

Global Business Progress Status

Transportation transition and carbon reduction initiatives are being implemented across Asia, with a primary focus on Southeast Asia. These initiatives were temporarily suspended due to the COVID-19 pandemic and are currently being expanded following participation in the 2022 G20 Summit.



Indonesia

- Executed a contract with IIE (Indonesia Institute for Energy Economics) for the development of REGEN POWERTRAIN remanufacturing.
- Proceeding with the registration of a Phase 1 carbon emission reduction methodology for riders on the transportation and delivery platform NUJEK.
- Signed a Memorandum of Agreement (MOA) with the national automotive company MAB for the development of a mass-market electric motorcycle.
- Entered into a partnership agreement with United Bike, the largest electric two-wheeler manufacturer.
- Executed a joint venture agreement for motorcycle remanufacturing with ELDERS.



Malaysia

- Conducted testing and feasibility assessments for a national vehicle program in collaboration with the Automotive, Robotics and IoT Institute (MARii) under the Ministry of Investment, Trade and Industry (MITI).
- Participated in E-MOBILITY ASIA 2024, Malaysia's leading electric mobility exhibition.
- Established industry-academia collaboration with UTHM for the development and testing of a national vehicle program.



Viet Nam

- Pursuing regulatory amendments to enable the electrified remanufacturing of internal combustion engine (ICE) motorcycles, a primary mode of transportation.
- Proposed a remanufacturing project involving approximately 300,000 confiscated and impounded motorcycles in collaboration with the Vietnam Police Agency.
- Submitted a project proposal in December 2022 to support Viet Nam's Nationally Determined Contribution (NDC) targets.



Philippines

- In September 2022, submitted a government project proposal through the KBL Party and executed a Memorandum of Agreement (MOA) for electrification transition. The total number of motorcycles and tricycles subject to remanufacturing is estimated to exceed approximately 8 million units.



Lao PDR

- Executed a government contract with the Lao PDR government for an electrification transition project targeting internal combustion engine taxi tuk-tuks.



India

- Engaged in discussions with INDURE of India regarding the establishment of a REGEN powertrain remanufacturing plant and component manufacturing facility, including the development of a nationwide dealership network and distribution supply across India.

Motorbike/Tricycle Electrification as Major Cause of Air Pollution in the Philippines

Approximately 8 million motorcycles and tricycles to be remanufactured

Internal combustion engine Motorcycle/Tricycle

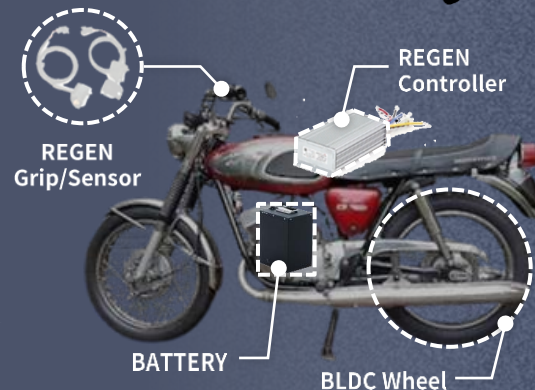
Based on fuel efficiency of 3.34L/day
when driving 100km per day

Daily CO₂ emissions: **7.78kg CO₂eq**

Daily carbon emissions based on
8 million units

62,240 CO₂eq/ton

REGEN POWERTRAIN Remanufacture(SDM)



Based on 3.34kWh/day fuel consumption
for 100km per day

Daily CO₂ emissions **1.56kg CO₂eq**

Daily carbon emissions based on
8 million units

12,480 CO₂eq/ton

※ Existing electric motorcycles emit 2.33 CO₂eq/kg per day

Carbon Credits Calculation

ICE **62,240 CO₂eq/ton**

Remanufacture **12,480 CO₂eq/ton**

Day **49,760 CO₂eq/ton**

X 12month

18,162,400 CO₂eq/ton

X 15 USD (VCM Carbon Credit)

270 million USD

3,957 KRW

※ Approximately USD 2.7 billion
for 10 years of recognition

Motorbike/Tricycle Electrification as Major Cause of Air Pollution in the Philippines

Business Fund Utilization Strategy

✓ **EDCF : Economic Development Cooperation Fund**

- **Established by the Korean government to enhance economic cooperation.**
A policy fund established to support the industrialization and economic development of developing countries, and to promote economic cooperation between Korea and these countries.
- **It is a form of concessional loan (tied aid) provided on the condition that Korean products and services are purchased.**

✓ **GCF : Green Climate Fund**

- **An international financial institution that supports developing countries in reducing carbon dioxide emissions and responding to climate change (headquartered in Incheon, South Korea).**
- **In 2024, the GCF selected nine projects in the Philippines and plans to provide USD 137.7 million (approximately KRW 190 billion) in support.**

✓ **Re-lending**

- **Credit lines are established with local overseas banks to facilitate payment support.**
- **A type of indirect financial instrument in which funds are re-lent to domestic importers for the purpose of settling payments for goods imported from Korea.**

The future of national transportation system, 'The people's car'

By developing and distributing **REGEN POWERTRAIN** domestic vehicles for transportation vehicles that generate excessive CO₂ emissions due to existing internal combustion engines or aging, it is possible to create new jobs, expand business areas related to carbon reduction, and strengthen the competitiveness of NDC.

