



**TRUST**  
Over **IP**

THE **LINUX** FOUNDATION

**TRQP:**  
**Trust Registry Query**  
**Protocol**

**2025.11.19**

**Ayra Card Protocol**  
**Operationalizing**  
**Trust**  
**Registries**



**ayra**  
trusted relationship network

**ayra.forum**

# Agenda

## Trust Registry Query Protocol

- The problem it solves
- How it works
- Who needs it
- Public Review



## Ayra Card Protocol

- Basic Ayra Card intro
- Critical Role of Trust Registries & TRQP



# TWO Main Questions

## Are you Authorized?

Can you do that thing?

- Issue a driver license?
- Is that employee badge really from your company?
- Are you authorized to sign that engineering drawing?

**Does EntityX have AuthorityY in EcosystemZ?**

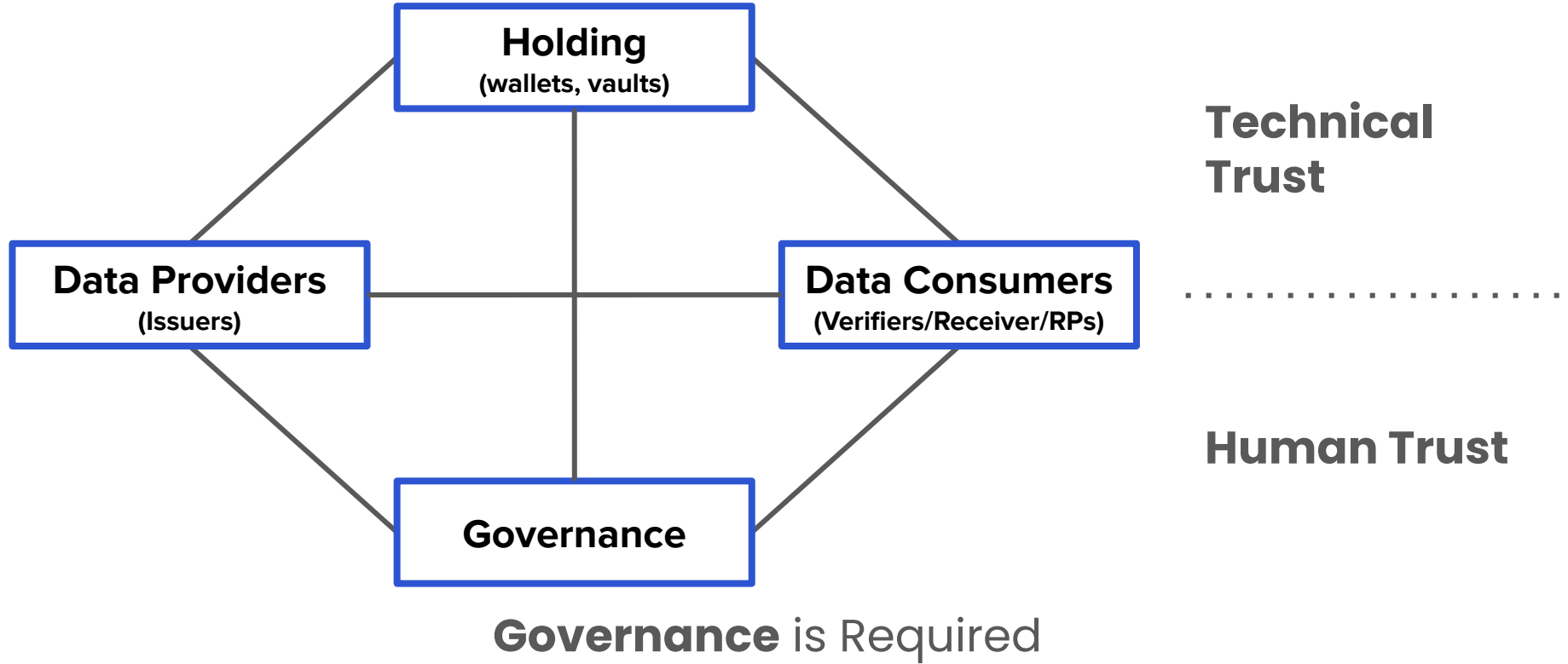
## Are you Recognized?

- Do other ecosystems recognize you?
- Do you recognize/acknowledge other ecosystems?

**Is EntityX recognized (for AuthorityY) by EcosystemZ?**

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# Why TRQP: Trust Triangle Is Not Sufficient

