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Autonomous Mobility in Europe

Deploying without leaving anyone behind

Vivetha Natterjee Head of Autonomous Product & Deployment, Bolt

20-minute thought-leadership talk · Drive Sweden Forum 2026 · Lindholmen Conference Centre · 15 September 2026

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THE CENTRAL ARGUMENT

Europe is not losing a technology race. It is at risk of losing a values race.

While the US and China deploy at scale — on their terms, with their safety standards and their data rules — Europe debates who runs the next pilot. This talk is about how to change that.

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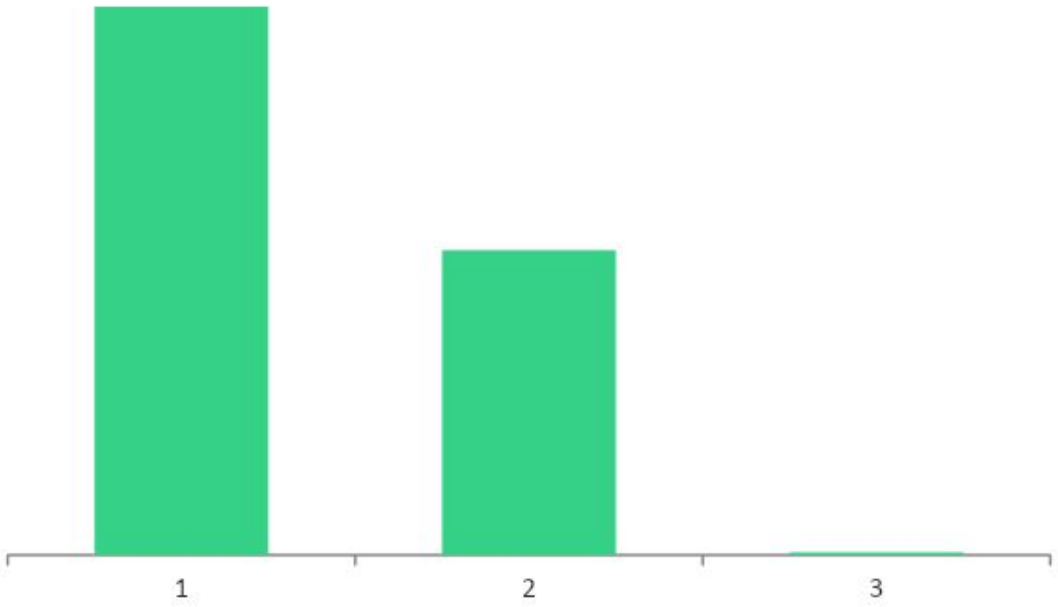
THE DEPLOYMENT GAP — TODAY

The race is already running



Commercial robotaxi rides per week (thousands). Europe = controlled pilots only.

UNITED STATES

450k+ rides / week — Waymo commercial fleet

CHINA

250k+ rides / week — Baidu Apollo Go, 10+ cities

EUROPE

35+ pilots — limited commercial routes

Source: McKinsey Center for Future Mobility, 2026

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THREE MODELS, THREE GAMBLES

Each region has placed a bet

UNITED STATES

“Move fast, patch later”

- State-by-state patchwork: CA, TX, AZ lead
- Innovation-first, liability-light
- No federal AV Act — 1,400+ vehicles testing
- Speed to market; accountability fragmented

CHINA

“Coordinate centrally, scale fast”

- Government-mandated infra & demo zones
- Apollo Go: Beijing, Guangzhou, Wuhan
- Data ecosystem as strategic asset
- Sovereignty concern for EU operators

EUROPE

“Rights-first — by design”

- GDPR, AI Act, GSR, UNECE
- No unified liability framework — yet
- Germany leads with Level 4 since 2021
- Cautious by values, not by accident

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THE EUROPEAN OPPORTUNITY

A market worth building right

€44B

Projected European AV market by 2030

38.5% CAGR — if deployment moves from pilots to reality

Robotaxis & roboshuttles

Until 2030, Europe prioritises controlled pilots and public-transport integration over full robotaxi deployment.

