Climate Warehouse

A global public meta data layer for the carbon markets

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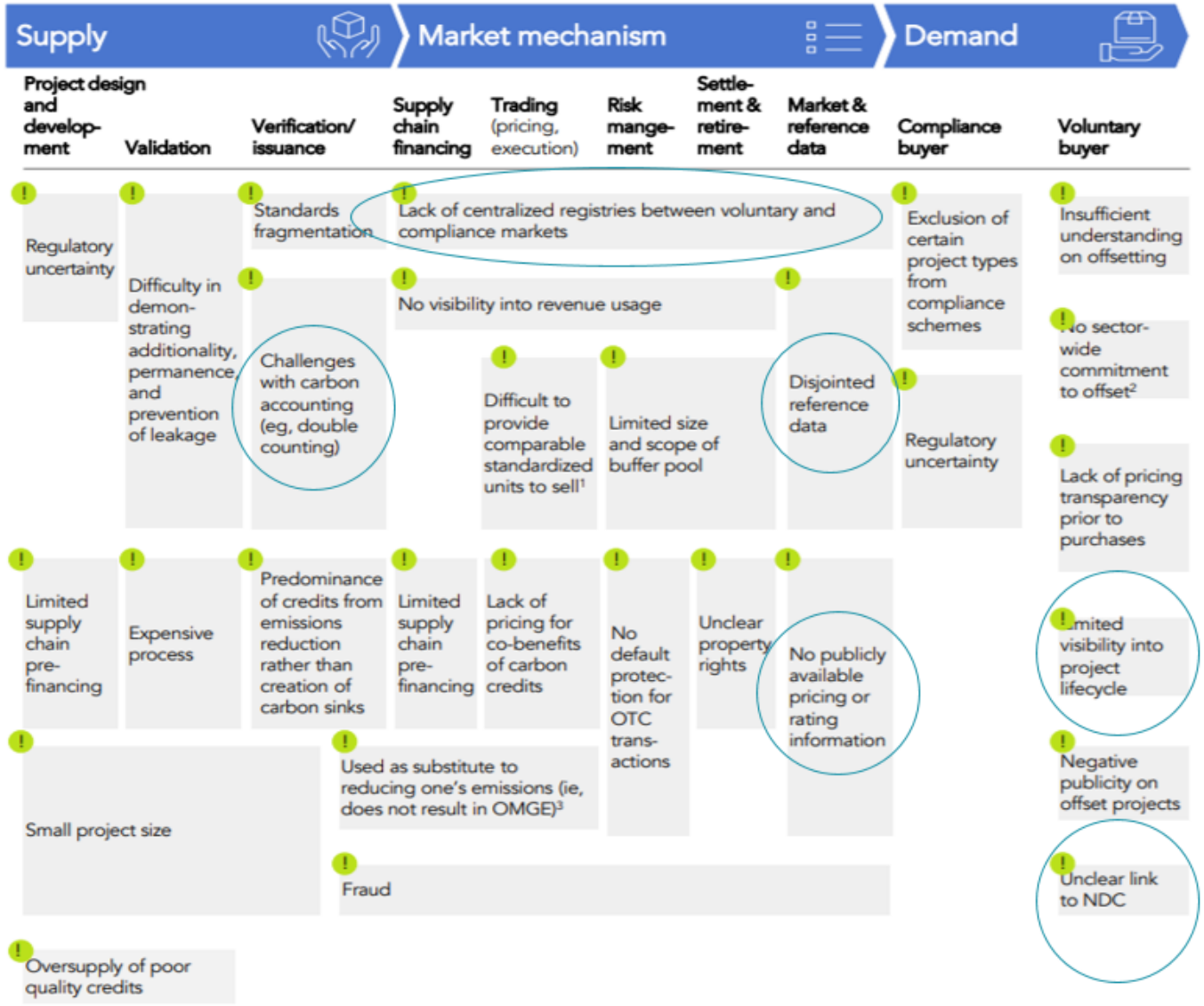
Context-setting

- **Individual commitments through nationally determined contributions (NDCs).** The Paris Agreement introduced a bottom-up approach for addressing climate change.
- **Decentralized cooperative approaches to achieve their NDCs.** This is expected to lead to heterogeneous climate markets, which may have differences in governance rules and operate under different technological systems.
- **Climate Warehouse:** a decentralized information technology approach to connect climate markets systems.

