



Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE
(All Programs Accredited by NBA)

Department of Information Technology



Implementing Comprehensive Blockchain Based Framework for Transparent Real Estate Transactions

Group No. 1

Amit Pandey 18104020

Aditya Shinde 18104032

Rajan Khade 18104020

Project Guide

Prof. Neha Deshmukh

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Introduction

- Problem Identified :
 - The Involvement of middlemen and brokers.
 - The increasing number of fraud cases.
 - Time delays and lack of digital protection.
- Solution Proposed :
 - Blockchain based platform using Hyperledger Fabric.
 - Permissioned access to the system and infrastructure.
 - Real estate transaction using web application.
 - Digital record keeping of all the transactions in a Ledger.

Objectives

- To make process faster and bring transparency with the use of blockchain.
- To Reduce the fraud cases.
- To make the process of real estate transactions digital.

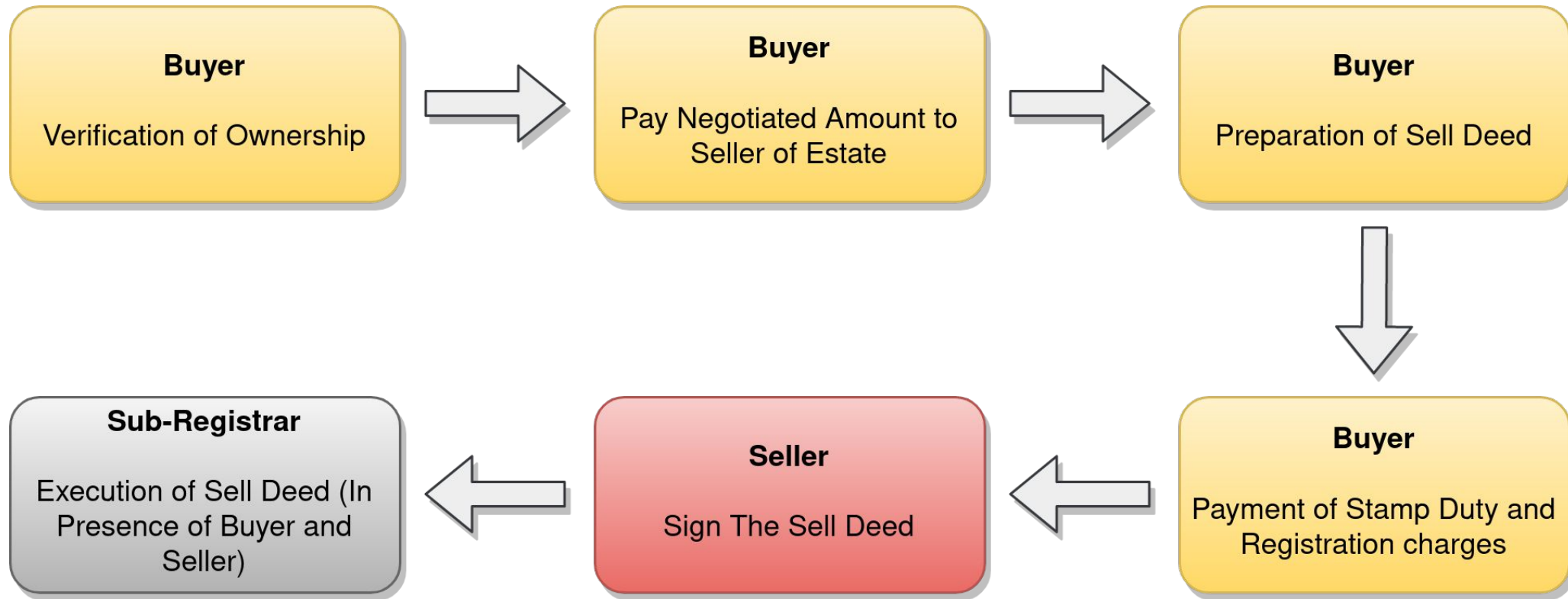
Technological Stack

- Blockchain
 - Technology - Hyperledger Fabric
 - Chaincode - Go
- Web Application
 - Backend – Node.js, Express.js
 - Frontend - HTML, CSS, JavaScript
 - Database (session storage) - MongoDB

