

ENVIRONMENTAL MONITORING IN BUILDINGS

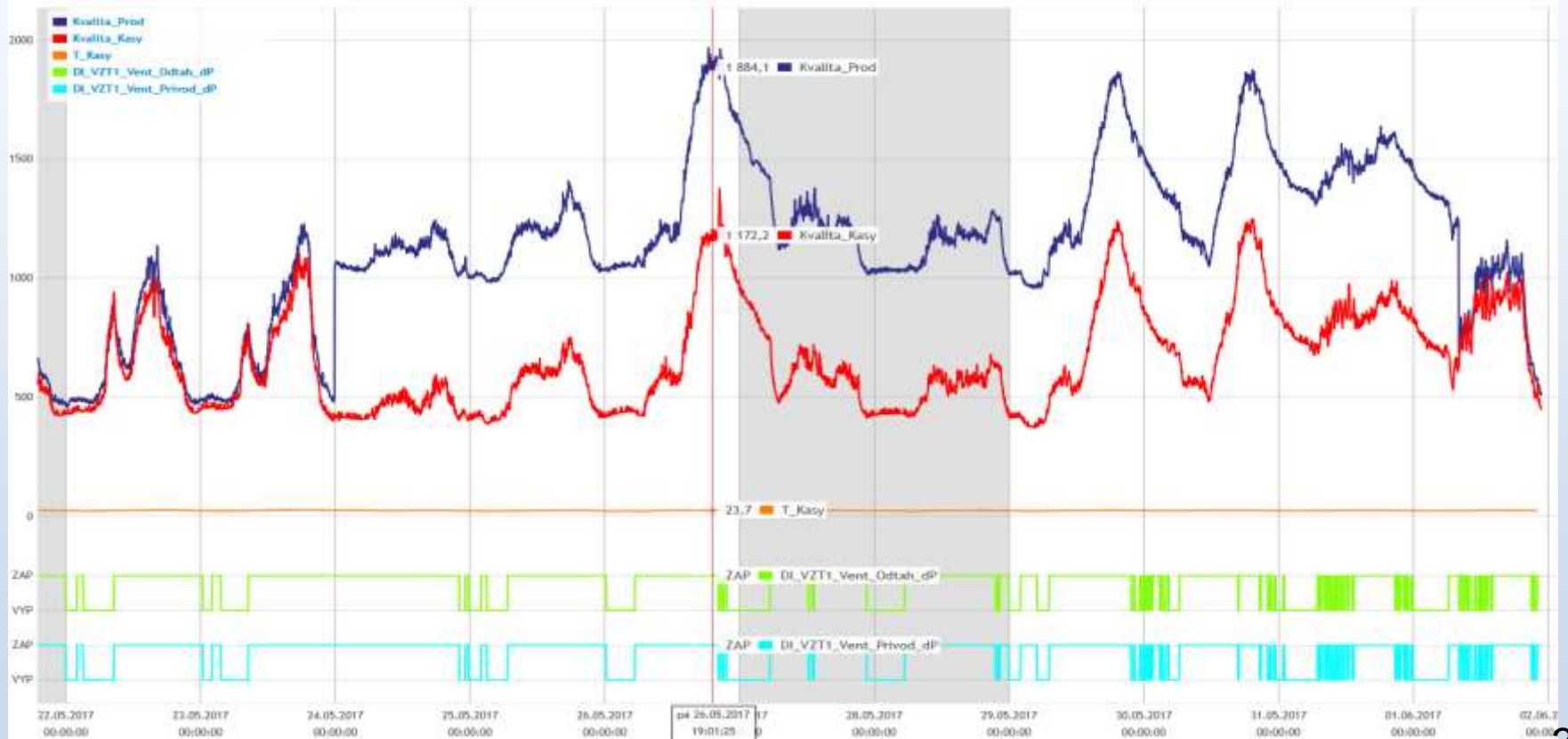


Summit 2018

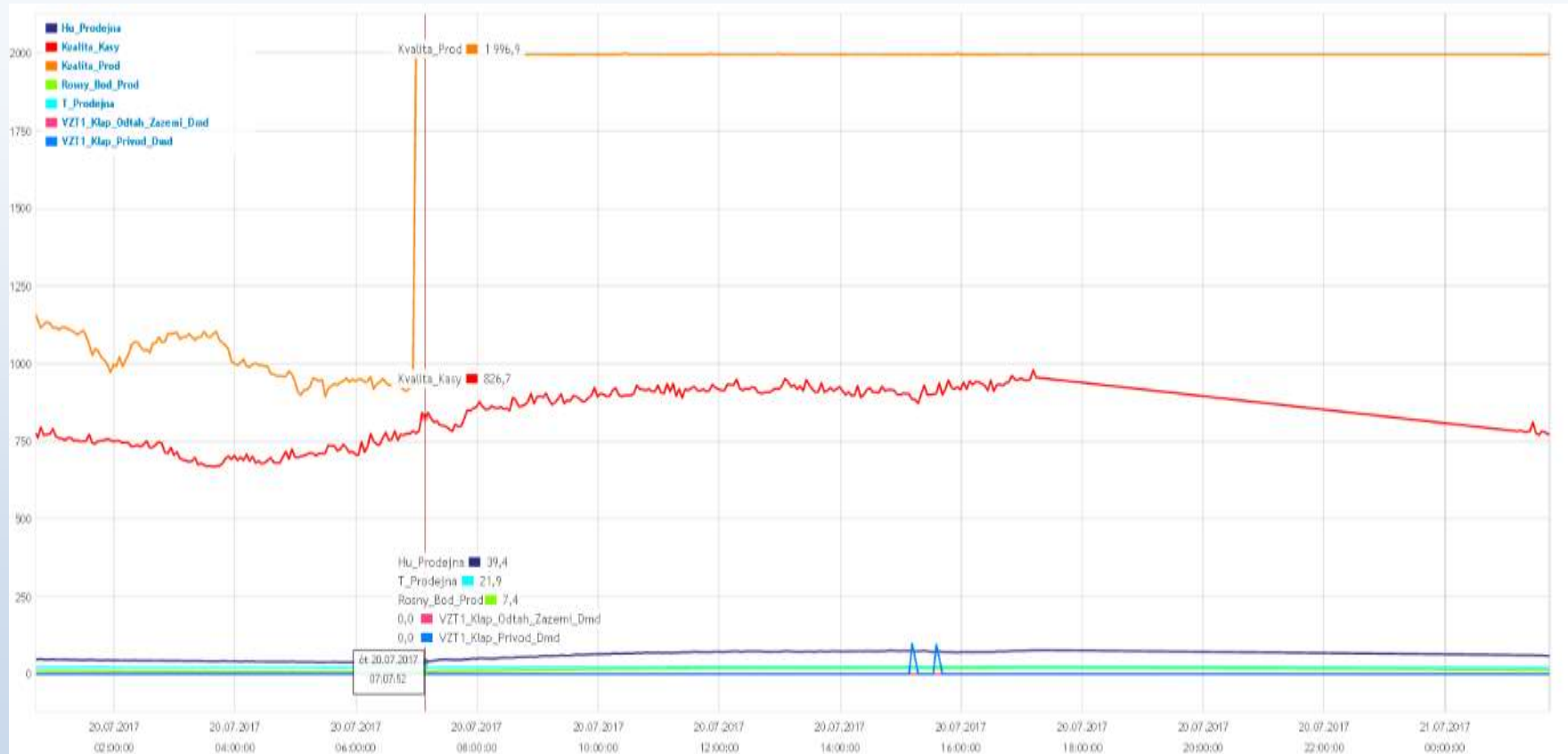
Building control systems

- **Reasons for building control**
 - Problems with non functional measurement and regulation
 - High energy costs
 - Problematic communication with the supplier
- **Control system is focused on:**
 - Better efficiency
 - Optimize energy costs
 - Improving the quality of the environment

Data from the control system



Wrong data?



