Optimised KYC Blockchain system

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Final year IT B

Project Guide

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Intro to KYC

What is KYC

Documents for KYC Form – Id Proof and Address Proof

Proof of Identity

Driving License

Voter's ID card

Pan Card

Aadhaar Card

Proof of Address

Electricity Bill

Gas Bill

Landline Bill

Benefits of KYC

Why KYC?

- **To Establish Identity**
- **Provide service**

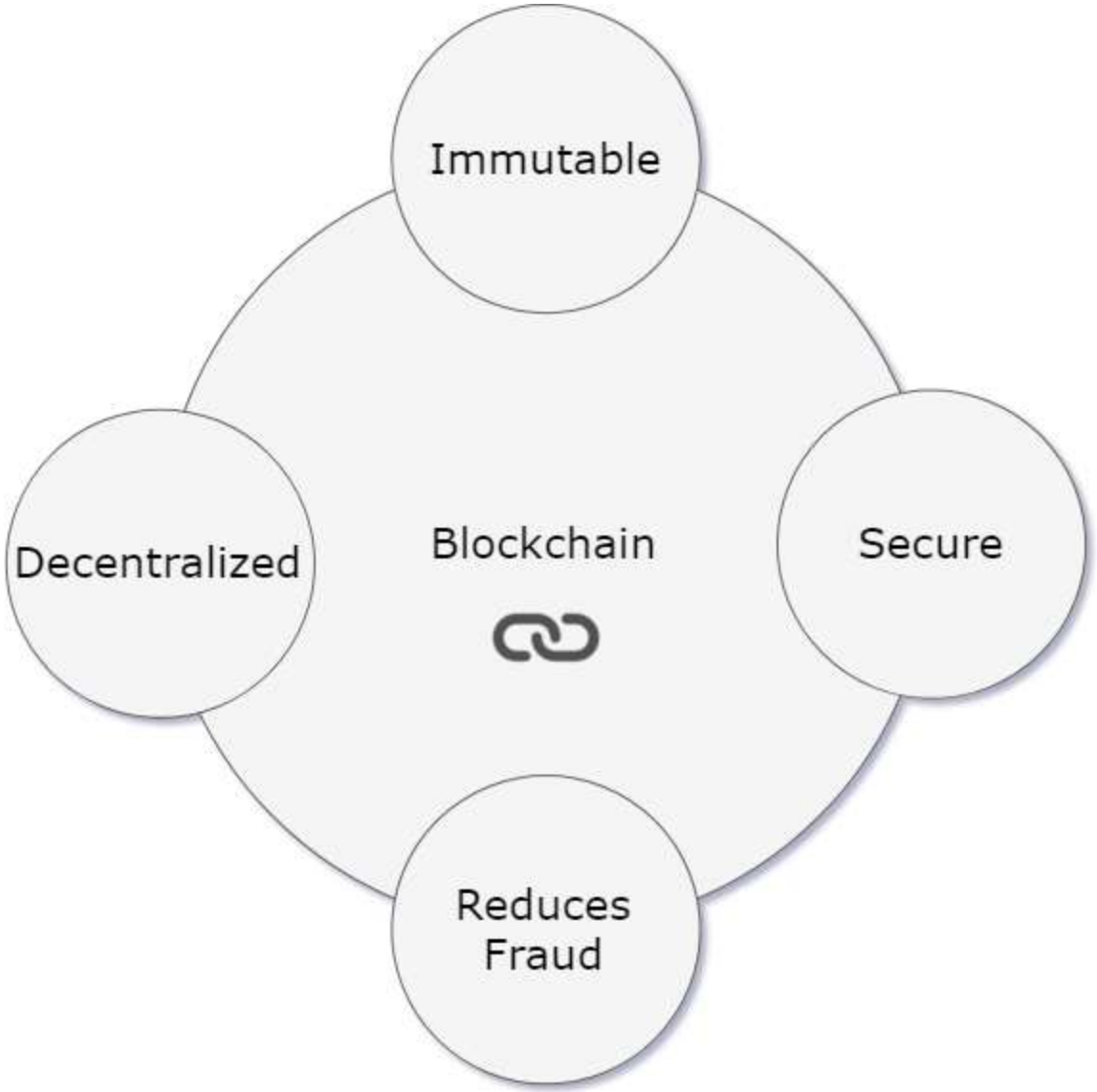
It prevents

- **Money Laundering in Banks**
- **Identity Thefts**

Problems with existing KYC process

- **Time consuming and Repetitive**
- **Rising cost**
- **Security issues**
- **Unrestricted usage**

Blockchain based solutions



State of the art

SBI to roll out Blockchain in KYC

- "By next month, we should have two beta production solutions ready for use by the 27 banks. We will also invite further participation. The beta production that will be ready are smart contracts and second is KYC," -Mr. Baraokar, Head of Innovation, SBI

IBM completes Proof-of-Concept

- IBM has partnered with **HSBC, Mitsubishi UFG, Deutsche Bank**. It is a part of the Shared Corporate Know Your Customer platform. To this end, IBM was working on its Proof-of-Concept. Its phase I has been completed.

Cognizant and Indian Insurers join hands for blockchain customer data sharing

- Cognizant is helping Indian Insurance companies to build a robust platform using the blockchain technology. This is to assist the Insurers to collect customer and policy information for various KYC related due diligence activities.

