

Korea's Climate Tech-Finance Integrated Trading System

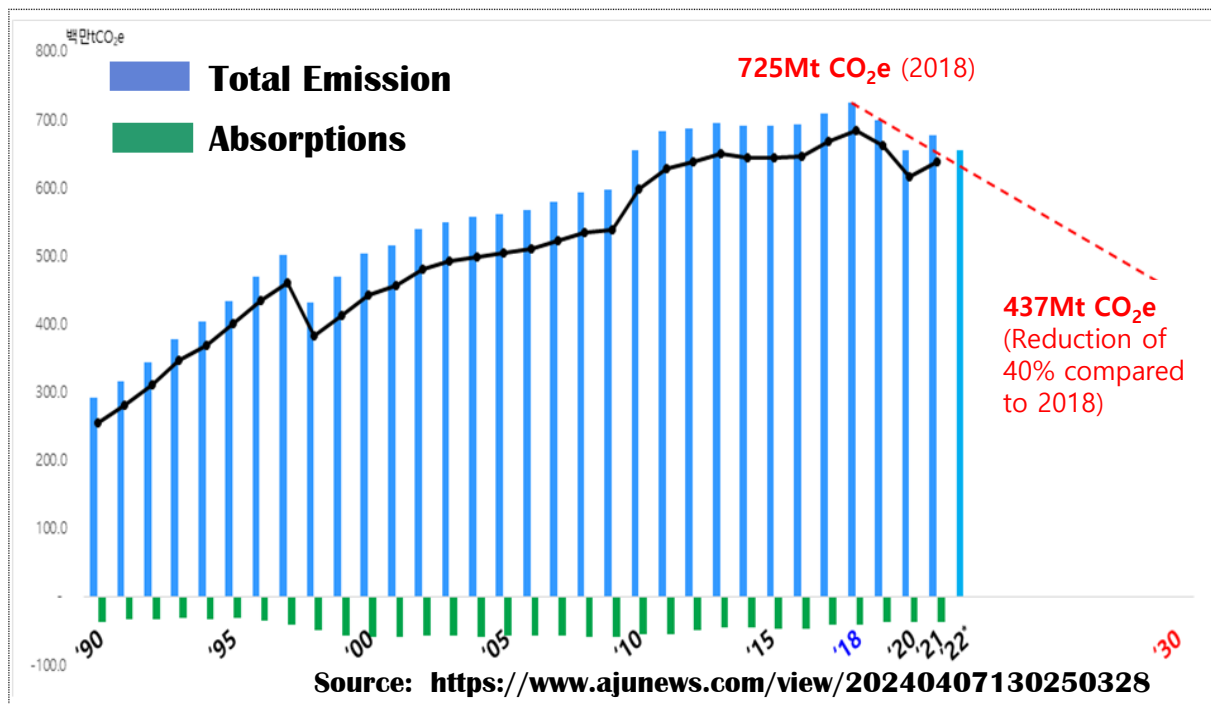
UNESCAP SIDE EVENT @ Bangkok, 23 Apr 2025