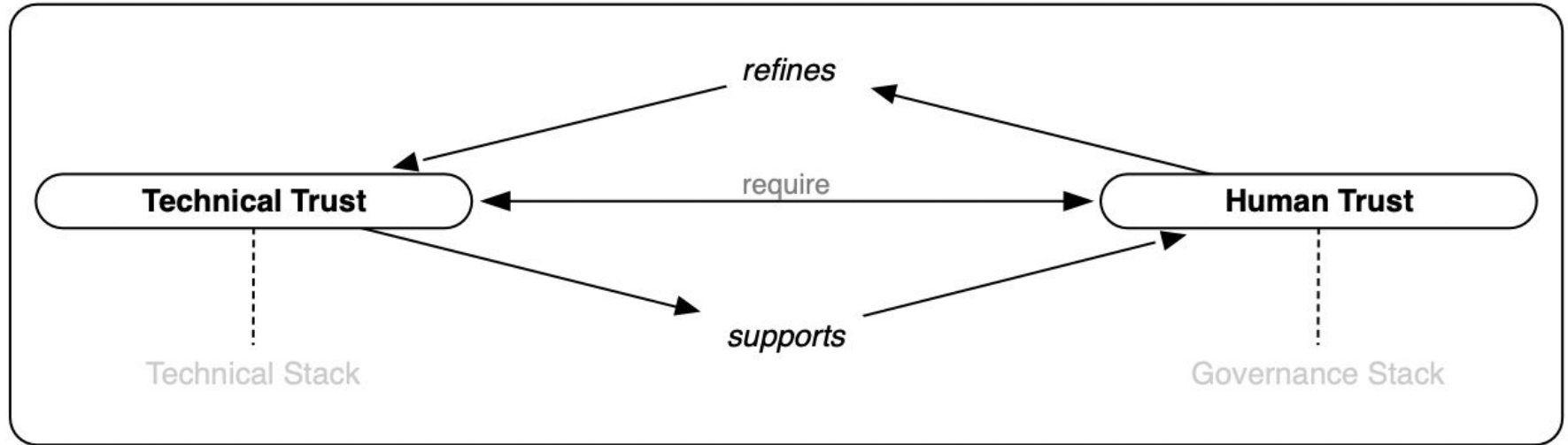


# When any entity is presented with a claim, there are three things they want to ensure:

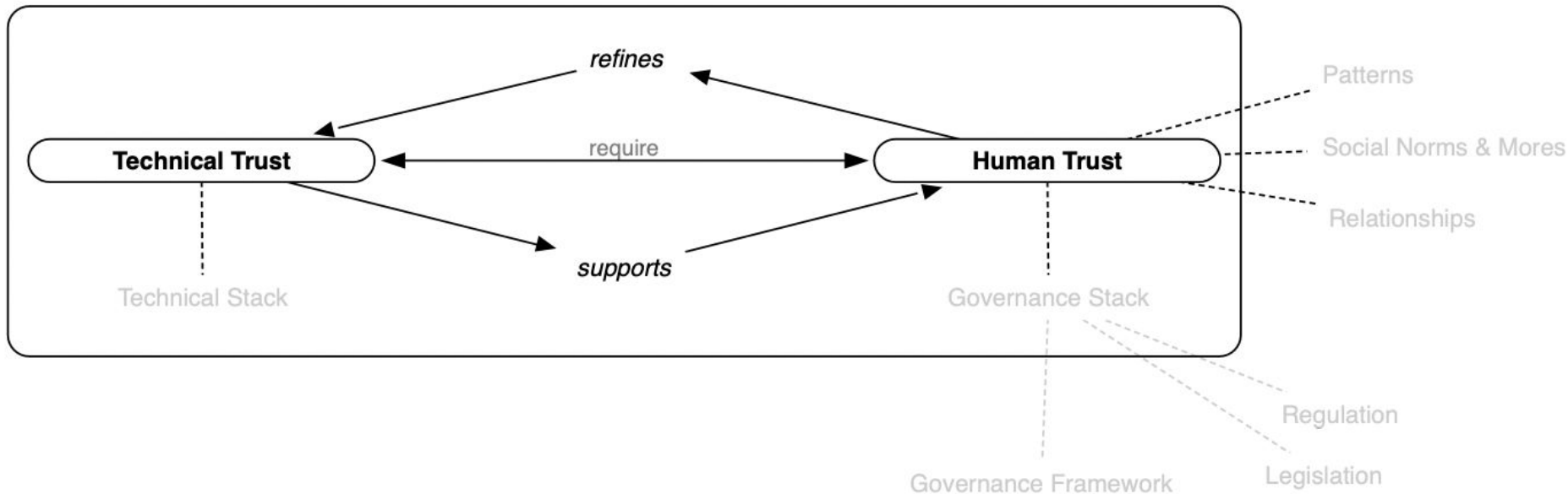
- 1 That the claim **hasn't been falsified** = technical trust  
at any point in time  
(cryptographic verifiability)
- 2 That the claim has **accurate representation** = human trust  
(authentication)
- 3 That the claim has **authority** = human trust  
(authorization)

Requires domain-specific governance

# Technical Trust & Human Trust



# Trust Over IP – Dual Stack – Technical & Governance

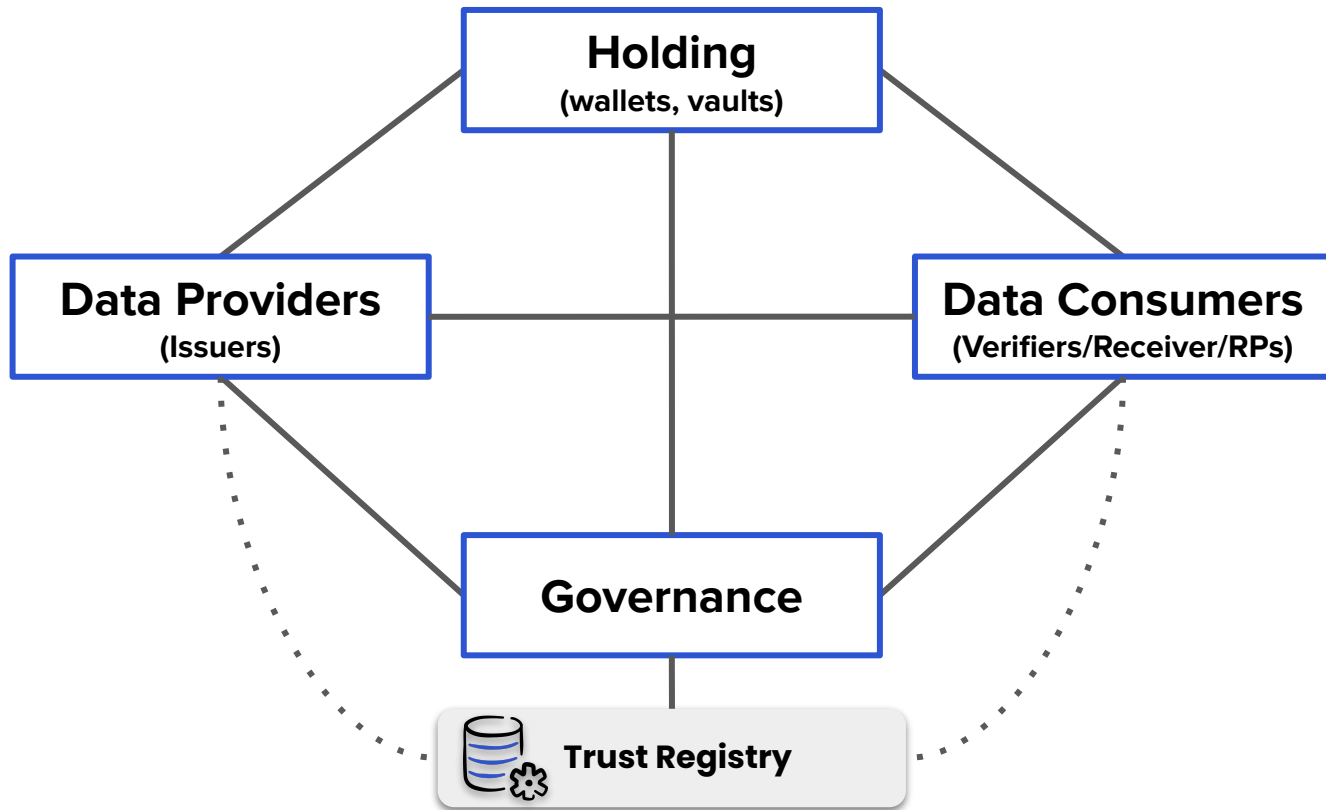


**TRQP** links **Human Trust** and  
**Technical Trust**

# Each Ecosystem

Leads its  
Ecosystem

- **Governs** Itself
- Runs **Trust Registry**





# More on that shortly...

# TRQP – Two Implementer Types



**TRQP Consumer**

**I need an answer**

**Trust Registry Query Protocol**

**TRQP Provider**

**I have answers**

*Trust lists  
Systems of record  
Authorities*

# TRQP Consumer

Simple pattern – use two endpoints:

- **/authorization** – does entity have the authorization?
  - **/recognition** – is the entity recognized?
-

## /authorization

- `entity_id`
- `action`
- `resource`
- `authority_id`

Does **EntityX** have  
**AuthorizationY** in **EcosystemZ**?

## /recognition

- `entity_id`
- `action`
- `resource`
- `authority_id`

Is **EntityX** recognized for  
**AuthorizationY** in **EcosystemZ**?

