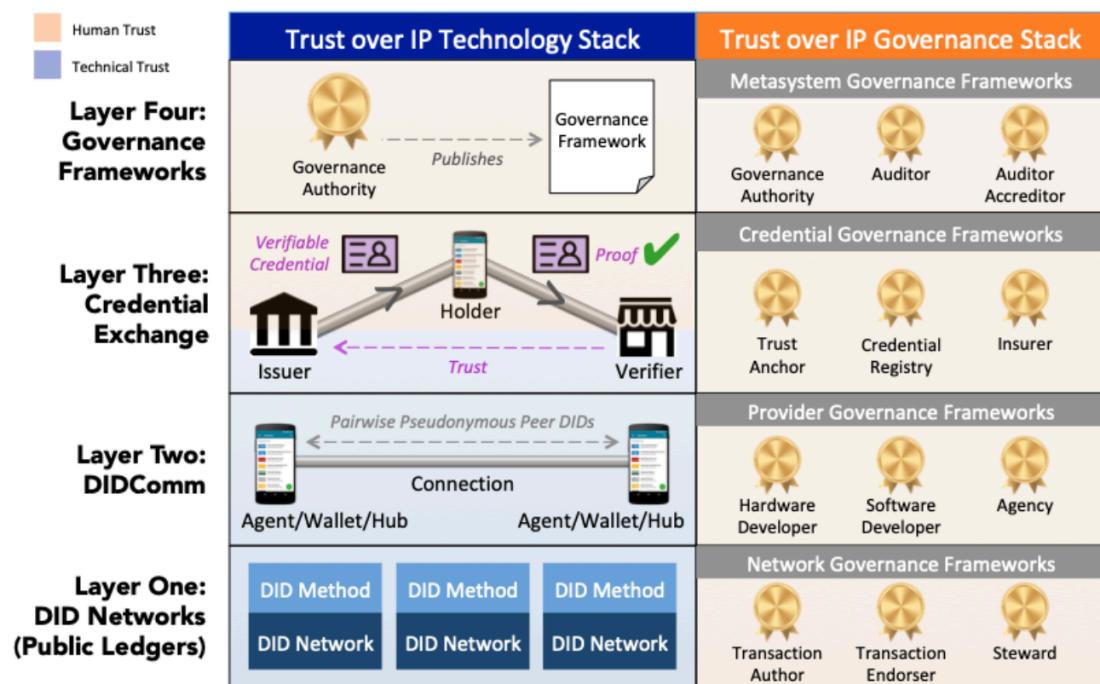
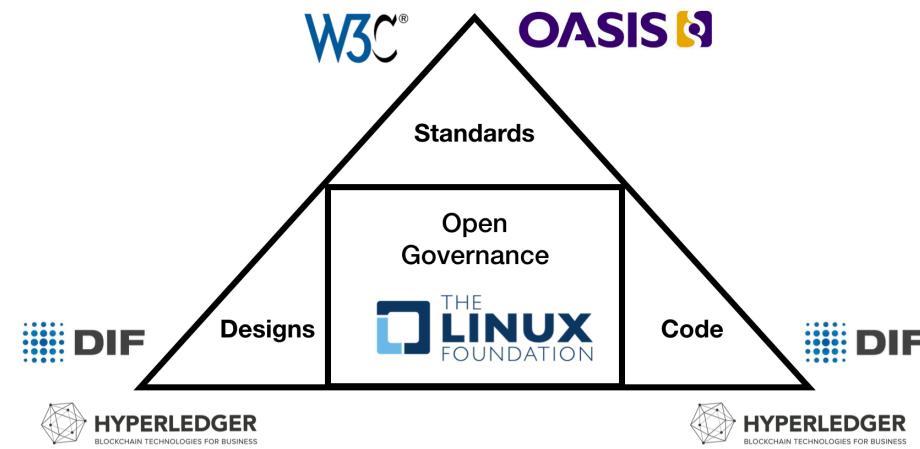




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12 October 2019

Trust over IP (ToIP) Stack

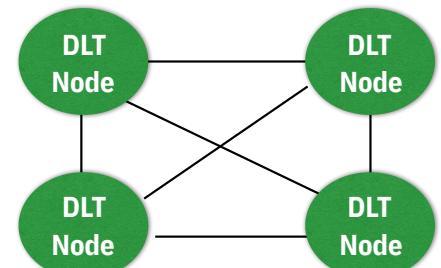
A complete architecture for Internet-scale digital trust that integrates cryptographic trust at the technical machine layer with human trust at the business, social, and legal layers.



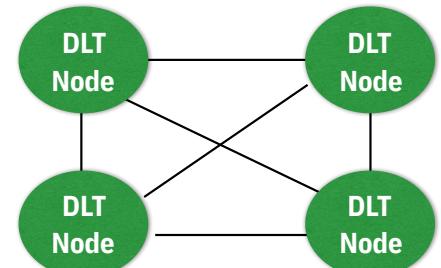
Enterprises need a risk adverse onramp to participate in decentralized identity endeavors as the industry matures both from a technical and business perspective.

Layer One - Ledger Options

Focusing on credential lifecycle management should be higher priority than DID network management during the early stages of a businesses decentralized identity technology adoption journey.

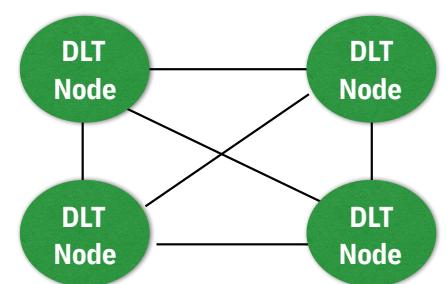


Dedicated Developer Sandbox

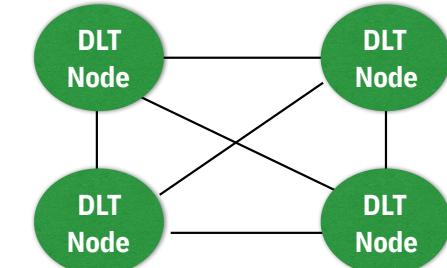


Existing Public Utility
(i.e.: Sovrin)