Kyobo Securities | Digital Asset Biz Team

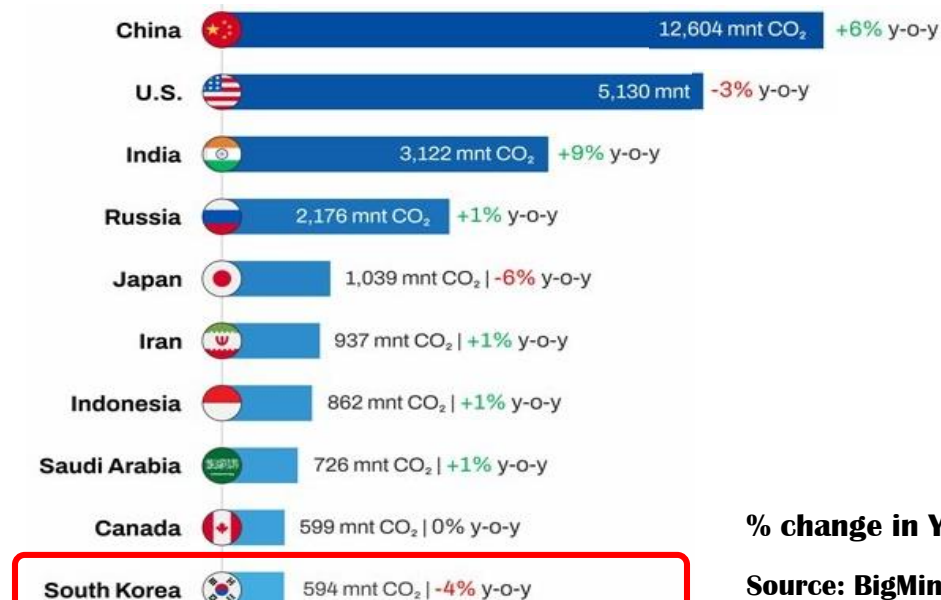


Status of Carbon Emissions in Korea

Carbon Emission



