



KGID
2026
SEJONG

From Policy to Pipeline: AI-Enabled Carbon Market Intelligence for Scaling Article 6 Climate Finance

Kwangnam Ryu

CEO, Newtonne Inc., Republic of Korea

Kwangnam Ryu

- **Founder & CEO, Newtonne Inc. (Vertical AI for Carbon Market)**

- Carbon AI (GraphRAG, AI Agent)
- Digital MRV (AI, Blockchain)
- Project Management System (Fund Operation)



- **Member, Presidential Commission on Carbon Neutrality and Green Growth**

- Article 6.2 & Climate Tech
- Climate Policy (2035 NDC Roadmap, 4th Phase of K-ETS)

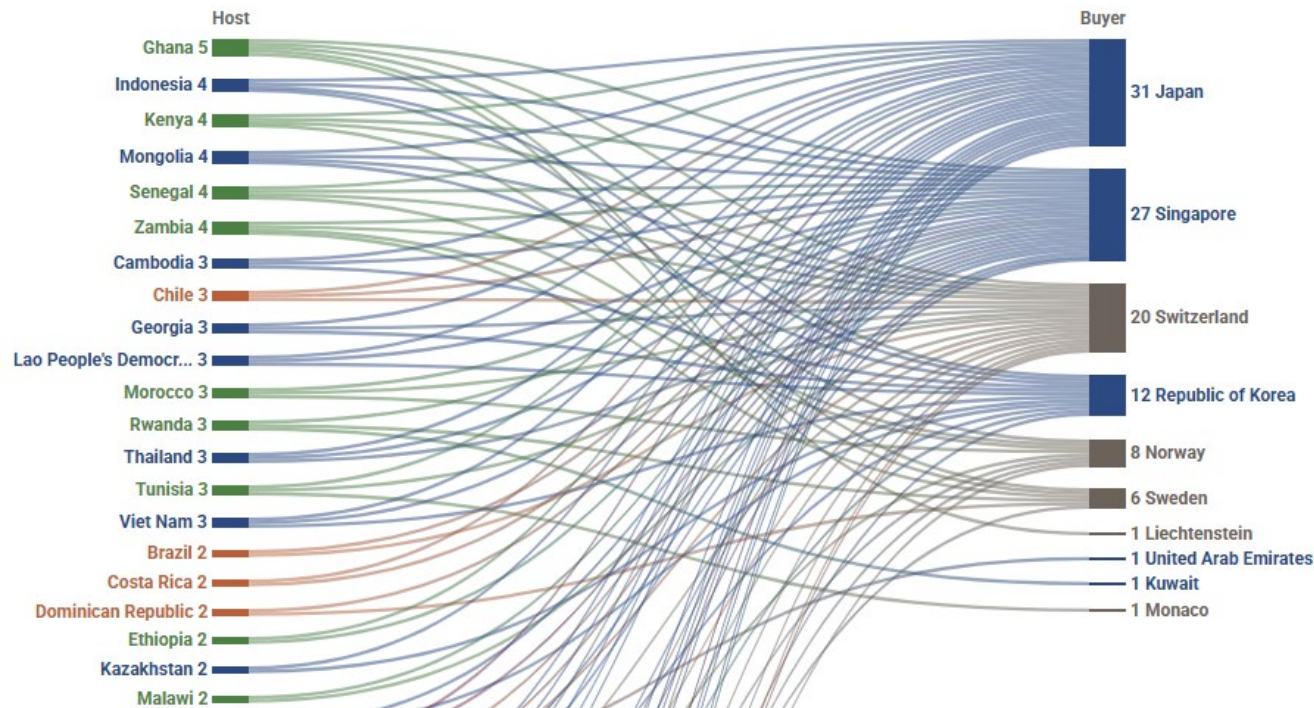
- **Researcher, KAIST Climate and Energy Policy & Strategy Research Group**

- Energy Modeling (The 10th Basic Plan for Electricity Supply and Demand)

How Do We Maximize Carbon Credits from Every Dollar of Climate Finance Invested?

