Smart City Index 2020

A tool for action, an instrument for better lives for all citizens.

A collaboration between:
“A great city is that which has the greatest men and women.”

Walt Whitman

“The City is what it is because our citizens are what they are.”

Plato
Preface

This is the second edition of the IMD-SUTD Smart City Index Report. Over the last twelve months, much has happened. Our view of cities in general, and of smart cities in particular, has been confronted to the reality of a sudden pandemic. At the time of writing this report [September 2020], it is still too early to draw the lessons of this experience. In a recent article1, Francis Fukuyama even expressed the view that it would take years to identify the deeper consequences of the current crisis: “Future historians will trace comparably large effects to the current coronavirus pandemic; the challenge is figuring them out ahead of time”.

Although we have still not seen the last of the sanitary crisis, and are only experiencing the first tremors of the much more traumatic economic and social crises to come, we see ways in which cities, smart or not, will be affected and transformed. In a recent study, the OECD underlines that, in many parts of the world, cities have been at the forefront of shaping a post-COVID world by taking inclusive measures (especially for local business support and employment, affordable housing construction and renovation, and support to vulnerable households), and investing to pair economic recovery with environmental sustainability, with an emphasis on clean forms of urban mobility and energy efficiency. The OECD also underlines that “the pivotal role of digitalisation in emergency responses to the pandemic has pushed many cities to systematise the use of smart city tools more permanently, while staying alert and monitoring the risk of contagion.”

It is now becoming clear that the trends identified in last year’s Smart City Index and Report will be accelerated, and that attention to smart cities will continue to increase concomitantly. It is also clear that the COVID crisis is likely to widen inequalities between the haves and the have-nots of connectivity, both among and within cities. This is an aspect that will deserve appropriate attention from analysts, and governments, both central and local.

As stressed in last year’s SCI Report, it is the position of the authors of this report that smart cities will not generate their full potential unless priority attention is devoted to the necessary balance between the technological aspects of smart cities and their human aspects.

Since last year, and based on the very rich feedback received after the launch of the first edition of the SCI, improvements have been brought to the index methodology, as well as in the way main results are presented. Altogether, however, the approach has not changed: In line with previous and on-going efforts initiated and carried out by IMD’s World Competitiveness Center, the Smart City Index presented here remains a holistic attempt to capture the various dimensions of how citizens could consider that their respective cities are becoming better cities by becoming smarter ones. Part of the SCI’s uniqueness is to rely first and foremost on the perceptions of those who live and work in the cities covered by the index, while providing a realistic recognition that not all cities start from the same level of development, nor with the same set of endowments and advantages. In SCI’s context, a ‘smart city’ continues to be defined as an urban setting that applies technology to enhance the benefits and diminish the shortcomings of urbanization for its citizens.

As for the first edition, this new SCI report is the result of a close cooperation between IMD and SUTD (Singapore University for Technology and Design), and benefitted from inputs by numerous experts and city specialists around the world, whom we want to thank most warmly. Looking forward to more feedback and reactions to this second edition, it is our hope to continue to strengthen the visibility and relevance of the Smart City Index as a tool for action, and an instrument for the betterment of citizens’ lives in all parts of the world.

1 Foreign Affairs Magazine, July-August 2020
3 See the introduction to this year’s report for details.
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## City Profiles

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For more than thirty years, the IMD World Competitiveness Center has pioneered research on how countries and companies compete to lay the foundations for sustainable value creation. The competitiveness of nations is probably one of the most significant developments in modern management and IMD is committed to leading the field.

The IMD World Competitiveness Center team:

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Christos Cabolis
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Bruno Lanvin
Senior Economist
José Caballero
Madeleine Hediger
Data Research and Online Services Specialist
Catherine Jobin
Order and Sales Administrator
William Milner
Research Projects Associate Manager
Marco Pistis
Research Specialist
Maryam Zargari
Research Specialist
# City performance overview

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User’s Guide to the Smart City Index

Smart City Ranking

**Smart City Ranking**: The Ranking position of the city amongst the 109 cities measured, based upon the Rating and its components.

**Group**: Each city is assigned to one of four groups, based upon its HDI values.

**Smart City Rating and Factor Ratings**: The Ratings for each city are calculated from the city’s performance relative to the other cities within the group.

The Methodology section provides the exact procedure for these calculations.

The 2019 Ranking and Rating are also shown for the 102 cities included in last year’s index.

**Background Information**: This presents the UN Human Development Index and its four components of the parent economy of the city, as well as the city’s position on the map. For Taipei City, the data is calculated using the same methodology and comparable data. This section also presents the population of the city as defined through the UN World Cities Report for 100 of the cities, or Eurostat for 9 small European cities.

**Priority Areas**: Summarizes the areas that the respondents perceive as the priority area for their city. From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. The total bar indicates the percentage of the respondents that included a given area as one of their five choices. The higher the percentage of responses per area, the greater the priority for the city. The left-hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.
**Structures and Technologies**

Key survey data collected on Structures (left side) and Technologies (right side), under five key areas: health and safety, mobility, activities, opportunities, and governance.

Each indicator presents the Score for the city and a comparison with its Group (1-4). Showing the Group’s Minimum, Mean, and Maximum Scores (light red bar) alongside with the city (blue circle) allows a clear comparison of the city’s performance in this indicator. The Methodology section provides the exact calculation of the Score.

This table can be read in two ways: down to examine all Structures or Technologies indicators, or across to examine a key area in both Structures and Technologies.
Methodology in a nutshell

1. The IMD-SUTD Smart City Index (SCI) assesses the perceptions of residents on issues related to structures and technology applications available to them in their city.

2. This edition of the SCI ranks 109 cities worldwide by capturing the perceptions of 120 residents in each city. The final score for each city is computed by using the perceptions of the last two years of the survey.

3. There are two pillars for which perceptions from residents are solicited: The Structures pillar referring to the existing infrastructure of the cities, and the Technology pillar describing the technological provisions and services available to the inhabitants.

4. Each pillar is evaluated over five key areas: health and safety, mobility, activities, opportunities, and governance.

5. The cities are distributed into four groups based on the UN Human Development Index (HDI) score of the economy they are part of.

6. Within each HDI group, cities are assigned a ‘rating scale’ (AAA to D) based on the perceptions-score of a given city compared to the scores of all other cities within the same group.

   - For group 1 (highest HDI quartile), scale AAA–AA–A–BBB–BB
   - For group 2 (second HDI quartile), scale A–BBB–BB–B–CCC
   - For group 3 (third HDI quartile), scale BB–B–CCC–CC–C
   - For group 4 (lowest HDI quartile), scale CCC–CC–C–D

7. Rankings are then presented in two formats:
   - an overall ranking (1 to 109)
   - a rating for each pillar and overall
Abu Dhabi

BACKGROUND INFORMATION

City
Population 1,145,000

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<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<td>0.863</td>
<td>0.864</td>
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<td>67,410</td>
<td>67,138</td>
<td>66,912</td>
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ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey question. A strong Alignment implies that these areas also demand priority attention.

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<td>69.2%</td>
</tr>
<tr>
<td>Housing</td>
<td>77.6%</td>
<td>69.2%</td>
<td>64.5%</td>
<td>69.2%</td>
<td>64.5%</td>
<td>69.2%</td>
</tr>
<tr>
<td>Social mobility</td>
<td>77.6%</td>
<td>69.2%</td>
<td>64.5%</td>
<td>69.2%</td>
<td>64.5%</td>
<td>69.2%</td>
</tr>
<tr>
<td>Security</td>
<td>77.6%</td>
<td>69.2%</td>
<td>64.5%</td>
<td>69.2%</td>
<td>64.5%</td>
<td>69.2%</td>
</tr>
</tbody>
</table>

All ratings range from AAA to D
Abuja

**Background Information**

City
Population: 2,440,000

(UN World Cities Report)

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.527</td>
<td>0.528</td>
<td>0.533</td>
<td>0.534</td>
<td>+0.001</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>53.1</td>
<td>53.3</td>
<td>54.0</td>
<td>54.3</td>
<td>&gt;0.3</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>9.7</td>
<td>9.5</td>
<td>9.7</td>
<td>9.7</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>6.2</td>
<td>6.3</td>
<td>6.5</td>
<td>6.5</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>5,540</td>
<td>5,336</td>
<td>5,203</td>
<td>5,086</td>
<td>-117.0</td>
</tr>
</tbody>
</table>

**Structures**

- Basic sanitation meets the needs of the poorest areas: 50.5
- Recycling services are satisfactory: 45.4
- Public safety is not a problem: 41.7
- Air pollution is not a problem: 40.7
- Medical services provision is satisfactory: 49.3
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 24.2

**Mobility**

- Traffic congestion is not a problem: 47.5
- Public transport is satisfactory: 57.1

**Activities**

- Green spaces are satisfactory: 61.0
- Cultural activities (shows, bars, and museums) are satisfactory: 72.7

**Opportunities (Work & School)**

- Employment finding services are readily available: 43.3
- Most children have access to a good school: 55.8
- Lifelong learning opportunities are provided by local institutions: 48.6
- Businesses are creating new jobs: 67.8
- Minorities feel welcome: 52.1

**Governance**

- Information on local government decisions are easily accessible: 47.7
- Corruption of city officials is not an issue of concern: 16.7
- Residents contribute to decision making of local government: 24.4
- Residents provide feedback on local government projects: 37.0

**Technologies**

- Online reporting of city maintenance problems provides a speedy solution: 47.1
- A website or App allows residents to easily give away unwanted items: 35.0
- Free public wifi has improved access to city services: 35.3
- CCTV cameras have made residents feel safer: 39.4
- A website or App allows residents to effectively monitor air pollution: 21.1
- Arranging medical appointments online has improved access: 49.2

**Opportunities (Work & School)**

- Online access to job listings has made it easier to find work: 67.8
- IT skills are taught well in schools: 57.6
- Online services provided by the city has made it easier to start a new business: 54.7
- The current internet speed and reliability meet connectivity needs: 56.3

**Governance**

- Online public access to city finances has reduced corruption: 27.3
- Online voting has increased participation: 22.8
- An online platform where residents can propose ideas has improved city life: 31.0
- Processing Identification Documents online has reduced waiting times: 54.0

**Priorities**

- From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

- The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

**Attitudes**

- You are willing to concede personal data in order to improve traffic congestion: 76.5%
- You are comfortable with face recognition technologies to lower crime: 86.4%
- You feel the availability of online information has increased your trust in authorities: 61.7%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 58.5%

**Group Rating**

4

All ratings range from AAA to D

**Smart City Rating**

107

Out of 109
Amsterdam

BACKGROUND INFORMATION

City
Population: 1,091,000
(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.927 0.929 0.932 0.934 +0.002
Life expectancy at Birth 81.7 81.9 82.0 82.1 +0.1
Expected years of schooling 18.1 18.0 18.0 18.0 +0.0
Mean years of schooling 12.1 12.2 12.2 12.2 +0.0
GNI per capita (PPP $) 46,976 47,008 48,994 50,013 +1,019.0

SMART CITY RANKING
9
Out of 109
11 in 2019

SMART CITY RATING
A
A in 2019

FACTOR RATINGS

AA
STRUCTURES
A
TECHNOLOGIES
GROUP 1

All ratings range from AAA to D

ATTITUDES
You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

PRIORITY AREAS
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.
The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions. A strong Alignment implies that these areas also demand priority attention.
Ankara

BACKGROUND INFORMATION

City
Population: 4,750,000

(UN World Cities Report)

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.800</td>
<td>0.805</td>
<td>0.807</td>
<td>+0.002</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>76.5</td>
<td>76.9</td>
<td>77.0</td>
<td>77.4</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>16.2</td>
<td>16.4</td>
<td>16.4</td>
<td>16.4</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
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<td>7.6</td>
<td>7.7</td>
<td>7.7</td>
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</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>23,048</td>
<td>23,409</td>
<td>24,702</td>
<td>24,905</td>
<td>+203.0</td>
</tr>
</tbody>
</table>

SMART CITY RANKING

57
Out of 109

SMART CITY RATING

B
CCC in 2019

FACTOR RATINGS

B
STRUCTURES

B
TECHNOLOGIES

GROUP 3

All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:

MIN |

CITY |

GROUP MEAN |

MAX |

Score

0 20 40 60 80 100

% of respondents who agree or strongly agree with the statement

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%
**Attitudes**

- **You are willing to concede personal data in order to improve traffic congestion**
- **You are comfortable with face recognition technologies to lower crime**
- **The proportion of your day-to-day payment transactions that are non-cash (% of transactions)**

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the **Alignment** - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

**Background Information**

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
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<td>0.866</td>
<td>0.871</td>
<td>0.872</td>
<td>+0.001</td>
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<tr>
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<td>81.5</td>
<td>81.7</td>
<td>81.9</td>
<td>82.1</td>
<td>+0.2</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>17.3</td>
<td>17.3</td>
<td>17.3</td>
<td>17.3</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
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<td>10.3</td>
<td>10.5</td>
<td>10.5</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>24,187</td>
<td>24,165</td>
<td>24,187</td>
<td>24,647</td>
<td>+262.0</td>
</tr>
</tbody>
</table>

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas: 60.2
- Recycling services are satisfactory: 37.7
- Public safety is not a problem: 32.5
- Air pollution is not a problem: 22.1
- Medical services provision is satisfactory: 37.5
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 29.1

**Mobility**

- Traffic congestion is not a problem: 19.3
- Public transport is satisfactory: 39.2

**Activities**

- Green spaces are satisfactory: 29.4
- Cultural activities (shows, bars, and museums) are satisfactory: 76.0

**Opportunities (Work & School)**

- Employment finding services are readily available: 33.6
- Most children have access to a good school: 41.1
- Lifelong learning opportunities are provided by local institutions: 41.5
- Businesses are creating new jobs: 24.9
- Minorities feel welcome: 35.1

**Governance**

- Information on local government decisions are easily accessible: 44.7
- Corruption of city officials is not an issue of concern: 19.6
- Residents contribute to decision making of local government: 21.4
- Residents provide feedback on local government projects: 32.7
Auckland

BACKGROUND INFORMATION

City
Population: 1,344,000
(UN World Cities Report)

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change
---|---|---|---|---|---
HDI | 0.914 | 0.917 | 0.920 | 0.921 | +0.001
Life expectancy at Birth | 81.7 | 81.9 | 82.0 | 82.1 | +0.1
Expected years of schooling | 18.9 | 18.1 | 18.8 | 18.8 | +0.0
Mean years of schooling | 12.4 | 12.6 | 12.7 | 12.7 | +0.0
GNI per capita (PPP $) | 33,983 | 34,538 | 34,668 | 35,108 | +440.0

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

PRIORITY AREAS

Health & Safety
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility
- Traffic congestion is not a problem
- Public transport is satisfactory

Activities
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Opportunities (Work & School)
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Governance
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

ECONOMIC PERFORMANCE

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change
---|---|---|---|---|---
GDP per capita (PPP $) | 33,983 | 34,538 | 34,668 | 35,108 | +440.0

TECHNOLOGIES

Health & Safety
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public toilet has improved access to city services
- CCTV camera has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Mobility
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle sharing has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Activities
- Online purchasing of tickets to shows and museums has made it easier to attend

Opportunities (Work & School)
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Governance
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times
### Background Information

**City**

- **Population:** 9,270,000

(UN World Cities Report)

### SMART City Ranking

**Bangkok**

- **Group Max:** 71
- **Out of 109:**
- **CCC in 2019:** 2015-2017
- **2 yr change:** +5.0

### Factor Ratings

- **CCC:**
- **Structures:**
- **Technologies:**
- **Group:**

### Priorities

#### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions. Low Alignment implies that these areas also demand priority attention.

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Attitudes

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

### Technologies

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras have made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle sharing has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times
Barcelona

BACKGROUND INFORMATION

City
Population 5,258,000
(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.885 0.888 0.891 0.893 +0.002
Life expectancy at Birth 83.0 83.1 83.3 83.4 +0.1
Expected years of schooling 17.8 17.8 17.9 17.9 +0.0
Mean years of schooling 9.7 9.8 9.8 9.8 +0.0
GNI per capita (PPP $) 32,265 33,379 34,226 35,041 +$815.0

SMART CITY RANKING

49 Out of 109

2015 0.885 2016 0.888 2017 0.891 2018 0.893 +0.002

Health & Safety
Basic sanitation meets the needs of the poorest areas 65.6
Recycling services are satisfactory 62.8
Public safety is not a problem 52.0
Air pollution is not a problem 26.3
Medical services provision is satisfactory 60.0
Finding housing with rent equal to 30% or less of a monthly salary is not a problem 20.4

Mobility
Traffic congestion is not a problem 27.8
Public transport is satisfactory 66.5

Activities
Green spaces are satisfactory 64.0
Cultural activities (shows, bars, and museums) are satisfactory 80.5

Opportunities (Work & School)
Employment finding services are readily available 77.1
Most children have access to a good school 63.5
Lifelong learning opportunities are provided by local institutions 70.6
Businesses are creating new jobs 46.2
Minorities feel welcome 48.2

Governance
Information on local government decisions are easily accessible 52.5
Corruption of city officials is not an issue of concern 38.8
Residents contribute to decision making of local government 40.6
Residents provide feedback on local government projects 48.5

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion 71.6%
You are comfortable with face recognition technologies to lower crime 83.6%
You feel the availability of online information has increased your trust in authorities 41.8%
The proportion of your day-to-day payment transactions that are non-cash (% of transactions) 49.0%

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the bar chart. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

Due to Space Constraints you can get the information of Barcelona city only...
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand side of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions. A strong Alignment implies that these areas also demand priority attention.

**PRIORITY AREAS**

- Employment finding services are readily available
- Online access to job listings has made it easier to find work
- Green spaces are satisfactory
- Online purchasing of tickets to shows and museums has made it easier to attend
- Traffic congestion is not a problem
- Car-sharing Apps have reduced congestion
- Basic sanitation meets the needs of the poorest areas
- Online reporting of city maintenance problems provides a speedy solution
- Recycling services are satisfactory
- Online services provided by the city has made it easier to start a new business
- Health services
- Online access to city finances has reduced corruption
- Employment finding services are readily available
- Online public access to city finances has reduced corruption
- Most children have access to a good school
- Online job listings has made it easier to find work
- Cultural activities (shows, bars, and museums) are satisfactory
- Online voting has increased participation
- Lifelong learning opportunities are provided by local institutions
- The current internet speed and reliability meet connectivity needs
- Residents provide feedback on local government projects
- An online platform where residents can propose ideas has improved city life
- Air pollution is not a problem
- Online scheduling and ticket sales has made public transport easier to use
- Social mobility
- The city provides information on traffic congestion through mobile phones
- Opportunities (Work & School)
- Free public wifi has improved access to city services
- Online opportunities have made it easier to find work
- Good schools
- Online access to city finances has reduced corruption
- Online access to city finances has reduced corruption
- Online opportunities have made it easier to find work
- Public transport
- The city provides information on traffic congestion through mobile phones
- Basic amenities
- The city provides information on traffic congestion through mobile phones
- People feel the availability of online information has increased their trust in authorities
- Online public access to city finances has reduced corruption
- Public transport
- Online access to job listings has made it easier to find work
- Social mobility
- Online opportunities have made it easier to find work
- Good schools
- Online access to city finances has reduced corruption
- Employment finding services are readily available
- Online opportunities have made it easier to find work
- Lifelong learning opportunities are provided by local institutions
- Online public access to city finances has reduced corruption
- Most children have access to a good school
- Online job listings has made it easier to find work
- Cultural activities (shows, bars, and museums) are satisfactory
- Online voting has increased participation
- Health services
- The city provides information on traffic congestion through mobile phones
- Basic amenities
- Online opportunities have made it easier to find work
- People feel the availability of online information has increased their trust in authorities
- Online public access to city finances has reduced corruption
- Employment finding services are readily available
- Online job listings has made it easier to find work
- Social mobility
- Online access to city finances has reduced corruption
- Good schools
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- Online opportunities have made it easier to find work
- Lifelong learning opportunities are provided by local institutions
- Online opportunities have made it easier to find work
- Good schools
- Online access to city finances has reduced corruption
- Basic amenities
- The city provides information on traffic congestion through mobile phones
- People feel the availability of online information has increased their trust in authorities
- Online public access to city finances has reduced corruption
- Employment finding services are readily available
- Online job listings has made it easier to find work
- Social mobility
- Online access to city finances has reduced corruption
- Good schools
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- Employment finding services are readily available
- Online opportunities have made it easier to find work
- Lifelong learning opportunities are provided by local institutions
- Online opportunities have made it easier to find work
- Good schools
- Online access to city finances has reduced corruption
- Basic amenities
- The city provides information on traffic congestion through mobile phones
- People feel the availability of online information has increased their trust in authorities
- Online public access to city finances has reduced corruption
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- Lifelong learning opportunities are provided by local institutions
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- Good schools
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- The city provides information on traffic congestion through mobile phones
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- Online public access to city finances has reduced corruption
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- Online job listings has made it easier to find work
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- The city provides information on traffic congestion through mobile phones
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- Online job listings has made it easier to find work
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- Lifelong learning opportunities are provided by local institutions
- Online opportunities have made it easier to find work
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- Online access to city finances has reduced corruption
- Basic amenities
- The city provides information on traffic congestion through mobile phones
- People feel the availability of online information has increased their trust in authorities
- Online public access to city finances has reduced corruption
- Employment finding services are readily available
- Online job listings has made it easier to find work
- Social mobility
- Online access to city finances has reduced corruption
- Good schools
- Online access to city finances has reduced corruption
- Employment finding services are readily available
- Online opportunities have made it easier to find work
- Lifelong learning opportunities are provided by local institutions
- Online opportunities have made it easier to find work
- Good schools
- Online access to city finances has reduced corruption
- Basic amenities
- The city provides information on traffic congestion through mobile phones
- People feel the availability of online information has increased their trust in authorities
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- The city provides information on traffic congestion through mobile phones
- People feel the availability of online information has increased their trust in authorities
- Online public access to city finances has reduced corruption
- Employment finding services are readily available
- Online job listings has made it easier to find work
- Social mobility
- Online access to city finances has reduced corruption
- Good schools
- Online access to city finances has reduced corruption
Bengaluru

**BACKGROUND INFORMATION**

City

Population: 10,087,000

(UN World Cities Report)

**SMART CITY RANKING**

95 out of 109

79 in 2019

**SMART CITY RATING**

C

CC in 2019

**FACTOR RATINGS**

C

STRUCTURES

CC

TECHNOLOGIES

CC

GROUP

4

All ratings range from AAA to D

---

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey question. A strong Alignment implies that these areas also demand priority attention.

**ATTITUDES**

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

---

**GDIS**

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

You are willing to concede personal data in order to improve traffic congestion

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

---

**Structures**

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.627</td>
<td>0.637</td>
<td>0.643</td>
<td>0.647</td>
<td>+0.004</td>
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<td>Life expectancy at Birth</td>
<td>68.6</td>
<td>68.9</td>
<td>68.9</td>
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<td>+0.2</td>
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<tr>
<td>Expected years of schooling</td>
<td>12.0</td>
<td>12.3</td>
<td>12.3</td>
<td>12.3</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>6.2</td>
<td>6.4</td>
<td>6.5</td>
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<tr>
<td>GNI per capita (PPP $)</td>
<td>5,674</td>
<td>6,075</td>
<td>6,446</td>
<td>6,829</td>
<td>+383.0</td>
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</table>

---

**Health & Safety**

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

Traffic congestion is not a problem

Public transport is satisfactory

**Activities**

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

**Governance**

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

---

**Technologies**

Online reporting of city maintenance problems provides a speedy solution

A website or App allows residents to easily give away unwanted items

Free public Wi-Fi has improved access to city services

CCTV cameras have made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

**Mobility**

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space have reduced journey time

Bicycle hiring has reduced congestion

Online scheduling and ticket sales has made public transport easier to use

The city provides information on traffic congestion through mobile phones

**Activities**

Online purchasing of tickets to shows and museums has made it easier to attend

**Opportunities (Work & School)**

Online access to job listings has made it easier to find work

IT skills are taught well in schools

Online services provided by the city has made it easier to start a new business

The current internet speed and reliability meet connectivity needs

**Governance**

Online public access to city finances has reduced corruption

Online voting has increased participation

An online platform where residents can propose ideas has improved city life

Processing Identification Documents online has reduced waiting times
Berlin

SMART CITY RANKING
38
Out of 109

SMART CITY RATING
BBB
BBB in 2019

BACKGROUND INFORMATION

City
Population: 3,563,000
(UN World Cities Report)

RATINGS

BBB in 2019

STRUCTURES

- 57.0
- 56.7
- 56.0
- 55.9
- 55.4

- 14.1
- 14.1
- 14.1
- 14.1
- 14.0

- 38
- 37
- 36
- 35
- 34

- 45,012
- 45,377
- 46,438
- 46,946
- 508.0

- 2015
- 2016
- 2017
- 2018
- 1 yr change

HDI
0.903
0.963
0.938
0.939
+0.001

Life expectancy at Birth
80.8
80.9
81.0
81.2
+0.2

Expected years of schooling
17.0
17.1
17.1
17.1
+0.0

Mean years of schooling
14.1
14.1
14.1
14.1
+0.0

GNI per capita (PPP $)
45,012
45,377
46,438
46,946
+508.0

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who answered the corresponding survey question below the scoring scale strong. A high Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

Country
Country
Country

Score
Score
Score

0 20 40 60 80 100

Score
Score
Score

0 20 40 60 80 100

Score
Score
Score

0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas
Recycling services are satisfactory
Public safety is not a problem
Air pollution is not a problem
Medical services provision is satisfactory
Finding housing with rent equal to 30% or less of a monthly salary is not a problem
Traffic congestion is not a problem
Public transport is satisfactory

Health & Safety

Online reporting of city maintenance problems provides a speedy solution
A website or App allows residents to easily give away unwanted items
Free public wifi has improved access to city services
CCTV cameras have made residents feel safer
A website or App allows residents to effectively monitor air pollution
Arranging medical appointments online has improved access

Mobility

Car-sharing Apps have reduced congestion
Apps that direct you to an available parking space have reduced journey time
Bicycle sharing has reduced congestion
Online scheduling and ticket sales has made public transport easier to use
The city provides information on traffic congestion through mobile phones

Activities

Online purchasing of tickets to shows and museums has made it easier to attend

Opportunities (Work & School)

Online access to job listings has made it easier to find work
IT skills are taught well in schools
Online services provided by the city have made it easier to start a new business
The current internet speed and reliability meet connectivity needs

Government

Online public access to city finances has reduced corruption
Online voting has increased participation
An online platform where residents can propose ideas has improved city life
Processing Identification Documents online has reduced waiting times
### Bilbao

#### BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
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<tbody>
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<td>0.888</td>
<td>0.891</td>
<td>0.893</td>
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<td>Life expectancy at Birth</td>
<td>83.0</td>
<td>83.1</td>
<td>83.3</td>
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<tr>
<td>Expected years of schooling</td>
<td>17.8</td>
<td>17.8</td>
<td>17.9</td>
<td>17.9</td>
<td>+0.0</td>
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<tr>
<td>Mean years of schooling</td>
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<td>9.8</td>
<td>9.8</td>
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<td>GNI per capita (PPP $)</td>
<td>32,265</td>
<td>33,379</td>
<td>34,226</td>
<td>35,041</td>
<td>+815.0</td>
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</tbody>
</table>

#### PRIORITY AREAS

**From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.**

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey question low. A strong Alignment implies that these areas also demand priority attention.