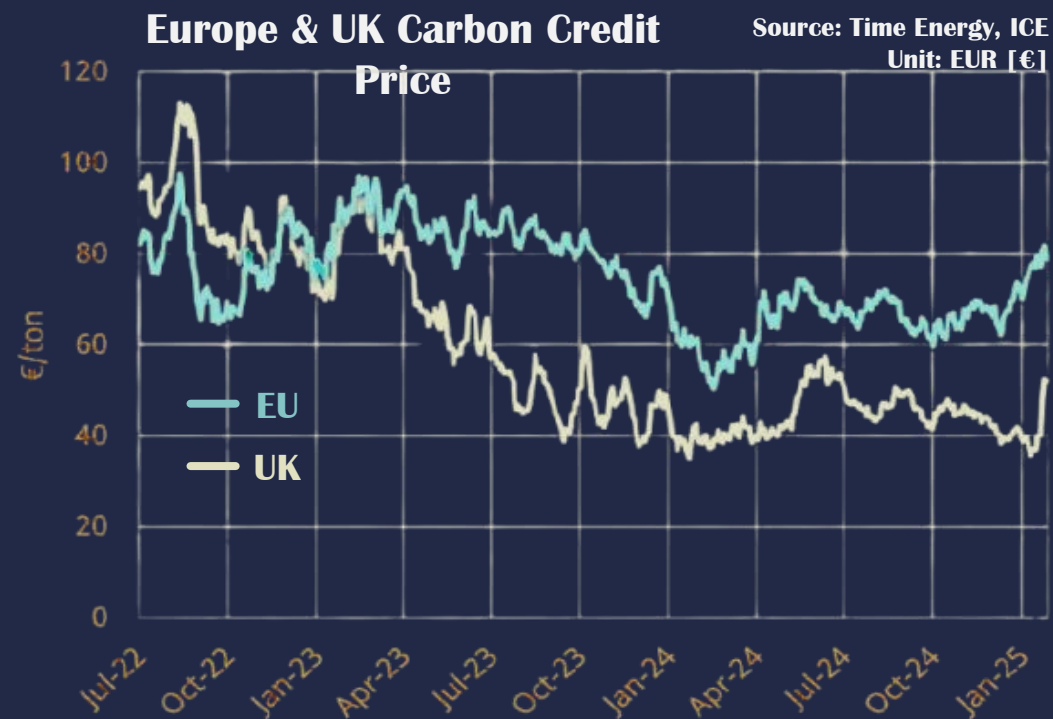
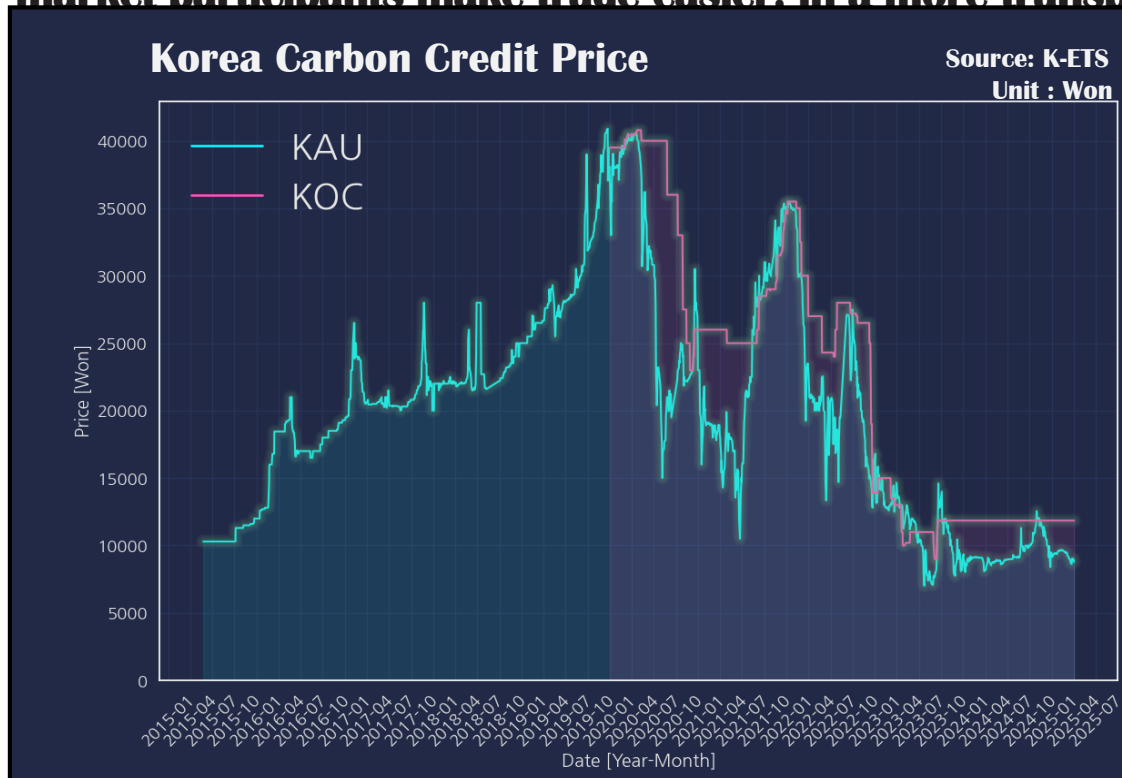
Countries with highest CO₂ emissions from energy sector in 2023