Article 6

- Countries with bilateral agreements: **107 agreements involving 63 different countries.**
- Countries that transferred or received ITMOs: **27.7 million ITMOs transactions involving 5 different countries.**
- Countries with approved PACM activities: **151 activities involving 28 different countries.**

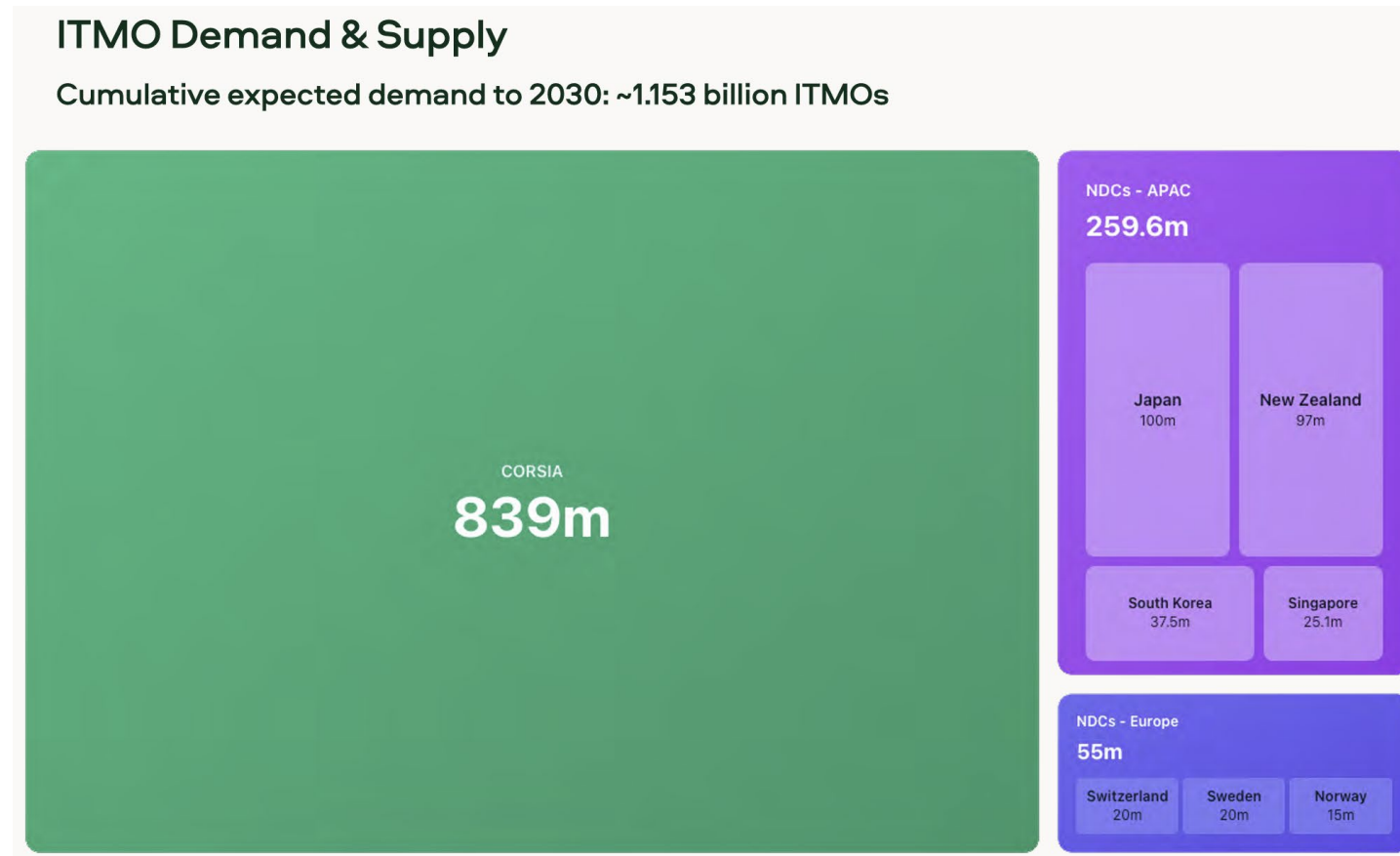


Countries	ITMOs
Guyana →	24.9 million
Madagascar →	2.72 million
Switzerland →	13.6 thousand
Ghana →	11.7 thousand
Thailand →	1.91 thousand

Source: UNEP (<https://article6pipeline.unepccc.org/global-data#article6-2-countries>)

Article 6

- Estimated cost for ITMO procurement: 1.153 billion ITMOs x 30 USD/tCO₂e = **34.59 Billion USD**



Source: Sylvera, Article 6: What You Need to Know Heading into 2026

Article 6 in ROK

- Bilateral Agreements – 11 Countries



(Mar. 2026)

- Ministerial MOUs – 9 Countries



“The policy infrastructure for Article 6 is taking shape.”

