

Real-Time Carbon Intensity Measurement Auditable Carbon Reporting

Challenge:

As the carbon market continues to mature, organizations require a comprehensive and effective approach to managing a complex web of regulatory, ESG, production standards, credit and offset generation protocols, and reporting requirements.

Solution:

The CarbonVue™ ecosystem provides a "Secure First Mile" methodology, tool kit, and services to establish a cybersecure structured, contextualized, and consistent real-time data hierarchy that seamlessly synchronizes both time-series and event-based data from diverse sources and external APIs. This creates a robust data foundation that serves as the single source for emissions reporting and carbon accounting.

This foundation also provides a Carbon Intensity Monitoring System (CIMS), enabling asset-level monitoring and benchmarking of carbon intensity in real-time.

CarbonVue™ Ecosystem

Manage Regulatory, ESG & Carbon Trading Reporting and Verification

Real-Time Monitoring:



Visualize asset-level monitoring and benchmarking in real-time with easy-to-use dashboards.

Verification Engine:



User interface and tool kit for verification against various standards and jurisdictions.

Data Integrity and Assurance:



Cyber secure, auditable, and quality assurance data foundation to support fiscal auditing.

Open Data Architecture:

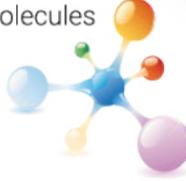


Consolidate and provide contextualized data to support various applications, reporting tools and third party and stakeholder data requirements.

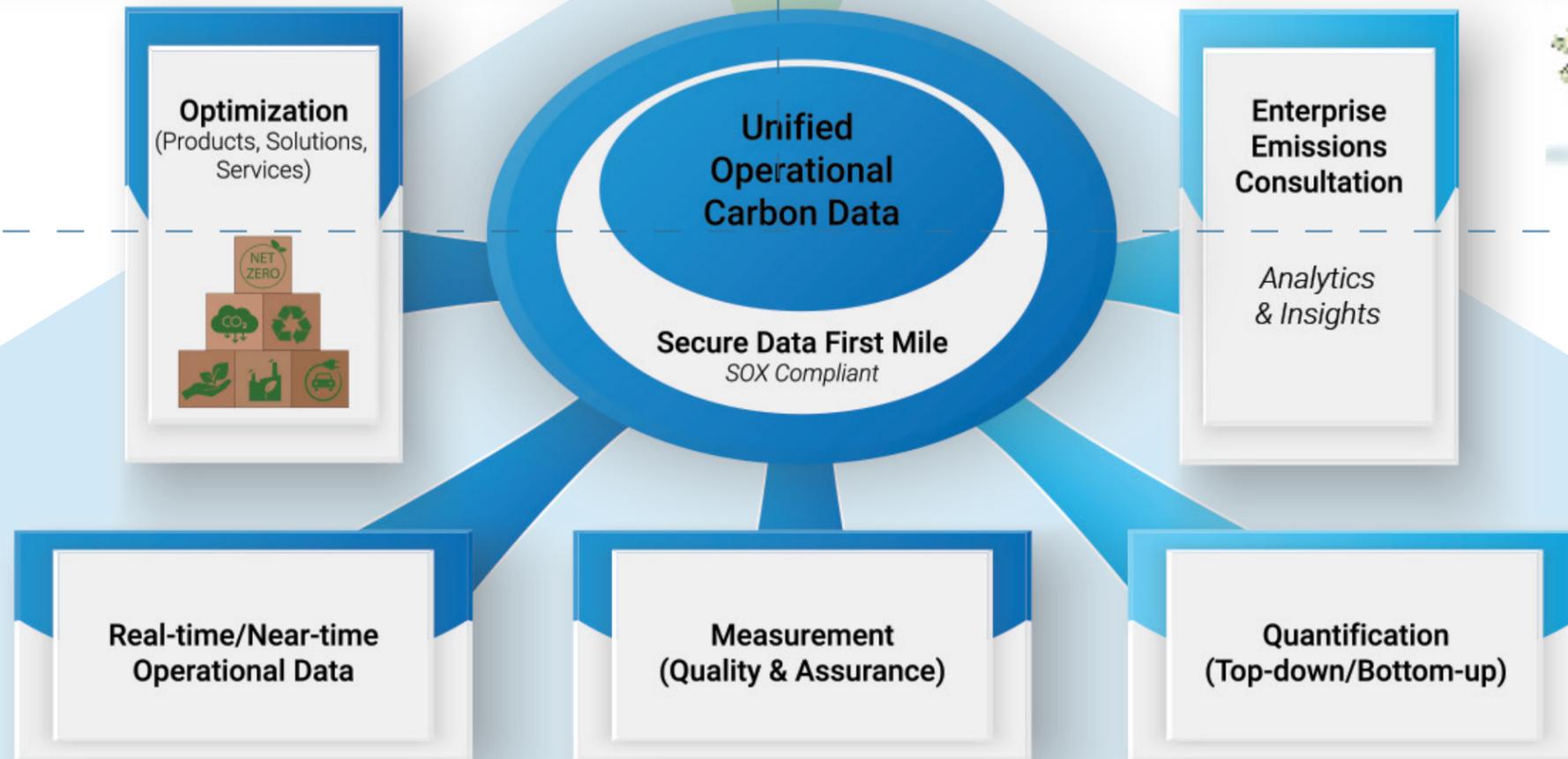
REGULATORY & SOCIAL

FISCAL & MARKETS



Molecules

 Corporate & Business Stake Holders (IT)
 Operational Stake Holders (OT)


 Money



**Blue indicates solutions available via Spartan and/or Partners*

“Brings production accounting methodologies to operational carbon accounting and verification.”

CarbonVue™ Benefits

Creating a Complete Carbon and Sustainability Data Ecosystem

- Secure and Auditable data from source with data integral quality, assurance and integrity
- Open data ecosystem for integration and data exchange with various application and stakeholders
- Verification engine and tool kit to support, streamline and de-risk the MMV (MRV) verification process



Additional Ecosystem elements include:

- CarbonVue™ Verification Engine
 - Emissions and Project Quantification
- Supercritical CO₂ Measurement
- Measurement System Anomaly Detection
- Open Path CO₂ leak detection (Boreal Technology)
- Erosion/Corrosion Monitoring
- Partner Data Portal
- AI/Machine Learning Model Development