Autonomous trucking

Hub-to-hub trucking has the strongest near-term case. The US and Europe are set to lead globally.

The risk

Most AV use cases will launch significantly later in Europe than in the US or China — not because the tech isn't ready.

Source: WEF Autonomous Vehicles White Paper, 2025

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THE REGULATORY MAZE

Europe's biggest self-inflicted obstacle

> *"Road transport suffers from fragmentation. Traffic rules and basic vehicle standards diverge widely across the EU, limiting the capacity to roll out new mobility solutions."* **— Draghi Report on EU Competitiveness**

THE PROBLEM NOW

- ✕ No single EU AV law — a web of GSR, AI Act, GDPR, UNECE Reg 157/158/169
- ✕ No unified liability framework at EU level
- ✕ A vehicle approved in Hamburg cannot operate in Helsinki
- ✕ UK's AV Act (2024) already clearer — regulatory-arbitrage risk

COMING BY 2026

- ✓ Unified type-approval for unlimited AV series
- ✓ Harmonised ADAS / ADS testing on public roads
- ✓ Cross-border single-approval framework
- ✓ €1B Horizon Europe fund for the automotive sector

Source: European Commission COM(2025) 95 final · Draghi Report

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TRAFFIC SAFETY & VISION ZERO

Europe's moral edge — and differentiator

2.8

road deaths per 100,000 inhabitants — Sweden, a global leader in road safety

"No loss of life on our roads is acceptable." — Vision Zero, Swedish law since 1997

The floor is non-negotiable

Any AV deployment that raises Sweden's 2.8 deaths/100k is politically and ethically dead on arrival.

AVs are a Vision Zero tool

~95% of accidents are caused by human error. Proven autonomous systems eliminate that variable.

Make it a global standard

Europe should export its safety culture — set UNECE NATM as the world benchmark, not an afterthought.

Source: Smart City Sweden · ICLEI Vision Zero · UNECE NATM

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INCLUSION

The reason that changes everything

3-5%

of the urban population cannot drive due to disability or age

30%+

of Europe will be 60+ by 2050 — losing the ability to drive means exclusion

+14%

increase in mobility for elderly & disabled with shared AVs

Rural Europe's lifeline

Where the last bus left a decade ago, a Level 4 roboshuttle integrated with public transport is not a gadget. It is a lifeline. Sweden knows this better than most.

Design imperative

Ramps, voice control, screen readers, hearing loops. Accessible by design — not retrofitted. This must be a procurement condition, not an optional add-on.

Source: ScienceDirect — Enabling Mobility & Inclusion (2024) · Harper et al. (2016)

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WHY BOLT IS THE PERFECT PLAYER

The independent European platform with scale

200M+	600+	23	4.5M+
customers globally	cities across 50+ countries	EU member states with operations	drivers & couriers on platform

European DNA — not a US or Chinese import Founded in Tallinn, Estonia. Bolt understands European regulation, culture and the politics of data sovereignty — from the inside.

Partnerships already in place Pony.ai (Level 4 AV tech), Stellantis (AV-ready platforms: eK0 van + STLA Small) and NVIDIA (AI backbone + Hyperion). Trials begin 2026.

100,000 AVs on platform by 2035 A concrete public commitment backed by industrial partnerships — a deployment strategy on European roads and safety standards, not a pilot programme.

