



MAKERS

CREATIVE
TECHNOLOGISTS



History

- 10/2014 - community IoT Bratislava, today more than 500 members
- 2015 - 1st LoraWan network in Slovakia on own gateways
- 04/2017 - MAKERS s. r. o. established
- 2018 - IQRF Alliance member

MAKERS s. r. o. company profile

- years of experience in the area of IoT and smart homes/buildings
- constantly growing team (today 15 people)
- office in Bratislava, Slovakia

Our services

*design and implementation of
IoT projects for B2B customers*

- System architecture and technology design for complex IoT projects (Smart home/building/city/lighting/metering/grid)
- HW integration (sensors & actuators), PLC programming
- IoT platforms customisation and extension
- API programming and BigData integration
- GUI development

LogicMachine - MAKERS IoT gateway

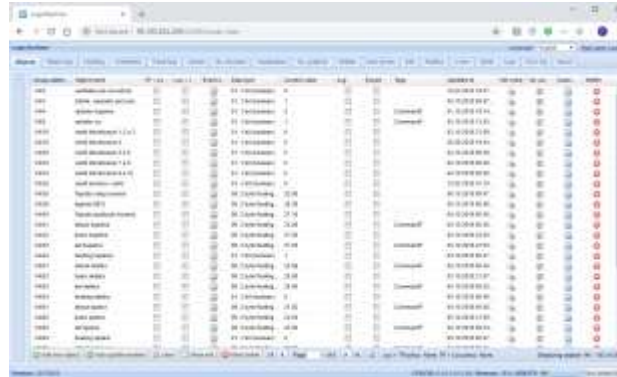
- All-in-one cross-standard controller uniting in one device gateway functionality, cloud service integration, complex network logic engine, easy-to create visualization platform, I/Os and much more.



Opensource, strong community&support, rapid development

LogicMachine - MAKERS IoT Edge Controller

- Multiprotocol gateway with open and powerful SW architecture
- Secure and reliable communication with IoT platform (e.g. MQTT)
- Open programming environment and many standards supported.
- MAKERS developed own programming framework accelerating development.



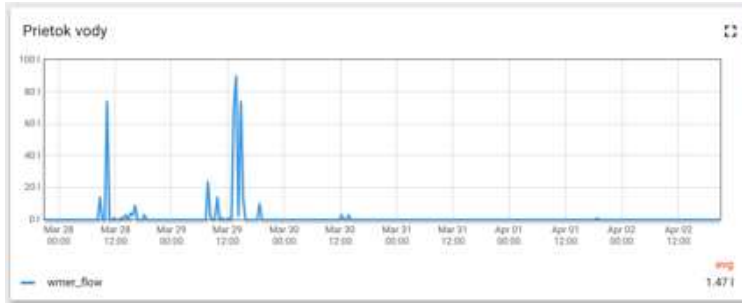
LogicMachine + IQRF + IoT platform

Auto provisioning

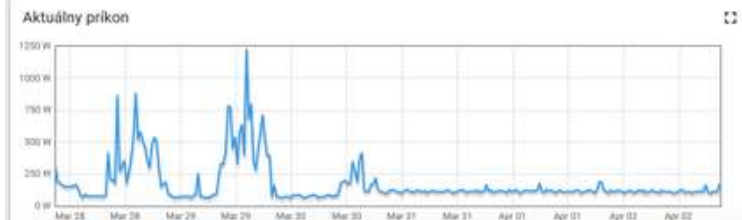
- Automatically create and configure new devices discovered by LogicMachine



Reference project: "Cvernovka"



Výkon na fázach



Energia v čase

🕒 Realtime - last 8 days

Times

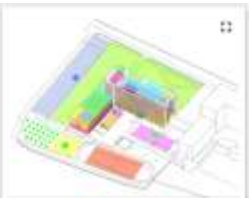
Alarms

2018: Realtime - last day

2018: Created time ↓

Created time	Message	Type	Severity	Status
2018-04-03 21:19:18	Simulated	TEMPERATURE	Warning	Active Unacknowledged