#### ATTITUDES

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

You are willing to concede personal data in order to improve traffic congestion

#### TECHNOCITIES

<table>
<thead>
<tr>
<th>Factor Ratings</th>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tbody>
<tr>
<td>Group Rating</td>
<td>BBB</td>
<td>60.0</td>
<td>64.0</td>
<td>51.2</td>
<td>50.5</td>
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<td>Technologies</td>
<td>BB</td>
<td>67.5</td>
<td>64.4</td>
<td>58.8</td>
<td>77.0</td>
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<td>Structures</td>
<td>A</td>
<td>60.4</td>
<td>63.7</td>
<td>64.0</td>
<td>65.9</td>
</tr>
</tbody>
</table>

#### LEGEND:

- **Score**
- **% of respondents who agree or strongly agree with the statement**
- **% of respondents who chose the Priority Area**
- **% of transactions**
**Birmingham**

**SMART CITY RANKING**

40

Out of 109

52 in 2019

**BACKGROUND INFORMATION**

City

Population 2,515,000

(UN World Cities Report)

**STRUCTURES**

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.918</td>
<td>0.919</td>
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<td>Life expectancy at Birth</td>
<td>81.1</td>
<td>81.1</td>
<td>81.2</td>
<td>81.2</td>
<td>+0.0</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>17.4</td>
<td>17.4</td>
<td>17.4</td>
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</tr>
<tr>
<td>Mean years of schooling</td>
<td>12.8</td>
<td>12.9</td>
<td>12.9</td>
<td>13.0</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>38,116</td>
<td>38,421</td>
<td>39,216</td>
<td>39,507</td>
<td>+291.0</td>
</tr>
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</table>

**TECHNOLOGIES**

**ATTITUDES**

You are willing to conciliate personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

**PRIORITY AREAS**

**Health & Safety**

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

Traffic congestion is not a problem

Public transport is satisfactory

**Activities**

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

**Governance**

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

**Correlation between ATTITUDES and PRIORITY AREAS**

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

You are comfortable with face recognition technologies to lower crime

You are willing to conciliate personal data in order to improve traffic congestion

**Legend**

- CITY MEAN
- GROUP MEAN
- Min
- City
- Group Max
**BACKGROUND INFORMATION**

**City**

Population: 9,765,000

*(UN World Cities Report)*

---

**Country**

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
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<td>0.760</td>
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<td>Life expectancy at Birth</td>
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<td>76.7</td>
<td>76.9</td>
<td>77.1</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>14.4</td>
<td>14.6</td>
<td>14.6</td>
<td>14.6</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>8.1</td>
<td>8.3</td>
<td>8.3</td>
<td>8.3</td>
<td>+0.0</td>
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<tr>
<td>GNI per capita (PPP $)</td>
<td>12,951</td>
<td>13,087</td>
<td>12,963</td>
<td>12,896</td>
<td>-67.0</td>
</tr>
</tbody>
</table>

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**SMART CITY RANKING**

92

Out of 109

▲

98 in 2019

---

**FACTOR RATINGS**

CC

D in 2019

---

**GROUP**

3

All ratings range from AAA to D

---

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the bar chart. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

---

**ATTITUDES**

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

---

**Structures**

**Health & Safety**

Basic sanitation meets the needs of the poorest areas

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Air pollution is not a problem

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Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

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**Activities**

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

**Governance**

Information on local government decisions are easily accessible

Compliance of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

---

**Technologies**

**Health & Safety**

Online reporting of city maintenance problems provides a speedy solution

A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

**Mobility**

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space has reduced journey time

Bicycle hiring has reduced congestion

Online scheduling and ticket sales has made public transport easier to use

The city provides information on traffic congestion through mobile phones

**Activities**

Online purchasing of tickets to shows and museums has made it easier to attend

**Opportunities (Work & School)**

Online access to job listings has made it easier to find work

IT skills are taught well in schools

Online services provided by the city has made it easier to start a new business

The current internet speed and reliability meet connectivity needs

**Governance**

Online public access to city finances has reduced corruption

Online voting has increased participation

An online platform where residents can propose ideas has improved city life

Processing Identification Documents online has reduced waiting times
### Background Information

#### City
- Population: 784,000

#### RATINGS
- Smart City Rating: CCC
- BBB in 2019

#### Out of 109
- Residents provide feedback on local government projects
- Processing identification documents online has reduced waiting times
- Residents contribute to decision-making of local government
- An online platform where residents can propose ideas has improved city life
- Corruption of city officials is not an issue of concern
- Online voting has increased participation
- Minorities feel welcome
- Businesses are creating new jobs
- The current internet speed and reliability meet connectivity needs
- Lifelong learning opportunities are provided by local institutions
- Online services provided by the city have made it easier to start a new business
- Most children have access to a good school
- IT skills are taught well in schools
- Cultural activities (shows, bars, and museums) are satisfactory
- Public transport is satisfactory
- Apps that direct you to an available parking space have reduced journey time
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem
- Arranging medical appointments online has improved access
- Medical services provision is satisfactory
- A website or App allows residents to effectively monitor air pollution
- Air pollution is not a problem
- CCTV cameras have made residents feel safer
- Public safety is not a problem
- Free public wifi has improved access to city services
- Recycling services are satisfactory
- A website or App allows residents to easily give away unwanted items
- Most people who want to recycle are satisfied with current services
- Social mobility is not an issue of concern
- Online access to job listings has made it easier to find work
- Employment finding services are readily available
- Online public access to city finances has reduced corruption
- Corruption of city officials is not an issue of concern
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing identification documents online has reduced waiting times

#### structures

<table>
<thead>
<tr>
<th>Health &amp; Safety</th>
<th>Score</th>
<th>City</th>
<th>Mean</th>
<th>Group Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic sanitation meets the needs of the poorest areas</td>
<td>72.3</td>
<td>70.0</td>
<td>72.0</td>
<td></td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>70.8</td>
<td>70.0</td>
<td>72.0</td>
<td></td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>73.3</td>
<td>70.0</td>
<td>72.0</td>
<td></td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>50.8</td>
<td>50.0</td>
<td>52.0</td>
<td></td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>30.7</td>
<td>25.0</td>
<td>50.0</td>
<td></td>
</tr>
<tr>
<td>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</td>
<td>77.0</td>
<td>75.0</td>
<td>77.0</td>
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#### technologies

<table>
<thead>
<tr>
<th>Health &amp; Safety</th>
<th>Score</th>
<th>City</th>
<th>Mean</th>
<th>Group Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online reporting of city maintenance problems provides a speedy solution</td>
<td>62.5</td>
<td>60.0</td>
<td>65.0</td>
<td></td>
</tr>
<tr>
<td>A website or App allows residents to easily give away unwanted items</td>
<td>57.3</td>
<td>54.0</td>
<td>60.0</td>
<td></td>
</tr>
<tr>
<td>Free public wifi has improved access to city services</td>
<td>48.2</td>
<td>45.0</td>
<td>50.0</td>
<td></td>
</tr>
<tr>
<td>CCTV cameras have made residents feel safer</td>
<td>72.3</td>
<td>65.0</td>
<td>70.0</td>
<td></td>
</tr>
<tr>
<td>A website or App allows residents to effectively monitor air pollution</td>
<td>47.2</td>
<td>45.0</td>
<td>50.0</td>
<td></td>
</tr>
<tr>
<td>Arranging medical appointments online has improved access</td>
<td>47.0</td>
<td>45.0</td>
<td>50.0</td>
<td></td>
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</tbody>
</table>

#### opportunities (work & school)

<table>
<thead>
<tr>
<th>Health &amp; Safety</th>
<th>Score</th>
<th>City</th>
<th>Mean</th>
<th>Group Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online access to job listings has made it easier to find work</td>
<td>65.3</td>
<td>60.0</td>
<td>70.0</td>
<td></td>
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<tr>
<td>IT skills are taught well in schools</td>
<td>56.0</td>
<td>54.0</td>
<td>60.0</td>
<td></td>
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<td>Online services provided by the city have made it easier to start a new business</td>
<td>48.3</td>
<td>45.0</td>
<td>50.0</td>
<td></td>
</tr>
<tr>
<td>The current internet speed and reliability meet connectivity needs</td>
<td>59.2</td>
<td>55.0</td>
<td>65.0</td>
<td></td>
</tr>
</tbody>
</table>

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand section of each bar shows the alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong alignment implies that these areas also demand priority attention.

####attitudes

- You are willing to concede personal data in order to improve traffic congestion: 64.7%
- You are comfortable with face recognition technologies to lower crime: 70.2%
- You feel the availability of online information has increased your trust in authorities: 61.3%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 67.3%

### governance

- GNI per capita (PPP $): 34,105
- Mean years of schooling: 10.1
- Life expectancy at birth: 82.8
- HDI: 0.875
- Unemployment: 34.818
- Recession: 0.002
- %: 35.573
- %: 0.002
- %: 36.141
- %: 1 yr change

### technology

- Amenities: 3.0
- Mobility: 4.0
- Health & safety: 4.5
- Economy: 4.0
- Education: 4.0
- Environment: 3.0
- Security: 3.0
- Culture: 4.0
- Employability: 4.0
Boston

BACKGROUND INFORMATION

City
Population: 4,249,000
(UN World Cities Report)

Country
city mean
2015 2016 2017 2018 1 yr change
HDI 0.917 0.919 0.919 0.920 +0.001
Life expectancy at Birth 78.9 78.9 78.9 78.9 +0.0
Expected years of schooling 16.2 16.3 16.3 16.3 +0.0
Mean years of schooling 13.3 13.4 13.4 13.4 +0.0
GNP per capita (PPP $) 54,039 54,443 55,351 56,140 +789.0

SMART CITY RANKING
36
Out of 109
32 in 2019

SMART CITY RATING
BBB
BBB in 2019

FACTOR RATINGS
A
STRUCTURES
BBB
TECHNOLOGIES

GROUP 1

All ratings range from AAA to D

PRIORITY AREAS

Health & Safety
Online reporting of city maintenance problems provides a speedy solution
A website or App allows residents to easily give away unwanted items
Free public wifi has improved access to city services
CCTV cameras have made residents feel safer
A website or App allows residents to effectively monitor air pollution
Arranging medical appointments online has improved access

Activities
Online purchasing of tickets to shows and museums has made it easier to attend

Goverance
Online public access to city finances has reduced corruption
Online voting has increased participation
An online platform where residents can propose ideas has improved city life
Processing Identification Documents online has reduced waiting times

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap
Bratislava

BACKGROUND INFORMATION

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change
--- | --- | --- | --- | --- | ---
HDI | 0.849 | 0.851 | 0.854 | 0.857 | +0.003
Life expectancy at Birth | 76.8 | 77.0 | 77.2 | 77.4 | +0.2
Expected years of schooling | 14.7 | 14.5 | 14.5 | 14.5 | +0.0
Mean years of schooling | 12.5 | 12.6 | 12.6 | 12.6 | +0.0
GNI per capita (PPP $) | 27,693 | 28,706 | 29,544 | 30,672 | +1,128.0

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

All ratings range from AAA to D

SMART CITY RANKING

76
Out of 109

SMART CITY RATING

CCC
CC in 2019

FACTOR RATINGS

CCC
STRUCTURES

CC
TECHNOLOGIES

GROUP

3

All ratings range from AAA to D
CITY GROUP MAX

All ratings range from AAA to D

TECHNOLOGIES
BBB

RATING

Brisbane

GROUP
27 in 2019

2015
2016
2017
2018
1 yr change

HDI
0.933
0.935
0.937
0.938
+0.001

Life expectancy at Birth
82.8
83.0
83.1
83.3
+0.2

Expected years of schooling
23.3
22.9
22.1
22.1
+0.0

Mean years of schooling
12.5
12.6
12.7
12.7
+0.0

GNI per capita (PPP $)
43,246
43,653
43,756
44,097
+341.0

Population
2,202,000

Information on local government decisions are easily accessible

Online public access to city finances has reduced corruption

Employment finding services are readily available

Online access to job listings has made it easier to find work

Green spaces are satisfactory

Online purchasing of tickets to shows and museums has made it easier to attend

Traffic congestion is not a problem

Car-sharing Apps have reduced congestion

Basic sanitation meets the needs of the poorest areas

Online reporting of city maintenance problems provides a speedy solution

Residents provide feedback on local government projects

Processing Identification Documents online has reduced waiting times

 Residents contribute to decision making of local government

An online platform where residents can propose ideas has improved city life

Minorities feel welcome

Businesses are creating new jobs

The current internet speed and reliability meet connectivity needs

Most children have access to a good school

IT skills are taught well in schools

Cultural activities (shows, bars, and museums) are satisfactory

Online viewing of cultural events has made it easier to attend

Public transport is satisfactory

Apps that direct you to an available parking space have reduced journey time

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Arranging medical appointments online has improved access

Medical services provision is satisfactory

A website or App allows residents to effectively monitor air pollution

Air pollution is not a problem

CCTV cameras have made residents feel safer

Public safety is not a problem

Free public wifi has improved access

Recycling services are satisfactory

A website or App allows residents to easily give away unwanted items

Attracting insurance companies has reduced insurance premiums

People have the freedom to choose how to travel

Using public transport to commute has made it cheaper

Basic amenities are adequate

Bicycle hiring has reduced congestion

Access to affordable housing has made it easier to move

CITY MEAN

GROUP MEAN

LEGEND:

MIN

MAX

Score

0

20

40

60

80

100

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

% of respondents who agree or strongly agree with the statement

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responders per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those responders who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
Brussels

BACKGROUND INFORMATION

City
Population: 1,205,000
(Eurostat)

Country  | 2015  | 2016  | 2017  | 2018  | 1 yr change
HDI       | 0.913 | 0.915 | 0.917 | 0.919 | +0.002
Life expectancy at Birth | 81.0  | 81.1  | 81.3  | 81.5  | +0.2
Expected years of schooling | 19.7  | 19.7  | 19.7  | 19.7  | +0.0
Mean years of schooling | 11.7  | 11.8  | 11.8  | 11.8  | +0.0
GNI per capita (PPP $)  | 41,598 | 42,260 | 43,300 | 43,821 | +$521.0

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:
GROUP MEAN

Score

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

% of respondents who agree or strongly agree with the statement

Score

0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

% of respondents who agree or strongly agree with the statement

33
Bucharest

BACKGROUND INFORMATION

City
Population 1,868,000
(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.806 0.808 0.813 0.816 +0.003
Life expectancy at Birth 75.5 75.6 75.8 75.9 +0.1
Expected years of schooling 14.5 14.3 14.3 14.3 +0.0
Mean years of schooling 10.9 11.0 11.0 11.0 +0.0
GNI per capita (PPP $) 20,157 21,173 22,828 23,906 +1,078.0

SMART CITY RANKING
87
Out of 109
85 in 2019

SMART CITY RATING
CC
CC in 2019

FACTOR RATINGS
CCC

GROUP 3

All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.
The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You feel the availability of online recognition technologies to lower crime
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

STRUCUTRES

Health & Safety
Basic sanitation meets the needs of the poorest areas
Recycling services are satisfactory
Public safety is not a problem
Air pollution is not a problem
Medical services provision is satisfactory
Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility
Traffic congestion is not a problem
Public transport is satisfactory

Activities
Green spaces are satisfactory
Cultural activities (shows, bars, and museums) are satisfactory

Opportunities (Work & School)
Employment finding services are readily available
Most children have access to a good school
Lifelong learning opportunities are provided by local institutions
Businesses are creating new jobs
Minorities feel welcome

Governance
Information on local government decisions are easily accessible
Compliance of city officials is not an issue of concern
Residents contribute to decision making of local government
Residents provide feedback on local government projects

TECHNOLOGIES

Health & Safety
Online reporting of city maintenance problems provides a speedy solution
A website or App allows residents to easily give away unwanted items
Free public Wi-Fi has improved access to city services
CCTV cameras have made residents feel safer
A website or App allows residents to effectively monitor air pollution
Arranging medical appointments online has improved access

Mobility
Car-sharing Apps have reduced congestion
Apps that direct you to an available parking space have reduced journey time
Bicycle hiring has reduced congestion
Online scheduling and ticket sales has made public transport easier to use
The city provides information on traffic congestion through mobile phones

Activities
Online purchasing of tickets to shows and museums has made it easier to attend

Opportunities (Work & School)
Online access to job listings has made it easier to find work
IT skills are taught well in schools
Online services provided by the city has made it easier to start a new business
The current internet speed and reliability meet connectivity needs

Governance
Online public access to city finances has reduced corruption
Online voting has increased participation
An online platform where residents can propose ideas has improved city life
Processing Identification Documents online has reduced waiting times
***Background Information***

**City**

Population: 1,714,000

(UN World Cities Report)

---

**Country**

<table>
<thead>
<tr>
<th>Year</th>
<th>HDI</th>
<th>Life Expectancy at Birth</th>
<th>Mean Years of Schooling</th>
<th>GNI per capita (PPP $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.835</td>
<td>76.0</td>
<td>11.8</td>
<td>23,965</td>
</tr>
<tr>
<td>2016</td>
<td>0.838</td>
<td>76.3</td>
<td>11.8</td>
<td>25,081</td>
</tr>
<tr>
<td>2017</td>
<td>0.841</td>
<td>76.5</td>
<td>11.9</td>
<td>25,774</td>
</tr>
<tr>
<td>2018</td>
<td>0.846</td>
<td>76.7</td>
<td>11.9</td>
<td>27,144</td>
</tr>
</tbody>
</table>

1 yr change: +0.004

---

**Priorities**

- Health & Safety: Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- Mobility: Traffic congestion is not a problem
- Public transport is satisfactory

- Activities: Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

- Opportunities (Work & School): Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

- Governance: Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

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**Smart City Rating**

- **Budapest**
  - Smart City Ranking: 77
  - Out of 109
  - CCC: CC in 2019

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**Technologies**

**Health & Safety**

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wi-fi has improved access to city services
- CCTV cameras have made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

**Mobility**

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle sharing has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

**Activities**

- Online purchasing of tickets to shows and museums has made it easier to attend

**Opportunities (Work & School)**

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

---

**Governance**

- Online public access to city finance has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing identification documents online has reduced waiting times

---

**Population**

1,714,000

---

**Health Indicators**

- **HDI**
  - 2015: 0.835
  - 2016: 0.838
  - 2017: 0.841
  - 2018: 0.846

- **Life Expectancy at Birth**
  - 2015: 76.0
  - 2016: 76.3
  - 2017: 76.5
  - 2018: 76.7

- **Mean Years of Schooling**
  - 2015: 11.8
  - 2016: 11.8
  - 2017: 11.9
  - 2018: 11.9

- **GNI per capita (PPP $)**
  - 2015: 23,965
  - 2016: 25,081
  - 2017: 25,774
  - 2018: 27,144

---

**Impact of Smart City Technologies**

- Information on local government decisions are easily accessible
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing identification documents online has reduced waiting times
Buenos Aires

BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.828</td>
<td>0.828</td>
<td>0.832</td>
<td>0.830</td>
<td>-0.002</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>76.1</td>
<td>76.2</td>
<td>76.4</td>
<td>76.5</td>
<td>+0.1</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>17.4</td>
<td>17.4</td>
<td>17.6</td>
<td>17.6</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>10.4</td>
<td>10.5</td>
<td>10.6</td>
<td>10.6</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>18,901</td>
<td>18,249</td>
<td>18,462</td>
<td>17,611</td>
<td>-851.0</td>
</tr>
</tbody>
</table>

**Health & Safety**
- Basic sanitation meets the needs of the poorest areas: 46.2
- Recycling services are satisfactory: 52.1
- Public safety is not a problem: 29.5
- Air pollution is not a problem: 28.9
- Medical services provision is satisfactory: 53.6
- Finding housing with rent equal or less than 10% of a monthly salary is a problem: 30.3

**Mobility**
- Traffic congestion is not a problem: 21.2
- Public transport is satisfactory: 49.9

**Activities**
- Green spaces are satisfactory: 74.8
- Cultural activities (shows, bars, and museums): 76.5

**Opportunities (Work & School)**
- Employment finding services are readily available: 50.8
- Most children have access to a good school: 40.5
- Lifelong learning opportunities are provided by local institutions: 52.3
- Businesses are creating new jobs: 37.2
- Minorities feel welcome: 46.1

**Governance**
- Information on local government decisions are easily accessible: 53.2
- Corruption of city officials is not an issue of concern: 27.2
- Residents contribute to decision making of local government: 36.1
- Residents provide feedback on local government projects: 50.0

**SMART CITY RANKING**
- Buenos Aires: CC in 2019

**SMART CITY RATING**
- CC

**ATTITUDES**
- You are willing to concede personal data in order to improve traffic congestion: 68.7%
- You are comfortable with face recognition technologies to lower crime: 56.4%
- You feel the availability of online information has increased your trust in authorities: 86.1%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 56.4%

**PRIORITY AREAS**
- Social mobility: 37.0%
- Affordable housing: 46.9%
- Fulfilling employment: 46.1%
- Public transport: 29.3%
- Health services: 23.9%
- School education: 38.0%
- Basic amenities: 29.2%
- Road congestion: 28.4%
- Air pollution: 20.2%
- Recycling: 13.2%
- Citizen engagement: 9.1%
- Social mobility: 7.8%

**TECHNOLOGIES**
- Online reporting of city maintenance problems provides a speedy solution: 48.8%
- A website/App allows residents to easily give away unwanted items: 47.7%
- Free public wifi has improved access to city services: 59.6%
- CCTV cameras have made residents feel safer: 53.4%
- A website/App allows residents to effectively monitor air pollution: 31.2%
- Arranging medical appointments online has improved access: 60.3%
- Car-sharing Apps have reduced congestion: 44.7%
- Apps that direct you to available parking space: 49.5%
- Bicycle sharing has reduced congestion: 57.4%
- Online scheduling and ticket sales has made public transport easier to use: 54.7%
- The city provides information on traffic congestion through mobile phones: 71.1%

**GROUP**
- CC
### Busan

#### Background Information

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.899</td>
<td>0.901</td>
<td>0.904</td>
<td>0.906</td>
<td>+0.002</td>
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<tr>
<td>Life expectancy at Birth</td>
<td>82.1</td>
<td>82.4</td>
<td>82.6</td>
<td>82.8</td>
<td>+0.2</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>16.5</td>
<td>16.4</td>
<td>16.4</td>
<td>16.4</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>34,276</td>
<td>35,122</td>
<td>35,945</td>
<td>36,757</td>
<td>+812.0</td>
</tr>
</tbody>
</table>

#### Priorities Areas

<table>
<thead>
<tr>
<th>Attitude</th>
<th>% of respondents who agree or strongly agree with the statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>You feel the availability of online information has increased your trust in authorities</td>
<td>56.2%</td>
</tr>
<tr>
<td>You feel the availability of online information has increased your trust in authorities</td>
<td>74.9%</td>
</tr>
<tr>
<td>The proportion of your day-to-day payment transactions that are non-cash (% of transactions)</td>
<td>68.1%</td>
</tr>
</tbody>
</table>

#### Attitudes

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td>72.5</td>
</tr>
<tr>
<td>Basic sanitation meets the needs of the poorest areas</td>
<td>72.5</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>67.9</td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>64.0</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>26.0</td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>75.7</td>
</tr>
<tr>
<td>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</td>
<td>47.8</td>
</tr>
<tr>
<td>Mobility</td>
<td>33.7</td>
</tr>
<tr>
<td>Traffic congestion is not a problem</td>
<td>33.7</td>
</tr>
<tr>
<td>Public transport is satisfactory</td>
<td>70.0</td>
</tr>
<tr>
<td>Activities</td>
<td>58.5</td>
</tr>
<tr>
<td>Green spaces are satisfactory</td>
<td>58.5</td>
</tr>
<tr>
<td>Cultural activities (shows, bars, and museums) are satisfactory</td>
<td>56.9</td>
</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
<td>55.7</td>
</tr>
<tr>
<td>Employment finding services are readily available</td>
<td>55.7</td>
</tr>
<tr>
<td>Most children have access to a good school</td>
<td>60.1</td>
</tr>
<tr>
<td>Lifelong learning opportunities are provided by local institutions</td>
<td>65.6</td>
</tr>
<tr>
<td>Businesses are creating new jobs</td>
<td>42.1</td>
</tr>
<tr>
<td>Minorities feel welcome</td>
<td>38.9</td>
</tr>
<tr>
<td>Governance</td>
<td>60.6</td>
</tr>
<tr>
<td>Information on local government decisions are easily accessible</td>
<td>60.6</td>
</tr>
<tr>
<td>Corruption of city officials is not an issue of concern</td>
<td>33.3</td>
</tr>
<tr>
<td>Residents contribute to decision making of local government</td>
<td>48.4</td>
</tr>
<tr>
<td>Residents provide feedback on local government projects</td>
<td>50.4</td>
</tr>
</tbody>
</table>

#### Structures

<table>
<thead>
<tr>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>60</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>100</td>
</tr>
</tbody>
</table>

#### Technologies

<table>
<thead>
<tr>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
</tr>
<tr>
<td>40</td>
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<tr>
<td>60</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>100</td>
</tr>
</tbody>
</table>

#### Governance

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online public access to city finances has reduced corruption</td>
<td>41.8</td>
</tr>
<tr>
<td>Online voting has increased participation</td>
<td>56.0</td>
</tr>
<tr>
<td>An online platform where residents can propose ideas has improved city life</td>
<td>55.4</td>
</tr>
<tr>
<td>Processing Identification Documents online has reduced waiting times</td>
<td>72.5</td>
</tr>
</tbody>
</table>

#### Health & Safety

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online reporting of city maintenance problems provides a speedy solution</td>
<td>60.1</td>
</tr>
<tr>
<td>A website or App allows residents to easily give away unwanted items</td>
<td>56.5</td>
</tr>
<tr>
<td>Free public wifi has improved access to city services</td>
<td>71.0</td>
</tr>
<tr>
<td>CCTV camera has made residents feel safer</td>
<td>76.6</td>
</tr>
<tr>
<td>A website or App allows residents to effectively monitor air pollution</td>
<td>64.8</td>
</tr>
<tr>
<td>Arranging medical appointments online has improved access</td>
<td>66.7</td>
</tr>
</tbody>
</table>

#### Mobility

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car-sharing Apps have reduced congestion</td>
<td>40.9</td>
</tr>
<tr>
<td>Apps that direct you to an available parking space have reduced journey time</td>
<td>46.1</td>
</tr>
<tr>
<td>Bicycle sharing has reduced congestion</td>
<td>38.7</td>
</tr>
<tr>
<td>Online scheduling and ticket sales have made public transport easier to use</td>
<td>70.9</td>
</tr>
<tr>
<td>The city provides information on traffic congestion through mobile phones</td>
<td>75.8</td>
</tr>
</tbody>
</table>

#### Activities

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online purchasing of tickets to shows and museums has made it easier to attend</td>
<td>73.5</td>
</tr>
</tbody>
</table>

#### Opportunities (Work & School)

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online access to job listings has made it easier to find work</td>
<td>65.5</td>
</tr>
<tr>
<td>IT skills are taught well in schools</td>
<td>62.3</td>
</tr>
<tr>
<td>Online services provided by the city has made it easier to start a new business</td>
<td>55.1</td>
</tr>
<tr>
<td>The current internet speed and reliability meet connectivity needs</td>
<td>75.7</td>
</tr>
</tbody>
</table>

#### Summary

- Busan's HDI score improved from 2015 to 2018, showing progress in overall development.
- Life expectancy at Birth increased over the years, indicating better health care and living conditions.
- GNI per capita also increased, reflecting economic growth.

