

# Kick-Off: Analysis and Evaluation of Blockchain-based Self-Sovereign Identity Systems

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## Introduction

- Motivation
- Problem Statement

## Research Questions

- RQ1: How are SSI systems different from previous online identity management concepts?
- RQ2: What are main criteria for analyzing SSI-Systems and how are the criteria reflected by the SSI-Systems?
- RQ3: What are requirements for companies and institutions to adapt the SSI-technology?

## Approach

- Methodology
- Timeline



## Siloed & Federated Identity

- User provide identity information to services → multiple identities
- Services manage the identity
- Data privacy issues on Service-side
- High power of Identity Providers (Google)

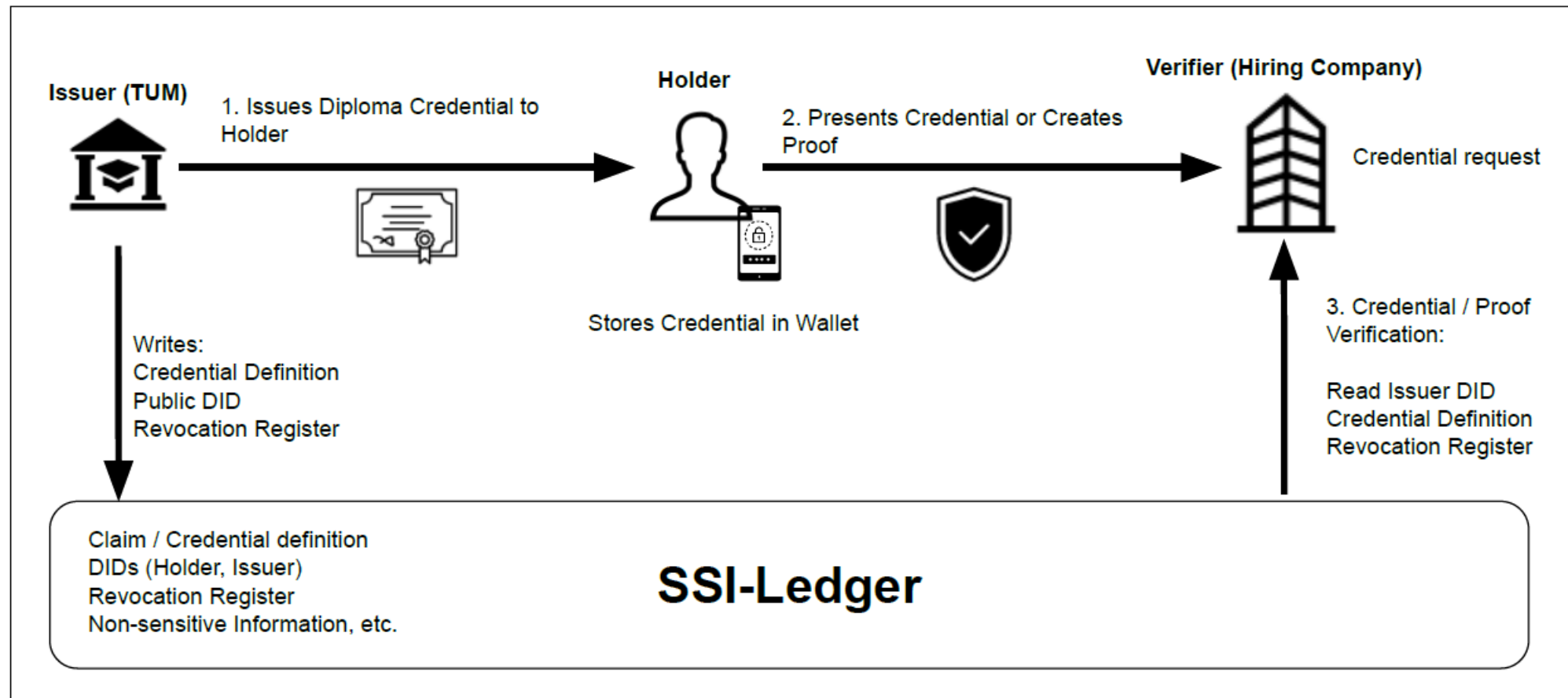


## Self-Sovereign Identity

- Autonomy about own identity → no central authority
- High Level of Privacy
- Simple to use
- Verifiable Credentials
- Not limited to persons

## Definition **Self-Sovereign Identity**:

Blockchain enabled concept where participants have the **full control** over their **online identity** and with whom and how their **personal data** are **shared** and **used**



# Problem Statement

- Various solutions that adapt SSI differently
  - Underlying technology?
  - (Native) Support?
  - Use of existing ecosystem?

→ Fast evolving eco-system, difficult to get an overview

- How do the systems solve tasks like verifying credentials or DID management?
- How do the concepts of SSI adaption differ between each solution and what are the strengths and weaknesses of each solution?
- How can own standards be integrated in the ecosystem?