- Korea's 2023 carbon emission was recorded about 600M tons, showing a gradual reduction while achieving continued GDP growth
- However, Korea's carbon emission levels still rank relatively high globally
- Therefore, we must continue our efforts toward achieving the net-zero 2050 goal

Korea Carbon Credit Price Trend

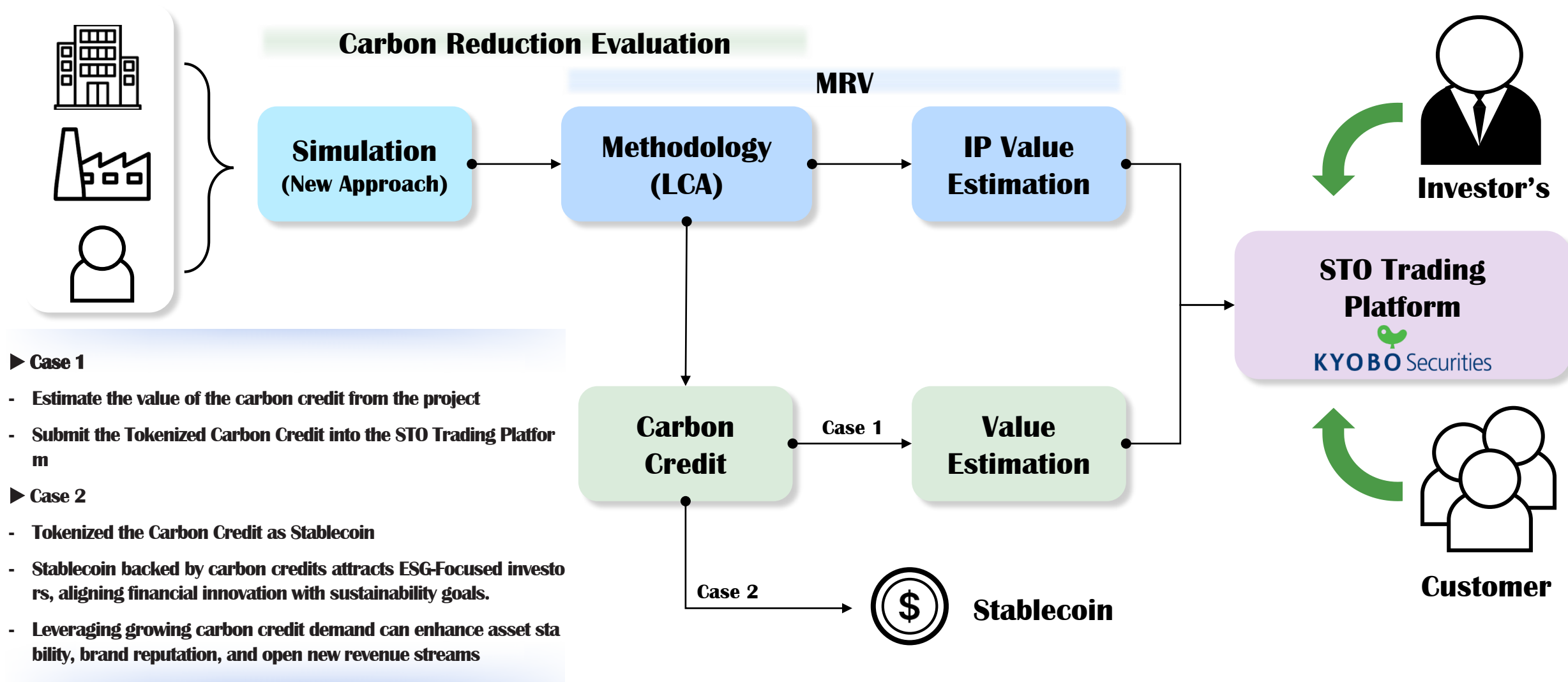
- Korea carbon credit market is experiencing all-time-low, traded close to USD 10, a phenomenon is very different from that of EU and UK
- There exists a huge gap between EU and Korea markets is caused from both public and private sectors
- To boost this sluggish market, a new trading scheme that combines the latest technology and climate finance to help the market participants make trade easier, in a more transparent manner, ultimately revitalizing that carbon credit market in