---

**Note:** The diagram and table data reflect the city's performance in various categories, highlighting areas of improvement and potential future focus. The ratings indicate the city's standing in comparison to others, with HDI being a key indicator of overall development.
**BACKGROUND INFORMATION**

- **City**: Cairo
- **Population**: 18,772,000 (UN World Cities Report)

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.690</td>
<td>0.696</td>
<td>0.696</td>
<td>0.700</td>
<td>+0.004</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>71.3</td>
<td>71.5</td>
<td>71.7</td>
<td>71.8</td>
<td>+0.1</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>13.0</td>
<td>13.1</td>
<td>13.1</td>
<td>13.1</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>10,069</td>
<td>10,323</td>
<td>10,473</td>
<td>10,744</td>
<td>+271.0</td>
</tr>
</tbody>
</table>

**SMART CITY RATING**

- **Total**: 43.4
- **Ranking**: 106
- **Out of**: 109
- **Group**: 4

**FACTOR RATINGS**

- **Structures**: D
- **Technologies**: D

**GROUP 4**

All ratings range from AAA to D

**PRIORITY AREAS**

- **Health & Safety**: Online reporting of city maintenance problems provides a speedy solution
- **Technologies**: A website or App allows residents to effectively monitor air pollution

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion
- You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
**Cape Town**

**Background Information**

- **Population**: 3,660,000
- **(UN World Cities Report)**

**Country**  |  **2015** |  **2016** |  **2017** |  **2018** |  **1 yr change**
--- | --- | --- | --- | --- | ---
HDI | 0.699 | 0.702 | 0.704 | 0.705 | +0.001
Life expectancy at Birth | 62.6 | 63.2 | 63.5 | 63.9 | +0.4
Expected years of schooling | 13.8 | 13.7 | 13.7 | 13.7 | +0.0
Mean years of schooling | 10.1 | 10.2 | 10.2 | 10.2 | +0.0
GNI per capita (PPP $) | 12,052 | 11,908 | 11,864 | 11,756 | -108.0

**Score**  |  **2015** |  **2016** |  **2017** |  **2018** |  **1 yr change**
--- | --- | --- | --- | --- | ---
Health & Safety | 45.3 | 54.7 | 55.5 | 35.8 | 35.2
Mobility | 39.8 | 39.8 | 35.5 | 35.8
Activities | 66.9 | 76.6 | 66.9 | 76.6 | 66.9
Opportunities (Work & School) | 51.1 | 51.2 | 54.1 | 53.2 | 48.3
Governance | 59.5 | 26.1 | 39.4 | 50.9

**Factor Ratings**

- **D**: Structures
- **C**: Technologies

**Group Rating**

- **4**: Out of 109

**Smart City Ranking**

- **103**: in 2019

**Atitudes**

- **You are willing to concede personal data in order to improve traffic congestion**: 74.1%
- **You are comfortable with face recognition technologies to lower crime**: 84.2%
- **The proportion of your day-to-day payment transactions that are non-cash (% of transactions)**: 69.2%

**Priorities**

- **Health & Safety**: Online reporting of city maintenance problems provides a speedy solution
- **Opportunities (Work & School)**: Online access to job listings has made it easier to find work
- **Utilities**: Online scheduling and ticket sales has made public transport easier to use
- **Safety & Security**: The city provides information on local government projects

**Technologies**

- **Health & Safety**: Online reporting of city maintenance problems provides a speedy solution
- **Opportunities (Work & School)**: Online access to job listings has made it easier to find work
- **Utilities**: Online scheduling and ticket sales has made public transport easier to use
- **Safety & Security**: The city provides information on local government projects
Chicago

BACKGROUND INFORMATION
City
Population 8,745,000
(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.917 0.919 0.919 0.920 +0.001
Life expectancy at birth 78.9 78.9 78.9 78.9 +0.0
Expected years of schooling 16.2 16.3 16.3 16.3 +0.0
Mean years of schooling 13.3 13.4 13.4 13.4 +0.0
GNI per capita (PPP $) 54,039 54,443 55,351 56,140 +789.0

PRIORITY AREAS
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES
You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:
MIN CITY MEAN GROUP MEAN

0% 20% 40% 60% 80% 100%

Structures
Health & Safety
Basic sanitation meets the needs of the poorest areas
Recycling services are satisfactory
Public safety is not a problem
Air pollution is not a problem
Medical services provision is satisfactory
Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility
Traffic congestion is not a problem
Public transport is satisfactory

Activities
Green spaces are satisfactory
Cultural activities (shows, bars, and museums) are satisfactory

Opportunities (Work & School)
Employment finding services are readily available
Most children have access to a good school
Lifelong learning opportunities are provided by local institutions
Businesses are creating new jobs
Minorities feel welcome

Governance
Information on local government decisions are easily accessible
Corruption of city officials is not an issue of concern
Residents contribute to decision making of local government
Residents provide feedback on local government projects

Technologies
Health & Safety
Online reporting of city maintenance problems provides a speedy solution
A website or App allows residents to easily give away unwanted items
Free public wifi has improved access to city services
CCTV cameras have made residents feel safer
A website or App allows residents to effectively monitor air pollution
Arranging medical appointments online has improved access

Mobility
Car-sharing Apps have reduced congestion
Apps that direct you to an available parking space have reduced journey time
Bicycle hiring has reduced congestion
Online scheduling and ticket sales has made public transport easier to use
The city provides information on traffic congestion through mobile phones

Activities
Online purchasing of tickets to shows and museums has made it easier to attend

Opportunities (Work & School)
Online access to job listings has made it easier to find work
IT skills are taught well in schools
Online services provided by the city has made it easier to start a new business
The current internet speed and reliability meet connectivity needs

Governance
Online public access to city finances has reduced corruption
Online voting has increased participation
An online platform where residents can propose ideas has improved city life
Processing Identification Documents online has reduced waiting times
**BACKGROUND INFORMATION**

**City**
- Population: 13,332,000
- (UN World Cities Report)

**Country**
- 2015: HDI = 0.742, Life expectancy at Birth = 75.9, Mean years of schooling = 7.7, GNI per capita (PPP $) = 13,485
- 2016: HDI = 0.749, Life expectancy at Birth = 76.2, Mean years of schooling = 7.8, GNI per capita (PPP $) = 14,311
- 2017: HDI = 0.753, Life expectancy at Birth = 76.5, Mean years of schooling = 7.8, GNI per capita (PPP $) = 15,212
- 2018: HDI = 0.758, Life expectancy at Birth = 76.7, Mean years of schooling = 7.9, GNI per capita (PPP $) = 16,127

**1 yr change**
- HDI: +0.005
- Life expectancy at Birth: +0.2
- Mean years of schooling: +0.1
- GNI per capita (PPP $): +$15.0

---

**SMART CITY RANKING**

64
Out of 109

42 in 2019

**SMART CITY RATING**

CCC
BB in 2019

**FACTOR RATINGS**

CCC

**STRUCTURES**

- Basic sanitation meets the needs of the poorest areas: 83.1
- Recycling services are satisfactory: 74.3
- Public safety is not a problem: 76.4
- Air pollution is not a problem: 71.7
- Medical services provision is satisfactory: 82.5
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 78.1

**Mobility**

- Traffic congestion is not a problem: 64.6
- Public transport is satisfactory: 75.6

**Health & Safety**

- Health: 85.3
- Safety: 82.5
- Security: 82.7

**Activities**

- Green spaces are satisfactory: 82.9
- Cultural activities (shows, bars, and museums) are satisfactory: 80.6

**Opportunities (Work & School)**

- Employment finding services are readily available: 81.0
- Most children have access to a good school: 79.5
- Lifelong learning opportunities are provided by local institutions: 70.6
- Businesses are creating new jobs: 76.2
- Minorities feel welcome: 82.5

**Governance**

- Information on local government decisions are easily accessible: 80.0
- Corruption of city officials is not an issue of concern: 69.6
- Residents contribute to decision making of local government: 72.6
- Residents provide feedback on local government projects: 79.6

**TECHNOLOGIES**

**Health & Safety**

- Online reporting of city maintenance problems provides a speedy solution: 83.1
- A website or App allows residents to easily give away unwanted items: 76.7
- Free public wifi has improved access to city services: 75.5
- CCTV camera has made residents feel safer: 81.3
- A website or App allows residents to effectively monitor air pollution: 81.0
- Arranging medical appointments online has improved access: 88.3

**Mobility**

- Car-sharing Apps have reduced congestion: 75.2
- Apps that direct you to an available parking space have reduced journey time: 79.8
- Bicycle hiring has reduced congestion: 72.6
- Online scheduling and ticket sales has made public transport easier to use: 88.5
- The city provides information on traffic congestion through mobile phones: 85.9

**Activities**

- Online purchasing of tickets to shows and museums has made it easier to attend: 89.4

**Opportunities (Work & School)**

- Online access to job listings has made it easier to find work: 88.9
- IT skills are taught well in schools: 79.8
- Online services provided by the city has made it easier to start a new business: 77.1
- The current internet speed and reliability meet connectivity needs: 87.8

**Governance**

- Online public access to city finances has reduced corruption: 77.1
- Online voting has increased participation: 79.3
- An online platform where residents can propose ideas has improved city life: 79.0
- Processing Identification Documents online has reduced waiting times: 78.4

---

**ATITUDES**

- You are willing to concede personal data in order to improve traffic congestion: 87.9%
- You are comfortable with face recognition technologies to lower crime: 89.1%
- You feel the availability of online information has increased your trust in authorities: 90.3%
- The proportion of your day-to-day payment transactions that are non-cash: 81.6%

---

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.
Copenhagen

BACKGROUND INFORMATION

Country 2015 2016 2017 2018 1 yr change
HDI 0.928 0.928 0.929 0.930 +0.001
Life expectancy at Birth 80.5 80.6 80.7 80.8 +0.1
Expected years of schooling 19.2 19.1 19.1 19.1 +0.0
Mean years of schooling 12.5 12.6 12.6 12.6 +0.0
GNI per capita (PPP $) 47,213 47,729 48,338 48,836 +698.0

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion 59.0%
You are comfortable with face recognition technologies to lower crime 68.6%
You feel the availability of online information has increased your trust in authorities 66.1%
The proportion of your day-to-day payment transactions that are non-cash 80.1%

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions. A strong Alignment implies that these areas also demand priority attention.

All ratings range from AAA to D

SMART CITY RANKING 6
Out of 109
5 in 2019

SMART CITY RATING AA in 2019

FACTOR RATINGS

AA STRUCTURES

A TECHNOLOGIES

GROUP 1

All ratings range from AAA to D
Denver

CITY

GROUP MAX

All ratings range from AAA to D

SMART CITY RANKING

35

Out of 109

33 in 2019

SMART CITY RATING

BBB

BBB in 2019

FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

GROUP 1

BACKGROUND INFORMATION

City

Population 2,599,000

(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change

HDI 0.917 0.919 0.919 0.920 +0.001

Life expectancy at Birth 78.9 78.9 78.9 78.9 +0.0

Expected years of schooling 16.2 16.3 16.3 16.3 +0.0

Mean years of schooling 13.3 13.4 13.4 13.4 +0.0

GNP per capita (PPP $) 54,039 54,443 55,351 56,140 +789.0

STRUCTURES

Score 0 20 40 60 80 100

Basic sanitation meets the needs of the poorest areas 54.3

Recycling services are satisfactory 64.7

Public safety is not a problem 47.6

Air pollution is not a problem 31.3

Medical services provision is satisfactory 87.6

Finding housing with rent equal to 30% or less of a monthly salary is not a problem 19.4

Mobility

Traffic congestion is not a problem 18.4

Public transport is satisfactory 57.8

Activities

Green spaces are satisfactory 67.6

Cultural activities (shows, bars, and museums) are satisfactory 80.9

Opportunities (Work & School)

Employment finding services are readily available 72.8

Most children have access to a good school 63.9

Lifelong learning opportunities are provided by local institutions 64.6

Businesses are creating new jobs 87.1

Minorities feel welcome 65.6

Governance

Information on local government decisions are easily accessible 68.0

Corruption of city officials is not an issue of concern 39.3

Residents contribute to decision making of local government 58.2

Residents provide feedback on local government projects 64.1

Health & Safety

Online reporting of city maintenance problems provides a speedy solution 45.1

A website or App allows residents to easily give away unwanted items 62.6

Free public wi-fi has improved access to city services 45.7

CCTV cameras have made residents feel safer 43.3

A website or App allows residents to effectively monitor air pollution 39.6

Health & Safety

Arranging medical appointments online has improved access 65.0

Health & Safety

Online purchasing of tickets to shows and museums has made it easier to attend 78.9

Opportunities (Work & School)

Online access to job listings has made it easier to find work 71.9

IT skills are taught well in schools 44.4

Online services provided by the city have made it easier to start a new business 48.6

The current internet speed and reliability meet connectivity needs 63.1

Technology

Cable-sharing Apps have reduced congestion 43.3

Apps that direct you to an available parking space have reduced journey time 40.1

Bicycle hiring has reduced congestion 43.2

Online scheduling and ticket sales has made public transport easier to use 58.8

The city provides information on traffic congestion through mobile phones 59.0

Technology

Processing Identification Documents online has reduced waiting times 58.0

Technology

Online public access to city finances has reduced corruption 39.8

Online voting has increased participation 54.5

An online platform where residents can propose ideas has improved city life 44.9

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

% of respondents who agree or strongly agree with the statement

You feel the availability of online information has increased your trust in authorities

% of respondents who chose the Priority Area

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

You are comfortable with face recognition technologies to lower crime

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

The percentage of responses per area, their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.
### Background Information

**City**

- **Population**: 2.415,000

(UN World Cities Report)

### Structures and Technologies

#### Structures

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.863</td>
<td>0.864</td>
<td>0.866</td>
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<tr>
<td>Life expectancy at Birth</td>
<td>77.3</td>
<td>77.5</td>
<td>77.8</td>
<td>77.8</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>13.7</td>
<td>13.6</td>
<td>13.6</td>
<td>13.6</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>10.6</td>
<td>10.8</td>
<td>10.9</td>
<td>11.0</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>66,093</td>
<td>67,410</td>
<td>67,138</td>
<td>66,912</td>
<td>-224.0</td>
</tr>
</tbody>
</table>

#### Technologies

- **GNI per capita (PPP $)**
- **Expected years of schooling**
- **Life expectancy at Birth**
- **Mean years of schooling**
- **GNI per capita (PPP $)**

### Priorities

#### Priorities Areas

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Attitudes

- **You are willing to concede personal data in order to improve traffic congestion**
- **You are comfortable with face recognition technologies to lower crime**
- **You feel the availability of online information has increased your trust in authorities**
- **The proportion of your day-to-day payment transactions that are non-cash (% of transactions)**

### Governance

- **Online public access to city finances has reduced corruption**
- **Online voting has increased participation**
- **An online platform where residents can propose ideas has improved city life**
- **Processing Identification Documents online has reduced waiting times**

### Legend

- **MIN**
- **MED**
- **CITY MEAN**
- **GROUP MEAN**
- **GROUP MAX**
Dublin

**BACKGROUND INFORMATION**

City
Population: 1,169,000

(UN World Cities Report)

**SMART CITY RANKING**

34
Out of 109

30 in 2019

**SMART CITY RATING**

BBB

BBB in 2019

**FACTOR RATINGS**

BBB

**GROUP**

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Factor</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.936</td>
<td>0.959</td>
<td>0.942</td>
<td>+0.003</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>81.3</td>
<td>81.6</td>
<td>81.9</td>
<td>82.1</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>18.7</td>
<td>18.8</td>
<td>18.8</td>
<td>18.8</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>12.3</td>
<td>12.5</td>
<td>12.5</td>
<td>12.5</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>45,809</td>
<td>50,911</td>
<td>52,799</td>
<td>55,660</td>
<td>+2,861.0</td>
</tr>
</tbody>
</table>

### STRUCTURES

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Governance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

### TECHNOLOGIES

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public Wi-Fi has improved access to city services
  - CCTV cameras have made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle sharing has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times
Dusseldorf

BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.936</td>
<td>0.938</td>
<td>0.939</td>
<td>+0.001</td>
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<tr>
<td>Life expectancy at Birth</td>
<td>80.8</td>
<td>80.9</td>
<td>81.0</td>
<td>81.2</td>
<td>+0.2</td>
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<tr>
<td>Expected years of schooling</td>
<td>17.0</td>
<td>17.1</td>
<td>17.1</td>
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<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>14.1</td>
<td>14.1</td>
<td>14.1</td>
<td>14.1</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>45,012</td>
<td>45,377</td>
<td>46,438</td>
<td>46,946</td>
<td>+508.0</td>
</tr>
</tbody>
</table>

ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion: 61.8%
- You are comfortable with face recognition technologies to lower crime: 57.6%
- You feel the availability of online information has increased your trust in authorities: 60.9%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 61.1%

PRIORITY AREAS

- Affordable housing: 59.1%
- Road congestion: 52.1%
- Security: 46.6%
- Air pollution: 42.9%
- Unemployment: 35.3%
- Public transport: 31.9%
- Recycling: 23.5%
- Green spaces: 23.1%
- Social mobility: 21.8%
- Fulfilling employment: 19.3%
- Health services: 17.4%
- Citizen engagement: 17.2%
- Basic amenities: 16.8%
- School education: 15.1%
- Corruption: 14.7%

TECHNOLOGIES

- Online reporting of city maintenance problems provides a speedy solution: 51.6%
- A website or App allows residents to easily give away unwanted items: 57.0%
- Free public wifi has improved access to city services: 58.6%
- CCTV cameras has made residents feel safer: 47.2%
- A website or App allows residents to effectively monitor air pollution: 45.1%
- Arranging medical appointments online has improved access: 52.3%
- Car-sharing Apps have reduced congestion: 39.4%
- Apps that direct you to an available parking space have reduced journey time: 49.6%
- Bicycle hiring has reduced congestion: 47.3%
- Online scheduling and ticket sales has made public transport easier to use: 64.8%
- The city provides information on traffic congestion through mobile phones: 62.2%

ACTIVITIES

- Online purchasing of tickets to shows and museums has made it easier to attend: 71.9%

Opportunities (Work & School)

- Online access to job listings has made it easier to find work: 70.6%
- IT skills are taught well in schools: 53.6%
- Online services provided by the city has made it easier to start a new business: 49.5%
- The current internet speed and reliability meet connectivity needs: 59.3%

Governance

- Online public access to city finances has reduced corruption: 48.7%
- Online voting has increased participation: 52.5%
- An online platform where residents can propose ideas has improved city life: 51.1%
- Processing Identification Documents online has reduced waiting times: 55.3%
Geneva Group Max

1. All ratings range from AAA to D
2. SMART CITY RANKING 7 Out of 109
3. SMART CITY RATING AA in 2019
4. FACTOR RATINGS AA STRUCTURES
5. TECHNOLOGIES A GROUP 1
6. Background Information

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change |
--------|------|------|------|------|------------|
HDI     | 0.943| 0.943| 0.943| 0.946| +0.003      |
Life expectancy at Birth | 83.1 | 83.3 | 83.5 | 83.6 | +0.1        |
Expected years of schooling | 16.2 | 16.2 | 16.2 | 16.2 | +0.0        |
Mean years of schooling | 13.4 | 13.4 | 13.4 | 13.4 | +0.0        |
GNI per capita (PPP $) | 58,723 | 58,138 | 57,301 | 59,375 | +2,074.0 |

Health & Safety
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility
- Traffic congestion is not a problem
- Public transport is satisfactory

Activities
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Opportunities (Work & School)
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Governance
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Technologies
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- The city provides information on traffic congestion through mobile phones

HDI
Mean years of schooling
Expected years of schooling
Life expectancy at Birth
GNI per capita (PPP $)

<table>
<thead>
<tr>
<th>Country</th>
<th>HDI</th>
<th>Mean years of schooling</th>
<th>Expected years of schooling</th>
<th>Life expectancy at Birth</th>
<th>GNI per capita (PPP $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geneva</td>
<td>0.943</td>
<td>13.4</td>
<td>13.4</td>
<td>83.6</td>
<td>59,375</td>
</tr>
</tbody>
</table>

Technologies

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health &amp; Safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>You are willing to concede personal data in order to improve traffic congestion</td>
<td>57.3%</td>
</tr>
<tr>
<td>You are comfortable with face recognition technologies to lower crime</td>
<td>62.7%</td>
</tr>
<tr>
<td>You feel the availability of online information has increased your trust in authorities</td>
<td>59.8%</td>
</tr>
</tbody>
</table>

PRIORITY AREAS
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

- Employment finding services are readily available
- Online access to job listings has made it easier to find work
- Green spaces are satisfactory
- Online purchasing of tickets to shows and museums has made it easier to attend
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has made it easier to start a new business
- Most children have access to a good school
- IT skills are taught well in schools

Attitudes

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The proportion of your day-to-day payment transactions that are non-cash (% of transactions)</td>
<td>70.1%</td>
</tr>
</tbody>
</table>
Gothenburg

**BACKGROUND INFORMATION**

Country: Canada

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>557,000</td>
</tr>
<tr>
<td>2016</td>
<td>577,000</td>
</tr>
<tr>
<td>2017</td>
<td>579,000</td>
</tr>
<tr>
<td>2018</td>
<td>581,000</td>
</tr>
</tbody>
</table>

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities

**PRIORITY AREAS**

The following areas are perceived as the most urgent for the city:

1. Health services
2. Education
3. Transportation
4. Housing
5. Environment

**TECHNOLOGIES**

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- CCTV cameras have made residents feel safer

**STRUCTURES**

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- Traffic congestion is not a problem
- Public transport is satisfactory

**ACTIVITIES**

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Governance**

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

**Score**

- 64.2
- 70.1
- 48.2
- 52.9
- 52.8
- 26.0
- 32.6
- 57.9
- 77.4
- 78.4
- 64.5
- 65.6
- 67.3
- 65.0
- 59.0
- 67.4
- 49.4
- 47.9
- 55.5
- 67.1
- 50.2
- 57.3
- 67.8
- 53.5
- 37.3
- 34.4
- 33.2
- 26.1
- 23.7
- 22.4
- 20.3
- 17.8
- 16.6
- 13.7
- 63.1
- 57.3
- 53.5
- 57.5
- 44.0
- 32.6
- 55.4
- 31.3
- 43.5
- 46.7
- 73.2
- 50.6
- 78.1
- 64.4
- 57.5
- 46.3
- 71.0
- 37.1
- 40.7
- 50.1
- 47.2
## BACKGROUND INFORMATION

### Guangzhou

**Population**: 12,458,000

(UN World Cities Report)

<table>
<thead>
<tr>
<th>Year</th>
<th>HDI</th>
<th>Life expectancy at Birth</th>
<th>Expected years of schooling</th>
<th>Mean years of schooling</th>
<th>GNI per capita (PPP $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.742</td>
<td>75.9</td>
<td>9.7</td>
<td>7.7</td>
<td>13,485</td>
</tr>
<tr>
<td>2016</td>
<td>0.749</td>
<td>76.2</td>
<td>13.8</td>
<td>7.8</td>
<td>14,311</td>
</tr>
<tr>
<td>2017</td>
<td>0.753</td>
<td>76.5</td>
<td>13.9</td>
<td>7.9</td>
<td>15,212</td>
</tr>
<tr>
<td>2018</td>
<td>0.758</td>
<td>76.7</td>
<td>13.9</td>
<td>8.0</td>
<td>16,127</td>
</tr>
</tbody>
</table>

### PRIORITY AREAS

- **Health & Safety**: Basic sanitation meets the needs of the poorest areas (82.7), Recycling services are satisfactory (74.2), Public safety is not a problem (64.9), Air pollution is not a problem (84.7), Medical services provision is satisfactory (82.1), Finding housing with rent equal to 30% or less of a monthly salary is not a problem (57.5).

- **Mobility**: Traffic congestion is not a problem (36.9), Public transport is satisfactory (63.0).

- **Activities**: Green spaces are satisfactory (77.7), Cultural activities (shows, bars, and museums) are satisfactory (83.5).

### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion (87.8% agree).
- You feel the availability of online information has increased your trust in authorities (85.7% agree).
- You are willing to concede personal data in order to improve traffic congestion (86.4% agree).

### TECHNOCITIES

- **Health & Safety**: Online reporting of city maintenance problems provides a speedy solution (83.0), A website or App allows residents to easily give away unwanted items (73.5), Free public Wi-Fi has improved access to city services (82.6), RCC in city has made residents feel safer (80.2), A website or App allows residents to effectively monitor air pollution (78.4), Arranging medical appointments online has improved access (89.2).

- **Mobility**: Car-sharing Apps have reduced congestion (64.3), Apps that direct you to an available parking space have reduced journey time (76.2), Bicycle sharing has reduced congestion (76.1), Online scheduling and ticket sales has made public transport easier to use (91.4), The city provides information on traffic congestion through mobile phones (88.3).

- **Activities**: Online purchasing of tickets to shows and museums has made it easier to attend (91.2).

- **Opportunities (Work & School)**: Online access to job listings has made it easier to find work (88.5), IT skills are taught well in schools (83.3), Online services provided by the city has made it easier to start a new business (84.5), The current internet speed and reliability meet connectivity needs (88.3).

- **Governance**: Online public access to city finances has reduced corruption (74.9), Online voting has increased participation (74.9), An online platform where residents can propose ideas has improved city life (80.4), Processing Identification Documents online has reduced waiting times (83.9).
Hamburg

BACKGROUND INFORMATION

City
Population: 1,831,000
(UN World Cities Report)

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change
---|---|---|---|---|---
HDI | 0.933 | 0.936 | 0.938 | 0.939 | +0.001
Life expectancy at Birth | 80.5 | 80.9 | 81.0 | 81.2 | +0.2
Expected years of schooling | 14.1 | 14.1 | 14.1 | 14.1 | +0.0
Mean years of schooling | 14.1 | 14.1 | 14.1 | 14.1 | +0.0
GNI per capita (PPP $) | 45,012 | 45,377 | 46,438 | 46,946 | +508.0

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

SMART CITY RANKING

22
Out of 109

N/A
not in 2019

SMART CITY RATING

A
not in 2019

FACTOR RATINGS

A
STRUCTURES
BB
TECHNOLOGIES
1
GROUP

All ratings range from AAA to D

Health & Safety

Basic sanitation meets the needs of the poorest areas
Recycling services are satisfactory
Public safety is not a problem
Air pollution is not a problem
Medical services provision is satisfactory
Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility

Traffic congestion is not a problem
Public transport is satisfactory

Activities

Green spaces are satisfactory
Cultural activities (shows, bars, and museums) are satisfactory

Opportunities (Work & School)

Employment finding services are readily available
Most children have access to a good school
Life-long learning opportunities are provided by local institutions
Businesses are creating new jobs
Minorities feel welcome

Governance

Information on local government decisions are easily accessible
Corruption of city officials is not an issue of concern
Residents contribute to decision making of local government
Residents provide feedback on local government projects

Health & Safety

Online reporting of city maintenance problems provides a speedy solution
A website or App allows residents to easily give away unwanted items
Free public wifi has improved access to city services
CCTV cameras have made residents feel safer
A website or App allows residents to effectively monitor air pollution
Arranging medical appointments online has improved access

Mobility

Car-sharing Apps have reduced congestion
Apps that direct you to an available parking space have reduced journey time
Bicycle sharing has reduced congestion
Online scheduling and ticket sales has made public transport easier to use
The city provides information on traffic congestion through mobile phones

Activities

Online purchasing of tickets to shows and museums has made it easier to attend

Opportunities (Work & School)

Online access to job listings has made it easier to find work
IT skills are taught well in schools
Online services provided by the city has made it easier to start a new business
The current internet speed and reliability meet connectivity needs

Governance

Online public access to city finances has reduced corruption
Online voting has increased participation
An online platform where residents can propose ideas has improved city life
Processing Identification Documents online has reduced waiting times

All ratings range from AAA to D
Hangzhou

BACKGROUND INFORMATION

City
Population
6,391,000
(UN World Cities Report)

SMART CITY RANKING
65
Out of 109

44 in 2019

SMART CITY RATING
BB
in 2019

FACTOR RATINGS

GROUP
4

All ratings range from AAA to D

Structures

Country
2015
2016
2017
2018
1 yr change
HDI
0.742
0.740
0.753
0.758
0.005
Life expectancy at Birth
75.9
76.2
76.5
76.7
0.2
Expected years of schooling
13.8
13.9
13.9
13.9
0.0
Mean years of schooling
7.7
7.8
7.8
7.9
0.1
GNI per capita (PPP $)
13,485
14,311
15,212
16,127
915.0

Technologies

Country
2015
2016
2017
2018
1 yr change
GNI per capita (PPP $)
14,311
15,212
16,127
76.2
85.4
13.4%

PRIORITY AREAS

You are willing to concede personal data in order to improve traffic congestion
82.0%

You are comfortable with face recognition technologies to lower crime
84.4%

You feel the availability of online information has increased your trust in authorities
85.2%

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
75.4%

ATTITUDES

Health & Safety
Basic sanitation meets the needs of the poorest areas
84.2

Public safety is not a problem
75.5

Air pollution is not a problem
76.8

Medical services provision is satisfactory
61.1

Finding housing with rent equal to 30% or less of a monthly salary is not a problem
80.3

Public transport is satisfactory
68.6

Mobility
Traffic congestion is not a problem
55.5

Public transport is satisfactory
72.5

Activities
Green spaces are satisfactory
80.3

Cultural activities (shows, bars, and museums) are satisfactory
83.4

Opportunities (Work & School)
Employment finding services are readily available
81.1

Most children have access to a good school
75.3

Lifelong learning opportunities are provided by local institutions
73.5

Businesses are creating new jobs
77.9

Minorities feel welcome
76.3

Governance
Information on local government decisions are easily accessible
75.2

Compliance of city officials is not an issue of concern
61.5

Residents contribute to decision making of local government
68.4

Residents provide feedback on local government projects
76.2

ENERGY

You feel the availability of online information has increased your trust in authorities
85.2%
Hanoi

BACKGROUND INFORMATION

City
Population: 3,790,000
(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.680 0.685 0.690 0.693 +0.003
Life expectancy at Birth 75.1 75.2 75.2 75.3 +0.1
Mean years of schooling 8.0 8.1 8.2 8.2 +0.0
GNI per capita (PPP $) 5,314 5,638 5,916 6,220 +304.0

SMART CITY RANKING
84
Out of 109
66 in 2019

SMART CITY RATING
CC
CCC in 2019

FACTOR RATINGS
CC
STRUCTURES
CC
TECHNOLOGIES
CC
GROUP 4

All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

RAINING

Score

0 20 40 60 80 100

LEGEND:

CITY MEAN GROUP MEAN

Score

0 20 40 60 80 100

LEGEND:

CITY MEAN GROUP MEAN

Score

0 20 40 60 80 100

LEGEND:

CITY MEAN GROUP MEAN
Hanover

BACKGROUND INFORMATION

City
Population 535,000

Hanover

SMART CITY RANKING

33
Out of 109

26 in 2019

SMART CITY RATING

BBB

BBB in 2019

FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.933</td>
<td>0.936</td>
<td>0.938</td>
<td>0.939</td>
<td>+0.001</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>80.8</td>
<td>80.9</td>
<td>81.0</td>
<td>81.2</td>
<td>+0.2</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>14.1</td>
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<td>14.1</td>
<td>14.1</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNH per capita (PPP $)</td>
<td>45,012</td>
<td>45,577</td>
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<tr>
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<td>14.1</td>
<td>14.1</td>
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<tr>
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<th>2016</th>
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<tr>
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<td>14.1</td>
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<tr>
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</table>
### Helsinki

**BACKGROUND INFORMATION**

**City**
- Population: 1,180,000

(UN World Cities Report)

**Country**
<table>
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<tr>
<th>Score</th>
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<td>41,142</td>
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**SMART CITY RANKING**
- 2 out of 109
- 8 in 2019

**FACTOR RATINGS**
- **AAA** STRUCTURES
- **AA** TECHNOLOGIES

**GROUP**
- 1

All ratings range from AAA to D

---

### PRIORITY AREAS

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

### STRUCTURES

**Health & Safety**
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**
- Traffic congestion is not a problem
- Public transport is satisfactory

**Activities**
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Governance**
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### TECHNOLOGIES

**Health & Safety**
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras have made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

**Mobility**
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle sharing has reduced congestion
- Online scheduling and ticket sales have made public transport easier to use
- The city provides information on traffic congestion through mobile phones

**Activities**
- Online purchasing of tickets to shows and museums has made it easier to attend

**Opportunities (Work & School)**
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city have made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