Ledger Options	Pros	Cons
Dedicated Developer Sandbox	<ul style="list-style-type: none">1. Available now.2. No ledger management or governance responsibilities.3. No required commitment to dedicate node services.	<ul style="list-style-type: none">1. Not viable for anything beyond small pilot efforts.2. Does not help in the assessment of DID business models.
Existing Public Utility	<ul style="list-style-type: none">1. Available now.2. No required commitment to dedicate node services.3. Viable for early pilots and production efforts.	<ul style="list-style-type: none">1. Fee or Token based writes.2. No say in governance model.3. Regulatory Risks
Dedicated Ecosystem Utility	<ul style="list-style-type: none">1. Ability to define governance model.2. Lower usage costs over time.3. Potential for monetizing write access services.	<ul style="list-style-type: none">1. Requires time to build.2. Requires commitment to provide node services.3. Requires ecosystem coordination.
Public Business Utility	<ul style="list-style-type: none">1. Ability to define governance model.2. Lower usage costs over time.3. Potential for monetizing write access services.4. Ecosystem independent Consortium	<ul style="list-style-type: none">1. Requires time to build.2. Requires commitment to provide node services.



Dedicated Ecosystem Utility
(i.e.: Sector Specific)



Public Business Utility

Ledger Options: Suggestions for Consideration

Sample roadmap recommendations for ToIP Layer One – balancing tactical v. strategic decisions.

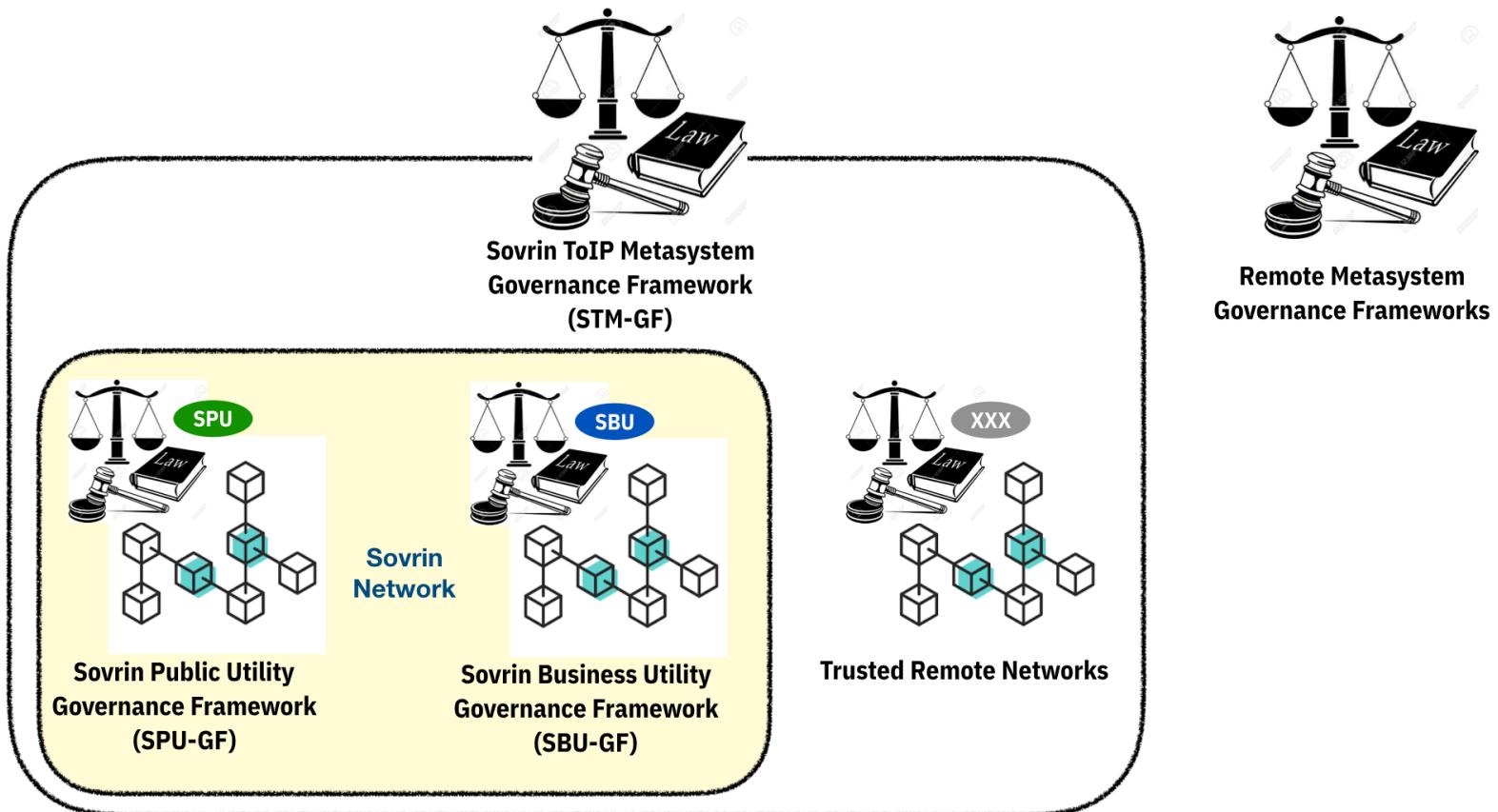
Ledger Options	Business Entity
Dedicated Developer Sandbox	 1 <i>Suggested Action</i> Tactical: Recommended starting point for all POC and pilot projects.
Existing Public Utility	 3 <i>Suggested Action</i> Tactical: Recommended only if alternative options do not exist to mature early pilots.
Dedicated Ecosystem Utility	Strategic: Only applicable if/when company decides to participate in a dedicated sector utility.
Public Business Utility	 2 <i>Suggested Action</i> Tactical: Take advantage of opportunity to frame now and use asap.



