Blockchain in the Context of International Student Mobility

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1. Background of the Blockchain Feasibility Study

International Student Mobility at RWTH Aachen University

- Internationalization strategy of RWTH Aachen relies on digitalization
- Multiple running initiatives to explore new technologies
- Relevant domains are research, teaching and student mobility
- Research focus of this study: digital recognition processes

Mobility System Cooperation in Higher Education

Goal of the Feasibility Study

The research goal of this study is the in-depth evaluation of potential use cases of blockchain technology in order to improve international student mobility.

For more information: MyScore webpage

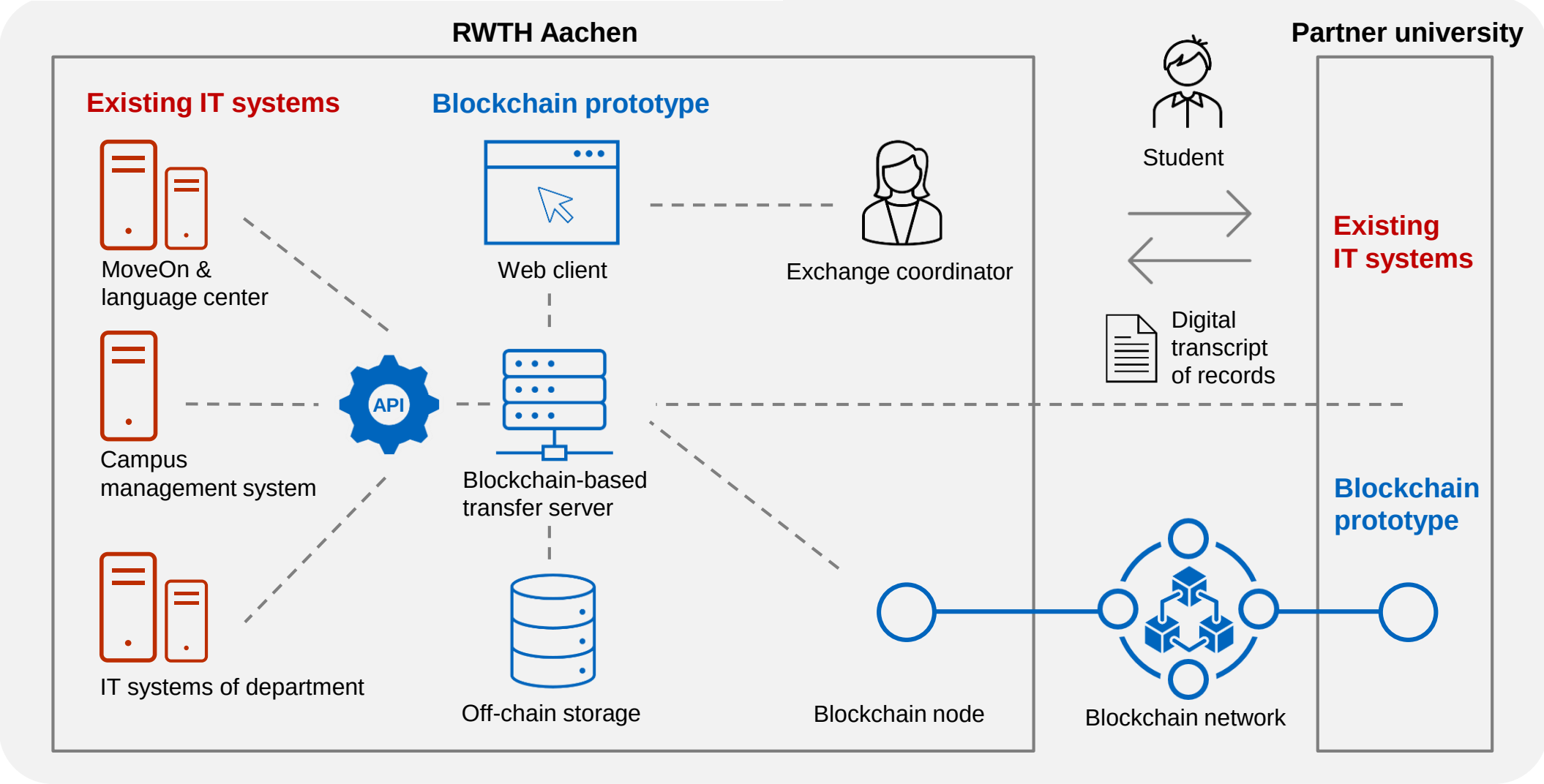
1. Background of the Blockchain Feasibility Study