B L O C K S T A C K

## **RQ1: How are SSI systems different from previous online identity management concepts?**

- How do SSI Systems use Blockchain/DLT to enable trust?
- What does make Self-Sovereign Identity solutions self-sovereign?
- How do SSI Systems support digital credentials?

## **RQ2: What are main criteria for analyzing SSI-Systems and how are the criteria reflected by the SSI-Systems?**

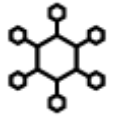
- What are the guiding principles of Self-Sovereign Identity?
- How do SSI-Systems correlate with the guiding principles of SSI-Management?
- What is the current status of maturity of the SSI-Ecosystem?

## **RQ3: What are requirements for companies and institutions to adapt the SSI-technology?**

- How could companies and institutions integrate SSI to their business?
- What are the benefits of integrating SSI?
- Which use-cases are most interesting and feasible?



Definition of SSI and distinction to other concepts of identity management



Introduction to underlying standard technology and processes



Definition of analysis criteria and selection of relevant SSI-Solutions



Analysis of SSI-Solutions based on predefined criteria

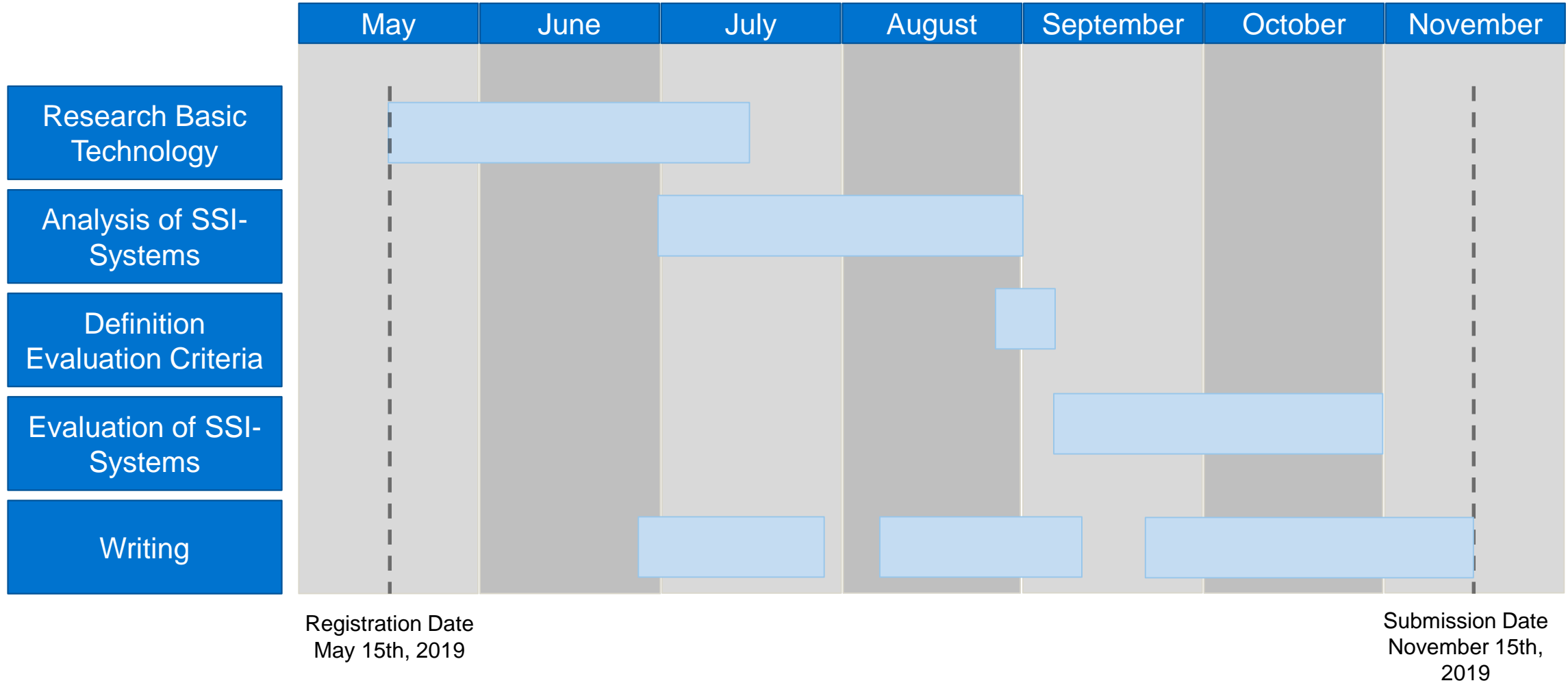


Definition of evaluation methodology and evaluation criteria



Evaluation of SSI-Solutions based on predefined criteria

# Timeline







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