Reimagining Mobility: How AI Is Driving a Safer, More Inclusive Future

Helen Pan, General Manager & Board Member, Baidu Apollo Autonomous Driving USA

An Urgent Need for Safer Urban Mobility

1 Million + Deaths

Approximately 1.19 million people die each year as a result of road traffic crashes, 94% are due to human error.

20 ~ 50 Million Injuries

Between 20 and 50 million more people suffer non-fatal injuries, with many incurring a disability.

3% GDP Lost

Road traffic crashes cost most countries 3% of their gross domestic product.

Goal to Halve that Number by 2030

The United Nations General Assembly has set an ambitious target of halving the global number of deaths and injuries from road traffic crashes by 2030 (A/RES/74/299).

Source: *Report on Road Traffic Injuries, World Health Organization (December 2023)*
TRAFFIC SAFETY FACTS Research Note , NHTSA (October 2017)

A Safer Alternative – Powered by AI

Apollo Go

Baidu's autonomous ride-hailing service platform, launched in 2021.

170 million kms of real-world operations

0 major accidents

10X safer than human drivers

1/14 insurance claims compared with human benchmark

Safety-First by Design

Comprehensive Sensing for Environmental Awareness

The Apollo RT6 autonomous vehicle utilizes over 40 sensors to achieve 360-degree environment perception, enabling it to navigate complex urban environments safely and reliably.

Fully redundant, automotive-grade system

Implements multi-domain redundancy design and six-layer minimal risk conditions (MRC) to ensure system safety and reliability.

Apollo ADFM, the large model built for L4 driverless operation

Enables L4 autonomous driving that adapts to complex, real-time environments at scale and with safety.

