IoT based data logger system for NOMAD sewage units with focus on efficiency and performance

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Introduction and background:

The NOMAD system is a sanitary infrastructure released by Jets^{TM} in 2022. The aim of this thesis is to look at the feasibility of data logging from a mobile site of the NOMAD unit to a cloud platform or external location.

This thesis is the preliminary work that looks at what possibilities exist in the world today and starts by looking at existing hardware, software, data platforms, and cybersecurity.

Problem description and objective:

The NOMAD units presently have hardware with process data, but without real-time transmission of data. Instead, the data are now acquired manually.

Hence there is a need for automatic transfer and storage of these process data.

Internet of things (IoT) is an intelligent technology that connects sensors and devices from different locations enabling automatic transfer of real-time data. Therefore, the implementation of IoT on the NOMAD units can improve product efficiency and enable the implementation of predictive maintenance of these units. With IoT and automatic real-time transfer of data to process control centers, alarms can be picked up faster, and acquired process data can be used to schedule maintenance and repair.

NOMAD

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