**Governance**
- Online public access to city finance has reduced corruption
Ho Chi Minh City

BACKGROUND INFORMATION

City
Population
7,298,000

(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.680 0.685 0.690 0.693 +0.003
Life expectancy at Birth 75.1 75.2 75.2 75.3 +0.1
Expected years of schooling 12.7 12.7 12.7 12.7 +0.0
Mean years of schooling 8.0 8.1 8.2 8.2 +0.0
GNI per capita (PPP $) 5,314 5,638 5,916 6,220 +304.0

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

TECHNOLOGIES

Health & Safety
Online reporting of city maintenance problems provides a speedy solution
A website or App allows residents to easily give away unwanted items
Free public wi-fi has improved access to city services
CCTV cameras has made residents feel safer
A website or App allows residents to effectively monitor air pollution
Arranging medical appointments online has improved access

Mobility
Car-sharing Apps have reduced congestion
Apps that direct you to an available parking space have reduced journey time
Bicycle hiring has reduced congestion
Online scheduling and ticket sales has made public transport easier to use
The city provides information on traffic congestion through mobile phones

Activities
Online purchasing of tickets to shows and museums has made it easier to attend cultural events

Opportunities (Work & School)
Online access to job listings has made it easier to find work
IT skills are taught well in schools
Online services provided by the city has made it easier to start a new business
The current internet speed and reliability meet connectivity needs

Goverance
Online public access to city finances has reduced corruption
Online voting has increased participation
An online platform where residents can propose ideas has improved city life
Processing Identification Documents online has made it easier to start a new business

All ratings range from AAA to D

SMART CITY RANKING
CC
CCC in 2019
83 Out of 109

FACTOR RATINGS
CC
STRUCTURES
50.9

TECHNOLOGIES
56

GROUP 4

56 in 2019

All ratings range from AAA to D

83
**BACKGROUND INFORMATION**

<table>
<thead>
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<th>Country</th>
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<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
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<td>0.931</td>
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<td>55,816</td>
<td>58,553</td>
<td>60,221</td>
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</table>

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion: 60.9%
- You are comfortable with face recognition technologies to lower crime: 45.2%
- You feel the availability of online information has increased your trust in authorities: 54.0%
- You are willing to give away unwanted items: 63.3%

**PRIORITY AREAS**

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution: 53.8%
  - A website or App allows residents to easily give away unwanted items: 50.9%
  - Free public WiFi has improved access to city services: 67.8%
  - CCTV cameras have made residents feel safer: 54.3%
  - A website or App allows residents to effectively monitor air pollution: 57.3%
  - Arranging medical appointments online has improved access: 62.2%
- **Mobility**
  - Car-sharing Apps have reduced congestion: 43.6%
  - Apps that direct you to an available parking space have reduced journey time: 54.1%
  - Bicycle sharing has reduced congestion: 37.8%
  - Online scheduling and ticket sales have made public transport easier to use: 59.9%
  - The city provides information on traffic congestion through mobile phones: 70.3%
- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend: 72.3%
- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work: 72.9%
  - IT skills are taught well in schools: 64.4%
  - Online services provided by the city has made it easier to start a new business: 65.8%
  - The current internet speed and reliability meet connectivity needs: 81.5%
- **Governance**
  - Online public access to city finances has reduced corruption: 53.9%
  - Online voting has increased participation: 49.8%
  - An online platform where residents can propose ideas has improved city life: 52.4%
  - Processing identification documents online has reduced waiting times: 65.4%

**STRAIGHT DRIVING**

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas: 68.9%
  - Recycling services are satisfactory: 39.9%
  - Public safety is not a problem: 54.6%
  - Air pollution is not a problem: 30.0%
  - Medical services provision is satisfactory: 53.6%
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 26.5%
- **Mobility**
  - Traffic congestion is not a problem: 26.1%
  - Public transport is satisfactory: 56.2%
- **Activities**
  - Green spaces are satisfactory: 42.1%
  - Cultural activities (shows, bars, and museums) are satisfactory: 54.8%
- **Opportunities (Work & School)**
  - Employment finding services are readily available: 66.7%
  - Most children have access to a good school: 61.8%
  - Lifelong learning opportunities are provided by local institutions: 64.7%
  - Businesses are creating new jobs: 58.2%
  - Minorities feel welcome: 50.3%
- **Governance**
  - Information on local government decisions are easily accessible: 55.6%
  - Corruption of city officials is not an issue of concern: 38.2%
  - Residents contribute to decision making of local government: 42.1%
  - Residents provide feedback on local government projects: 54.2%
Hyderabad

BACKGROUND INFORMATION

City

Population 10,716,000

(UN World Cities Report)

SMART CITY RANKING

85

Out of 109

CCC in 2019

67 in 2019

SMART CITY RATING

CC

FACTOR RATINGS

STRUCTURES

CCC

TECHNOLOGIES

CCC

GROUP 4

All ratings range from AAA to D

PRIORITY AREAS

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change
--- | --- | --- | --- | --- | ---

HDI | 0.627 | 0.637 | 0.643 | 0.647 | +0.004

Life expectancy at Birth | 68.6 | 68.9 | 68.2 | 68.4 | +0.2

Expected years of schooling | 12.0 | 12.3 | 12.3 | 12.3 | +0.0

Mean years of schooling | 6.2 | 6.4 | 6.5 | 6.5 | +0.0

GNI per capita (PPP $) | 5,674 | 6,075 | 6,446 | 6,829 | +383.0

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion | 58.2%

You are comfortable with face recognition technologies to lower crime | 58.3%

You feel the availability of online information has increased your trust in authorities | 59.9%

The proportion of your day-to-day payment transactions that are non-cash (% of transactions) | 71.7%

LEGEND:

MIN | CITY MEAN | GROUP MEAN

0% 20% 40% 60% 80% 100%

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

% of respondents who agree or strongly agree with the statement

% of respondents who chose the Priority Area

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

The right hand section shows the % of respondents who chose the Priority Area

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1 yr change

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Score
**BACKGROUND INFORMATION**

### City
- **Population:** 10,323,000
- **(UN World Cities Report)**

### SMART CITY RANKING
- **94** out of 109
- **CC in 2019**

### SMART CITY RATING
- **C**

### FACTOR RATINGS
- **C**

### STRUCTURES
- **CC**

### TECHNOLOGIES
- **C**

### GROUP
- **4**

### All ratings range from AAA to D

---

**PRIORITY AREAS**

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Governance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

---

**ATTITUDES**

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- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

---

**TECHNOLOGIES**

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras has made residents feel safer
  - The city provides information on traffic congestion through mobile phones

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend cultural events
  - Online services provided by the city has made it easier to start a new business

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Most children have access to a good school

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times

---

**LEGEND:**
- **MIN**
- **CITY**
- **GROUP MEAN**
- **MAX**

---

**Country** | **HDI** | **Life expectancy at Birth** | **Mean years of schooling** | **GNI per capita (PPP $)** | **Score** | **1 yr change** |
---|---|---|---|---|---|---|
2015 | 0.696 | 70.8 | 12.8 | 10,029 | 55.6 | +0.0 |
2016 | 0.700 | 71.0 | 12.9 | 10,419 | 55.3 | +0.5 |
2017 | 0.704 | 71.3 | 12.9 | 10,811 | 54.8 | +0.5 |
2018 | 0.707 | 71.5 | 12.9 | 11,256 | 54.0 | +0.8 |

---

**Score**

- **0% 20% 40% 60% 80% 100%**
- **% of respondents who agree or strongly agree with the statement**

---

**% of respondents who chose the Priority Area**

- **0% 20% 40% 60% 80% 100%**
- **% of respondents who chose the Priority Area**

---

**% of respondents who disagree or strongly disagree with the statement**

- **0% 20% 40% 60% 80% 100%**
- **% of respondents who disagreed or strongly disagreed with the statement**
Kiev

SMART CITY RANKING
98
Out of 109
92 in 2019

CITY GROUP MAX

BACKGROUND INFORMATION

City
Population: 2,942,000
(UN World Cities Report)

COUNTRY RANKING

All ratings range from AAA to D

SMART CITY RATING
C
C in 2019

FACTOR RATINGS
D
STRUCTURES
C

TECHNOLOGIES

GROUP 4

![Map of Kiev](Image)

COUNTRY RANKING

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.742</td>
<td>0.746</td>
<td>0.747</td>
<td>0.750</td>
<td>+0.003</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>71.5</td>
<td>71.1</td>
<td>71.8</td>
<td>72.0</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>14.9</td>
<td>15.1</td>
<td>15.1</td>
<td>15.1</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>11.3</td>
<td>11.3</td>
<td>11.3</td>
<td>11.3</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>7,373</td>
<td>7,601</td>
<td>7,670</td>
<td>7,904</td>
<td>+324.0</td>
</tr>
</tbody>
</table>

STRUCTURES

Health & Safety
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility
- Traffic congestion is not a problem
- Public transport is satisfactory

Activities
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Opportunities
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Governance
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Technologies

Health & Safety
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public WiFi has improved access to city services
- CCTV cameras have made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Mobility
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle sharing has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Activities
- Online purchasing of tickets to shows and museums has made it easier to attend
- Online access to job listings has made it easier to find work
- Online skills training has improved access to city services
- Online reporting of city maintenance problems provides a speedy solution
- Online scheduling and ticket sales has made public transport easier to use

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:

- GROUP MEAN
- CITY

- % of respondents who agree or strongly agree with the statement
- 0% 20% 40% 60% 80% 100%
Information on local government decisions are easily accessible. Online public access to city finances has reduced corruption.

Employment finding services are readily available. Online access to job listings has made it easier to find work.

Green spaces are satisfactory. Online purchasing of tickets to shows and museums has made it easier to attend.

Traffic congestion is not a problem. Car-sharing Apps have reduced congestion.

Basic sanitation meets the needs of the poorest areas. Online reporting of city maintenance problems provides a speedy solution.

Residents provide feedback on local government projects. Processing Identification Documents online has reduced waiting times.

Residents contribute to decision making of local government. An online platform where residents can propose ideas has improved city life.

Military and security are not a problem. Free public wifi has improved access to city services.

Minorities feel welcome. Online voting has increased participation.

Businesses are creating new jobs. The current internet speed and reliability meet connectivity needs.

Most children have access to a good school. IT skills are taught well in schools.

Cultural activities (shows, bars, and museums) are satisfactory. Public transport is satisfactory. Apps that direct you to an available parking space have reduced journey time.

Finding housing with rent equal to 30% or less of a monthly salary is not a problem. Local authorities have improved public transport. Arranging medical appointments online has improved access.

Medical services provision is satisfactory. A website or App allows residents to effectively monitor air pollution.

Public safety is not a problem. Free public wifi has improved access to city services.

Public transport is satisfactory. A website or App allows residents to easily give away unwanted items.

Recycling services are satisfactory. Free public wifi has improved access to city services.

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

You feel the availability of online information has increased your trust in authorities. You feel the availability of online information has increased your trust in authorities.

You are willing to concede personal data in order to improve traffic congestion. You are willing to concede personal data in order to improve traffic congestion.

The proportion of your day-to-day payment transactions that are non-cash (% of transactions) The proportion of your day-to-day payment transactions that are non-cash (% of transactions).

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.
Kuala Lumpur

BACKGROUND INFORMATION

Country: Kuala Lumpur

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>(UN World Cities Report)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>6,837,000</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SMART CITY RATING

54
Out of 109
78 in 2019

SMART CITY RATING

B
CCC in 2019

FACTOR RATINGS

B
STRUCTURES

B
TECHNOLOGIES

GROUP

3
All ratings range from AAA to D

PRIORITY AREAS

- **Health & Safety**: Basic sanitation meets the needs of the poorest areas
- **Mobility**: Public transport is satisfactory
- **Activities**: Cultural activities (shows, bars, and museums) are satisfactory
- **Opportunities (Work & School)**: Employment finding services are readily available
- **Governance**: Information on local government decisions are easily accessible

ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:

- CITY
- GROUP MEAN
- MIN
- MAX

Score

<table>
<thead>
<tr>
<th>Area</th>
<th>CITY</th>
<th>GROUP MEAN</th>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td>65.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling services</td>
<td>57.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public safety</td>
<td>48.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical services</td>
<td>75.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic congestion</td>
<td>44.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public transport</td>
<td>61.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>69.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural activities</td>
<td>70.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities</td>
<td>68.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>64.9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LEGEND:

- MIN
- CITY
- GROUP MEAN

% of respondents who chose the Priority Area

<table>
<thead>
<tr>
<th>Area</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td>63.2</td>
<td>55.7</td>
<td>59.8</td>
<td>65.8</td>
</tr>
<tr>
<td>Mobilty</td>
<td>62.2</td>
<td>54.9</td>
<td>48.1</td>
<td>75.4</td>
</tr>
<tr>
<td>Activities</td>
<td>66.4</td>
<td>74.1</td>
<td>51.4</td>
<td>63.2</td>
</tr>
</tbody>
</table>

% of respondents who agree or strongly agree with the statement

<table>
<thead>
<tr>
<th>Area</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td>61.3%</td>
<td>55.0%</td>
<td>49.4%</td>
<td>37.9%</td>
</tr>
<tr>
<td>Mobilty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GNI per capita (PPP $)

<table>
<thead>
<tr>
<th>Year</th>
<th>GNI per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>25,394</td>
</tr>
<tr>
<td>2016</td>
<td>26,555</td>
</tr>
<tr>
<td>2017</td>
<td>27,227</td>
</tr>
<tr>
<td>2018</td>
<td>24,703</td>
</tr>
</tbody>
</table>

Mean years of schooling

- 10.2

Expected years of schooling

- 13.5

Life expectancy at Birth

- 75.5

HDI

- 0.797

Employment finding services are readily available

- Online access to job listings has made it easier to find work

Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- The current internet speed and reliability meet connectivity needs

Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
### Background Information

#### City
- Population: 13,123,000
- (UN World Cities Report)

#### City Ratings
- 2019: 102

#### Smart City Rating

#### Structure Ratings
- 2019: D

#### Technologies Ratings
- 2019: D

#### Group Rating
- 2019: 4

#### Governance
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

#### Health & Safety
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility
- Traffic congestion is not a problem
- Public transport is satisfactory

#### Activities
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Opportunities (Work & School)
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business

#### Attitudes
- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

#### Priorities
- Public transport
- Affordable housing
- Unemployment
- Health services
- Basic amenities

#### Security
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items

#### Technologies
- Online scheduling and ticket sales has made public transport easier to use
- Bicycle hiring has reduced congestion

#### Government
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times
### Background Information

**City**

<table>
<thead>
<tr>
<th>Population</th>
<th>2,884,000</th>
</tr>
</thead>
</table>

(UN World Cities Report)

### Priorities Areas

#### Health & Safety
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility
- Traffic congestion is not a problem
- Public transport is satisfactory

#### Activities
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Technologies

#### Health & Safety
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wi-fi has improved access to city services
- CCTV cameras has made residents feel safer
- The city provides information on traffic congestion through mobile phones

#### Mobility
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

#### Activities
- Online purchasing of tickets to shows and museums has made it easier to attend

#### Opportunities (Work & School)
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

#### Governance
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has made it easier to start a new business

### AT&Titudes

#### You are willing to concede personal data in order to improve traffic congestion
- 27.6%

#### You are comfortable with face recognition technologies to lower crime
- 35.2%

#### The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
- 44.8%

### Smart City Rating

**Lisbon**

- **Smart City Ranking:** 75
- **Score:** 76 in 2019
- **Group:** 3
- **All ratings range from AAA to D**
London

BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.916</td>
<td>0.918</td>
<td>0.919</td>
<td>0.920</td>
<td>+0.001</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>81.1</td>
<td>81.1</td>
<td>81.2</td>
<td>81.2</td>
<td>+0.0</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>17.4</td>
<td>17.4</td>
<td>17.4</td>
<td>17.4</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>12.8</td>
<td>12.9</td>
<td>12.9</td>
<td>13.0</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>38,116</td>
<td>38,421</td>
<td>39,216</td>
<td>39,507</td>
<td>+291.0</td>
</tr>
</tbody>
</table>

ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
- You feel the availability of online information has increased your trust in authorities
- You are willing to concede personal data in order to improve traffic congestion

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

<table>
<thead>
<tr>
<th>Health &amp; Safety</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic sanitation meets the needs of the poorest areas</td>
<td>64.9</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>67.9</td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>38.5</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>28.2</td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>81.1</td>
</tr>
<tr>
<td>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</td>
<td>24.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobility</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic congestion is not a problem</td>
<td>25.9</td>
</tr>
<tr>
<td>Public transport is satisfactory</td>
<td>65.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green spaces are satisfactory</td>
<td>71.6</td>
</tr>
<tr>
<td>Cultural activities (shows, bars, and museums) are satisfactory</td>
<td>80.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities (Work &amp; School)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment finding services are readily available</td>
<td>67.6</td>
</tr>
<tr>
<td>Most children have access to a good school</td>
<td>64.5</td>
</tr>
<tr>
<td>Lifelong learning opportunities are provided by local institutions</td>
<td>63.9</td>
</tr>
<tr>
<td>Businesses are creating new jobs</td>
<td>60.6</td>
</tr>
<tr>
<td>Minorities feel welcome</td>
<td>63.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Governance</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on local government decisions are easily accessible</td>
<td>62.6</td>
</tr>
<tr>
<td>Corruption of city officials is not an issue of concern</td>
<td>50.6</td>
</tr>
<tr>
<td>Residents contribute to decision making of local government</td>
<td>49.1</td>
</tr>
<tr>
<td>Residents provide feedback on local government projects</td>
<td>54.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technologies</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordable housing</td>
<td>61.6</td>
</tr>
<tr>
<td>Air pollution health services</td>
<td>69.2</td>
</tr>
<tr>
<td>Social cohesion</td>
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<tr>
<td>Road congestion</td>
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<tr>
<td>Unemployment</td>
<td>68.4</td>
</tr>
<tr>
<td>Fulfilling employment</td>
<td>69.5</td>
</tr>
<tr>
<td>Public transport</td>
<td>69.5</td>
</tr>
<tr>
<td>Recycling</td>
<td>69.9</td>
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<tr>
<td>School education</td>
<td>70.1</td>
</tr>
<tr>
<td>Social mobility</td>
<td>70.4</td>
</tr>
<tr>
<td>Basic amenities</td>
<td>70.5</td>
</tr>
<tr>
<td>Green spaces</td>
<td>70.6</td>
</tr>
<tr>
<td>Citizen engagement</td>
<td>70.7</td>
</tr>
<tr>
<td>Security</td>
<td>70.8</td>
</tr>
<tr>
<td>Recreation and leisure</td>
<td>70.9</td>
</tr>
<tr>
<td>Health services</td>
<td>71.0</td>
</tr>
<tr>
<td>Health care</td>
<td>71.1</td>
</tr>
<tr>
<td>Unemployment</td>
<td>71.2</td>
</tr>
<tr>
<td>Social cohesion</td>
<td>71.3</td>
</tr>
<tr>
<td>Housing</td>
<td>71.4</td>
</tr>
<tr>
<td>Social mobility</td>
<td>71.5</td>
</tr>
<tr>
<td>Basic amenities</td>
<td>71.6</td>
</tr>
<tr>
<td>Green spaces</td>
<td>71.7</td>
</tr>
<tr>
<td>Citizen engagement</td>
<td>71.8</td>
</tr>
</tbody>
</table>

All ratings range from AAA to D
Information on local government decisions are easily accessible. Online public access to city finances has reduced corruption.

Employment finding services are readily available. Online access to job listings has made it easier to find work.

Green spaces are satisfactory. Online purchasing of tickets to shows and museums has made it easier to attend.

Traffic congestion is not a problem. Car-sharing Apps have reduced congestion.

Basic sanitation meets the needs of the poorest areas. Online reporting of city maintenance problems provides a speedy solution.

Mean years of schooling.

Life expectancy at Birth.

GNI per capita (PPP $).

Residents provide feedback on local government projects. Processing Identification Documents online has made it easier to start a new business.

Online scheduling and ticket sales has made public transport easier to use. The city provides information on traffic congestion through mobile phones.

Most children have access to a good school. IT skills are taught well in schools.

Minorities feel welcome.

Businesses are creating new jobs. The current internet speed and reliability meet connectivity needs.

Cultural activities (shows, bars, and museums) are satisfactory.

Online purchasing of tickets to shows and museums has made it easier to attend.

Online voting has increased participation. An online platform where residents can propose ideas has improved city life.

Lifelong learning opportunities are provided by local institutions. Online services provided by the city has made it easier to start a new business.

CITY GROUP MAX

All ratings range from AAA to D

Los Angeles
All ratings range from AAA to D

**SMART CITY RANKING**

51

Out of 109

23 in 2019

**FACTOR RATINGS**

BB

**GROUP RATINGS**

BB

**TECHNOLOGIES**

BB

**PRIORITY AREAS**

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.888</td>
<td>0.887</td>
<td>0.890</td>
<td>0.891</td>
<td>+0.001</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>82.2</td>
<td>82.3</td>
<td>82.4</td>
<td>82.5</td>
<td>+0.1</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>15.4</td>
<td>15.5</td>
<td>15.5</td>
<td>15.5</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>11.5</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>38,668</td>
<td>38,926</td>
<td>39,935</td>
<td>40,511</td>
<td>+576.0</td>
</tr>
</tbody>
</table>

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of those respondents who also answered the corresponding survey questions low. A
- The left hand section of each bar shows the Alignment - the proportion of those respondents who chose the Priority Area
- A strong Alignment implies that these areas also demand priority attention.

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

- Traffic congestion is not a problem
- Public transport is satisfactory

**Activities**

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Governance**

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

**Structures**

- Health & Safety
- Mobility
- Activities
- Opportunities (Work & School)
- Governance

**Technologies**

- Health & Safety
- Mobility
- Activities
- Opportunities (Work & School)
- Governance

**Country**

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.888</td>
<td>0.887</td>
<td>0.890</td>
<td>0.891</td>
<td>+0.001</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>82.2</td>
<td>82.3</td>
<td>82.4</td>
<td>82.5</td>
<td>+0.1</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>15.4</td>
<td>15.5</td>
<td>15.5</td>
<td>15.5</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>11.5</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>38,668</td>
<td>38,926</td>
<td>39,935</td>
<td>40,511</td>
<td>+576.0</td>
</tr>
</tbody>
</table>

**Score**

- 0 20 40 60 80 100

**% of respondents who chose the Priority Area**

- 0% 20% 40% 60% 80% 100%

**% of respondents who agree or strongly agree with the statement**

- 0% 20% 40% 60% 80% 100%

**Mean years of schooling**

- 60.4
- 65.8
- 48.6
- 21.7
- 63.2
- 21.3

**Mean years of schooling**

- 59.9
- 58.1
- 49.5
- 71.6

**Mean years of schooling**

- 53.4
- 57.7
- 59.9
- 58.1

**Mean years of schooling**

- 50.8
- 71.1

**Mean years of schooling**

- 38.2
- 38.2
- 38.2
- 38.2

**Mean years of schooling**

- 43.3
- 43.3
- 43.3
- 43.3

**Mean years of schooling**

- 67.8
- 64.3
- 51.3
- 43.3

**Mean years of schooling**

- 43.3
- 43.3
- 43.3
- 43.3

**Mean years of schooling**

- 64.3
- 51.3
- 43.3
- 43.3

**Mean years of schooling**

- 51.3
- 43.3
- 43.3
- 43.3
### Madrid

#### Background Information

- **Population**: 6,199,000 (UN World Cities Report)

#### SMART City Ranking

**45**

- **Out of 109**
- **21 in 2019**

#### SMART City Rating

**BB**

- **BBB in 2019**

#### Factor Ratings

**BB**

- **Structures**
- **Technologies**

#### Group Rating

**2**

- All ratings range from **AAA to D**

---

#### Priorities

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Governance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

#### Technologies

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras have made residents feel safer
  - Arranging medical appointments online has improved access

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend
  - Opportunities (Work & School)
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times

---

#### Attitudes

- **You are willing to concede personal data in order to improve traffic congestion**
- **You are comfortable with face recognition technologies to lower crime**
- **You feel the availability of online information has increased your trust in authorities**
- **The proportion of your day-to-day payment transactions that are non-cash (% of transactions)**

---

#### Scores

- **Health & Safety**: 69.9
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**: 23.2
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**: 70.6
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**: 74.7
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Governance**: 60.4
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

---

#### Scores (2015-2018)

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.888</td>
<td>0.891</td>
<td>0.893</td>
<td>+0.002</td>
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<tr>
<td>Life expectancy at Birth</td>
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<td>83.1</td>
<td>83.3</td>
<td>83.4</td>
<td>+0.1</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>9.7</td>
<td>9.8</td>
<td>9.8</td>
<td>9.6</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>32,265</td>
<td>33,379</td>
<td>34,226</td>
<td>35,041</td>
<td>+$815.0</td>
</tr>
</tbody>
</table>

---

#### Governance

- The city provides information on traffic congestion through mobile phones
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

---

#### HDI

- **HDI 2015**: 0.885
- **HDI 2016**: 0.888
- **HDI 2017**: 0.891
- **HDI 2018**: 0.893

---

#### Map Tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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#### Opportunities

- **Work & School**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs

---

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras have made residents feel safer
  - Arranging medical appointments online has improved access

---

#### Attitudes

- You are willing to concede personal data in order to improve traffic congestion
  - You are comfortable with face recognition technologies to lower crime
  - You feel the availability of online information has increased your trust in authorities
  - The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
Makassar

BACKGROUND INFORMATION

City
Population: 1,489,000
(UN World Cities Report)

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.696</td>
<td>0.700</td>
<td>0.704</td>
<td>0.707</td>
<td>+0.003</td>
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<td>Life expectancy at Birth</td>
<td>70.8</td>
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<td>71.3</td>
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<td>+0.2</td>
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<tr>
<td>Expected years of schooling</td>
<td>12.8</td>
<td>12.9</td>
<td>12.9</td>
<td>12.9</td>
<td>+0.0</td>
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<tr>
<td>Mean years of schooling</td>
<td>7.9</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>10,029</td>
<td>10,419</td>
<td>10,811</td>
<td>11,256</td>
<td>+445.0</td>
</tr>
</tbody>
</table>

SMART CITY RANKING

96 Out of 109

SMART CITY RATING

C

CC in 2019

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

C

GROUP

4

All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions flow. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You feel the availability of face recognition technologies to lower crime
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:

MIN

CITY

GROUP MEAN

CITY MEAN

GROUP MAX

Score

0 20 40 60 80 100

0% 20% 40% 60% 80% 100%

% of respondents who agree or strongly agree with the statement

You are comfortable with face recognition technologies to lower crime

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

70.2%

88.5%

80.4%

57.1%
Manchester

BACKGROUND INFORMATION

City
Population: 2,646,000
(UN World Cities Report)

Country  | 2015  | 2016  | 2017  | 2018  | 1 yr change
---------|-------|-------|-------|-------|-------------
HDI      | 0.916 | 0.918 | 0.919 | 0.920 | +0.001
Life expectancy at Birth | 81.1  | 81.1  | 81.2  | 81.2  | +0.0
Expected years of schooling | 17.4  | 17.4  | 17.4  | 17.4  | +0.0
Mean years of schooling | 12.8  | 12.9  | 12.9  | 13.0  | +0.1
GNI per capita (PPP $) | 38,116 | 38,421 | 39,216 | 39,507 | +291.0

TECHNOLOGIES

SMART RATING
A
not in 2019

GROUP RATING
1
not in 2019

All ratings range from AAA to D

LEGEND:
CITY MEAN
GROUP MEAN
MAX

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

0% 20% 40% 60% 80% 100%
% of respondents who agree or strongly agree with the statement

0 20 40 60 80 100
% of respondents who chose the Priority Area

Source: UN World Cities Report
**Background Information**

**City**
- **Population:** 12,946,000

**Ratings**
- 94 in 2019

**Country**
- 2015: 0.702
- 2016: 0.704
- 2017: 0.709
- 2018: 0.712

**1 yr change**
- +0.003

**Health & Safety**
- Basic sanitation meets the needs of the poorest areas: 49.2
- Recycling services are satisfactory: 60.5
- Public safety is not a problem: 33.0
- Air pollution is not a problem: 15.0
- Medical services provision is satisfactory: 44.7
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 39.7

**Mobility**
- Traffic congestion is not a problem: 10.6
- Public transport is satisfactory: 30.6

**Activities**
- Green spaces are satisfactory: 48.2
- Cultural activities (shows, bars, and museums) are satisfactory: 63.0

**Opportunities (Work & School)**
- Employment finding services are readily available: 61.3
- Most children have access to a good school: 48.5
- Lifelong learning opportunities are provided by local institutions: 49.9
- Businesses are creating new jobs: 72.0
- Minorities feel welcome: 53.2

**Governance**
- Information on local government decisions are easily accessible: 55.8
- Corruption of city officials is not an issue of concern: 20.4
- Residents contribute to decision making of local government: 45.2
- Residents provide feedback on local government projects: 61.2

**Technologies**
- Online reporting of city maintenance problems provides a speedy solution: 51.7
- A website or App allows residents to easily give away unwanted items: 48.6
- Free public wifi has improved access to city services: 48.2
- CCTV cameras has made residents feel safer: 67.0
- A website or App allows residents to effectively monitor air pollution: 38.0
- Arranging medical appointments online has improved access: 58.5

**Priorities**
- The proportion of your day-to-day payment transactions that are non-cash: 52.4
- You feel the availability of online information has increased your trust in authorities: 73.0
- You are comfortable with face recognition technologies to lower crime: 85.9
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 70.2
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 54.8

**Group**
- D

**All ratings range from AAA to D**
Marseille

BACKGROUND INFORMATION

City
Population: 1,605,000

(UN World Cities Report)

SMART CITY RANKING

78
Out of 109

N/A
not in 2019

SMART CITY RATING

CCC
not in 2019

FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

CCC

GROUP 2

All ratings range from AAA to D

PRIORITY AREAS

Country 2015 2016 2017 2018 1 yr change
HDI 0.888 0.887 0.890 0.891 +0.001
Life expectancy at Birth 82.2 82.3 82.4 82.5 +0.1
Expected years of schooling 15.4 15.5 15.5 15.5 +0.0
Mean years of schooling 11.5 11.4 11.4 11.4 +0.0
GNP per capita (PPP $) 38,668 38,926 39,935 40,511 +576.0

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

You are willing to concede personal data in order to improve traffic congestion

Your city provides information on traffic congestion through mobile phones

Online scheduling and ticket sales has made public transport easier to use

Bicycle hiring has reduced congestion

The city provides information on traffic congestion through mobile phones

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

You are willing to concede personal data in order to improve traffic congestion

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

You are willing to concede personal data in order to improve traffic congestion

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

You are willing to concede personal data in order to improve traffic congestion

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

You are willing to concede personal data in order to improve traffic congestion

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

You are willing to concede personal data in order to improve traffic congestion

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
Information on local government decisions are easily accessible.

