Deloitte. Insights

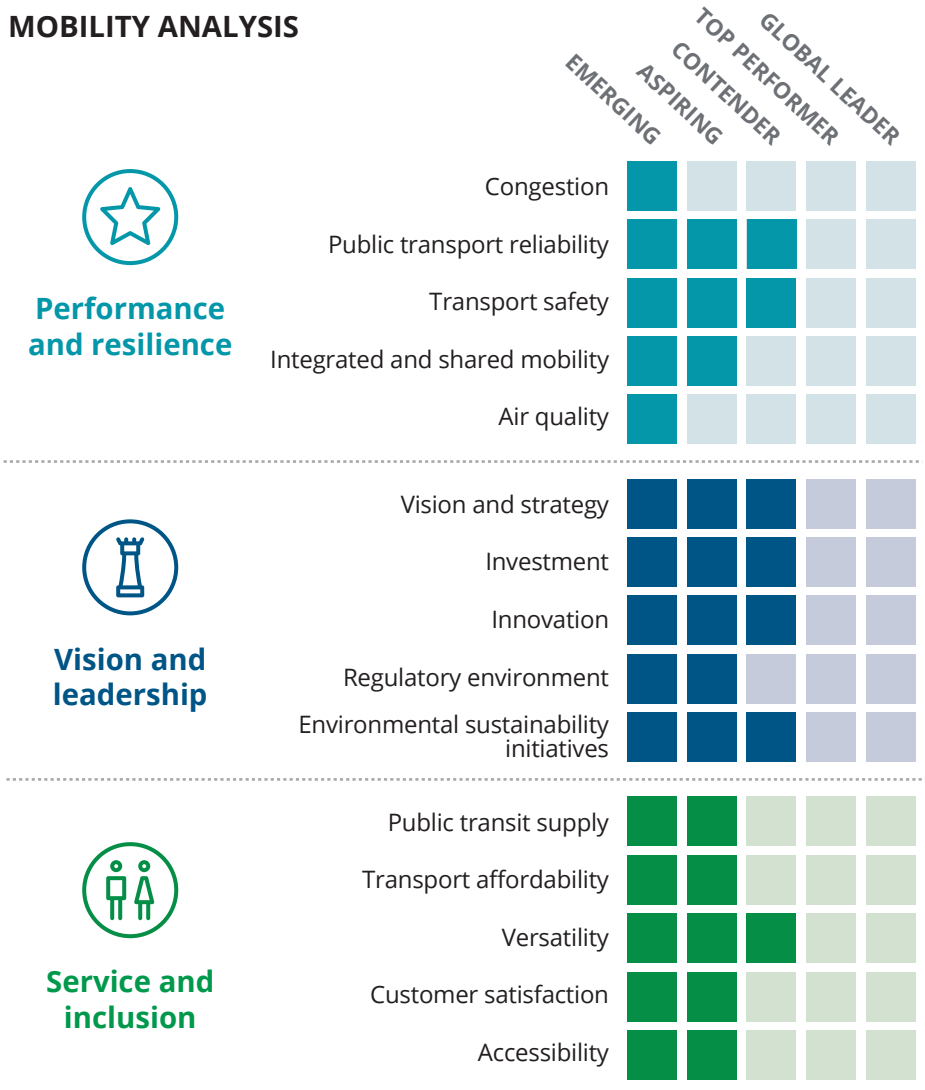
Deloitte City Mobility Index

Bangalore

Analysis area: 2,292 km² | **Population:** 12,112,721 (2017 estimated) | **Population density:** 5,285/km²

Definition of analysis area: Bangalore Metropolitan Area and area defined by Bangalore International Airport Area Planning Authority

MOBILITY ANALYSIS



KEY MOBILITY STATISTICS

Public transport options*
Bus, metro

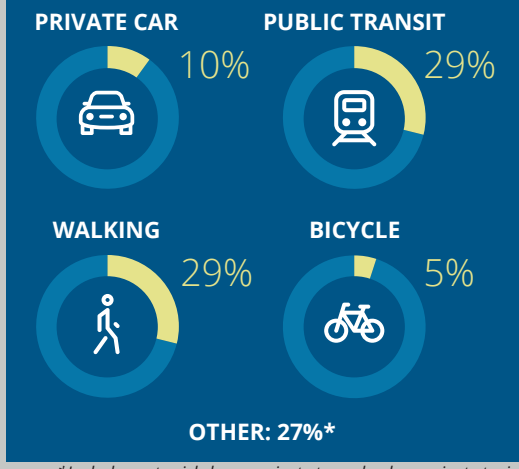
Monthly public transport pass
US$26

GDP
US$110 billion (2016 estimate)

