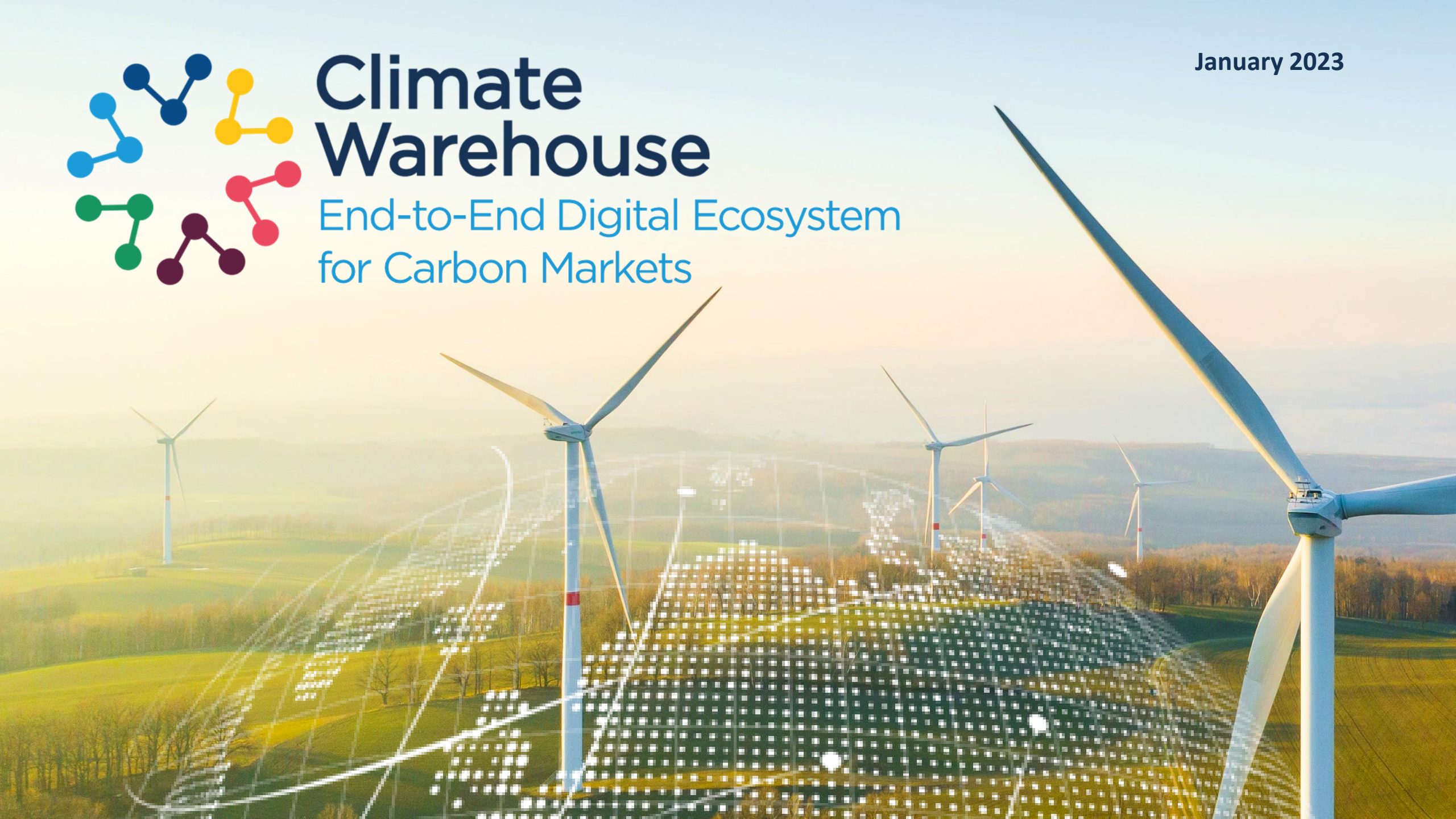




Climate Warehouse

End-to-End Digital Ecosystem
for Carbon Markets

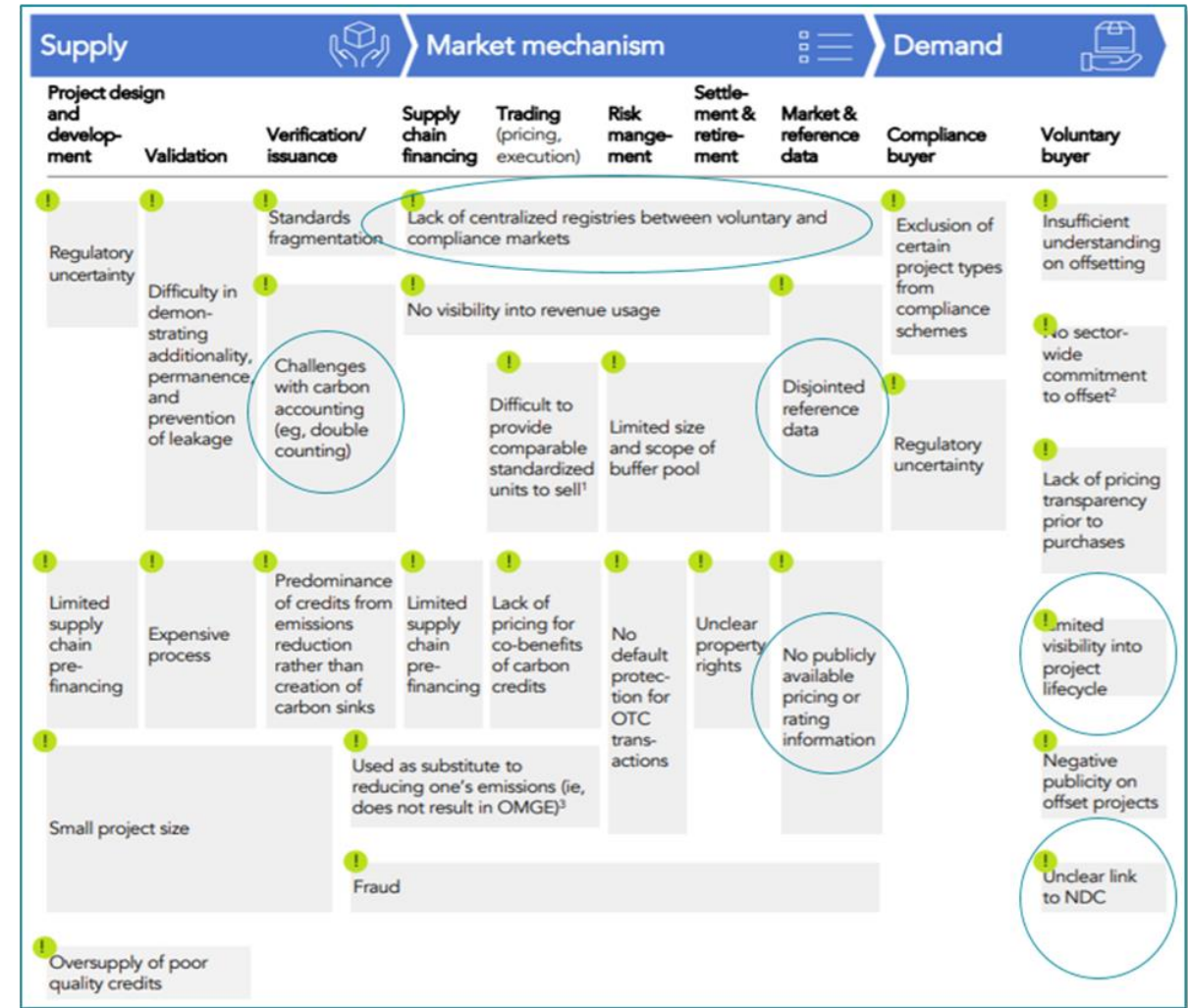
January 2023



Challenges in the Scale-up of Voluntary Carbon Markets

- **Post-2020 markets under the Paris Agreement will be built through a bottom-up approach**, as each party to the Agreement is required to track the greenhouse gas (GHG) emission reductions (or removals) achieved—and has considerable leeway to determine how this will be done.
- **The bottom-up nature of future carbon markets comes with increased complexity and diversity of reporting and verification approaches** for GHG emissions inventories and mitigation outcomes:
 - Limited transparency
 - Limited liquidity
 - Market fragmentation and inaccessibility
 - Quality variability
 - Lagging methodologies
- There is significant potential for **digital infrastructure** to underpin and streamline the functioning of post-2020 carbon markets.