## /authorization

- `entity_id`
- `action`
- `resource`
- `authority_id`

Does **EntityX** have **AuthorizationY** in **EcosystemZ**?

Does **EntityX** (`entity_id`) have **AuthorizationY** (`action + resource`) in **EcosystemZ** (`authority_id`)?

Does `did:government` have (`issue + country:driverlicense`) in `did:country`?

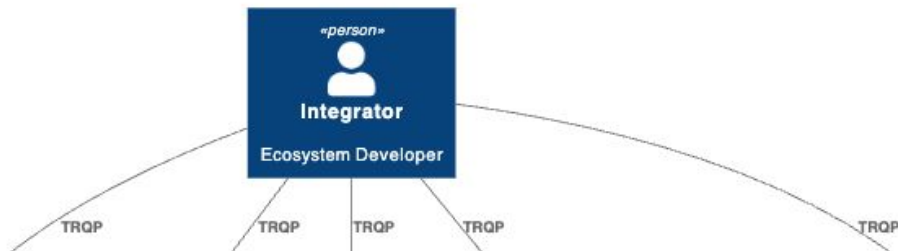
PARC Model comes from [Cedar](#) (internet scale deployments like Amazon AWS): “Can this **principal** take this **action** on this **resource** in this **context**?”

# Trust Registry Query Protocol – Leverage Existing Systems

TRQP is meant to **leverage existing systems**:

- Systems of Record
- Trusted Lists
- OpenID Federation (OIDF)
- X.509 PKI
- Many more...

Native and Bridged Support for TRQP - Implementer Review Draft



THE TRUTH IS OUT THERE

# TRQP v2 – Public Review Period Starting



Assuming vote passes on 2025.11.27, the **Trust Registry Query Protocol v2** will enter **Public Review 02** in first week of December.

- 30-day review period
- Github dispositioning

### Table of Contents

- 1. Introduction
- 2. Conventions and Definitions
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  - 4.4 Trust Registries
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  - 5.2 `entity_id`
  - 5.3 `action`
  - 5.4 `resource`
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- 6. Authorization Query and Response Schemas
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## Trust Registry Query Protocol (TRQP) Specification

- Specification Version: 2.0
- Document Status: Public Review 02 PENDING TRTF VOTE ON 2025.11.27 (i.e. Public Review is expected to start after that vote)

Participate:

- [GitHub repo](#)
- [File an issue](#)
- [Start a discussion](#)

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**NOTE**

This specification is currently a Working Draft of the Trust Over IP (ToIP) [Trust Registry Task Force](#). Feedback is welcome - see instructions [here](#)

For a complete overview of the motivations and core concepts behind TRQP, please see the [TRQP Overview page](#).

### § 1. Introduction

*This section is informative.*

The ToIP Trust Registry Query Protocol (TRQP) is a lightweight, read-only protocol for making fast, efficient



## Ayra Card Protocol

Operational Use of TRQP





# Ayra is Operationalizing Trust Over IP Concepts

## From Governance Frameworks to TRQP

- The **First Person Network** is underpinned by the **Ayra Trust Network**
  - Modular governance
- **Trust Registry** Fabric underpins everything we're doing
- The **Ayra Card** protocol is leveraging and operationalizing it all

# Consider a Business Card – Content & Context



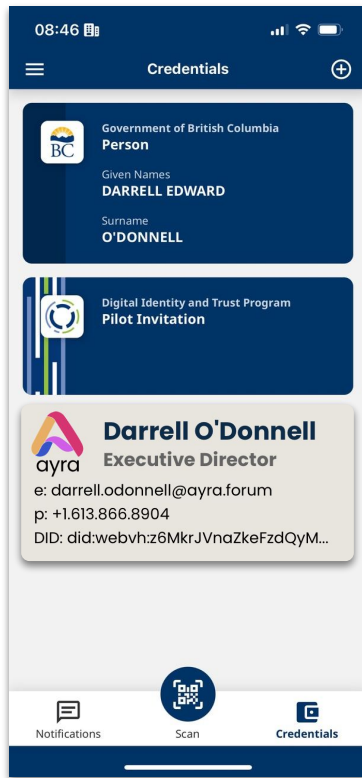
## CONTENT

- I decide what to put on my card

## CONTEXT

- I hand it to you
- You decide what to do with it

# But digitally?



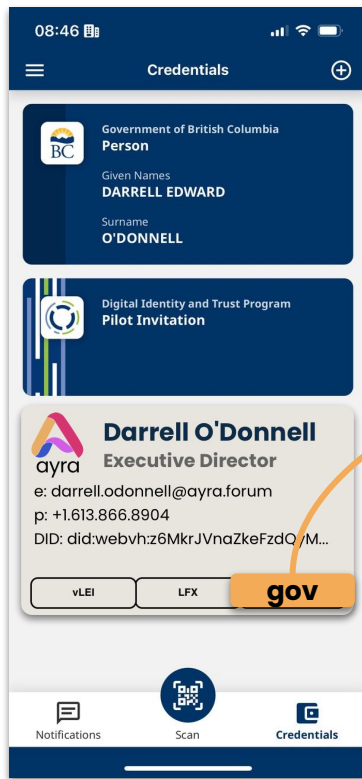
I can put it in my wallet

**Then what?**

- How do you ask for it?
- How do I offer it?
- What do we do afterwards?

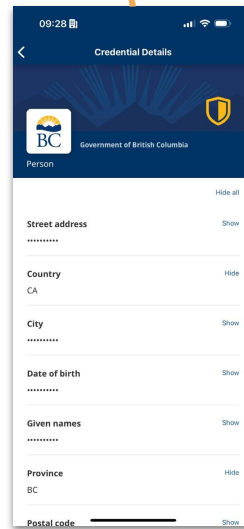
There is no consistency

# Simple Data & Dynamic Payloads

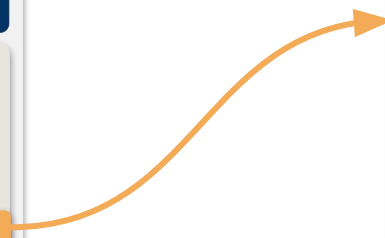
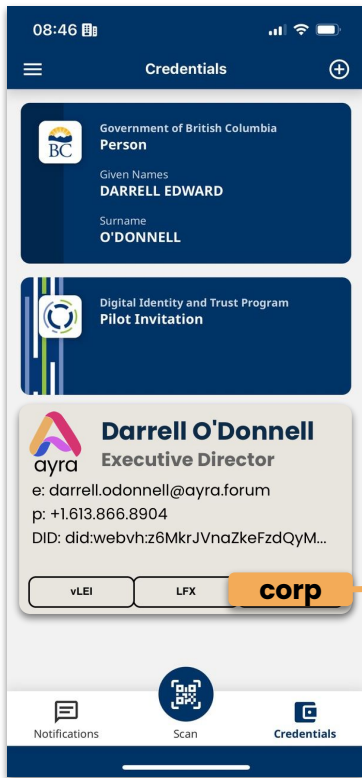