Principal transport authorities
Bangalore Metropolitan Transport Corporation, Bangalore Metro Rail Corporation, South Western Railway

**Planned, regulated, licensed, and monitored by principal transport authorities.*

JOURNEY MODAL SPLIT



**Includes auto rickshaws, private two-wheelers, private taxis*

FUTURE OF MOBILITY CAPABILITY

STRENGTHS

- Streamlined governance and institutional mechanisms in place to manage urban transport
- Healthy presence of Future of Mobility–oriented startups
- Presence of well-recognized academic and research institutions for collaboration

CHALLENGES

- Very limited coverage of metro rail
- Active transport infrastructure development a challenge due to narrow roads and limited space
- Lack of support for the Bangalore Regional Master Plan 2031 from private citizen forums and resident welfare associations

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

- **Build on the results of pilots to invest in traffic demand management using intelligent transport systems**
- **Strengthen partnerships with private sector companies to deliver public transport solutions**
- **Expand non–road based transport modes to complement existing transport provision**

MOBILITY ANALYSIS FURTHER DETAILS:

Performance and resilience

Narrow roads, urban sprawl, and two-wheelers have all contributed to Bangalore's worsening air quality and traffic congestion. The government plans to tackle these issues by promoting shared mobility and implementing air quality controls.

- More than 80 percent of roads in the Bruhat Bengaluru Mahanagara Palike (BBMP) region are only two-lane. The BBMP is planning to launch an Internet of Things (IoT)–driven parking management system for 87 roads in and around the central business district.
- The BBMP is also considering installing 345 bicycle-docking stations with 6,000 bicycles. However, the lack of right-of-way on major roads and the absence of cycling infrastructure could inhibit its success.
- A number of initiatives to address air quality are being enacted. These include introducing new emission standards and planning to ban heavy-duty vehicles on a peripheral ring road and older commercial vehicles across the city.

Vision and leadership

Bangalore's Future of Mobility vision includes promotion of electric vehicles (EVs) and creation of a new ring road for better connections with major highways.

- Under the Karnataka Electric Vehicle and Electric Storage Policy, the government will launch electric auto rickshaws. There are plans to set up new EV manufacturing zones and charging infrastructure across the city by 2031, which will raise US$470 million and create an additional 55,000 jobs.
- The Bangalore Development Authority (BDA) plans to invest US$3.8 million on a new ring road to link to highways and ease road congestion. The government is also looking at using integrated smart cards, vehicle tracking, and a real-time information system, in its current services.
- The Bangalore Regional Master Plan 2031 seeks to implement a number of improvements, but many groups have criticized the plan because it lacks measures to increase green spaces.

Service and inclusion

Bangalore's disabled people are poorly served by its bus system and infrastructure. However, the government is planning to improve bus accessibility and last-mile connectivity.

- Less than one-fifth of buses have low floors, making accessibility poor for disabled people. The government is seeking to rectify this and improve user-friendliness in other public transport services and infrastructure.
- The expansion of the metro system is expected to cover high-density areas and provide better connectivity to suburban regions. The government is planning to improve the last-mile connectivity for metro users through a shared-bicycle system, although challenges exist.
- Bangalore introduced Atal Sarige buses to provide low-cost connectivity with major bus stations for low-income communities, but affordability is still a challenge for many.

SUMMARY

Known as the Silicon Valley of India, Bangalore is not only a hub for technology companies in India but also boasts an impressive presence of world-renowned academic and research institutions. Rapid growth during the IT boom attracted a large number of people, which resulted in growth in the number of vehicles and deterioration in air quality. For some time, the lack of transport-oriented development policies, combined with narrow roads, contributed to its congestion issues. The government is now working toward promoting sustainable transport through a range of innovative policies. The city also has the potential to engage its existing impressive IT infrastructure and Future of Mobility–focused startups to lead development and roll out innovative solutions.

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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.