Report by Taskforce on Scaling Voluntary Carbon Markets (TSVCM)



Source: Adams, Tim. Winters, Bill. Nazareth, Annette and Mark Carney *Taskforce on Scaling Voluntary Carbon Markets Phase 1 Final Report: January 2021*, TSVCM, pg. 45

What is the value proposition?

A decentralized IT approach to connect climate markets

Climate Warehouse

An open-shared meta data layer

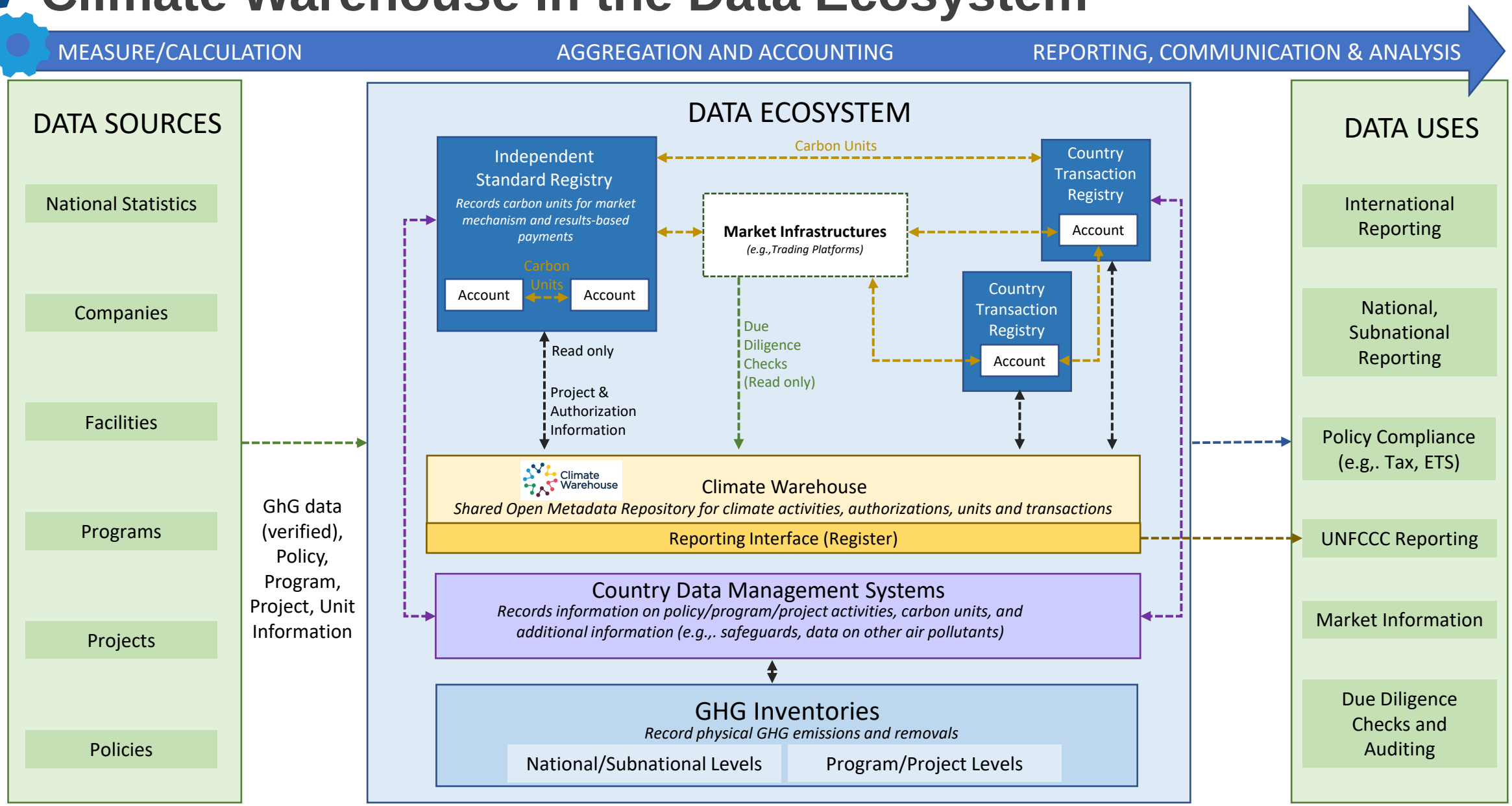
1. **A common data taxonomy that enables reconciliation of data from registries.** It facilitates a peer-to-peer connection among decentralized registries with the aim to link, aggregate and harmonize the underlying data