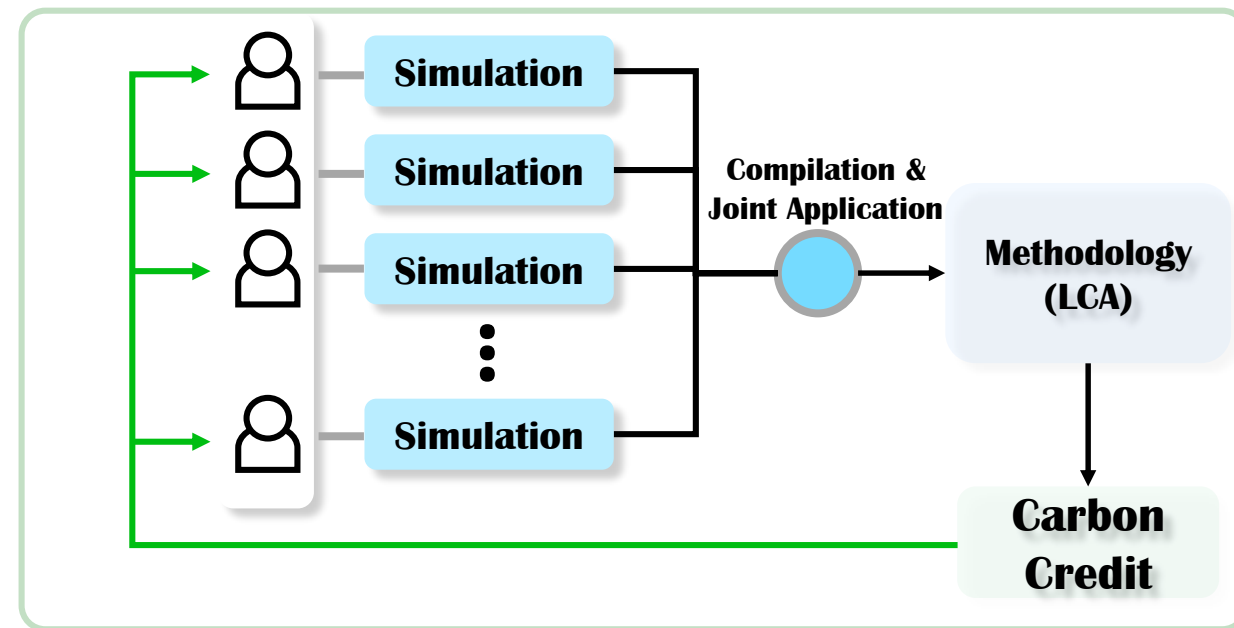
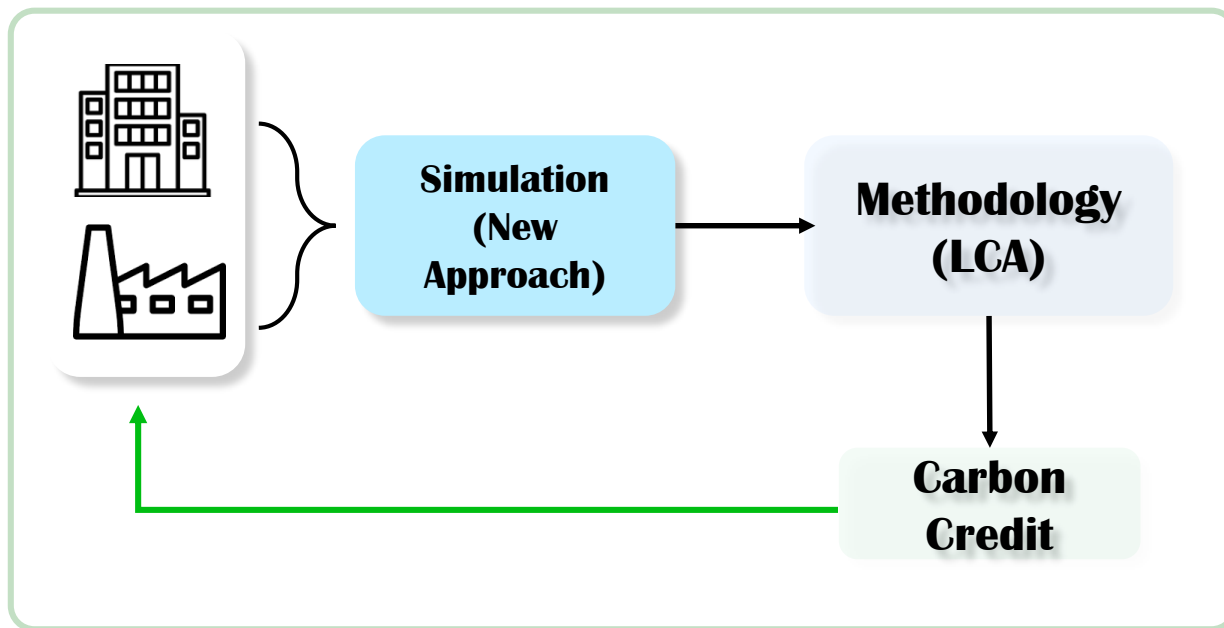
Status of Carbon Credit Market in Korea