Report by Taskforce on Scaling Voluntary Carbon Markets (TSVCM)



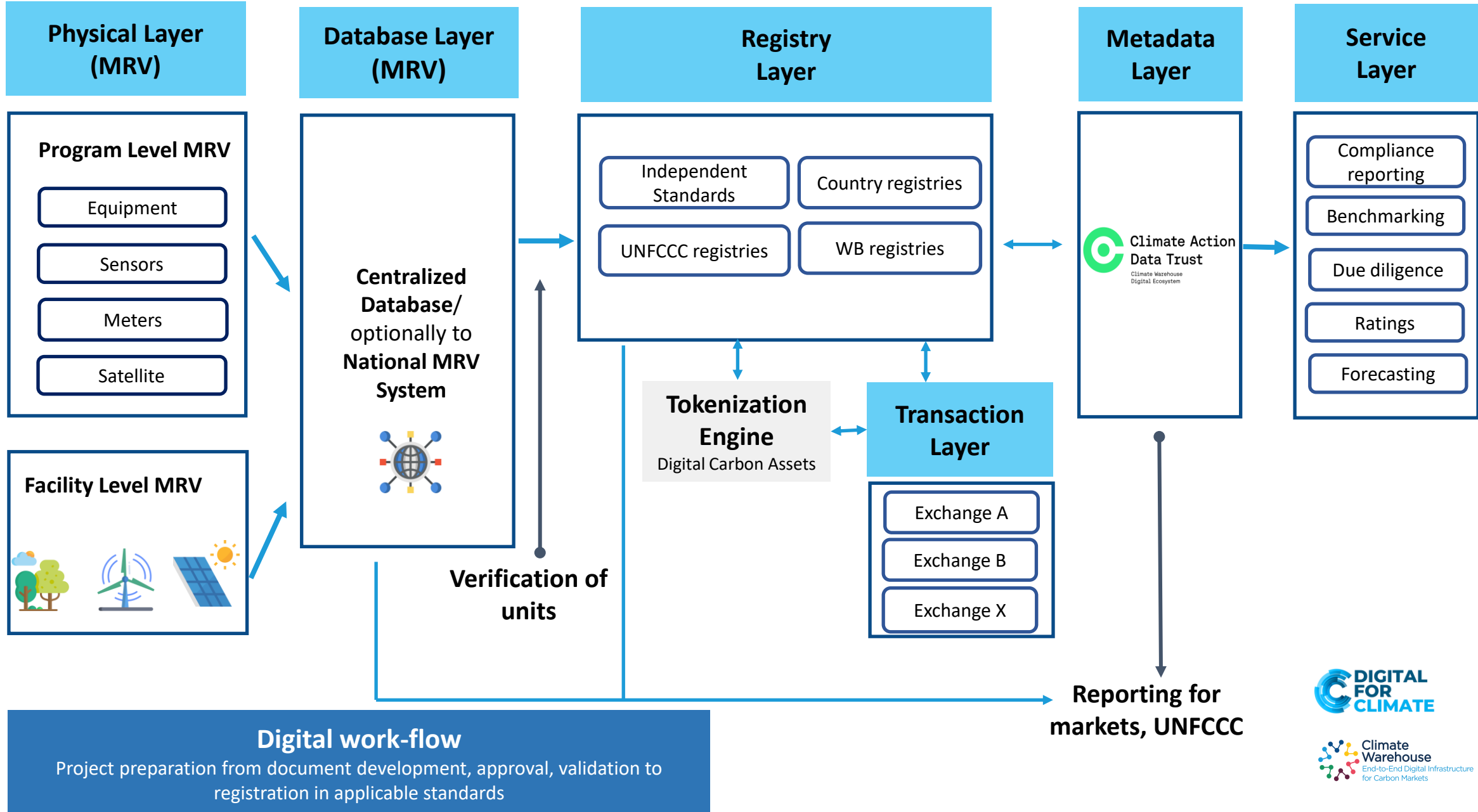
Source: Adams, Tim. Winters, Bill. Nazareth, Annette and Mark Carney Taskforce on Scaling Voluntary Carbon Markets Phase 1 Final Report: January 2021, TSVCM, pg. 45



