# Future-Proof Building

## smart and sustainable

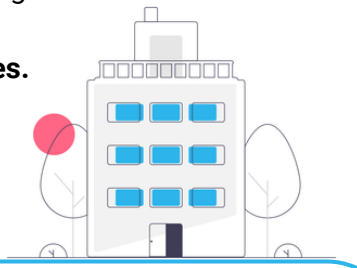
challenge week 040

Electrical engineering companies face the challenge of **transforming existing buildings** into smart ones. A crucial step in this process is obtaining an **accurate baseline** measurement, which forms the basis for further optimization and digitalization of the building. This is currently relying on a lot of manual labor which is very **time consuming** and **error-prone**. We invite you to analyze an existing on-campus building and experience this first hand. Experiment with CO2 meters and other sensors on-site to understand space usage and well-being in the current building. Compare these findings with both current and future standards.

But that's only the first step, we ask you to **leverage modern digital technologies** such as IoT, data analytics, and automation to improve this process and/ or the building itself. Together with our suppliers will demonstrate the status-quo on how data can be made **insightful** for installers and building managers. But data can only be visualized after it has been properly captured.

Mansveld

It's up to you to choose to implement **sensors for real-time data** or work on **specific improvement area**s such as smart energy management, lighting or window coverings. We challenge you to provide solutions to transform an existing on campus building with the latest technologies.
Be creative and innovative in your approach.
Think outside the box and look for **new opportunities.**



## Challenge

*Develop an innovative solution that allows existing buildings to be analyzed and measured in an efficient and accurate manner based on their installed electrical installations. We challenge you to imagine a building that is not only functional and comfortable but also intelligent and sustainable.*

## Criteria

- The proposed solution must be able to perform a detailed and **accurate** baseline measurement of the existing installations in the building.
- Ensure that the proposed solutions are **easy to use**, understand and implement for smart building end-users and maintenance personnel.
- Focus on **sustainable** solutions that contribute to energy efficiency and environmental friendliness within smart buildings.
- Ensure that the proposed solutions are **technically feasible** within the context of electrical systems and infrastructure.
- Consider solutions that are **cost-effective** and take into account the budgetary aspect of implementation and maintenance.