15,000,000 unit + α
(α : Overseas exports, carbon credits, etc.)

REGEN
POWERTRAIN
and



SDM METHODOLOGY
GLOBAL REGISTRATION

'The People's Car'



- ✓ creating new jobs
- ✓ Expansion of carbon reduction-related business areas
- ✓ Strengthening NDCs competitiveness



Delivery Platform Carbon Reduction and Carbon Credits (Indonesia)

For 32,510 NUJEK riders operating on Indonesia's transportation and delivery platform NUJEK, the registration of a **"Phase 1 carbon emission reduction methodology covering an initial cohort of 450 riders"** has been initiated.

A REGEN POWERTRAIN pilot model is scheduled to be supplied for NUJEK.



"Even cow emissions are subject to carbon taxes now?"

Delivery platform companies are not classified as sectors with mandatory carbon reduction obligations related to manufacturing; however, future obligations are expected to apply to carbon emissions generated by their primary operational means—such as motorcycles—used in delivery services (currently under development).



**REGEN
POWERTRAIN
and**



**SDM METHODOLOGY
GLOBAL REGISTRATION**

**Carbon
Reduction**

**GLOBAL STANDARDIZATION
(UNFCCC SDM METHODOLOGY)
GLOBAL SCALE-UP**

**CARBON REDUCTION TECHNOLOGY STANDARDIZATION
MANDATORY IMPLEMENTATION OF REGEN POWERTRAIN**

Carbon Reduction & National Vehicle Feasibility and Local Testing (Malaysia, Industry–Academia Collaboration)



MINISTRY OF
INVESTMENT, TRADE AND INDUSTRY

Malaysia Automotive, Robotics & IoT Institute

A public-sector think tank and research institute for the transportation sector under the Ministry of Investment, Trade and Industry (MITI), mandated to strengthen the overall transportation ecosystem by enhancing capabilities across technology, human capital, supply chains, market development, and after-sales support.



Industry–Academia Collaboration
(National Institute of Technology)

Supply of REGEN POWERTRAIN pilot model in Malaysia scheduled for March 2024.



**Technology & Cost Competitiveness
in the Global Two-Wheeler Carbon Reduction Market**

Technology Transfer

- ✓ Enhancing Malaysia's technology competitiveness
- ✓ Establishing domestic carbon reduction technologies
- ✓ Creating local jobs through industry–academia collaboration
- ✓ Supporting Malaysia's NDC targets

