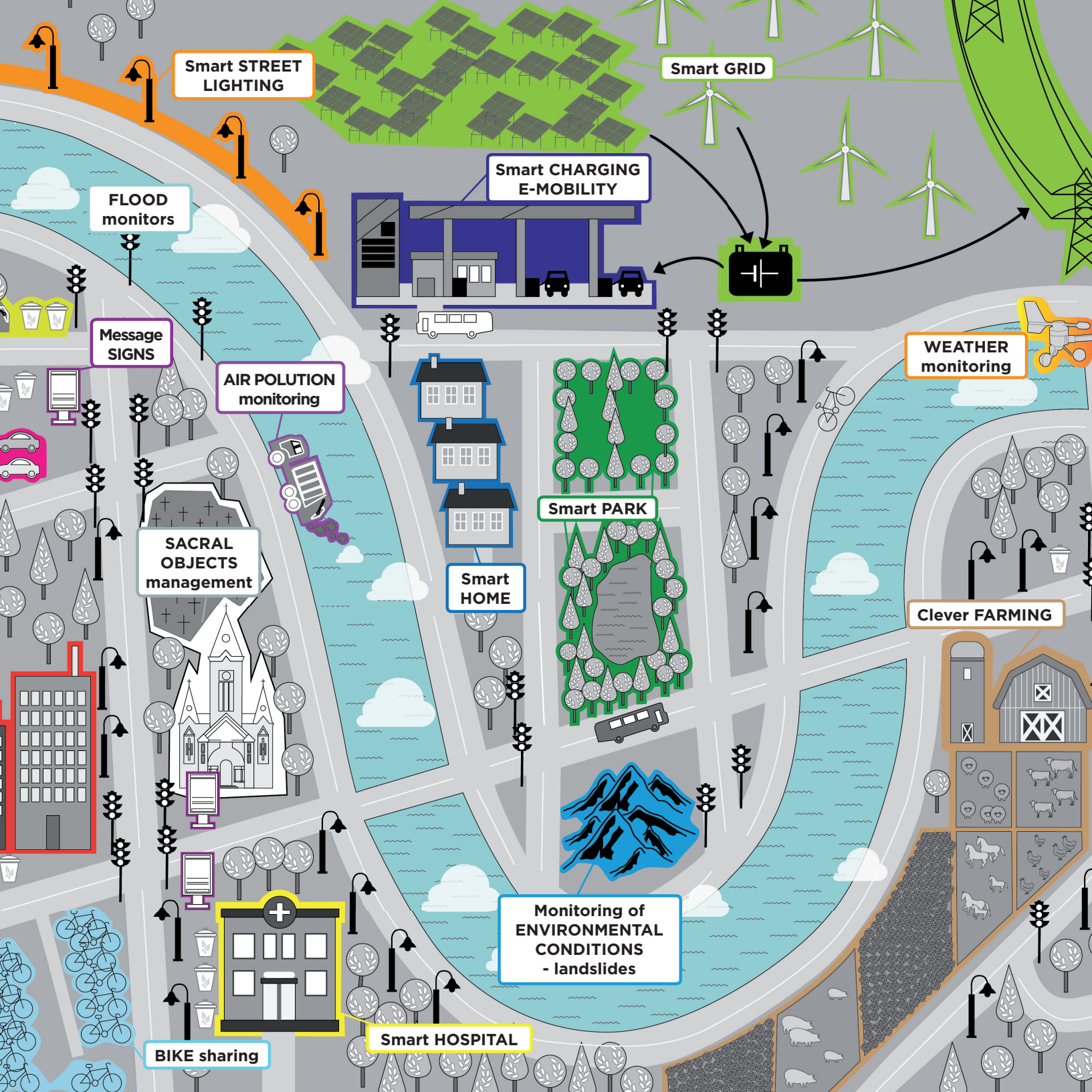
Smart city is tomorrow's place. It will be at the heart of the revolution and innovative solutions. In order for cities to be successful, there is a need to provide not only a pleasant place to live, but also a competitive marketplace and the ability to create more satisfied employees.