Our IQRF sensor system

- One base station with Ethernet and GSM connection
- CO₂ and temperature sensors with high-capacity batteries
- No additional cables
- Speed and variability during instalation
- In a real supermarket - total measured area was 1700 m²



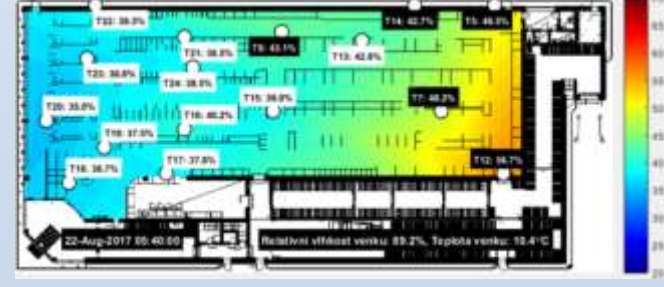
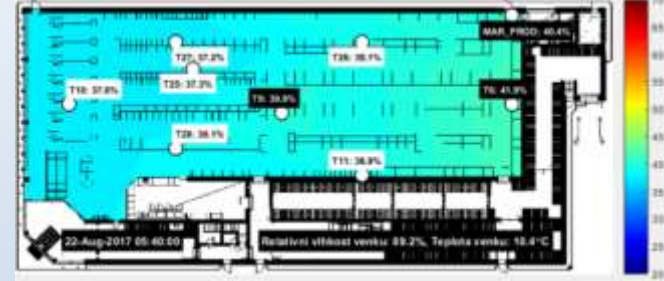
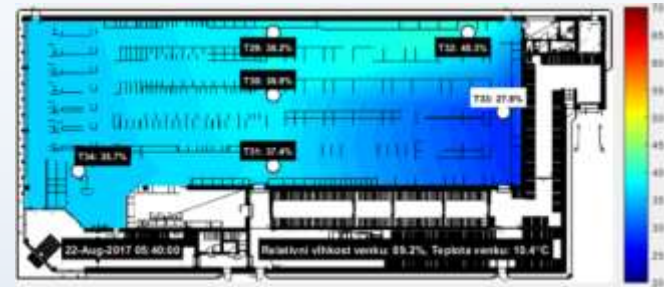
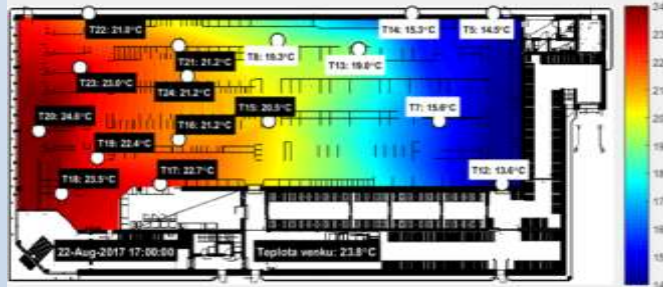
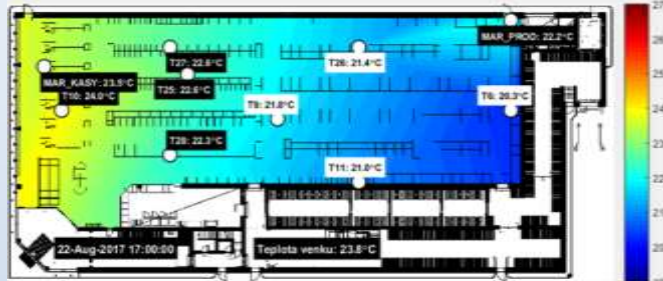
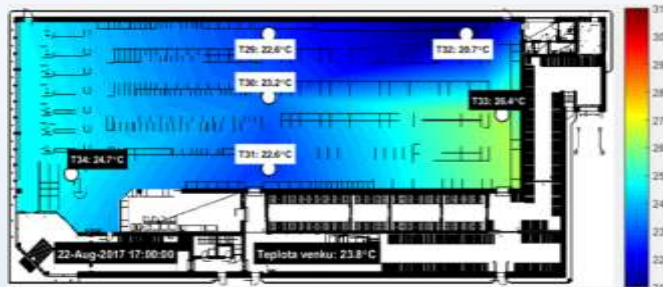
Positions of temperature sensors