Our Safety Framework

Behavioral Level

- Robust Driving Competence
- Conflict Management
- Social Behavior & Acceptance

Architectural Level

- System Safety
- Cybersecurity
- Vehicle Safety: Active & Passive

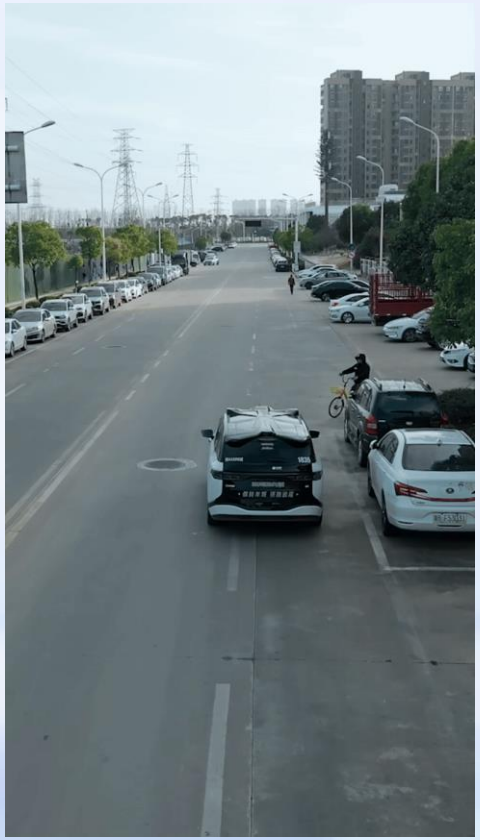
Foundational Level

- V & V & Data Feedback Loops
- Operational Safety
- Safety Culture & Governance

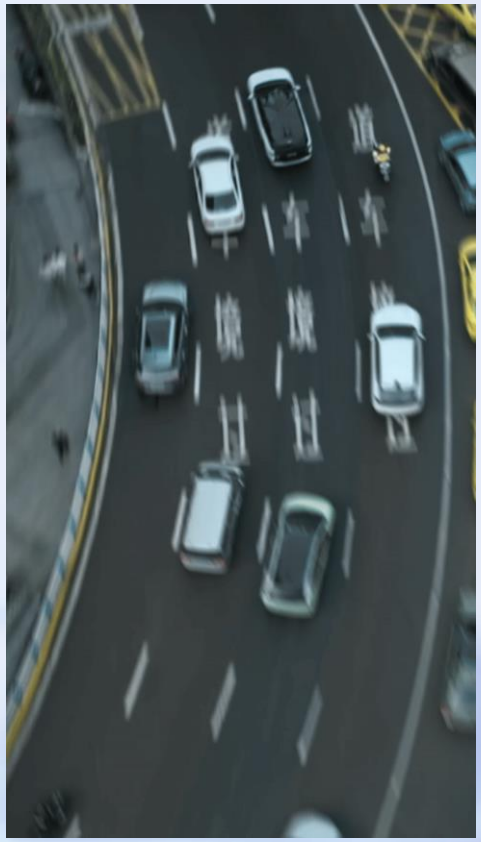
Safe Driving in Diverse, Complex Scenarios

- **Confident Navigation on Narrow Roads**

- **Immediate Obstacle Evasion**



- **Dynamic Rerouting**



Making Mobility More Sustainable & Eco-friendly

- Integration with public transportation
- Low-carbon incentive scheme

Driving the Future of Autonomous and Sustainable Mobility at Scale

- **15** Cities Globally
- **11+** Million Rides
- **1000+** Fully Driverless Vehicles

Apollo Go Accessibility Initiative

Making Mobility Easier for the Visually-Impaired

17 **million**
people with visual impairments

1/5 **only**
travel independently

Apollo Go Accessibility Initiative—a long-term program to co-create new features with vision-impaired users.

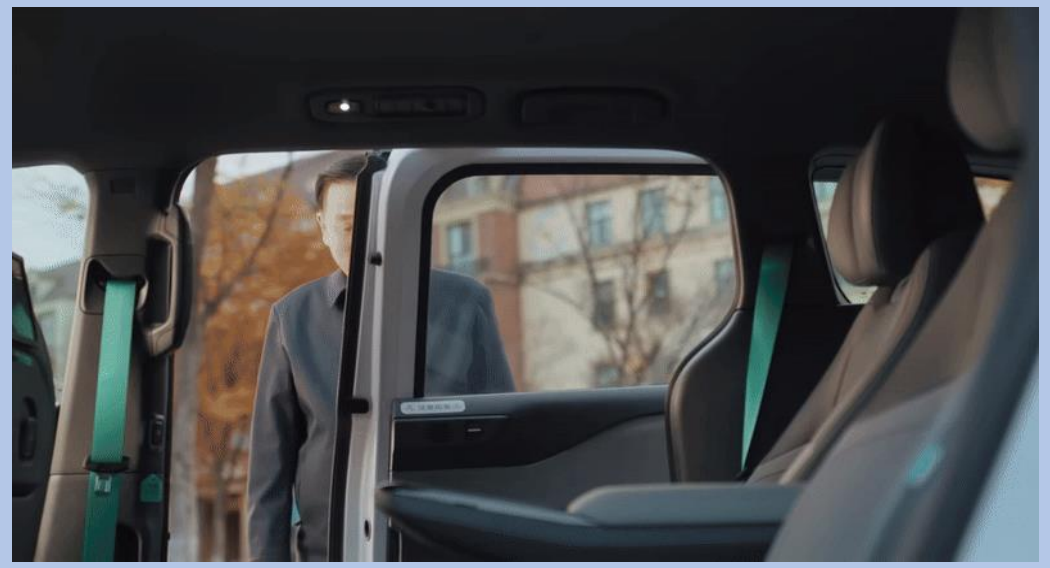
How Does the Service Work?

- **Zero-Contact Access**
- **Voice-First Control**
- **Service Dog-Friendly**

Apollo Go: Expanding Accessibility

- **Safe Travel Initiative**

- **Senior Care Program**



The Future of Mobility, Powered by AI