

A decorative graphic on the left side of the slide, consisting of several concentric, broken circular arcs in various shades of blue, creating a sense of motion or a target.

2026

A re-calibration of Robotaxi: operational model, technical breakthrough, and supply chain

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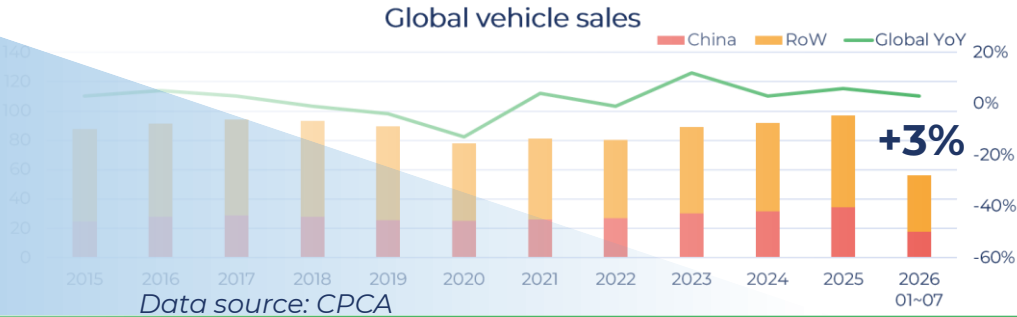
OUTLINE

- Global automotive trends
- Status of robotaxi & 5 key driving factors
- Forecasts of robotaxi and impacts
- Economic models of robotaxi vs human drivers
- Summary



After a year of growth, constraints are on the way

- Growth has picked up in recent months, bringing total growth to 3%, led by India (+19%) and ASEAN (+10%)
- China shows a K-shaped development: domestic -20%, export +62% (BYD gains more profit from exports than domestic sales for the first time)
- European players are suffering from market contraction, leading to layoffs



Oil price fluctuations are pushing xEV adoption

- 800V + SiC are becoming mainstream, significantly easing BEV charging anxiety as power levels keep rising beyond 1MW
- GaN-based OBC & DC/DC is entering production
- Embedded-die (module-free) designs are attracting collaboration across the supply chain

LLM-based AI is the heart of intelligent cars

- Breakthroughs in L3/L4 legislation in China will create a new market, while L2+ adoption grows with continued improvement and financial backing
- L2+ and L4 are converging technically, significantly accelerating robotaxi fleet growth and operations globally



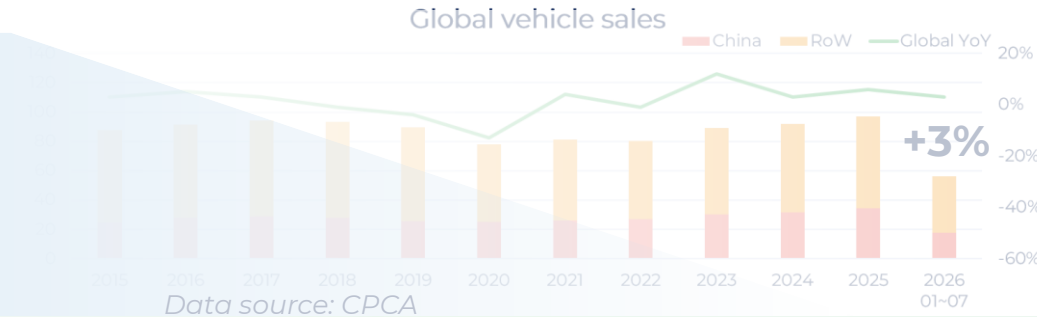
Automakers face a chip shortage driven by AI data-center demand

- The supply shortage and price hikes for memory (DRAM and NAND) show no signs of stopping, and capacity is shifting toward power management ICs
- In the transition to zonal E/E architecture, 10BASE-T1 is becoming a new backbone at the edge
- 48V power networks are increasingly adopted, now featured in a second Cybercab model



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- LLM-based AI agents are an emerging trend in new infotainment systems