	Korean Allowance Units (KAU)	Korean Offset Credits (KOC)
Description	Compliance instrument for 1 ton of CO ₂ -equivalent	Credit from certified emission reduction projects
Issuance & Usage	Issued under K-ETS for mandatory use	Issued by approved registries; used for offset
Participants	Large emitters and power generators	Project develops, companies, NGOs where contribute the carbon reductions
Application Scope	Sectors under K-ETS (Power, Industry, etc.)	Renewable energy, reforestation, and other mitigation projects
Regulation	Governed by national law and government agencies	Managed via third-party certification and guidelines
Market Dynamics	Prices and trading volumes are influenced by policy adjustments, economic factors, and supply/demand dynamics in the compliance market.	An emerging market segment with potential for growth as policy clarifications and market incentives are introduced; still adapting to new regulatory requirements.

Climate-Finance Integration Trading Platform

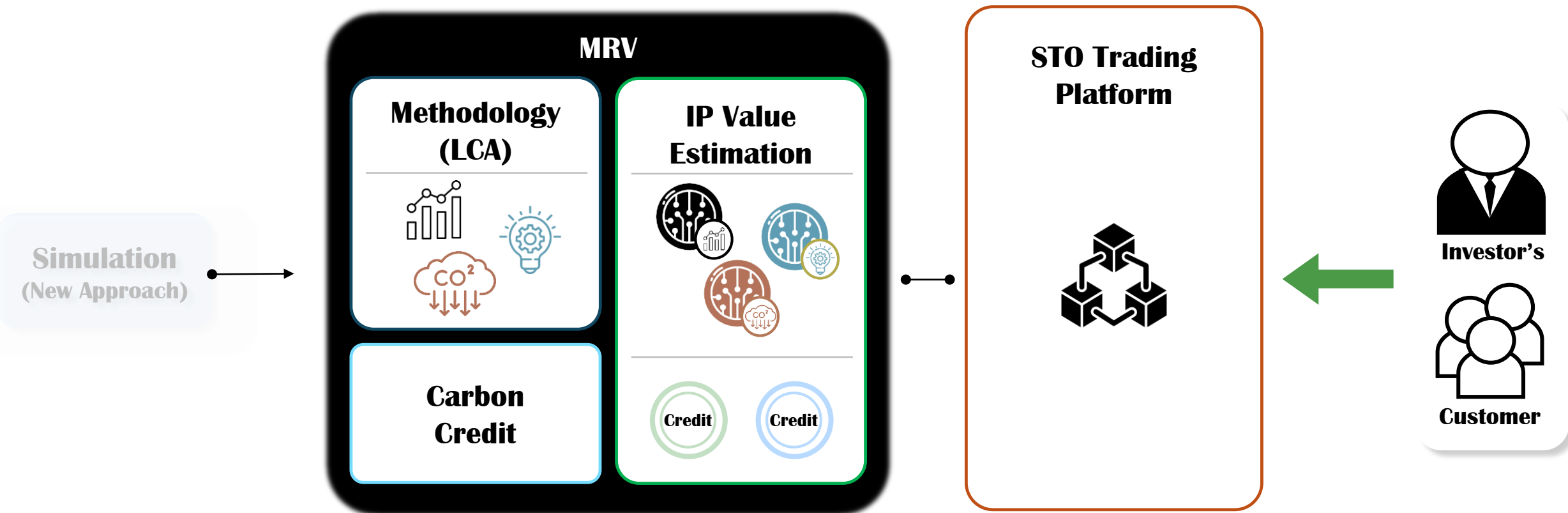


Carbon Reduction Evaluation - Simulation



- **Scope 1** can be quantitatively measured, but there is no established quantitative methodology for comprehensively assessing indirect effects coming from Scope 2 & 3 throughout the value chain.
- Conduct simulations using conceptual data models and basic assessment algorithms to quantitatively evaluate carbon emissions and reduction effects.
- Objectively assess the environmental value of companies' carbon reduction technologies/projects and measure the efficiency of carbon reductions compared to R&D investments.
- For instance, the simulation allows the non-experts evaluate carbon reductions through renewable energy sources (e.g., solar) and acquire corresponding emission credits.

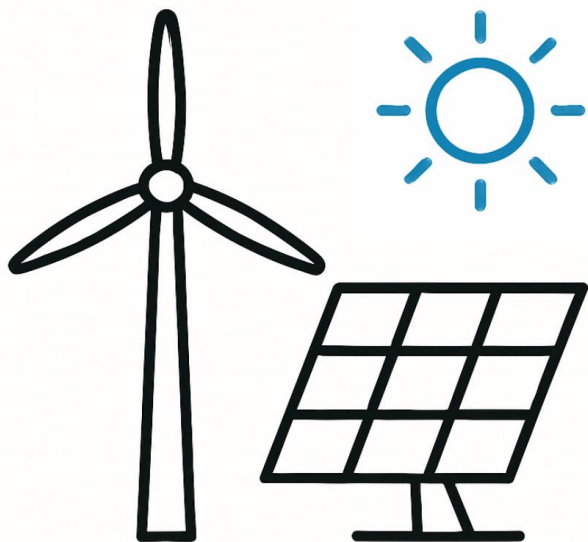
IP Value Estimation & STO Trading Platform



- Provides accurate Intellectual Property (IP) valuation for the carbon reduction estimation method.
- Upon certification, the carbon reduction estimation method are tokenized as a IP, transforming into valuable IP assets.
- Enables companies to generate additional profit by trading these IP tokens, further leveraging their innovation.

Target Underlying Asset (Examples)

Renewable Energy



**Investment Contract,
Noncash Trust**

Real Estate



Noncash Trust

Intellectual Property



**Carbon Reduction Tech
& Carbon Credit**

Introduction to KYOBO ST Platform



Korea ST business



- Issuance of new form of securities (e.g., investment contract, noncash trust) under distributed ledger



- Bespoke ST issuance and distribution platform which is designed to meet the Korean security token standard while encouraging global interoperability



Global market

Singapore

Participation in MAS related projects (Wine RWA, Tokenized MMF)

Japan

Strategic partnership with SBI Digital Asset Holdings

Others

Exploring entry into other markets (e.g., EU) with favorable regulatory environments for digital assets



Business Goals

Short Term

Korea: Collaboration with ST partners including Lucentblock (Real Estate) , TESSA (Collectibles)

