

GOALS

SO-SHARED presents a social sharing platform through which users share STAs to build communities and create value.

We propose a solution for the better utilization of physical resources within smart communities.

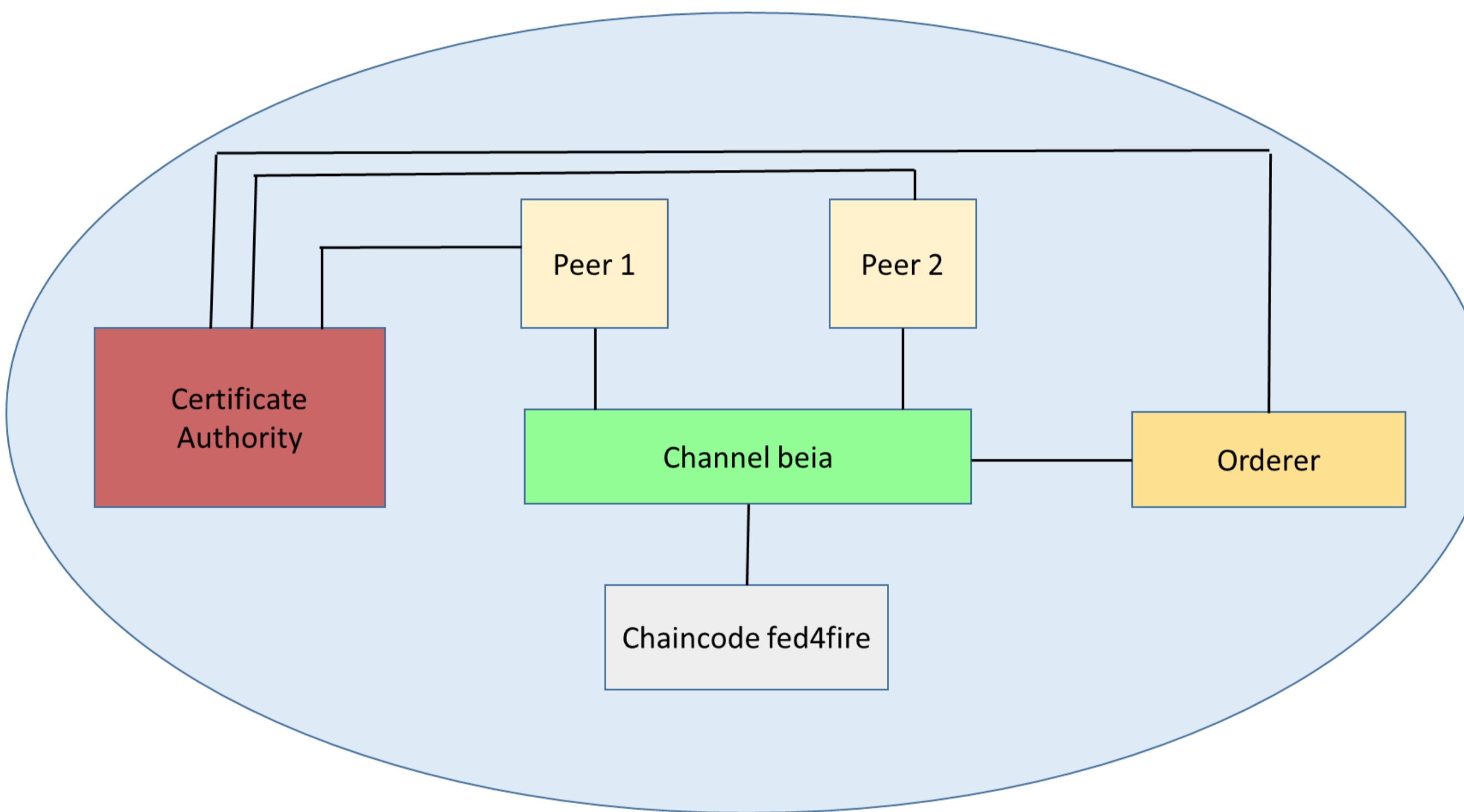
CHALLENGES

The challenge is to unlock this potentially vast marketplace and create significant improvements in utilization of resources, community cohesion, costs reduction and more.

The platform will match supply and demand based on geolocation and customer preferences with proven technology. Sharing conditions are recorded on a blockchain.

DEMO SETUP

Set up a Hyperledger Fabric network so that registered users in Fabric CA can submit and evaluate transactions in the Hyperledger.



RESULTS

Submit Transaction

id	key	value
initialized	initialized	{ "rev": "1-9a400e"
Beia	Beia	{ "rev": "1-89be05"
Project01	Project01	{ "rev": "1-649b03"

```

mandana@hyperledger-vm:~/fabric/fabric-samples/beia/javascript$ node invoke.js
Wallet path: /home/mandana/fabric/fabric-samples/beia/javascript/wallet
Transaction has been submitted
  
```

MORE RESULTS

Evaluate Transaction

```

const gateway = new Gateway();
await gateway.connect(ccp, { wallet, identity: 'User01', discovery: { enabled: true, asLocalhost: true } });

const network = await gateway.getNetwork('beia');

const contract = network.getContract('fed4fire');

const result = await contract.evaluateTransaction('readData', 'Project01');
console.log('Transaction has been evaluated, result is: ' + result.toString());

// Disconnect from the gateway.
await gateway.disconnect();
catch (error) {
  }
  
```

```

mandana@hyperledger-vm:~/fabric/fabric-samples/beia/javascript$ node query.js
Wallet path: /home/mandana/fabric/fabric-samples/beia/javascript/wallet
Transaction has been evaluated, result is: Value01
mandana@hyperledger-vm:~/fabric/fabric-samples/beia/javascript$ 
  
```

CONCLUSIONS

The main experimental results of the SO-SHARED project are:

- The development and implementation of product functionalities in an agile fashion to ensure the right direction of the project early on;
- Final testing process, looking at functional and non-functional aspects to guarantee readiness of the solution and scalability.

POST MORTEM

We will further design and implement innovative business models based on blockchain technologies that will provide traceability, transparency, trust and gamification features, such as securely tracking the sensor data information as well as the identity of the stakeholders and rewarding them with coins/tokens for their behavior.

Contact person: Dr. Eng. George Suciú Jr.
 Email: george@beia.ro / Twitter: [@GeorgeSuciúG](https://twitter.com/GeorgeSuciúG)
www.beiaro.eu
www.beia-telemetrie.ro