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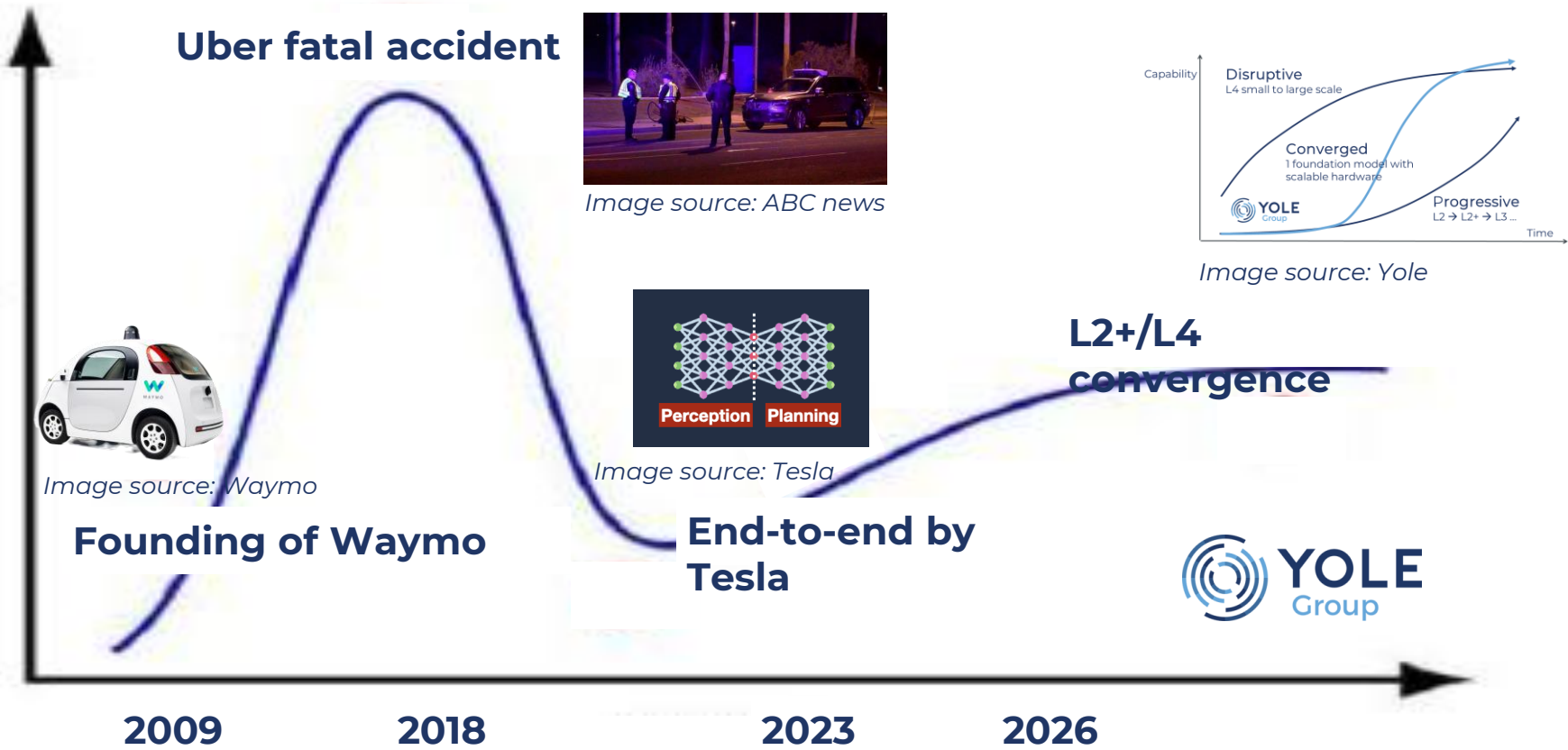
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A COMEBACK OF ROBOTAXI

Robotaxi is not a new concept, but recent technological progress signals that genuine adoption has begun.

Hype cycle of robotaxi



5 DRIVING FACTORS OF ROBOTAXI

Robotaxi Eva Cab



Image source:
Geely booth @ Beijing Autoshow 2026,
Photo by Yole Group



Significant reduction in BOM costs due to scale of economy and redundancy reduction



Operational excellence increasing revenue while reducing operational costs



Data-driven algorithms (E2E since late 2023) provide a feasible path



'Hybrid' operation, mixing driverless robotaxis and traditional taxis, greatly improving consumer experiences and reaching profitability



L2+/L4 convergence leveraging real-life data from massive L2+ fleets to improve L4 robotaxi using the same foundation models

ENGAGEMENT IN ‘HYBRID’ OPERATION MODE

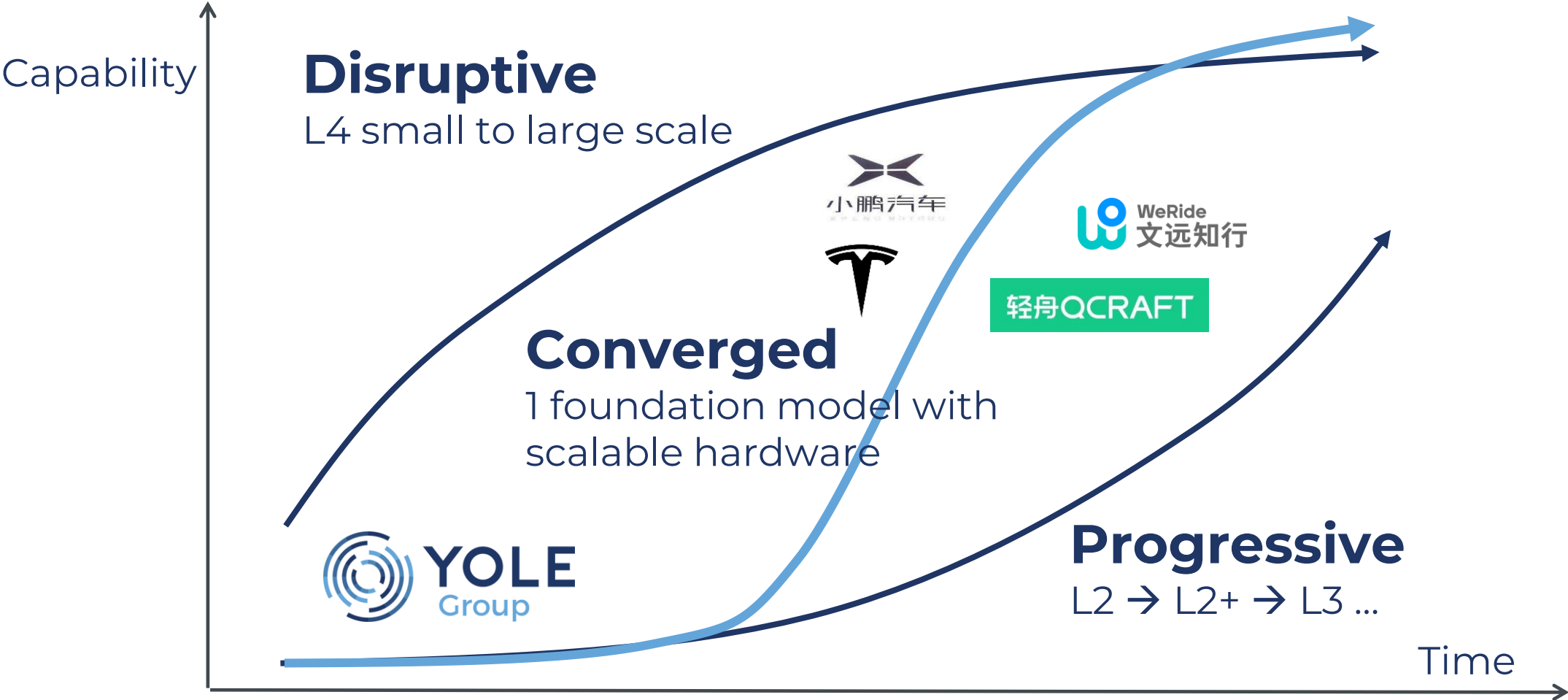
‘Hybrid’ mode means consumers have more willingness in calling robotaxi. More importantly, it assures the positions of mobility service providers.

	Own platform	Uber	lyft	Grab	Others
		Limited cities in the US	In the US (Nashville)		
		In UAE & the UK	In the UK & Germany		
		In Saudi Arabia, UAE, & Switzerland		In Singapore	In Europe 
		In Croatia (to expand)			
		In the US (LV)	In the US (LV)	In Singapore	
		In the US (LV)			
	 如祺出行				In China 
					
					
	MOIA				

Non-exhaustive list

L2+/L4 CONVERGENCE

A new unified architecture, built on a single autonomous-driving foundation model, is emerging to converge L2+ mass-market assistance with L4-grade autonomous capabilities, as demonstrated by players such as Tesla and XPeng.



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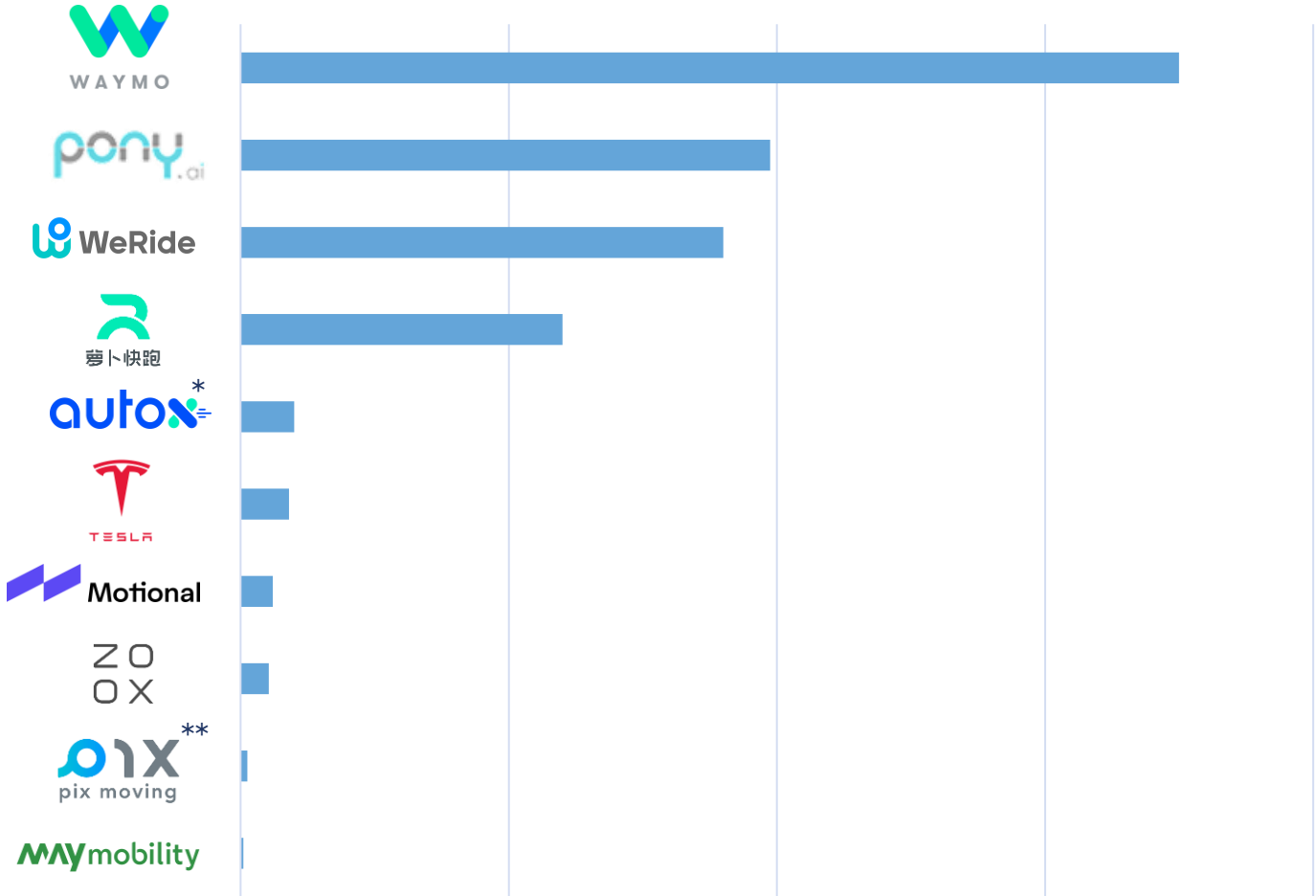
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Rank of unsupervised operational fleet

 **YOLE**
Group

As of July 2026
Estimated by Yole Group



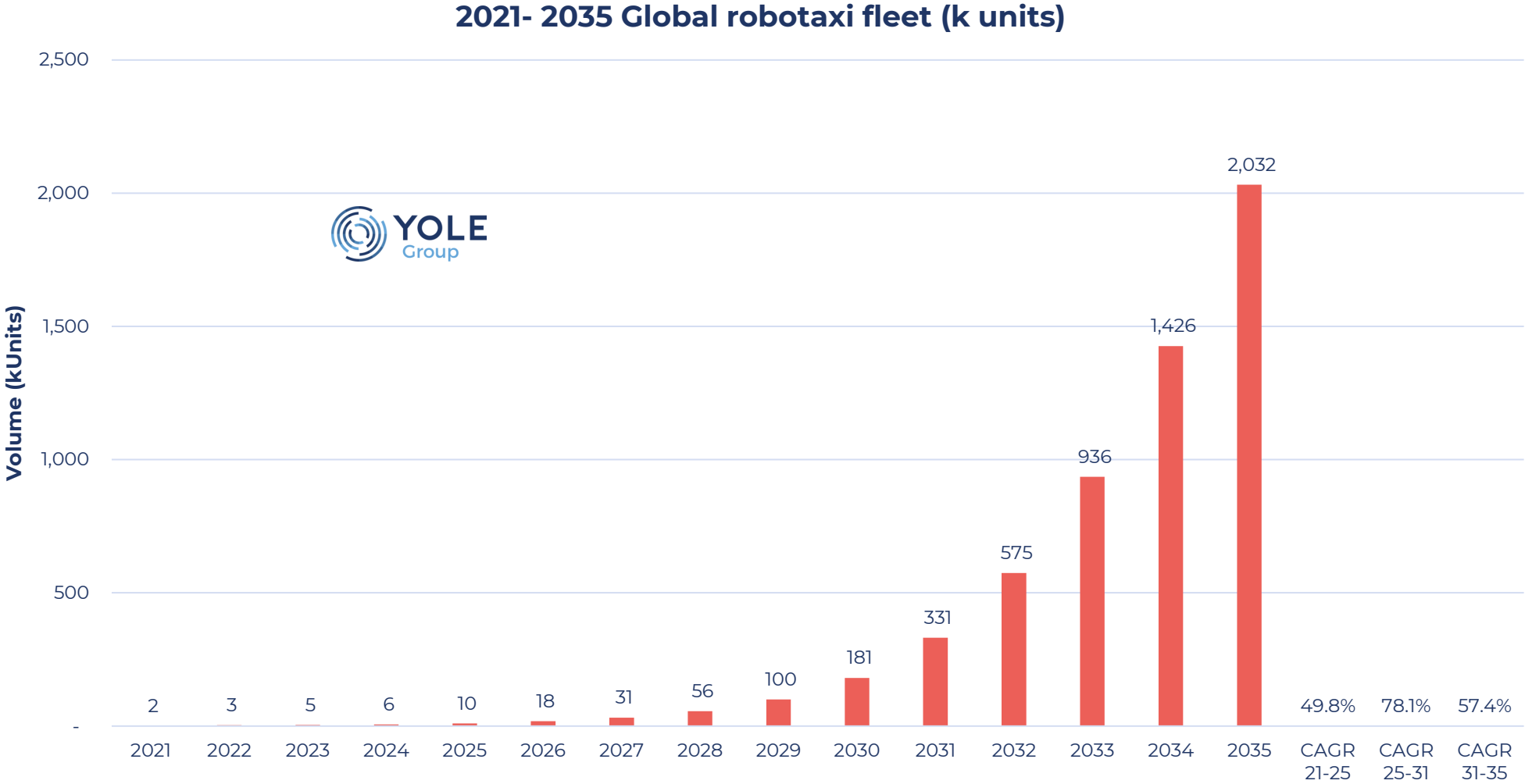
**AutoX has exited the robotaxi business, and its key assets have been converted to Tensor Robocar for privately owned vehicles.*

*** PIX Moving, although marketed as a 'Potato bus'/robobus, shares the features of private rides on public roads, similar to Zoox, and is therefore counted as a robotaxi.*

2021-2035 GLOBAL ROBOTAXI FLEET (K UNITS)



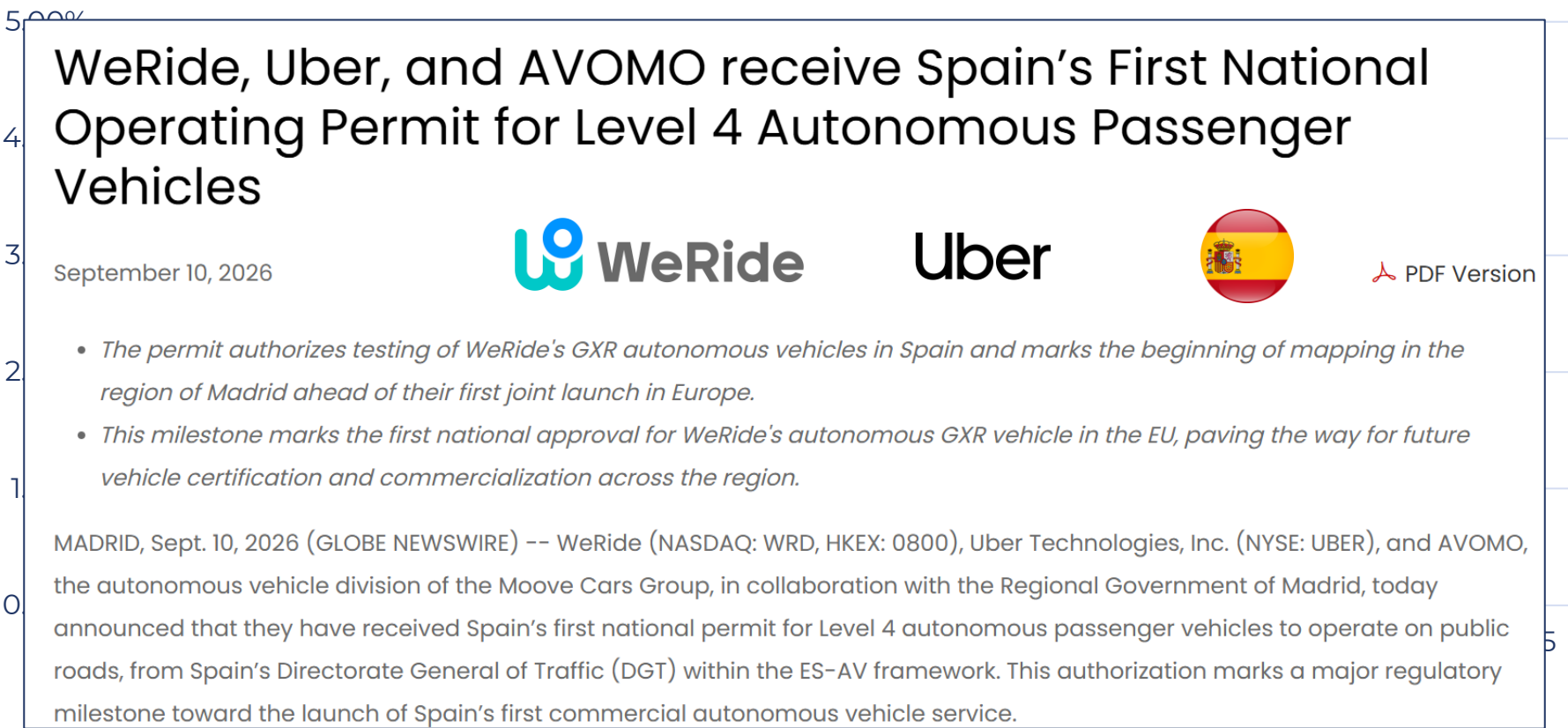
Rapid expansion of robotaxi in the next years.





Robotaxi fleets grow rapidly, but not evenly. Due to legislation, consumer acceptance, consumption power, etc., the negative impact on new cars sales is expected to hit China first, and then the US.

Impact (percentage) on privately owned cars



OEM INVOLVEMENT IN ROBOTAXI



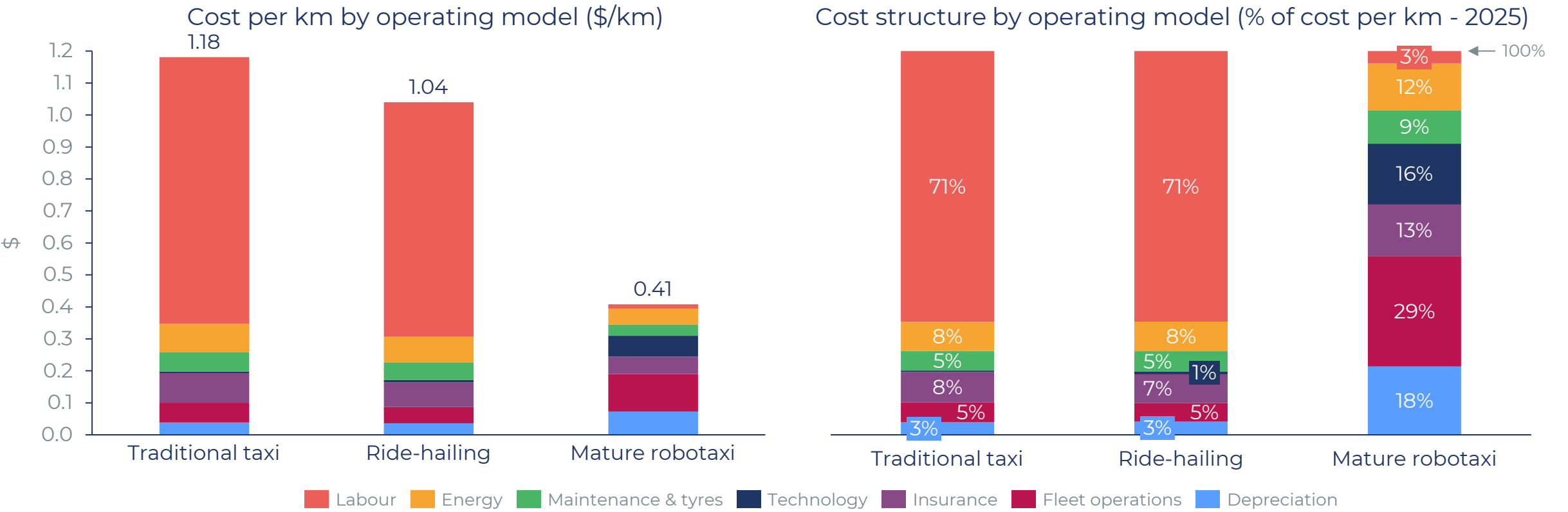
	Pilot			Production oriented	
	Vehicle	ADAS	Mobility	Vehicle manufacturing	Full engagement
Toyota	■ 			■ 	
Volkswagen	■ 		■ MOIA		
GM		■ 			
Stellantis					
Tesla					■
BYD					
Geely				■ 	■ 
Hyundai-Kia		■ 		■ 	
Ford					
Honda					
Nissan	■ 				
Renault					
Suzuki					
BMW					
Mercedes-Benz					
Tata				■ 	
Lucid				■ 	
SAIC					■ 
XPeng					■
GAC				■  	

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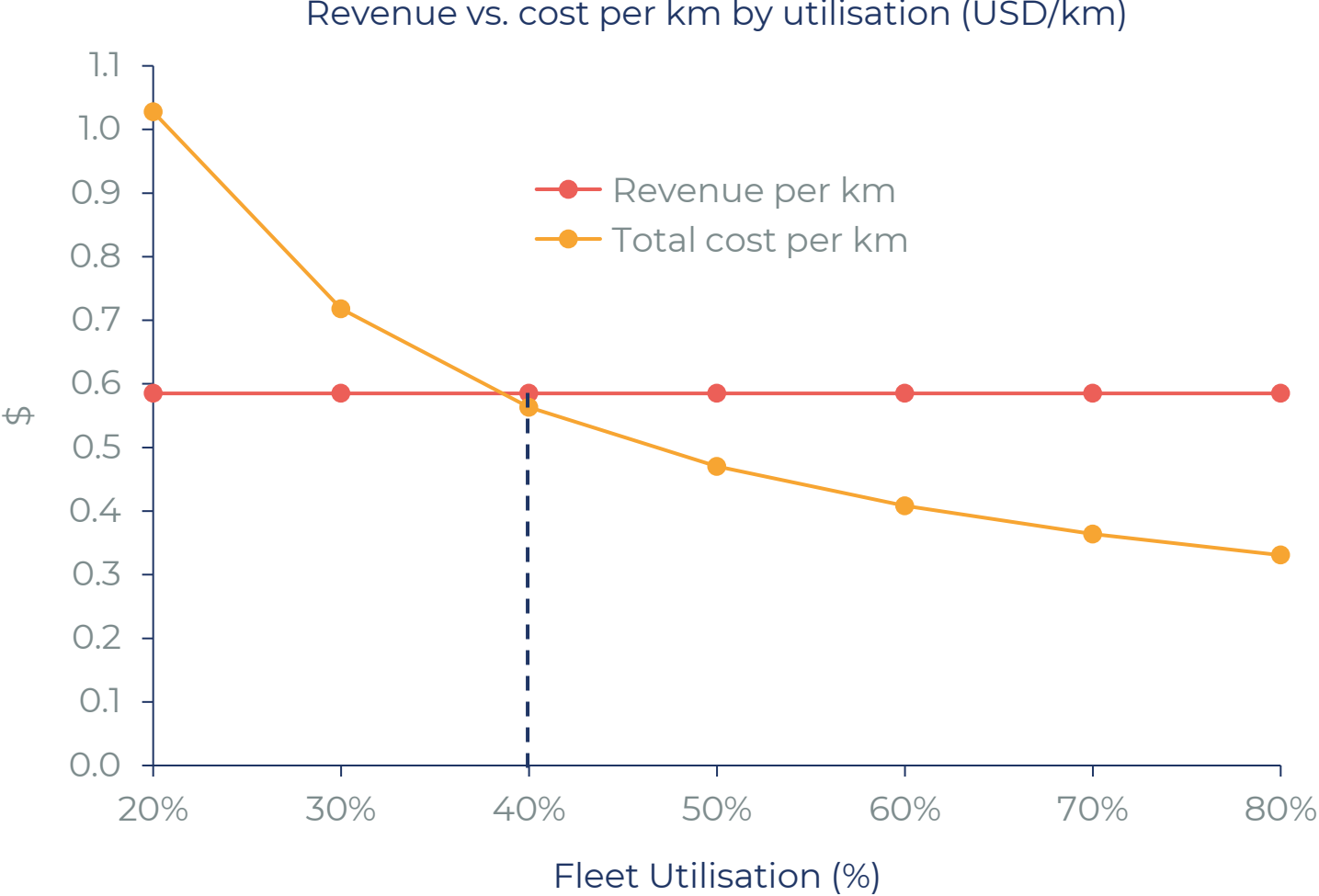
ROBOTAXI ECONOMIC MODELS

With a reference of the US mobility market, mature robotaxi reaches the lowest unit cost at \$0.41/km, around 60-65% below ride-hailing and traditional taxi.



BREAK-EVEN ANALYSIS: PROFITABLE AT MODERATE UTILIZATION

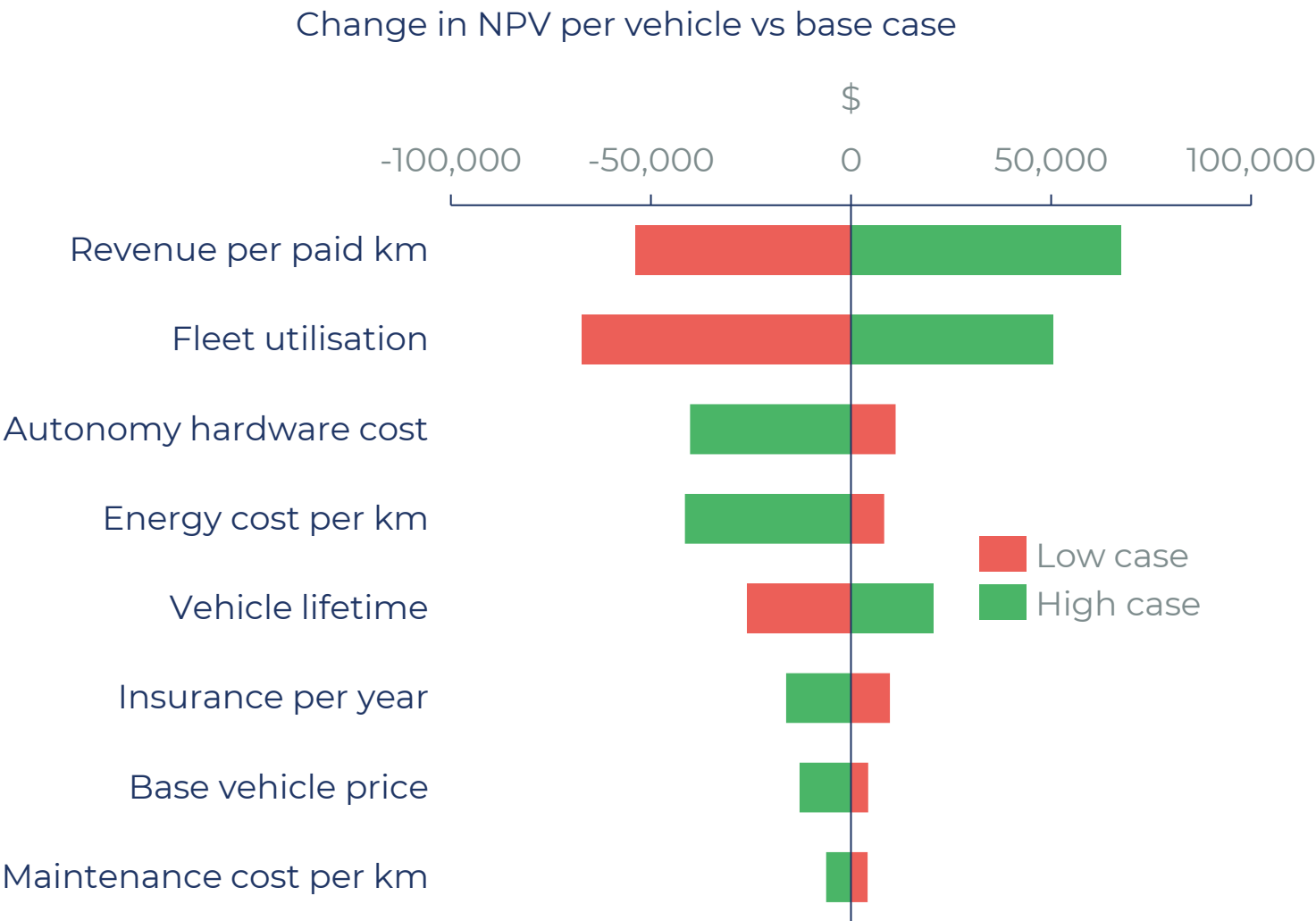
- Break-even is reached at approximately 40% fleet utilization, when cost per km falls below the \$0.585/km fare.
- NPV* per vehicle reaches \$54.8k, with a payback period of approximately 2.1 years and positive cumulative cash flow from year 3.
- EBITDA reaches \$32k per vehicle, with an operating margin of roughly 30%.
- Higher utilization improves unit economics: cost per km falls from \$1.03 at 20% to \$0.33 at 80%, declining rapidly beyond the break-even level.



Notes:
NPV (Net Present Value): the present value of future cash flows minus the initial investment. A positive NPV indicates the investment creates value after accounting for the discount rate.

SENSITIVITY ANALYSIS: REVENUE AND UTILIZATION LEAD

- Revenue per paid km is the strongest NPV driver, with a sensitivity range of about \$127k per vehicle.
- Fleet utilization is the second-largest driver, generating an NPV swing of roughly \$99k.
- Autonomy hardware and energy costs follow, each having a material impact of around \$50k across the tested scenarios.
- Vehicle lifetime, insurance, vehicle price and maintenance have comparatively smaller impacts on NPV.



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SUMMARY

- After a decade of hype and retrenchment, robotaxi is back on a fast-growth path, jointly driven by 5 technical and operational factors
- The competition is mainly between US and China players. Till 2025, Waymo led the unsupervised operational robotaxi fleet, followed by Pony.AI, WeRide and Apollo Go
- Mobility service providers, such as Uber, DiDi, and Lyft, are expanding robotaxi business
- Automotive OEMs are joining the game in various ways
- Global robotaxi fleet is forecast to grow 78% annually between 2025 and 2031
- By 2031, in leading markets, like China and the US, it is expected to see first negative impacts on new car sales
- The economic models show that, in the US with mature technologies, the mileage cost of robotaxi will be \$0.41/km, versus \$1.18/km and \$1.04/km for normal taxi and ride-hailing as labor costs are the main contributor
- Also in the US market, a minimal utilization rate of 40% is needed to reach utility economy (UE)

Thank you for your attention. Questions?



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