Source: Stellantis PR Dec 2025 · Reuters Nov 2025 · Zag Daily Mar 2026

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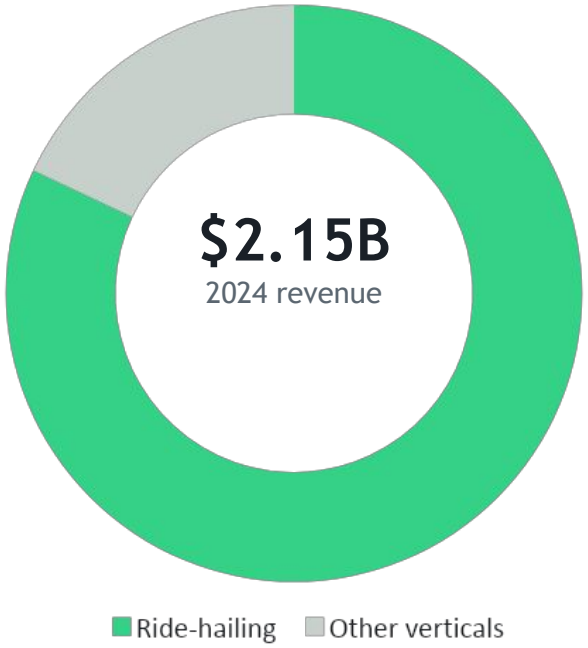
BOLT'S OPERATIONAL POWER

AVs need a platform already at city scale



82% of 2024 revenue came from ride-hailing — the AV launchpad: dispatcher, routing, pricing and fleet management already live across 23 EU member states.

105M
rental rides in 2025

40%
of users combine micromobility with transit

+8%
ridership growth year-on-year

First & last mile: 30%+ of scooter trips begin or end within 100m of a public-transport stop. No AV startup can buy this foundation — Bolt already has it.

Source: Sacra / Bolt financials 2024 · Zag Daily Jan 2026 · Bolt.eu

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SUSTAINABILITY & CLIMATE

Autonomous mobility as a 2030 climate tool

−38%

CO_2 per km

shared AV vs private car

23%

less congestion

smoother AV flow cuts idle emissions

40%

lower energy use

platooning + route AI vs mixed traffic

2030

target year

Drive Sweden Transformation Roadmap milestone & Sweden's −70% transport target

Electrification × shared AV = multiplicative decarbonisation An electric AV serving 8–12 rides/day replaces up to 6 private cars. With green electricity, this is the fastest route to Scope 1 transport zero.

Trafikverket + Drive Sweden Transformation Roadmap: data-driven policy **Sweden's STRADA road-data system feeds real-world AV safety validation, linking safety, emissions and deployment in one governance loop.**

Energy-demand shaping: AVs as grid assets Autonomous fleets can charge off-peak, integrating with renewable supply curves — turning mobility into an active participant in grid balancing.

Source: Drive Sweden Transformation Roadmap, June 2026 · Trafikverket STRADA · IEA EV Outlook 2025 · UITP 2024

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WHY IT MATTERS

Robotaxis advance autonomous mobility — and Europe's goals

THE ROBOTAXI SYSTEM

- Electric & shared by default
- High utilisation — one AV replaces up to 6 cars
- Autonomous driving removes human error
- Optimised routing & smart off-peak charging

CLIMATE & SUSTAINABILITY

−38% CO_2/km · 40% less energy · −23% congestion

- Fit for 55 — −55% EU emissions by 2030
- Zero-emission new cars from 2035
- Green Deal — climate-neutral EU by 2050
- −90% transport emissions by 2050
- Sweden — −70% transport by 2030

TRAFFIC SAFETY

~95% of crashes stem from human error — removed by autonomy

- No speeding, distraction or impaired driving
- Consistent, rule-compliant behaviour
- Sweden Vision Zero — no deaths or serious injuries
- EU — halve road deaths & serious injuries by 2030
- EU Vision Zero — near-zero by 2050

Source: EU Fit for 55 & CO_2 car standards · EU Road Safety Policy Framework 2021–2030 · Sweden Vision Zero

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SWEDEN'S UNIQUE POSITION

The deployment stack already exists — here

Lindholmen Science Park

Gothenburg — Europe's leading AV test environment; hub for Volvo, RISE and cross-border pilots.

RISE Research Institutes

Applied AV research, safety validation and test methods feeding directly into UNECE standards.