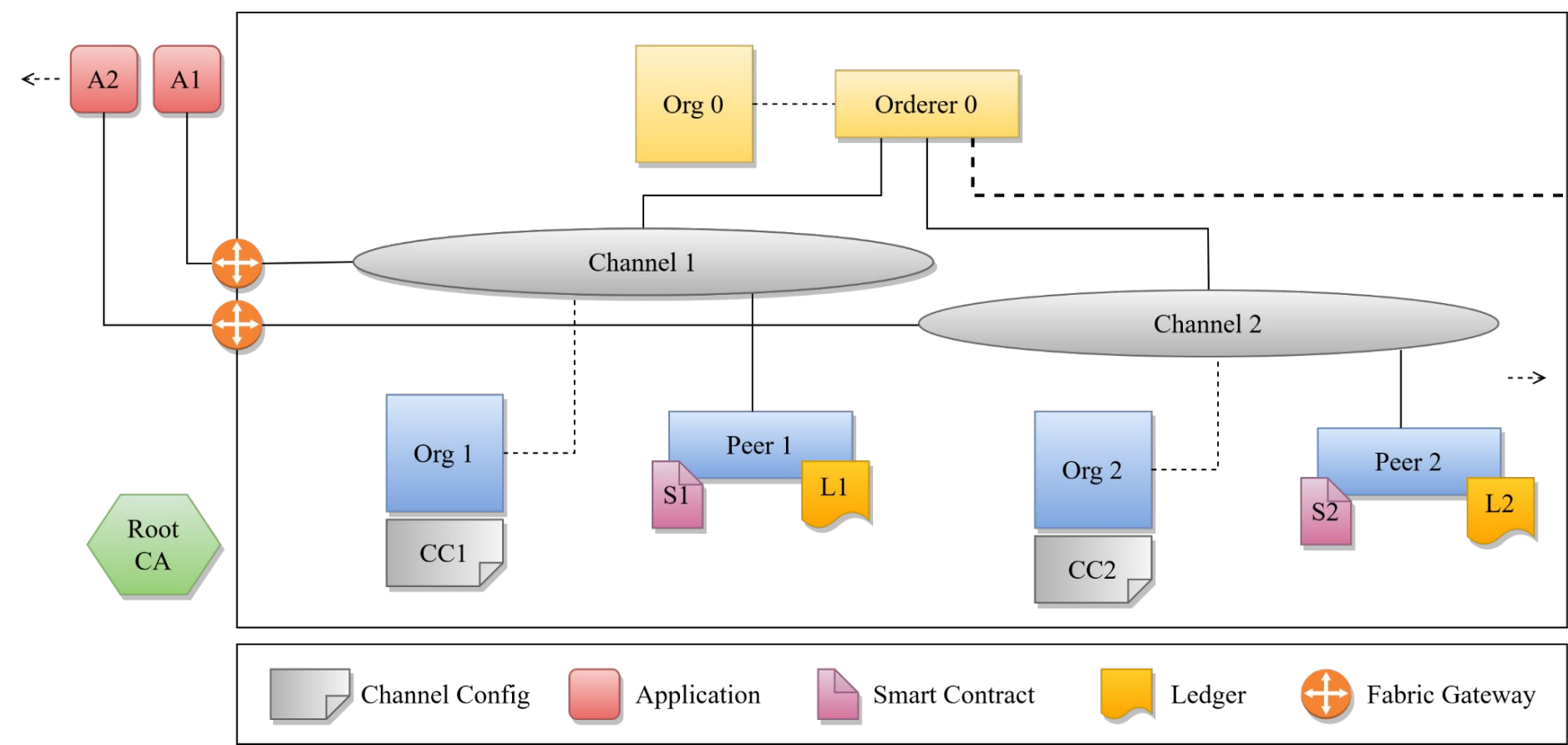
Review Suggestions

- To add a Government Entity in the process.
- To use Hyperledger Fabric technology.

