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Growing an AV Ecosystem, Step by Step

From Pilots to Scale — lessons from real-world autonomous services in Korea

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PROPRIETARY AND CONFIDENTIAL

WHO WE ARE — IN ONE SLIDE

A full-stack AV software company that runs real services

Korea's full-stack autonomous driving software company founded 2018, based in Jeju & Seoul.

We build, operate autonomous services, for both passengers and freight, under our AI driver **RideFlux Driver™.**

24,000+
Autonomous driving hours

160
Team members (50% MS/PhD)

148
Patent applications



KOREA'S FIRSTS

2020 First fully-open public AD service

2024 First driverless test permit

2026 First paid autonomous freight permit

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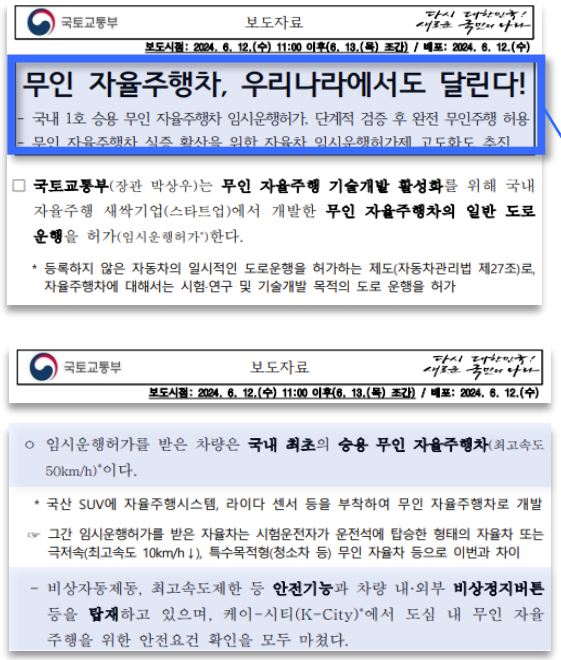
WHAT MAKES US DIFFERENT

Reaching driverless on a fraction of the capital





국토교통부 보도자료

보도시점: 2024. 6. 12.(수) 11:00 이후(6. 13.(목) 조간) / 배포: 2024. 6. 12.(수)

무인 자율주행차, 우리나라에서도 달린다!

- 국내 1호 승용 무인 자율주행차 임시운행허가, 단계적 검증 후 완전 무인주행 허용
- 무인 자율주행차 실증 확산을 위한 자율차 임시운행허가제 고도화도 추진

□ **국토교통부**(장관 박상우)는 **무인 자율주행 기술개발 활성화**를 위해 국내 자율주행 새싹기업(스타트업)에서 개발한 **무인 자율주행차의 일반 도로 운행**을 허가(임시운행허가*)한다.

* 등록하지 않은 자동차의 일시적인 도로운행을 허가하는 제도(자동차관리법 제27조)로, 자율주행차에 대해서는 시험·연구 및 기술개발 목적의 도로 운행을 허가

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○ 임시운행허가를 받은 차량은 **국내 최초**의 **승용 무인 자율주행차**(최고속도 50km/h)*이다.

* 국산 SUV에 자율주행시스템, 라이다 센서 등을 부착하여 무인 자율주행차로 개발

☞ 그간 임시운행허가를 받은 자율차는 시험운전자가 운전석에 탑승한 형태의 자율차 또는 극저속(최고속도 10km/h↓), 특수목적형(청소차 등) 무인 자율차 등으로 이번과 차이

- 비상자동제동, 최고속도제한 등 **안전기능**과 차량 내·외부 **비상정지버튼** 등을 **탑재**하고 있으며, 케이-시티(K-City)*에서 도심 내 무인 자율주행을 위한 안전요건 확인을 모두 마쳤다.

MOLIT press release · **12 June 2024**
Korea's first driverless permit for a passenger car — no safety driver in the driver's seat after step-by-step verification at K-City.

₩88.2B (≈US$64M) cumulative funding
- driverless on a fraction of the capital.

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WHERE WE STARTED

You don't need the whole ecosystem on day one

Jeju compresses a whole country's driving into one island — so we collect diverse, meaningful data fast.



- **Every road type, minutes apart**

  Signalized & unsignalized intersections, roundabouts, urban, expressway-grade, mountain & coastal roads — all within ~20 min.

- **Every weather, fast-changing**

  Heavy-snow and heavy-rain zones; conditions differ by area and shift constantly — rich adverse-weather data.

- **Real demand + a willing partner**

  15M+ annual visitors, and a local government that wanted to work with us.

The key: diverse road + weather data, gathered fast — our foundation for scaling into other regions.
We began small, then grew step by step.

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FROM PILOT TO SERVICE

How we decide a pilot is ready to become a real service

A pilot answers "can it drive?" A service must answer "can people rely on it, every day?"

