



HVAC Solution - SeltronHome[®] powered by Nomnio IoT platform

Business Case – Seltron d.o.o., Maribor



Nomnio d.o.o., Slovenia, EU

Living progress.

Challenges

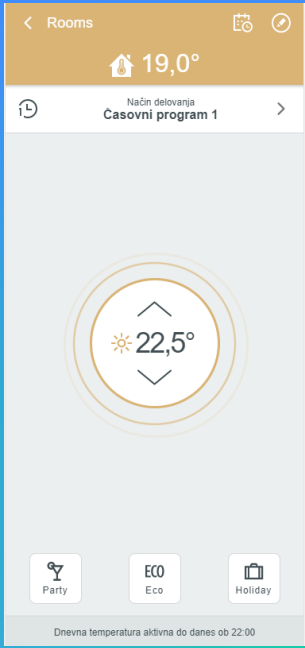
- Users access their heating systems via mobile and desktop applications.
- Maintenance experts to access to the authorised customers systems remotely to diagnose and troubleshoot or even repair settings remotely.
- Manufacturers to gain analytical data for R&D and production optimisation.

Solution proposal

- Communication module, which connect to the heating regulation subsystem with additional features (internet provided).
- Connect applications for monitoring, managing, dianose and troubleshot remotely.
- Security threat protection

First phase

- Communication module
- End-user application



Second phase

- Application for maintenance experts – outsourced partner companies – for the authorised remote access with diagnostic and troubleshooting purpose.
- Data gathering for optimisation of R&D and production.

The screenshot shows the Kelvin application interface. At the top, there is a search bar with the text "Iskanje stranke ...". Below the search bar, there are three summary cards: "Stranke" with a count of 2, "Napake" (Errors) with a count of 2 and a red warning icon, and "Neprevzeti GWD" (Unconsumed GWD) with a count of 0. Below these cards is a table with columns "Stranka", "Kraj", and "Stanje".

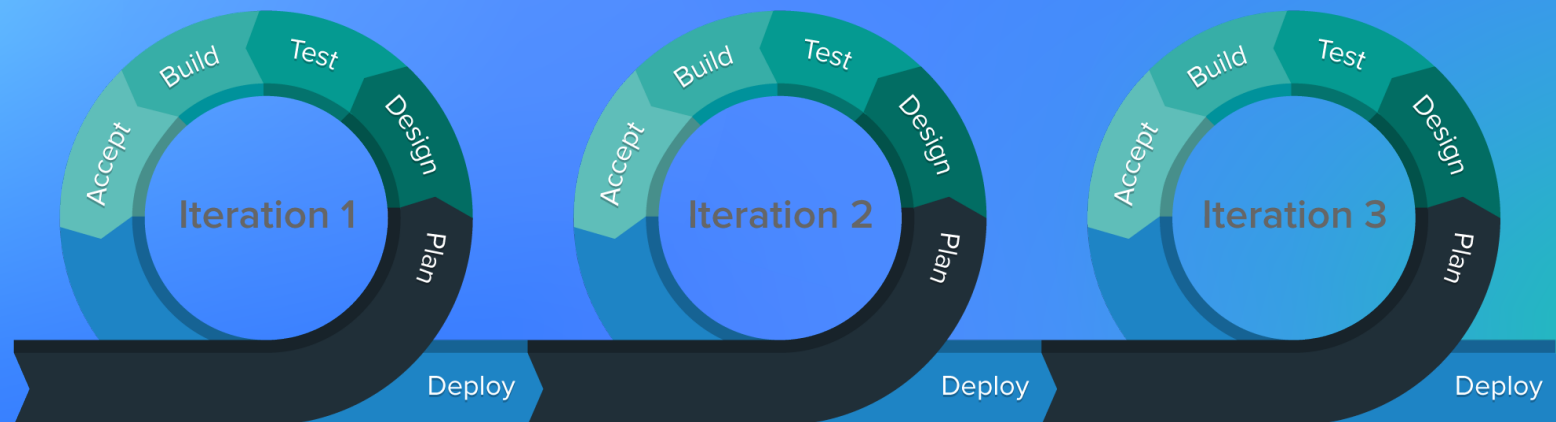
Stranka	Kraj	Stanje
Demo Stranka *	Maribor	
Nomnio Office	Maribor	

The screenshot shows a detailed view of a technical schematic for an "Oil boiler, mixing circuit, d. h. w. storage tank". Below the schematic is a table of temperature sensor data.

Temperature sensors	Mea.	Cal.
T1 - Programmable sensor	73,0°	73,0°
outside temperature	4,0°	4,0°
liquid fuel boiler	4,0°	4,0°
low pipe	4,0°	4,0°
boiler bottom	54,0°	54,0°
boiler upper	54,2°	54,2°

Third phase

- Optimisation and improvements.



About Nomnio d.o.o.

- Slogan: Living progress.
- NOMNIO grow from 3 member into 15 and still growing.
- Our core business is based in IoT (IIoT) development,
 - We also reach: BIO informatics, Computer vision...
 - And involved in projects like smart sport equipment (SKI) , smart cities (Water management...), smart industry equipment (metering, grinding, quality management...), smart public transport (buses...)
- Microsoft partner.

Our main technology used

- MQTT, WEBSOCKET & COAP for devices-cloud communication , COAP also for device-device communication, WEBSOCKET for mobile devices and cloud communication.
- Backend is developed with .NET CORE (architecture with microservices), which are running on Azure Service Fabric Cluster.
- Frontend (applications, hybrid applications) are developed with IONIC (Java Script - Angular).
- Azure IoT HUB insures MQTT communication with devices and monitoring over our devices.
- We also use Cosmos DB, Azure Table storage, Key vault, Notification hub...



Recap

- Our platform covers from 60% - 80% of work already done!
- What is left to work on – your specifics.
- High security supported by Azure built-in controls.
- Scalability and predictive expenses.
- Pay as you grow model.
- Last but not list: positive team!



Living Progress.