

ALESSIO

The problem

- Successful automation solutions tend to be used over considerable stretches of time (> 10 years)
- Security requirements are hard to predict over larger periods of time
- Outdated security in older systems implies a considerable risk, e. g. for critical infrastructure
- **The only means to achieve durable security is updatability**

The problem understood by the German Federal Ministry of Education and Research



The German Federal Ministry of Education and Research partially funds research for updatable security in the project ALESSIO

- Infineon Technologies AG, Neubiberg (Prime contractor)
- Giesecke & Devrient GmbH, München
- Fraunhofer-Institut für Angewandte und Integrierte Sicherheit (AISEC), Garching bei München
- Technische Universität München
- WIBU-SYSTEMS AG, Karlsruhe
- Siemens AG, München

From January 2017 to December 2019
Total costs 6.8 M€, 58% federal funding

Siemens: 1 M€, 40% funding

What does the name ALESSIO stand for?

Architektur für **l**angfristige **S**icherheit
durch **S**ecure Elements mit Update-Funk**ti**on

Architecture for **l**ong **ter**m **s**ecurity
by **s**ecure elements with update func**ti**on

ALESSIO as a bipartite project



In ALESSIO, **two kinds of updatability** are considered:

- **Software updates**
- **Updates of FPGA configurations**

Infineon and G&D are only interested in software updates, the rest only in FPGA updates.

The ALESSIO FPGA structure