**Foundation for Manufacturing-to-Service
Business Transformation**

Digital Transformation of Transportation

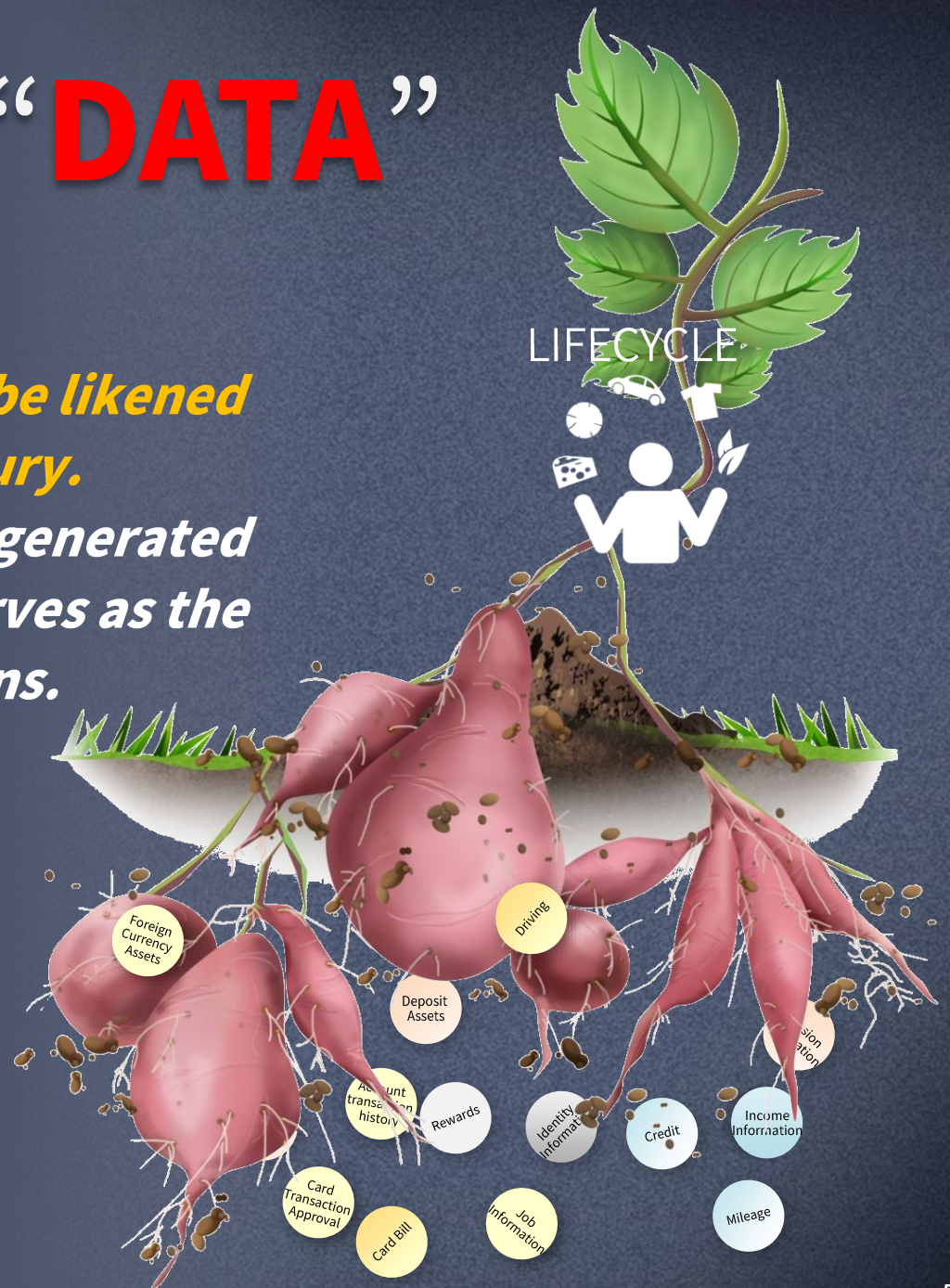


The 21st century oil “**DATA**”

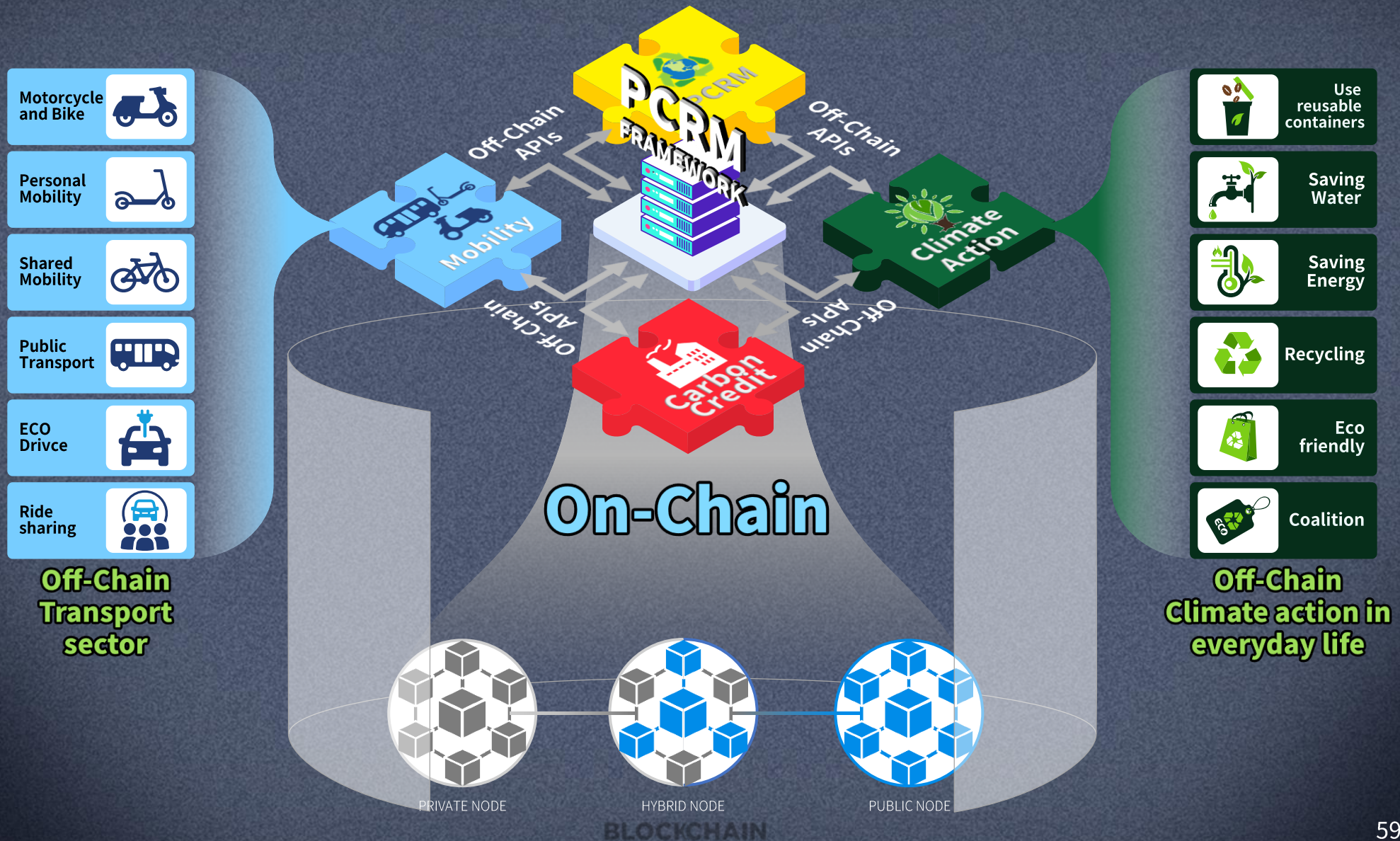
The 21st century oil “**DATA**”

