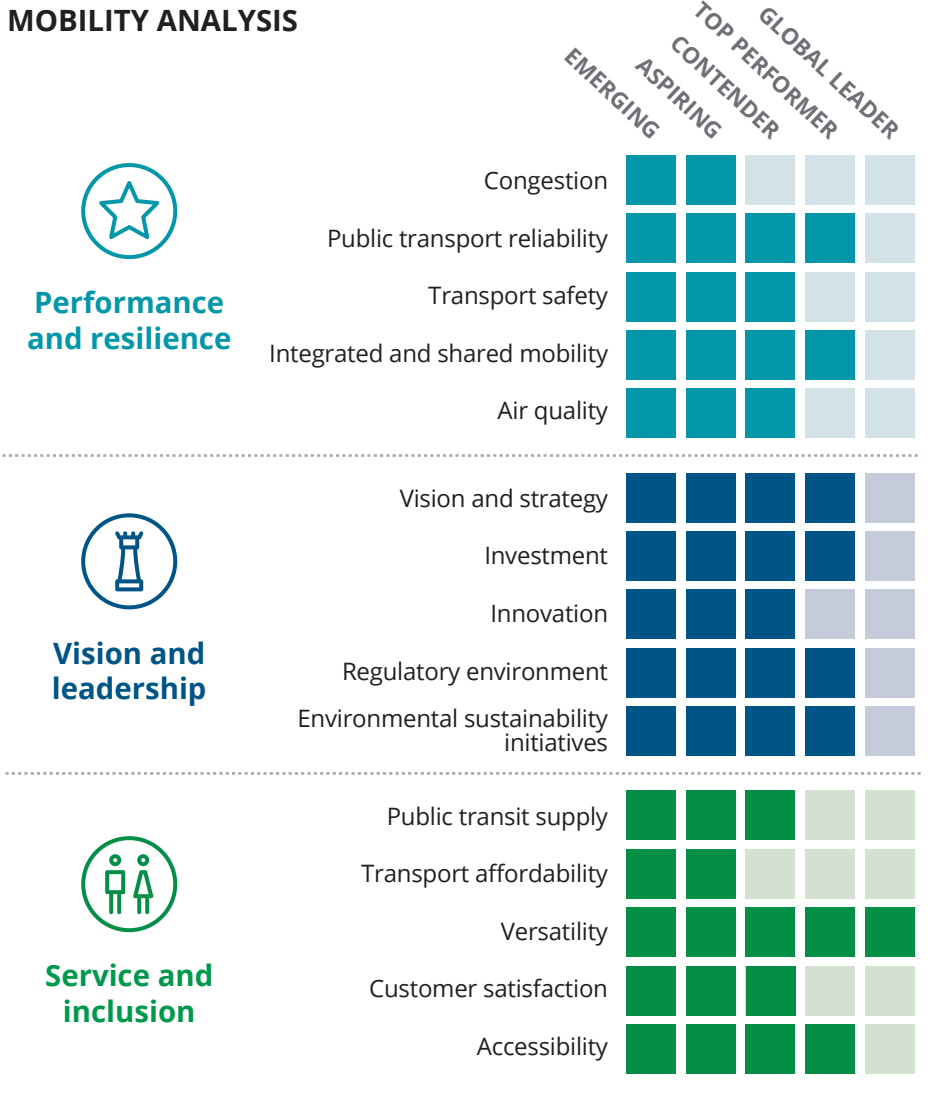




MOBILITY ANALYSIS



KEY MOBILITY STATISTICS

Public transport options*
Metro, commuter train, light rail, tram, bus, ferry (including sea taxi and sea bus), taxi, cable car/funicular, bicycle

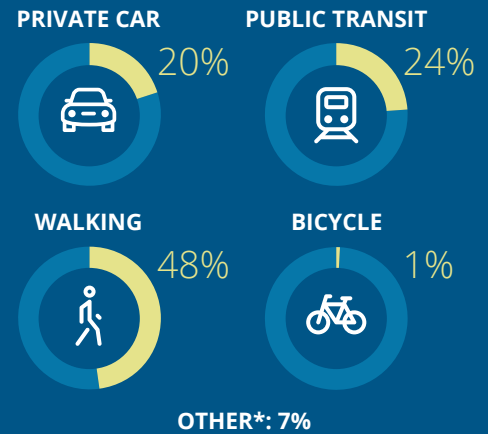
Monthly public transport pass
US\$48

GDP
US\$348 billion (2015)

Principal transport authorities
Istanbul Metropolitan Municipality (IMM)

**Regulated and owned by principal transport authority.*

JOURNEY MODAL SPLIT



** Includes service buses, private taxi, and private two-wheelers.*

FUTURE OF MOBILITY CAPABILITY



STRENGTHS

- Use of self-driving and electric vehicle (EV) technology for short trips on public transport
- Unique options, such as an underground funicular and undersea train routes, supplement the regular transport system
- Rapid expansion of smart parking, smart sensors, and corridor speed controls under the Intelligent Transport System 2018–2020

CHALLENGES

- Congestion in the city is consistently among the worst in Europe; rush hour commutes can take two hours each way
- Transport costs, already high when compared to minimum wage levels, rose 11 percent in 2017
- One of the world's fastest-growing cities, infrastructure and technology use need to increase substantially to accommodate population growth

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



Consider alternative revenue streams such as monetizing road use to decrease congestion



Develop an open data policy to create opportunities for private players



Create a performance and infrastructure management dashboard to target congestion

MOBILITY ANALYSIS FURTHER DETAILS:



Performance and resilience

Congestion remains a pressing problem, despite the generally reliable public transport, due to an increase in private car use.

- With more than 15,800 (2016) new vehicles on city roads each month, local authorities instituted congestion charging in the Eminönü district and will launch a new mobile app to provide real-time traffic information and integrated journey-planning.
- The region's integrated ticketing system has 18 million active cards; its payment system was upgraded in 2017 with technology enabled with near-field communication (NFC). Smart card reloads are patchy for non-NFC enabled phones.
- Since 2011, Istanbul's Peninsula Pedestrianization Project has used data analytics to identify high accident zones and restricted car trips accordingly. This has helped reduce traffic fatalities by 60 percent and improved air quality.



Vision and leadership

Istanbul's vision includes expanding public transport and integrating cycling as another transport mode. The city is also experimenting with technologies such as self-driving shuttles and smart parking.

- The İstanbul Metropolitan Municipality (İMM) developed an integrated parking master plan that increases the number of smart parking lots from 17 to 30 by 2030. İstanbul is also planning to install 1,000 km of bikeways by 2023.
- In 2017, the İMM announced that US\$2.98 billion would be allocated for metro and suburban rail projects, including expanding the Marmaray metro. The total investment plan is more than 50 percent of the railway budget for the rest of Turkey.
- In April 2018, the İstanbul Electric Tram and Tunnel Company introduced the city's first self-driving electric shuttle.



Service and inclusion

Affordability is an issue given the range of income groups in the region. All public transport stations and vehicles are 100 percent disabled-friendly except Metrobus stops, which are at only 56 percent.

- With consistent fare hikes, public transportation expenses have jumped from 12 percent in 2003 to 16.2 percent in 2016, which is difficult to afford for low-income job seekers.
- The public transport system offers good accessibility; it has many lifts, ramps, and signs for the disabled. The region is now introducing technology that recognizes disabled passengers through smart cards and provides Bluetooth-based voice instructions.

SUMMARY

With its geographically spread out, hilly terrain split down the middle by the Bosphorus strait, Istanbul's transport system uses a variety of modes to serve one of the oldest cities in the world. Not surprisingly, water-based modes are wide-ranging, boast good coverage, and are more reliable than road-based modes. Beset by congestion problems, İstanbul has several initiatives in place to increase technology use and to improve sustainability by promoting pedestrian culture. This has led to far fewer road accidents and better air quality. The regional authorities are investing heavily in public transport, but the speed of implementation needs to accelerate to accommodate the city's rapid expansion.

CONTACTS

Simon Dixon

Global Transportation leader
Partner
Deloitte MCS Limited
Tel: +44 (0) 207 303 8707
Email: sidixon@deloitte.co.uk

Cem Yilmaz

Public Sector leader
Partner
Deloitte Consulting, Turkey
Tel: +90 533 592 85 17
Email: cylimaz@deloitte.com

Burcu Maden

Strategy and Operations
Consultant
Deloitte Consulting, Turkey
Tel: +90 532 721 24 08
Email: bmaden@deloitte.com

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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