Group of students designs application "MoLEnergy" to improve management of energy consumption in the Museum of London

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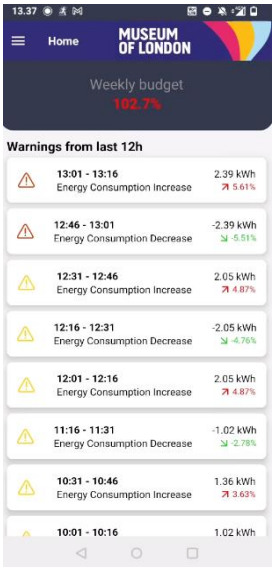
In the Co-Innovation Lab of the Munich University of Applied Sciences, a team of bachelor and master students of Munich University and Tampere University of Applied Sciences worked together with the Museum of London on a challenging project. The project outcome is an application for the facility managers of the museum, called "MoLEnergy", which collects sensor data from the building and organizes it to get a better understanding of the overall energy consumed.

Museum of London on its journey of becoming carbon free by 2040

The Museum of London wants to be one of the front runners in developing a smart building management system especially designed for the needs of a museum. As buildings contribute a huge amount of greenhouse gasses to the environment, MoL wishes to act as a leading example of how to improve one's operations, and to inspire other museums to do the same. Other drives for MoL to make a change are their public responsibility, the chance to reduce costs and to achieve the net zero carbon targets set by the UK government. As the Museum of London is building a new museum, it offers a great chance to reinvent the way of operating and to improve their processes.

Great opportunity to save costs, time and energy

As of now, the museum's energy consumption is too high, resulting in energy-waste and high operating costs. Furthermore, the facility managers only have access to scattered and historical data and need to rely on third-parties to build their reports on the different variables of energy consumption in the building. Their ultimate goal is to implement innovative technology to tackle these problems by the time the new Museum of London opens in 2025. Therefore, they need a scalable solution that is engaging the Facility Management staff and provides an integrated overview of all relevant information. This results in a great opportunity to save costs, time and energy by making data access easier and supporting decision making.



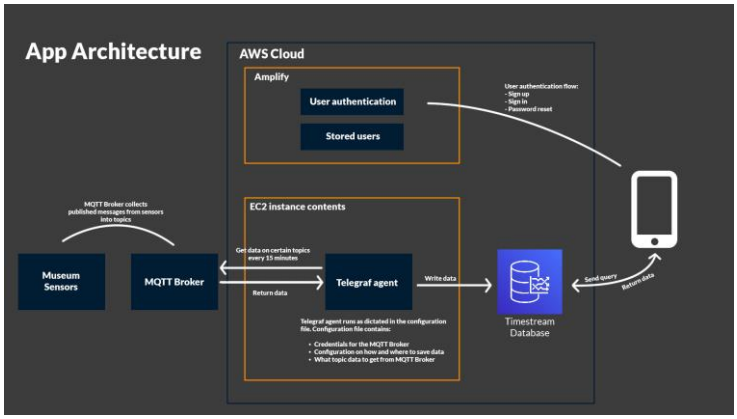
"Home Screen view of MoLEnergy"

Co-Innovation Lab develops MoLEnergy - an application that helps MoL in managing their energy consumption

MoLEnergy is a mobile application that enables the facility managers of the Museum of London to see different information based on the building's smart sensors. The app collects data on overall and baseload energy consumption, provides a list of warnings in case of abnormal values, compares energy consumption to yesterday, last week and month and shows in parallel the related costs to create an incentive to save energy. With MoLEnergy the museum will be able to better connect to the building and enhance decision making to optimize the performance of the museum, making it more efficient and reducing the museum's carbon footprint.

Amazon Web Services as support for the teams

Throughout the project the team was supported by partners from Amazon Web Services (AWS). Lars Schmitz coached the students on the methodology of "Amazon Working Backwards", a modern way of analyzing the customer needs and supported them in applying it in their projects. In addition, AWS provided the team with technical support.



"App Architecture of MoLEnergy"

The management and the facility managers are enthusiastic about the new solution

During the meetings, feedback received from the Museum of London on the implementation and future use cases showed that the project met the needs and the students fulfilled the core philosophy behind the co-innovation approach.

"It's been a great experience working with the clever student team on this very important challenge for the Museum of London. The energy management solution was built with a very solid product development process during which we received including excellent client communication and engagement." - Steve Watson

If you got excited about the project and want to get to know other interesting projects, visit the website of the Co-Innovation Lab and the Digital Transformation Lab (DTLab) of the Munich University of Applied Sciences here:

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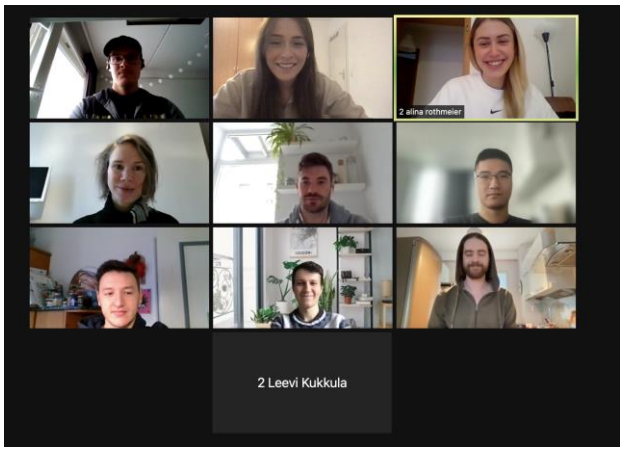

Project team (from left to right): Juuso Melentjeff, Ebru Mersinli, Alina Rothmeier, Vilma Pyrhönen, Maximilian Günzel, Long Nguyen, Marco Gagliardi, Yannick Wörle, Toni Salminen and Leevi Kukkula