Data is so important that it can be likened to the oil of the 21st century.

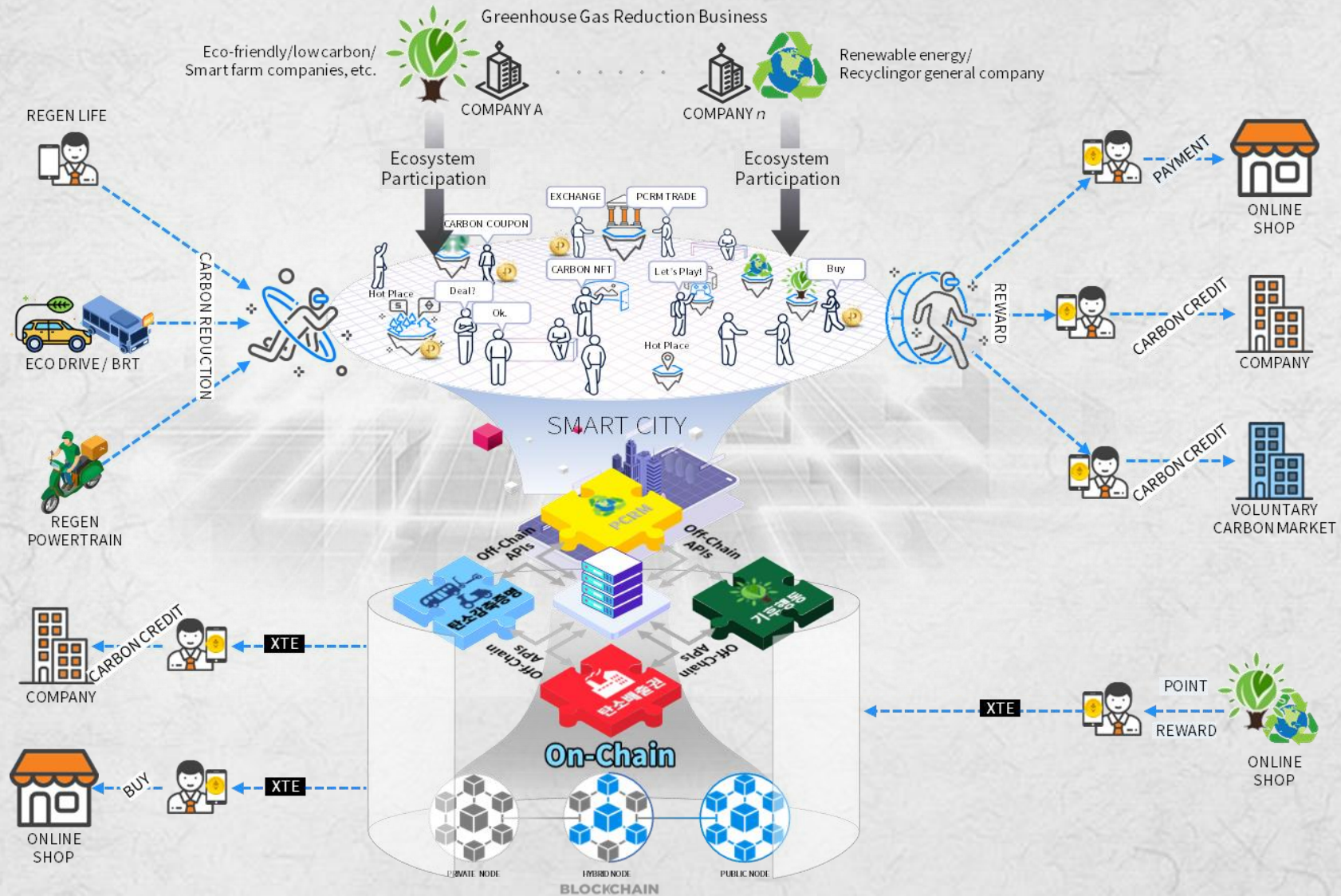
The value and necessity of data generated in daily life is increasing as it serves as the basis for carbon emissions.



