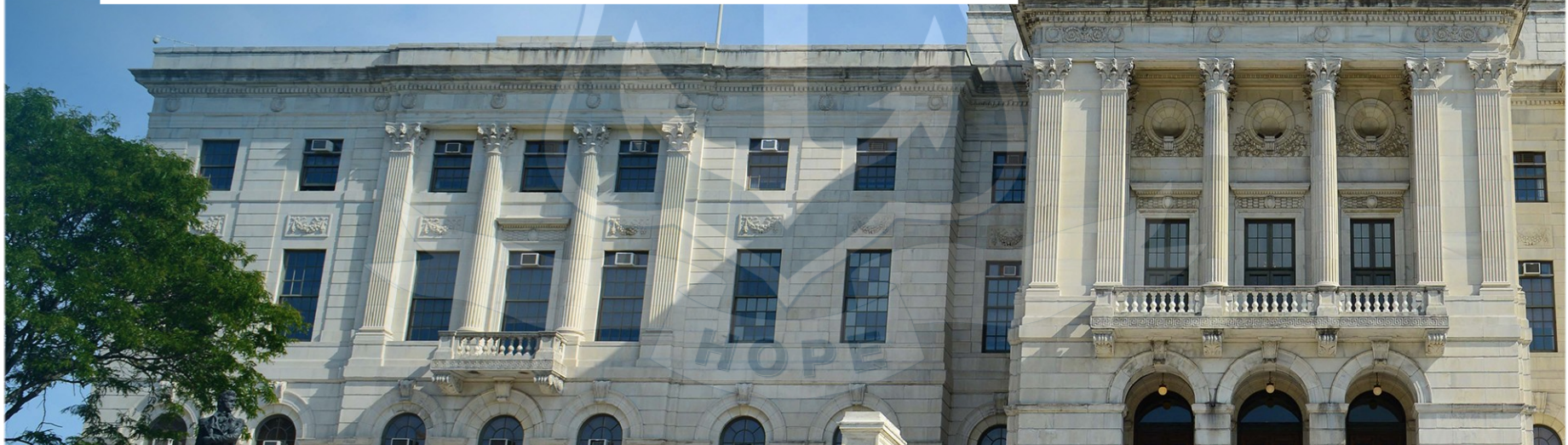# State of Rhode Island: Digital Government with Identity Blockchain

Elizabeth M. Tanner, Esq.
Director, Dept. of Business Regulation

Bio and Agenda

Bio

- Attorney: Business and Real Estate

- Title Insurance/Clearing Title- Land evidence records

- Opened 350+ businesses

- Owned or co-owned several businesses myself

- Grew increasingly frustrated with red tape and bureaucracy to do business with municipal, state and federal governments

- Began state service in 2015 at RI Commerce Corporation focused on listening to problems and solving them- focus on making it easier to do business

- Promoted in 2017 by Governor, now Secretary of Commerce Gina Raimondo to lead the Department of Business Regulation.

- DBR oversees a wide variety of divisions
.

Agenda

1) How we got here in state government

2) How we found digital government opportunities and strategies in the state

3) The POC project delivering identities and credentials for individuals and businesses – driving efficiencies and building trust

4) Enabling technologies: Self sovereign identity, Hyperledger Indy and Aries

5) The roadmap and next steps

RI Digital Identity Agenda

1) <u>How we got here in state government</u>

How we found digital government opportunities and strategies

Identity & credentials POC > drives efficiencies and building trust

Key technologies: Self sovereign identity, Hyperledger Indy, Aries

The roadmap and next steps

Rhode Island's Journey: How we got here

- **Hired to make it easier to do business/cut the red tape = Listening**
- **Early discovery: It's not the regulations**
- **Focused on processes and highest volume**
- **Looked at every other state in country**
- **Discovered Estonia= e-resident**
- **Crypto and Blockchain Forum in RI**