We offer not only the products but also the technology that are the basis of every smart city. Whether smart buildings, urban furniture, air condition monitoring or weather monitoring and environmental aspects (landslides, water levels, shocks). Increasingly, LPWAN networks are ideal for outdoor use and allow data to be transferred directly from the sensors to the monitoring centre. An essential part of the solution is also the Smart City platform that integrates technology with comprehensive control over all devices in the city.



Smart City  
CATALOGUE  
DOWNLOAD





Smart STREET LIGHTING

Smart GRID

FLOOD monitors

Smart CHARGING E-MOBILITY

Message SIGNS

AIR POLLUTION monitoring

WEATHER monitoring

SACRAL OBJECTS management

Smart PARK

Smart HOME

Clever FARMING

BIKE sharing

Monitoring of ENVIRONMENTAL CONDITIONS - landslides

Smart HOSPITAL



# AGRICULTURE

Every good farmer, be it a grower, a breeder, a wine-maker, a beekeeper or a forester, puts a lot of effort and money into the proper management of his production areas, but circumstances do not always allow him to harvest the crops appropriately. Farmers are particularly worried about weather conditions - temperature fluctuations, unforeseen precipitation, long-term drought, and soil moisture - all result in lower yields.

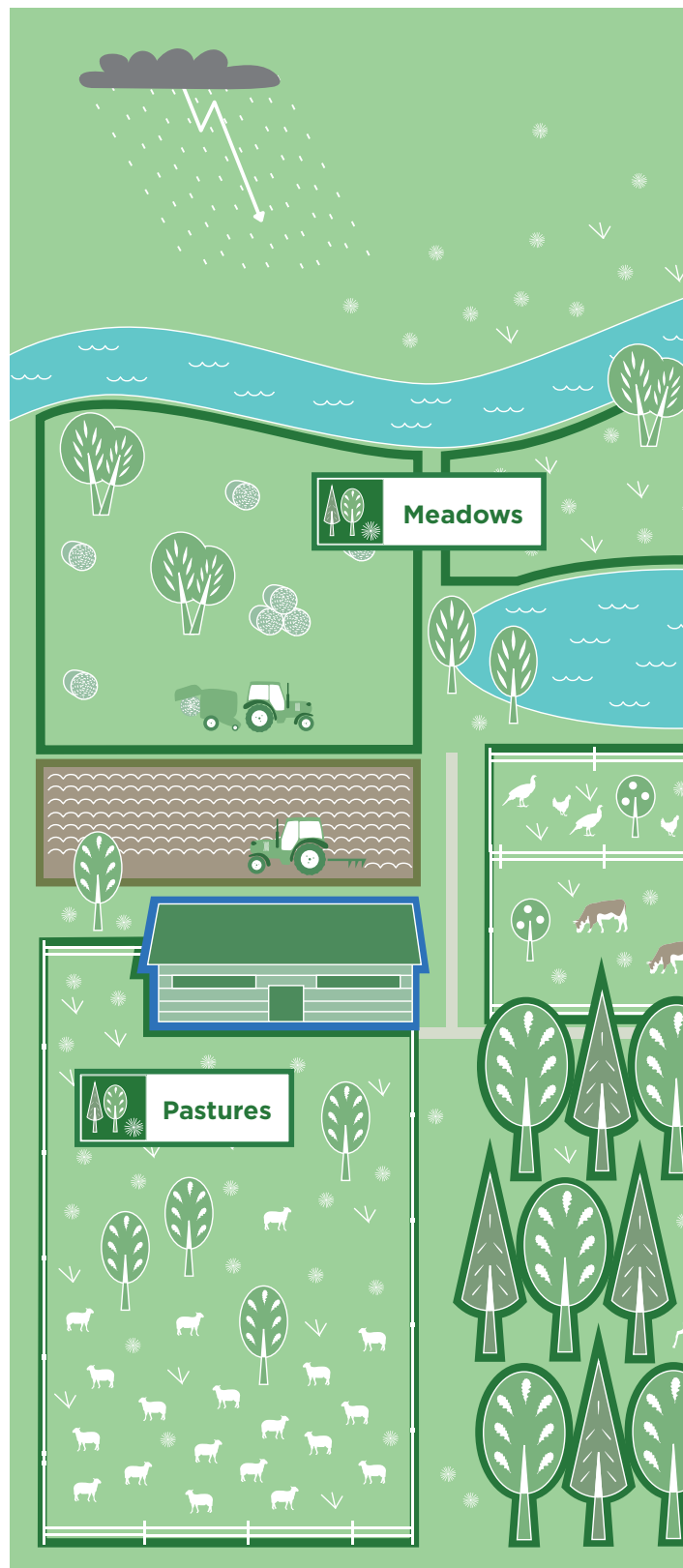
We cannot predict the wind and rain precisely; we can however, monitor and evaluate them very well. Technology can be a great help also were you would not expect it - on farms, vineyards, fields or forests, especially if it is automated and communicates efficiently. It makes work easier and more efficient, with better property protection, and helps prevent and speeds up crisis response.