Overview of the Study Design

- The feasibility study follows a three-phase approach as shown below
- In the first phase, three milestones were reached: (1) documentation of process landscape, (2) formulation of target process and (3) design of technical blockchain model

2. Summarized Results of the First Milestone

Solution Architecture of the Blockchain Prototype

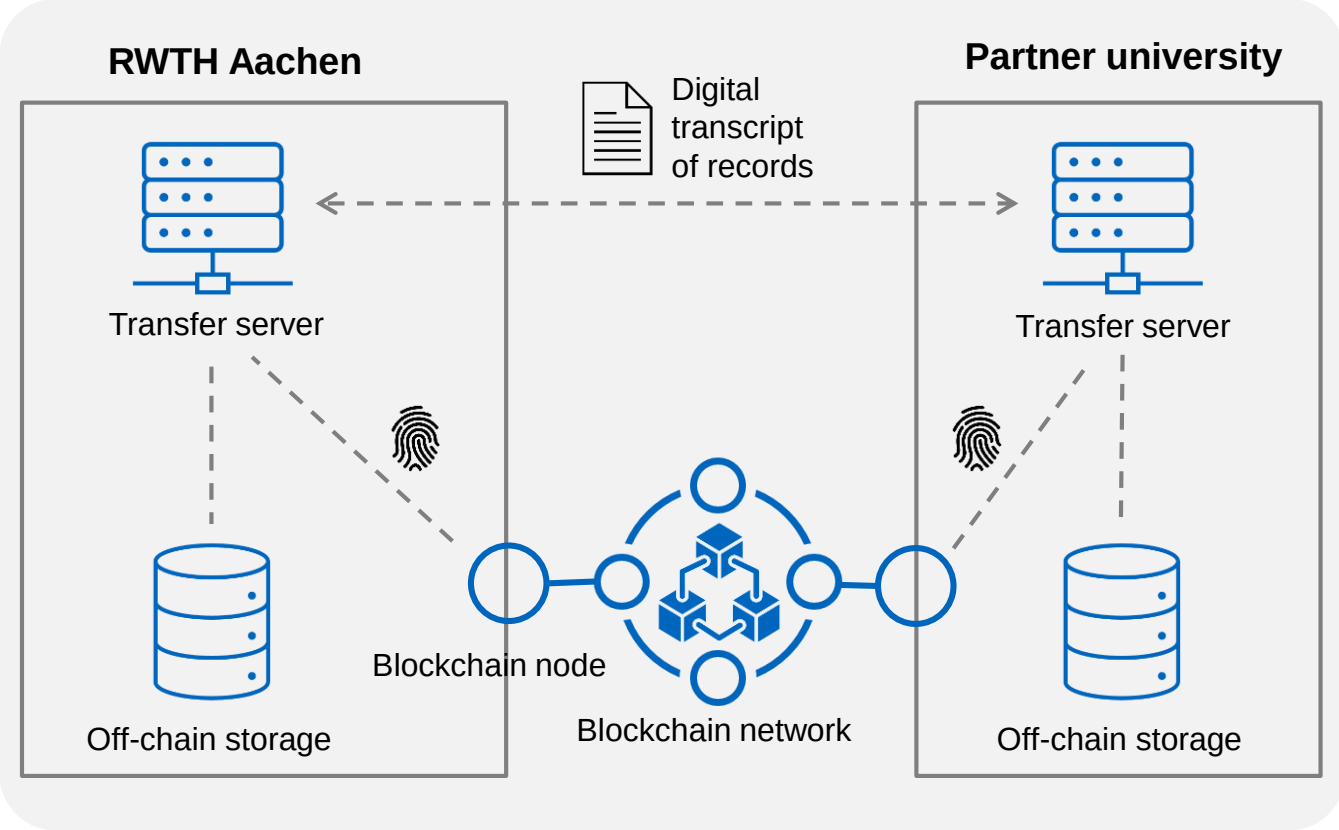


