CONVENIENCE

Cognitive building automation infrastructure and services

Pro²Future

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MOTIVATION & GOALS

- **Home automation** is a growing market, gaining more and more importance in our life's
- HMI-Master GmbH successfully started its business 8 years ago and aim for
  - staying **competitive**
  - further advancing in technology and the improving **maturity level** of products
- The project aims for elevate existing solutions towards leverage state-of-the-art regarding **security, software architecture** and **infrastructure**.
- In addition the project investigates how **IoT** communication protocols and devices can further enhance the technology stack and service portfolio of HMI
- Research is conducted in the context of **real use case** scenarios (e.g. apartments or offices)

Project FactBox

Project Name CONVENIENCE
Project ID MFP 4.1.3-3
Duration 12 Months

Area 4,1
Cognitive Products

Project Lead
Dr. Konrad Diwold

APPROACH

- Utilizing open-source frameworks in the context of HMI's home automation
- Redesign of **communication interfaces** and **protocols** to enable dependable communication within the system
- Investigation of further benefits to be achieved with the application of **wireless communication** in the context of intelligent home automation systems and services

CONTRIBUTION

Scientific contribution
The scientific contributions of the work in CONVIENCE are experiments of state-of-the-art technologies on real use cases and to investigate the applicability in open-source frameworks and HMI hardware.

Economic contribution
As an economic contribution, upgrading the products of HMI by state-of-the-art and novel technologies can increase their competitiveness in the national, but also international market. Also, the reliability of their products can profit through our work.

SYSTEM ARCHITECTURE

Existing solution | **Available Technology** | **Advanced Home Automation Services**

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