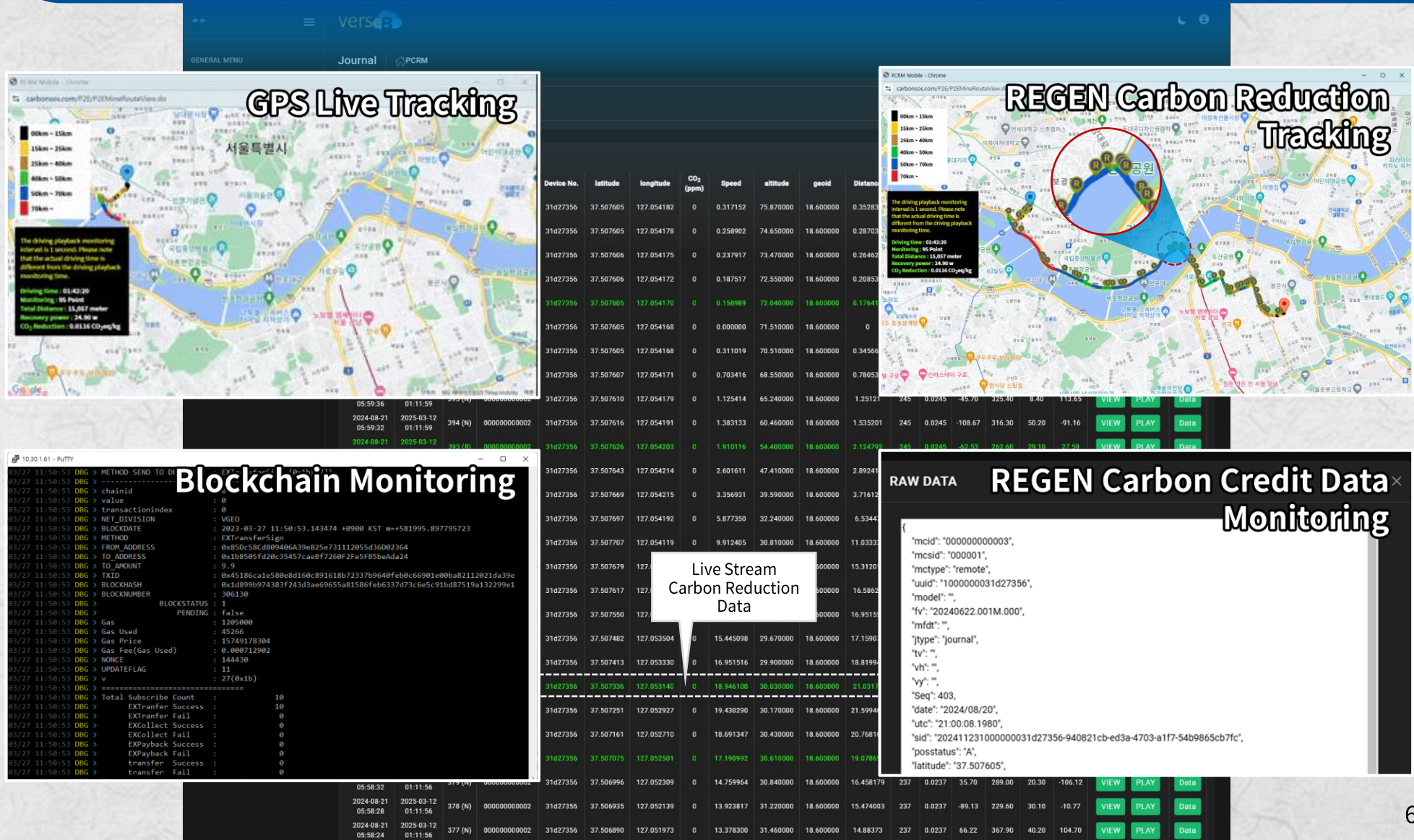
Compensation for carbon reduction proof through on-chain conversion of off-chain climate action



