# Mumbai:
# Eager to Begin

Mumbai is the capital city of the Indian state of Maharashtra. It's the 2nd most populous city in India, after Delhi, and the 7th most populous city in the world, with a population of 12.5 million. It is also the financial, commercial, and entertainment capital of India, home to Bollywood, national corporations such as the State Bank of India, Tata Motors, and Tata Consultancies, and the highest number of millionaires and billionaires among all cities in India. The extreme density of the population, however, causes serious problems with pollution, transportation, and a lack of affordable housing--an estimated 60% of all residents live in informal slums.

While these are the kinds of issues smart city initiatives are designed to ameliorate, Mumbai has made fairly little progress toward becoming a smart city in the past several years. In 2017, the city's government chose to withdraw from India's Smart Cities Mission, a national initiative sponsoring smart city projects throughout the country, because Mumbai's leaders objected to guidelines that would require the city to cede autonomy of its projects to a governing body. Mumbai currently ranks 161st out of 174 cities in the Cities in Motion Index, though the report also placed it in the "potential" quadrant, which includes cities that "show great potential and that, despite their current position in the middle to low area of the index, are evolving positively at great speed."

Paradoxically, despite the dearth of public information (in English) around Mumbai's smart city initiatives, its citizens and business executives report being very familiar with Mumbai's initiatives--90 and 88%, respectively--compared to the global average of 58%. It's not clear, however, if the respondents are referring to the well-known Smart Cities Mission, which Mumbai had been expected to participate in.

Nevertheless, Mumbai's citizens hope that smart city initiatives will provide better access to clean water and sanitation (34%), better education, (30%), and better employment opportunities (30%). Mumbai's business executives hope for improved affordability of operations, such as rents, taxes, and fees, (40%) and environmental sustainability (38%). Well over 90% of respondents agree that smart city initiatives would make Mumbai a more appealing place to live and do business.

## Citizen Priorities: A Cleaner Environment and More Jobs

Mumbai's citizens hope that smart city projects will help improve their city's environment and bring new job opportunities.

# 1 in 3

1 in 3 citizens cite improving air and water quality as a top priority for better personal health and safety, followed by 1 in 4 (24%) who believe that improving road safety is a key objective.
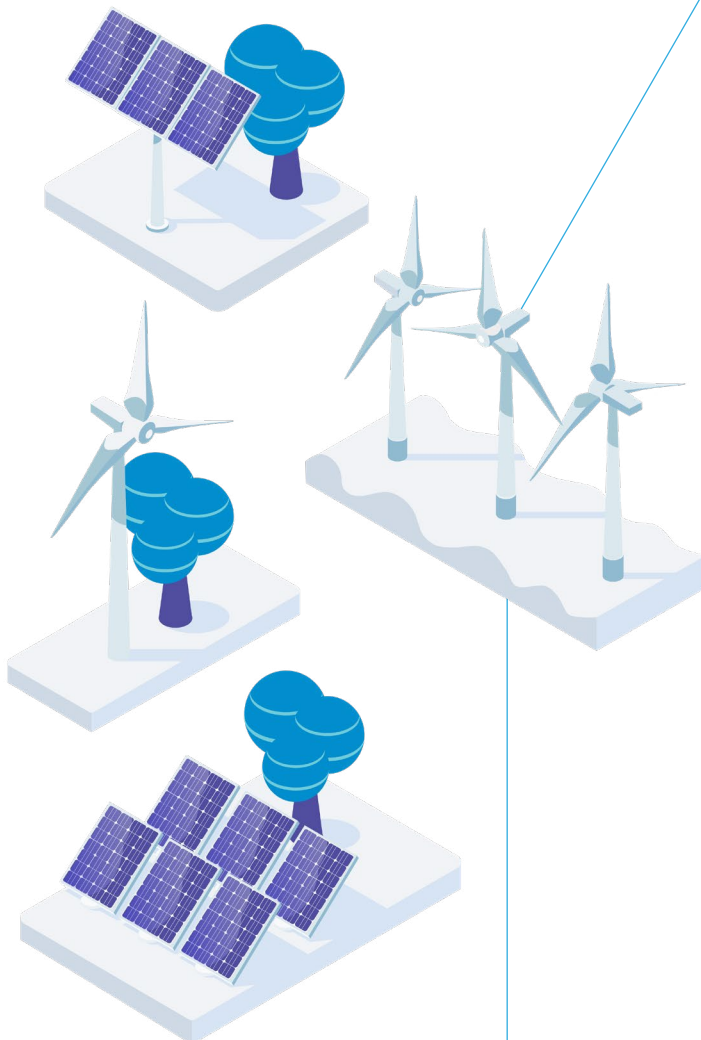
# 37%

Specifically, citizens believe that to improve environmental sustainability, smart city initiatives should focus on improving the efficiency of waste recovery--for example, through recycling--(37%) and expanding the availability of renewable energy sources, such as wind and solar power, (32%).