OUR READINESS GATES

Stable disengagement

Low, sustained intervention rates in the target ODD

Repeatable performance

Same result day after day, not a good demo day

Public acceptance

Riders actually trust and re-use the service

WE RATCHET UP IN STAGES

Free → Paid **Safety-driver → Driverless** **Fixed route → On-demand**

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FROM PILOTS TO SCALE — TODAY

The same AI driver, across many cities and vehicle types

12
Cities

23
Services launched

201
Service-months

4.7
Satisfaction / 5.0

PASSENGER

- Robotaxi — incl. a fully driverless robotaxi PoC in Seoul Sangam
- Robobus — incl. the world's-longest 116 km round-trip public route (Jeju City – Seogwipo)
- Operating across Jeju, Seoul, Busan, Sejong, Iksan and more

FREIGHT

- Korea's first paid middle-mile autonomous trucking on public roads
- Long, repeatable routes of 56–112 km
- Gunsan–Jeonju–Daejeon · East Seoul–Jincheon · and more

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DIFFERENT ROADS TO SCALE

Robotaxi, robobus and freight don't scale the same way

PASSENGER Robotaxi & robobus

SCALING BOTTLENECK

Public trust + dense-urban ODD complexity

JUDGED ON

Ridership & satisfaction

NOTE

Fixed routes de-risk buses



FREIGHT Middle-mile trucking

SCALING BOTTLENECK

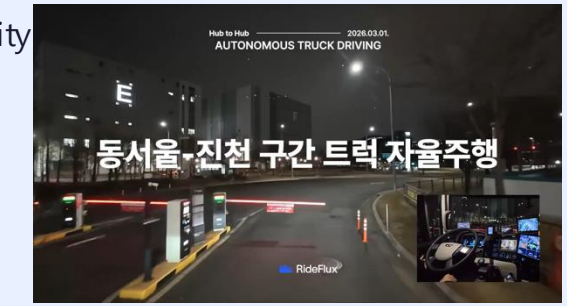
Highway-speed reliability + B2B economics

JUDGED ON

Cost per trip & schedule reliability

NOTE

Fewer, longer, repeatable routes



Shared RideFlux Driver™ core — but regulation, insurance and unit economics differ for each.

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CHALLENGES

What actually gets hard when you scale

1 Public roads ≫ test tracks

Illegally parked cars, cut-ins, unpredictable pedestrians, weather — all at once.

2 The “last few %”

Rare edge cases demand disproportionate validation. One incident can set the whole industry back.

3 Capital intensity

Vehicles, sensors, HD maps, safety staff — all paid for before revenue.

4 Keeping tech, rules & insurance in step

Keeping technology, regulation and insurance moving together is important; misalignment is where risk appears.

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Infrastructure: a safe place to validate before public roads

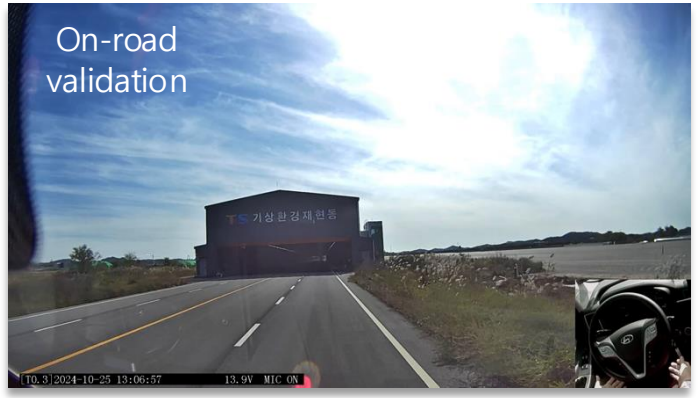
Public test infrastructure arrived in step with our technology — and cut the cost and time of real-vehicle validation.

INFRASTRUCTURE

K-City national proving ground
Every road type, one site
Free access for startups
Test slots + on-site Innovation Center
→ Real-vehicle validation, Saving the time & cost











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GOVERNMENT & PUBLIC SUPPORT

Policy and funding that opened one door at a time

Each arrived in step with our technology's readiness — a close, agile partnership between government and industry. Getting that cadence right is what keeps AV deployment safe.

POLICY

MOLIT's AV Act: permits in stages, from temporary operation to driverless, plus legal pilot zones where paid service is allowed.

Mar 2025 : Pilot zones

국토교통부
Ministry of Land, Infrastructure and Transport



FUNDING

Sustained public R&D, including KADIF
bridging a gap venture money alone couldn't.
Gwangju : city-scale, end-to-end demonstration city

Next: ~3,000 vehicles across 6 cities, **₩880B (≈US$0.6B)**



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WHAT SCALE NEEDS NEXT

Four conditions for large-scale deployment

1

Regulation ↔ technology dialogue

A regular channel so rules evolve as fast as the tech does

2

Patient financing

Public + private capital through the capital-heavy phase

3

Partnerships across the stack

OEMs, mobility platforms, logistics, telcos, insurers

4

Selective infrastructure

Invested where it clearly pays off — not everywhere at once

OUR PLAN

- Deepen driverless passenger operations
- Scale paid middle-mile freight
- Reuse the same AI driver across new cities and vehicle types

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FOR COUNTRIES JUST STARTING

Here's simply what worked for us

Every country is different — so here is the playbook we actually followed.

1. **Start with one region**

   Real demand + a willing local partner — that was Jeju for us

2. **Secure the legal basis to operate**

   Permission to operate, and a legal zone to charge for the service

3. **Start safe, then scale up**

   Safety drivers & fixed routes → earn public trust → remove constraints

Why step by step? For safety, not regulation — we prove reliability even in the edge cases before we expand, and scalable technology is what makes that expansion possible."

THE RECURRING THEME

You grow the ecosystem step by step — not all at once.

How international bodies like UNESCAP help:

- Share real operating cases across borders
- Harmonize standards so the next country doesn't start from zero

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The ecosystem follows deployment — not the other way around.

- Start small, in the right place
- Turn pilots into real services with clear readiness gates
- Expand on one core — reuse the same stack across cities and vehicle types

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For the safety, Beyond the safety

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pm@rideflux.com · www.rideflux.com · Thank you — happy to discuss.

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