Article 6 in ROK

- NDC goal

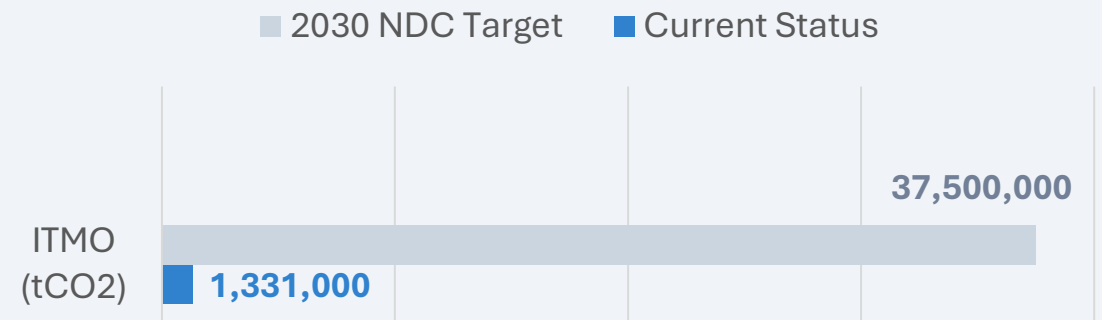
Category	2030 NDC	2035 NDC
Target	37.5 MtCO ₂	29.8–34.0 MtCO ₂
Methodology	Cumulative through 2030 (no pathway specified)	Single-year (or cumulative 2031–2035)



- The 2026 budget for international mitigation totals **~USD 38M (KRW 55.7B)**, covering Installation Support Programs to secure international reduction outcomes and Feasibility Studies for new project development.

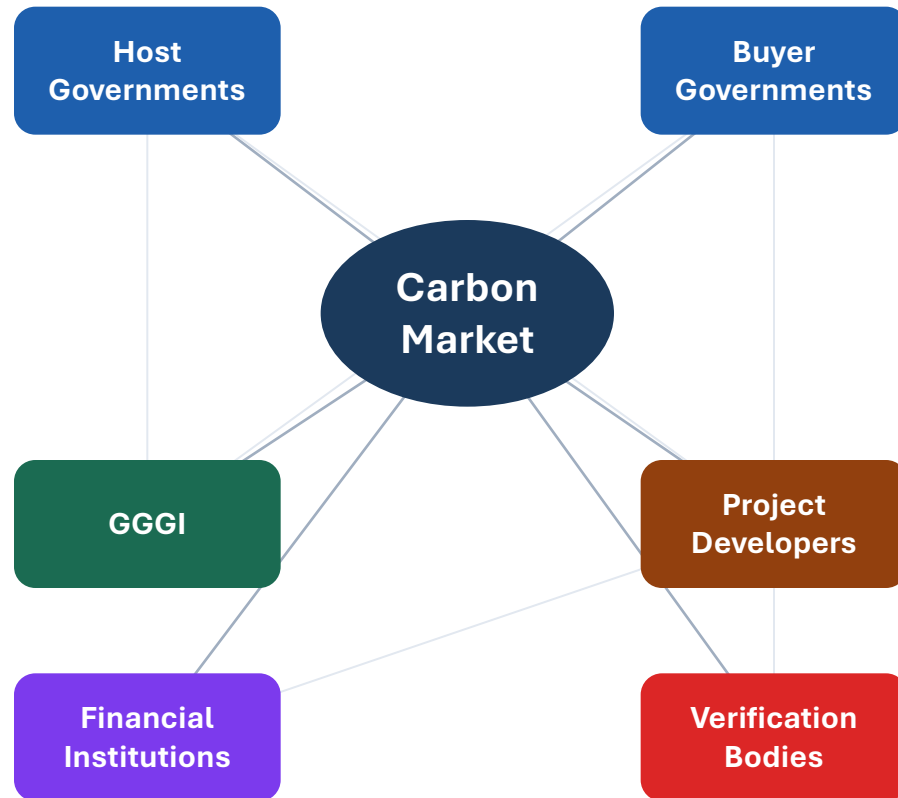
- A6.2 Projects: Only 3, totaling **1,331,000 tCO₂**
- Consultation Completed
 - Cambodia e-Mobility Transition Project
- Under Consultation
 - Vietnam Biomass Fuel Switching Project
 - Mongolia Landfill GHG Reduction Project

ITMO Status vs. NDC Target (tCO₂)