RI Digital Identity Agenda

How we got here in state government

2) How we find digital government opportunities, strategies

Identity & credentials POC > drives efficiencies and building trust

Key technologies: Self sovereign identity, Hyperledger Indy, Aries

The roadmap and next steps

Finding Digital Government Opportunities

- **Highest volume processes**
- **Data collection: paper vs. electronic**
- **LEAN**
- **Single location for a whole process**
- **Single identification**
- **Single entry**
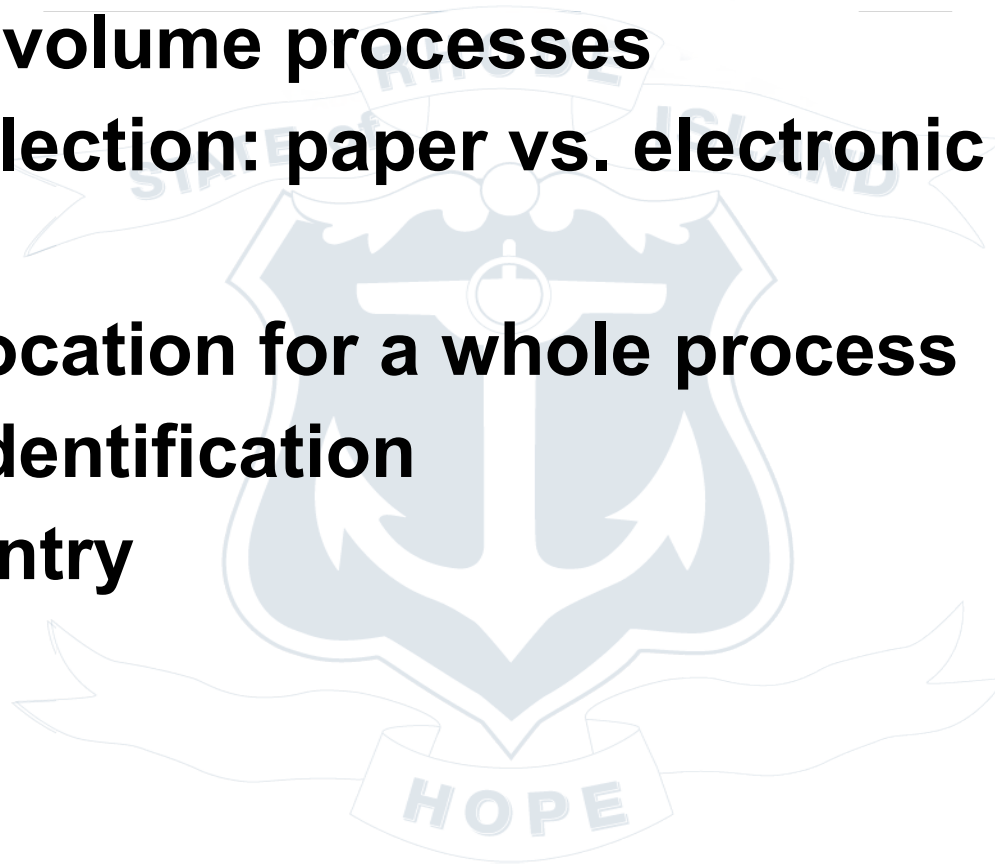
Strategies to Turn Opportunities into Reality

- **Get everyone in a room**
- **Talk to leadership**
- **Provide examples**
- **Get external experts**
- **Association and industry support**
- **Set an expectation**
- **Leadership from the top= POC**

IT Opportunities with Government

- **Consider a section just for non IT folks to read**
- **Use common language**
- **Tell me what it actually does**
- **Give examples- not just broad strokes**
- **How does this save the state:**
  - **Time**
  - **Money**
  - **Hassle from employees/unions**
  - **Customers**