Online public access to city finances has reduced corruption.

Employment finding services are readily available.

Online access to job listings has made it easier to find work.

Green spaces are satisfactory.

Online purchasing of tickets to shows and museums has made it easier to attend.

Traffic congestion is not a problem.

Car-sharing Apps have reduced congestion.

Basic sanitation meets the needs of the poorest areas.

Online reporting of city maintenance problems provides a speedy solution.

Residents provide feedback on local government projects.

Processing Identification Documents online has made it easier to start a new business.

Most children have access to a good school.

IT skills are taught well in schools.

GNI per capita (PPP $)

Mean years of schooling

Expected years of schooling

Life expectancy at Birth

HDI

Population

Government

Opportunities (School) Activities

Health & Safety

Mobility

Technologies

Health & Safety

Online reporting of city maintenance problems provides a speedy solution.

A website or App allows residents to easily give away unwanted items.

Free public Wi-Fi has improved access to city services.

CCTV cameras has made residents feel safer.

A website or App allows residents to effectively monitor air pollution.

Arranging medical appointments online has improved access.

Car-sharing Apps have reduced congestion.

Apps that direct you to an available parking space have reduced journey time.

Online scheduling and ticket sales has made public transport easier to use.

The city provides information on traffic congestion through mobile phones.

Online purchasing of tickets to shows and museums has made it easier to attend.

Online access to job listings has made it easier to find work.

IT skills are taught well in schools.

Online services provided by the city has made it easier to start a new business.

The current internet speed and reliability meet connectivity needs.

Most children have access to a good school.

IT skills are taught well in schools.

Online services provided by the city has made it easier to start a new business.

The current internet speed and reliability meet connectivity needs.

Most children have access to a good school.

IT skills are taught well in schools.

Online services provided by the city has made it easier to start a new business.

The current internet speed and reliability meet connectivity needs.

Most children have access to a good school.

IT skills are taught well in schools.

Online services provided by the city has made it easier to start a new business.

The current internet speed and reliability meet connectivity needs.
**Medellin**

**BACKGROUND INFORMATION**

City

Population: 3,911,000

_(UN World Cities Report)_

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
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<tr>
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<td>0.760</td>
<td>0.761</td>
<td>+0.001</td>
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<td>76.9</td>
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<td>+0.2</td>
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<td>14.6</td>
<td>14.6</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>8.1</td>
<td>8.3</td>
<td>8.3</td>
<td>8.3</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
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<td>13,087</td>
<td>12,963</td>
<td>12,896</td>
<td>-67.0</td>
</tr>
</tbody>
</table>

**SMART CITY RANKING**

72

Out of 109

91 in 2019

**SMART CITY RATING**

C in 2019

**FACTOR RATINGS**

CCC

**STRUCTURES**

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Governance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

**TECHNOLOGIES**

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras have made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions: low. A strong Alignment implies that these areas also demand priority attention.

**ATTITUDES**

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

**LEGEND:**

- **MIN**
- **CITY MEAN**
- **GROUP MEAN**
Melbourne

BACKGROUND INFORMATION

City
Population: 4,203,000
(UN World Cities Report)

SMART CITY RANKING

20
Out of 109

SMART CITY RATING

A

BBB in 2019

24 in 2019

FACTOR RATINGS

A

STRENGTHS

SERVICES

1

GROUP MEAN

GROUP MAX

All ratings range from AAA to D

PRIORITY AREAS

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LEGEND:

MIN

CITY MEAN

GROUP MEAN

CITY

GROUP

Health & Safety

Basic sanitation meets the needs of the poorest areas

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility

Traffic congestion is not a problem

Public transport is satisfactory

Activities

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

Structures

Score

TECHNOLOGIES

Score

Health & Safety

Online reporting of city maintenance problems provides a speedy solution

Free public WiFi has improved access to city services

CCTV cameras have made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space have reduced journey time

Bicycle hiring has reduced congestion

Online scheduling and ticket sales has made public transport easier to use

The city provides information on traffic congestion through mobile phones

Activities

Online purchasing of tickets to shows and museums has made it easier to attend

Online access to job listings has made it easier to find work

IT skills are taught well in schools

Online voting has increased participation

An online platform where residents can propose ideas has improved city life

Governance

Online public access to city finances has reduced corruption

Online voting has increased participation

An online platform where residents can propose ideas has improved city life

Processing Identification Documents online has reduced waiting times
Mexico City

BACKGROUND INFORMATION

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change |
---------|------|------|------|------|-------------|
HDI      | 0.759 | 0.764 | 0.765 | 0.767 | +0.002 |
Life expectancy at Birth | 74.9 | 74.9 | 74.9 | 75.0 | +0.1 |
Expected years of schooling | 13.7 | 14.1 | 14.1 | 14.3 | +0.2 |
Mean years of schooling | 8.6 | 8.6 | 8.6 | 8.6 | +0.0 |
GNI per capita (PPP $) | 17,074 | 17,344 | 17,533 | 17,628 | +95.0 |

SMART CITY RANKING
90 Out of 109

98 in 2019

SMART CITY RATING
CC CC in 2019

FACTOR RATINGS

 nhóm 3

TECHNOLOGIES

Health & Safety
Basic sanitation meets the needs of the poorest areas
Recycling services are satisfactory
Public safety is not a problem
Air pollution is not a problem
Medical services provision is satisfactory
Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility
Traffic congestion is not a problem
Public transport is satisfactory

Attitudes
You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
You are willing to concede personal data in order to improve traffic congestion
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:
MIN CITY GROUP MEAN MAX

Group Meas.

All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.
The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions. A strong Alignment implies that these areas also demand priority attention.

Country | 2015 | 2016 | 2017 | 2018 | Score |
---------|------|------|------|------|-------|
Mexico City | 88 in 2019 | 90 | 90 | 90 | 90 |

Health & Safety
Online reporting of city maintenance problems provides a speedy solution
A website or App allows residents to easily give away unwanted items
Free public wifi has improved access to city services
CCTV cameras has made residents feel safer
A website or App allows residents to effectively monitor air pollution
Arranging medical appointments online has improved access

Mobility
Car-sharing Apps have reduced congestion
Apps that direct you to an available parking space have reduced journey time
Bicycle hiring has reduced congestion
Online scheduling and ticket sales has made public transport easier to use
The city provides information on traffic congestion through mobile phones

Activities
Online purchasing of tickets to shows and museums has made it easier to attend

Opportunities (Work & School)
Online access to job listings has made it easier to find work
IT skills are taught well in schools
Online services provided by the city has made it easier to start a new business
The current internet speed and reliability meet connectivity needs

Governance
Online public access to city finances has reduced corruption
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Country | 2015 | 2016 | 2017 | 2018 | 1 yr change |
---------|------|------|------|------|-------------|

Health & Safety
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###米兰

####背景信息

<table>
<thead>
<tr>
<th>国家</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1年变化</th>
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<tr>
<td>HDI</td>
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<td>0.878</td>
<td>0.881</td>
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<td>生命期望</td>
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<td>GDP人均（PPP $）</td>
<td>34,105</td>
<td>34,818</td>
<td>35,573</td>
<td>36,141</td>
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</table>

####健康与安全

- 原始卫生服务满足最贫困地区的需求
- 保护服务不受影响
- 空气污染不是一个问题
- 医疗服务提供是满意的
- 找到房租与工资或月收入不相等的30%或低于一个月的工资不是一个问题

####交通

- 交通拥堵不是一个问题
- 公共交通是足够的

####活动

- 绿地是满意的
- 文化活动（剧院、酒吧和博物馆）是可负担的

####机遇（工作与学校）

- 就业发现服务是可获得的
- 大多数儿童有资格接受好学校
- 终身学习机会由当地机构提供
- 企业正在创造新工作
- 贫困群体感到受欢迎

####治理

- 坐市和地方政府决策的信息是容易获得的
- 在线处理身份文件减少了等候时间
- 居民参与地方决策的平台改善了城市生活
- 在线投票增加了参与
- 少数群体感到受欢迎
- 在线服务为创业提供了便利

####技术

- 在线购买门票和博物馆门票更方便
- 找到停车地点的应用程序减少了周转时间
- 在线预约医疗服务提高了访问度
- 一个网站或应用程序允许居民有效地监测空气污染
- 空气污染不是一个问题
- CCTV摄像头使居民感到更安全
- 公共安全不是一个问题
- 免费公共WiFi改善了对城市服务的访问
- 回收服务是满意的
- 一个网站或应用程序允许居民轻松地捐赠不想要的物品

####国家

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####技术

- 空气污染
- 失业
- 安全
- 公共运输
- 空间
- 社会流动性
- 基本便利
- 回收
- 市民参与
- 学校教育
- 健康服务
- 安全
- 无线网络
- 回收
- 公共服务
- 垃圾
- 技术

####成就

- 2019年
- 22

###表现

####结构

- 基本卫生服务满足最贫困地区的需求
- 保护服务不受影响
- 空气污染不是一个问题
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####技术

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- 回收服务是满意的
- 一个网站或应用程序允许居民轻松地捐赠不想要的物品
Moscow

**BACKGROUND INFORMATION**

City:
- Population: 12,166,000
- (UN World Cities Report)

**SMART CITY RANKING**

56
Out of 109

**FACTOR RATINGS**

CCC in 2019

**TECHNOLOGIES**

70.6
CCC

**RATINGS**

Out of 109
72 in 2019

56
▲

** الحقوق**

**Structures**

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
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<tr>
<td>HDI</td>
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<td>0.817</td>
<td>0.822</td>
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<td>Life expectancy at Birth</td>
<td>71.5</td>
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<td>Expected years of schooling</td>
<td>15.4</td>
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<tr>
<td>Mean years of schooling</td>
<td>11.8</td>
<td>11.8</td>
<td>12.0</td>
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<td>+0.0</td>
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<td>24,032</td>
<td>24,066</td>
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**Technologies**

<table>
<thead>
<tr>
<th>Country</th>
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<tbody>
<tr>
<td>BASIC sanitation meets the needs of the poorest areas</td>
<td>61.7</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>50.7</td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>40.8</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>33.5</td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>61.3</td>
</tr>
<tr>
<td>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</td>
<td>39.8</td>
</tr>
<tr>
<td>Traffic congestion is not a problem</td>
<td>24.2</td>
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<tr>
<td>Public transport is satisfactory</td>
<td>70.6</td>
</tr>
<tr>
<td>Green spaces are satisfactory</td>
<td>69.9</td>
</tr>
<tr>
<td>Cultural activities (shows, bars, and museums) are satisfactory</td>
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<tr>
<td>Employment finding services are readily available</td>
<td>68.3</td>
</tr>
<tr>
<td>Most children have access to a good school</td>
<td>61.8</td>
</tr>
<tr>
<td>Lifelong learning opportunities are provided by local institutions</td>
<td>65.9</td>
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<tr>
<td>Businesses are creating new jobs</td>
<td>54.1</td>
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<tr>
<td>Minorities feel welcome</td>
<td>50.1</td>
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<tr>
<td>Information on local government decisions are easily accessible</td>
<td>60.7</td>
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<td>Corruption of city officials is not an issue of concern</td>
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<tr>
<td>Residents contribute to decision making of local government</td>
<td>43.4</td>
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<tr>
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<td>62.6</td>
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<tbody>
<tr>
<td>Online access to job listings has made it easier to find work</td>
<td>60.1</td>
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<tr>
<td>IT skills are taught well in schools</td>
<td>61.8</td>
</tr>
<tr>
<td>Online services provided by the city has made it easier to start a new business</td>
<td>60.3</td>
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<tr>
<td>The current internet speed and reliability meet connectivity needs</td>
<td>74.7</td>
</tr>
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</table>

**Health & Safety**

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<tr>
<td>A website or App allows residents to easily give away unwanted items</td>
<td>61.6</td>
</tr>
<tr>
<td>Free public well has improved access to city services</td>
<td>69.7</td>
</tr>
<tr>
<td>CCTV camera has made residents feel safer</td>
<td>68.0</td>
</tr>
<tr>
<td>A website or App allows residents to effectively monitor air pollution</td>
<td>49.7</td>
</tr>
<tr>
<td>Arranging medical appointments online has improved access</td>
<td>72.3</td>
</tr>
</tbody>
</table>

**Motivation**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car-sharing Apps have reduced congestion</td>
<td>52.0</td>
</tr>
<tr>
<td>Apps that direct you to an available parking space have reduced journey time</td>
<td>67.2</td>
</tr>
<tr>
<td>Bicycle hiring has reduced congestion</td>
<td>56.0</td>
</tr>
<tr>
<td>Online scheduling and ticket sales has made public transport easier to use</td>
<td>77.2</td>
</tr>
<tr>
<td>The city provides information on traffic congestion through mobile phones</td>
<td>54.4</td>
</tr>
</tbody>
</table>

**Activities**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online purchasing of tickets to shows and museums has made it easier to attend</td>
<td>82.8</td>
</tr>
</tbody>
</table>

**Governance**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online public access to city finances has reduced corruption</td>
<td>39.7</td>
</tr>
<tr>
<td>Online voting has increased participation</td>
<td>60.0</td>
</tr>
<tr>
<td>An online platform where residents can propose ideas has improved city life</td>
<td>63.1</td>
</tr>
<tr>
<td>Processing Identification Documents online has reduced waiting times</td>
<td>74.6</td>
</tr>
</tbody>
</table>

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

**ATTITUDES**

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
### BACKGROUND INFORMATION

#### Mumbai
- **Population:** 21,043,000
- **GNI per capita (PPP $):**
  - 2015: 5,674
  - 2016: 6,075
  - 2017: 6,446
  - 2018: 6,829
- **Mean years of schooling:***
  - 2015: 6.2
  - 2016: 6.4
  - 2017: 6.5
  - 2018: 6.5
- **Expected years of schooling:**
  - 2015: 12.0
  - 2016: 12.3
  - 2017: 12.3
  - 2018: 12.3
- **Life expectancy at Birth:***
  - 2015: 68.6
  - 2016: 68.9
  - 2017: 68.2
  - 2018: 68.4
- **HDI (UN World Cities Report):***
  - 2015: 0.627
  - 2016: 0.637
  - 2017: 0.643
  - 2018: 0.647

### FACTOR RATINGS

#### STRUCTURES
- 4

#### TECHNOLOGIES
- C

### GROUP RATING

- 4

### SMART CITY RATING

- 93

### PRIORITY AREAS

#### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion: 75.9%
- You are comfortable with face recognition technologies to lower crime: 78.0%
- You feel the availability of online information has increased your trust in authorities: 81.3%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 69.3%
**BACKGROUND INFORMATION**

City: Munich

Population: 1,438,000

**Countries**

<table>
<thead>
<tr>
<th>Year</th>
<th>HDI</th>
<th>Life expectancy at Birth</th>
<th>Average years of schooling</th>
<th>Mean years of schooling</th>
<th>GNI per capita (PPP $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.933</td>
<td>80.8</td>
<td>17.0</td>
<td>14.1</td>
<td>45,121</td>
</tr>
<tr>
<td>2016</td>
<td>0.936</td>
<td>80.9</td>
<td>17.1</td>
<td>14.1</td>
<td>45,777</td>
</tr>
<tr>
<td>2017</td>
<td>0.938</td>
<td>81.0</td>
<td>17.1</td>
<td>14.1</td>
<td>46,438</td>
</tr>
<tr>
<td>2018</td>
<td>0.939</td>
<td>81.2</td>
<td>17.1</td>
<td>14.1</td>
<td>46,946</td>
</tr>
</tbody>
</table>

**SMART CITY RATING**

- **Group Max:** 11
- **Out of 109:** N/A
- **Not in 2019:** A

<table>
<thead>
<tr>
<th>Factor Ratings</th>
<th>AAA</th>
<th>BBB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structures</td>
<td>A</td>
<td>N/A</td>
</tr>
<tr>
<td>Technologies</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. The city that ranks highest in this list is Munich, with a score of 66.4.

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas: 73.1
- Recycling services are satisfactory: 76.8
- Public safety is a non-problem: 88.5
- Air pollution is a non-problem: 91.8
- Medical services provision is satisfactory: 92.1
- Finding housing with rent equal to 30% or less of a monthly salary is a non-problem: 92.4

**Mobility**

- Traffic congestion is a non-problem: 30.1
- Public transport is satisfactory: 66.4

**Activities**

- Green spaces are satisfactory: 78.2
- Cultural activities (shows, bars, and museums) are satisfactory: 81.9

**Opportunities (Work & School)**

- Employment finding services are readily available: 63.4
- Most children have access to a good school: 73.0
- Lifelong learning opportunities are provided by local institutions: 67.1
- Businesses are creating new jobs: 69.7
- Minorities feel welcome: 61.1

**Governance**

- Information on local government decisions are easily accessible: 62.7
- Corruption of city officials is a non-issue of concern: 64.8
- Residents contribute to decision making of local government: 54.6
- Residents provide feedback on local government projects: 57.8

**ATTITUDES**

You are willing to concede personal data in order to improve traffic congestion: 60.5%

You feel the availability of online recognition technologies to lower crime: 60.5%

The proportion of your day-to-day payment transactions that are non-cash: 63.9%

**TECHNOLOGIES**

**Opportunities (Work & School)**

- Online access to job listings has made it easier to find work: 73.5%
- IT skills are taught well in schools: 54.5%
- Online services provided by the city has made it easier to start a new business: 47.3%
- The current internet speed and reliability meet connectivity needs: 61.2%

**Health & Safety**

- Online reporting of city maintenance problems provides a speedy solution: 40.8%
- A website or App allows residents to easily give away unwanted items: 59.3%
- Free public wil has improved access to city services: 58.1%
- CCTV cameras have made residents feel safer: 54.5%
- A website or App allows residents to effectively monitor air pollution: 37.3%
- Arranging medical appointments online has improved access: 57.8%

**Mobility**

- Car-sharing Apps have reduced congestion: 39.8%
- Apps that direct you to an available parking space have reduced journey time: 47.6%
- Bicycle hiring has reduced congestion: 47.1%
- Online scheduling and ticket sales has made public transport easier to use: 76.5%
- The city provides information on traffic congestion through mobile phones: 57.1%

**Activities**

- Online purchasing of tickets to shows and museums has made it easier to attend: 76.2%
Nairobi

BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.562</td>
<td>0.568</td>
<td>0.574</td>
<td>0.579</td>
<td>+0.005</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>64.8</td>
<td>65.4</td>
<td>65.9</td>
<td>66.3</td>
<td>+0.4</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>10.9</td>
<td>11.0</td>
<td>11.1</td>
<td>11.1</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>6.3</td>
<td>6.4</td>
<td>6.5</td>
<td>6.6</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>2,788</td>
<td>2,875</td>
<td>2,936</td>
<td>3,052</td>
<td>+116.0</td>
</tr>
</tbody>
</table>

SMART CITY RANKING

108 Out of 109

100 in 2019

SMART CITY RATING

D in 2019

FACTOR RATINGS

D STRUCTURES

D TECHNOLOGIES

GROUP 4

All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the tall bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

<table>
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<tr>
<th>Country</th>
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<td>11.0</td>
<td>11.1</td>
<td>11.1</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>6.3</td>
<td>6.4</td>
<td>6.5</td>
<td>6.6</td>
<td>+0.1</td>
</tr>
<tr>
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<td>2,875</td>
<td>2,936</td>
<td>3,052</td>
<td>+116.0</td>
</tr>
</tbody>
</table>
Nanjing

**BACKGROUND INFORMATION**

- **Population**: 7,369,000
- **Country**
  - **2015**: HDI: 0.742, Life expectancy at Birth: 75.9, Mean years of schooling: 7.7, GNH per capita: 13,485
  - **2016**: HDI: 0.747, Life expectancy at Birth: 76.2, Mean years of schooling: 7.8, GNH per capita: 14,311
  - **2017**: HDI: 0.753, Life expectancy at Birth: 76.5, Mean years of schooling: 7.9, GNH per capita: 15,212
  - **2018**: HDI: 0.758, Life expectancy at Birth: 76.7, Mean years of schooling: 8.0, GNH per capita: 16,127
  - **1 yr change**: HDI: +0.005, Life expectancy: +0.2, Mean years of schooling: +0.1, GNH per capita: +$915.0

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion
- You feel the availability of online information has increased your trust in authorities
- You are comfortable with face recognition technologies to lower crime
- You are willing to concede personal data in order to improve traffic congestion

**PRIORITY AREAS**

- Road congestion
- Air pollution
- Affordable housing
- Social mobility
- Recreational services

**TRENDS**

- **HDI**
  - **2015**: 0.742
  - **2016**: 0.749
  - **2017**: 0.753
  - **2018**: 0.758

**TECHNOLOGIES**

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - CCTV cameras have made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Online scheduling and ticket sales have made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city have made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times
New Delhi

BACKGROUND INFORMATION

City
Population: 25,703,000

(UN World Cities Report)

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change
---|---|---|---|---|---
HDI | 0.627 | 0.637 | 0.643 | 0.647 | +0.004
Life expectancy at Birth | 68.6 | 68.9 | 69.2 | 69.4 | +0.2
Expected years of schooling | 12.0 | 12.3 | 12.3 | 12.3 | +0.0
Mean years of schooling | 6.2 | 6.4 | 6.5 | 6.5 | +0.0
GNP per capita (PPP $) | 5,674 | 6,075 | 6,446 | 6,829 | +383.0

SMART CITY RANKING

86 Out of 109

SMART CITY RATING

CC

CC in 2019

68 in 2019

FACTOR RATINGS

C

STRUCTURES

Score | LEGEND | CITY | GROUP MAX
---|---|---|---
Health & Safety | 59.3 | | |
Basic sanitation meets the needs of the poorest areas | | |
Recycling services are satisfactory | | |
Public safety is not a problem | | |
Air pollution is not a problem | | |
Medical services provision is satisfactory | | |
Finding housing with rent equal to 30% or less of a monthly salary is not a problem | | |
Mobility | 34.6 | | |
Traffic congestion is not a problem | | |
Public transport is satisfactory | | |
Activities | 65.4 | | |
Green spaces are satisfactory | | |
Cultural activities (shows, bars, and museums) are satisfactory | | |
Opportunities (Work & School) | 66.8 | | |
Employment finding services are readily available | | |
Most children have access to a good school | | |
Lifelong learning opportunities are provided by local institutions | | |
Businesses are creating new jobs | | |
Minorities feel welcome | | |
Governance | 71.7 | | |
Information on local government decisions are easily accessible | | |
Corruption of city officials is not an issue of concern | | |
Residents contribute to decision making of local government | | |
Residents provide feedback on local government projects | | |

TECHNOLOGIES

Score | LEGEND | CITY | GROUP MAX
---|---|---|---
Health & Safety | 62.9 | | |
Online reporting of city maintenance problems provides a speedy solution | | |
A website or App allows residents to easily give away unwanted items | | |
Free public wi-fi has improved access to city services | | |
CCTV cameras has made residents feel safer | | |
A website or App allows residents to effectively monitor air pollution | | |
Arranging medical appointments online has improved access | | |
Mobility | 71.5 | | |
Car-sharing Apps have reduced congestion | | |
Apps that direct you to an available parking space has reduced journey time | | |
Bicycle hiring has reduced congestion | | |
Online scheduling and ticket sales has made public transport easier to use | | |
The city provides information on traffic congestion through mobile phones | | |
Activities | 79.9 | | |
Online purchasing of tickets to shows and museums has made it easier to attend | | |
Opportunities (Work & School) | 74.9 | | |
Online access to job listings has made it easier to find work | | |
IT skills are taught well in schools | | |
Online services provided by the city has made it easier to start a new business | | |
The current internet speed and reliability meet connectivity needs | | |
Governance | 84.0 | | |
Online public access to city finances has reduced corruption | | |
Online voting has increased participation | | |
An online platform where residents can propose ideas has improved city life | | |
Processing Identification Documents online has reduced waiting times | | |

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:

MIN 63.5 75.7

34.6 67.5 65.7

27.4 70.9

67.5 65.4

55.0

34.6 64.0

66.8 64.0 64.6 70.9 67.4

71.7 49.6 64.7 63.5

71.8% 50.9% 48.3% 41.2% 38.5% 37.2% 30.3% 29.9% 29.9% 22.7% 20.9% 18.8% 12.0% 9.0% 0% 20% 40% 60% 80% 100%

Score

0 20 40 60 80 100

% of respondents who chose the Priority Area

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change
---|---|---|---|---|---

Score

0 20 40 60 80 100

% of respondents who agree or strongly agree with the statement

78.2% 81.2% 76.9% 70.0%
New York

BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>City</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.919</td>
<td>0.919</td>
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<tr>
<td>Life expectancy at Birth</td>
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<td>78.9</td>
<td>78.9</td>
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<td>16.3</td>
<td>16.3</td>
<td>16.3</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>13.3</td>
<td>13.4</td>
<td>13.4</td>
<td>13.4</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>54,039</td>
<td>54,443</td>
<td>55,351</td>
<td>56,140</td>
<td>+789.0</td>
</tr>
</tbody>
</table>

ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion: 59.1%
- You are comfortable with face recognition technologies to lower crime: 65.2%
- You feel the availability of online information has increased your trust in authorities: 86.1%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 72.5%

PRIORITY AREAS

- Affordable housing: 56.0%
- Security: 43.5%
- Health services: 40.4%
- Air pollution: 38.7%
- Public transport: 37.8%
- Road congestion: 36.5%
- Unemployment: 35.2%
- Fulfilling employment: 33.0%
- Computation: 27.0%
- Green spaces: 18.7%
- Basic amenities: 13.0%
- Recycling: 11.8%
- Social mobility: 11.7%
- Citizen engagement: 12.2%


SMART CITY RANKING

10
Out of 109

SMART CITY RATING

A

BBB in 2019

FACTOR RATINGS

A

AA

TECHNOLOGIES

GROUP 1

All ratings range from AAA to D
Newcastle

BACKGROUND INFORMATION
City
Population
791,000
(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.916 0.916 0.919 0.920 +0.001
Life expectancy at Birth 81.1 81.1 81.2 81.2 +0.0
Expected years of schooling 17.4 17.4 17.4 17.4 +0.0
Mean years of schooling 12.8 12.9 12.9 13.0 +0.1
GNI per capita (PPP $) 38,116 38,421 39,216 39,507 +291.0

PRIORITY AREAS
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.
The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES
You are willing to concede personal data in order to improve traffic congestion
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:
MIN GROUP MEAN CITY MAX

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

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Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100

Score

0 20 40 60 80 100
**Osaka**

**BACKGROUND INFORMATION**

- **City**
  - Population: 20,238,000
  - (UN World Cities Report)

**Governing Indicators**

- **GNI per capita (PPP $)**
  - 2015: 26,407
  - 2016: 26,007
  - 2017: 26,607
  - 2018: 27,207

**FACTORS**

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Governance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

**Issues**

- Information on local government projects are easily accessible
- Online public access to city finances has reduced corruption
- Employment finding services are readily available
- Online access to job listings has made it easier to find work
- Green spaces are satisfactory
- Online purchasing of tickets to shows and museums has made it easier to attend
- Traffic congestion is not a problem
- Car-sharing Apps have reduced congestion
- Basic sanitation meets the needs of the poorest areas
- Online reporting of city maintenance problems provides a speedy solution
- Corruption of city officials is not an issue of concern
- Online voting has increased participation
- Minorities feel welcome
- Lifelong learning opportunities are provided by local institutions
- Online services provided by the city has made it easier to start a new business
- Cultural activities (shows, bars, and museums) are satisfactory
- Public transport is satisfactory
- Apps that direct you to an available parking space have reduced journey time
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem
- Arranging medical appointments online has improved access
- Air pollution is not a problem
- CCTV cameras has made residents feel safer
- Public safety is not a problem
- Free public wifi has improved access to city services
- A website or App allows residents to easily give away unwanted items

**PRIORITY AREAS**

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<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
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<th>2018</th>
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<tbody>
<tr>
<td>HDI</td>
<td>0.906</td>
<td>0.910</td>
<td>0.913</td>
<td>0.915</td>
<td>+0.002</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>83.9</td>
<td>84.1</td>
<td>84.3</td>
<td>84.5</td>
<td>+0.2</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>15.2</td>
<td>15.2</td>
<td>15.2</td>
<td>15.2</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>39,297</td>
<td>39,407</td>
<td>40,343</td>
<td>40,799</td>
<td>+456.0</td>
</tr>
</tbody>
</table>

**SMART CITY RATING**

- **80** out of 109
- 69 in 2019

**GROUP**

- 2

All ratings range from AAA to D

---

**LEGEND:**

- **CITY MEAN**
- **GROUP MEAN**
- **MIN**
- **MAX**
Oslo

BACKGROUND INFORMATION

City

Population: 66,584

(UN World Cities Report)

<table>
<thead>
<tr>
<th>Country</th>
<th>2015 HDI</th>
<th>2016 HDI</th>
<th>2017 HDI</th>
<th>2018 HDI</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>0.948</td>
<td>0.951</td>
<td>0.953</td>
<td>0.954</td>
<td>+0.001</td>
</tr>
</tbody>
</table>

Линия для города Осло на карте.