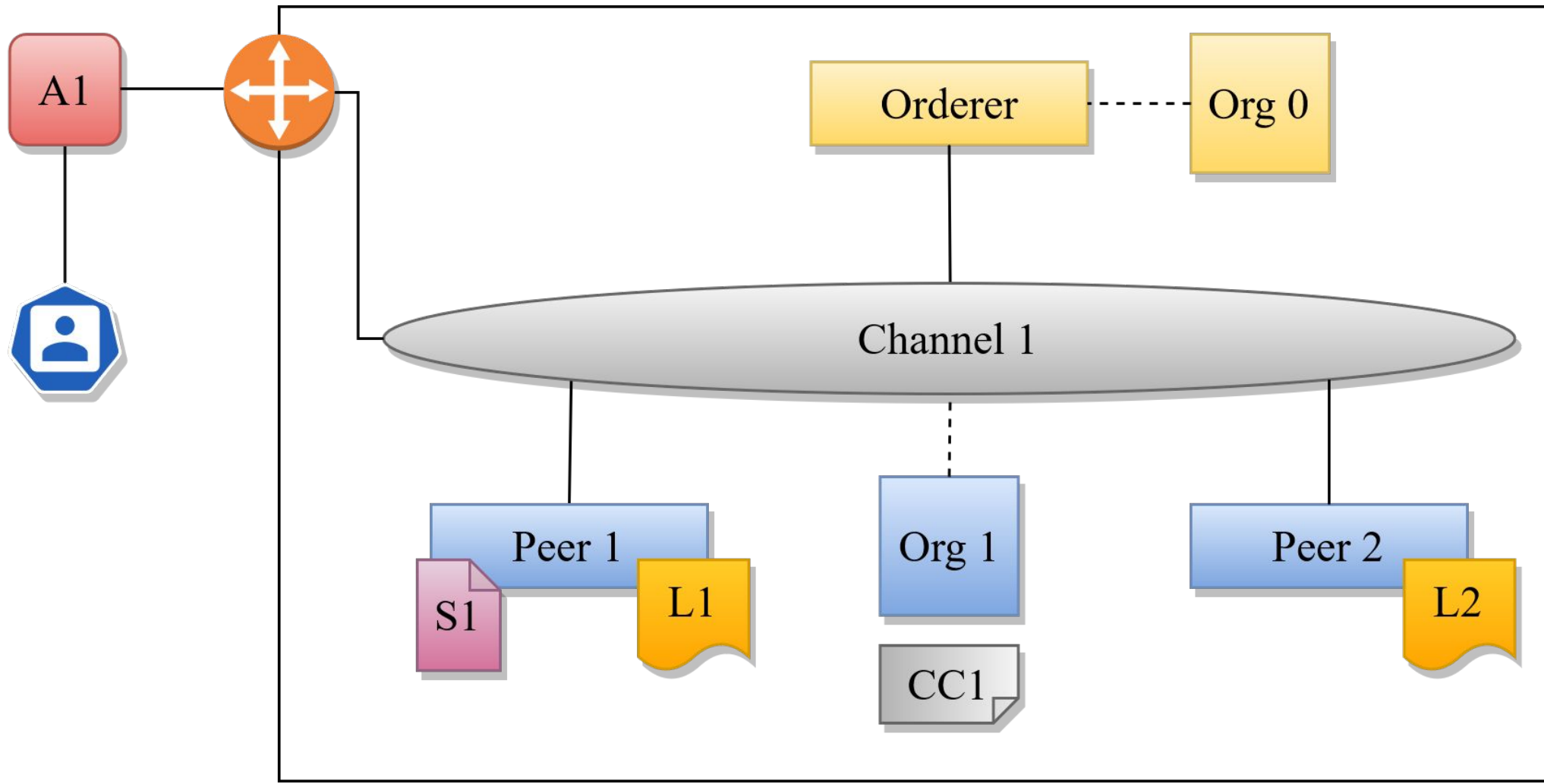
Existing System



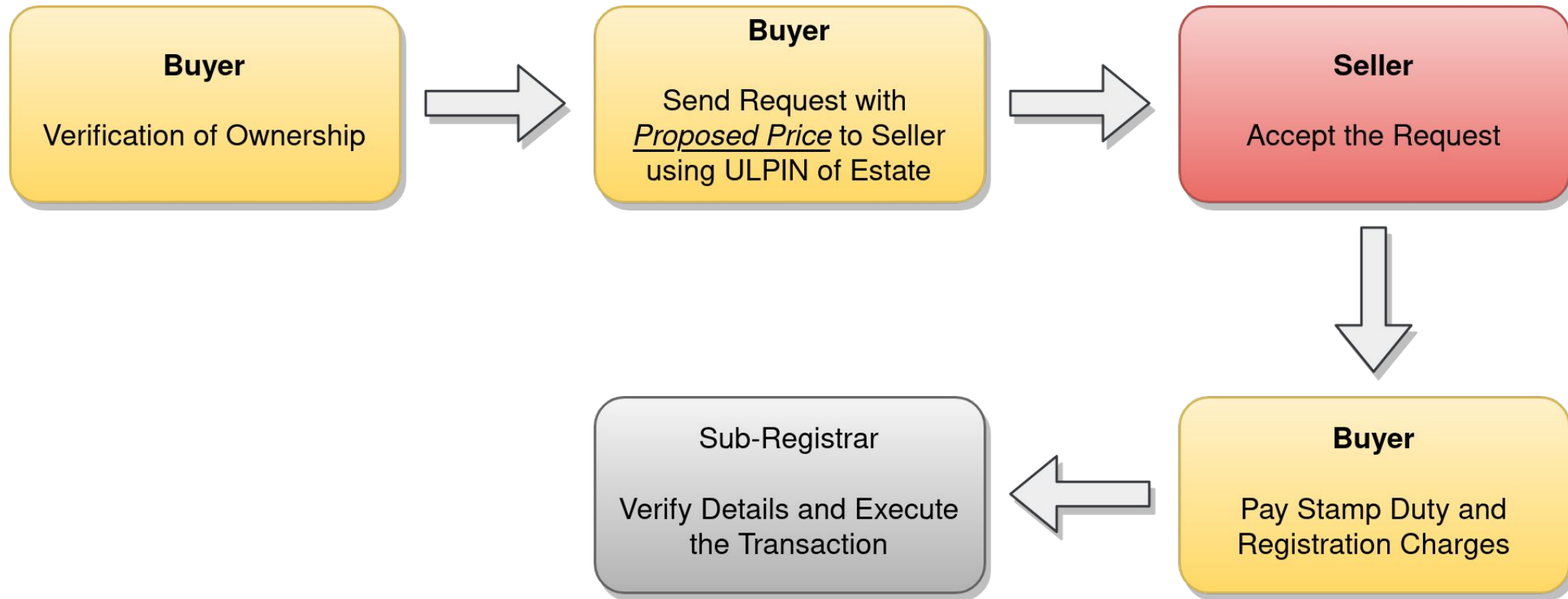
Proposed Hyperledger Fabric Architecture



Org 0	Central Govt.	Org 1	State 1 Govt.
Root CA	Central Govt.	Org 2	State 2 Govt.



Proposed System Architecture



Implementation Status

- Hyperledger Fabric Setup is done.
- Chaincode (Smart Contract) development is done.
- Web Application (both frontend and backend) development is done.
- Chaincode need a security audit and testing.

Thank You...!!