## Payloads point at rich information

- Education
  - LinkedIn
  - Github
- Legal
- Custom Data
- Government ID



# Payload: Corporate Registration



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Central Business Name Index

Search of a business name SOGC search Registries of commerce Localities Contact

business name or UID  
ayra

☒ exact search

☐ advanced search

**Ayra Association** [Back to search](#) [print](#)

address	Kanzleistrasse 18
ZIP / Town	8004 Zürich
legal form	Association
seat	Zürich
status	active
UID	CHE-232.499.461 <a href="#">link</a>
CH-ID	CH-020-6003564-1
FRC-ID	1671360

cantonal excerpt [link](#) Handelsregisteramt des Kantons Zürich [link](#)

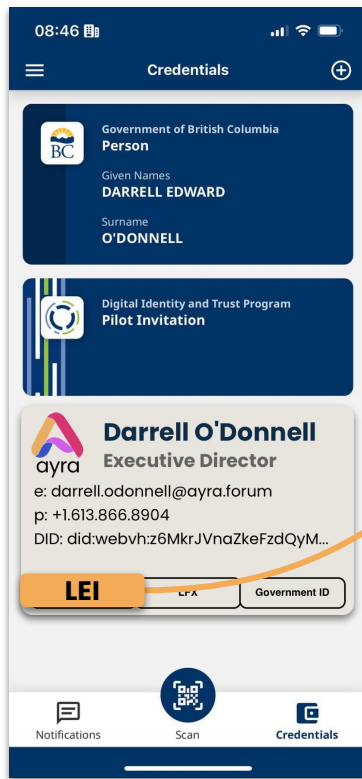
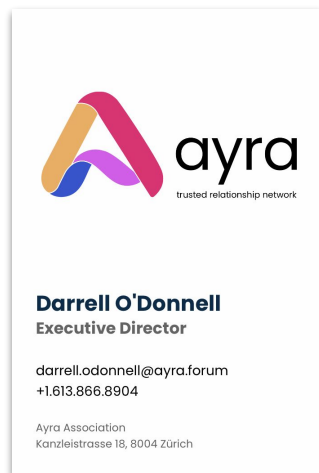
**purpose**

Der Verein bezweckt, das Wachstum sicherer, interoperabler und nachhaltiger Peer-Digital-Trust-Ökosysteme voranzutreiben, die die digitale Welt verbinden und bereichern, und dient insbesondere als Verwaltungsorgan für das Ayra Trust Network. Der Verein kann Immobilien, andere Sachwerten und Immaterialgüter und Rechte erwerben, zur Erreichung seines Zweckes und auch zur Verwaltung seines Vermögens.

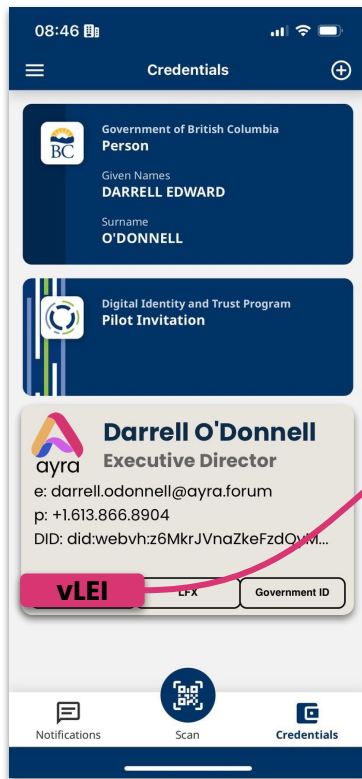
**SOGC publications**

in the SOGC published publications regarding the registry of commerce since 23.12.2024  
The facts recorded in the commercial register can be found in the cantonal extract.

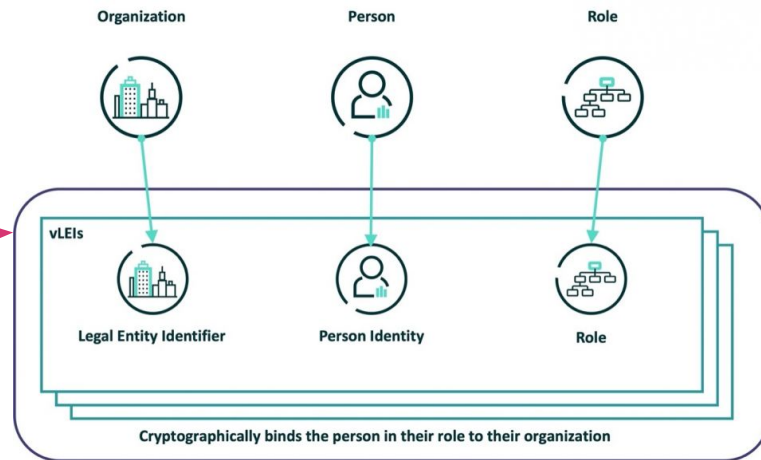
# Simple Data & Payloads: LEI



# Simple Data & Payloads – GLEIF vLEI



## vLEI “dance”



Ayra Cards are “***universal credentials***” but they do more.

They **normalize** a few things that currently create a confusing set of options (choice fatigue):

- **Connection** – durable connection for relationship and communication
- **Interactions** – how do I make the digital trust interactions consistent?
- **Credentials** – standardized data and format
- **Payloads** – how do I use a simple credential to bridge into the existing, highly valued systems that I need?



# Payloads of Interest



## Member Ecosystems

**accenture**



**Pearson**

**sentiance**

TRUSTED ASSOCIATES  
innovate • collaborate • amplify • outpace

 **velocity**



# Ayra Card Ecosystem

It is about **Business, Governance**, and **Technology**

The **Technology** part is important but not the main story...

The tech works – at scale

The **Business** and **Governance** are critical – they are the **Terms** under which we engage...

# Linking Business & Governance to Technology

- **Terms** – the **business** and **governance** behind sharing information:
  - Assurances
  - Liability/Indemnity
  - Value
  - Consistency
- **Tech** – the open **technology** tailored to meet business needs:
  - Real Interoperability
  - Cross silo sharing
  - Technical Trust
  - Consistency



