

# Transport innovation in Our Country

## 1. Overview of the transport innovation in our country

- The integration of technologies such as 5th-generation mobile communication (5G), the Internet of Things, big data, cloud computing, and artificial intelligence with transportation has deepened. Significant progress has been made in the construction of new infrastructure in the transportation sector.
- Our country's focus on innovation has positioned it as a global leader in various modes of transportation, including high-speed rail, bus-rapid transit (BRT), electric vehicles, and autonomous vehicles.

## 2. High-speed rail

- High-speed rail is the passenger train system that operates at **250 km/h (155 mph) or more**, providing fast and efficient travel over long distances.
- Our country has the world's **longest high-speed rail networks**.

Figure 1 China high-speed rail route map 2024



- High-speed rail is a critical component of our country's transportation infrastructure, **enlarging the transportation circles, driving sustainable growth, and reducing environmental impact**.

Transit circle	The impact brought by the high-speed rail on population mobility
0.5 hour	Increase the number of regions accessible within a 30-minute travel time, improving urban connectivity.
2 hours	High-speed rail travels at ~300 km per hour, allowing for a 2-hour journey between major cities.
1 day	Travelling between cities in a single day is possible, allowing for greater intercity population mobility.

## 3. Bus-rapid transit (BRT)

- Our country continues to expand its BRT systems to enhance urban transportation.



BRT system in Guangzhou

## 4. Electric vehicles



- Our country is the world's largest market for electric vehicles (as of 2022).
- Our country's focus on reducing greenhouse gas emissions and air pollution has catalysed the rapid development and adoption of electric vehicles.
- By 2025, our country aims to achieve major advancements in battery technology and vehicle safety, and integrate electric vehicles with renewable energy resources and smart city infrastructure to improve efficiency and sustainability across the transportation sector.

## 5. Autonomous vehicles

- Our country is rapidly becoming a global leader in the development and deployment of autonomous vehicles.



Autonomous vehicles

References:

1. California Management Review. (2024). "How Chinese Companies are Dominating Electric Vehicle Market Worldwide." <https://cmr.berkeley.edu/assets/documents/pdf/2024-03-how-chinese-companies-are-dominating-electric-vehicle-market-worldwide.pdf>
2. GIZ. (2022). "The Development of High-Speed Rail in China: Impact Research on Transportation Modal Shift and CO2 Emission Reduction Potential." [https://transition-china.org/wp-content/uploads/2022/06/20220621\\_HSR-Study-English-Final.pdf](https://transition-china.org/wp-content/uploads/2022/06/20220621_HSR-Study-English-Final.pdf)
3. Institute for Transportation and Development Policy. (2024). "The BRT Standard." <https://itdp.org/publication/the-brt-standard/>
4. International Energy Agency. (2023). "Global EV Outlook." <https://iea.blob.core.windows.net/assets/dac14d2-cabc-498a-8263-9f97d5dc327/GEVO2023.pdf>
5. International Union of Railways. (2024). "High-Speed Rail." <https://uic.org/passenger/highspeed/>
6. Railway Technology. (2023). "The 10 Fastest High-speed Trains in the World." <https://www.railway-technology.com/features/the-10-fastest-high-speed-trains-in-the-world/>
7. 中國人民共和國中央人民政府. (2020) "新能汽車產業發展規劃 (2021-2035年)." [https://www.gov.cn/zhengce/content/2020-11/02/content\\_5556716.htm](https://www.gov.cn/zhengce/content/2020-11/02/content_5556716.htm)
8. 中國人民共和國中央人民政府. (2022). "“十四五”現代綜合交通運輸體系發展規劃." [https://www.gov.cn/zhengce/content/2022-01/18/content\\_5669049.htm](https://www.gov.cn/zhengce/content/2022-01/18/content_5669049.htm)
9. statista. (2024). "Total Length of Operation Network of High-speed Railways in China from 2008 to 2023 (in 1,000 kilometers)." <https://www.statista.com/statistics/1120063/china-length-of-high-speed-rail-operation-network/>