

Nasdaq Digital Registry Solution for Sovereign Carbon Credits

With the introduction of Internationally Transferred Mitigation Outcomes (ITMOs), the Paris Agreement (Article 6) outlines a way for nations to voluntarily cooperate cross-border to increase ambitions in climate change mitigation and adaptation. ITMOs are verified sovereign carbon credits earned from reduction of greenhouse gas emissions that can be transferred between countries to achieve climate targets and finance projects that cut greenhouse gas emissions.

As the demand to trade ITMOs grow, as a means for nations and corporates to meet net-zero targets, the participating nations require trusted registries to securely scale the issuance, transfer, and lifecycle tracking of these contracts.

Nasdaq's fully managed digital registry solution supports efficient cross-border trade of sovereign carbon credits with a robust and modern foundation for issuance, transfer, settlement, custody, and retirement of ITMOs. The solution offers the option of a shared, multi-tenant environment to lower the total cost of ownership and enhance accessibility for nations. Developed, deployed, and road-tested by Nasdaq, and already in use for Voluntary Carbon Market (VCM) contracts, the service employs defined standards, institutional-grade controls, and innovative technology to enable agility and scale with the reliability and resiliency expected from Nasdaq technology.

Establish a trusted, secure sovereign carbon registry with institutional grade technology

Nasdaq's cloud-based SaaS solution for sovereign carbon registries enables secure, end-to-end operation of digital carbon registry, empowering market operators and participants to:

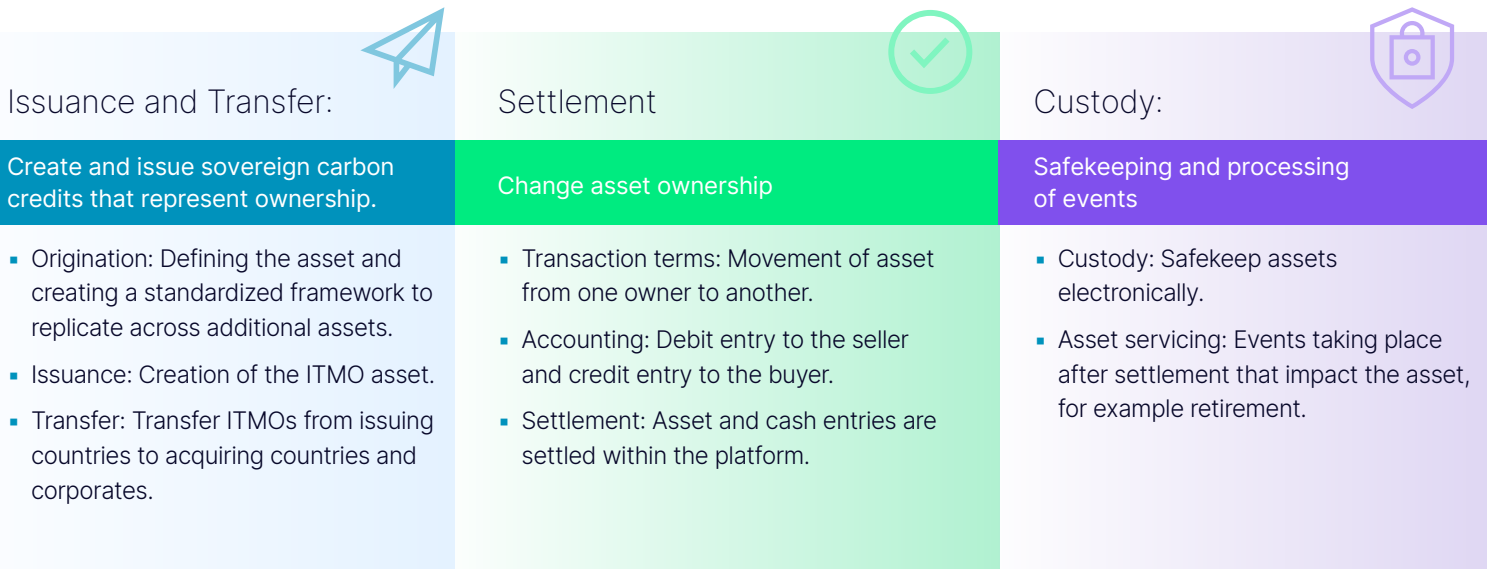
- Accelerate digital issuance of high-quality sovereign carbon credits (ITMOs)
- Securely track and verify each credit's full asset lifecycle, from transfer through retirement, with complete audit history
- Settle transactions with robust and reliable ownership transfer

With capabilities proven across capital and digital markets, Nasdaq leverages smart contracts to facilitate creation and distribution of standardized credits, with a full audit trail generated throughout its lifecycle. Carbon registry operators can minimize manual processing and complexity, improve access, and drive growth across the rapidly evolving and emerging sovereign carbon ecosystem.