The city provides information on traffic congestion through mobile phones.

Online scheduling and ticket sales has made public transport easier to use.
In 2019, Paris ranked 61 out of 109 cities in the global City Ranking. The city’s performance has improved, moving up from 63 in 2018.

**Health & Safety**: The city provides information on traffic congestion through mobile phones, which is a considerate service for residents. However, issues like corruption, safety, and recycling remain challenges.

**Mobility**: Car-sharing Apps have reduced congestion, and the city provides information on traffic congestion through mobile phones, improving public transport access.

**Activities**: Online purchasing of tickets to shows and museums has made it easier to attend events. Lifelong learning opportunities are provided by local institutions, and schools teach IT skills well.

**Opportunities (Work & School)**: Online access to job listings has made it easier to find work. IT skills are taught well in schools, and online services provided by the city have made it easier to start a new business.

**Government**: Online public access to city finances has reduced corruption. Online voting has increased participation, and an online platform where residents can propose ideas has improved city life.
Philadelphia

BACKGROUND INFORMATION

City
Population: 5,585,000
((UN World Cities Report)

Country | 2015 | 2016 | 2017 | 2018 | 1 yr change
HDI | 0.917 | 0.919 | 0.919 | 0.920 | +0.001
Life expectancy at Birth | 78.9 | 78.9 | 78.9 | 78.9 | +0.0
Expected years of schooling | 16.2 | 16.3 | 16.3 | 16.3 | +0.0
Mean years of schooling | 13.3 | 13.4 | 13.4 | 13.4 | +0.0
GNI per capita (PPP $) | 54,039 | 54,443 | 55,351 | 56,140 | +789.0

SMART CITY RANKING
52
Out of 109

SMART CITY RATING
BB
BB in 2019

FACTOR RATINGS
BB
Structures
BB
Technologies

GROUP 1
All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:
MIN - CITY MEAN - GROUP MEAN

CITY

<table>
<thead>
<tr>
<th>Health &amp; Safety</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic sanitation meets the needs of the poorest areas</td>
<td>42.1</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>52.6</td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>24.4</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>31.1</td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>59.4</td>
</tr>
<tr>
<td>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</td>
<td>27.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobility</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic congestion is not a problem</td>
<td>20.4</td>
</tr>
<tr>
<td>Public transport is satisfactory</td>
<td>49.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green spaces are satisfactory</td>
<td>54.4</td>
</tr>
<tr>
<td>Cultural activities (shows, bars, and museums) are satisfactory</td>
<td>77.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities (Work &amp; School)</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment finding services are readily available</td>
<td>59.1</td>
</tr>
<tr>
<td>Most children have access to a good school</td>
<td>36.6</td>
</tr>
<tr>
<td>Lifelong learning opportunities are provided by local institutions</td>
<td>50.0</td>
</tr>
<tr>
<td>Businesses are creating new jobs</td>
<td>55.0</td>
</tr>
<tr>
<td>Minorities feel welcome</td>
<td>52.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Governance</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on local government decisions are easily accessible</td>
<td>56.3</td>
</tr>
<tr>
<td>Corruption of city officials is not an issue of concern</td>
<td>32.6</td>
</tr>
<tr>
<td>Residents contribute to decision making of local government</td>
<td>43.1</td>
</tr>
<tr>
<td>Residents provide feedback on local government projects</td>
<td>53.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technologies</th>
<th>Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online reporting of city maintenance problems provides a speedy solution</td>
<td>32.2</td>
</tr>
<tr>
<td>Affordability housing</td>
<td>52.3</td>
</tr>
<tr>
<td>A website or App allows residents to easily give away unwanted items</td>
<td>44.6</td>
</tr>
<tr>
<td>Free public wifi has improved access to city services</td>
<td>41.7</td>
</tr>
<tr>
<td>CCTV cameras have made residents feel safer</td>
<td>26.6</td>
</tr>
<tr>
<td>A website or App allows residents to effectively monitor air pollution</td>
<td>58.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobility</th>
<th>Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car-sharing Apps have reduced congestion</td>
<td>44.6</td>
</tr>
<tr>
<td>Apps that direct you to an available parking space have reduced journey time</td>
<td>40.4</td>
</tr>
<tr>
<td>Bicycle hiring has reduced congestion</td>
<td>56.8</td>
</tr>
<tr>
<td>Online scheduling and ticket sales has made public transport easier to use</td>
<td>56.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online purchasing of tickets to shows and museums has made it easier to attend</td>
<td>75.6</td>
</tr>
<tr>
<td>Online access to job listings has made it easier to find work</td>
<td>63.4</td>
</tr>
<tr>
<td>IT skills are taught well in schools</td>
<td>39.9</td>
</tr>
<tr>
<td>Online services provided by the city has made it easier to start a new business</td>
<td>38.6</td>
</tr>
<tr>
<td>The current internet speed and reliability meet connectivity needs</td>
<td>56.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities (Work &amp; School)</th>
<th>Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online public access to city finances has reduced corruption</td>
<td>39.2</td>
</tr>
<tr>
<td>Online voting has increased participation</td>
<td>43.1</td>
</tr>
<tr>
<td>An online platform where residents can propose ideas has improved city life</td>
<td>40.0</td>
</tr>
<tr>
<td>Processing Identification Documents online has reduced waiting times</td>
<td>48.9</td>
</tr>
</tbody>
</table>
Phoenix

BACKGROUND INFORMATION

City
Population
4,063,000

(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.917 0.919 0.919 0.920 +0.001
Life expectancy at Birth 78.9 78.9 78.9 78.9 +0.0
Expected years of schooling 16.2 16.3 16.3 16.3 +0.0
Mean years of schooling 13.3 13.4 13.4 13.4 +0.0
GNI per capita (PPP $) 54,039 54,443 55,351 56,140 +789.0

SMART CITY RANKING

39  Out of 109

A

SMART CITY RATING

BBB

not in 2019

FACTOR RATINGS

GROUP 1

All ratings range from AAA to D

Health & Safety
Basic sanitation meets the needs of the poorest areas
Recycling services are satisfactory
Public safety is not a problem
Air pollution is not a problem
Medical services provision is satisfactory
Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Mobility
Traffic congestion is not a problem
Public transport is satisfactory

Activities
Green spaces are satisfactory
Cultural activities (shows, bars, and museums) are satisfactory

Opportunities (Work & School)
Employment finding services are readily available
Most children have access to a good school
Lifelong learning opportunities are provided by local institutions
Businesses are creating new jobs
Minorities feel welcome

Governance
Information on local government decisions are easily accessible
Corruption of city officials is not an issue of concern
Residents contribute to decision making of local government
Residents provide feedback on local government projects

Health & Safety
Online reporting of city maintenance problems provides a speedy solution
A website or App allows residents to easily give away unwanted items
Free public Wi-Fi has improved access to city services
CCTV cameras have made residents feel safer
A website or App allows residents to effectively monitor air pollution
Arranging medical appointments online has improved access

Mobility
Car-sharing Apps have reduced congestion
Apps that direct you to an available parking space have reduced journey time
Bicycle hiring has reduced congestion
Online scheduling and ticket sales has made public transport easier to use
The city provides information on traffic congestion through mobile phones

Activities
Online purchasing of tickets to shows and museums has made it easier to attend

Opportunities (Work & School)
Online access to job listings has made it easier to find work
IT skills are taught well in schools
Online services provided by the city has made it easier to start a new business
The current internet speed and reliability meet connectivity needs

Governance
Online public access to city finances has reduced corruption
Online voting has increased participation
An online platform where residents can propose ideas has improved city life
Processing Identification Documents online has reduced waiting times

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

TECHNOLOGIES

afordable housing
road congestion
school education
air pollution
health services
unemployment
fulfilling employment
security
public transport
recycling
corruption
animal engagement
green spaces
social mobility

Score
0% 20% 40% 60% 80% 100%

% of respondents who chose the Priority Area

Sustainable living

% of respondents who agree or strongly agree with the statement
**BACKGROUND INFORMATION**

**City**
- Population: 1,314,000
- (UN World Cities Report)

**Country**
- HDI: 0.882 (2015), 0.885 (2016), 0.888 (2017), 0.891 (2018)

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

**ATTITUDES**

You are willing to concede personal data in order to improve traffic congestion
- 60.8%

You feel the availability of online information has increased your trust in authorities
- 66.6%

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
- 56.4%

**STRUCUTRES**

Health & Safety
- Basic sanitation meets the needs of the poorest areas: 68.8%
- Recycling services are satisfactory: 42.0%
- Public safety is not a problem: 72.4%
- Air pollution is not a problem: 24.7%
- Medical services provision is satisfactory: 21.6%
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 66.7%

Mobility
- Traffic congestion is not a problem: 50.7%
- Public transport is satisfactory: 82.7%

Activities
- Green spaces are satisfactory: 65.4%
- Cultural activities (shows, bars, and museums) are satisfactory: 68.8%

Opportunities (Work & School)
- Employment finding services are readily available: 78.8%
- Most children have access to a good school: 75.8%
- Lifelong learning opportunities are provided by local institutions: 74.1%
- Businesses are creating new jobs: 73.7%
- Minorities feel welcome: 50.3%

Governance
- Information on local government decisions are easily accessible: 68.5%
- Corruption of city officials is not an issue of concern: 33.3%
- Residents contribute to decision making of local government: 46.4%
- Residents provide feedback on local government projects: 59.9%

**TECHNOLOGIES**

Health & Safety
- Online reporting of city maintenance problems provides a speedy solution: 54.1%
- A website or App allows residents to easily give away unwanted items: 66.6%
- Free public wifi has improved access to city services: 60.8%
- CCTV cameras have made residents feel safer: 63.6%
- A website or App allows residents to effectively monitor air pollution: 49.2%
- Arranging medical appointments online has improved access: 65.4%

Mobility
- Car-sharing Apps have reduced congestion: 38.0%
- Apps that direct you to an available parking space have reduced journey time: 47.5%
- Bicycle sharing has reduced congestion: 44.9%
- Online scheduling and ticket sales has made public transport easier to use: 77.2%
- The city provides information on traffic congestion through mobile phones: 48.3%

Activities
- Online purchasing of tickets to shows and museums has made it easier to attend: 82.9%

Opportunities (Work & School)
- Online access to job listings has made it easier to find work: 78.5%
- IT skills are taught well in schools: 59.3%
- Online services provided by the city has made it easier to start a new business: 49.7%
- The current internet speed and reliability meet connectivity needs: 76.7%

Governance
- Online public access to city finances has reduced corruption: 38.3%
- Online voting has increased participation: 52.1%
- An online platform where residents can propose ideas has improved city life: 52.7%
- Processing Identification Documents online has reduced waiting times: 67.7%

**LEGEND:**
- CITY MEAN
- GROUP MEAN
- GROUP MAX
**BACKGROUND INFORMATION**

City: Rabat

Population: 1,967,000

(UN World Cities Report)

**Country** | **2015** | **2016** | **2017** | **2018** | **1 yr change**
---|---|---|---|---|---
HDI | 0.660 | 0.660 | 0.675 | 0.676 | +0.001
Life expectancy at Birth | 75.7 | 76.0 | 76.2 | 76.5 | +0.3
Expected years of schooling | 12.6 | 12.8 | 13.1 | 13.1 | +0.0
Mean years of schooling | 5.0 | 5.4 | 5.5 | 5.5 | +0.0
GNI per capita (PPP $) | 7,183 | 7,169 | 7,342 | 7,480 | +138.0

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

**ATTITUDES**

You are willing tocondeal personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

**LEGEND:**

- **MIN:** City Mean
- **MAX:** Group Max
Rio de Janeiro

BACKGROUND INFORMATION

Country
Population 12,902,000
(UN World Cities Report)

SMART CITY RANKING
102
Out of 109

SMART CITY RATING
C
in 2019

FACTOR RATINGS

STRUCTURES
C
in 2019

TECHNOLOGIES

GROUP
3
All ratings range from AAA to D

STRUCTURES RANKING

<table>
<thead>
<tr>
<th>Factor</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic sanitation</td>
<td>22.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycling services</td>
<td>34.5</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public safety</td>
<td>16.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air pollution</td>
<td>28.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical services</td>
<td>20.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Finding housing</td>
<td>24.2</td>
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</tr>
<tr>
<td>Mobility</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Traffic congestion</td>
<td>16.8</td>
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<td></td>
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<tr>
<td>Public transport</td>
<td>19.4</td>
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<td></td>
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<td></td>
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<td>Activities</td>
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</tr>
<tr>
<td>Green spaces</td>
<td>48.7</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Cultural activities</td>
<td>59.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment finding</td>
<td>38.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most children access</td>
<td>20.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifelong learning opportunities</td>
<td>32.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Businesses creating</td>
<td>30.6</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Minorities feel</td>
<td>19.9</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Governance</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Information on</td>
<td>29.5</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Corruption of</td>
<td>12.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents contribute</td>
<td>19.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents provide</td>
<td>23.2</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

TECHNOLOGIES RANKING

<table>
<thead>
<tr>
<th>Factor</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online reporting</td>
<td>24.0</td>
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<td></td>
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<tr>
<td>City maintenance</td>
<td>37.1</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free public wifi</td>
<td>28.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCTV cameras</td>
<td>39.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A website or App</td>
<td>22.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arranging appointments</td>
<td>36.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Car-sharing Apps</td>
<td>39.3</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Apps</td>
<td>45.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle hiring</td>
<td>51.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online scheduling and</td>
<td>54.3</td>
<td></td>
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<td>The city provides</td>
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<tr>
<td>Activities</td>
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<td></td>
</tr>
<tr>
<td>Online purchasing</td>
<td>74.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online access</td>
<td>50.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT skills</td>
<td>24.3</td>
<td></td>
<td></td>
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<tr>
<td>Online services</td>
<td>37.8</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>The current internet</td>
<td>56.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online public access</td>
<td>21.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online voting</td>
<td>36.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An online platform</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing Identification Documents</td>
<td>49.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:

CITY MEAN
GROUP MEAN

Score

% of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100%

% of respondents who agree or strongly agree with the statement

0% 20% 40% 60% 80% 100%


**BACKGROUND INFORMATION**

**City**

Population: 6,370,000  
*(UN World Cities Report)*

---

**SMART CITY RANKING**

53  
Out of 109

71 in 2019

---

**SMART CITY RATING**

B  
CCC in 2019

---

**FACTOR RATINGS**

B  
STRUCTURES

BB  
TECHNOLOGIES

GROUP 3  
All ratings range from AAA to D

---

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

---

**ATTITUDES**

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

---

**Structures**

<table>
<thead>
<tr>
<th>Year</th>
<th>Basic sanitation meets the needs of the poorest areas</th>
<th>Recycling services are satisfactory</th>
<th>Public safety is not a problem</th>
<th>Air pollution is not a problem</th>
<th>Medical services provision is satisfactory</th>
<th>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>83.2</td>
<td>72.9</td>
<td>52.5</td>
<td>40.7</td>
<td>80.7</td>
<td>61.4</td>
</tr>
<tr>
<td>2016</td>
<td>83.2</td>
<td>72.9</td>
<td>52.5</td>
<td>40.7</td>
<td>80.7</td>
<td>61.4</td>
</tr>
<tr>
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<td>72.9</td>
<td>52.5</td>
<td>40.7</td>
<td>80.7</td>
<td>61.4</td>
</tr>
</tbody>
</table>

**Technologies**

<table>
<thead>
<tr>
<th>Year</th>
<th>Online reporting of city maintenance problems provides a speedy solution</th>
<th>A website or App allows residents to easily give away unwanted items</th>
<th>Free public wifi has improved access to city services</th>
<th>CCTv cameras has made residents feel safer</th>
<th>A website or App allows residents to effectively monitor air pollution</th>
<th>Arranging medical appointments online has improved access</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>74.7</td>
<td>65.3</td>
<td>62.2</td>
<td>72.7</td>
<td>55.7</td>
<td>78.5</td>
</tr>
<tr>
<td>2016</td>
<td>74.7</td>
<td>65.3</td>
<td>62.2</td>
<td>72.7</td>
<td>55.7</td>
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<td>2018</td>
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<td>65.3</td>
<td>62.2</td>
<td>72.7</td>
<td>55.7</td>
<td>78.5</td>
</tr>
</tbody>
</table>

---

**Activities**

<table>
<thead>
<tr>
<th>Year</th>
<th>Green spaces are satisfactory</th>
<th>Cultural activities (shows, bars, and museums) are satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>62.3</td>
<td>66.7</td>
</tr>
<tr>
<td>2016</td>
<td>62.3</td>
<td>66.7</td>
</tr>
<tr>
<td>2017</td>
<td>62.3</td>
<td>66.7</td>
</tr>
<tr>
<td>2018</td>
<td>62.3</td>
<td>66.7</td>
</tr>
</tbody>
</table>

---

**Mobility**

<table>
<thead>
<tr>
<th>Year</th>
<th>Traffic congestion is not a problem</th>
<th>Public transport is satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>32.1</td>
<td>54.4</td>
</tr>
<tr>
<td>2016</td>
<td>32.1</td>
<td>54.4</td>
</tr>
<tr>
<td>2017</td>
<td>32.1</td>
<td>54.4</td>
</tr>
<tr>
<td>2018</td>
<td>32.1</td>
<td>54.4</td>
</tr>
</tbody>
</table>

---

**Health & Safety**

<table>
<thead>
<tr>
<th>Year</th>
<th>Basic sanitation meets the needs of the poorest areas</th>
<th>Recycling services are satisfactory</th>
<th>Public safety is not a problem</th>
<th>Air pollution is not a problem</th>
<th>Medical services provision is satisfactory</th>
<th>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>83.2</td>
<td>72.9</td>
<td>52.5</td>
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</tr>
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<td>52.5</td>
<td>40.7</td>
<td>80.7</td>
<td>61.4</td>
</tr>
</tbody>
</table>

---

**Opportunities (Work & School)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment finding services are readily available</th>
<th>Most children have access to a good school</th>
<th>Lifelong learning opportunities are provided by local institutions</th>
<th>Businesses are creating new jobs</th>
<th>Minorities feel welcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>58.1</td>
<td>76.1</td>
<td>66.7</td>
<td>65.0</td>
<td>62.8</td>
</tr>
<tr>
<td>2016</td>
<td>58.1</td>
<td>76.1</td>
<td>66.7</td>
<td>65.0</td>
<td>62.8</td>
</tr>
<tr>
<td>2017</td>
<td>58.1</td>
<td>76.1</td>
<td>66.7</td>
<td>65.0</td>
<td>62.8</td>
</tr>
<tr>
<td>2018</td>
<td>58.1</td>
<td>76.1</td>
<td>66.7</td>
<td>65.0</td>
<td>62.8</td>
</tr>
</tbody>
</table>

---

**Governance**

<table>
<thead>
<tr>
<th>Year</th>
<th>Information on local government decisions are easily accessible</th>
<th>Corruption of city officials is not an issue of concern</th>
<th>Residents contribute to decision making of local government</th>
<th>Residents provide feedback on local government projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>76.5</td>
<td>47.1</td>
<td>58.7</td>
<td>62.1</td>
</tr>
<tr>
<td>2016</td>
<td>76.5</td>
<td>47.1</td>
<td>58.7</td>
<td>62.1</td>
</tr>
<tr>
<td>2017</td>
<td>76.5</td>
<td>47.1</td>
<td>58.7</td>
<td>62.1</td>
</tr>
<tr>
<td>2018</td>
<td>76.5</td>
<td>47.1</td>
<td>58.7</td>
<td>62.1</td>
</tr>
</tbody>
</table>
### Rome

#### Background Information

- **Population**: 3,718,000
- **Country**: Italy

#### Smart City Ranking

- **Score**: 101
- **Out of**: 109
- **Group**: Rankings
- **Rating**: CCC in 2019

#### Factor Rankings

- **Structures**: C
- **Technologies**: C
- **Governance**: A

#### Group Rating

- **Overall Rating**: 3
- **All ratings range from AAA to D**

#### Priorities and Attitudes

**Priorities**

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas: 82.8%
  - Recycling services are satisfactory: 81.3%
  - Public safety is not a problem: 81.2%
  - Air pollution is not a problem: 80.0%
  - Medical services provision is satisfactory: 79.0%
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 78.8%

- **Mobility**
  - Traffic congestion is not a problem: 77.8%
  - Public transport is satisfactory: 72.1%

- **Activities**
  - Green spaces are satisfactory: 75.9%
  - Cultural activities (shows, bars, and museums) are satisfactory: 75.0%

- **Opportunities (Work & School)**
  - Employment finding services are readily available: 74.8%
  - Most children have access to a good school: 74.1%
  - Lifelong learning opportunities are provided by local institutions: 70.2%
  - Businesses are creating new jobs: 68.9%
  - Minorities feel welcome: 68.7%

- **Governance**
  - Information on local government decisions are easily accessible: 73.3%
  - Corruption of city officials is not an issue of concern: 73.3%
  - Residents contribute to decision making of local government: 72.4%
  - Residents provide feedback on local government projects: 72.4%

**Attitudes**

- **Health & Safety**
  - You are willing to concede personal data in order to improve traffic congestion: 57.1%
  - You are comfortable with face recognition technologies to lower crime: 48.3%
  - You feel the availability of online information has increased your trust in authorities: 63.7%
  - The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 44.6%

- **Mobility**
  - The city provides information on traffic congestion through mobile phones: 35.4%
  - Online scheduling and ticket sales has made public transport easier to use: 34.8%
  - Bicycle hiring has reduced congestion: 35.6%

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend: 79.1%
**Rotterdam**

**Background Information**

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.927</td>
<td>0.929</td>
<td>0.932</td>
<td>0.934</td>
<td>+0.002</td>
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<tr>
<td>Life expectancy at Birth</td>
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<td>81.9</td>
<td>82.0</td>
<td>82.1</td>
<td>+0.1</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>12.1</td>
<td>12.2</td>
<td>12.2</td>
<td>12.2</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>46,976</td>
<td>47,008</td>
<td>48,994</td>
<td>50,013</td>
<td>+1,019.0</td>
</tr>
</tbody>
</table>

**Structures**

- Basic sanitation meets the needs of the poorest areas: 63.2
- Recycling services are satisfactory: 64.6
- Public safety is not a problem: 50.8
- Air pollution is not a problem: 36.0
- Medical services provision is satisfactory: 73.2
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 31.9

**Mobility**

- Traffic congestion is not a problem: 29.1
- Public transport is satisfactory: 71.3

**Activities**

- Green spaces are satisfactory: 56.1
- Cultural activities (shows, bars, and museums) are satisfactory: 75.2

**Opportunities (Work & School)**

- Employment finding services are readily available: 64.6
- Most children have access to a good school: 70.9
- Lifelong learning opportunities are provided by local institutions: 61.2
- Businesses are creating new jobs: 61.0
- Minorities feel welcome: 57.1

**Governance**

- Information on local government decisions are easily accessible: 59.8
- Corruption of city officials is not an issue of concern: 54.5
- Residents contribute to decision making of local government: 52.5
- Residents provide feedback on local government projects: 56.3

**Health & Safety**

- Online reporting of city maintenance problems provides a speedy solution: 53.6
- A website or App allows residents to easily give away unwanted items: 60.3
- Free public WiFi has improved access to city services: 53.0
- CCTV cameras have made residents feel safer: 55.6
- A website or App allows residents to effectively monitor air pollution: 37.5
- Arranging medical appointments online has improved access: 61.2

**Mobility**

- Car-sharing Apps have reduced congestion: 34.1
- Apps that direct you to an available parking space has reduced journey time: 48.3
- Bicycle sharing has reduced congestion: 47.3
- Online scheduling and ticket sales has made public transport easier to use: 62.4
- The city provides information on traffic congestion through mobile phones: 48.6

**Activities**

- Online purchasing of tickets to shows and museums has made it easier to attend: 73.5

**Opportunities (Work & School)**

- Online access to job listings has made it easier to find work: 68.1
- IT skills are taught well in schools: 54.3
- Online services provided by the city has made it easier to start a new business: 49.0
- The current internet speed and reliability meet connectivity needs: 67.4

**Governance**

- Online public access to city finances has reduced corruption: 42.3
- Online voting has increased participation: 42.2
- An online platform where residents can propose ideas has improved city life: 51.7
- Processing Identification Documents online has reduced waiting times: 55.3

**Technologies**

- Affordable housing: 57.3%
- Security: 66.5%
- Road congestion: 58.2%
- Air pollution: 42.7%
- Unemployment: 37.1%
- Health services: 34.3%
- Green spaces: 34.2%
- Public transport: 25.9%
- Basic amenities: 25.5%
- School education: 24.7%
- Recycling: 24.3%
- Citizen engagement: 20.3%
- Fulfilling employment: 19.2%
- Social mobility: 14.6%
- Computation: 10.5%

**Priorities**

- Information on local government decisions are easily accessible: 59.8
- Employment finding services are readily available: 64.6
- Green spaces are satisfactory: 56.1
- Traffic congestion is not a problem: 63.2
- Public transport is satisfactory: 71.3

**Ratings**

- **Overall Rating**: BBB in 2019
- **Smart City Rating**: 29 out of 109
- **Group**: 1

**Background Information**

- **Population**: 953,000
- **(UN World Cities Report)**

**Priorities**

- **Governance**: Information on local government decisions are easily accessible
- **Opportunities (Work & School)**: Employment finding services are readily available
- **Activities**: Green spaces are satisfactory
- **Mobility**: Traffic congestion is not a problem
- **Health & Safety**: Online reporting of city maintenance problems provides a speedy solution
- **Technologies**: Affordable housing
San Francisco

**BACKGROUND INFORMATION**

**City**
- Population: 3,300,000
- (UN World Cities Report)

**Smart City Ranking**
- **2019:** BBB
- **2018:** BBB
- Out of 109:
  - 12 in 2019

**Smart City Rating**
- **2019:** A

**Factor Ratings**
- **Structures:** BBB
- **Technologies:** BBB

**Group:** 1

All ratings range from AAA to D

**Priorities**

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas: 0.017
  - Recycling services are satisfactory: 0.19
  - Public safety is not a problem: 0.163
  - Air pollution is not a problem: 0.134
  - Medical services provision is satisfactory: 0.134
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 0.134

- **Mobility**
  - Traffic congestion is not a problem: 0.017
  - Public transport is satisfactory: 0.017

- **Activities**
  - Green spaces are satisfactory: 0.017
  - Cultural activities (shows, bars, and museums) are satisfactory: 0.017

- **Opportunities (Work & School)**
  - Employment finding services are readily available: 0.017
  - Most children have access to a good school: 0.017
  - Lifelong learning opportunities are provided by local institutions: 0.017
  - Businesses are creating new jobs: 0.017
  - Minorities feel welcome: 0.017

- **Governance**
  - Information on local government decisions are easily accessible: 0.017
  - Corruption of city officials is not an issue of concern: 0.017
  - Residents contribute to decision making of local government: 0.017
  - Residents provide feedback on local government projects: 0.017

**Priorities (UN World Cities Report)**

- **2015**
  - HDI: 0.917
  - Life expectancy at Birth: 78.9
  - Expected years of schooling: 15.3
  - Mean years of schooling: 13.3
  - GNI per capita (PPP $): 54,039

- **2016**
  - HDI: 0.919
  - Life expectancy at Birth: 78.9
  - Expected years of schooling: 16.3
  - Mean years of schooling: 13.4
  - GNI per capita (PPP $): 54,443