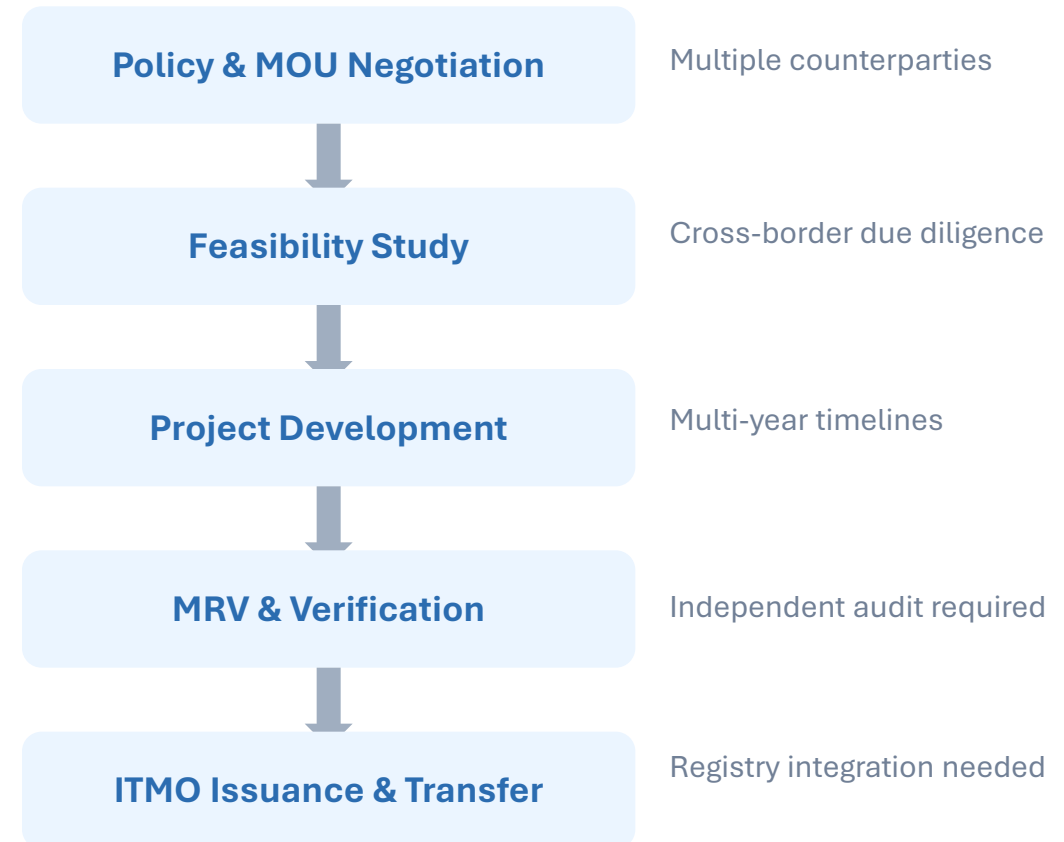
Carbon Market Complexity: The Case for Digital Infrastructure

STAKEHOLDERS



6+ stakeholders with complex bilateral ties

PROCESS PIPELINE



5-step pipeline with manual handoffs at each stage

“Digital infrastructure is essential to execute, track, and verify at scale.”

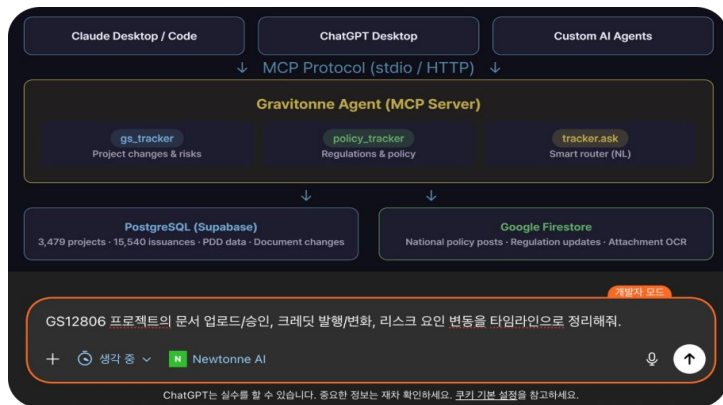
Newtonne: AI Infrastructure for the Carbon Market

AI Gravitonne

Carbon Market Intelligence AI

Core Capabilities

- **3,000+ projects learned** → methodology & risk auto-analysis
- PDD vs. field data discrepancy detection & registry tracking
- **MCP/API integration with institutional systems**