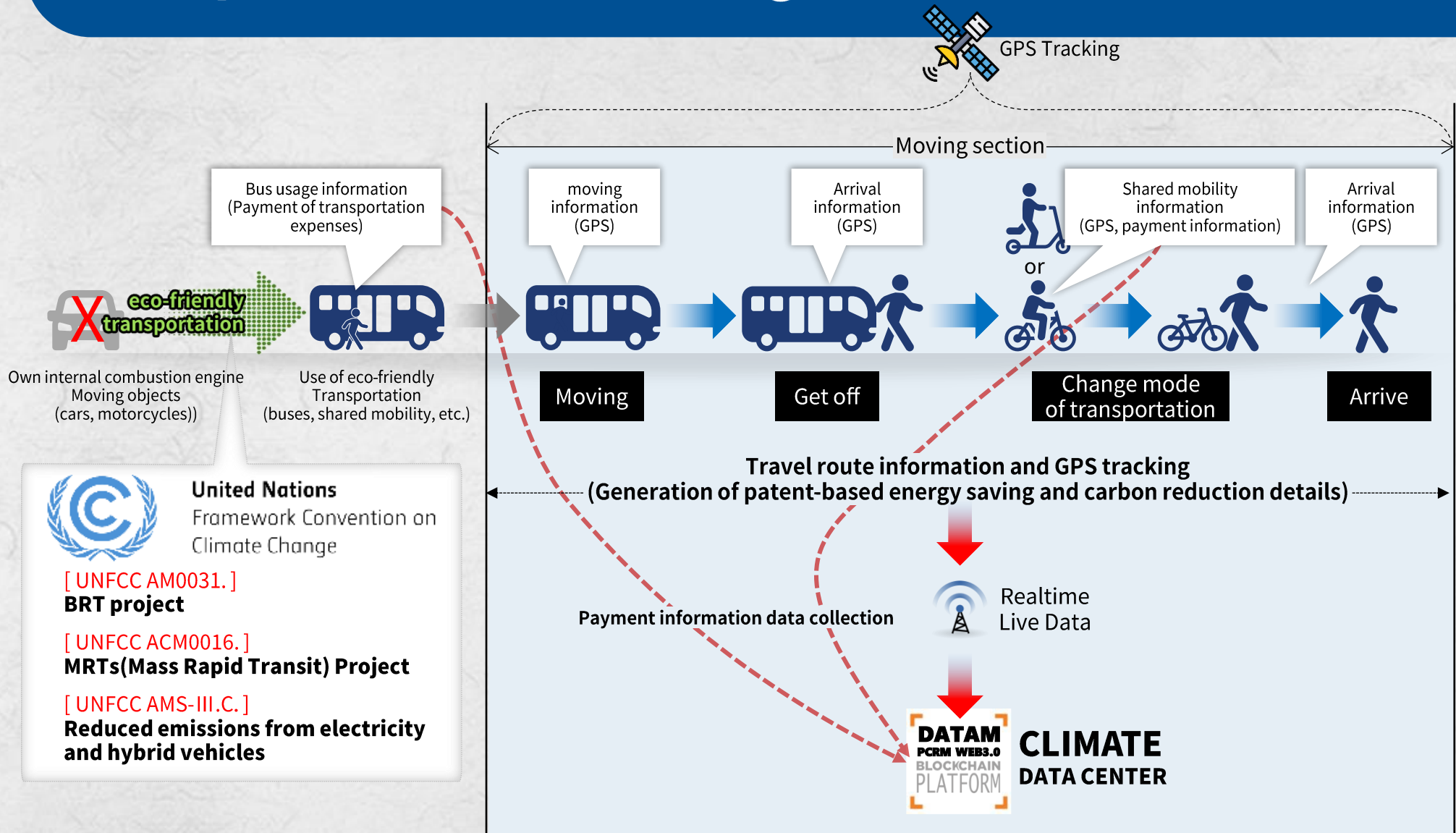
Connected Government Ecosystem



Climate Action WEB3.0 Management System



Examples of multi-channel big data collection



REGEN Carbon Reduction Certification System (Patented)



리젠드라이브

아래 정보는 매번 등록하지 않으셔도 됩니다.
변경사항만 해당항목을 수정 하시면 됩니다

탑승인원 *

화물적재량

총 주행거리

공회전 제한 시간 (초)

과속제한 속도 (km)

음성안내 ☐ 켜기 ☐ 끄기

주행시작

홈 에코포인트 WALLET My

Trip Configuration and Start

리젠드라이브

주행 중입니다. **00:00:00**

031 km 안내끄기

운행거리 **024.10** 연료소모량 **03.10** 평균연비 **8.10**
리터 Km/리터

CO₂배출량 **123.45 kg**

FUEL CUT

002.00 km 00:03:00

주행종료

홈 에코포인트 WALLET My설정

Driving and Carbon Reduction Mining Commencement

리젠드라이브

주행종료 **00:01:00**

000 km 안내끄기

운행거리 **024.10** 연료소모량 **03.10** 평균연비 **8.10**
리터 Km/리터

CO₂배출량 **123.45 kg**

FUEL CUT

002.00 km 00:03:00

주행종료

홈 에코포인트 WALLET My

Carbon Reduction Mining Completion upon Arrival

리젠드라이브

누적 리젠량 1,000P 목록보기

주행 시작 2023-03-13 09:00
주행 종료 2023-03-13 10:00
운행 시간 01:00:00 운행 거리 20 km
최고 속도 77 km/h 평균 속도 38 km/h
탄소감축량 1.46 kg 평균 연비 12.00 km/h

FUEL CUT 주행거리 0.429 km
FUEL CUT 주행시간 00:00:22
주행가능거리 170 km

급출발 0 회 급제동 0 회
공회전시간 00:00
과속시간 00:00:00 (100km/h 이상)

보상비용 10 P (2023-03-13)

홈 에코포인트 WALLET My설정

Notification of Carbon Reduction Outcomes

GPS Satellite Signal



GPS Tracking Initiation

GPS Tracking Termination

Carbon Reduction Certification Issuance



Digital MRV

Carbon Reduction Certification Request

Carbon Reduction Certification Results

Convergence of climate big data-based AI and digital finance.



