

# Definition of Bachelor Thesis Project

## Digital Test System (DTS) and Energy Monitoring for Buildings

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Assignment **Background:**

Amstein & Walthert AG developed an internal system to monitor and detect errors in newly constructed buildings. This system is fed with data from different types of sensors from that building (e.g. air conditioning, heating unit). In this system the data is stored, and then different kind of function tests are run on that data to detect errors. Finally, the data is analyzed and displayed for customers with Power BI.

The problem is that this system is no longer maintainable and does not satisfy the current state of art of an optimal working system. To ensure a working system for large projects in the future and to cover the raising demand in the system, A & W decided to fully refactor the given system.

### **Objectives:**

The thesis is focused on refactoring the above described system from the ground up. This will involve system design and architecture, development of all parts of the system and integrating all parts with each other. Additionally, this brand-new system will be deployed on Microsoft Azure and will run completely in the cloud.

The overall objective is the development of an efficient, maintainable system which fulfills all requirements of the old system and additional requirements for the new system.

Industry  
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