Nasdaq's tailored technology for carbon registries

provides a single service for secure, scalable and efficient issuance, settlement and custody of carbon credits.

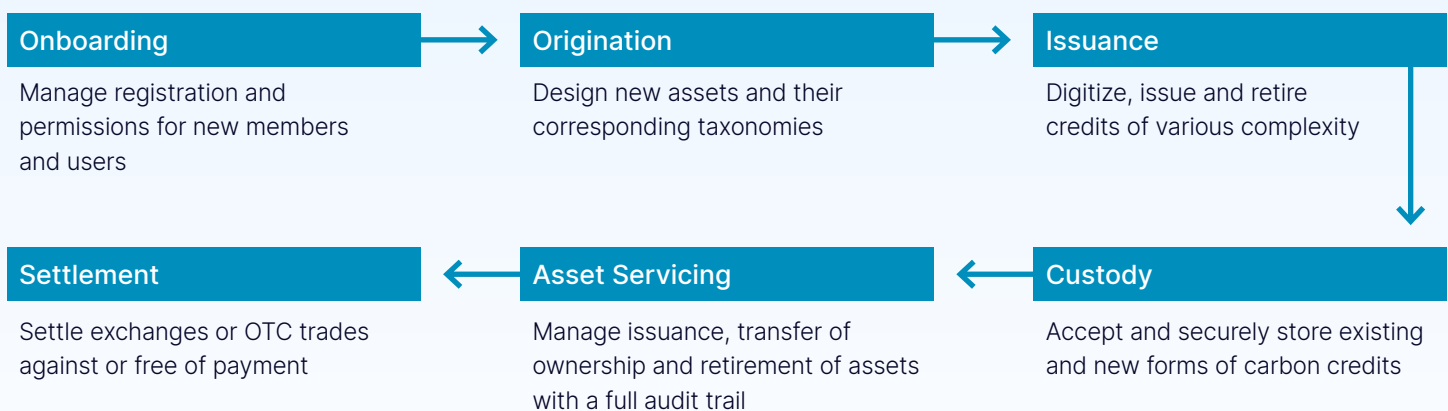
Registry technology and ITMO lifecycle components:



Enabling a sustainable carbon credit registry

- Create digital sovereign carbon credits and distribute them to owners cross borders with a full audit trail, leveraging smart contracts on a digital asset-based registry.
- Improve efficiency and standardization across the assets' lifecycle with a seamless and scalable platform.
- Protect your ecosystem with secure transfer of assets using cryptographic keys and proven infosec standards used by Nasdaq in providing technology solutions to hundreds of customers in over 50 countries.
- Unlock growth opportunities: Nasdaq's SaaS delivery model and feature-rich digital registry solution facilitates quick launch of new assets and modifications as the ITMO and broader carbon credits trade landscape evolves.
- Interoperability with other ecosystem participants and ISVs through recognized standards decrease barriers to entry, facilitate connectivity, and fuel liquidity, fostering a healthy and thriving ecosystem.

Capabilities across the trade lifecycle



Key benefits for market participants:

Registry operators:

A fully managed solution for cost-efficient operations that facilitates onboarding, user permissions, and creation of carbon assets based on a flexible taxonomy. Seamlessly manage the full life cycle from issuance to settlement with a full audit trail.

Investors:

Investors and buyers in carbon markets seek high-quality carbon credits to meet their business needs, sustainability goals, and investment objectives.

Issuers:

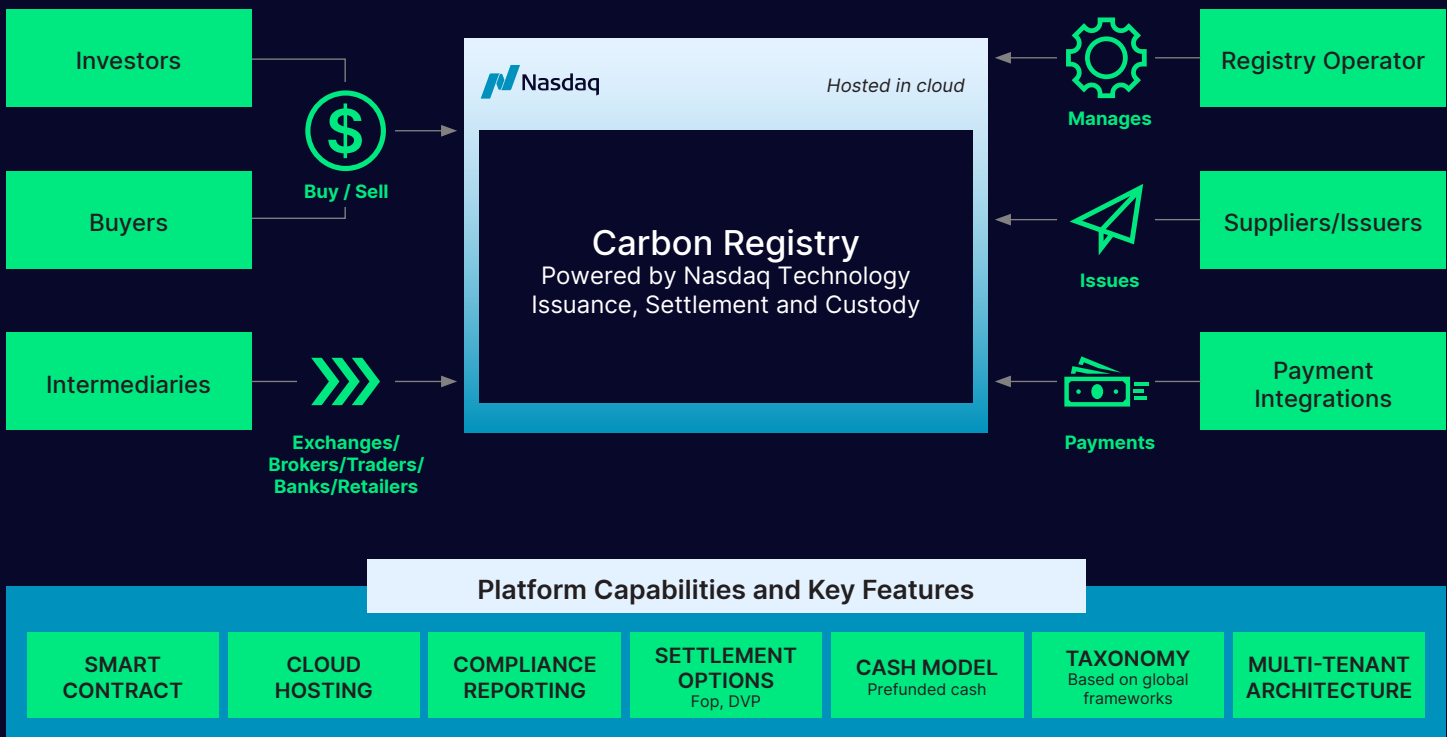
Enhanced transparency and traceability for carbon credit assets and transactions, backed by automated processes that increase efficiency and reduce costs. Ecosystem interoperability facilitates cross-border trade.

Custodians:

Hold carbon assets securely on behalf of owners and manage credits in individual or omnibus accounts.

Intermediaries:

Provide reliable registry services to exchanges, brokers, traders, banks, and retailers operating in the global carbon markets. Create a global carbon removal ecosystem with Nasdaq



Carbon registry solution evolution and future

The Carbon Registry Solution can be provided as a single-instance managed service or through a multi-tenant SaaS model to meet different needs. By adopting a SaaS delivery model, our Carbon Registry solution provides the following benefits:

1. **Increased Accessibility:** On-demand access to our solution, eliminating the need for on-premises installations.
2. **Customizability:** Each tenant can configure the registry to align with their specific business requirements and operational needs.
3. **Efficiency:** Scalable cloud infrastructure optimizes resource utilization.
4. **Security and Privacy:** Robust global infrastructure support for business-critical applications. Our technology is ISO 27001 certified, meeting the highest standards of security and compliance.

Nasdaq Financial Technology offers a range of marketplace capabilities that can further scale and enhance a multi-registry ecosystem, including trading and market surveillance technology. Nasdaq's Carbon Registry solution drives operation of efficient, transparent, and reliable market ecosystems with integrity through a modern platform. With comprehensive coverage, robust integrity monitoring and resilient infrastructure tailored for sovereign carbon credits, markets can build a trusted ecosystem that flourishes, attracting high-quality issuers and encouraging liquidity acceleration from investors.

Our platform capabilities:



Comprehensive platform management:

Benefit from Nasdaq's market infrastructure expertise by allowing us to execute the heavy lifting for account, system and user management.



Standardized UI:

Streamline user experience for all actors with a simplified, unified UI that serves all carbon market participants; or integrate to our APIs to create your own front-end storage.



Modern APIs:

Leveraging REST and streaming APIs to flexibly connect to data, ISVs and the broader community required to operate your venue.



Robust data management:

Move data through the platforms with efficiency and interoperability while benefitting from robust data storage and reporting capabilities.



Enhanced resiliency:

Help ensure seamless recovery with multi-region automated failover capacity and benefit from Nasdaq's rigorous security standards.



Cloud-native flexibility:

Scalable and efficient delivery — cloud-native with multi-tenant shared environment option.

Bring your marketplace to life. Visit our website or contact us: tech@nasdaq.com.