2. Summarized Results of the First Milestone

Solution Architecture of the Blockchain Prototype

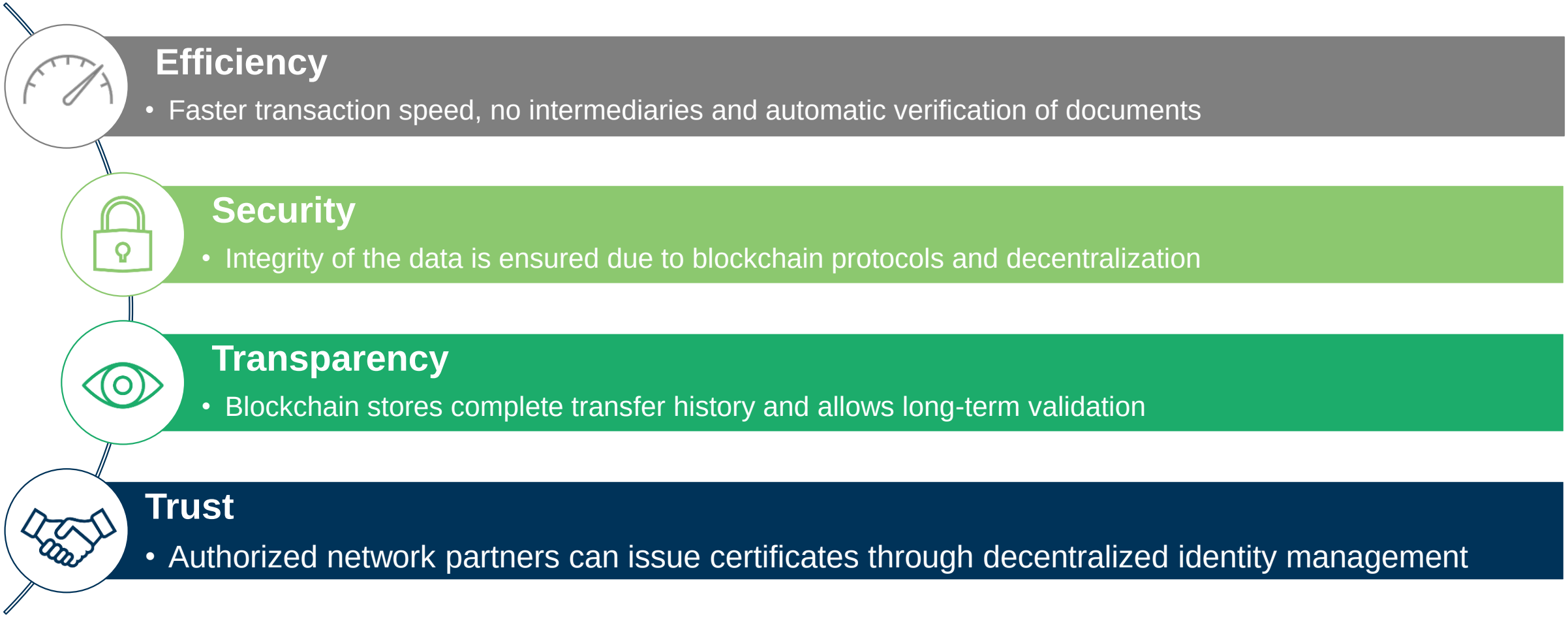
Data Exchange & Verification

- Direct exchange of documents between transfer servers
- Blockchain stores hash value of the data along with a timestamp
- Authentication of identities is enabled by public key infrastructure
- Reading and writing access rights depend on specific use case