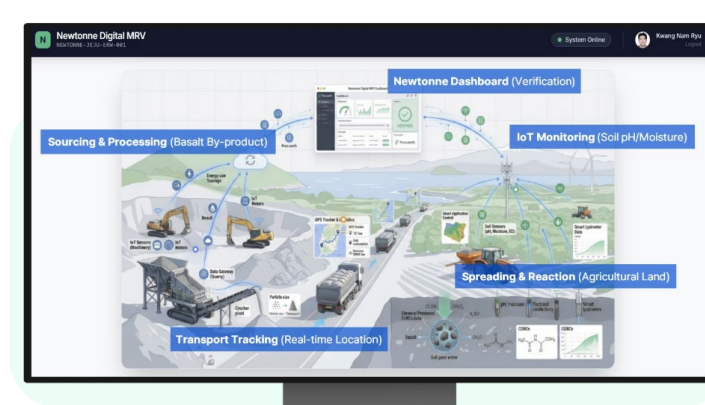


IoT Digitonne

Digital MRV

Core Capabilities

- **IoT sensor-based** on-site measurement & verification
- Auto-validation with **blockchain-anchored audit trail; greenwashing detection**
- Purpose-built OS for emerging carbon reduction technologies

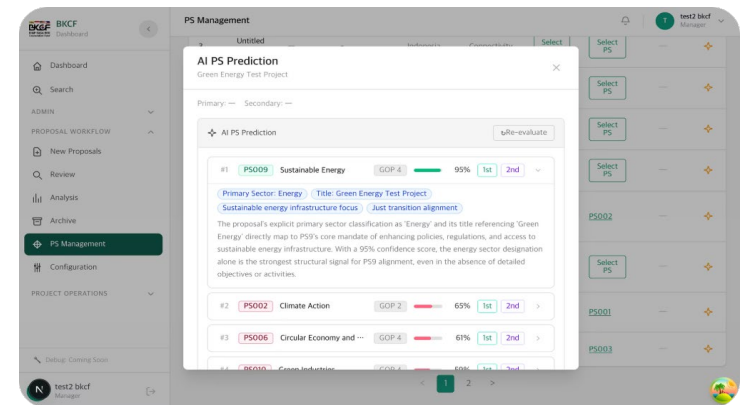


PM Project Management System

Digital Platform for Carbon Projects

Core Capabilities

- **End-to-end lifecycle:** proposal → evaluation → DD → monitoring → reporting
- **Multi-stakeholder collaboration with role-based access**
- AI-assisted project scoring & portfolio optimization



Gravitonne: Carbon Project Pre-Screening

PDD → credit issuance takes 3–4 years.
 No pre-screening tools exist to filter sunk costs.

Carbon Underwriting

- Input PDD → AI returns feasibility score, Article 6 match, ITMO pricing, risk flags
- **Detects methodology shifts & host-country policy changes that general-purpose LLMs cannot track**
- MCP-native — plugs into existing AI workflows
- Trained on 3,000+ real projects — proprietary data moat

Research collaboration -
 KAIST Graduate School of Green Growth and Sustainability



Climate analyst's AI workspace

User

Indonesia POME methane capture 프로젝트 PDD 검토 부탁해. 6조 매칭이랑 ITMO 가격 추정도.

PDD_Indonesia_POME_v3.pdf · 18p

Calling newtonne mcp...

Newtonne MCP response

NEWTONNE · CARBON UNDERWRITING v0.4

Indonesia POME methane capture
 AMS-III.H · Article 6.4 eligible · 142 ktCO₂e/yr

7.2 B+ Investable with conditions

ARTICLE 6 BILATERAL MATCHES

Korea–Indonesia BCA (2025)	82%
Japan JCM Indonesia (2013)	65%
Singapore–Indonesia Lol (2022)	58%

ITMO PRICE ESTIMATE **\$9–14 / tCO₂e**

\$5 \$15 \$25

TOP 3 RISK FLAGS

- Baseline methodology vintage 2008 — requires 6.4 update
- MRV gaps — flow meter calibration data 6+ months old
- Additionality — Indonesian regulation tightening 2027+

Live in Q2 2026. Newtonne becomes the default carbon underwriting tool inside every climate analyst's AI.