2. **Provide visibility into corresponding adjustment procedures and the lifecycle of carbon offsets** from issuances to retirement, which will safeguard against double counting and ease reporting requirements.

3. **Surface publicly-available information on MOs** and record status changes to provide information on how MOs are used.

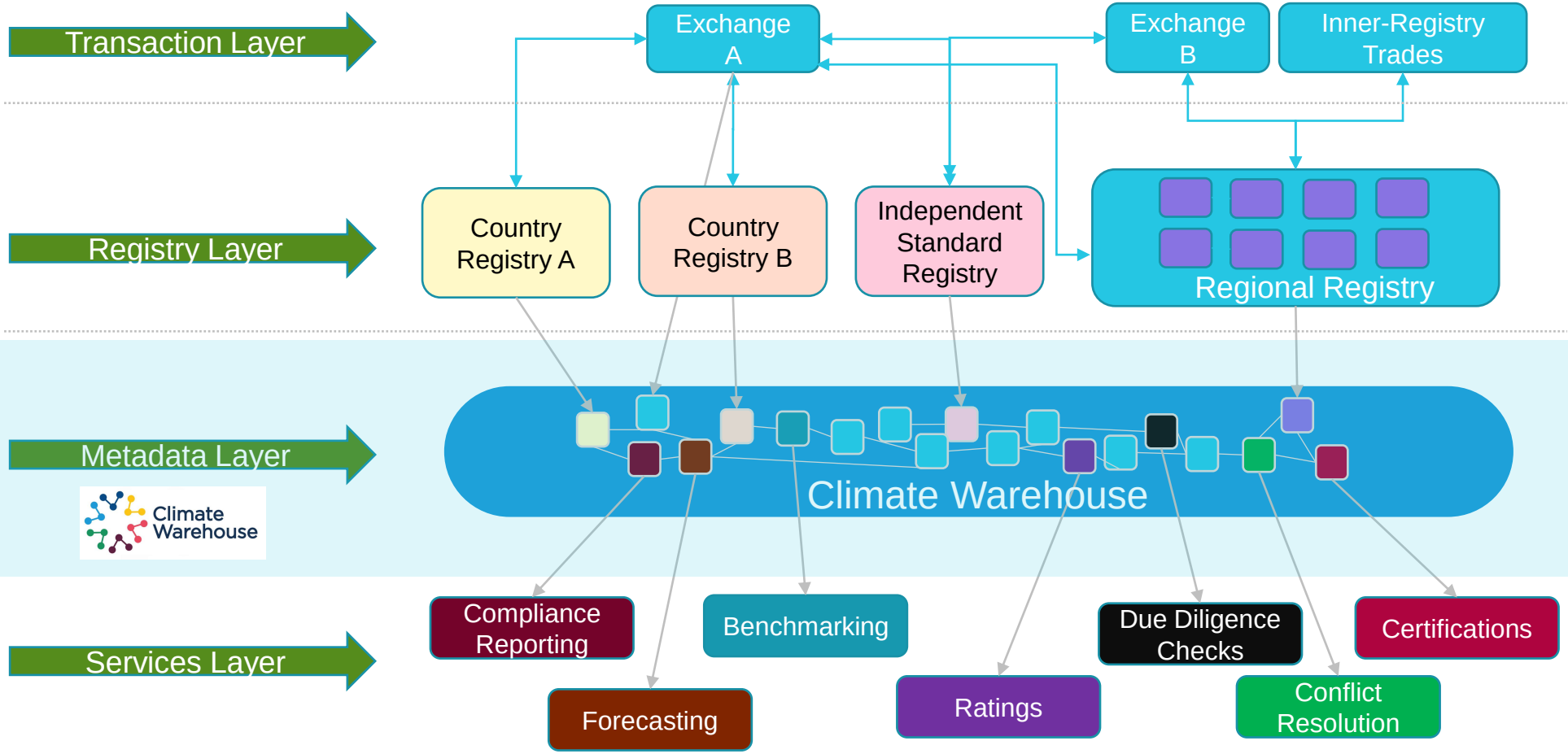
4. **Enhance transparency and trust among market participants and enable tracking of MOs and reduce double counting risk**. The Climate Warehouse would not hold assets or directly facilitate.