Trusted  
Connections



Rich, Ongoing  
Relationships



Authentic  
Experiences



Frictionless  
Interactions



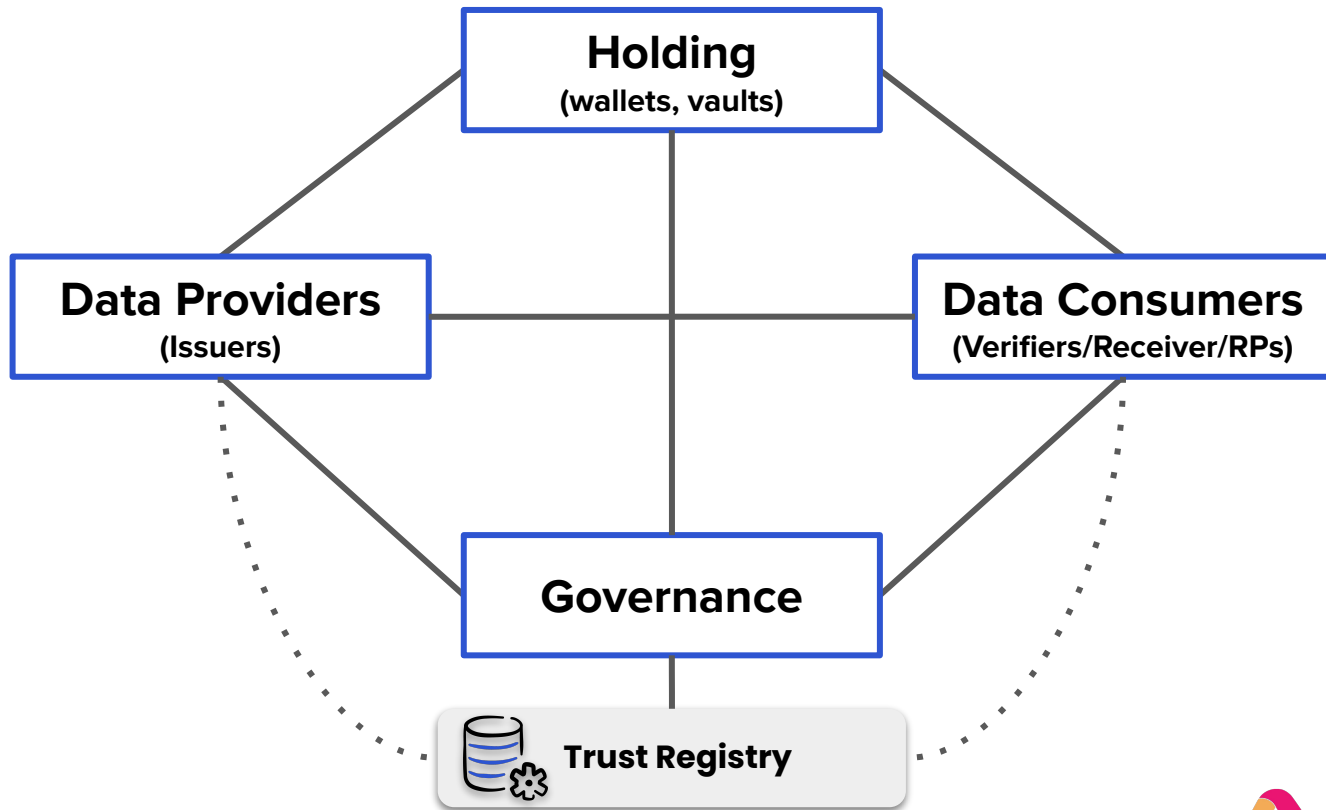
Global Reach &  
Compliance

# Trust Registries Link Ecosystems...

# Each Ecosystem

Leads its  
Ecosystem

- **Governs** Itself
- Runs **Trust Registry**



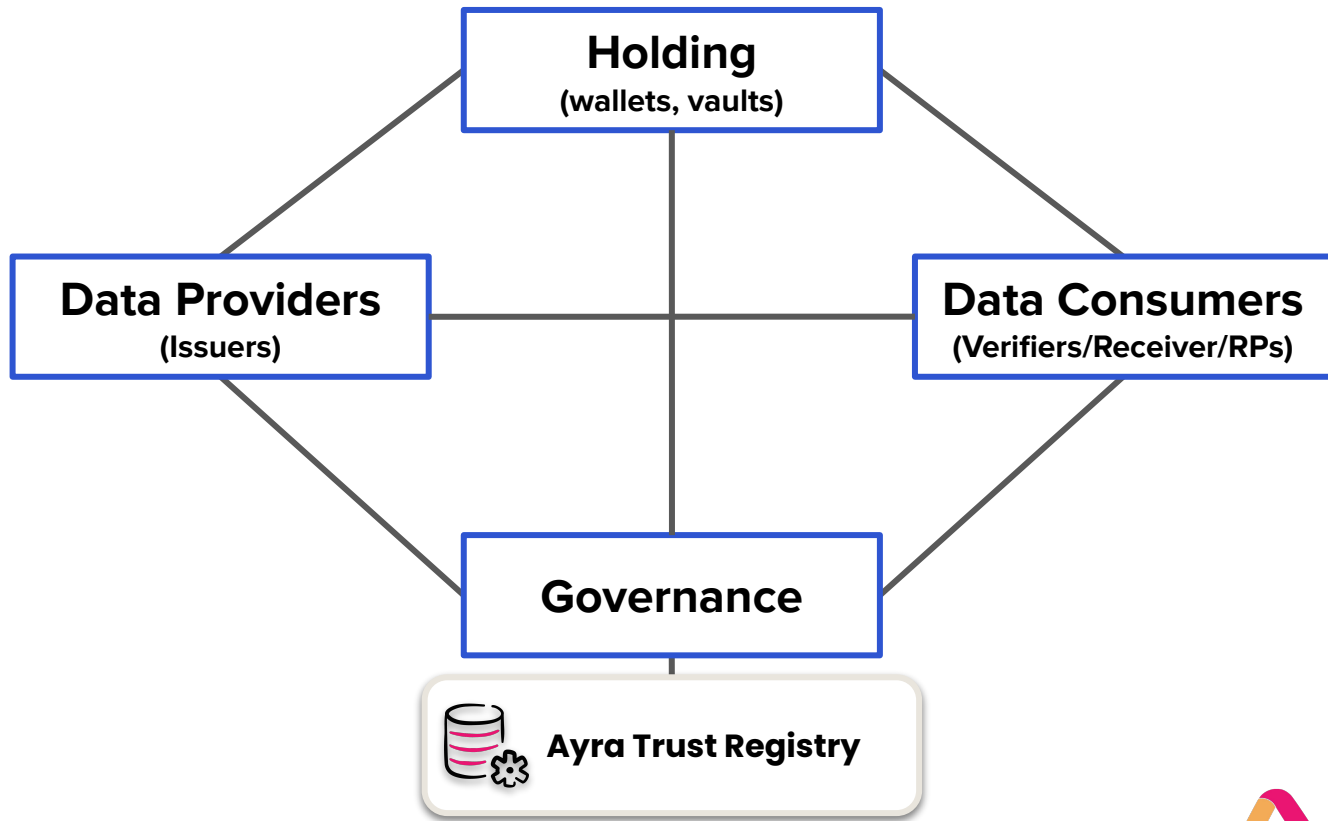
# Ayra is an Ecosystem

## Leads the **Ayra Ecosystem**

- **Governs** itself
- Runs **Trust Registry**

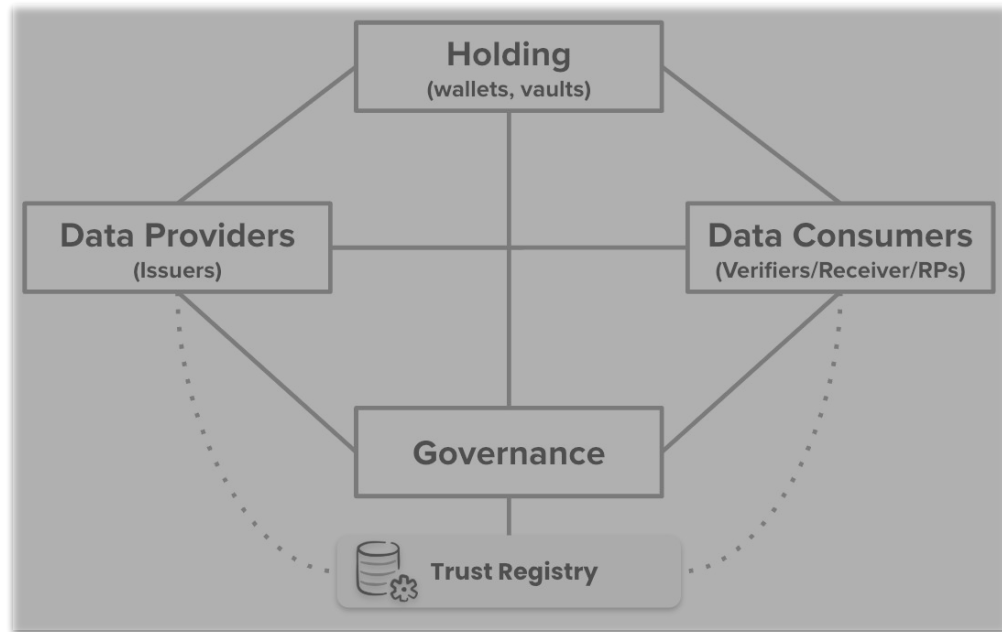
## **Encourages** & **Links** other **Ecosystems**

- They **evolve independently**