Literature Survey

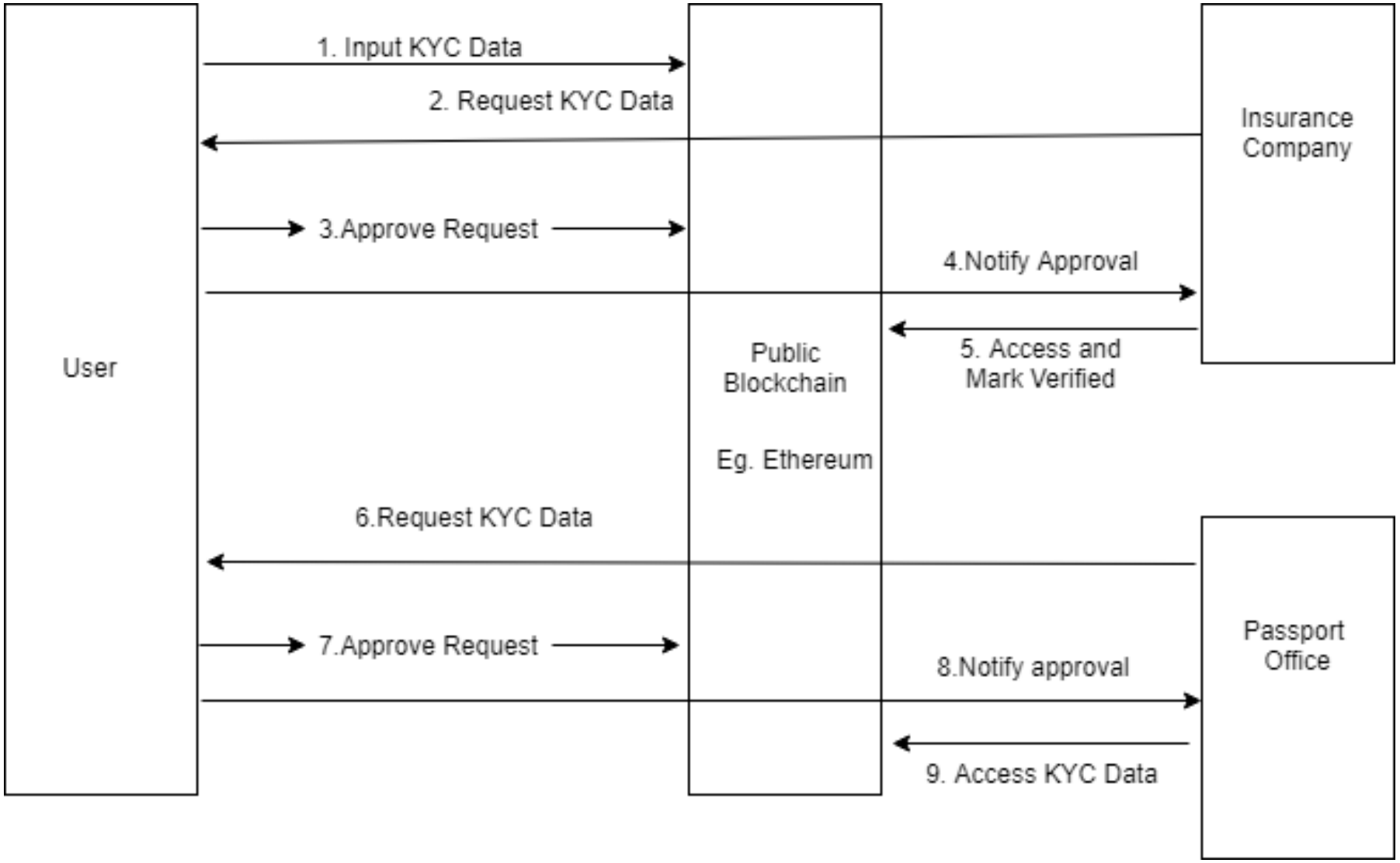
Study 1

KYC Optimization Using Distributed Ledger Technology J. Parra Moyano, O. Ross, Bus Inf Syst Eng 59(6):411–423 (2017)

Study 2

- **Blockchain Orchestration and Experimentation Framework: A Case Study of KYC.** By Shbair, Wazen & Steichen, Mathis & François, Jérôme & State, Radu. (2018). 10.1109/NOMS.2018.8406327.