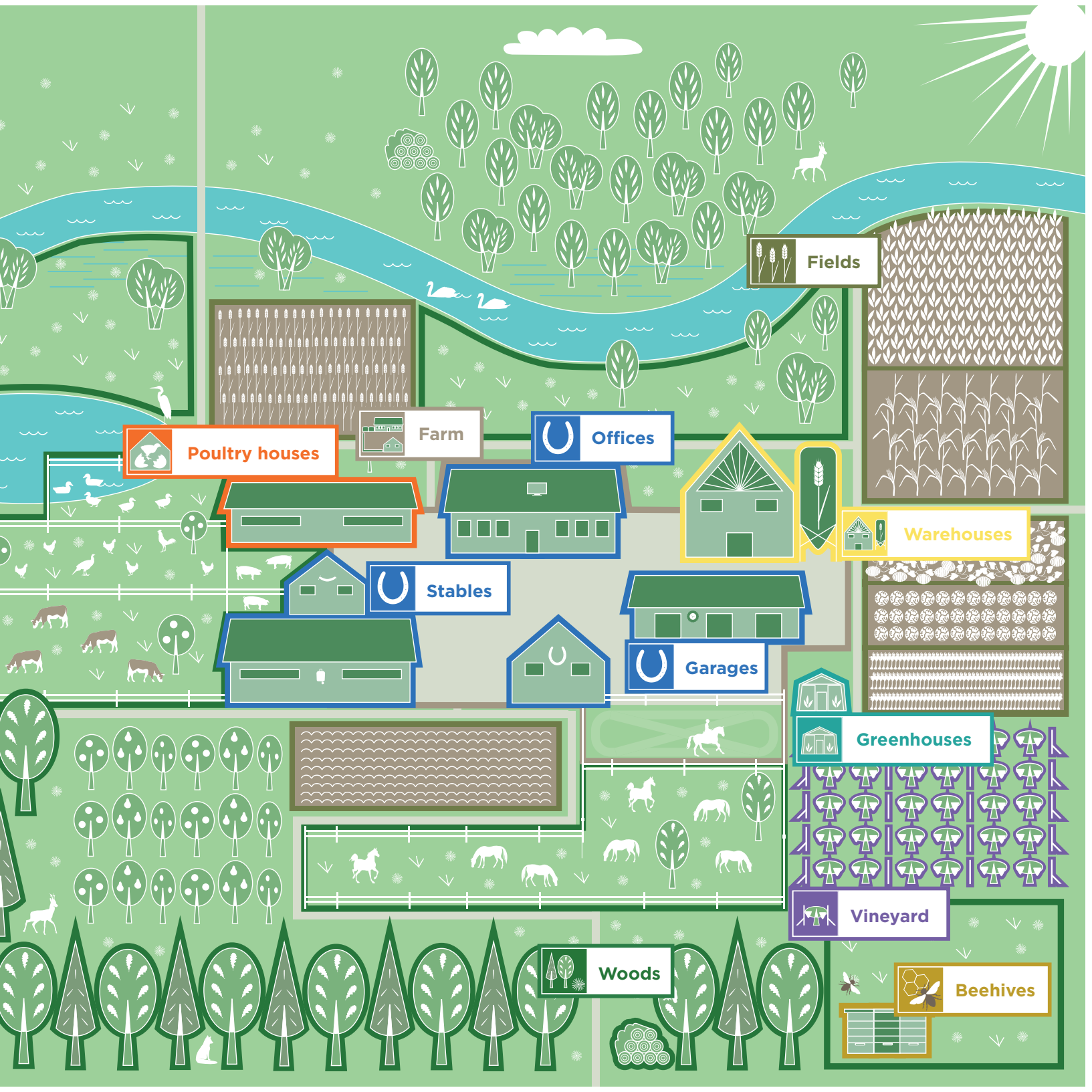
Agriculture  
CATALOGUE  
DOWNLOAD



**iNELS**  
Smart Agriculture  
IoT services for farmers  
[www.inels.com/agriculture](http://www.inels.com/agriculture)







 **Poultry houses**


 **Farm**

 **Offices**

 **Fields**

 **Warehouses**

 **Stables**

 **Garages**

 **Greenhouses**

 **Vineyard**

 **Woods**

 **Beehives**

# SMART STREET LIGHTING

## SMART POLE

Poles of public lighting do not need to be just an inexpensive statue that provides lighting and as a loudspeakers for public radio. As an integral part of urban infrastructure, they are the ideal place for installation of devices to track the events that take place around it. The Smart Pole of iNELS is designed for regular street lighting in any „Street“, but in the „City“ its options make it an ideal technological oasis for city parks, squares, pedestrian zones or colonnades. In addition, the modular system allows you to build your own variation, choosing from 15 different modules. This is why it will not only become a design element, but will be a useful utility that replaces existing devices (lighting, radio, cameras) commonly used in the city. It also brings additional extensions: air quality monitoring, car and bicycle rechargers, SOS button, intercom and interactive touch panel. All technologies are integrated into the Smart City Platform.





Main street light



Motion detector



Camera



Public address  
loudspeaker



Intercom



Wireless charging



Payment terminal



SOS button



Car charging



Wi-Fi hotspot



Communication  