Digitonne: ERW-Specialized dMRV

Asia's First Carbon Removal dMRV

ERW Focus

Enhanced Rock Weathering — soil sensor integration & simulation modeling

Field Pilots

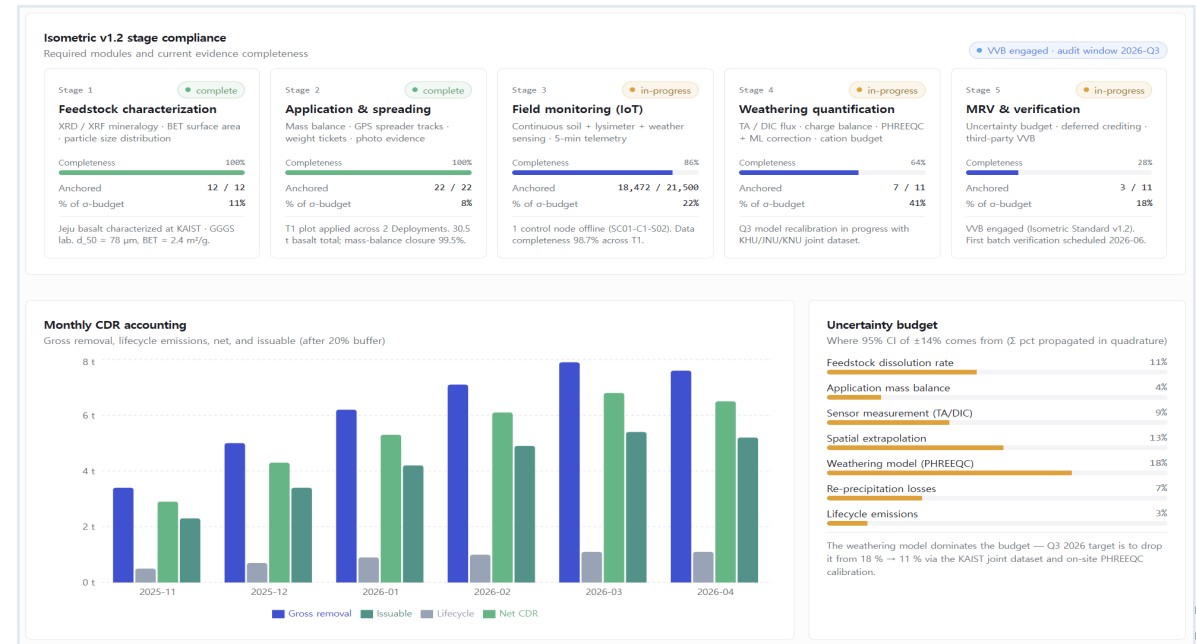
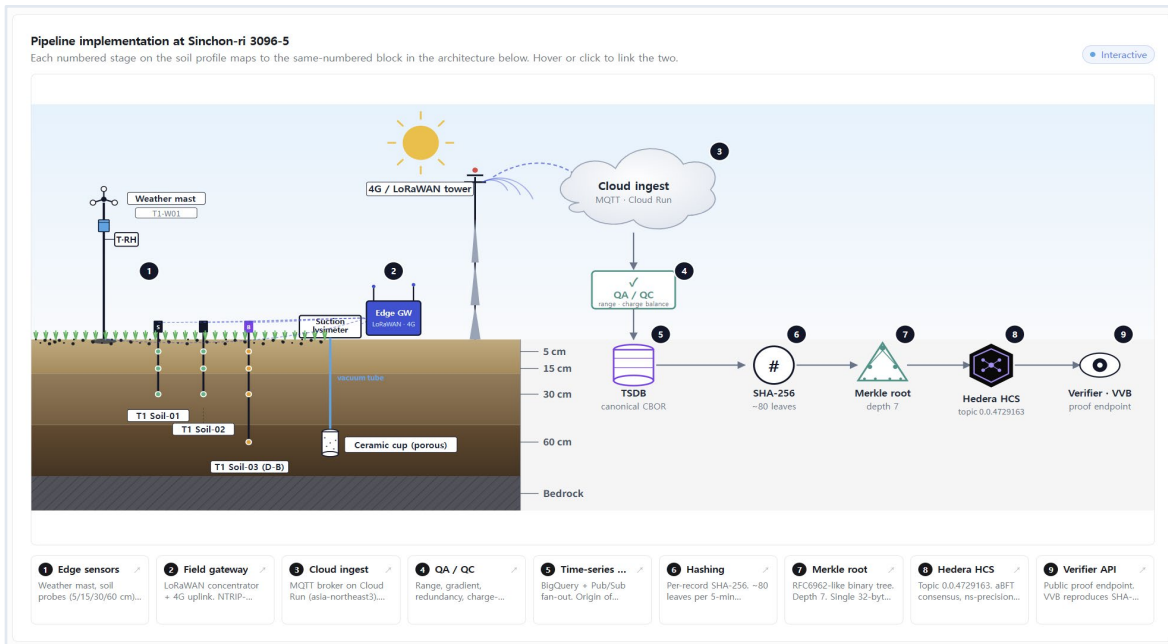
Live demonstrations in Jeju Island & Gangwon Province, South Korea