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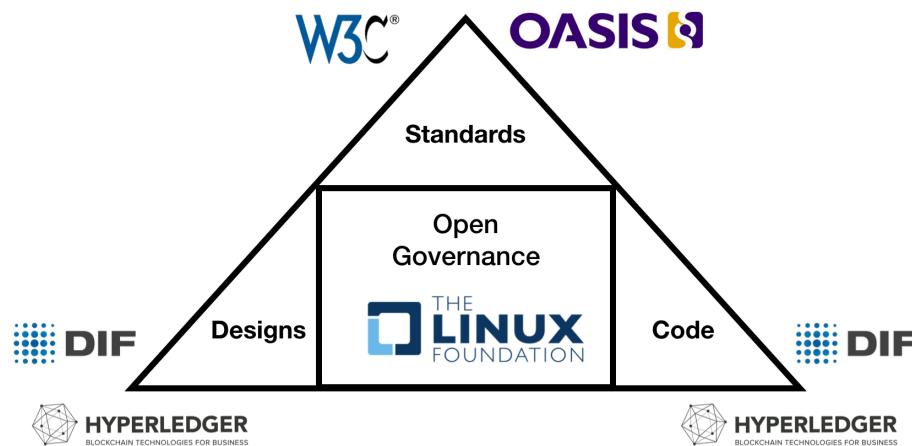
Goal: Network of Decentralize Identity Ecosystems

Evolve Sovrin to support a metasystem of interoperable and trustworthy DID Ledgers.

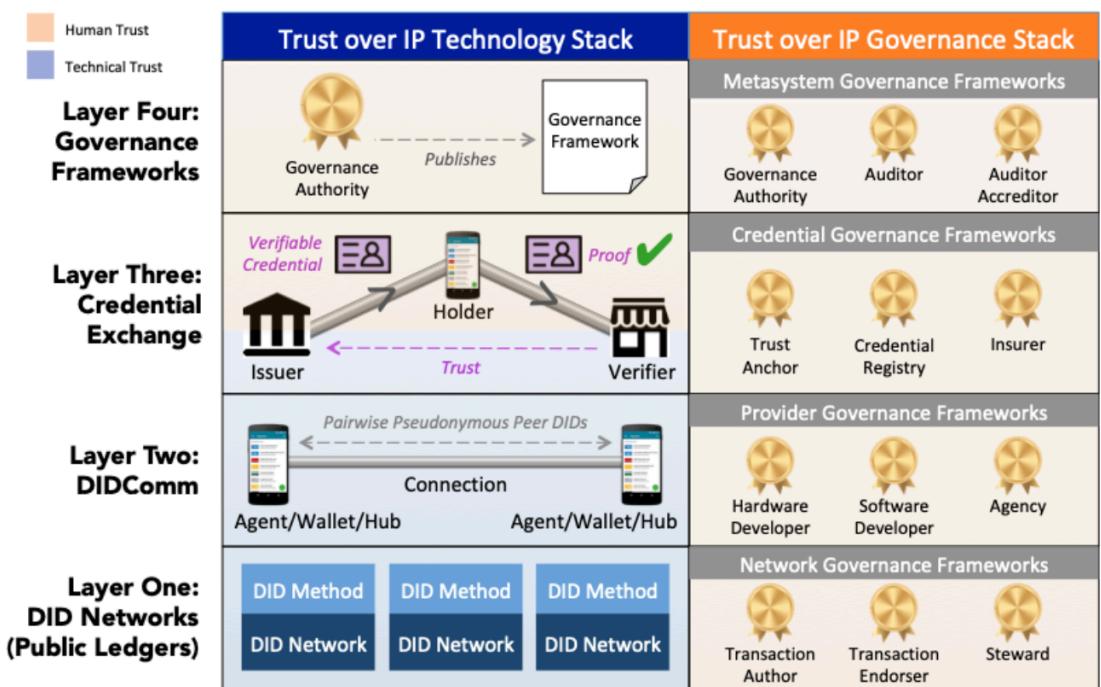


Trust over IP (ToIP) Stack

A complete architecture for Internet-scale digital trust that integrates cryptographic trust at the technical machine layer with human trust at the business, social, and legal layers.



- ToIP Project under Linux Foundation
 - Technology agnostic Reference Architecture
 - Coordination and collaboration around reference implementations
 - Coordination between technical Standards Developing Organizations (SDOs) and Business Governance Models.



Layer One: Metasystem Governance Approach

Define a plan to manage the transition from a single DID Ledger governance model to a metasystem model.

- **Background**

- The Sovrin Governance Framework Versions 1 and 2 dealt with the notion of a single global utility (DID Ledger). As we transition to Version 3, we need to assume that there will be more than one global utility that needs to serve the masses at scale but a number of these utilities can be part of a metasystem of trust.

- **Goal**

- Provide enterprises with a means top participate in the broader Sovrin Community by enabling a dedicated business utility that can act as a Permissioned Safe Zone with Token-free Economics for businesses.

- **Audience**

- This proposal is intended as a discussion starter for potential member candidates that desire a new identity utility dedicated for business participation and use.

- **Proposal**

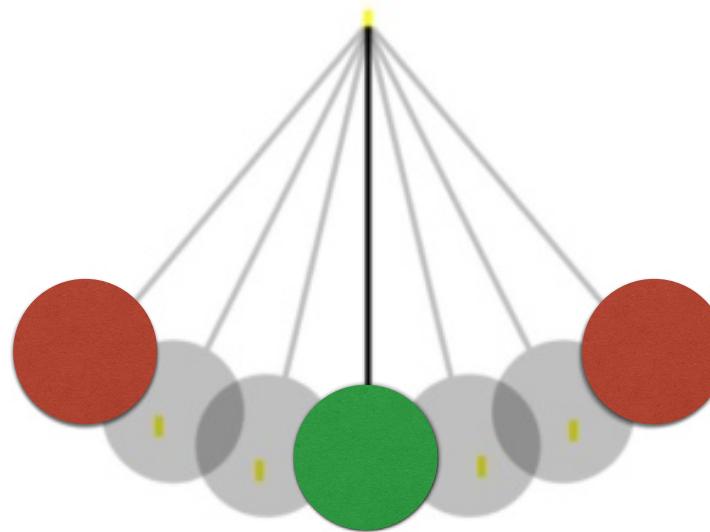
- Leverage the Sovrin Foundation as a **fee-based provider of administration services** for the management and delivery of a new DID Ledger under the did:sov root namespace. This new ledger, did:sov:biz, will operate as a public utility provider under its own governance framework. A consortium of members will pay annual membership fees and provide supporting infrastructure to maintain a sustainable permissioned identity utility.