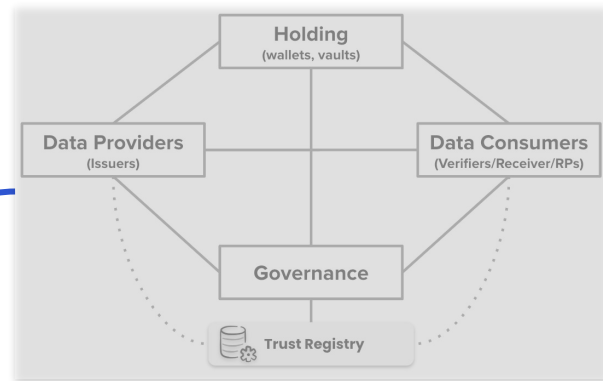
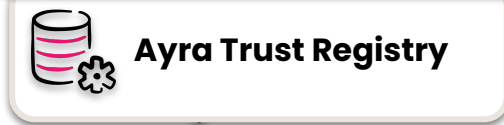
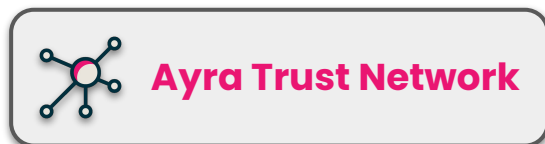
# General Fabric

- **Trust Registry**
- **Conformance Test Suite**



# Ayra Trust Network: Trust Registry Fabric

- Ecosystem – needs to run **Trust Registry**
- This tells others **WHO** they can do business with
- Establish relationship with Ayra Trust Network





# Make Consuming Data Consistent

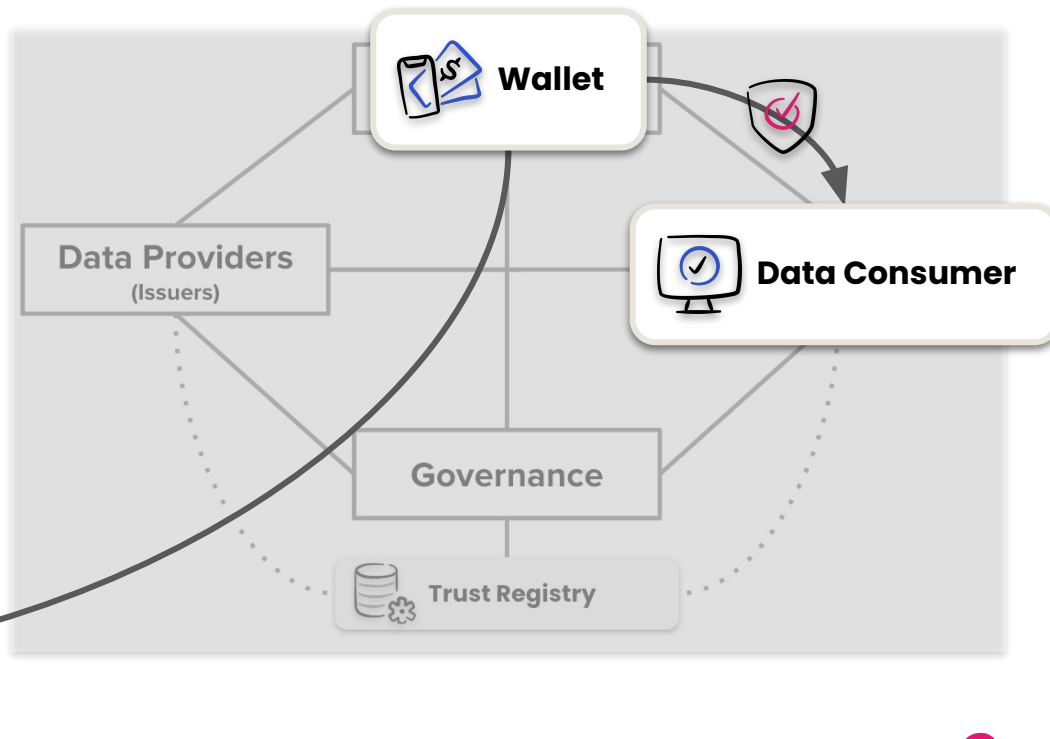
- We need to know the **connections will work**
- **Any Wallet** to any **Data Consumer**