Transportstyrelsen

Vision Zero architect. Globally trusted road-safety data infrastructure — the STRADA system.

Vision Zero framework

The global benchmark for road-safety ethics — the standard all AV deployment should be measured against.

Drive Sweden Transformation Roadmap

Published June 2026 with Transportstyrelsen: national roadmap from pilots to integrated AV mobility by 2030. Identifies the structural impasse and sets a mid-2027 sub-target. Three priorities: national governance, modernised regulation, model regions. Taxi and ride-hailing named as the primary AV entry point.

Source: Lindholmen · RISE · Trafikverket · Vision Zero · Drive Sweden Transformation Roadmap, June 2026

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VÄSTRA GÖTALAND · ROLLOUT 2026–2035

Deploying across Västra Götaland

2026

2026-2028
Urban robotaxis

2028-2030
Suburban → urban on-demand

2030-2033
Shared roboshuttles

2033-2035
Private cars automated

Urban robotaxis go live in central Göteborg.

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BRINGING OUR DRIVERS WITH US

No one left behind: careers that grow with autonomy

1 TODAY

Driver

Earn flexibly on the Bolt platform and build a track record and rating.

2 GROW

Small-fleet entrepreneur

Own and manage several vehicles — and create jobs for other drivers.

3 2026+

AV safety operator

Onboard safety driver supervising and validating early autonomous routes.

4 SCALE

Remote-operations entrepreneur

Run teleoperation and fleet-monitoring hubs that keep AV fleets moving.

…plus growing demand for charging, maintenance, cleaning, depot and field-support roles across the fleet.

FOR DRIVERS

Reskilling into higher-value, better-paid roles — evolution, not redundancy.

FOR RIDERS

Safer, more affordable and more available rides — accessible to everyone.

FOR SOCIETY

Jobs upgraded, mobility for those who can't drive, and progress toward Vision Zero.

Bolt's commitment: deploy autonomy without leaving drivers, riders or communities behind.

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THREE QUESTIONS FOR THIS ROOM

01

Break the structural impasse — who goes first?

Drive Sweden's Transformation Roadmap names the deadlock: international players await national signals; public actors await political direction. The mid-2027 sub-target is 20 months away. What does this room commit to unblocking — and who leads?

02

Who owns the safety bar?

Is the EU Commission the right body to set global AV safety certification — or should Sweden's Vision Zero tradition anchor a European-led UNECE standard first?

03

Procurement as policy?

Can public-transport procurement requirements — mandating accessibility, safety and data sovereignty — become Europe's most powerful lever for shaping how AVs are built?

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WHAT TO COMMIT TO — STARTING NOW

A five-point mandate

1	**Harmonise regulation**	Accelerate the EU 2026 unified type-approval framework. In parallel, implement Drive Sweden's mid-2027 national clarity sub-target — Sweden doesn't need to wait for Brussels to move first.
2	**Anchor in Vision Zero**	Make Sweden's 2.8/100k the floor, not the aspiration. Set UNECE NATM as the global AV safety standard.
3	**Design for inclusion**	Mandate accessibility in all AV public-transport procurement — by default, not by exception.
4	**Build the liability bridge**	Give industry the legal clarity to invest at scale; replicate Germany's mandatory Level 4 insurance model EU-wide.
5	**Build for operations at scale**	Stand up the operational backbone autonomy needs — teleoperation hubs, depots, charging and maintenance — and reskill drivers to run it. Drive Sweden's 200-partner ecosystem — OEMs, cities, operators, academia — is the coalition to build this. Time to shift from research mode to deployment mode.

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DRIVE SWEDEN FORUM 2026

Deploy smarter.
Not faster.

Harmonise regulation · Anchor in Vision Zero · Design for inclusion · Build the liability bridge · Build for operations at scale

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Drive Sweden — 200 partners, a decade of research, and a Transformation Roadmap published this June — is the ecosystem that turns Europe's AV ambition into operational reality. Not from behind a desk in Brussels. From Lindholmen, on real roads, with real people.