New motorcycle financial products enabled by ride data monitoring and pattern analysis.

- ✓ Risk-based insurance pricing (**High-risk surcharge**)
- ✓ Discounts for safe riders (avg. speed $\leq 60\text{km/h}$)
- ✓ Business models based on ride data: financing, license management, and more



Climate Action Big Data & AI Convergence Platform

REGEN POWERTRAIN enables **DIGITAL TRANSFORMATION.**

New value can be created by integrating data accumulated from diverse climate actions with real-world big data across the full lifecycle.



Big Data

Manufacturing Servitization and Subscription Models

- ✓ Driver Carbon Indexing (Individual / Group)
- ✓ Predictive Maintenance & Traffic Data
- ✓ Road Usage Analytics (Battery Stations)
- ✓ Air Quality Monitoring & CCU

e-Mobility Consortium

Need of E-Mobility Consortium

“ **Developing a global leading e-mobility model** that combines business models and technologies ,”



**Global Vehicle
E-Mobility
Development**



2023 DIFA & E-Mobility Consortium

DATAM unveiled a leading electric two-wheeler model at the 2023 Korea Future Mobility Expo.

[이데일리 이윤정 기자] 운송수단 탄소감축 전문기업인 데이탐은 지난 19일부터 21일까지 열린 2023 대한민국미래모빌리티엑스포에서 인지감응 리튬파워트레인기술을 선보였다고 24일 밝혔다.



(사진=데이탐)

해당 기술은 전기이륜차의 기동간 배터리 방전에너지를 운전환경에 따라 약 25%~ 50%를 회수해 재발전하는 기술이다.

박계정 데이탐 CTO는 “기존 기술은 배터리 kWh당 주행거리가 평균 약 20km이지만 리튬파워트레인기술을 적용하면 약 30km 이상을 주행할 수 있다”며 “1회 충전 주행거리와 충전시간에 대한 문제점을 획기적으로 극복할 수 있는 기술”이라고 설명했다.

또한 데이탐은 이번 행사에서는 인도, 인도네시아, 말레이시아 등의 바이어들로부터 구체적인 합작사업 및 제조 기술의 정부시범사업과 기술이전 제안을 받았다. 시뮬레이터와 실 주행테스트를 통해 회수되는 에너지에 대한 실시간 모니터링 및 월 3.0기반의 탄소감축데이터 통합관리에 대한 빅데이터 운영기술이 방문자들로부터 큰 관심을 받았다.

The “K-E-Mobility Consortium” was launched to advance innovative technologies in Korea’s e-mobility sector.



사진 = K e모빌리티 컨소시엄 제공

G밸리뉴스 윤선미 기자 = EXCO에서 개최된 2023대한민국 미래모빌리티 엑스포에서 대한민국 e모빌리티 글로벌 선도 모델 개발 전략 포럼이 지난 19일부터 21일까지 열렸다.

이날 포럼은 국내·외 약100여명의 전문가들이 참석한 가운데 교통환경정책연구원과 데이탐코리아의 주최로 진행되었다.

이날 의제발표는 ▲한국 전기이륜차협회 협회 하일정장임이사의 '동남아시아 e모빌리티 선점전략', ▲오신대 스마트 자동차와 손일선교수의 '스마트배터리핵심기술소개', ▲대덕대학교 자동차학과 한정현 교수의 '국내전기이륜차 정책의 문제점 및 발전방향', ▲이영철 기후재난연합 운영위원의 '국가온실가스 감축목표 달성을 위한 글로벌e모빌리티 선도모델'에 대한 의제 발표가 있었고, 김경배 TBN한국교통방송 교통전문위원이 좌장으로 의제토론이 진행되었다.

이날 토론에서는 중국 의존의 국내·외 e모빌리티 시장에 경쟁력을 가지기 위해서는 혁신적인 배터리 및 파워트레인 기술을 발전시켜 비교우위의 기술력을 가져야 한다는 것에 의견을 모았다.