RI Digital Identity Agenda

How we got here in state government

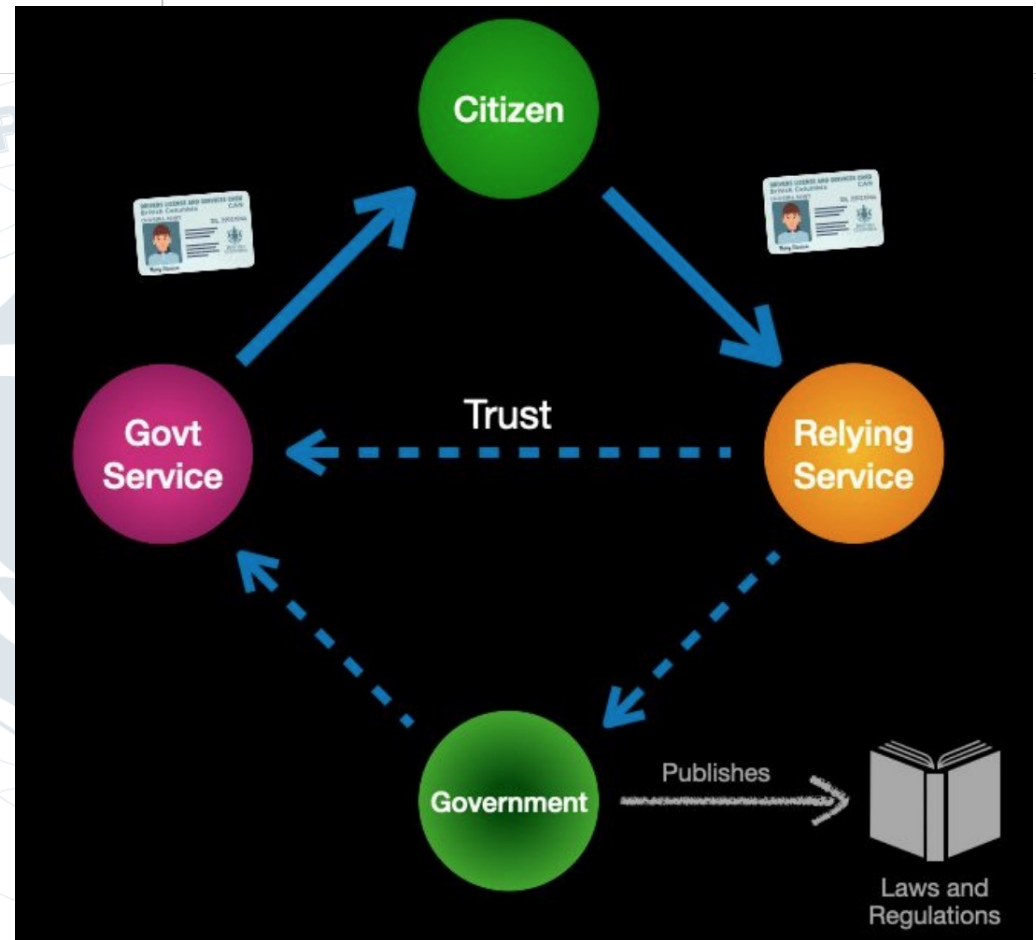How we found digital government opportunities and strategies