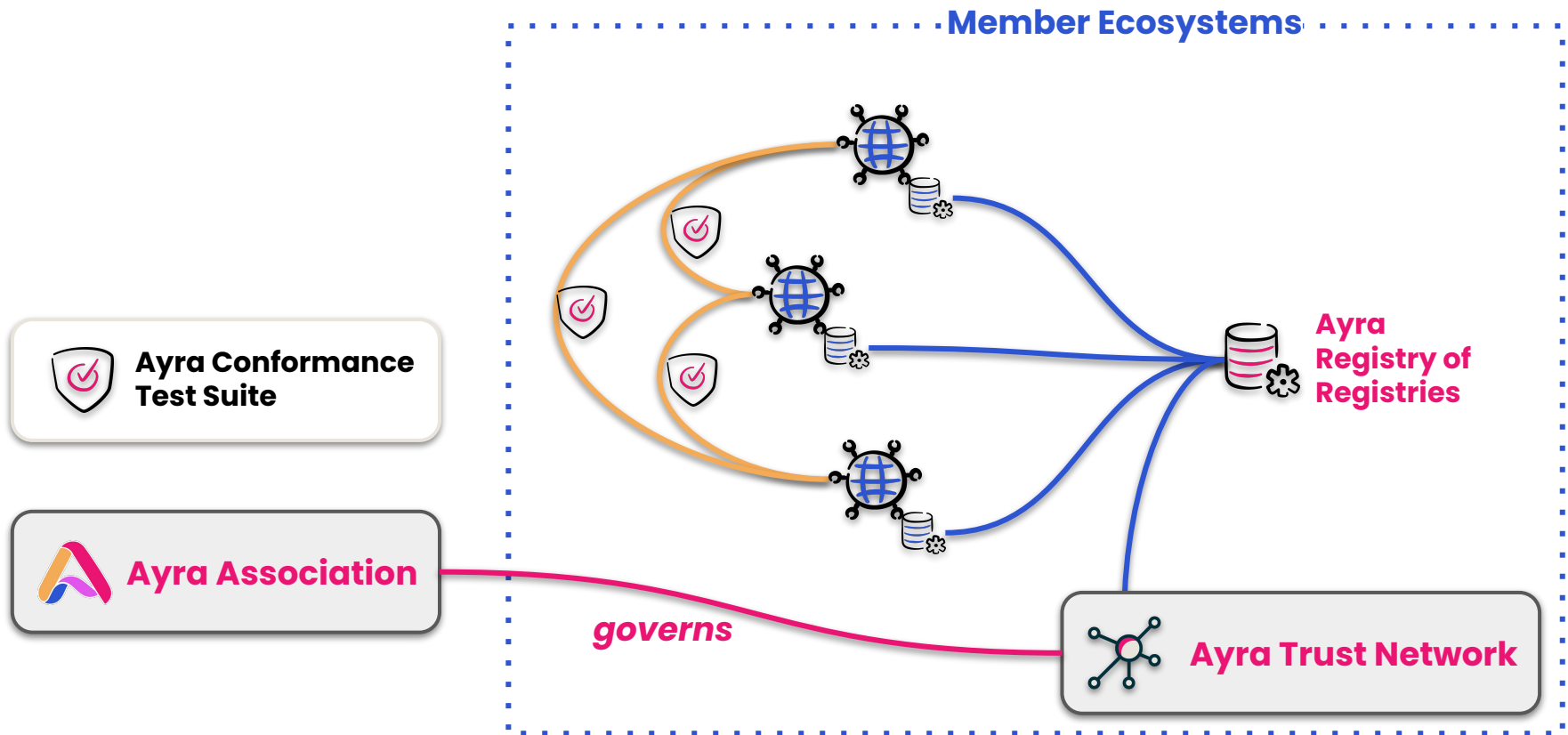
**Ayra Conformance  
Test Suite**

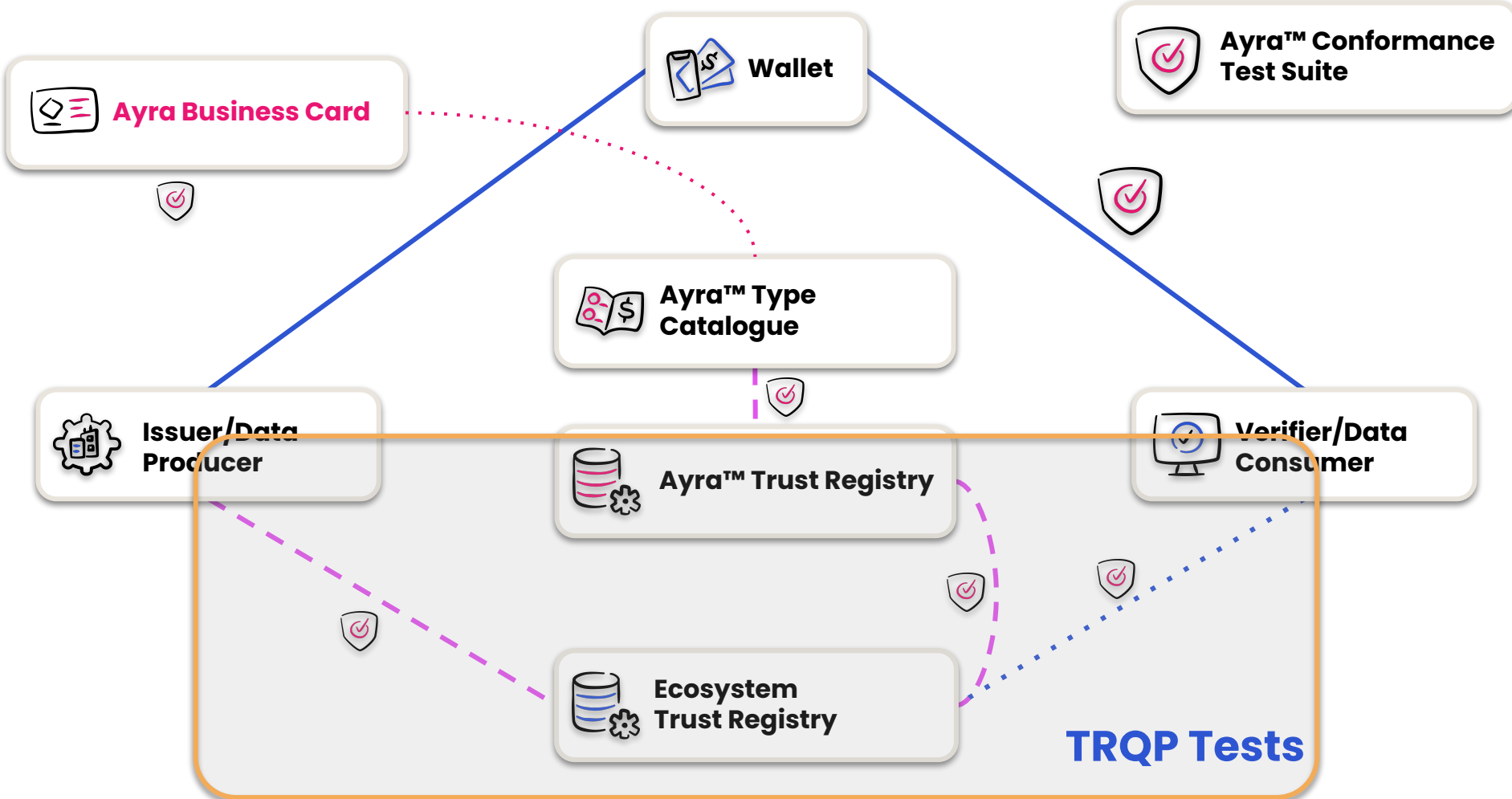


**Data Consumer  
(out of ecosystem)**



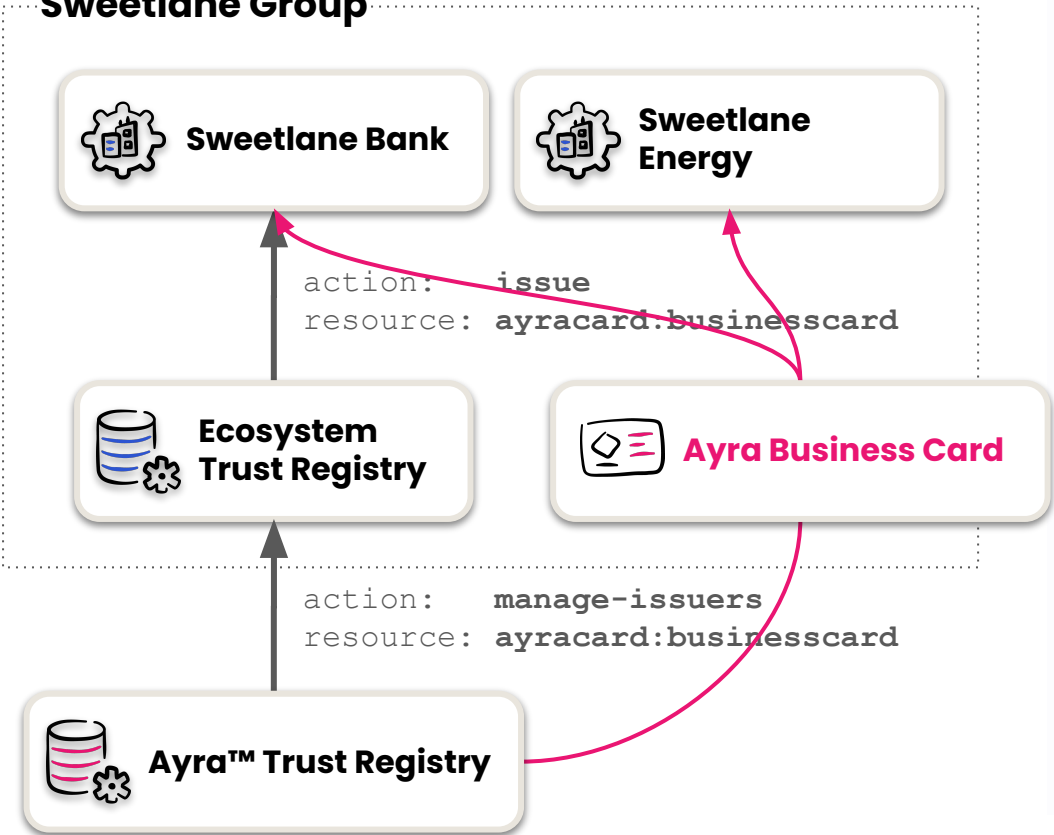
# Ecosystems & Ayra





# Ayra Card – Ecosystem-Led, Ayra Governed

## Sweetlane Group



## Entities

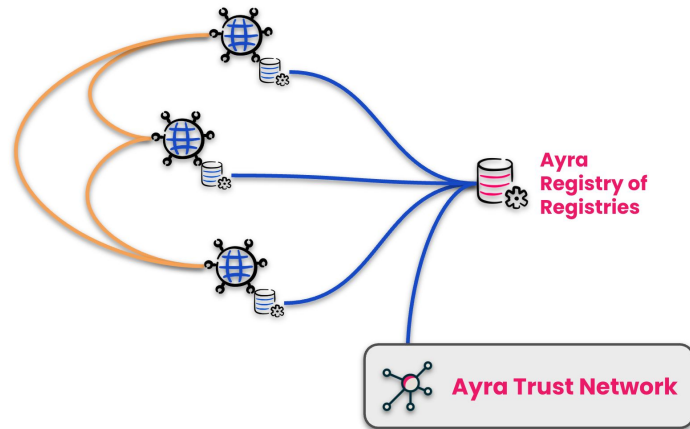
ENTITY DID	NAME	AUTHORITY DID	AUTHORIZATIONS
did:webvh:SCID-ATN: ayra.forum	<b>Ayra Trust Network</b>	Root	[root] ayracard
did:webvh:SLB-SLB: OUP:sweetlane.exam ple.com	<b>Sweetlane Bank</b>	Root	[manager-issuers] ayracard:businesscard
did:webvh:SCID-SLB ANK:sweetlanebank.e sample.com	<b>Sweetlane Bank</b>	did:webvh:DID-SL GROUP:sweetlane. example.com	[issue] ayracard:businesscard

**Ayra does NOT  
manage other  
ecosystems.**

# Ayra Trust Fabric

## Three foundational components of Ayra:

- a **trust registry fabric** that managed membership in Ayra Trust Network
  - **this is WHO you can connect with**
- a **conformance test suite** (CTS) that validates connections with universal compatibility in mind
  - **this is HOW you connect**
- a **market of marketplaces** for providing and discovering trusted data sources
  - **this is WHAT and WHY you are connecting**

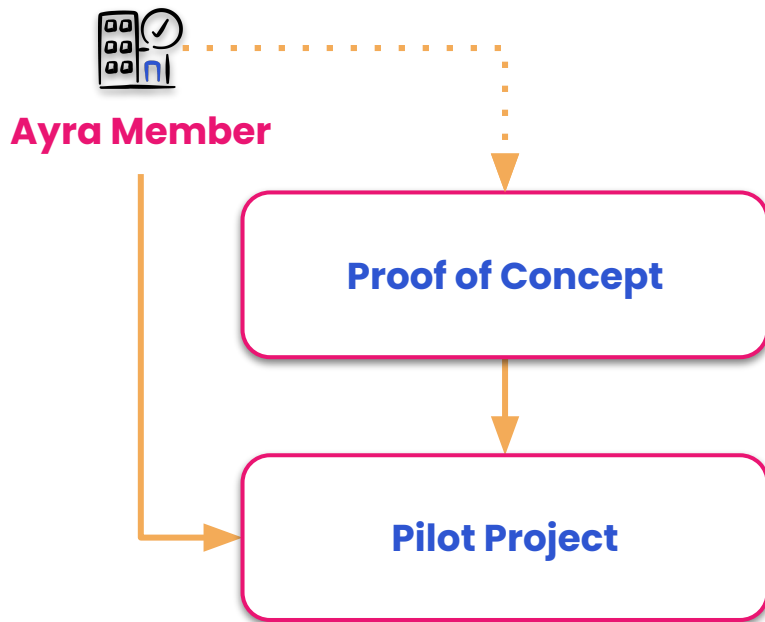


# Ayra Card Demonstration

Demonstration for **Ayra Members** on November 25th (6pm PT)

- Ayra Cards in Use
- Conformance Tests
- Trust Registry integrations

**Proofs of Concept** and **Pilot Projects** to follow





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**Ayra Card Protocol**  
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