또한 이날 ▲교통환경정책연구원, ▲데이탐코리아, ▲이브텍, ▲에이선즈는 대한민국 기술이 중심이 되어 약 10억대의 글로벌 e모빌리티 전환시장을 선도하기 위한 공동의 목표를 달성하기 위해 각 기관과 기업이 가지고있는 전문성을 융합하는 컨소시엄구축 협약을 했다.

e-Mobility Consortium



Global Participating Companies Overview

(Total: 14 Companies)

- **China (2)**
(Electric motorcycles, electric bicycles, electric buses manufacturers)
- **Viet Nam (1)**
- **Indonesia (2)**
- **Malaysia (1)**
- **Philippines (2)**
- **India (2)**
- **Middle East (2)**
- **Africa (2)**

外 완성전기이륜차 3개업체

※ LG에너지솔루션 등 대기업 배터리셀 업체는 수출시점에 선택적 합류

GOALS

Global Leader in Two-Wheeler Transportation

<https://www.motoya.co.kr/news/articleView.html?idxno=35542>

곧 발표될 유로7 규제... 전기차도 규제 대상 되나?

박병하 | 승인 2022.06.16 14:25 | 댓글 0



가

2025년도부터 자동차는 배기가스 뿐만 아니라 브레이크 패드에서 발생하는 '분진'까지 규제될 전망이다. 유럽연합집행위원회(European Commission, 이하 EC)가 오는 7월 발표할 신규 자동차 배출가스 관련 규제, '유로7(Euro 7)'에 제동시 마모로 인해 발생하는 브레이크 패드의 분진까지 규제 대상으로 도입할 계획을 밝힌 것이다.



뉴스데스크

제동장치, 배출가스보다 미세먼지 많다/리포트

이승선

글자 크기 + -

인쇄

2019년 12월 13일 20시



◀앵커▶

자동차 배출가스는 미세먼지의

주요 요인 가운데 하나로 알려져 있는데요.



<https://tjmbc.co.kr/article/FeqZ4-rVE1m>

<https://me2.kr/rZOul>

데이탐, 인지감응 리젠 시스템 장착하고 동급 세계 최고 주행거리 전기오토바이 출시한다

블록체인투데이 | 승인 2022.04.09 12:35

1회 충전으로 300 km 이상 주행 가능 배달전용 오토바이 개발 착수
인지감응 리젠 시스템 온실가스 감축효과 블록체인으로 탄소감축증명

데이탐, 전기 이륜차의 테슬라를 꿈꾸다

입력 2021.05.28 오후 3:20 수정 2021.05.28 오후 3:21 | 기사원문

4 1

가

데이탐, 혁신적인 전기 이륜차 인지감응 에너지 효율화기술 개발 성공



[블록체인투데이 편집팀] 글로벌 개발에 성공한 인지감응 리젠(R) 가능한 전기오토바이를 곧 출시



<https://moneys.mt.co.kr/news/mwView.php?no=2021052815138046207>

Global transportation transformation plan

Re-manufacturing Electric Motorcycle Supply Plan by Country

Nations	Remanufacturing Plan(units)								Total
	2026	2027	2028	2029	2030	2031	2032	2033	
Indonesia	150,000	300,000	450,000	600,000	900,000	1,500,000	2,100,000	3,000,000	9,000,000
Philippines	100,000	200,000	300,000	300,000	300,000	300,000	500,000	500,000	2,500,000
India	150,000	450,000	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000	3,000,000	13,600,000
Vietnam	50,000	100,000	150,000	200,000	300,000	500,000	700,000	1,000,000	3,000,000
Total	450,000	1,050,000	1,900,000	2,600,000	3,500,000	4,800,000	6,300,000	7,500,000	28,100,000

Carbon Reduction by Re-Manufacturing Electric Motorcycle Supply by Country

Nations	Carbon Reduction (kg CO ₂ eq/Y/unit)	Carbon Reduction (ton CO ₂ e/year)								Total
		2026	2027	2028	2029	2030	2031	2032	2033	
Indonesia	646	96,900	193,800	290,700	387,600	581,400	969,000	1,356,600	1,938,000	5,814,000
Philippines	534	53,400	106,800	160,200	160,200	160,200	160,200	267,000	267,000	1,335,000
India	720.1	108,015	324,045	720,100	1,080,150	1,440,200	1,800,250	2,160,300	2,160,300	9,793,360
Vietnam	794.8	39,740	79,480	119,220	158,960	238,440	397,400	556,360	794,800	2,384,400
Annual Reduction		298,055	704,125	1,290,220	1,786,910	2,420,240	3,326,850	4,340,260	5,160,100	19,326,760
Accumulated Reduction		298,055	1,002,180	1,994,345	3,077,130	4,207,150	5,747,090	7,667,110	9,500,360	32,839,520

Joint Venture GOALS

Achieve Global TOP10!!!

In ESG and Carbon Neutrality by 2030

Spread of **Private-led Carbon Reduction** and about **15 billion** two-wheelers transportation electrification” which is about **15%** of China, Vietnam, Indonesia, the Philippines

Carbon Reduction Effect

150million ton/year, 1.5 billion ton/year

Achieving the target of carbon reduction of approximately

31
billion USD



Thank you

 DATAM KOREA