3) Identity & credentials POC > drive efficiencies, build trust

Key technologies: Self sovereign identity, Hyperledger Indy, Aries
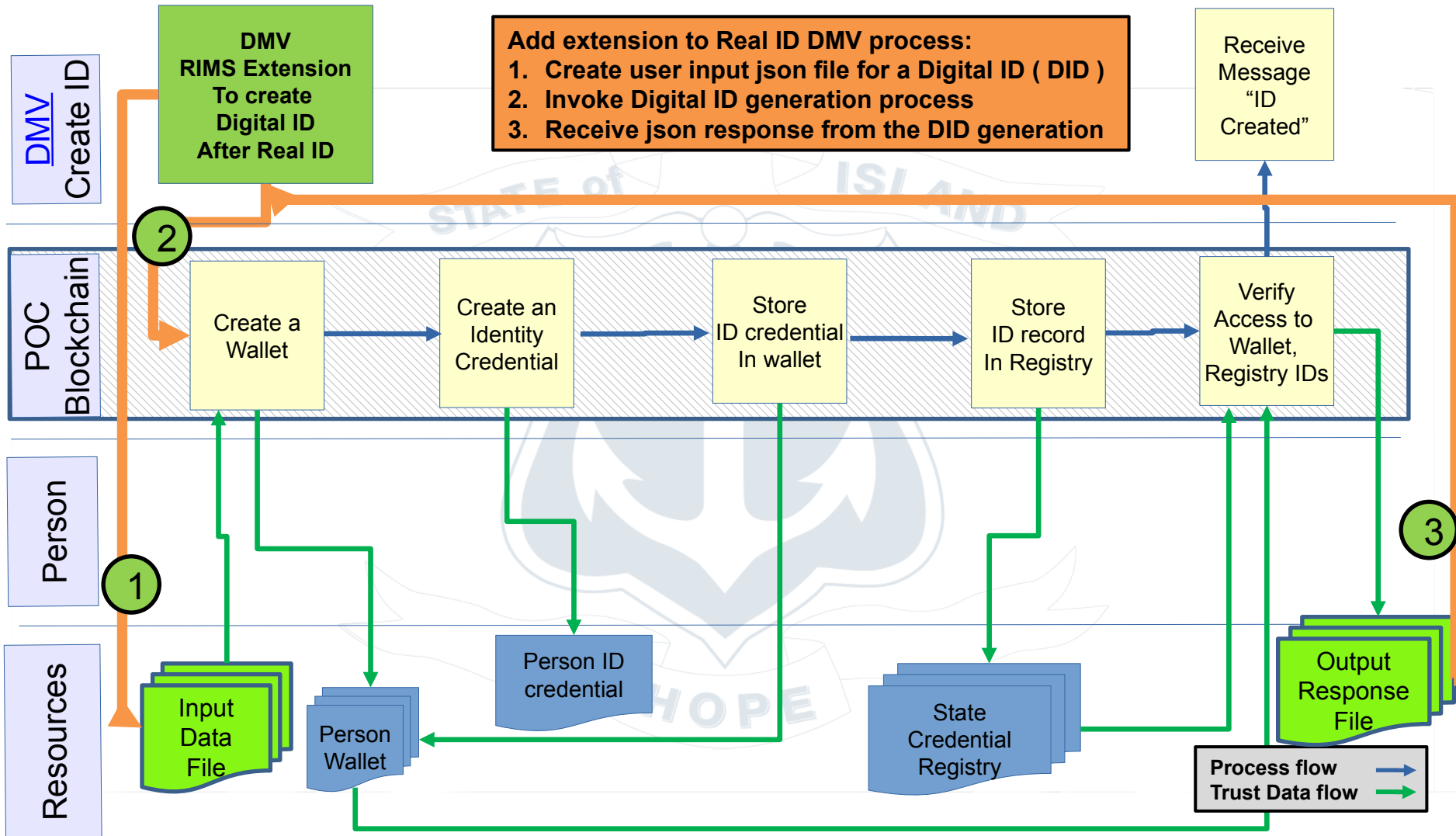
The roadmap and next steps

Add Governance of Trust Triangle

- In these governance trust triangles, the government itself is the governance authority

- the laws and regulations of the country are the governance framework

- the issuers are the various government services authorized to issue a specific type of credential