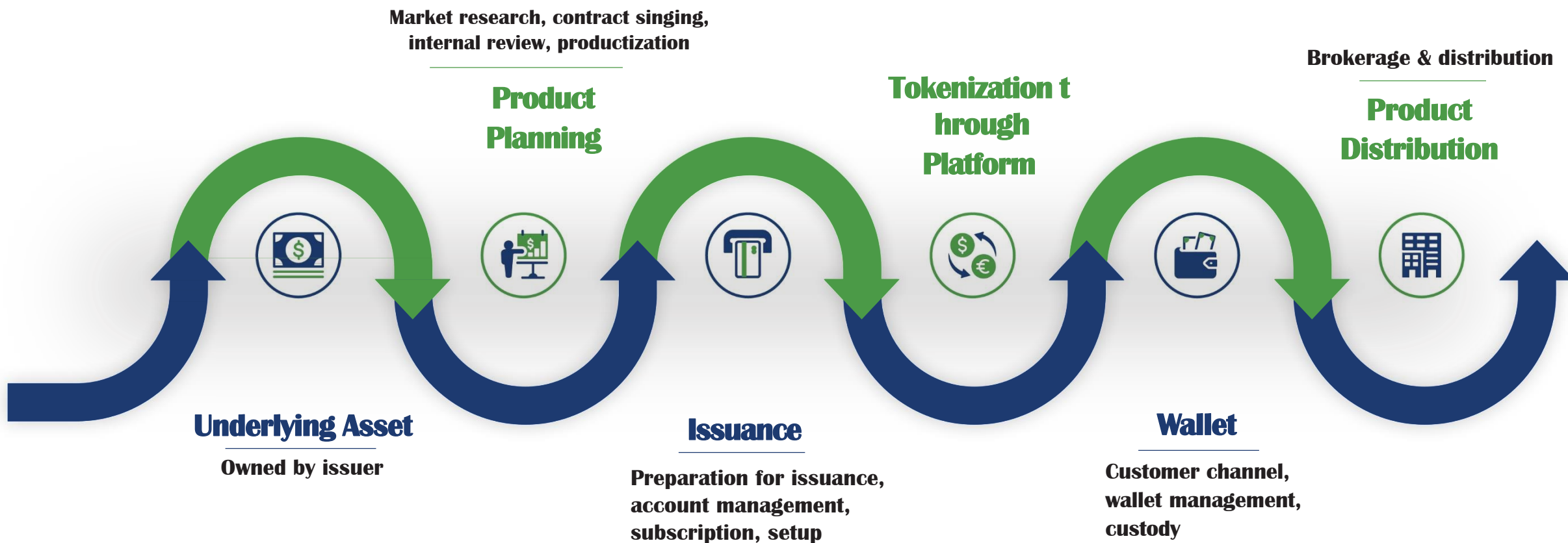
Int'l: Tokenization of Korean Content IP in Singapre, Thailand, etc.

Mid to Long Term

Korea: Strengthen ST product lineups (fixed income, MMFs)

Int'l: Tokenization of Korean assets/rights

ST Issuance Process





**Thank you
for your Attention**



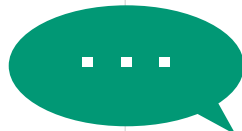
Panel Discussion



Importance of AI and data-driven systems for evaluating carbon reduction potential of climate technologies



Operationalization of AI-based NBI evaluation for climate technologies - policy and Institutional mechanisms, demonstration, collaboration and partnerships



Public-Private Partnership strategies for climate tech-finance integration in the Asia-Pacific Region

Moderator:
Dr. Jaeryoung Song,
Senior Researcher, NIGT

Panellist 1.
Dr. Minsu Son,
Research Fellow, KICT

Panellist 2.
Dr. Pham Tran Hai,
Principal Advisor, IRUS, Viet Nam

Panellist 3.
Mr. Jae H. Lee,
General Partner, Zeitgeist Capital, USA

Thank you for your attention.



Harmonizing Innovation Growth
and Climate Resilience
: AI-based NBI Platform
for Climate Technology Cooperation
in the Asia-Pacific Region

Hosted
by



주태국 대한민국 대사관



ESCAP
Economic and Social Commission
for Asia and the Pacific



과학기술정보통신부

Organized
by



APCTT
Asian and Pacific Centre
for Transfer of Technology