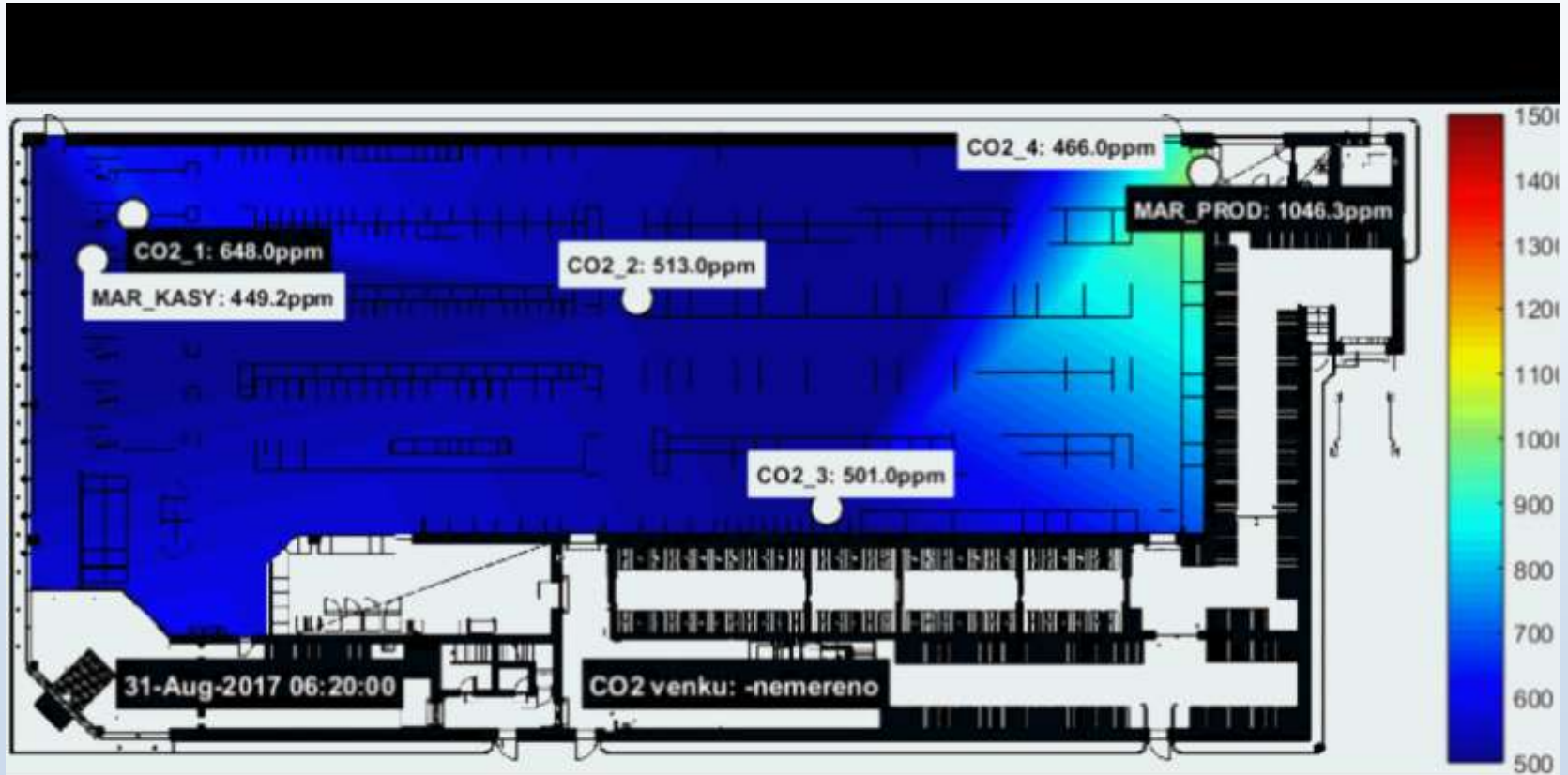
Positions of CO₂ sensors



Temperature map and relative humidity map



CO₂ map



Further development

- Cooperation with academic partners:



- Development focused on:
 - Measurement of quality of air in Open-space
 - New sensors:
 - VOC
 - Noise sensor
 - Dust sensor
 - Mean radiant temperature sensor



Thank you for you attention

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