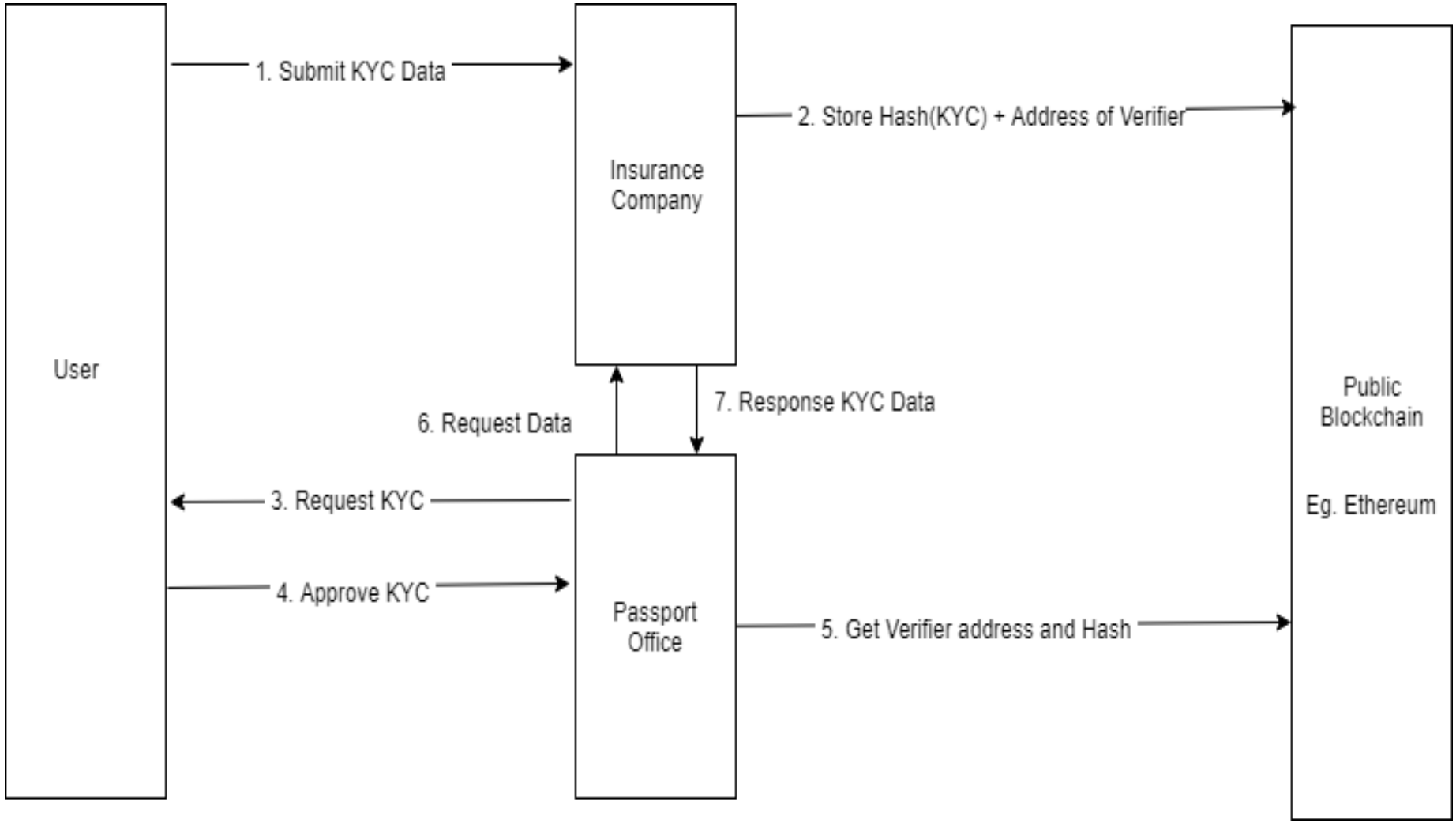
Existing Solution 1



Limitations

- **Public Blockchain - vulnerabilities**
- **3 Step access approval**
- **Authenticity of verifying organization**
- **User level complexity**