# 40%

In order to make their city more affordable, 40% of citizens cited improving the ability of energy and water utilities to vary pricing according to usage, followed by 36% who cited improving the residential planning capabilities of city authorities through better data collection and analysis.

# 29%

To improve job opportunities, Mumbai's citizens believe that smart city initiatives should prioritize attracting large technology companies to establish operations in the city and support the growth of technology start-ups--both at 29%. The focus on tech companies is in keeping with Mumbai's reputation as developing a niche in the IT industry.

# 82%

Mumbai's citizens are considerably more willing than those from other cities included in this study to share personal data for larger social benefits. 82% believe that the benefits outweigh the loss of personal privacy (compared to 54%, globally).

# 92%

92% are willing to share data to help prevent or solve crime by improving personal identification (e.g., facial recognition) (compared to 70% globally).

# 90%

90% would share their data to improve travel and reduce road congestion, as well as to reduce energy costs by personalizing energy tariffs.

# 84%

Despite this optimism, 84% of Mumbai's citizens believe that smart city initiatives could actually exacerbate social inequalities, far more than any other city surveyed. (52% global average)

## Business Priorities: Affordability of Operations and Environmental Sustainability

**44%**

In order to make Mumbai a more affordable place for business, 44% of executives believe that smart city initiatives should prioritize improving the commercial planning capabilities of city authorities through better data collection and analysis. The next highest priority should be improving the ability of energy and water utilities to vary pricing according to usage or time of day.

**46%**

46% of business executives believe that attracting tech companies to Mumbai should be a top priority of smart city initiatives to help the city's innovation environment.

**42%**

Along the same lines, 42% also believe that these initiatives should facilitate greater research and development collaboration between universities and businesses.

**52%**

52% hope that smart city initiatives can help create market opportunities through fostering new partnerships with large technology companies-- more than any other city surveyed.

# 38%

Mumbai's executives also hope opportunities will arise from developing new marketing strategies through the use of open-government data (38%).

# 94%

94% believe that the ability to access Mumbai's open-government data is vital to their organization--the highest percentage of any city surveyed.
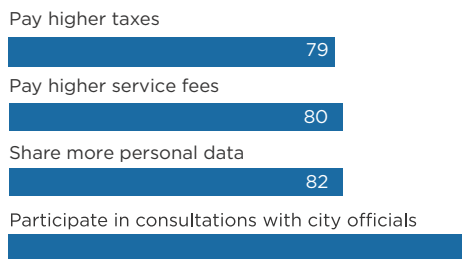
# 34%

To increase the availability of talent for their organizations, business executives believe that smart city initiatives should prioritize expanding training on advanced technologies in higher education (34%), as well as expanding consultation between educational institutions and businesses on skill requirements (28%). The same amount believe that improving environmental quality (such as air and water) will attract more talent to the city.
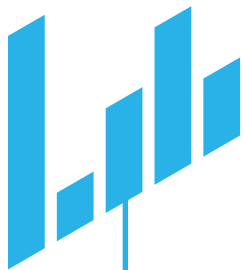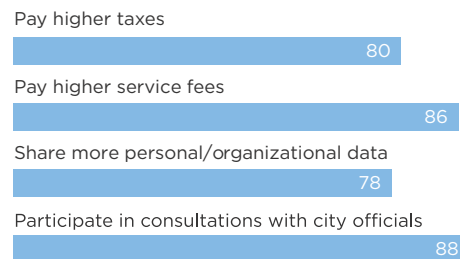
## Trade Offs: Citizens and Business are All-In

In exchange for benefits of smart city initiatives, are you or
your organization willing to . . .
(% of respondants)

**Citizens**

Pay higher taxes

| | 79 |

Pay higher service fees

| | 80 |

Share more personal data

| | 82 |

Participate in consultations with city officials

**Business Executives**

Pay higher taxes

| | 80 |

Pay higher service fees

| | 86 |

Share more personal/organizational data

| | 78 |

Participate in consultations with city officials

| | 88 |

As these numbers indicate, both citizens and business executives are more than willing to compromise in terms of money, time, and data to get the benefits of smart city initiatives. Citizens' willingness to pay higher taxes and fees is nearly twice the global average. This is similar for business executives too, despite the fact that they cited affordability of operations as the number one priority of these initiatives. One qualification, however, is that although 78% of business executives said they'd be willing to share their organization's data to participate, 84%, the highest globally, agree that, from a business perspective, it would be risky to share too much of their organization's data with the city as a means of helping them develop smart city solutions.

**Key Takeaway:** Mumbai's citizens and business executives are very optimistic about the possible benefits of smart city initiatives, and more willing to give to get the benefits of these initiatives than any other city surveyed. It appears that the citizens and business executives of Mumbai are ready for their city leaders to put these plans into motion.