Layer One: DID Ledger Governance

The Sovrin Community is comprised of minimally two disparate market segments. Both segments can agree on an Open by Design governance approach. While the members within each market segment may require incompatible governance models, both segments adamantly disagree with any deviation from an open approach at the technology or governance levels.

Accelerated energy towards a public permission-less utility that leverages a utility token may be socially acceptable, but it creates a number of **risk mitigation dilemmas** for participating institutions.

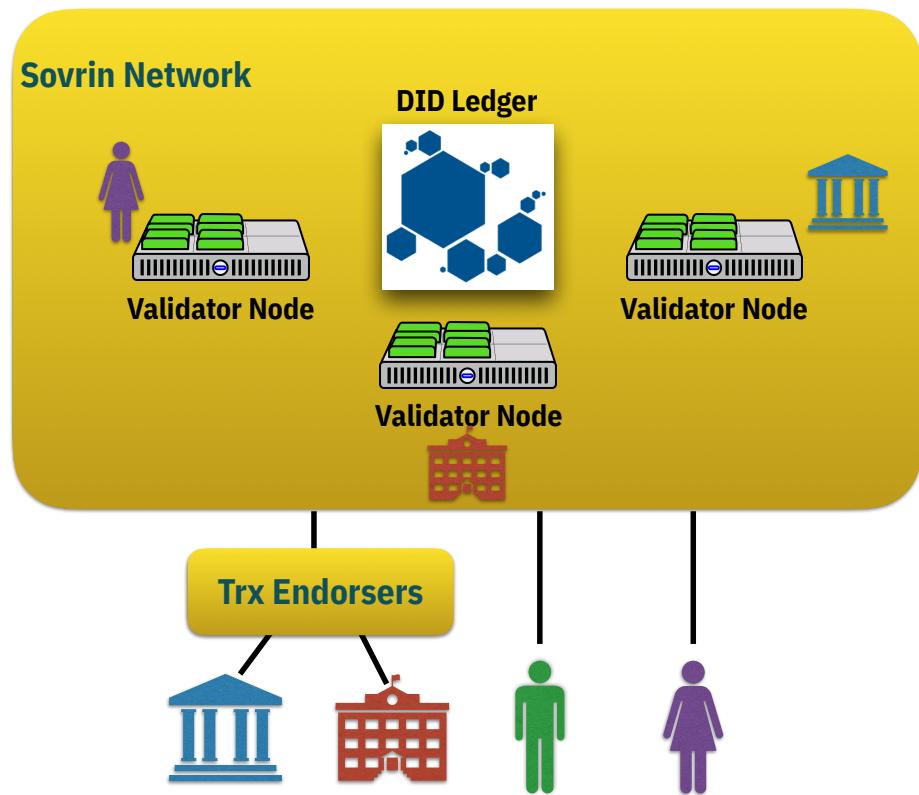
Accelerated energy towards a proprietary permissioned utility presents an unacceptable swing of the bob to the right **away from a decentralized model**.



The oscillation between extreme governance approaches depicts an opportunity to steer the pendulum bob to a center position that would allow institutions to strike a **balance between open privacy by design and financial risks**.

Layer One: As-Is Public Ledger

A single DID Ledger supporting both Permissioned and Permission-less Writes via Token or US-Fiat payments.

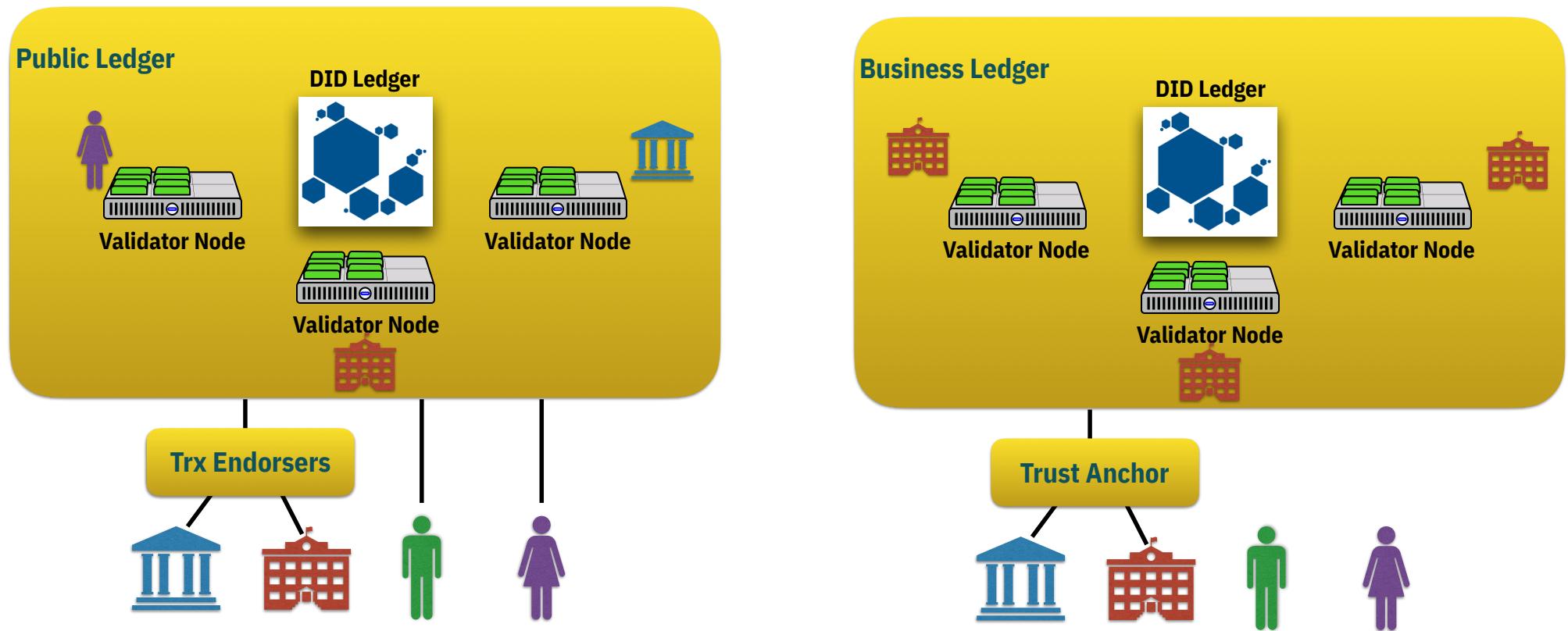


- **As-Is Situation**

- MainNet (“did:sov”) supporting two disparate communities with different degrees of risk tolerance.
- Dual Models
 - Permissioned Writes thru approved Transaction Endorsers
 - Permission-less public writes by anyone
- Foundation sustainability via Fee-based Writes (US-Fiat or Token).

Layer One: To-be Network of Ledgers

Multiple DID Ledgers each having their own governance models for access and payments.



Layer One: Time to Act

Establish a new Identity Utility Network and associated it with a new DID Root Namespace (did:biz) **OR** help the Sovrin Foundation become an Identity Utility Service Provider in support of a new utility under the did:sov root namespace.

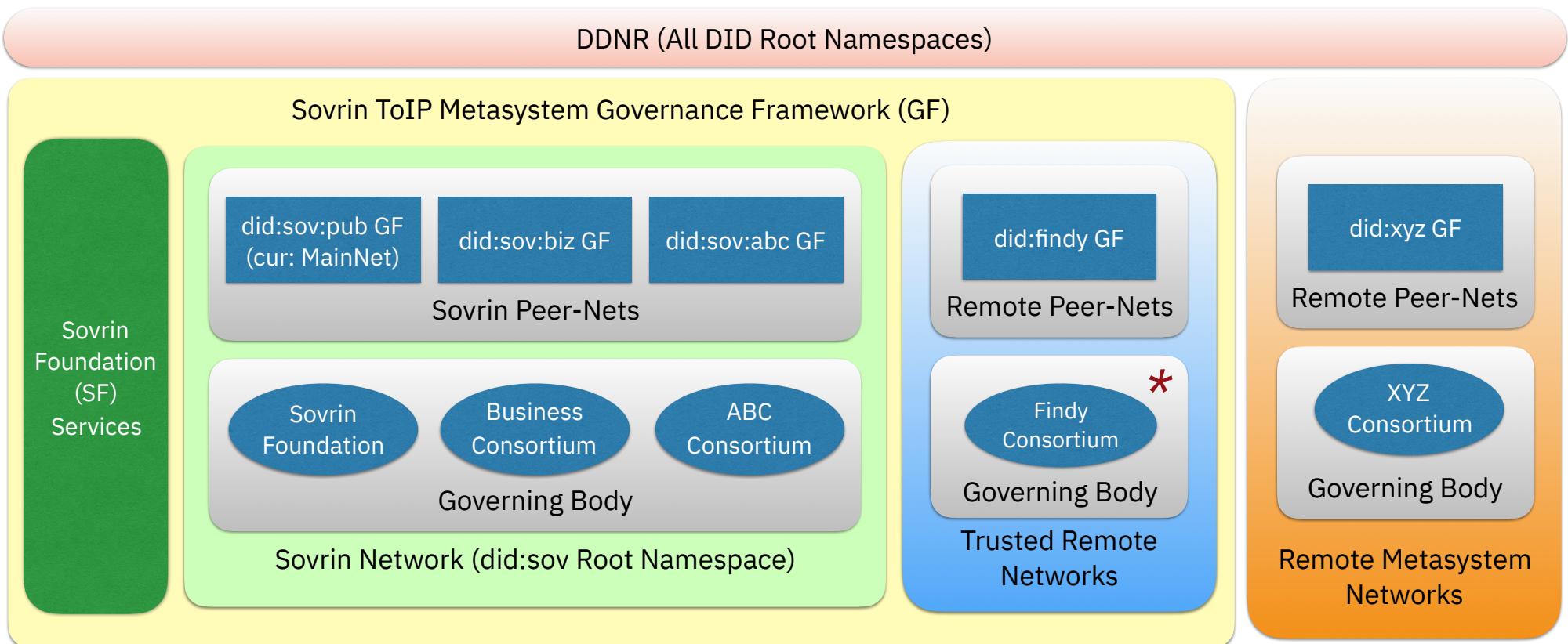
Peer-Net Characteristic	Undesirable Model		Proposed Model	
	Sovrin Network	Business Utility	Sovrin Network	Business Utility
DID Namespace	did:sov	did:biz	did:sov:pub	did:sov:biz
Target Audience	Everyone	All Business Sectors	Everyone	All Business Sectors
Governing Body	Sovrin Foundation	DIBE Consortium	Sovrin Foundation	DIBE Consortium
Governance Framework	Sovrin GF Version 2	DIBE GF Version 1	Sovrin GF Version 3	DIBE GF Version 1
Identity Network Administrator	Sovrin Foundation	DIBE Consortium	Sovrin Foundation	Sovrin Foundation

Layer One: ToIP Metasystem Concepts

- **DID Namespace:** Building on URI Standards, the DID Specification allows for both root namespace (did:xxx) and sub-namespace (did:xxx:yyy) conventions.
- **Peer-Net:** A distinct system of domain specific ledgers operated by decentralized peer nodes and associated with a DID Namespace. Governed by its own governance framework.
- **Network of Networks:** A decentralized collection of discoverable and interoperable Peer-Nets. The internet is already an exemplar of a network of networks structure based on DNS and URI standards.
- **Governing Body:** An organization or consortium that is responsible for the management of a Peer-Net.
- **Sovrin Foundation:** Provider of Services to Peer-Nets Governing Bodies
- **Identity Utility Network:** A Peer-Net governed by a consortium and preferably built on Hyperledger Indy.
- **Identity Utility Administrator:** The provider of operational and maintenance services for an Identity Utility Network.
- **Decentralized DID Namespace Registry (DDNR):** Provides registration, discovery, and access for Peer-Nets.
- **Remote Peer-Net:** A system of ledgers associated with a DID Root Namespace that operates under its own Governance Framework. From a Sovrin perspective this would be a trusted ledger as it is recognized under the Sovrin GF.
- **Sovrin ToIP Metasystem Governance Framework:** A set of business, legal and technical governance documents that describe how members of the Sovrin Metasystem will operate.
- **Sovrin Network:** The system of ledgers under the did:sov Root Namespace.
- **Sovrin Peer-Net:** A peer-net that is register under the did:sov Root Namespace.
- **Trusted Remote Network:** The system of ledgers under the did:sov Root Namespace that adhere to a ToIP Metasystem Governance Framework.
- **Remote Metasystem Network:** The system of ledgers under a disparate Root Namespace that may or may not exist under a foreign ToIP Metasystem Governance Framework.

Layer One: Decentralized Identifier Utility Ledgers

DID Utility Networks are evolving to be collections of trusted Peer-Nets (systems of ledgers) that agree at the interoperable stack layer but differ on governance.





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12 October 2019

Consortium Participation Opportunity

Is your organization interested in participating in the [Decentralized Identity Business Ecosystem \(DIBE\) Consortium](#)?

- **Disclaimer**

- The content presented herein is offered as a discussion starter.
- All **topics** and **pricing** are offered for conceptual purposes and should not be considered final. It is the responsibility of the Governance Framework Working Group to propose the necessary consortium **policies** and **prices**.

- **Purpose**

- Establish a consortium along with a governance framework for a decentralized identity utility that businesses can comfortably participate in and reliably use.

- **Audience**

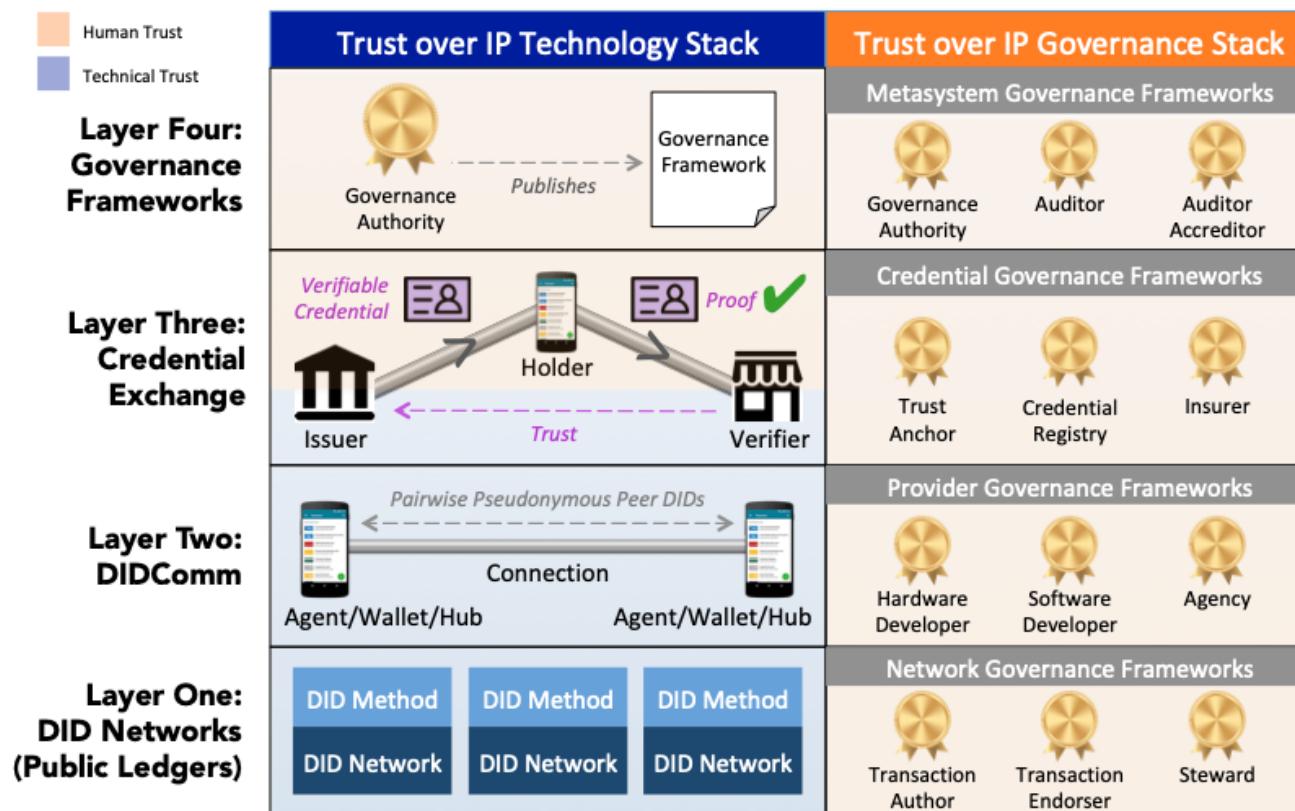
- This proposal is intended as a discussion starter for prospective consortium members for a new identity utility dedicated for business participation and use.

- **Proposal**

- Leverage the Sovrin Foundation as a fee-based provider of administration services for the management and delivery of a new DID Ledger under the did:sov root namespace. This new ledger, did:sov:biz, will operate as a public utility provider under its own governance framework. A consortium of members will pay annual membership fees and provide supporting infrastructure to maintain a sustainable permissioned identity utility.

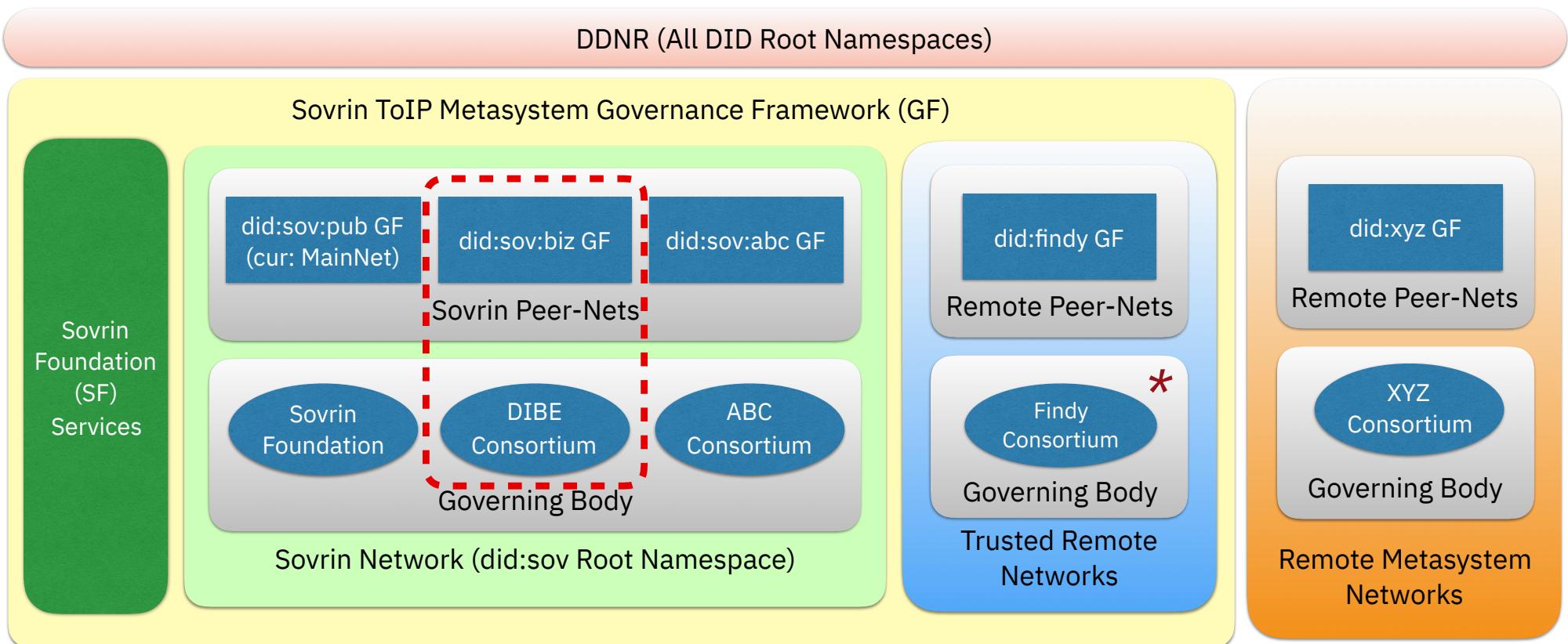
Trust over IP (ToIP) Stack

A complete architecture for Internet-scale digital trust that integrates cryptographic trust at the technical machine layer with human trust at the business, social, and legal layers.



Layer One: Sovrin Peer-Net for Business Participants

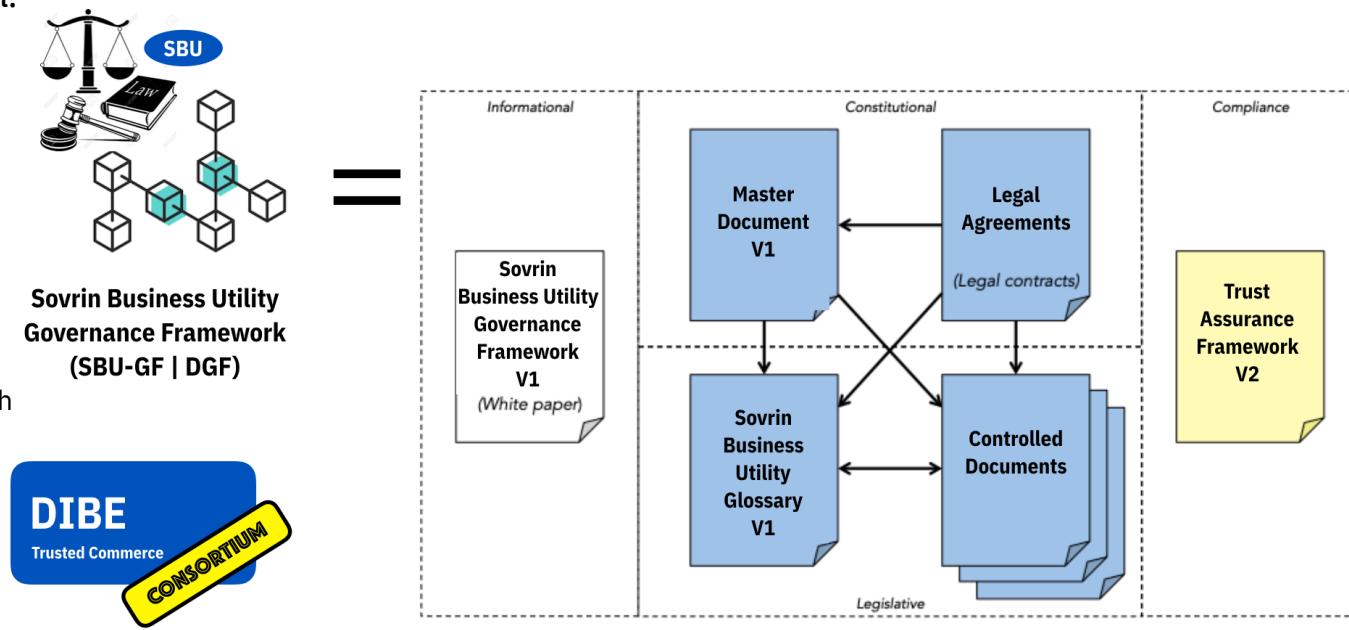
DID Utility Networks are evolving to be collections of trusted Peer-Nets (systems of ledgers) that agree at the interoperable stack layer but differ on governance.



DIBE Consortium

An association focused on the governance of a dedicated decentralized identity utility for trusted commerce.

- Enterprise grade governance framework that will:
 - Enforce Permissioned Writes with contractual instruments that will ease GDPR concerns
 - Establish financial sustainability of the Consortium without the use of Tokens
 - Establish a governing board so no single organization owns the DID Ledger
 - Require adherences to a specific stack of open standards and protocols
- Pros
 - Acceptable participation as a Validator Node with GDPR protection under legal instruments including a Data Processing Addendum (DPA).
 - Membership with write privileges; No Token concerns.
- Cons
 - Autonomy requires accountability and responsibilities for the operational and maintenance tasks for the Peer-Net.



Decentralized Identity Business Ecosystem (DIBE) Consortium

Governance Framework: Term Sheet Topics

Topic	Approach	Topic	Approach	
Optimal Consensus Threshold	A balance between budget requirements and technology limitations will define the number of nodes required to operate the Identity Utility Network ("Network"). Initially this will be set at 13 . The set of active nodes on the network will be periodically pulled from a pool of available nodes.	Board of Directors (BoD)		
Membership Types	<ol style="list-style-type: none"> 1. Founding Members <ol style="list-style-type: none"> a. Limited to 15. b. Members that are willing to contribute to the infrastructure, management, and financial needs of the <i>Network</i>. c. Benefits <ol style="list-style-type: none"> i. Seat on Board of Directors. ii. Automatic approval to operate as a Trust Anchor. iii. Unlimited transactions. 2. Stewards <ol style="list-style-type: none"> a. Limited to 30. b. Members that are willing to contribute to the infrastructure and financial needs of the <i>Network</i>. c. Benefits <ol style="list-style-type: none"> i. Automatic approval to operate as a Trust Anchor. ii. Unlimited transactions. 3. Trust Anchors: An unlimited number of members that are willing to be responsible for the endorsement of transactions to the ledger. They are obligated to use <i>Network</i> approved endorser software and accountable for vetting the entities performing write requests. 			
Budget		BoD is responsible for defining and approving the <i>Network</i> budget. Income for the budget will be derived from membership dues. The budget will be limited to expenses for the administration, operation, and maintenance of the <i>Network</i> .		
Membership Dues		<ol style="list-style-type: none"> 1. Founding Members: \$50K/yr 2. Stewards: \$30K/yr 3. Trust Anchors <ol style="list-style-type: none"> a. Enterprise Plan: 1000 write transactions/yr for \$10K/yr b. Service Provider Plan: 2500 write transactions/yr for \$25K/yr 		
Membership Obligations		<ol style="list-style-type: none"> 1. Founding Members <ol style="list-style-type: none"> a. Sign Steward Agreement b. Sign Trust Anchor Agreement (<i>optional</i>) c. Host 3 nodes (main, test, dev), each running <i>Network</i> approved code. 2. Stewards <ol style="list-style-type: none"> a. Sign Steward Agreement b. Sign Trust Anchor Agreement (<i>optional</i>) c. Host 3 nodes (main, test, dev), each running <i>Network</i> approved code. 3. Trust Anchors <ol style="list-style-type: none"> a. Sign Trust Anchor Agreement 		

Governance Framework: Term Sheet Topics

Topic	Approach 2
Governance Framework	<p>The BoD will refine and prune the SGFv2 to create an acceptable set of control and legal documents for the <i>Network</i>.</p>
Management	<p>The BoD will be required to manage a budget and hire resources to coordinate the management of the <i>Network</i> using Sovrin Foundation as an Identity Utility Administrator.</p> <p>The BoD will hire a <i>Network Manager</i> who will report to the BoD and will be responsible for activities such as:</p> <ol style="list-style-type: none">1. Financial Accounting2. Legal3. Public Communications4. Administrative5. Membership Management <p>The BoD will appoint a representative of the <i>Network</i> to serve on the Sovrin Board of Trustees.</p> <p>The BoD will hire a <i>Network Architect</i> who will be responsible for interfacing with the Sovrin Foundation for activities such as:</p> <ol style="list-style-type: none">1. Technical Strategy & Architecture2. Build and Test

Governance Framework Bootstrap

*The Sovrin Metasystem Task Force
is helping to quickly establish the
foundational governance
documents for a new Peer-Net.*

Template	Suggested Action
Sovrin Governance Framework Master Document	<i>Review and update scope, core principles, and core policies.</i>
Sovrin Glossary	<i>Work with Sovrin to separate terms from Appendices.</i>
Sovrin Trust Assurance Framework	<i>Review conformance of actors to policies.</i>
Sovrin Steward Agreement	<i>Review and update contractual instrument.</i>
Transaction Author Agreement	<i>Evaluate necessity/applicability. Review/Update if required.</i>
Transaction Endorser Agreement	<i>Review and update contractual instrument for use with Trust Anchors.</i>
Sovrin Governing Body Policies	<i>Review and update control document. Propose suggestions to Sovrin Foundation.</i>
Sovrin Ledger Access Policies	<i>Review and update control document.</i>
Sovrin Steward Business Policies	<i>Review and update control document.</i>
Sovrin Steward Technical Policies	<i>Review and update control document.</i>
Sovrin Economic Policies	<i>Not required.</i>
Sovrin Trust Mark Policies	<i>Review for consideration.</i>
Sovrin Steward Data Processing Addendum (DPA)	<i>Required. Review and update contractual instrument.</i>
Sovrin Steward Technical and Organizational Measures (TOMs)	<i>Required. Review and update contractual instrument. Consolidate with Steward Technical Policies.</i>
Sovrin Transaction Endorser DPA	<i>Required. Review and update contractual instrument.</i>
Sovrin Transaction Endorser TOMs	<i>Required. Review and update contractual instrument.</i>

Alignment with Sovrin

The DIBE Governance Framework Workgroup will work in conjunction with the Sovrin Metasystem Governance Framework Workgroup.

Workgroups	Sovin Governance Framework Version 1	Sovin Governance Framework Version 2	Sovin Governance Framework Version 3
Governance Framework (GF) Workgroup	✓	✓	
Sovrin Metasystem GF Workgroup			✓
Public Utility GF Workgroup			✓
DIBE GF Workgroup			✓

Consortium Membership Campaign: Want to join?

Actionable next steps!

- Consortium Building Phase (4Q19)
 - Exploratory Sessions for prospective members.
 - Prospective Founding Members nominate executive sponsor and consortium associate.
- Governance Framework Phase (1Q20)
 - Solicitation for additional Founding Members is ongoing.
 - Governance Framework Workgroup (GFWG), comprised of nominated Consortium Associates, will gather twice a week for 6-8 weeks over Zoom Mtgs to create the Governance Framework documents required to launch the DIBE Consortium.
 - Collaborate with Sovrin Leadership on Sovrin Foundation Services & Costs.
 - Leverage GitHub and open source Markdown documents to establish and host the DIBE Governance Framework documents.
 - Formal proposal from the GFWG to Executive Sponsors of the DIBE Governance Framework.
- Execution Phase (2Q20)
 - Announce DIBE Consortium in conjunction with Sovrin Foundation.
 - Create DIBE Board of Directors (formalization of Founding members via signing of agreements).
 - Ongoing campaign for adding Stewards and Trust Anchors.
 - Members (Founding, Stewards) create the Sovrin Business Utility (DID Ledger)