[Issue #18](#): Proposal for ZKPassport Implementation Project

Contact Information

Team Lead (Main Contact Person):

- **Name:** Mykyta Yefruiev
- **Position/Role:** Tech Lead at Unicsoft
- **Email:** myf@unicsoft.com
- **GitHub Username:** https://github.com/mykytayefrueiv
- **Mina Recipient Address (for potential funding):** TBD

Team Members:

1. **Member 1:**
   - **Name:** Artem Sklyarov
   - **Role:** Solution Architect, Back-end & Blockchain Developer
   - **Relevant Experience/Previous Work (with links):** 15+ years of experience with a strong focus on developing decentralized applications and blockchain solutions. Solution Architect and Lead developer on the digital asset boutique https://www.teroxx.com/
2. **Member 2:**
   - **Name:** Svitlana Razina
   - **Role:** Back-end Developer
   - **Relevant Experience/Previous Work (with links):** 10+ years of experience with Golang, NodeJS, PHP. Proficient in high-load microservice architectures and integrating third-party APIs including KYC services. Back-end developer on the digital asset boutique https://www.teroxx.com/
3. **Member 3:**
   - **Name:** Oleksandr Trityak
   - **Role:** Full-Stack Developer
   - **Relevant Experience/Previous Work:** 7 years of experience specializing in frontend and mobile development with React Native, React.js, Angular, and Vue.js. Skilled in building technical architectures and leading small teams. Experienced in designing and implementing blockchain-powered applications.

Team Overview

Our team consists of highly experienced professionals in blockchain development, backend, and frontend technologies. Artem, our team lead, has over a decade of experience in blockchain solutions and software development. Svitlana brings her expertise in backend development and high-load microservice architectures. Oleksandr is a versatile full-stack developer with extensive experience in both front-end and back-end development.

Proposed Solution

Proposed Solution Description: We propose to develop a cross-platform application leveraging NFC technology and zero-knowledge proofs (ZKPs) to scan and store passport information on the Mina blockchain securely. This application will provide a robust framework for decentralized identity verification while ensuring user privacy. The solution will involve developing the core library integrated with the Mina blockchain, implementing NFC and MRZ modules, and building a user-friendly interface.

Execution Plan

Step-by-Step Plan:

1. **Develop Architecture (+UML):** 1 week
   ○ Design the system architecture and create UML diagrams to outline the structure and interactions.
2. **Implement Core Library:** 6 weeks
   ○ Develop the core library, integrated with the Mina blockchain and off-chain storage, leveraging ZKP protocol.
3. **Implement NFC and MRZ Modules:** 3 weeks
   ○ Develop NFC (encrypted reading) and MRZ modules according to ICAO specifications.
4. **Implement User Interface:** 3 weeks
   ○ Build a demo user-friendly interface for both iOS and Android platforms.
5. **Integration and Unit Testing:** 2 weeks
   ○ Conduct thorough testing to ensure the application meets security and usability standards.
6. **Documentation:** 1 week
   ○ Provide comprehensive system architecture, core library, and user interface documentation.

Critical Milestones:

1. Completion of the NFC and MRZ modules.
2. Implementation of the core library.
3. Implementation of a demo user-friendly interface.
4. Comprehensive documentation and user manual.

Additional Support and Funding

Support Requirements:

● Technical support from the Mina Foundation is needed to integrate with the Mina wallet.

Grant Funding: We are requesting a total of $23,850 - $28,350 to cover the costs associated with the development, testing, and documentation of the zkPassport project. This funding will ensure that our team has the necessary resources to deliver a high-quality, secure, and user-friendly application.

Funding Breakdown:

- Development Breakdown
    - Develop Architecture (+UML): $1200
    - Implement Core Library: $13,000
    - Implement NFC and MRZ Modules: $8,000
    - Implement User Interface: $6,500
    - Integration and Unit Testing: $3,700
    - Documentation: $2,500
    - Project coordination: $4,000
- **Total:** $38,900

Community Engagement

Engagement with Mina Community: Our team has actively engaged with the Mina community to refine this proposal. We participated in discussions and sought feedback to align our solution with community expectations. Our experience with Mina and the community enhances our project's potential for success.