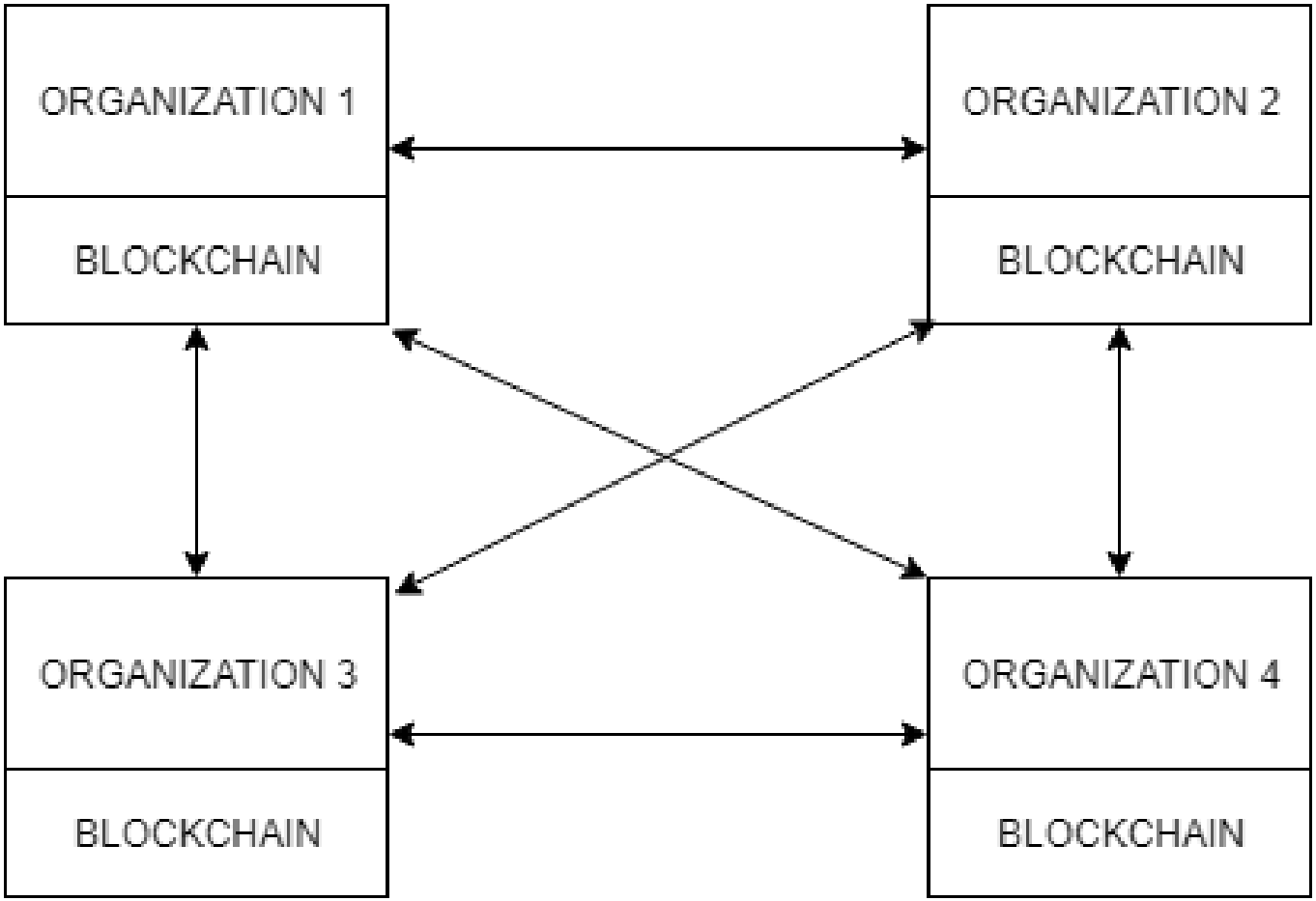
Existing solution 2



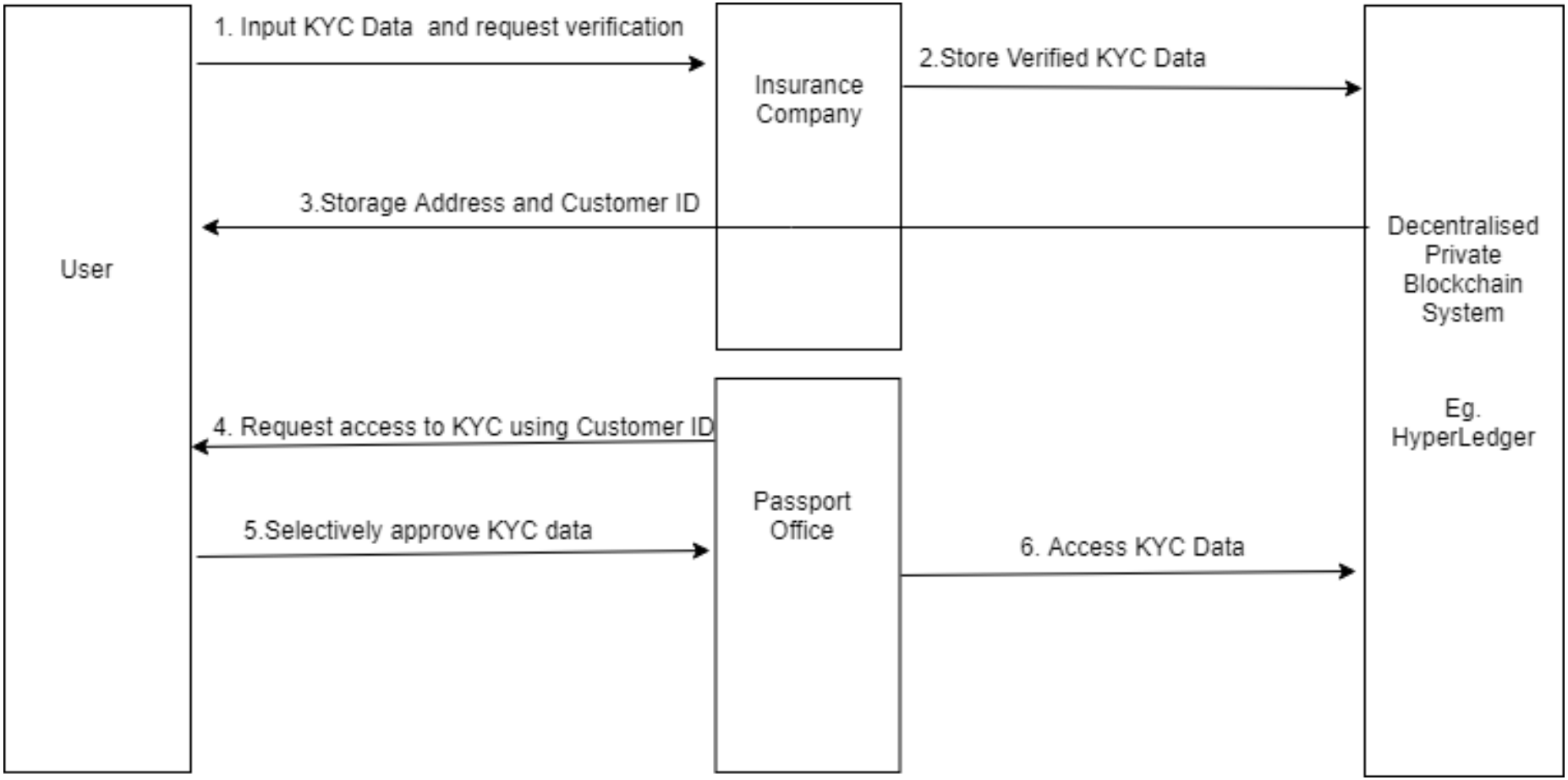
Limitations

- Inter Organizational dependency
- Time consuming process
- Local Database security
- Transmitting KYC Data over network vulnerability

Proposed solution



Proposed solution



Benefits in proposed system

- **Better security – private blockchain**
- **Better reliability and trust**
- **Custom consensus protocol**
- **Localized data availability**
- **Less complexity for user**
- **Revealing specific data**
- **Better in managing branches of organizations**

Implementation Stack