- **2017**
  - HDI: 0.920
  - Life expectancy at Birth: 78.9
  - Expected years of schooling: 16.3
  - Mean years of schooling: 13.4
  - GNI per capita (PPP $): 55,351

- **2018**
  - HDI: 0.920
  - Life expectancy at Birth: 78.9
  - Expected years of schooling: 16.3
  - Mean years of schooling: 13.4
  - GNI per capita (PPP $): 56,140

**Score**

- 2015: 54
- 2016: 55
- 2017: 56
- 2018: 57

**Score Change**

- 2015-2016: +0.002
- 2016-2017: +0.001
- 2017-2018: +0.001

**Government**

- Online public access to city finances has reduced corruption: 43.4
- Online voting has increased participation: 53.5
- An online platform where residents can propose ideas has improved city life: 49.7
- Processing Identification Documents online has reduced waiting times: 54.3
**BACKGROUND INFORMATION**

**City**
- Population: 6,507,000

*(UN World Cities Report)*

**SMART CITY RANKING**
- **Santiago**
- **Group MAX**
- **Score:** 91
- **Rank:** 3 out of 109

**SMART CITY RATING**
- **CC**
- **SS**
- **GROUP** in 2019

**FACTOR RATINGS**
- **Structures:** CC
- **Technologies:** CC
- **Group:** 3

All ratings range from AAA to D

---

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

**ATTITUDES**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

---

**Structures**

- Basic sanitation: Satisfactory
- Recycling services: Satisfactory
- Public safety: Is not a problem
- Air pollution: Is not a problem
- Medical services provision: Satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary: Is not a problem

**Technologies**

- Online reporting of city maintenance problems provides a speedy solution
- A website or app allows residents to easily give away unwanted items
- CCTV cameras have made residents feel safer
- The city provides information on traffic congestion through mobile phones
- The city provides information on traffic congestion through public transport
- The city provides information on traffic congestion through online scheduling and ticket sales
- The city provides information on traffic congestion through online purchasing of tickets to shows and museums

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

- Traffic congestion is not a problem
- Public transport is satisfactory

**Activities**

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Governance**

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

---

**Score**

- Health & Safety: 41.4
- Mobility: 18.2
- Activities: 59.7
- Opportunities (Work & School): 60.9
- Governance: 45.8

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**Mean**

- Health & Safety: 47.1
- Mobility: 29.4
- Activities: 69.7
- Opportunities (Work & School): 44.6
- Governance: 45.8

---

**1 yr change**

- Health & Safety: 0.6
- Mobility: 0.1
- Activities: 0.8
- Opportunities (Work & School): 0.1
- Governance: 0.8

---

**Score**

- Health & Safety: 45.3
- Mobility: 41.6
- Activities: 80.5
- Opportunities (Work & School): 65.3
- Governance: 27.1
You are willing to concede personal data in order to improve traffic congestion
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

<table>
<thead>
<tr>
<th>PRIORITY AREAS</th>
<th>ATTITUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td>You are willing to concede personal data in order to improve traffic congestion</td>
</tr>
<tr>
<td>Health services</td>
<td>You feel the availability of online information has increased your trust in authorities</td>
</tr>
<tr>
<td>Online reporting of city maintenance problems provides a speedy solution</td>
<td></td>
</tr>
<tr>
<td>A website or App allows residents to easily give away unwanted items</td>
<td></td>
</tr>
<tr>
<td>Free public wi-fi has improved access to city services</td>
<td></td>
</tr>
<tr>
<td>CCTV cameras have made residents feel safer</td>
<td></td>
</tr>
<tr>
<td>A website or App allows residents to effectively monitor air pollution</td>
<td></td>
</tr>
<tr>
<td>Arranging medical appointments online has improved access</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>You are comfortable with face recognition technologies to lower crime</td>
</tr>
<tr>
<td>Car-sharing Apps have reduced congestion</td>
<td></td>
</tr>
<tr>
<td>Apps that direct you to an available parking space have reduced journey time</td>
<td></td>
</tr>
<tr>
<td>Bicycle hiring has reduced congestion</td>
<td></td>
</tr>
<tr>
<td>Online scheduling and ticket sales has made public transport easier to use</td>
<td></td>
</tr>
<tr>
<td>The city provides information on traffic congestion through mobile phones</td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>You feel the availability of online information has increased your trust in authorities</td>
</tr>
<tr>
<td>Online purchasing of tickets to shows and museums has made it easier to attend</td>
<td></td>
</tr>
<tr>
<td>Online access to city finances has reduced corruption</td>
<td></td>
</tr>
<tr>
<td>Online voting has increased participation</td>
<td></td>
</tr>
<tr>
<td>An online platform where residents can propose ideas has improved city life</td>
<td></td>
</tr>
<tr>
<td>Processing Identification Documents online has reduced waiting times</td>
<td></td>
</tr>
</tbody>
</table>

### Sao Paulo - 2019

**Population:** 21,066,000

**HDI:** 0.755

**Mean years of schooling:** 15.3

**Life expectancy at Birth:** 75.0

**Expected years of schooling:** 15.4

**Basic sanitation:** meets the needs of the poorest areas

**Sao Paulo**

**Group:** C

**Technologies:** 3

### BACKGROUND INFORMATION

**City:** Sao Paulo

**Population:** 21,066,000

(UN World Cities Report)

**GNI per capita (PPP $):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Score</th>
<th>STD</th>
<th>Median</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>HDI</td>
<td>0.755</td>
<td>0.02</td>
<td>15.3</td>
<td>75.0</td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td>0.757</td>
<td>0.02</td>
<td>15.4</td>
<td>75.2</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td>0.760</td>
<td>0.02</td>
<td>15.4</td>
<td>75.5</td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td>0.761</td>
<td>0.02</td>
<td>15.4</td>
<td>75.7</td>
</tr>
</tbody>
</table>

**1 yr change:** +0.001

### STRUCTURES

**Factor Rating:** C

**Group Rating:** 3

All ratings range from AAA to D

### TECHNOLOGIES

**Factor Rating:** C

**Group Rating:** 3

All ratings range from AAA to D

### PRIORITY AREAS

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

- Traffic congestion is not a problem
- Public transport is satisfactory

**Activities**

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Government**

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

**Health & Safety**

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wi-fi has improved access to city services
- CCTV cameras have made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

**Mobility**

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

**Activities**

- Online purchasing of tickets to shows and museums has made it easier to attend

**Opportunities (Work & School)**

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

**Government**

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times
**Background Information**

**City**
- Population: 3,249,000

**Cut City Ranking**
- 37 out of 109

**Smart City Rating**
- BBB

**Group Rankings**
- BBB in 2019

**Factor Ratings**
- BBB

**Structures**
- Basic sanitation meets the needs of the poorest areas
- Public transport is satisfactory
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory
- Most children have access to a good school
- Employment finding services are readily available
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Basic sanitation meets the needs of the poorest areas
- Public transport is satisfactory
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory
- Most children have access to a good school
- Employment finding services are readily available
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs

**Health & Safety**
- Public safety is not a problem
- Air pollution is not a problem
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem
- Traffic congestion is not a problem

**Mobility**
- Traffic congestion is not a problem
- Public transport is satisfactory

**Activities**
- Activities
- Health & Safety
- Structures
- Technologies
- Opportunities (Work & School)
- Governance

**Priorities**
- From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

**Attitudes**
- You are willing to concede personal data in order to improve traffic congestion
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash

**Country**
- HDI
- Life expectancy at birth
- Mean years of schooling
- Expected years of schooling
- Global Value added (GVA) per capita (PPP $)
- HDI

**Population**
- Residents provide feedback on local government projects
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life

**Microclimate**
- Basic sanitation meets the needs of the poorest areas
- Online reporting of city maintenance problems provides a speedy solution
- Arranging medical appointments online has improved access
- A website or App allows residents to effectively monitor air pollution
- CCTV cameras have made residents feel safer
- Free public wifi has improved access to city services
- Recycling services are satisfactory
- A website or App allows residents to easily give away unwanted items

**Opportunities (Work & School)**
- Online access to job listings has made it easier to find work
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life

**Governance**
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

**All ratings range from AAA to D**
**Seoul**

**SMART CITY RANKING**

47 out of 109

47 in 2019

**SMART CITY RATING**

BB in 2019

**BACKGROUND INFORMATION**

<table>
<thead>
<tr>
<th>Country</th>
<th>City</th>
<th>Population 9,774,000</th>
<th>(UN World Cities Report)</th>
</tr>
</thead>
</table>

**Economic Indicators**

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.899</td>
<td>0.901</td>
<td>0.904</td>
<td>0.906</td>
<td>+0.002</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>82.1</td>
<td>82.4</td>
<td>82.6</td>
<td>82.8</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>16.0</td>
<td>16.4</td>
<td>16.4</td>
<td>16.4</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>12.1</td>
<td>12.2</td>
<td>12.2</td>
<td>12.2</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>34,276</td>
<td>35,122</td>
<td>35,945</td>
<td>36,757</td>
<td>+812.0</td>
</tr>
</tbody>
</table>

**TECHNOLOGIES**

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas: 72.2
- Recycling services are satisfactory: 68.3
- Public safety is not a problem: 58.5
- Air pollution is not a problem: 10.0
- Medical services provision is satisfactory: 73.5
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 32.6

**Mobility**

- Traffic congestion is not a problem: 22.4
- Public transport is satisfactory: 71.1

**Activities**

- Green spaces are satisfactory: 50.6
- Cultural activities (shows, bars, and museums) are satisfactory: 70.7

**Opportunities (Work & School)**

- Employment finding services are readily available: 54.7
- Most children have access to a good school: 57.0
- Lifelong learning opportunities are provided by local institutions: 60.9
- Businesses are creating new jobs: 42.3
- Minorities feel welcome: 27.4

**Governance**

- Information on local government decisions are easily accessible: 67.8
- Corruption of city officials is not a problem: 24.7
- Residents contribute to decision making of local government: 48.3
- Residents provide feedback on local government projects: 48.3

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion: 70.2%
- You feel the availability of online information has increased your trust in authorities: 80.6%
- You feel the availability of online information has increased your trust in authorities: 74.0%
- You feel the availability of face recognition technologies to lower crime: 72.5%
- You are comfortable with face recognition technologies to lower crime: 72.5%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 43.6%

**PRIORITY AREAS**

- The city provides information on traffic congestion through mobile phones: 68.4%
- Online scheduling and ticket sales has made public transport easier to use: 63.7%
- The city provides information on traffic congestion through mobile phones: 56.5%
- The city provides information on traffic congestion through mobile phones: 80.6%
- The city provides information on traffic congestion through mobile phones: 81.1%

**Country** | **Score** | **Health & Safety** | **Technologies** | **Group Mean** | **City Mean** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>City</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>City</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>City</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>City</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
</tr>
</tbody>
</table>

**LEGEND**

- **GROUP MAX**
- **GROUP MEAN**
- **CITY MEAN**
- **MIN**

**Monitoring Indicators**

- GNI per capita (PPP $)
- Mean years of schooling
- Expected years of schooling
- Life expectancy at Birth
- HDI

**Score**

- 22.4
- 10.0
- 73.5
- 32.6
- 22.4
- 71.1
- 50.6
- 70.7
- 54.7
- 57.0
- 60.9
- 42.3
- 27.4
- 67.8
- 24.7
- 48.3
- 48.3

**Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap**
**Shanghai**

**BACKGROUND INFORMATION**

City
Population: 23,741,000

(Under World Cities Report)

**SMART CITY RANKING**

81 Out of 109

**FACTOR RATING**

CC
B in 2019

**TECHNOLOGIES**

CCC

**GROUP**

4

All ratings range from AAA to D
Shenzhen

BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.742</td>
<td>0.749</td>
<td>0.753</td>
<td>0.758</td>
<td>+0.005</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>75.9</td>
<td>76.2</td>
<td>76.5</td>
<td>76.7</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>13.8</td>
<td>13.9</td>
<td>13.9</td>
<td>13.9</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>7.7</td>
<td>7.8</td>
<td>7.8</td>
<td>7.9</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>13,485</td>
<td>14,311</td>
<td>15,212</td>
<td>16,127</td>
<td>+$915.0</td>
</tr>
</tbody>
</table>

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left-hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You feel the availability of online information has increased your trust in authorities
The proportion of your day-to-day payment transactions that are non-cash

| % of respondents who agree or strongly agree with the statement |
|-------------------|-------------------|-------------------|-------------------|
|                  | % of transactions |                  |                  |
|                  | 0% 20% 40% 60% 80% 100% | 0% 20% 40% 60% 80% 100% |
|                  |                  |                  |                  |

SHENZHEN

43 in 2019

SMART CITY RATING

BB in 2019

BACKGROUND INFORMATION

Shenzhen has a population of 10.749.000 (UN World Cities Report) and ranks 43 in 2019 out of 109

Information on local government decisions are easily accessible
Online public access to city finances has reduced corruption
Green spaces are satisfactory
Online purchasing of tickets to shows and museums has made it easier to attend
Traffic congestion is not a problem
Car-sharing Apps have reduced congestion
Basic sanitation meets the needs of the poorest areas
Online reporting of city maintenance problems provides a speedy solution
Residents provide feedback on local government projects
Processing Identification Documents online has reduced waiting times

GNI per capita (PPP $) | Mean years of schooling | Expected years of schooling | Life expectancy at Birth | HDI | Population |
-----------------------|-------------------------|-----------------------------|--------------------------|-----|------------|
13,485                 | 13.9                    | 13.9                        | 76.7                     | 0.758 | 10,749,000 |

Population areas also demand priority attention.
### BACKGROUND INFORMATION

**City**
- Population: 5,619,000
- (UN World Cities Report)

### SMART CITY RANKING

1 Out of 109

1 in 2019

### AAA RATING

AAA in 2019

### FACTOR RATINGS

AAA

### STRUCTURES

**Factors**
- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**
- Traffic congestion is not a problem
- Public transport is satisfactory

**Activities**
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Governance**
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### TECHNLOGIES

**Factors**
- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public Wi-Fi has improved access to city services
  - CCTV cameras have made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access

**Mobility**
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

**Activities**
- Online purchasing of tickets to shows and museums has made it easier to attend

**Opportunities (Work & School)**
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools

**Governance**
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has made it easier to start a new business

### PRIORITY AREAS

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public Wi-Fi has improved access to city services
  - CCTV cameras have made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has made it easier to start a new business

### ATTITUDES

- You feel the availability of online information has increased your trust in authorities
- You are comfortable with face recognition technologies to lower crime
- You are willing to concede personal data in order to improve traffic congestion

### Overview

Singapore has a AAA rating, indicating it excels in all sectors. The city provides information on traffic congestion through mobile phones, and online purchasing of tickets to shows and museums has made it easier to attend events. Online access to job listings has made it easier to find work, and IT skills are taught well in schools. Online public access to city finances has reduced corruption, and online voting has increased participation. An online platform where residents can propose ideas has improved city life, and processing identification documents online has reduced waiting times.
**BACKGROUND INFORMATION**

Sofia receives a CC rating in 2019.

- **Population:** 1,226,000
- **HDI:** 0.807 in 2015, 0.812 in 2016, 0.813 in 2017, 0.816 in 2018, +0.003
- **Life expectancy at Birth:** 74.6 in 2015, 74.7 in 2016, 74.8 in 2017, 74.9 in 2018
- **Mean years of schooling:** 11.8 in 2015, 11.8 in 2016, 11.8 in 2017, 11.8 in 2018
- **GNI per capita (PPP $):** 18,662 in 2015, 17,757 in 2016, 18,874 in 2017, 19,646 in 2018, +772.0

**ATTITUDES**

- You feel the availability of online information has increased your trust in authorities (63.4%)
- You are comfortable with face recognition technologies to lower crime (48.9%)
- You are willing to concede personal data in order to improve traffic congestion (39.2%)
- You accept surveillance to improve traffic congestion (33.3%)
- You feel the availability of online information has increased your trust in authorities (55.4%)

**PRIORITY AREAS**

- Air pollution: 57.6%
- Corruption: 77.4%
- Green spaces: 68.7%
- Public transport: 61.8%
- Social mobility: 49.4%
- Affordable housing: 49.9%
- Health services: 43.3%
- Basic amenities: 33.3%
- Security: 31.7%
- Green spaces: 31.7%
- Unemployment: 29.5%
- Child care: 16.9%
- School education: 15.6%
- Fulfilling employment: 13.2%
- Public transport: 13.2%
- Social mobility: 6.2%

**HEALTH & SAFETY**

- Basic sanitation meets the needs of the poorest areas: 47.7
- Recycling services are satisfactory: 39.2
- Public safety is not a problem: 33.0
- Air pollution is not a problem: 17.1
- Medical services provision is satisfactory: 41.9
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 29.9

**MOBILITY**

- Traffic congestion is not a problem: 16.0
- Public transport is satisfactory: 54.4

**ACTIVITIES**

- Green spaces are satisfactory: 44.1
- Cultural activities (shows, bars, and museums) are satisfactory: 76.3

**OCCUPATIONAL OPPORTUNITIES**

- Employment finding services are readily available: 61.0
- Most children have access to a good school: 61.7
- Lifelong learning opportunities are provided by local institutions: 52.7
- Businesses are creating new jobs: 61.1
- Minorities feel welcome: 41.2

**GOVERNANCE**

- Information on local government decisions are easily accessible: 39.0
- Corruption of city officials is not an issue of concern: 12.3
- Residents contribute to decision making of local government: 24.6
- Residents provide feedback on local government projects: 33.4

**TECHNOLOGIES**

- Online reporting of city maintenance problems provides a speedy solution: 42.9
- A website or App allows residents to easily give away unwanted items: 49.9
- Free public wifi has improved access to city services: 61.8
- A website or App allows residents to effectively monitor air pollution: 53.6
- Arranging medical appointments online has improved access: 60.4
- Car-sharing Apps have reduced congestion: 50.5
- Apps that direct you to an available parking space have reduced journey time: 38.3
- Online scheduling and ticket sales has made public transport easier to use: 52.7
- The city provides information on traffic congestion through mobile phones: 51.8
- Online purchasing of tickets to shows and museums has made it easier to attend: 80.0
- Online access to job listings has made it easier to find work: 77.8
- IT skills are taught well in schools: 56.3
- Online services provided by the city has made it easier to start a new business: 52.7
- The current internet speed and reliability meet connectivity needs: 74.9
- Online public access to city finances has reduced corruption: 26.3
- Online voting has increased participation: 33.0
- An online platform where residents can propose ideas has improved city life: 40.0
- Processing Identification Documents online has reduced waiting times: 56.3

**REFERENCES**

- UN World Cities Report
- [City of Sofia](https://www.sofia.bg/en)
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of respondents per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of the respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

You are willing to concede personal data in order to improve traffic congestion

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
Stockholm

BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.932</td>
<td>0.934</td>
<td>0.935</td>
<td>0.937</td>
<td>+0.002</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>82.3</td>
<td>82.4</td>
<td>82.5</td>
<td>82.7</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>18.6</td>
<td>18.8</td>
<td>18.8</td>
<td>18.8</td>
<td>+0.0</td>
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<tr>
<td>Mean years of schooling</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
<td>12.4</td>
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<tr>
<td>GNI per capita (PPP $)</td>
<td>46,168</td>
<td>46,662</td>
<td>47,398</td>
<td>47,955</td>
<td>+557.0</td>
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</table>

PRIORITY AREAS

<table>
<thead>
<tr>
<th>Category</th>
<th>15%</th>
<th>20%</th>
<th>25%</th>
<th>30%</th>
<th>35%</th>
<th>40%</th>
<th>45%</th>
<th>50%</th>
<th>55%</th>
<th>60%</th>
<th>65%</th>
<th>70%</th>
<th>75%</th>
<th>80%</th>
<th>85%</th>
<th>90%</th>
<th>95%</th>
<th>100%</th>
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</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td>66.7</td>
<td>72.7</td>
<td>53.8</td>
<td>55.9</td>
<td>54.6</td>
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<td></td>
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</tr>
<tr>
<td>Mobility</td>
<td>33.0</td>
<td>54.6</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Activities</td>
<td>77.7</td>
<td>76.5</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Opportunities</td>
<td>68.4</td>
<td>72.1</td>
<td>69.2</td>
<td>69.1</td>
<td>57.1</td>
<td></td>
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<tr>
<td>Governance</td>
<td>64.0</td>
<td>56.8</td>
<td>51.1</td>
<td>58.0</td>
<td></td>
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</tbody>
</table>

ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND:
- MIN
- CITY MEAN
- GROUP MEAN
- CITY MAX

SMART CITY RANKING

16
Out of 109
25 in 2019

SMART CITY RATING

A
BBB in 2019

FACTOR RATINGS

A
STRUCTURES

BBB
TECHNOLOGIES

GROUP 1

All ratings range from AAA to D
### Smart City Ranking

**Sydney**

**Group Rating**

![Map of Sydney showing city and surrounding areas.](https://example.com/sydney_map)

**All ratings range from AAA to D**

#### Background Information
- **Population**: 4.505 million

**2015**

- HDI: 0.933
- Life expectancy at Birth: 82.8
- Mean years of schooling: 12.5
- GNI per capita (PPP $): 43,246

**2016**

- HDI: 0.935
- Life expectancy at Birth: 83.0
- Mean years of schooling: 12.6
- GNI per capita (PPP $): 43,653

**2017**

- HDI: 0.937
- Life expectancy at Birth: 83.1
- Mean years of schooling: 12.7
- GNI per capita (PPP $): 43,756

**2018**

- HDI: 0.938
- Life expectancy at Birth: 83.3
- Mean years of schooling: 12.7
- GNI per capita (PPP $): 44,097

**1 yr change**

- HDI: +0.001
- Life expectancy at Birth: +0.2
- Mean years of schooling: +0.0
- GNI per capita (PPP $): +341.0

#### Priorities Areas

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas: 66.2
  - Recycling services are satisfactory: 66.7
  - Public safety is not a problem: 49.8
  - Air pollution is not a problem: 44.1
  - Medical services provision is satisfactory: 66.6
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 32.6

- **Mobility**
  - Traffic congestion is not a problem: 20.5
  - Public transport is satisfactory: 52.2

- **Activities**
  - Green spaces are satisfactory: 65.2
  - Cultural activities (shows, bars, and museums) are satisfactory: 75.3

- **Opportunities (Work & School)**
  - Employment finding services are readily available: 68.3
  - Most children have access to a good school: 75.0
  - Lifelong learning opportunities are provided by local institutions: 68.2
  - Businesses are creating new jobs: 60.9
  - Minorities feel welcome: 57.7

- **Governance**
  - Information on local government decisions are easily accessible: 60.7
  - Corruption of city officials is not an issue of concern: 41.9
  - Residents contribute to decision making of local government: 51.0
  - Residents provide feedback on local government projects: 57.9

#### Attitudes

- You are willing to concede personal data in order to improve traffic congestion: 8.8%
- You feel the availability of online information has increased your trust in authorities: 13.8%
- You are comfortable with face recognition technologies to lower crime: 15.9%
- You are willing to concede personal data in order to improve traffic congestion: 15.9%
- You feel the availability of online information has increased your trust in authorities: 22.6%
- You are comfortable with face recognition technologies to lower crime: 22.1%
- You are willing to concede personal data in order to improve traffic congestion: 27.2%
- You feel the availability of online information has increased your trust in authorities: 15.9%
- You are comfortable with face recognition technologies to lower crime: 13.8%
- You are willing to concede personal data in order to improve traffic congestion: 8.8%

#### Structures

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Governance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

#### Technologies

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - Free public wi-fi has improved access to city services
  - CCTV cameras has made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space has reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales have made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend
  - Online access to job listings has made it easier to find work
  - Free public wi-fi has improved access to city services
  - Online scheduling and ticket sales have made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs
  - Processing the Payment transaction that are non-cash (% of transactions)

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times

#### Governance

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution

- **Mobility**
  - Car-sharing Apps have reduced congestion

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times
Information on local government decisions are easily accessible.
Online public access to city finances has reduced corruption.
Employment finding services are readily available.
Online access to job listings has made it easier to find work.
Green spaces are satisfactory.
Online purchasing of tickets to shows and museums has made it easier to attend.
Traffic congestion is not a problem.
Car-sharing Apps have reduced congestion.
Basic sanitation meets the needs of the poorest areas.
Online reporting of city maintenance problems provides a speedy solution.
GNI per capita (PPP $)
Mean years of schooling
Expected years of schooling
HDI
Population
Governance
Opportunities (Work & School)
Activities
Motivations
Health & Safety
Basic sanitation meets the needs of the poorest areas
Recycling services are satisfactory
Public safety is not a problem
Air pollution is not a problem
Medical services provision is satisfactory
Finding housing with rent equal to 30% or less of a monthly salary is not a problem
Traffic congestion is not a problem
Public transport is satisfactory
Activities
Green spaces are satisfactory
Cultural activities (shows, bars, and museums) are satisfactory
Opportunities (Work & School)
Employment finding services are readily available
Most children have access to a good school
Lifelong learning opportunities are provided by local institutions
Businesses are creating new jobs
Minorities feel welcome
Goverance
Information on local government decisions are easily accessible
Computation of city efficiency is not an issue of concern
Residents contribute to decision making of local government
Residents provide feedback on local government projects

Taipei City

BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.885</td>
<td>0.903</td>
<td>0.907</td>
<td>0.911</td>
<td>+0.004</td>
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<tr>
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<td>80.0</td>
<td>80.4</td>
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<td>+0.3</td>
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<tr>
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<td>16.6</td>
<td>16.5</td>
<td>-0.1</td>
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<tr>
<td>Mean years of schooling</td>
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<td>12.0</td>
<td>12.1</td>
<td>12.2</td>
<td>+0.1</td>
</tr>
<tr>
<td>GDP per capita (PPP $)</td>
<td>45,547</td>
<td>46,054</td>
<td>47,144</td>
<td>49,403</td>
<td>+2,259.0</td>
</tr>
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</table>

SMART CITY RANKING
8
Out of 109
7 in 2019

SMART CITY RATING
A in 2019

FACTOR RATINGS

TECHNOLOGIES
A

GROUP 2

All ratings range from AAA to D

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion.
You are comfortable with face recognition technologies to lower crime.
You feel the availability of online information has increased your trust in authorities.
The proportion of your day-to-day payment transactions that are non-cash (% of transactions).

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the top bar. The higher the percentage of responses per area, the greater the priority for the city.
The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong alignment implies that these areas also demand priority attention.