hotspot



RGB Signalling  
status light



Air quality sensor



Backlit  
infopanel



Touch panel



USB charge  
socket



Charging socket  
230 V



Smart Street  
Lighting  
CATALOGUE  
DOWNLOAD



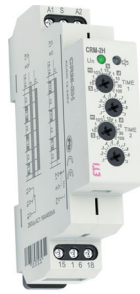
**iNELS**  
Smart Street Lighting  
Economical and effective outdoor lighting solutions  
www.inels.com/uk



# RELAYS REFERENCES

ELKO EP is a world leader in the field of electronic relays development and manufacturing used in residential and industrial electro-installations. We offer more than 150 types of relays that can be

produced under well-known OEM brand names. We develop and implement products according to customer specifications as well as launch new products under brand names.

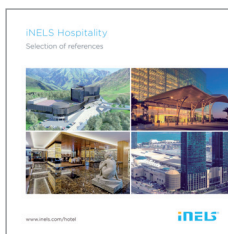




# iNELS REFERENCES

The new industrial branch Smart electro-installation has been developing by quantum leaps in recent years. ELKO EP has kept a careful eye on these trends, and with them in mind, it has introduced the iNELS system to the market. Through its wide-ranging versatility, it covers contemporary requirements for intelligent electrical installations for various sized buildings: from apartments to family homes, villas and hotels to factories.

In this brochure, you will find a selection of over 10 000 installations that iNELS has performed in its existence. References are thematically grouped based on type of building. It is not a complete listing, but offers inspiration. It includes apartments, homes, villas and hotels, but also commercial and historical buildings.



Hospitality  
CATALOGUE  
DOWNLOAD

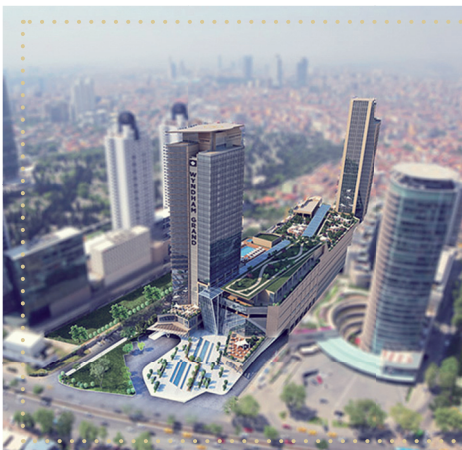




Kroměřížská nemocnice  
(Kroměříž, Czech republic)



Marriott Marquis (Doha, Qatar)



Wyndham Grand (Istanbul, Turkey)





Movenpick (Dubai, UAE)



ELKO EP (Holešov, Czech republic)



Buddha Palace (Thimphu, Bhutan)





  
Jamie's Italian Restaurant  
Budapest, Hungary

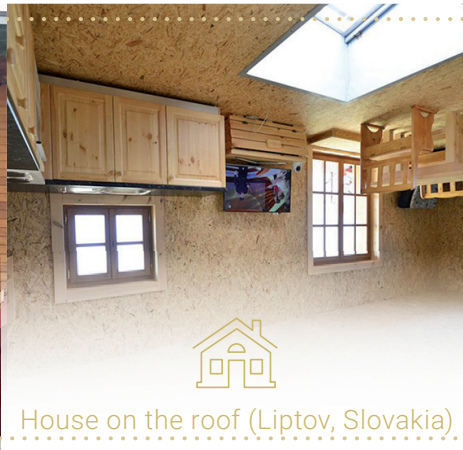


  
Sunseeker Yacht (Mallorca, Spain)

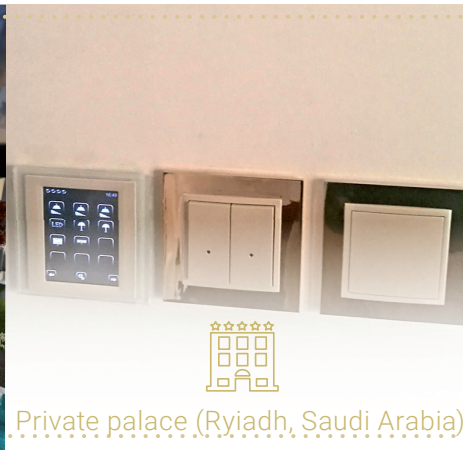
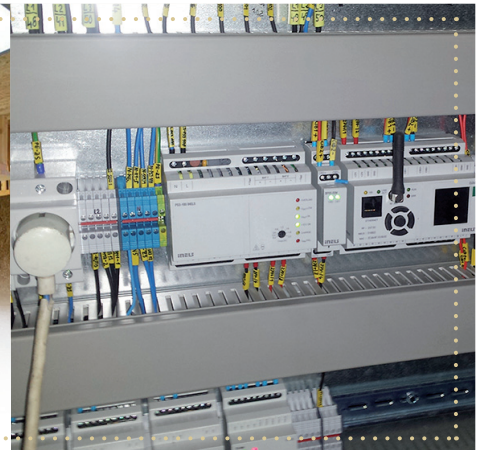


  
Bodorka Aquarium  
(Balatonfüred, Magyarország)





House on the roof (Liptov, Slovakia)

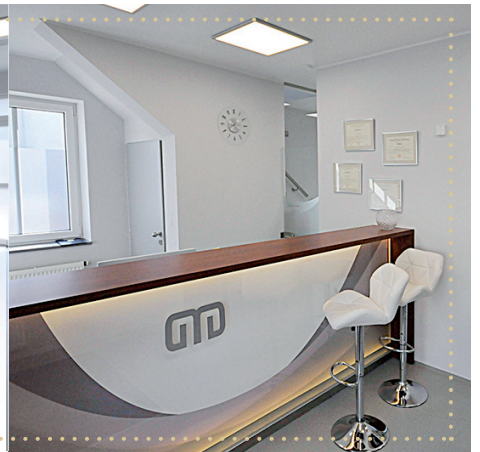


Private palace (Riyadh, Saudi Arabia)



Passerinvest (Prague, Czech republic)





M-Gate clinic  
(Pardubice, Czech republic)

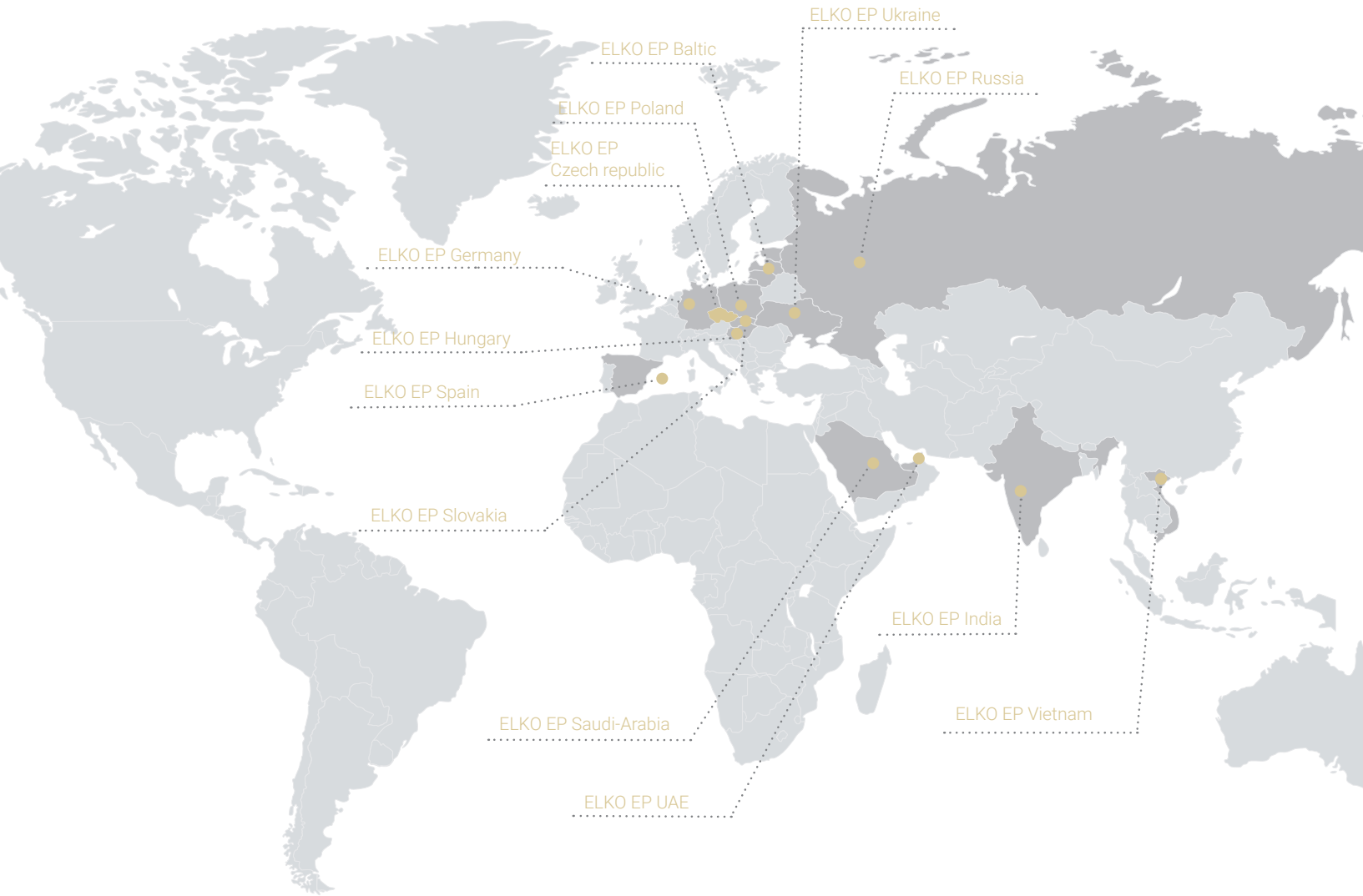


Moni's Jewelry  
(Budapest, Hungary)



Hyundai (Nošovice, Czech republic)





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