



# Cyber Risk Analysis of New IoT Ventures

Payatu Casestudy

# Problem

Our client in this project was a German company that wanted to buy a facility management company. The company is a facility management startup that designs IoT solutions for smart facilities. So, the client wanted to perform a technical risk analysis from an investment perspective. They wanted to test the whole ecosystem of the Startup's facility management

offerings. The results were one of the major driving factors in the deal between the 2 companies.

The project needed a holistic assessment of the technologies from a security standpoint, which included hardware, software, and cloud. So, the client reached out to Payatu for the evaluation.

# Solution

Payatu team did the following assessment:

## Hardware assessment

1. We could get control of the device via hardware debug port.
2. We were also able to extract the firmware, which was their intellectual property (IP).
3. We could hack into the device after injecting malicious firmware by changing the boot priority from the device to the SD card.

### Code reviews

1. We found that the code had a hardcoded private key, SSH password, MQTT client ID, and username passwords.
2. Code was not written keeping security best practices in mind and had lots of flaws. We were able to find vulnerabilities like access key injection, SQL injection, access control issues, and IDOR (insecure direct object references) issues.

### Cloud assessment

Some of the cloud instances were accessible publicly. This could have hampered their data security.

# Benefits

Our Holistic assessment helped the German company identify issues with the facility management ecosystem that could have cost Millions. The project was completed in 6 weeks.

This technical risk assessment paved a road for the Payatu team to help companies looking for cyber risk analysis in their new investment ventures.

# About Payatu

Payatu is a Research-powered cybersecurity services and training company specialized in IoT, Embedded Web, Mobile, Cloud, & Infrastructure security assessments with a proven track record of securing software, hardware and infrastructure for customers across 20+ countries.

Our deep technical security training and state-of-the-art research methodologies and tools ensure the security of our client's assets.

At Payatu, we believe in following one's passion, and with that thought, we have created a world-class team of researchers and executors who are willing to go above and beyond to provide best-in-class security services. We are a passionate bunch of folks working on the latest and cutting-edge security technology.