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Entities

Entity name	Definovaná spotreba (l)	Prietok (l/s)
WMA-SPACE.0.06	788	0
WMA-SPACE.0.07	0	0
WMA-SPACE.0.08	3120	0

Entities

Entity name	El. spotreba (kWh)	Aktuálny výkon (W)
EM-SPACE.0.06	247.23	82
EM-SPACE.0.07	91.27	0
EM-SPACE.0.08	766.98	0



Reference project: “Cvernovka”

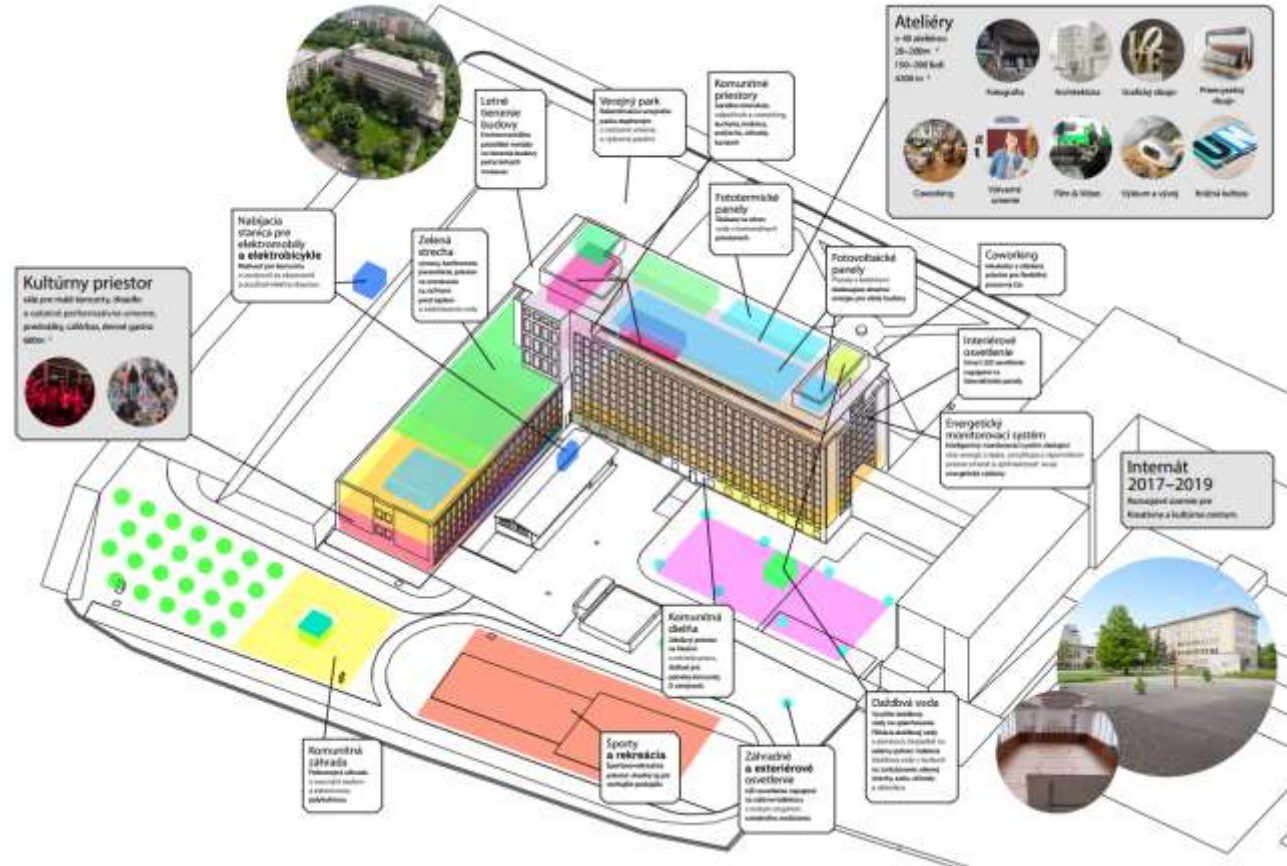
Smart City incubator

- Photovoltaic panels
- Hot water solar panels
- Rain water collectors & distribution
- E-car chargers
- Smart metering