- Citizens or businesses can obtain the credentials for which they are qualified

- present them to any relying service that trusts the government for the accuracy of the information on the credential
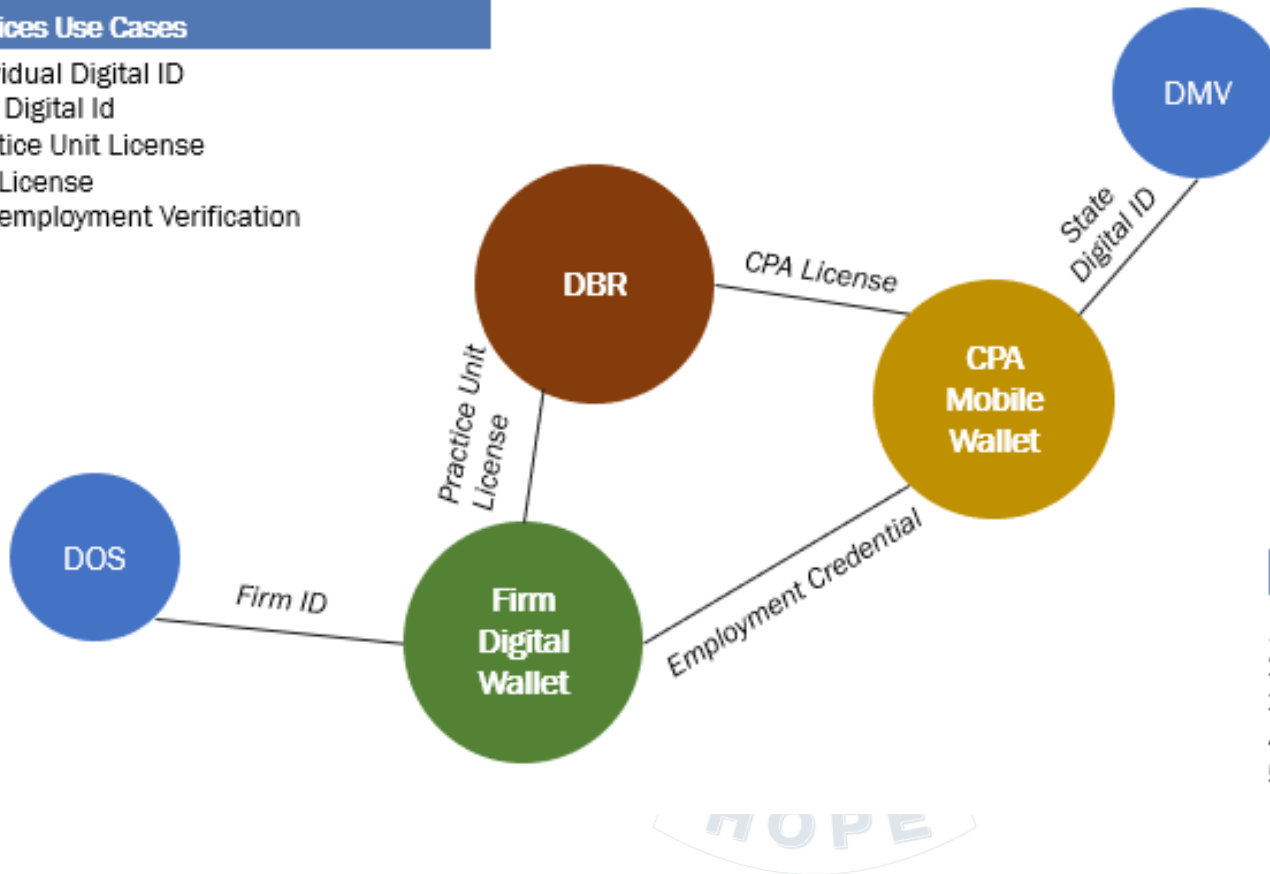
DMV Identity Creation on Blockchain POC
Steps 1 & 2 in Journey Map

DMV Create ID

DMV RIMS Extension To create Digital ID After Real ID

Add extension to Real ID DMV process:
1. **Create user input json file for a Digital ID (DID)**
2. **Invoke Digital ID generation process**
3. **Receive json response from the DID generation**

Receive Message "ID Created"

POC Blockchain

Create a Wallet → Create an Identity Credential → Store ID credential In wallet → Store ID record In Registry → Verify Access to Wallet, Registry IDs

Person

Resources

Input Data File

Person Wallet

Person ID credential

State Credential Registry

Output Response File

| Process flow | → |
| Trust Data flow | → |

POC DBR Use Cases (workshop deck)