Standards

Built to Isometric & Puro.earth methodologies with auto-reporting

IoT + Blockchain

Sensor data collection with blockchain-anchored verification trail



Digitonne: E-Mobility & Off-Grid Solar OS

dMRV + operational OS

- **Verra methodology-aligned** e-mobility & off-grid solar project with app-based field OS
- **Blockchain tokenization** of verified carbon credits for transparent trading
- **IoT + dMRV** for real-time monitoring of charging stations & solar panels



Multi-Dimensional Impact

RE100

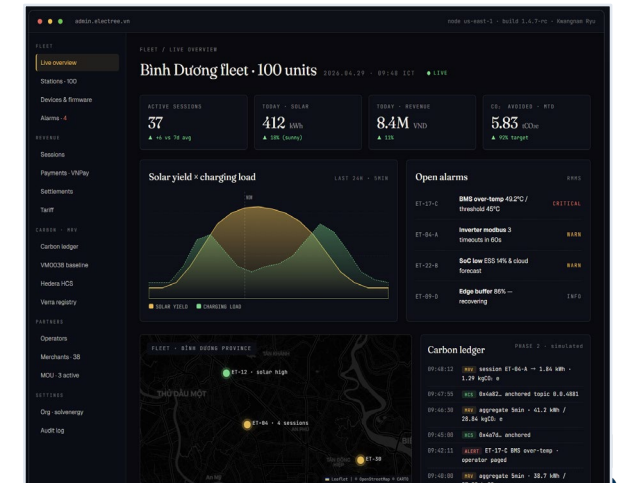
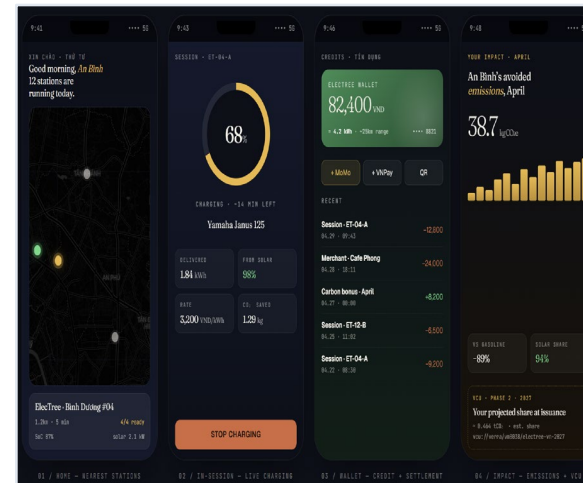
Vietnam factory renewable energy compliance

Scope 3

Employee transport emissions reduction

Community

Local economic activation in host regions



Project Management: GGGI BKCF Platform

GGGI's Project Management System



- **4 countries:** Brunei, Philippines, Indonesia, Malaysia
- **709 projects** over 5 years of operational data → exclusive Newtonne training set
- **End-to-end:** proposal intake → evaluation → due diligence → selection → monitoring → reporting
- **Launched Feb. 2026** — live and operational, not just a prototype