Facility management

- Ticketing & reservations
- Polling
- Reminders
- Energy monitoring system

<http://nadaciacvernovka.sk/>



Reference project: “Cvernovka”

What we did

- HW integration
- IoT Edge programming & deployment
- IoT platform development & deployment
- IoT platform maintenance & support



Future project: Supermarket chain in Slovakia

IoT solutions interconnecting sensors and 3rd party (cloud) services to better understand the energy consumption and temperatures throughout the store.

Online actual overview of all measured values on a SCADA like user interface.
Alerts, reports and anomalies detection.





Thank you!

Peter Vereš

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Reference: HausMaster

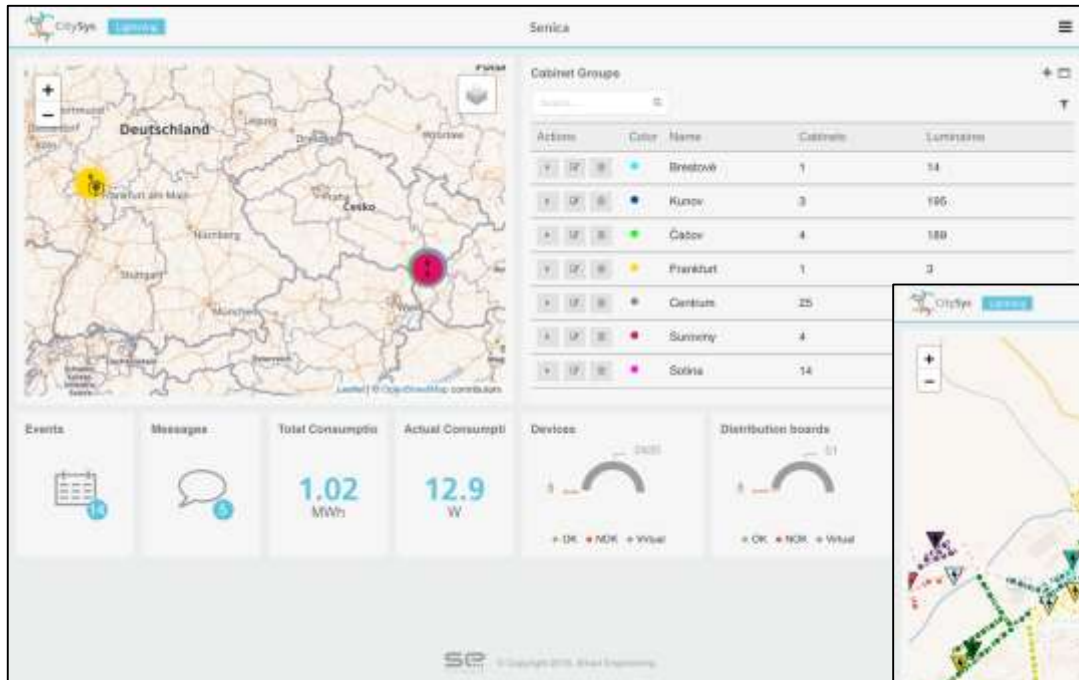
Complete SmartHome
solution.

Similar to other smart
home products of
Telco or Energy
providers, but with
different approach.

We provide local
autonomous control.



Reference: Smart City (Smart Lighting)



The dashboard provides a high-level overview of the smart lighting system. It features a map of Germany with highlighted locations, a table of cabinet groups, and key performance indicators for consumption and device status.