- **HyperLedger Framework**
- **ChainCode for Smart Contracts**
- **REST API**
- **Angular Frontend**

Final Year Project Deliverables

Review 1

- Literature Survey
- Scheduling Timeline
- Architecture and flow of solution
- Platform for implementation

Review 2

- Blockchain Implementation
- Complete Organization module
- Complete User module

Review 3

- Decentralization of Blockchain
- Smart Contracts for consensus protocol

References

[1] J. Parra Moyano, O. Ross,**KYC Optimization Using Distributed Ledger Technology** , Bus Inf Syst Eng 59(6):411–423,2017

[2] Shbair, Wazen & Steichen, Mathis & François, Jérôme & State, Radu,**Blockchain Orchestration and Experimentation Framework: A Case Study of KYC.** 10.1109/NOMS.2018.8406327,2018

[3] K. Bhaskaran,**Double-Blind Consent-Driven Data Sharing on Blockchain**, *2018 IEEE International Conference on Cloud Engineering (IC2E)*, Orlando, FL, , pp. 385-391.doi: 10.1109/IC2E.2018.00073,2018

[4] Aublin, P., Mokhtar, S.B., & Quéma V,**Redundant Byzantine Fault Tolerance.Distributed Computing Systems** (ICDCS),IEEE 33rd International Conference on, pp.297-306.. (2013) doi:10.1109/ICDCS.2013.53 or http://dx.doi.org/10.1109/ICDCS.2013.53,2013