Data and trade infrastructure is a precondition to scale a transparent and inclusive carbon market

Climate Warehouse is piloting the digitization of the carbon market ecosystem

Digital Methodology
Digitalization of Methodologies: smart contract toward the digitization of the mitigation activity cycle





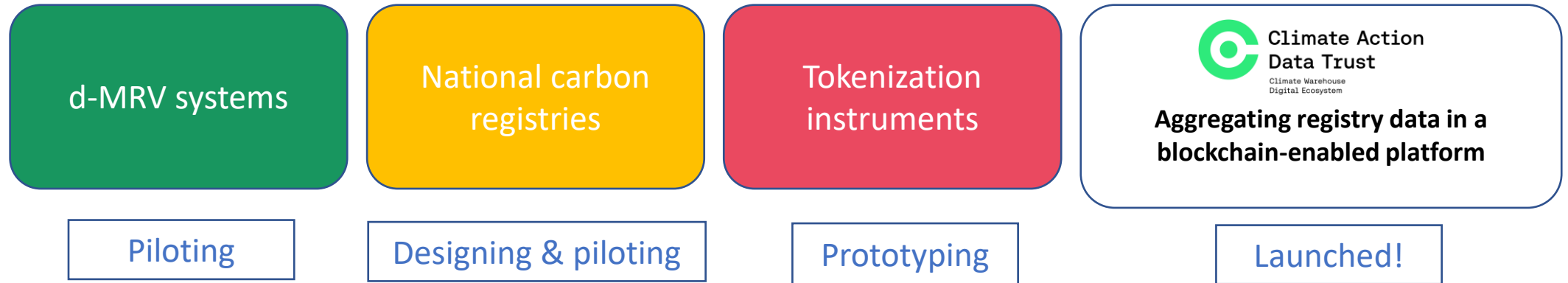
World Bank's Climate Warehouse Program:

Building an End-to-End Digital Ecosystem for Carbon Markets



Climate Warehouse

End-to-End Digital Infrastructure
for Carbon Markets



<https://climateactiondata.org/>

Designing, prototyping, piloting and validating digital infrastructure for the scale up of carbon markets and finance



World Bank Climate Warehouse Program:

Building an End-to-End Digital Ecosystem for Carbon Markets



Pillar 1: Piloting and Developing Global Public Goods

Making digital infrastructure for carbon markets available to client countries through development, testing and prototyping of innovative digital infrastructure for carbon markets.

Work Streams:

- **Digital for Climate (D4C) Working Group.** Collaboration with EBRD, UNDP, UNFCCC, and WB for a modular and interoperable end-to-end digital ecosystem for carbon markets.
- **Digital Monitoring, Reviewing and Verification (dMRV) systems.** Piloting the connection between dMRV systems with national carbon registries and national MRV systems.
- **National Carbon Registries.** Development of opensource off- and on-chain transaction registries.
- **Tokenization instruments.** Development of tokenization instruments to tokenize carbon markets.
- **Climate Action Data Trust (CADT)**



Pillar 2: Global Knowledge and Capacity-Building

Support countries and jurisdictions to in implementation of digital infrastructure for carbon markets needed for GHG mitigation and NDC implementation.

Work Streams:

- **Develop** knowledge base on digital infrastructure and facilitate information exchange through technical discussions and knowledge dissemination
- **Assist** countries to identify and implement best practice approaches and, where relevant, achieve compatibility in design to support the development and linking of digital infrastructure for carbon markets
- **Encourage** international and national cooperation, and inform the domestic and global policy discussions on GHG mitigation by sharing lessons learned and providing a platform for collective innovation on digital infrastructure products