Embedded AI Modules

AI Search

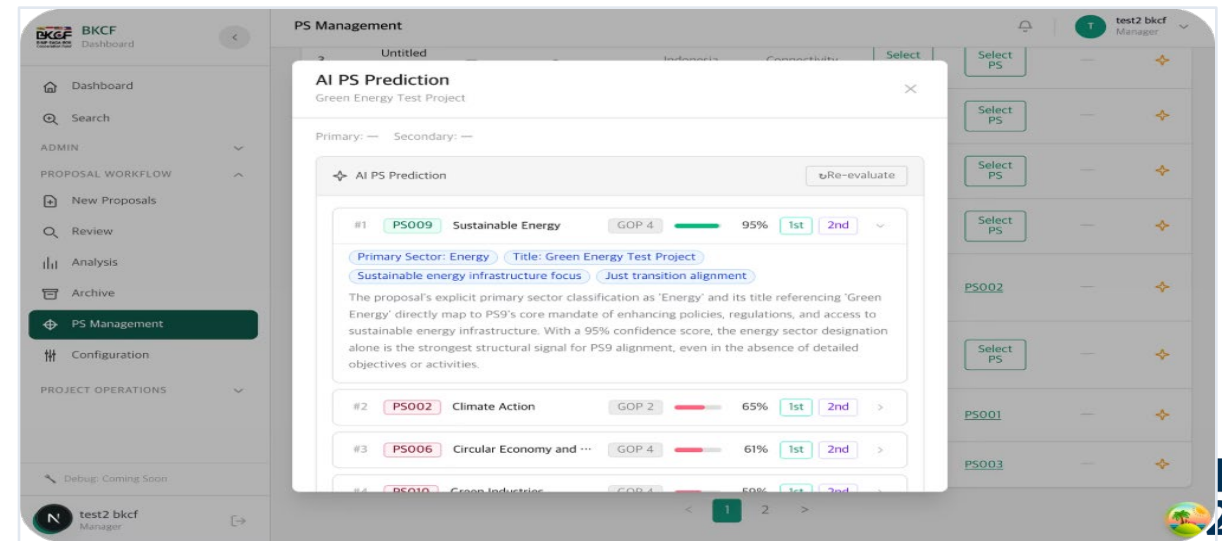
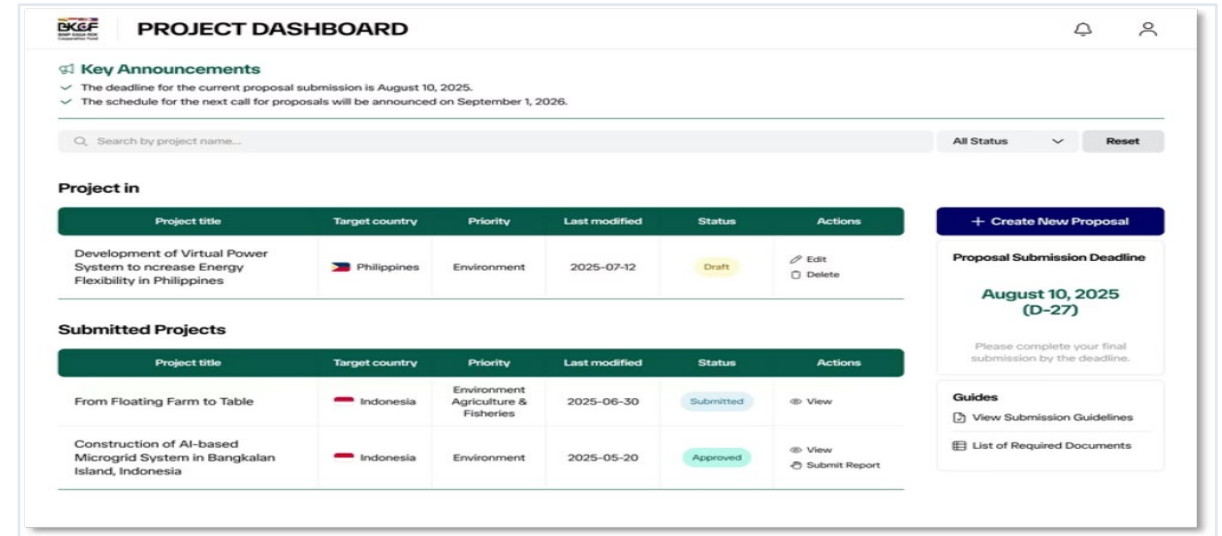
Conversational RAG across project history

PS Code

Auto-classification & prediction

AI Roadmap

GGGI AI integration strategy



Conclusion

“How do we maximize carbon credits from every dollar of climate finance invested?”

We build the AI infrastructure that makes Article 6 work.

- AI pre-screening, digital MRV, IoT monitoring, blockchain verification — end-to-end
- Selected for Korea's **Net Zero Challenge X** — solving a national-scale climate finance challenge

We don't run the registry or marketplace — by design.

- Private-sector VCMs inevitably face credibility challenges
- A technology partner for the **World Bank's** Article 6 strategy & NDC roadmaps for developing nations
- AI infrastructure powering **GGGI's GVCM** and other trusted multilateral initiatives

NEWTONNE

Newton gave the world $F = ma$.

Newtonne writes the new law of climate finance.

Where trust was missing — verified data.

Where capital stood still — measured acceleration.

Wherever climate capital flows — Newtonne is the infrastructure.

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