Services Use Cases

1. Individual Digital ID
2. Firm Digital Id
3. Practice Unit License
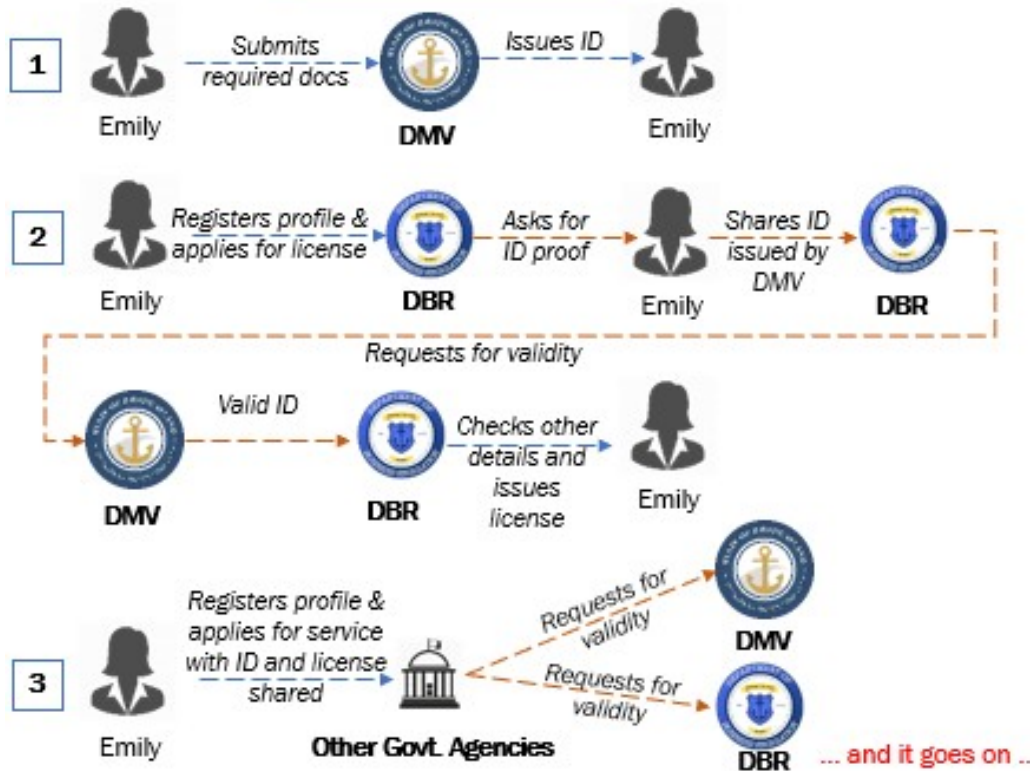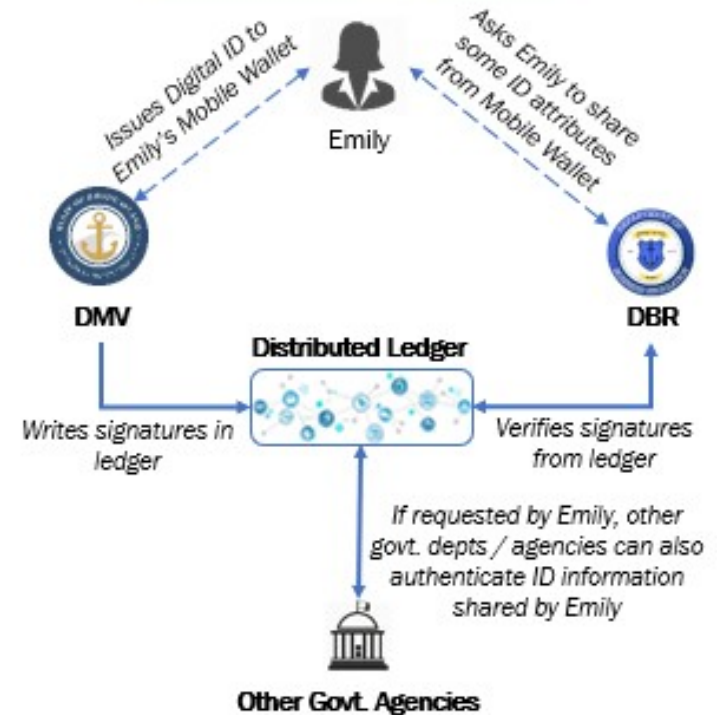4. CPA License
5. CPA employment Verification

DMV

DBR

CPA License

State Digital ID

CPA Mobile Wallet

Practice Unit License

DOS

Firm ID

Firm Digital Wallet

Employment Credential

Payoffs

1. User Control
2. Easy Sharing
3. Secured Data access
4. Trust Automation
5. Data validation and consolidation

Identity Blockchain Value for CPA License (workshop deck)

