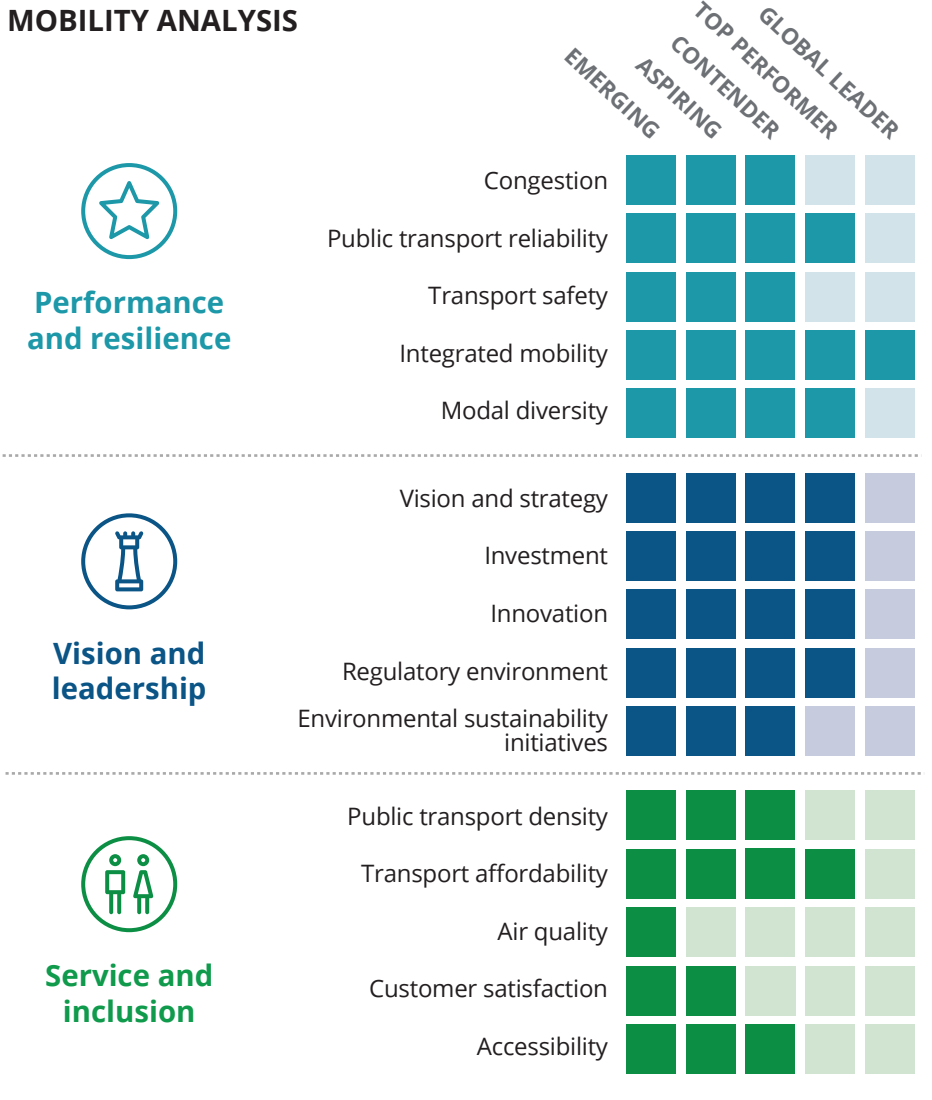




MOBILITY ANALYSIS



KEY MOBILITY STATISTICS

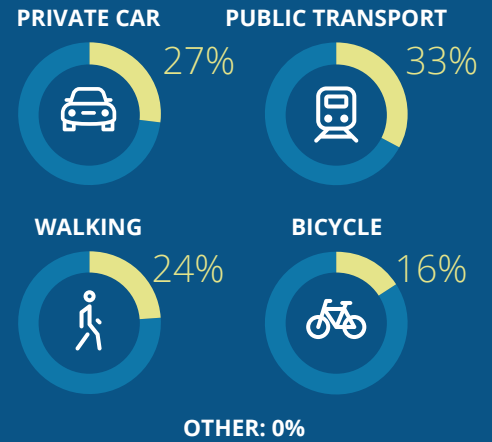
Public transport options*
 Commuter rail, light rail including metro and tram, bus, bike, ferry

Monthly public transport pass
 US\$29

GDP per capita
 US\$22,799 (CNY157,279) (2019)

Principal transport authorities
 Shanghai Municipal Transportation Commission

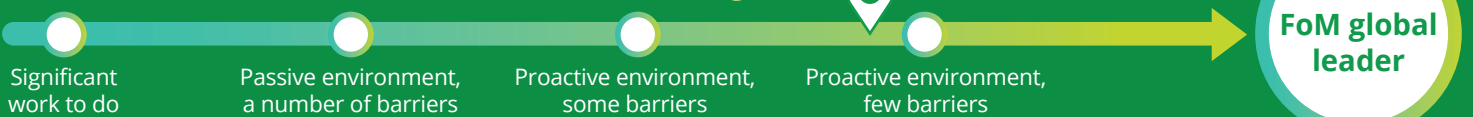
JOURNEY MODAL SPLIT



*Regulated, licensed, subsidised, and monitored by principal transport authorities.

FUTURE OF MOBILITY CAPABILITY

Shanghai



STRENGTHS

- Expansion of the rail network to outer areas, connecting more of the metropolitan area to fast and reliable services
- Active promotion of electric vehicles, through fleet programmes, expanding the charging infrastructure and various financial and nonfinancial incentives for private vehicle users
- The city deploys a range of modern technologies to improve safety, reduce congestion and enhance system operations

CHALLENGES

- Issues around shared bicycle services and unregulated parking have created a need for stricter oversight and regulation
- Industrial clusters within the metro area and sustained use of fossil fuel sources contribute to poor air quality
- COVID-related concerns resulted in a relaxation of licence plate control measures and worsening congestion after much success in containing it

Key focus areas to improve city mobility and realise the Future of Mobility:



Enhance integration of bus services with rail system in outer areas



Improve regulation of personal and private transport modes to reduce disorderly use



Implement low-emission zones in areas where air quality is poor

MOBILITY ANALYSIS FURTHER DETAILS:



Performance and resilience

Shanghai's use of a suite of high-tech solutions has enabled the city to reduce congestion and traffic accidents significantly. The focus for network expansion over the near term is to connect residents in the outer suburbs to the city centre.

- In 2019, there were fewer traffic accidents, fatalities and injuries in Shanghai, by 11, 15 and 12 per cent respectively, compared to 2018, with the introduction of a crosswalk warning system, the use of RFID-enabled licence plates and an updated surveillance system that detects traffic violations.
- The city-wide deployment of smart traffic signals and a camera system that uses artificial intelligence to harness big data has helped reduce traffic congestion by 15 per cent.
- The top priority for the next three years is to improve the integration of commuter trains from adjacent cities with the urban metro network, to create a one-hour commuting circle within the metropolitan area.



Vision and leadership

The city is expanding its network, upgrading infrastructure with state-of-the-art technologies and shifting to cleaner transport.

- Urban metro construction in Shanghai has slowed down since 2019, and the focus is now on adding a total of 286 km to three lines of the suburban rail network by 2023.
- As part of the city's 5G+ smart transport action plan, 297 metro stations will be connected to a 5G network by the end of 2020 to explore its use for safety management, intelligent operations and equipment maintenance.
- The target is to have 100 per cent zero-emission bus fleets within the central city area by the end of 2020. There are also plans to hasten the electrification of taxi fleets by replacing 5,000 hydrocarbon-powered taxis with electric vehicles.



Service and inclusion

Shanghai has an extensive and affordable public transport system, and measures are in hand to improve accessibility and air quality.

- Shanghai is increasing the accessibility of public transport to disabled and elderly people through procurement of low-floor buses, expanded barrier-free facilities and additional staff training. By the end of 2020 every bus stop in the seven districts of central Shanghai will have E-ink display boards showing real-time arrival information.
- Since 2017, bike-sharing platforms have been strictly regulated, with heavy fines for not parking in designated zones and a cap on the number of shared bikes on the road. By 2019, the total number shrank to 600,000 from a peak of 1.7 million in 2017.
- To address the poor air quality, there are incentives to trade in old and polluting vehicles for new ones that meet the China VI emission standards.

SUMMARY

Shanghai has one of the busiest, safest and most reliable metro systems globally. The city continues to invest in expanding coverage to outer areas and to improve the operation of the network through the deployment of a suite of modern technologies. It leads other Chinese cities in the commercialisation of LTE V2X technologies to enable communication between cars and infrastructure, and there are plans to trial driverless robo-taxis in designated zones. It is rapidly expanding the number of electric vehicle charging ports, adding 100,000 between 2020 and 2022.

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About the Deloitte City Mobility Index

The Deloitte City Mobility Index reviews major cities on key aspects of mobility and the resulting relationship to economic performance. Drawing on publicly available data, client conversations, and bespoke Deloitte analyses, we assess each city's ability to transport its citizens both now and in the future and therefore its potential to bring prosperity to the city.

As we receive feedback, we will update and expand the analysis, which may mean the results shown in this document may change.

For the full interactive index, visit the Deloitte City Mobility Index at deloitte.com/insights/mobility-index.

For Deloitte's insights on the Future of Mobility, visit deloitte.com/insights/future-of-mobility.

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