Climate Warehouse in the Data Ecosystem



Building a public good data layer

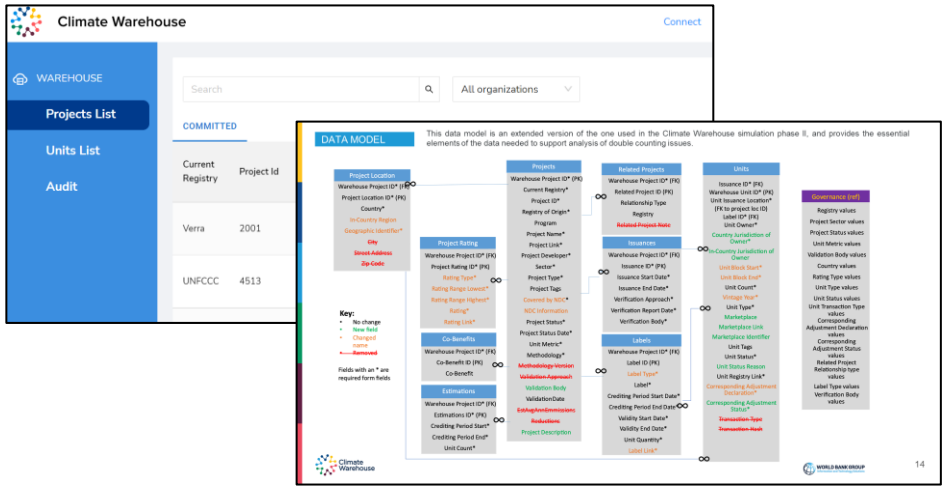
- Designed as an open shared infrastructure layer
- Common taxonomy of data facilitates communication between entities
- Registry service providers and countries share data to the Warehouse
- Public and private sector market players can host a node and build out the service layer



Prototype Architecture

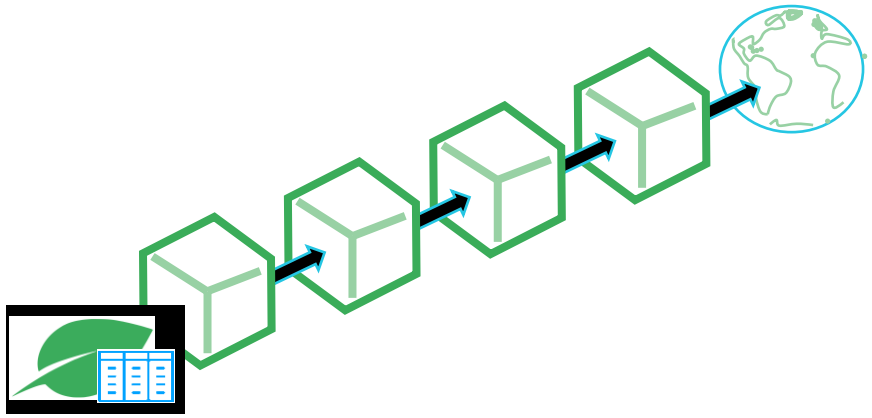
The Climate Warehouse infrastructure has 2 layers: the CW data layer and the public blockchain layer

Climate Warehouse Data Layer…



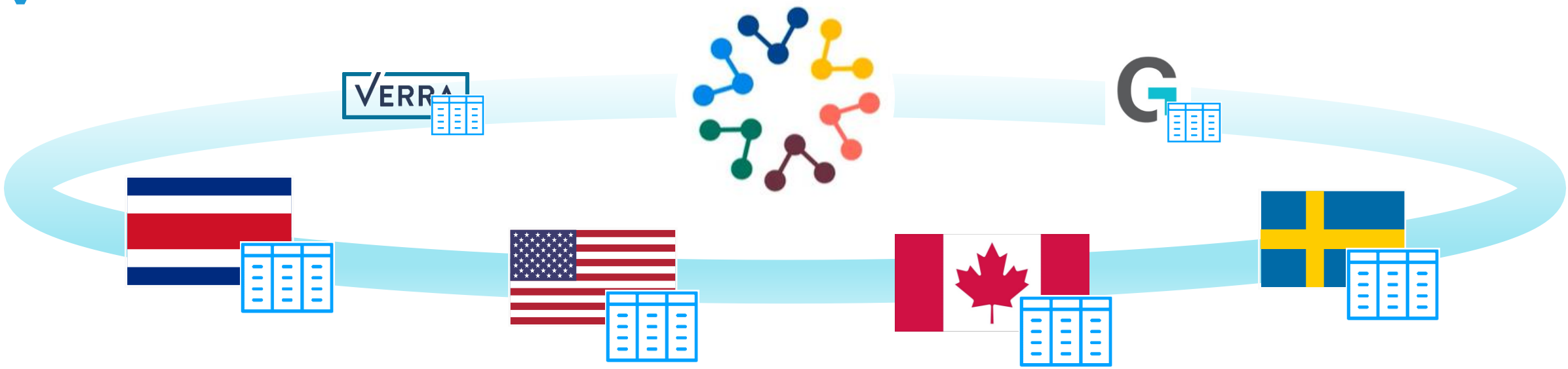
- Defines a common data model and taxonomy
- Reconcile data across registries
- Identify potential double counting
- Enable auditing and reporting

…Tested on a Public Blockchain Layer



- Transparent and Immutable Data
- Auditable
- Accessible and Inclusive
- Public and Transparent
- Open source
- Peer-to-peer governance

Climate Warehouse on Chia's Public Blockchain Data Layer



Interconnected Autonomy

Each member government or standards registry owns their node and their data. There is no central server, no proprietary software or environments required, and no dependencies on foreign or private entities. All code is free and open source.

Easy to Use

It is easy to run a node on low-cost hardware, with limited Internet connection.

There are multiple ways to upload or sync data from a registry into the Climate Warehouse.

Intuitive interface for basic data access and update

Enables and Activates Service Layer

The data is stored with the blockchain and is accessible through an API. Any data analytics tool can be used to aggregate, report and visualize the data.

Secure

The data is protected by the global 250,000 node Chia public blockchain.

Each table of data has separate security settings for read and write so that only permissioned users can add or update the data in that table.

Prototype Architecture

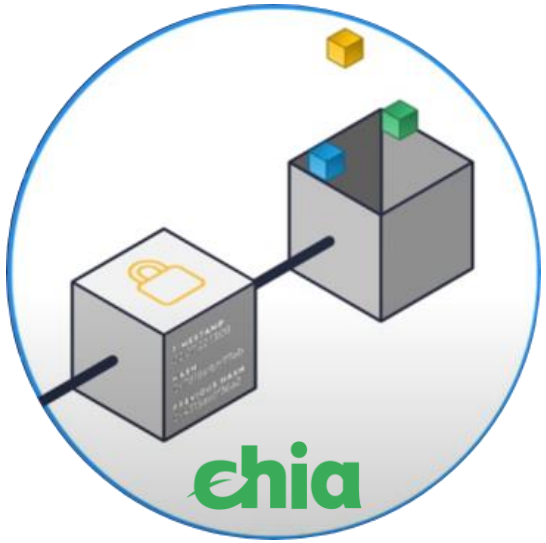
The blockchain layer supports inclusiveness, accountability, transparency and integrity

Transparency

- *Fully auditable and secure record of transactions*

Accountability

- *Decentralized governance/peer-to-peer support*
- *Only registries can edit their own data, allowing countries to flexibly choose their approaches*
- *Follows the Article 6 bottom-up approach*



The Chia Blockchain Layer

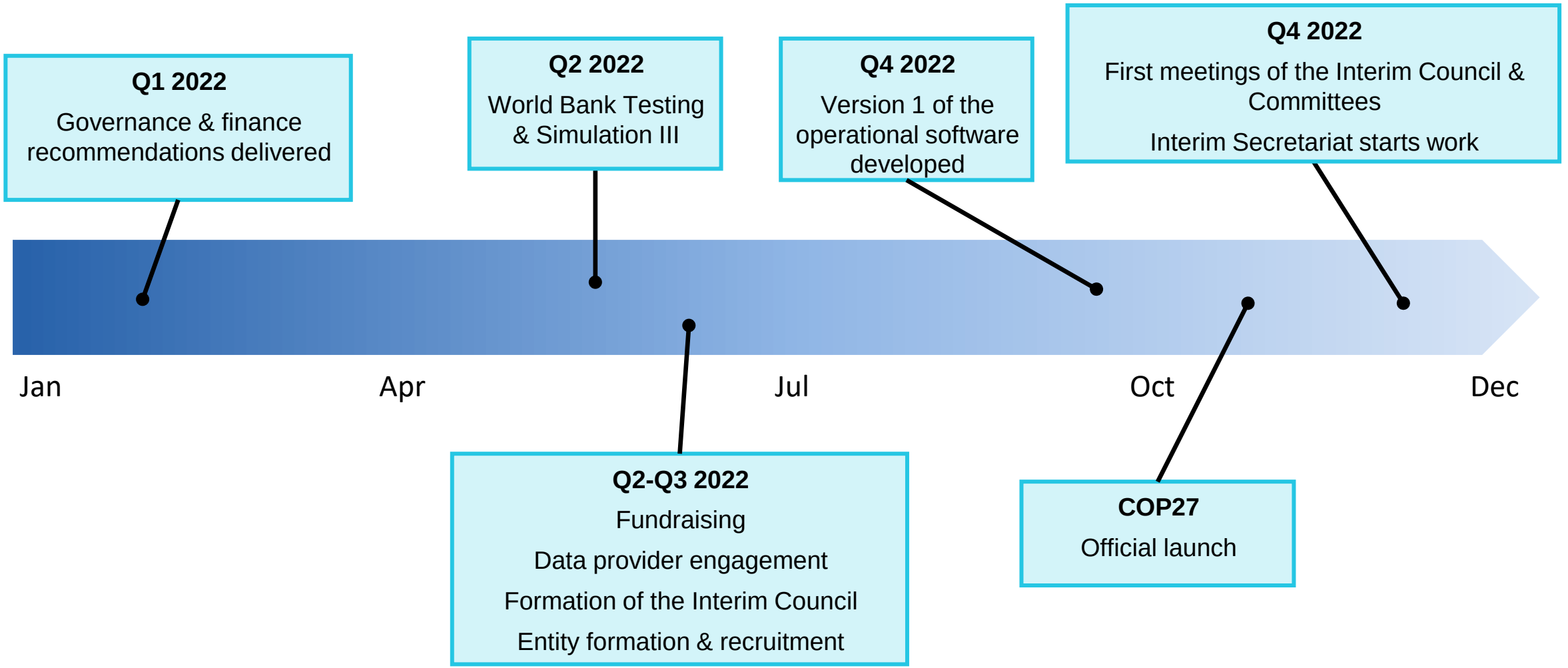
Integrity

- *Fully immutable and traceable*

Inclusiveness

- *Public, fully open source and permissionless*
- *Anyone in the network can access both the data layer and Chia Network blockchain node and add blocks*

2022 “inception phase” work program



Climate Warehouse

For further information:

http://www.theclimatewarehouse.org

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