RI Digital Identity Agenda

How we got here in state government

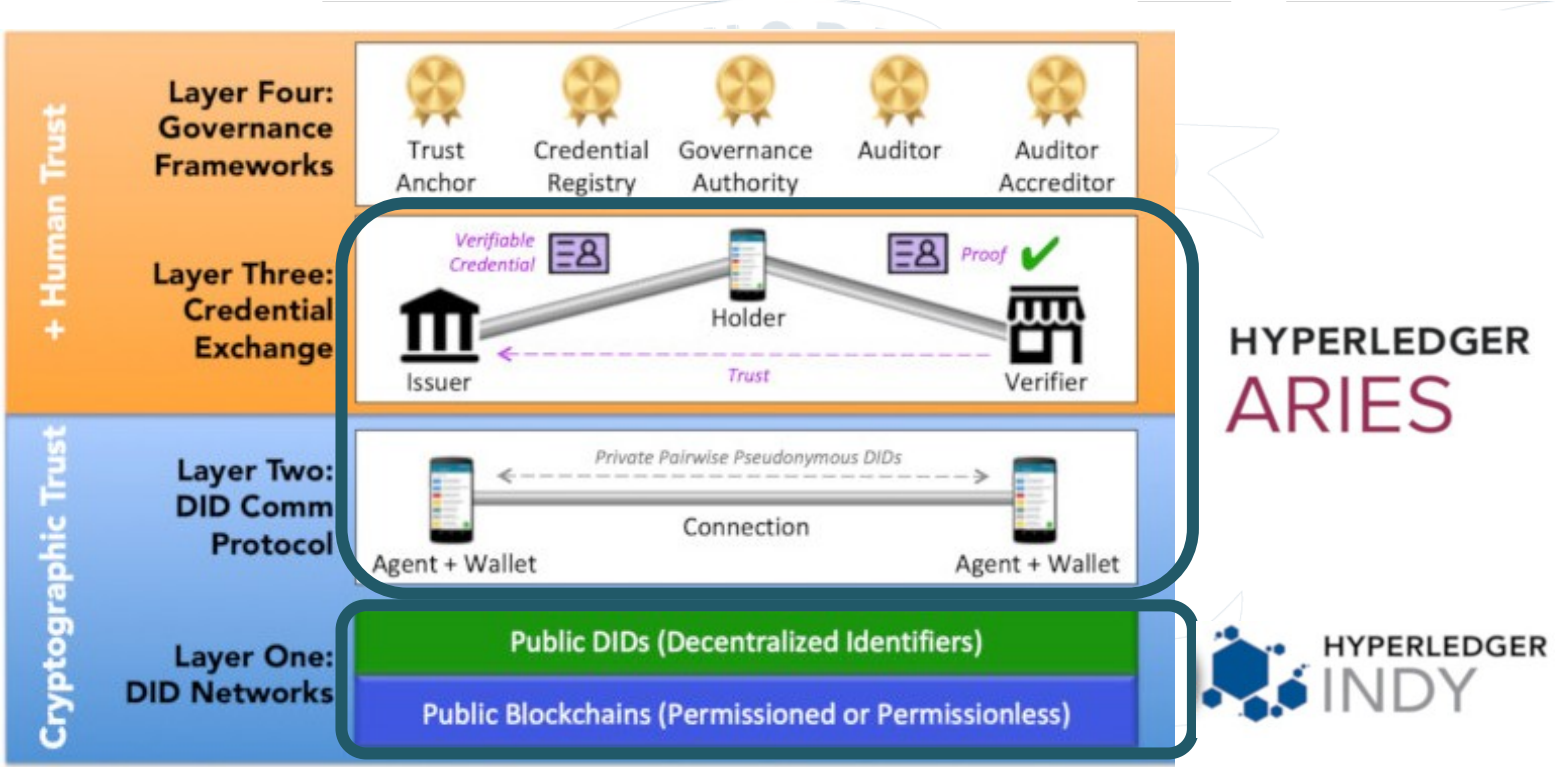How we found digital government opportunities and strategies

Identity & credentials POC > drive efficiencies, build trust

4) Key Tech: Self sovereign identity, Hyperledger Indy, Aries

The roadmap and next steps

Hyperledger Indy Stack

Together, Hyperledger Indy, Aries and Ursa make the Hyperledger Identity "Stack."

Source: https://www.evernym.com/blog/hyperledger-aries/

Conceptual Client – Server Architecture
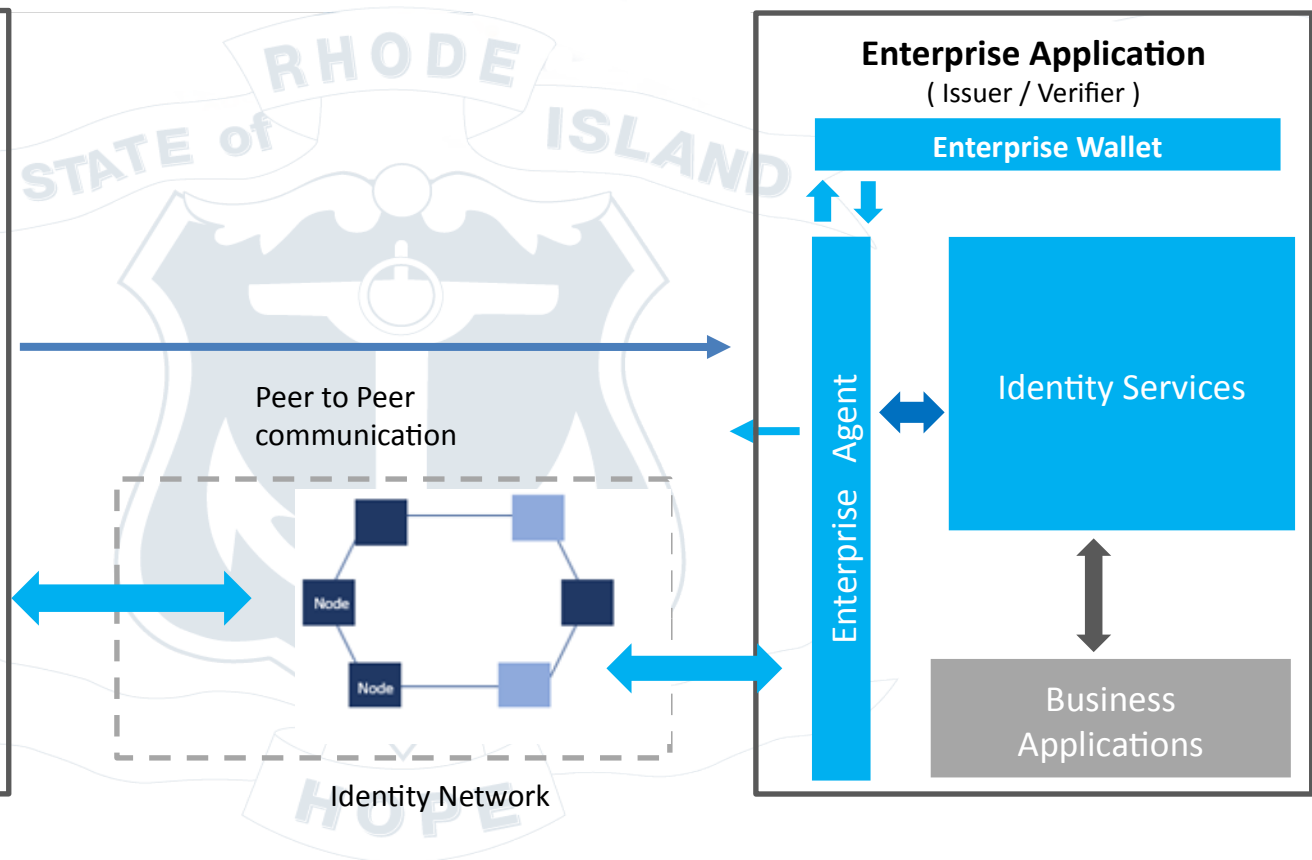
RI Digital Identity Agenda

How we got here in state government

How we found digital government opportunities and strategies

Identity & credentials POC > drive efficiencies, build trust

Key Tech: Self sovereign identity, Hyperledger Indy, Aries

5) The roadmap and next steps

RI Blockchain project
Value Opportunities and Education Plan

Identity Blockchain Potential Value

1. Verifiable digital identities
2. Verifiable digital credentials (licenses)
3. Verifiable digital signatures for data provenance on transactions
4. Verifiable consent management
5. User managed identities implement Self-Sovereign Identity and privacy standards
6. Better identity protection with selective disclosure proofs, non-correlated data
7. Automated digital trust using smart wallets (implement Trust Over IP standards)
8. Improved compliance at lower costs
9. Fraud reductions possible
10. Better data quality for analytics, reporting
11. Improved data security
12. Authentication support to legacy systems

RI Blockchain Work Group
Education Plan

1. Basic education presentations on:
   1. Identity Blockchain concepts
   2. Case studies on Identity blockchain in government
   3. Answer questions on Identity Blockchain
2. Identity Blockchain Opportunity Assessments
3. Reference materials on Identity Blockchain use cases in Public Sector and Industry

Roadmap: How to get to a Digital Government

- **Convert paper forms to electronic**
- **Choose a couple of good softwares for everyone to use**
- **Connect those softwares to a single identity and create a version of a data bank**
- **Put it all on blockchain**