2. Summarized Results of the First Milestone

Advantages of the Blockchain-Based Process

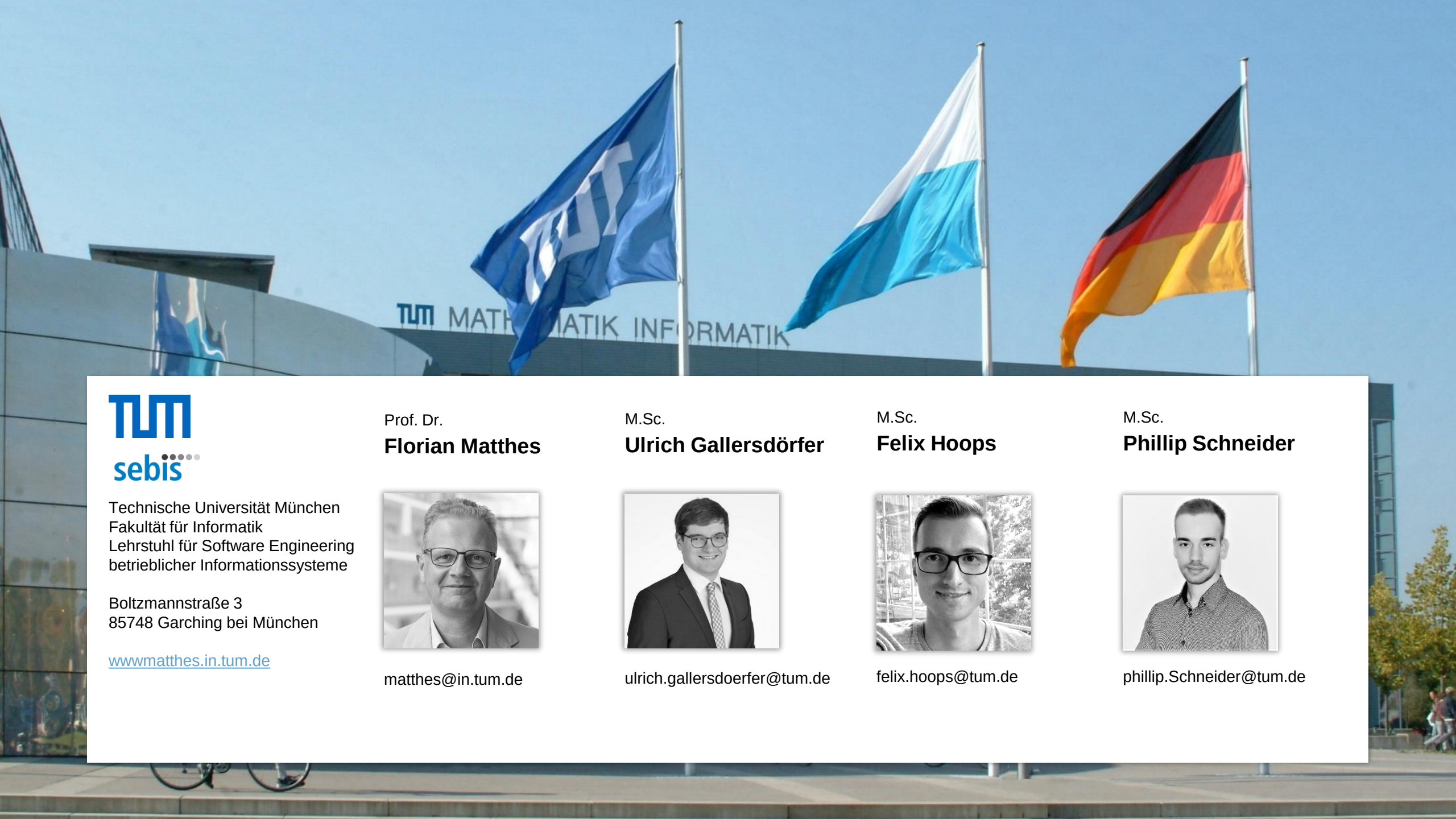


2. Summarized Results of the First Milestone

Outlook and Related Initiatives

- Based on the feasibility evaluation, one use case is selected for a prototypical implementation
- Inclusion of an international partner university from RWTH Aachen‘s network
- Prototype development benefits from the sebis chair‘s experience with related initiatives:
  - Digital Credentials Consortium (DCC)
  - Digital Credentials for Higher Education Institutions (DiBiHo)

For more information: sebis webpage



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