Actions	Color	Name	Cabinets	Luminaires
[Y] [D] [E]	Light Blue	Brestow	1	14
[Y] [D] [E]	Dark Blue	Kunov	3	195
[Y] [D] [E]	Green	Čabov	4	189
[Y] [D] [E]	Yellow	Frankfurt	1	3
[Y] [D] [E]	Grey	Centrum	25	
[Y] [D] [E]	Red	Sunny	4	
[Y] [D] [E]	Pink	Solna	14	

Key Metrics:

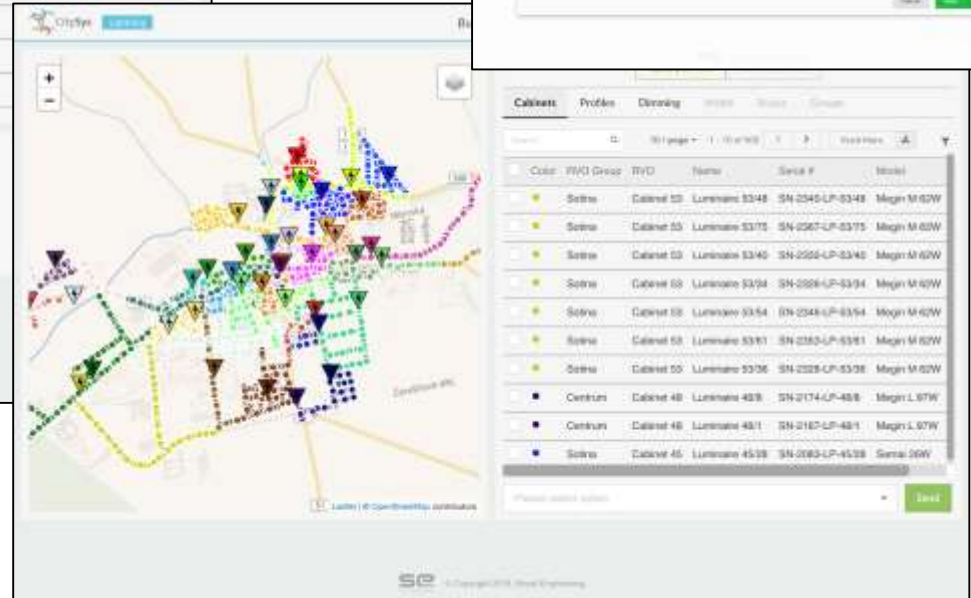
- Total Consumption: 1.02 MWh
- Actual Consumption: 12.9 W
- Devices: 2000 (OK: 1900, NOK: 100, Vital: 0)
- Distribution boards: 31 (OK: 30, NOK: 1, Vital: 0)



The Profile Detail view shows the configuration for a specific luminaire. It includes a visual representation of the luminaire's components and their status.

Profile Detail

Visual representation of luminaire components and their status.



This view shows a detailed map of the smart lighting network with individual cabinets and luminaires color-coded by group. A table on the right provides a detailed list of the cabinets.

Color	PWD Group	Type	Name	Serial #	Model
Yellow	Solna	Cabinet 03	Luminaire 03/48	SN-2548-LP-03/48	Magn M 60W
Yellow	Solna	Cabinet 05	Luminaire 03/75	SN-2567-LP-03/75	Magn M 60W
Yellow	Solna	Cabinet 03	Luminaire 03/40	SN-2558-LP-03/40	Magn M 60W
Yellow	Solna	Cabinet 03	Luminaire 03/94	SN-2528-LP-03/94	Magn M 60W
Yellow	Solna	Cabinet 03	Luminaire 03/54	SN-2548-LP-03/54	Magn M 60W
Yellow	Solna	Cabinet 03	Luminaire 03/61	SN-2583-LP-03/61	Magn M 60W
Yellow	Solna	Cabinet 05	Luminaire 03/26	SN-2328-LP-03/26	Magn M 60W
Grey	Centrum	Cabinet 48	Luminaire 48/9	SN-2174-LP-48/9	Magn L 97W
Grey	Centrum	Cabinet 48	Luminaire 48/1	SN-2187-LP-48/1	Magn L 97W
Blue	Solna	Cabinet 45	Luminaire 45/28	SN-2093-LP-45/28	Serie 26W