KONE

VISUALIZATION OF SENSOR DATA
Project Proposal – Visualization of sensor data

1. Introduction

- Understanding of people flow in busy skyscrapers is essential for owners and operators of the buildings
- We measure the movement of the persons in the building entrances, hallways, lobbies and elevators
- We want to collect data and develop tools for understanding the people flow in the buildings
2. Project goals

- To create a modern web user interface for the sensor data
- The UI will show key metrics in real time and statistical reports of the building usage and elevator performance and people flow in a building
- The data comes from sensors in the building hallways, lobbies and elevators
- Solution should use infrastructure as code approach. Infrastructure and delivery pipeline reusable for other projects.

3. Technologies

- The data is available via REST API from KONE cloud
- SaaS services should be as much as possible on Cloud Environment
- The team can select technologies and libraries for the UI implementation
- The UI design comes from KONE, but the teams ideas what metrics could be shown or how they could be shown can also be implemented
- Deployment and CI/CD tools should be used
4. Requirements for the students

- Understanding of REST APIs
- Knowledge of web UI technologies
- Knowledge of web programming
- Understanding basic Cloud software development
- Basic deployment models and automation tools understanding (infrastructure as code)

Briefly describe your opinion on the difficulty of the topic: Easy/Moderate
5. Legal Issues

- Remove below either 1 or 2 regarding both IPR and NDA.
- Intellectual Property Rights (IPR):
  - The client gets all IPRs to the results.

- Non-disclosure agreement (NDA):
  - Signing the NDA included in the Aalto's contract template is not required.

- Are there any other legal issues? Team should list all libraries and open source components which were used
6. Client

- KONE is a global leader in the elevator and escalator industry. At KONE, our mission is to improve the flow of urban life.
- Project Manager: Pasi Raitola, IoT Architect: Risto Saari, Chief Design Engineer: Ville Ojansivu

- How much time are they prepared to spend guiding the team
  - Few hours per week

- Does the client offer the team any resources such as a working room, a cloud server, computers/other necessary devices, software?
  - Solution is installed to KONE cloud
Client representative(s)

- Product Owner
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- IoT Architect
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Preselected Student Team Members
None
7. Additional information

- The team should use scrum practices.
- Collaboration tools used e.g. Skype is used.
- Documentation should be in English.
- Infrastructure and delivery pipeline reusable for other projects.