LEGEND:
MIN - CITY MEAN - GROUP MEAN
**SMART CITY RATING**

59 out of 109

**N/A**

not in 2019

**SMART CITY RATING**

B

**CCC**

TECHNOLOGIES

B

**GROUP**

3

All ratings range from AAA to D

---

**BACKGROUND INFORMATION**

**City**

Population: 570,000

(Estonia)

---

**STRUCTURES**

<table>
<thead>
<tr>
<th>Country</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
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<td>0.875</td>
<td>0.879</td>
<td>0.882</td>
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<td>78.1</td>
<td>78.4</td>
<td>78.6</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>16.1</td>
<td>16.1</td>
<td>16.1</td>
<td>16.1</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>12.9</td>
<td>13.1</td>
<td>13.0</td>
<td>13.0</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>27,001</td>
<td>27,915</td>
<td>29,320</td>
<td>30,379</td>
<td>+1,059.0</td>
</tr>
</tbody>
</table>

---

**TECHNOLOGIES**

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas: 69.9
- Recycling services are satisfactory: 72.5
- Public safety is not a problem: 81.0
- Air pollution is not a problem: 73.0
- Medical services provision is satisfactory: 74.6
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 35.5

**Mobility**

- Traffic congestion is not a problem: 22.7
- Public transport is satisfactory: 70.6

**Activities**

- Green spaces are satisfactory: 76.9
- Cultural activities (shows, bars, and museums) are satisfactory: 85.5

**Opportunities (Work & School)**

- Employment finding services are readily available: 75.0
- Most children have access to a good school: 71.7
- Lifelong learning opportunities are provided by local institutions: 63.3
- Businesses are creating new jobs: 65.7
- Minorities feel welcome: 47.8

**Governance**

- Information on local government decisions are easily accessible: 67.1
- Corruption of city officials is not an issue of concern: 35.1
- Residents contribute to decision making of local government: 33.7
- Residents provide feedback on local government projects: 48.0

---

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

---

**ATTITUDES**

You are willing to concede personal data in order to improve traffic congestion:

- 49.2%

You feel the availability of online information has increased your trust in authorities:

- 59.8%

The proportion of your day-to-day payment transactions that are non-cash (% of transactions):

- 70.0%

---

**GNI per capita (PPP $)**

2015: 29,320

2016: 30,379

2017: 31,071

2018: 32,020

---

**Life expectancy at Birth**

2015: 77.8

2016: 78.1

2017: 78.4

2018: 78.6

---

**Expected years of schooling**

2015: 16.1

2016: 16.1

2017: 16.1

2018: 16.1

---

**Mean years of schooling**

2015: 12.9

2016: 13.1

2017: 13.0

2018: 13.0

---

**GNI per capita (PPP $)**

2015: 29,320

2016: 30,379

2017: 31,071

2018: 32,020

---

**Population**

2015: 570,000

2016: 570,000

2017: 570,000

2018: 570,000

---

**Governance**

Information on local government decisions are easily accessible: 67.1

Corruption of city officials is not an issue of concern: 35.1

Residents contribute to decision making of local government: 33.7

Residents provide feedback on local government projects: 48.0

---

**Post Setup**

The city provides information on traffic congestion through mobile phones:

- 85.0%

Bicycle hiring has reduced congestion:

- 93.0%

Online public access to city finances has reduced corruption:

- 74.0%

Processing Identification Documents online has reduced waiting times:

- 79.9%

---

**Post Setup**

Online reporting of city maintenance problems provides a speedy solution:

- 76.4%

Free public Wi-Fi has improved access to city services:

- 71.7%

CCTV cameras has made residents feel safer:

- 62.8%

The city provides information on traffic congestion through mobile phones:

- 88.0%

---

**Factors**

The proportion of your day-to-day payment transactions that are non-cash (% of transactions):

- 70.0%

The available options to control the city are:

- 85.0%

The availability of online information has increased your trust in authorities:

- 59.8%

You feel the availability of online information has increased your trust in authorities:

- 59.8%

The proportion of your day-to-day payment transactions that are non-cash (% of transactions):

- 70.0%

The available options to control the city are:

- 85.0%
**BACKGROUND INFORMATION**

**City**
- Population: 3,608,000
- Tel Aviv (UN World Cities Report)

**RATINGS**
- **Factor Ratings**
  - **Structures**: BB
  - **Technologies**: BB
- **Group Rating**: 50
  - 46 in 2019

**Country** | **2015** | **2016** | **2017** | **2018** | **1 yr change**
--- | --- | --- | --- | --- | ---
HDI | 0.901 | 0.902 | 0.904 | 0.906 | +0.002
Life expectancy at Birth | 82.3 | 82.5 | 82.7 | 82.8 | +0.1
Expected years of schooling | 16.0 | 15.9 | 16.0 | 16.0 | +0.1
Mean years of schooling | 12.9 | 13.0 | 13.0 | 13.0 | +0.1
GNI per capita (PPP $) | 31,814 | 32,428 | 32,860 | 33,650 | +790.0

**PRIORITY AREAS**
- From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.
- The left hand section of each bar shows the Alignment, the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

**ATTITUDES**
- You are willing to concede personal data in order to improve traffic congestion 20.8%
- You feel the availability of online information has increased your trust in authorities 31.8%
- You are comfortable with face recognition technologies to lower crime 67.7%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions) 49.6%

**LEGEND:**
- **Group Mean**
- **City Mean**

**Structures**
- Health & Safety: Basic sanitation meets the needs of the poorest areas 53.4
  - Recyling services are satisfactory 60.7
  - Public safety is not a problem 52.2
  - Air pollution is not a problem 32.9
  - Medical services provision is satisfactory 68.8
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem 26.5
- Mobility: Traffic congestion is not a problem 19.6
  - Public transport is satisfactory 42.9
- Activities: Green spaces are satisfactory 54.9
  - Cultural activities (shows, bars, and museums) are satisfactory 79.9
- Opportunities (Work & School): Employment finding services are readily available 66.3
  - Most children have access to a good school 67.1
  - Lifelong learning opportunities are provided by local institutions 66.2
  - Businesses are creating new jobs 70.5
  - Minorities feel welcome 90.7
- Governance: Information on local government decisions are easily accessible 61.0
  - Corruption of city officials is not an issue of concern 42.9
  - Residents contribute to decision making of local government 44.0
  - Residents provide feedback on local government projects 54.8

**Technologies**
- Health & Safety: Online reporting of city maintenance problems provides a speedy solution 59.5
  - A website or App allows residents to easily give away unwanted items 52.2
  - Free public wi-fi has improved access to city services 58.4
  - CCTV cameras have made residents feel safer 52.2
  - A website or App allows residents to effectively monitor air pollution 35.1
  - Arranging medical appointments online has improved access 75.8
- Mobility: Car-sharing Apps have reduced congestion 41.4
  - Apps that direct you to an available parking space has reduced journey time 51.4
  - Bicycle sharing has reduced congestion 57.3
  - Online scheduling and ticket sales has made public transport easier to use 62.7
  - The city provides information on traffic congestion through mobile phones 59.1
- Activities: Online purchasing of tickets to shows and museums has made it easier to attend 78.8
- Opportunities (Work & School): Online access to job listings has made it easier to find work 70.8
  - IT skills are taught well in schools 64.4
  - Online services provided by the city has made it easier to start a new business 96.7
  - The current internet speed and reliability meet connectivity needs 67.6
- Governance: Online public access to city finances has reduced corruption 45.0
  - Online voting has increased participation 46.8
  - An online platform where residents can propose ideas has improved city life 53.5
  - Processing Identification Documents online has reduced waiting times 64.1
**Background Information**

**City**

**Population**

- Total: 884,000
- (Eurostat)

**Ratings**

- BBB in 2019
- Smart City Rating 28 out of 109
- Group 1

**SMART CITY RANKING**

- Rank 29 in 2019

**Factor Ratings**

- **A** for Structures
- **BB** for Technologies

**Group**

- 1

**All ratings range from AAA to D**

---

**Priority Areas**

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

- Traffic congestion is not a problem
- Public transport is satisfactory

**Activities**

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Governance**

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

---

**Attitudes**

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

---

**Technologies**

- Affordable housing
- Security
- Health services
- Public transport
- Road congestion
- Green spaces
- Basic amenities
- School education
- Unemployment
- Air pollution
- Recycling
- Citizen engagement
- Social mobility
- Fulfilling employment
- Comprehension

---

**Country**

<table>
<thead>
<tr>
<th>Year</th>
<th>HDI</th>
<th>Life expectancy at Birth</th>
<th>Expected years of schooling</th>
<th>Mean years of schooling</th>
<th>GNI per capita (PPP $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.927</td>
<td>81.7</td>
<td>18.1</td>
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</tr>
<tr>
<td>2017</td>
<td>0.926</td>
<td>81.0</td>
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<td>2018</td>
<td>0.933</td>
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<td>12.2</td>
<td>50,013</td>
</tr>
</tbody>
</table>

**Score**

- 0
- 20
- 40
- 60
- 80
- 100

**Percentage of respondents who agree or strongly agree with the statement**

- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

---

**Background Information**

**The Hague**

**City**

**Population**

- Total: 884,000
- (Eurostat)

**Ratings**

- BBB in 2019
- Smart City Rating 28 out of 109
- Group 1

**SMART CITY RANKING**

- Rank 29 in 2019

**Factor Ratings**

- **A** for Structures
- **BB** for Technologies

**Group**

- 1

**All ratings range from AAA to D**

---

**Priority Areas**

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

- Traffic congestion is not a problem
- Public transport is satisfactory

**Activities**

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Opportunities (Work & School)**

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Governance**

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

---

**Attitudes**

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

---

**Technologies**

- Affordable housing
- Security
- Health services
- Public transport
- Road congestion
- Green spaces
- Basic amenities
- School education
- Unemployment
- Air pollution
- Recycling
- Citizen engagement
- Social mobility
- Fulfilling employment
- Comprehension

---

**Country**

<table>
<thead>
<tr>
<th>Year</th>
<th>HDI</th>
<th>Life expectancy at Birth</th>
<th>Expected years of schooling</th>
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**SMART CITY RANKING**

- Rank 29 in 2019

**Factor Ratings**

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- **BB** for Technologies

**Group**

- 1

**All ratings range from AAA to D**

---

**Priority Areas**

**Health & Safety**

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- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

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**Activities**

- Green spaces are satisfactory
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**Opportunities (Work & School)**

- Employment finding services are readily available
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- Businesses are creating new jobs
- Minorities feel welcome

**Governance**

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---

**Attitudes**

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- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

---

**Technologies**

- Affordable housing
- Security
- Health services
- Public transport
- Road congestion
- Green spaces
- Basic amenities
- School education
- Unemployment
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</tbody>
</table>

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- 20
- 40
- 60
- 80
- 100

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- 0%
- 20%
- 40%
- 60%
- 80%
- 100%
### Tianjin

#### Background Information

**City**
- Population: 11,210,000
- (UN World Cities Report)

#### Governance

<table>
<thead>
<tr>
<th>Factor</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.753</td>
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</tr>
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<td>76.2</td>
<td>76.5</td>
<td>76.7</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>13.8</td>
<td>13.9</td>
<td>13.9</td>
<td>13.9</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>7.7</td>
<td>7.8</td>
<td>7.8</td>
<td>7.9</td>
<td>+0.1</td>
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<tr>
<td>GNI per capita (PPP $)</td>
<td>13,485</td>
<td>14,311</td>
<td>15,212</td>
<td>16,127</td>
<td>+915.0</td>
</tr>
</tbody>
</table>

#### Priorities in the City

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Goverance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

#### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion
- 37.4% of respondents agree

You are comfortable with face recognition technologies to lower crime
- 89.4% of respondents agree

You feel the availability of online information has increased your trust in authorities
- 81.9% of respondents agree

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
- 89.4% of respondents agree

#### STRUCTURES

**Score**

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - Free public Wi-Fi has improved access to city services
  - CCTV cameras have made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs

- **Goverance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times

#### TECHNOLOGIES

**Score**

- **Health & Safety**
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- **Goverance**
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  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times
**BACKGROUND INFORMATION**

**Population**

- 2015: 38,001,000
- 2016: 38,407,000
- 2017: 39,407,000
- 2018: 39,799,000

**HDI**

- 2015: 0.906
- 2016: 0.910
- 2017: 0.913
- 2018: 0.915

**Life expectancy at Birth**

- 2015: 83.9
- 2016: 84.1
- 2017: 84.3
- 2018: 84.5

**Mean years of schooling**

- 2015: 12.5
- 2016: 12.7
- 2017: 12.8
- 2018: 12.8

**GNI per capita (PPP $)**

- 2015: 39,297
- 2016: 39,407
- 2017: 40,343
- 2018: 40,799

**Score**

- 2015: 68.6
- 2016: 65.7
- 2017: 57.3
- 2018: 68.0

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas: 68.6%
- Recycling services are satisfactory: 65.7%
- Public safety is not a problem: 57.3%
- Air pollution is not a problem: 46.3%
- Medical services provision is satisfactory: 68.0%
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 44.6%

**Mobility**

- Traffic congestion is not a problem: 30.4%
- Public transport is satisfactory: 66.3%

**Activities**

- Green spaces are satisfactory: 38.7%
- Cultural activities (shows, bars, and museums) are satisfactory: 61.0%

**Opportunities (Work & School)**

- Employment finding services are readily available: 52.1%
- Most children have access to a good school: 47.4%
- Lifelong learning opportunities are provided by local institutions: 53.5%
- Businesses are creating new jobs: 46.2%

**Governance**

- Information on local government decisions are easily accessible: 43.8%
- Corruption of city officials is not an issue of concern: 32.2%
- Residents contribute to decision making of local government: 36.4%
- Residents provide feedback on local government projects: 36.7%

**SMART CITY RANKING**

- **79** Out of 109
- **B in 2019**

**SMART CITY RATING**

- **CCC**

**TECHNOLOGIES**

- **Score**
  - 2015: 29.7
  - 2016: 32.2
  - 2017: 35.9
  - 2018: 44.0

**PRIORITY AREAS**

- Health & Safety
  - Online reporting of city maintenance problems provides a speedy solution: 50.0%
  - A website or App allows residents to easily give away unwanted items: 66.7%
  - Free public Wi-Fi has improved access to city services: 59.2%
  - CCTV cameras have made residents feel safer: 60.3%
  - A website or App allows residents to effectively monitor air pollution: 36.3%
  - Arranging medical appointments online has improved access: 56.5%

- Mobility
  - Car-sharing Apps have reduced congestion: 22.0%
  - Apps that direct you to an available parking space have reduced journey time: 39.2%
  - Bicycle hiring has reduced congestion: 26.0%
  - Online scheduling and ticket sales has made public transport easier to use: 60.8%
  - The city provides information on traffic congestion through mobile phones: 61.9%

- Activities
  - Online purchasing of tickets to shows and museums has made it easier to attend: 64.9%

- Opportunities (Work & School)
  - Online access to job listings has made it easier to find work: 65.9%
  - IT skills are taught well in schools: 32.7%
  - Online services provided by the city has made it easier to start a new business: 38.4%
  - The current internet speed and reliability meet connectivity needs: 57.0%

- Governance
  - Online public access to city finances has reduced corruption: 29.7%
  - Online voting has increased participation: 32.2%
  - An online platform where residents can propose ideas has improved city life: 35.3%
  - Processing Identification Documents online has reduced waiting times: 44.0%

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion: 42.0%
- You are comfortable with face recognition technologies to lower crime: 61.9%
- You feel the availability of online information has increased your trust in authorities: 41.1%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 68.6%
### Background Information

#### City

<table>
<thead>
<tr>
<th>Country</th>
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<td>HDI</td>
<td>0.917</td>
<td>0.920</td>
<td>0.922</td>
<td>0.922</td>
<td>+0.001</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>82.0</td>
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</tr>
<tr>
<td>Expected years of schooling</td>
<td>16.0</td>
<td>16.1</td>
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<tr>
<td>GNI per capita (PPP $)</td>
<td>42,567</td>
<td>42,691</td>
<td>43,496</td>
<td>43,602</td>
<td>+106.0</td>
</tr>
</tbody>
</table>

#### Attitudes

- You are willing to concede personal data in order to improve traffic congestion.
- You are comfortable with face recognition technologies to lower crime.
- You feel the availability of online information has increased your trust in authorities.
- You are willing to concede personal data in order to improve traffic congestion.
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 54.5%.

#### Priorities

- The left hand section of each bar shows the alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong alignment implies that these areas also demand priority attention.

#### Technologies

- Online reporting of city maintenance problems provides a speedy solution.
- A website or App allows residents to easily give away unwanted items.
- Free public WiFi has improved access to city services.
- The city provides information on traffic congestion through mobile phones.
- The proportion of online transactions: 84.1%.

#### Structures

- Basic sanitation meets the needs of the poorest areas.
- Recycling services are satisfactory.
- Public safety is not a problem.
- Air pollution is not a problem.
- Medical services provision is satisfactory.
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem.
- Traffic congestion is not a problem.
- Public transport is satisfactory.

#### Activities

- Green spaces are satisfactory.
- Cultural activities (shows, bars, and museums) are satisfactory.

#### Opportunities (Work & School)

- Employment finding services are readily available.
- Most children have access to a good school.
- Lifelong learning opportunities are provided by local institutions.
- Businesses are creating new jobs.
- Minorities feel welcome.

#### Governance

- Information on local government decisions are easily accessible.
- Corruption of city officials is not an issue of concern.
- Residents contribute to decision making of local government.
- Residents provide feedback on local government projects.

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas.
- Recycling services are satisfactory.
- Public safety is not a problem.
- Air pollution is not a problem.
- Medical services provision is satisfactory.
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem.

#### Mobility

- Traffic congestion is not a problem.
- Public transport is satisfactory.

#### Score

- 0 20 40 60 80 100
### Vancouver

#### Background Information

**City**

Population: 2,485,000

(UN World Cities Report)

#### Country Rankings

<table>
<thead>
<tr>
<th>Year</th>
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#### Priorities and Attitudes

**Priorities**

- Affordable housing
- Road congestion
- Health services
- Public transport
- Unemployment
- Full employment
- School education
- Air pollution
- Security
- Corruption
- Citizen engagement
- Recycling
- Green spaces
- Social mobility
- Basic amenities

**Attitudes**

- You are willing to concede personal data in order to improve traffic congestion
- You feel the availability of online information has increased your trust in authorities
- The proportion of online day-to-day transactions that are non-cash

#### Structures and Technologies

**Structures**

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

- **Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

- **Activities**
  - Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

- **Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

- **Governance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

**Technologies**

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public Wi-Fi has improved access to city services
  - CCTV cameras have made residents feel safer

- **Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools

- **Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation

#### Smart City Ranking

- **Vancouver**
  - Rank: 19
  - Out of 109
  - Group: 1
  - A in 2019

#### Factor Ratings

- **Structures**
  - A

- **Technologies**
  - BBB

#### Group MAX

- 117

All ratings range from AAA to D
**Vienna**

### BACKGROUND INFORMATION

![Map of Vienna](Map)  
*UN World Cities Report*

**City**

<table>
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<th>2018</th>
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</tr>
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<tr>
<td>HDI</td>
<td>0.906</td>
<td>0.909</td>
<td>0.912</td>
<td>0.914</td>
<td>+0.002</td>
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<td>Life expectancy at Birth</td>
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<td>12.6</td>
<td>12.6</td>
<td>12.6</td>
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<td>43,822</td>
<td>44,621</td>
<td>45,375</td>
<td>46,231</td>
<td>+856.0</td>
</tr>
</tbody>
</table>

### SMART CITY RANKING

**25** out of 109

**BBB** in 2019

### FACTOR RATINGS

**A**  
**Top**  
**Structures**

**B**  
**Good**  
**Technologies**

**GROUP 2**

All ratings range from AAA to D

### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the bar chart. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions true. A strong Alignment implies that these areas also demand priority attention.

### LEGEND:

- MIN
- CITY
- MEAN
- GROUP MAX

### HEALTH & SAFETY

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### MOBILITY

- Traffic congestion is not a problem
- Public transport is satisfactory

### ACTIVITIES

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### OPPORTUNITIES (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### GOVERNANCE

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### GINI PER CAPITA (PPP $)

<table>
<thead>
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<th>Year</th>
<th>Gini Per Capita (PPP $)</th>
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<tr>
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<td>43,822</td>
</tr>
<tr>
<td>2016</td>
<td>44,621</td>
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<td>45,375</td>
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<td>2018</td>
<td>46,231</td>
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### MEAN YEARS OF SCHOOLING

<table>
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<td>2015</td>
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<td>12.6</td>
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### EXPECTED YEARS OF SCHOOLING

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</tr>
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### LIFE EXPECTANCY AT BIRTH

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<td>2016</td>
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<tr>
<td>2017</td>
<td>81.3</td>
</tr>
<tr>
<td>2018</td>
<td>81.4</td>
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### HDI

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<tbody>
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<td>2016</td>
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<td>2017</td>
<td>0.912</td>
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<td>0.914</td>
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### SCORE

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<tr>
<td>2016</td>
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<tr>
<td>2017</td>
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</tr>
<tr>
<td>2018</td>
<td>68.9%</td>
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### LEGEND:

- MIN
- CITY
- MEAN
- GROUP MAX

### TECHNOCITIES

- BBB in 2019

### Technologies

<table>
<thead>
<tr>
<th>Area</th>
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<tr>
<td>Affordable housing</td>
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<tr>
<td>Unemployment</td>
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</tr>
<tr>
<td>Road congestion</td>
<td>56.5</td>
</tr>
<tr>
<td>Security</td>
<td>48.7</td>
</tr>
<tr>
<td>Air pollution</td>
<td>40.2</td>
</tr>
<tr>
<td>Fulfilling employment</td>
<td>57.3</td>
</tr>
<tr>
<td>Traffic congestion</td>
<td>42.0</td>
</tr>
<tr>
<td>School education</td>
<td>39.6</td>
</tr>
<tr>
<td>Health services</td>
<td>49.0</td>
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<tr>
<td>Health services</td>
<td>71.6</td>
</tr>
<tr>
<td>Public transport</td>
<td>63.4</td>
</tr>
<tr>
<td>Basic amenities</td>
<td>79.5</td>
</tr>
<tr>
<td>Services</td>
<td>72.4</td>
</tr>
<tr>
<td>Skills</td>
<td>55.6</td>
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<tr>
<td>Online job listings</td>
<td>49.8</td>
</tr>
<tr>
<td>Reliability</td>
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<td>Online public access to city finances</td>
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<td>Online voting</td>
<td>48.3</td>
</tr>
<tr>
<td>Improved city life</td>
<td>45.4</td>
</tr>
<tr>
<td>Processing Identification Documents</td>
<td>56.1</td>
</tr>
</tbody>
</table>

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

### PRIORITY AREAS

- Affordable housing
- Unemployment
- Road congestion
- Security
- Air pollution
- Fulfilling employment
- School education
- Health services
- Citizen engagement
- Green spaces
- Recycling
- Social mobility
- Public transport
- Basic amenities

### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
Warsaw

BACKGROUND INFORMATION

City
Population 1,722,000
(UN World Cities Report)

Country 2015 2016 2017 2018 1 yr change
HDI 0.858 0.864 0.868 0.872 +0.004
Life expectancy at Birth 77.9 78.1 78.3 78.5 +0.2
Expected years of schooling 16.1 16.4 16.4 16.4 +0.0
Mean years of schooling 12.2 12.3 12.3 12.3 +0.0
GNI per capita (PPP $) 24,369 25,042 26,182 27,626 +1,444.0

SMART CITY RANKING
55
Out of 109
61 in 2019

SMART CITY RATING
B
In 2019

FACTOR RATINGS
B
STRUCTURES
B
TECHNOLOGIES

GROUP
3
All ratings range from AAA to D

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You feel the availability of online information has increased your trust in authorities

You are comfortable with face recognition technologies to lower crime

You are willing to concede personal data in order to improve traffic congestion

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

0% 20% 40% 60% 80% 100% % of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100% % of respondents who agree or strongly agree with the statement

0 20 40 60 80 100 Score

0 20 40 60 80 100 Score

0% 20% 40% 60% 80% 100% % of respondents who chose the Priority Area

0% 20% 40% 60% 80% 100% % of respondents who agree or strongly agree with the statement

0 20 40 60 80 100 Score

0 20 40 60 80 100 Score
Washington D.C. in 2019

**Smart City Rating:** A

**Group Rating:** 1

**Country:** Washington D.C.

**Population:** 4,955,000

**HDI:** 0.917

**Mean years of schooling:** 16.3

**Expected years of schooling:** 16.3

**Life expectancy at Birth:** 78.9

**GNI per capita (PPP $):** 56,140

**Technology Factor:**
- Online voting has increased participation
- Online reporting of city maintenance problems provides a speedy solution
- Online services provided by the city has made it easier to start a new business
- Online purchasing of tickets to shows and museums has made it easier to attend
- Online public access to city finances has reduced corruption

**Structure Factor:**
- Basic sanitation meets the needs of the poorest areas
- Recyling services are satisfactory
- Employment finding services are readily available
- Lifelong learning opportunities are provided by local institutions
- Information on local government decisions are easily accessible

**Opportunities (Work & School):**
- Online access to job listings has made it easier to find work
- Online scheduling and ticket sales has made public transport easier to use
- Online access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life

**Activities:**
- Online purchasing of tickets to shows and museums has made it easier to attend
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

**Health & Safety:**
- Online reporting of city maintenance problems provides a speedy solution
- Free public will has improved access to city services
- CCTV cameras has made residents feel safer
- Arranging medical appointments online has improved access
- Online voting has increased participation

**Mobility:**
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones
- Online voting has increased participation

**Opportunities (Work & School):**
- Online access to job listings has made it easier to find work
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times
- Residents provide feedback on local government projects

**Government:**
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times
- Residents provide feedback on local government projects

**Attitudes:**
- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
### Structures

<table>
<thead>
<tr>
<th>Area</th>
<th>Score</th>
<th>Health &amp; Safety</th>
<th>Mobility</th>
<th>Activities</th>
<th>Opportunities (Work &amp; School)</th>
<th>Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic sanitation</td>
<td>70.5</td>
<td>70.5</td>
<td></td>
<td>75.5</td>
<td>71.7</td>
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<td>Recycling services</td>
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<td>73.7</td>
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<td>Public safety</td>
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<td>68.5</td>
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<td>73.7</td>
<td>72.8</td>
<td>43.3</td>
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<td>Air pollution</td>
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<td>67.0</td>
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<td>74.0</td>
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<td></td>
<td>74.0</td>
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<td>Green spaces</td>
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<td>74.0</td>
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<td>39.3</td>
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<td>74.0</td>
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<td>74.0</td>
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<td>39.3</td>
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<td>Most children have access</td>
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<td></td>
<td>74.0</td>
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<td></td>
<td>74.0</td>
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<td>43.6</td>
<td></td>
<td>74.0</td>
<td>71.8</td>
<td>39.3</td>
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<tr>
<td>Minorities feel welcome</td>
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<td>60.3</td>
<td></td>
<td>74.0</td>
<td>71.8</td>
<td>39.3</td>
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### Technologies

<table>
<thead>
<tr>
<th>Area</th>
<th>Score</th>
<th>Health &amp; Safety</th>
<th>Opportunities (Work &amp; School)</th>
<th>Governance</th>
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<tbody>
<tr>
<td>Online reporting</td>
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<td>50.8</td>
<td>68.3</td>
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<td>feel safer</td>
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<tr>
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### Background Information

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<td>17.8</td>
<td>17.9</td>
<td>17.9</td>
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<td>Mean years of schooling</td>
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<td>9.8</td>
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<td>33,379</td>
<td>34,226</td>
<td>35,041</td>
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</tr>
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</table>
### BACKGROUND INFORMATION

#### City
- Population: 1,542,000
- (UN World Cities Report)

#### Smart City Ranking
- **Zhuhai**
- **Group**: 4
- **Country**: China
- **Score**: 86.2
- **Ranking**: CCC
- **In 2019**
- **Out of 109**

#### Smart City Rating
- **Group**: 4
- All ratings range from AAA to D

### STRUCTURES

#### Health & Safety
- Basic sanitation meets the needs of the poorest areas: 84.8
- Recycling services are satisfactory: 87.0
- Public safety is not a problem: 81.4
- Air pollution is not a problem: 87.3
- Medical services provision is satisfactory: 63.5
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 86.2

#### Mobility
- Traffic congestion is not a problem: 81.2
- Public transport is satisfactory: 96.2

#### Activities
- Green spaces are satisfactory: 88.6
- Cultural activities (shows, bars, and museums) are satisfactory: 85.2

#### Opportunities (Work & School)
- Employment finding services are readily available: 86.6
- Most children have access to a good school: 87.3
- Lifelong learning opportunities are provided by local institutions: 82.3
- Businesses are creating new jobs: 88.8
- Minorities feel welcome: 86.2

#### Governance
- Information on local government decisions are easily accessible: 84.3
- Corruption of city officials is not an issue of concern: 83.1
- Residents contribute to decision making of local government: 83.4
- Residents provide feedback on local government projects: 86.2

### TECHNOLOGIES

#### Health & Safety
- Online reporting of city maintenance problems provides a speedy solution: 87.8
- A website or App allows residents to easily give away unwanted items: 79.7
- Free public Wi-Fi has improved access to city services: 88.0
- CCTV cameras have made residents feel safer: 84.2
- A website or App allows residents to effectively monitor air pollution: 82.5
- Arranging medical appointments online has improved access: 86.7

#### Mobility
- Car-sharing Apps have reduced congestion: 86.5
- Apps that direct you to an available parking space have reduced journey time: 83.7
- Bicycle hires have reduced congestion: 84.3
- Online scheduling and ticket sales have made public transport easier to use: 86.1
- The city provides information on traffic congestion through mobile phones: 83.1

#### Activities
- Online purchasing of tickets to shows and museums has made it easier to attend: 90.2

#### Opportunities (Work & School)
- Online access to job listings has made it easier to find work: 87.4
- IT skills are taught well in schools: 83.1
- Online services provided by the city has made it easier to start a new business: 85.1
- The current internet speed and reliability meet connectivity needs: 84.6

#### Governance
- Online public access to city finances has reduced corruption: 89.8
- Online voting has increased participation: 81.9
- An online platform where residents can propose ideas has improved city life: 85.5
- Processing Identification Documents online has reduced waiting times: 86.1
Information on local government decisions are easily accessible. Online public access to city finances has reduced corruption.

Employment finding services are readily available. Online access to job listings has made it easier to find work.

Green spaces are satisfactory. Online purchasing of tickets to shows and museums has made it easier to attend.

Basic sanitation meets the needs of the poorest areas. Online reporting of city maintenance problems provides a speedy solution.

GNI per capita (PPP $) 1,246,000

Residents provide feedback on local government projects. Processing Identification Documents online has reduced waiting times.

Residents contribute to decision making of local government. An online platform where residents can propose ideas has improved city life.

Corruption of city officials is not an issue of concern. Online voting has increased participation.

Minorities feel welcome. Businesses are creating new jobs.

The current internet speed and reliability meet connectivity needs. Lifelong learning opportunities are provided by local institutions. Online services provided by the city has made it easier to start a new business.

Most children have access to a good school. IT skills are taught well in schools.

Cultural activities (shows, bars, and museums) are satisfactory. Public transport is satisfactory. Apps that direct you to an available parking space have reduced journey time.

Finding housing with rent equal to 30% or less of a monthly salary is not a problem. Arranging medical appointments online has improved access.

Medical services provision is satisfactory. A website or App allows residents to effectively monitor air pollution.

Air pollution is not a problem. CCTV cameras has made residents feel safer.

Public safety is not a problem. Free public wifi has improved access to city services.

Recycling services are satisfactory. A website or App allows residents to easily give away unwanted items.

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

You are willing to concede personal data in order to improve traffic congestion. You feel the availability of online information has increased your trust in authorities.

The proportion of your day-to-day payment transactions that are non-cash (% of transactions) 72.8%
A collaboration between: