Smart City Index 2021

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

A collaboration between:
“What strange phenomena we find in a great city, all we need do is stroll about with our eyes open.”

Charles Baudelaire, Mademoiselle Bistouri

“Cities, like dreams, are made of desires and fears, even if the thread of their discourse is secret, their rules are absurd, their perspectives deceitful, and everything conceals something else.”

Italo Calvino, Invisible Cities
Preface

Welcome to the third edition of the IMD-SUTD Smart City Index Report. Last year, we wrote in the preface to the same report that it was still too early to draw conclusions from the lessons of the pandemic and of its effects on smart cities. This remains true at the time of launching this latest edition (October 2021). The warnings that emerged from last year’s report also remain very much with us a year later: the health crisis might very well be only a harbinger for other challenges for cities around the world, including social and economic ones. During the same time, other global challenges (climate change, inequalities) have not abated. In many respects, on the contrary, they have taken an emergency dimension.

Such global concerns are bound to have sizeable consequences on cities.

One of the most visible aspects of the pandemic has been that of lock-down measures affecting shops, restaurants, entertainment locations, and work places. City centres emptied almost overnight, while traffic was reduced to a small proportion of its previous levels. Teleworking and online meetings became the norm, and those who had the opportunity started to flee large cities and operate from less densely populated areas. It is now becoming clear that a significant part of the new habits created will not fade away after the pandemic. A new normal has been defined for cities.

Health-related emergencies have had dire consequences on cities and on their populations. However, they did not relegate other emergencies (including climate-related issues) to the back burner. As this year’s report data show, quality of life, safety, mobility and waste management remained high on the list of citizens’ concerns in all parts of the world. Moreover, the same data seems to indicate that the acceleration of deep processes such as digitization has changed some perceptions, creating significant differences between last year’s rankings and this year’s.

COVID-19 also highlighted how cities could take fresh responsibilities, and come up with innovative solutions in the face of unprecedented emergencies. New definitions of resilience have been offered – and put in practice – in all types of cities around the world.

In that context, some smart cities have displayed higher capabilities to mobilize and harmonize their services and resources. While some hopes lead to partial disappointments (including those put in AI to help accelerate the production of vaccines and relevant medical solutions and equipment), the technologies and analytical tools available in smart cities proved important to manage the tracking tools that were so critical in slowing the spread of COVID-19. On the other hand, the ubiquitous use of such tools raised increasing concerns about the limitation of personal freedoms that they entailed, and the potential misuse of the personal data collected in the process.

Since the creation of the Smart City Index (SCI), we insisted on the fact that 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. The recent crisis has underlined the relevance and importance of this mantra.

On the methodological side, we pursue our efforts to make the SCI methodology and coverage ever better and more relevant to decision makers and analysts. We also strive to maintain the degree of coherence and continuity that will progressively allow the index to generate the longer-term time series required for urban policies and strategies. Fundamentally, the approach has not changed: in line with previous and ongoing efforts initiated and carried out by IMD’s World Competitiveness Centre, 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.

This year’s report includes 118 cities. One important improvement has been brought to the SCI methodology, which now relies on a compounded weighted average of scores obtained in 2019, 2020 and 2021. Details are provided in the methodology section of the report.

The 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, who we want to thank most warmly.

It is our collective hope that this new edition of the SCI index and report will continue to generate the productive feedback and discussions that previous editions produced, and we look forward to further opportunities to make them even more valuable in what promises to be an exciting post-pandemic era for smart cities around the world.
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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:

- **Professor Arturo Bris**
  Director
- **Christos Cabolis**
  Chief Economist & Head of Operations
- **Bruno Lanvin**
  President, Smart City Observatory
- **José Caballero**
  Senior Economist
- **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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## Smart City Index 2021

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## Smart City Index 2021 (Continued)

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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 118 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 2021 Ranking and Rating are also shown for the 109 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 Urbanization Prospects for the majority of cities or Eurostat for a number of 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.

**BACKGROUND INFORMATION**

<table>
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<th>Country</th>
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<th>GDP per capita (PPP $)</th>
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**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

**Attitudes:** Shows and compares the responses to three key privacy aspects (willingness to concede personal data, comfort vis-à-vis face recognition, and whether online information has increased trust in authorities) and the percentage of day-to-day transactions that are non-cash. The city is represented by the blue bar, while the group average is shown by the light red bar.

### 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 118 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 three years of the survey, with the weight of 3:2:1 for 2021:2020:2019.

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 118)
   - a rating for each pillar and overall
**Abu Dhabi**

**BACKGROUND INFORMATION**

**City**
- Population: 1,483,000
- (UN World Urbanization Prospects)

**STRUCTURES**

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<td>67,136</td>
<td>66,912</td>
<td>67,462</td>
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**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

**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 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 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)

**LEGEND:**

- MIN
- CITY
- GROUP
- MEAN
- MAX

**All ratings range from AAA to D**
Health & Safety

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

Structures

CCTV cameras has made residents feel safer

Governance

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

Opportunities (Work & School)

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

Activities

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

Health & Safety

Online reporting of city maintenance problems provides a speedy solution

Technologies

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

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

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

Technologies

Online reporting of city maintenance problems provides a speedy solution

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

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
An online platform where residents can propose ideas has improved city life. Online public access to city finances has reduced corruption. CCTV cameras have made residents feel safer. Online access to job listings has made it easier to find work. Online services provided by the city have made it easier to start a new business. Online purchasing of tickets to shows and museums has made it easier to attend events.

The left-hand section of each bar shows the percentage of those who also demand priority attention. The right-hand section of each bar shows the proportion of those who also answered the corresponding survey questions low. The more points the bar is filled with, the greater the priority for the city. The Alignment - the proportion of those who also demand priority attention.

The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 70.8%
Online access to job listings has made it easier to find work.

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

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.

Public transport is satisfactory. Apps that direct you to an available parking space have reduced journey time.

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

Online access to city finances has reduced corruption.

Information on local government decisions are easily accessible.

Residents provide feedback on local government projects.
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.

CCTV cameras has made residents feel safer.
Online public access to city finances has reduced corruption.
Online access to job listings has made it easier to find work.

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

ALL RATINGS RANGE FROM AAA TO D

Residents contribute to decision making of local government
Provision of a website or App allows residents to effectively monitor pollution
Basic sanitation meets the needs of the poorest areas
Online reporting of city maintenance problems provides a speedy solution

Online public access to city finances has reduced corruption.
Online access to job listings has made it easier to find work.

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.

Country 2016 2017 2018 2019 1 yr change
HDI 18.6 30.8 32.2 32.2 +0.1
Life expectancy at Birth 81.7 81.9 82.1 82.2 +0.1
Expected years of schooling 17.3 17.3 17.3 17.9 +0.6
Mean years of schooling 10.3 10.5 10.5 10.6 +0.1
GNI per capita (PPP $) 24,187 24,647 24,909 30,155 +5,246

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 proportion of your day-to-day payment transactions that are non-cash (% of transactions)
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% of respondents who agree or strongly agree with the statement
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Health & Safety
Online services provided by the city has made it easier to start a new business

76.8
18.8
MEAN
70.9

CCTV cameras has made residents feel safer

12.8
2018
+0.1

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

52.5

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

Online public access to city finances has reduced corruption

Residents contribute to decision making of local government

61.4
58.8
63.8
61.8

Processing Identification Documents online has reduced waiting times

44.6
11.6

Activities

All ratings range from AAA to D

8.6% 20% 40% 60% 80% 100%
0% 20% 40% 60% 80% 100%

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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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)

Online reporting of city maintenance problems provides a speedy solution

A website or App allows residents to effectively monitor air pollution

The city provides information on traffic congestion through mobile phones

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

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 comfortable with face recognition technologies to lower crime

Bicycle hiring has reduced congestion

The city offers information on traffic congestion through mobile phones

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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You are comfortable with face recognition technologies to lower crime

Air pollution is not a problem

Public safety is not a problem

Free public serial has improved access to city services

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

GNI per capita (PPP $)

Population

Country

Activities

Opportunities (Work & School)

Governance

Health & Safety

Structures

Technologies

Variations of Access and Fulfilling Employment

Opportunities (Work & School)

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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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: 15,540,000 (UN World Urbanization Prospects)

Smart City Index 2021

Country

HDI

Life expectancy at birth

Expected years of schooling

Mean years of schooling

GNI per capita (PPP $)

Mean years of schooling

Expected years of schooling

Life expectancy at birth

HDI

Bangkok

Population

15,540,000

Background Information

City

Population

15,540,000

(Life expectancy at birth)

76.4

76.7

76.9

77.2

+0.2

(2019)

Population

15,540,000

(GNI per capita (PPP $))

14,966

15,548

16,129

17,781

+1,652

1yr change

2014

2016

2017

2018

2019

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

Public safety is not a problem

Free public wifi has improved access to city services

A website or App allows residents to effectively monitor air pollution

Processing Identification Documents online has reduced waiting times

Opportunities (Work & School)

IT skills are taught well in schools

Most children have access to a good school

Businesses are creating new jobs

Residents provide feedback on local government projects

Activities

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

Green spaces are satisfactory

Bicycle hiring has reduced congestion

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

Online voting has increased participation

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

Most children have access to a good school

Government

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Online public access to city finances has reduced corruption

Processing Identification Documents online has reduced waiting times

Government

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

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3

Group

All ratings range from AAA to D

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)

65.9%

77.6%

75.4%

78.5%

1yr change

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)

65.9%

77.6%

75.4%

78.5%

1yr change

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1yr change

23.4%

24.9%

25.6%

28.5%

29.2%

29.9%

29.9%

31.5%

32.5%

33.1%

33.5%

34.6%

35.4%

35.4%

36.4%

36.4%

36.4%

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Barcelona

**BACKGROUND INFORMATION**

City

Population: 1,640,000

(Grossstat)

**SMART CITY RANKING**

58

Out of 118

49 in 2020

**SMART CITY RATING**

B

BB in 2020

**FACTOR RATINGS**

B

STRUCTURES

BB

TECHNOLOGIES

GROUP 2

All ratings range from AAA to D

### Health & Safety

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.888</td>
<td>0.891</td>
<td>0.893</td>
<td>0.904</td>
<td>+0.011</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>83.1</td>
<td>83.3</td>
<td>83.4</td>
<td>83.6</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>17.8</td>
<td>17.9</td>
<td>17.9</td>
<td>17.6</td>
<td>-0.3</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>9.8</td>
<td>9.8</td>
<td>9.8</td>
<td>10.3</td>
<td>+0.5</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>33,379</td>
<td>34,226</td>
<td>35,041</td>
<td>40,975</td>
<td>+5,934</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 (shoes, 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

- **TECHNOLOGIES RANKING**
  - 49 in 2020

- **BACKGROUND INFORMATION**
  - Out of 118

### Activities

- 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 let the city use your location data to deliver services
- You are willing to share personal data in order to improve traffic congestion

### Opportunities (Work & School)

- Online access to job listings has made it easier for students to fulfill employment needs
- IT skills are taught well in schools
- Online access to continuing education programs
- 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 allows residents to propose ideas that have been implemented
- Processing Identification Documents online has reduced waiting times

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to effectively monitor air pollution
- Online public access to city finances has reduced corruption
- Online purchasing of tickets to shows and museums has made it easier to attend
- Online services provided by the city has made it easier to start a new business
- 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 allows residents to propose ideas that have been implemented
- Processing Identification Documents online has reduced waiting times
Health & Safety
Online services provided by the city have made it easier to start a new business.

Online public access to city finances has reduced corruption.

<table>
<thead>
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<th>Year</th>
<th>Score</th>
<th>1 yr change</th>
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<tbody>
<tr>
<td>2016</td>
<td>76.2</td>
<td>+0.2</td>
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<tr>
<td>2017</td>
<td>76.5</td>
<td>+0.1</td>
</tr>
<tr>
<td>2018</td>
<td>76.7</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>76.9</td>
<td></td>
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</table>

Group Mean: 76.6

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-side section of each bar shows the percentage of respondents per area, the greater the priority for the city.

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 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.
You are comfortable with face recognition technologies to lower crime.
You are willing to concede personal data in order to improve traffic congestion.

Activities
Online purchasing of tickets to shows and museums has made it easier to attend cultural activities (shows, bars, and museums) are satisfactory
Cultural activities (shows, bars, and museums) are satisfactory

Opportunities (Work & School)
Most children have access to a good school.
IT skills are taught well in schools.
Online services provided by the city have made it easier to start a new business.

Goverance
Information on local government decisions is easily accessible.
Corruption of city officials is not an issue of concern.
Resident provide feedback on local government projects.

Group Mean: 76.4

All ratings range from AAA to D

SMART CITY RANKING
69
Out of 118

BACKGROUND INFORMATION

City
Population: 20,460,000
(UN World Urbanization Prospects)

Country
HDI: 0.749
Life expectancy at birth: 76.2
Expected years of schooling: 13.9
Mean years of schooling: 7.8
GNI per capita (PPP $): 14,311

1 yr change
+0.003
+0.2
+0.1
-0.7

14,311 15,212 16,127 16,057 -70

82 in 2020

Smart City Index 2021
Online access to job listings has made it easier to find work.

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

CCTV cameras has made residents feel safer.

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

Opportunities (Work & School)

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

Medical services provision is satisfactory.

Basic sanitation meets the needs of the poorest areas.

Online reporting of city maintenance problems provides a speedy solution.

Air pollution is not a problem.

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.

Online voting has increased participation.

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

Online public access to city finances has reduced corruption.

Recycling services are satisfactory.

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

Processing Identification Documents online has reduced waiting times.

Corruption of city officials is not an issue of concern.

Information on local government decisions are easily accessible.

Most children have access to a good school.

Employment finding services are readily available.

IT skills are taught well in schools.

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

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

The current internet speed and reliability meet connectivity needs.

Minorities feel welcome.

Businesses are creating new jobs.

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

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

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

CCTV cameras has made residents feel safer.

Online public access to city finances has reduced corruption.

Residents contribute to decision making of local government.

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

Air pollution is not a problem.

Public safety is not a problem.

Free public wifi has improved access to city services.

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

Basic sanitation meets the needs of the poorest areas.

Online reporting of city maintenance problems provides a speedy solution.

Online access to city finances has reduced corruption.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

Employment finding services are readily available.

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

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

The current internet speed and reliability meet connectivity needs.

Residents provide feedback on local government projects.

Online public access to city finances has reduced corruption.
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.

**Health & Safety**
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety 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 is 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 effectively monitor air pollution
- A website or App allows residents to easily give away unwanted items

**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

**Assessment**
- Your 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 proportion of your day-to-day payment transactions that are non-cash (% of transactions)

**PRIORITY AREAS**
- Fulfilling employment opportunities
- Affordable housing
- Unemployment
- Security
- Health services
- Citizen engagement
- School education
- Social mobility
- Air pollution
- Recycling
- Green spaces
- Corruption
- Road congestion
- Public transport
- Basic amenities

**ATTITUDES**
- You feel 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)

**BACKGROUND INFORMATION**

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
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<tbody>
<tr>
<td>HDI</td>
<td>0.888</td>
<td>0.891</td>
<td>0.893</td>
<td>0.904</td>
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<td>Life expectancy at Birth</td>
<td>83.1</td>
<td>83.3</td>
<td>83.4</td>
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<tr>
<td>Expected years of schooling</td>
<td>17.8</td>
<td>17.9</td>
<td>17.9</td>
<td>17.6</td>
<td>-0.3</td>
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<tr>
<td>Mean years of schooling</td>
<td>9.8</td>
<td>9.8</td>
<td>9.8</td>
<td>10.3</td>
<td>+0.5</td>
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<tr>
<td>GNI per capita (PPP $)</td>
<td>33,379</td>
<td>34,226</td>
<td>35,041</td>
<td>40,975</td>
<td>+5,934</td>
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</table>

**Score**
- 0 20 40 60 80 100

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilbao</td>
<td>77.4</td>
</tr>
</tbody>
</table>

**LEGEND:**
- MIN  | CITY  | GROUP  | MEAN  | GROUP MAX |
- 0%  | 20%  | 40%  | 60%  | 80%  | 100%  |

**Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap**
Online public access to city finances has reduced corruption
47.0
48.3 38.8

Activities
TECHNOLOGIES
Online access to job listings has made it easier to find work
51.9
52.3 42.2

STRUCTURES
Governance
An online platform where residents can propose ideas has improved city life
61.9
62.3 42.2

Activities
TECHNOLOGIES
Online services provided by the city has made it easier to start a new business
13.2
13.6 5.1

Mobility
65.9
40 in 2020

Residents contribute to decision making of local government
55.8
56.8 46.8

Health & Safety
Basic sanitation meets the needs of the poorest areas
58.5
62.3 52.3

opportunities (Work & School)
Online access to job listings has made it easier to find work
61.2
61.6 41.5

All ratings range from AAA to D

Health & Safety
Online reporting of city maintenance problems provides a speedy solution
42.4
53.6 54.1

You feel the availability of online information has increased your trust in authorities
62.2%
66.8% 73.0%

You are willing to concede personal data in order to improve traffic congestion
51.6%
54.1% 73.0%

You are comfortable with face recognition technologies to lower crime
54.1%
54.1% 73.0%

You are willing to concede personal data in order to improve traffic congestion
51.6%
54.1% 73.0%

You feel the availability of online information has increased your trust in authorities
62.2%
66.8% 73.0%

The proportion of those respondents who also demand priority attention.

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 these respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

The right hand section of each bar shows the percentage of responses per area, the greater the priority for the city.

The greater the priority for the city.

The higher the percentage of responses per area, the greater the priority for the city.

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The greater the priority for the city.
Health & Safety
CCTV cameras has made residents feel safer

Opportunities (Work & School)
53.8
71.9
14.6
48.3
14.6
An online platform where residents can propose ideas has improved city life

Mobility
8.3
Online purchasing of tickets to shows and museums has made it easier to attend

Governance
8.3
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

All ratings range from AAA to D
Online public access to city finances has reduced corruption.

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 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.

Opportunities (Work & School)

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

Activities

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

Opportunities (Work & School)

Online public access to city finances has reduced corruption.

Goverance

Online public access to city finances has reduced corruption.

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

Activities

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Opportunities (Work & School)

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Activities

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

City
Population 650,000
(Eurostat)

Country 2016 2017 2018 2019 1 yr change
HDI 0.887 0.890 0.891 0.901 +0.010
Life expectancy at Birth 82.3 82.4 82.5 82.7 +0.2
Expected years of schooling 15.6 15.5 15.5 15.6 +0.1
Mean years of schooling 11.4 11.4 11.4 11.5 +0.1
GNI per capita (PPP $) 38,926 39,935 40,511 47,173 +6,662

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
Traffic congestion is not a problem
Public transport is satisfactory
Green spaces are satisfactory
Cultural activities (shoes, bars, and museums) are satisfactory
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
Information on local government decisions are easily accessible
Corruption of city officials is not an issue of concern
Residents provide feedback on local government projects

_mobility
Bicycle hiring has reduced congestion
The city provides information on traffic congestion through mobile phones
Online scheduling and ticket sales has made public transport easier to use
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 farms
Free public well 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

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 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 use of facial recognition technologies has lowered crime
You are willing to concede personal data in order to improve traffic congestion
You are comfortable with face recognition technologies to lower crime
You are willing to concede personal data in order to improve traffic congestion

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

All ratings range from AAA to D

Smart City Index 2021
Online access to job listings has made it easier to find work.

Online public access to city finances has reduced corruption.

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

Opportunities (Work & School)

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.

Processing Identification Documents online has reduced waiting times.

Income inequality was a key concern, with the proportion of respondents identifying this as a serious problem increasing from 59.1% in 2016 to 61.1% in 2019.

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 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.

You are concerned about biometric data being misused.

You do not feel the availability of online information has increased your trust in authorities.

You are not comfortable with face recognition technologies to lower crime.

You are not willing to concede personal data in order to improve traffic congestion.

You do not feel the availability of online information has increased your trust in authorities.

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You are not comfortable with face recognition technologies to lower crime.

You are not willing to concede personal data in order to improve traffic congestion.
Bratislava

BACKGROUND INFORMATION

City

Population
440,000

(Eurostat)

SMART CITY RANKING
96
Out of 118

76 in 2020

SMART CITY RATING
CC

CC in 2020

FACTOR RATINGS
CC

STRUCTURES
CC

TECHNOLOGIES
CC

GROUP 3

All ratings range from AAA to D

SMART CITY

RATINGS

LEGEND:

MIN

GROUP

MEAN

MAX

18

2018

2019

1 yr change

Country

2016

2017

2018

2019

HDI

0.851

0.854

0.857

0.860

+0.003

Life expectancy at Birth

77.0

77.2

77.4

77.5

+0.1

Expected years of schooling

14.0

14.5

14.5

14.5

+0.5

Mean years of schooling

12.8

12.6

12.6

12.7

+0.1

GNI per capita (PPP $)

28,706

29,544

30,672

32,113

+1,441

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

Traffic congestion is not a problem

Public transport is satisfactory

Green spaces are satisfactory

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

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

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Recycling services are satisfactory

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

Corruption of city officials is not an issue of concern

Online voting has increased participation

Information on local government decisions are easily accessible

Lifelong learning opportunities are provided by local institutions

Most children have access to a good school

Traffic congestion is not a problem

Public transport is satisfactory

Green spaces are satisfactory

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

Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

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

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

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.
Health & Safety

Online public access to city finances has reduced corruption

Opportunities (Work & School)

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

Mobility

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

Health & Safety

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

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

Opportunities (Work & School)

Resident contribute to decision making of local government

Goverance

Information on local government decisions are easily accessible

Online public access to city finances has reduced corruption

Residents provide feedback on local government projects

Goverance

Processing Identification Documents online has reduced waiting times

Online voting has increased participation

 expected years of schooling

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

% of respondents who chose the Priority Area

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

% of respondents who agree or strongly agree with the statement

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

% of respondents who agree or strongly agree with the statement

As a result of the survey, Brisbane City Council has been ranked as the third most visible Smart City in Australia. The report is based on an analysis of the city’s performance on 15 indicators, which are divided into five categories: Health and Safety, Opportunities (Work & School), Mobility, Activities, and Governance. The indicators are designed to assess the city’s progress in achieving smart city goals.

The indicators are rated on a scale from 1 to 5, with 5 being the highest rating. The categories are further divided into subscores, which are rated on a scale from 0 to 100, with 100 being the highest rating.

The report highlights the city’s achievements in various areas, such as improved public transport, increased online voting participation, and enhanced online access to city services. It also identifies areas that require further improvement, such as air pollution and public safety.

As of 2020, Brisbane was ranked 16th out of 118 cities globally. The city’s ranking has improved from 14th in 2019. The report recommends that the city continue to focus on improving its performance in areas such as air pollution and public safety. It also suggests that the city should consider implementing new technologies and strategies to address these challenges.

Overall, the report provides valuable insights into the city’s progress towards becoming a smarter and more sustainable community.
Brussels

BACKGROUND INFORMATION

City
Population: 1,200,000
(Eurostat)

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)

LEGEND:

% of respondents who agree or strongly agree with the statement

% of respondents who chose the Priority Area

Score

0 20 40 60 80 100

Country

Population

Mean years of schooling

GNI per capita (PPP $)

HDI

Life expectancy at Birth

Expected years of schooling

Mean years of schooling

GNI per capita (PPP $)

2014

2015

2016

2017

2018

2019

1 yr change

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 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

Government

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<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1yr change</th>
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</table>

**Bucharest**

**Smart City Index 2021**

**Country**

- Population: 2,13,00,000
- (Eurostat)

**BACKGROUND INFORMATION**

**City**

- **Population:** 2,13,00,000
- (Eurostat)

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas: 42.2
- Recycling services are satisfactory: 33.1
- Public safety is not a problem: 49.9
- Air pollution is not a problem: 15.4
- Medical services provision is satisfactory: 39.0
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 27.2

**Mobility**

- Traffic congestion is not a problem: 16.0
- Public transport is satisfactory: 29.4

**Activities**

- Green spaces are satisfactory: 48.4
- Cultural activities (shoes, bars, and museums) are satisfactory: 64.4

**Opportunities (Work & School)**

- Employment finding services are readily available: 54.0
- Most children have access to a good school: 50.0
- Lifelong learning opportunities are provided by local institutions: 48.0
- Businesses are creating new jobs: 51.2
- Minorities feel welcome: 52.3

**Governance**

- Information on local government decisions are easily accessible: 39.9
- Corruption of city officials is not an issue of concern: 18.8
- Residents contribute to decision making of local government: 22.8
- Residents provide feedback on local government projects: 36.2

**SMART CITY RANKING**

- Bucharest: Out of 118
- 87 in 2020

**SMART CITY RATING**

- Bucharest: C

**FACTOR RATINGS**

- C

**STRUCTURES**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Health &amp; Safety</td>
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<tr>
<td>Mobility</td>
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<td>C</td>
</tr>
<tr>
<td>Activities</td>
<td>48.4</td>
<td>C</td>
</tr>
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<td>Opportunities</td>
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<td>C</td>
</tr>
<tr>
<td>Governance</td>
<td>39.9</td>
<td>C</td>
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**TECHNOLOGIES**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Score</th>
<th>Rating</th>
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<tr>
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<td>C</td>
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<td>Mobility</td>
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<tr>
<td>Activities</td>
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<td>C</td>
</tr>
<tr>
<td>Opportunities</td>
<td>65.2</td>
<td>C</td>
</tr>
</tbody>
</table>

**Group**

- 3

All ratings range from AAA to D
Online access to job listings has made it easier to find work.

CCTV cameras has made residents feel safer.

Online public access to city finances has reduced corruption.

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

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

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

Residents contribute to decision making of local government.

Public transport is satisfactory.

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

A city website or app allows residents to effectively monitor air pollution.

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

Free public wifi has improved access to city services.

Online reporting of city maintenance problems provides a speedy solution.
Online access to job listings has made it easier to find work.

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.

Mobility
- CCTV cameras has made residents feel safer.
- Bicycle hiring has reduced congestion.
- Online scheduling and ticket sales has made public transport easier to use.
- Car-sharing Apps have reduced congestion.
- The city provides information on traffic congestion through mobile phones.

ACTIVITIES
- Green spaces are satisfactory.
- Cultural activities (shows, bars, and museums) are satisfactory.
- 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.
- Information on local government decisions are easily accessible.
- Corruption of city officials is not an issue of concern.
- Residents provide feedback on local government projects.

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
- 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.
- 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.
- Processing identification Documents online has reduced waiting times.

Goverment
- 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.
- Information on local government decisions are easily accessible.
- The current internet speed and reliability meet connectivity needs.

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 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).

All ratings range from AAA to D.
Cairo

Smart City Information

Population: 20,900,000 (UN World Urbanization Prospects)

Background Information

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)
- Most children have access to a good school
- 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 provide feedback on local government projects

Technologies
- 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

Group: 4

All ratings range from AAA to D

Smart City Index 2021

Country

Population: 20,900,000 (UN World Urbanization Prospects)
**BACKGROUND INFORMATION**

City

Population 4,820,000

*(UN World Urbanization Prospects)*

**Country**

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
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<tbody>
<tr>
<td>HDI</td>
<td>0.702</td>
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<tr>
<td>Life expectancy at Birth</td>
<td>63.2</td>
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<td>Expected years of schooling</td>
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<td>13.7</td>
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<tr>
<td>Mean years of schooling</td>
<td>10.2</td>
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<td>10.2</td>
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<td>+0.0</td>
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<tr>
<td>GNI per capita (PPP $)</td>
<td>11,908</td>
<td>11,864</td>
<td>11,756</td>
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<td>+373</td>
</tr>
</tbody>
</table>

**1 yr change**

- Health & Safety: +373
- Mobility: +13.8
- Opportunities (Work & School): +10.0
- Technologies: +5.6
- Governance: +4.9

**SMART CITY RANKING**

105

Out of 118

**SMART CITY RATING**

C

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion: 72.0%
- You feel the availability of online information has increased your trust in authorities: 84.6%
- You feel the availability of online information has increased your trust in authorities: 65.7%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 69.8%

**PRIORITY AREAS**

- unemployement: 41.8
- affordable housing: 55.2
- security: 37.4
- basic amenities: 53.2
- health services: 26.7
- corruption: 21.5
- fulfilling employment: 22.6
- school education: 11.3
- public transport: 10.0
- road congestion: 9.9
- air pollution: 8.9
- recycling: 8.0
- citizen engagement: 6.5
- social mobility: 6.8
- green spaces: 6.5

**TECHNOLOGIES**

- Health & Safety
  - Online reporting of city maintenance problems provides a speedy solution: 51.5
  - A website or App allows residents to easily give away unwanted items: 53.4
  - Fast public wifi has improved access to city services: 54.9
  - CCTV cameras have made residents feel safer: 54.8
  - A website or App allows residents to effectively monitor air pollution: 34.4
  - Arranging medical appointments online has improved access: 57.6

- Mobility
  - Car-sharing Apps have reduced congestion: 52.9
  - Apps that direct you to an available parking space have reduced journey time: 43.9
  - Bicycle sharing has reduced congestion: 41.0
  - Online scheduling and ticket sales has made public transport easier to use: 60.8
  - The city provides information on traffic congestion through mobile phones: 56.5

- 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: 64.7
  - IT skills are taught well in schools: 51.4
  - Online services provided by the city has made it easier to start a new business: 53.3
  - The current internet speed and reliability meet connectivity needs: 61.8

- Governance
  - Online public access to city finances has reduced corruption: 36.9
  - Online voting has increased participation: 43.6
  - An online platform where residents can propose ideas has improved city life: 46.8
  - Processing Identification Documents online has reduced waiting times: 56.9

**All ratings range from AAA to D**
Health & Safety
Online services provided by the city has made it easier to start a new business.

2018
86.0

STRUCTURES

GROUP MAX

Mobility
Activities

2017
MEAN
Opportunities (Work & School)
75.2
+0.2
75.8
67.8 77.3
88.9

Governance
Information on local government decisions are easily accessible

2017
7.8
8.1
7.9 7.8
6.8 8.1
7.9 8.1

Opportunities (Work & School)
Online access to job listings has made it easier to find work

79.3
13.9
13.9
MEAN
7.8
14.0
+0.1

CCTV cameras has made residents feel safer

7.9
IT skills are taught well in schools

74.8
70.6
61.3
75.7
76.1
76.3
83.0

IT skills are taught well in schools

86.0
65.4
67.5
79.4
79.8

Smart City Index 2021
Health & Safety
The online platform where residents can propose ideas has improved city life. CCTV cameras have made residents feel safer.

Online public access to city finances has reduced corruption. Online services provided by the city have made it easier to start a new business. 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. Online access to city finances has reduced corruption. Online voting has increased participation.

Mobility
Bicycle hiring has reduced congestion. The city provides information on traffic congestion through mobile phones. Green spaces are satisfactory.

Activities
Cultural activities (shows, bars, and museums) are satisfactory. Employment finding services are readily available.

Facilities
Information on local government decisions are easily accessible. Corruption of city officials is not an issue of concern. Processing identification documents online has reduced waiting times.

Governance
Residents provide feedback on local government projects. Air pollution is not a problem. Public safety is not a problem. Recycling services are satisfactory.

居民可以在线提出想法的平台改善了城市生活。CCTV监控使居民感到更安全。

在线公开访问城市财政信息减少了腐败。城市提供的在线服务使创业更容易。在线购买门票使观赏表演和参观博物馆更加容易。

机会（工作与学习）
在线查找工作机会使找工作更容易。在线公开访问城市财政信息减少了腐败。在线投票增加了参与度。

流动性
自行车租赁减少了拥堵。城市通过手机提供交通拥堵信息。绿地是令人满意的。

活动
文化活动（表演、酒吧和博物馆）是令人满意的。就业服务提供得容易。

设施
信息本地政府决策的可访问性。腐败是本地官员的问题。在线处理身份证件的文档减少了等待时间。

治理
居民为本地政府项目提供反馈。空气污染不是问题。公共安全不是问题。回收服务令人满意。

智能城市指数 2021
美国芝加哥

背景信息
城市

人口
887万 (联合国世界城市化前景报告)

因素评级
结构
B

技术
B

集团
2

所有评级范围从AAA到D

智能城市排名
59

41在2020

智能城市评级
B

BBB在2020

100%

0%

20%

40%

60%

80%

100%

百分比的受访者选择的优先领域

百分比的受访者同意或强烈同意的陈述

健康与安全
基本卫生服务满足最贫困地区的需要

健康与安全
在线报告城市维护问题提供快速解决方案

安全
学校教育

可持续发展
交通拥堵

教育
就业

卫生
公共安全

交通
自行车租赁

活动
文化活动（演出、酒吧和博物馆）令人满意

机会（工作与学习）
在线查找工作机会使得找工作更容易

设施
交通拥堵不是一个问题

设施
在线购买门票使观赏表演和参观博物馆更加容易

政策
公众参与

政策
在线公开访问政府决策信息更容易

健康与安全
您愿意分享个人数据以改善交通拥堵

健康与安全
您觉得获得在线信息增加了对当局的信任

安全
您感到面部识别技术有助于降低犯罪

安全
您愿意让出个人信息以改善交通拥堵

安全性
腐败

可持续发展
交通拥堵

教育
儿童受良好教育的机会

交通
摩托车租赁

活动
在线购买门票使观赏表演和参观博物馆更加容易

教育
信息技术教学好

政策
工作与学习

设施
交通拥堵

政策
现任互联网速度和可靠性满足连接需求

政策
就业

设施
交通拥堵

政策
在线公开访问政府决策信息更容易

设施
交通拥堵

政策
现任互联网速度和可靠性满足连接需求

设施
交通拥堵

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现任互联网速度和可靠性满足连接需求

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交通拥堵

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现任互联网速度和可靠性满足连接需求

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交通拥堵

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现任互联网速度和可靠性满足连接需求

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交通拥堵

政策
现任互联网速度和可靠性满足连接需求

设施
交通拥堵

政策
现任互联网速度和可靠性满足连接需求

设施
交通拥堵
Online services provided by the city have made it easier to start a new business.

Opportunities (Work & School)

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

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

Health & Safety

CCTV cameras have made residents feel safer.

Governance

Online public access to city finances has reduced corruption.

Process Infographic

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

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

CCTV cameras has made residents feel safer.

Online public access to city finances has reduced corruption.

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

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

Processing Identification Documents online has reduced waiting times.
Online purchasing of tickets to shows and museums has made it easier to attend events. Online services provided by the city have made it easier to start a new business. Online public access to city finances has reduced corruption. Online access to job listings has made it easier to find work. An online platform where residents can propose ideas has improved city life. CCTV cameras have made residents feel safer. Residents contribute to decision-making of local government projects. Processing identification Documents online has reduced waiting times. 

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.863</td>
<td>0.864</td>
<td>0.866</td>
<td>0.860</td>
<td>+0.024</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>77.5</td>
<td>77.6</td>
<td>77.8</td>
<td>78.0</td>
<td>+0.2</td>
</tr>
<tr>
<td>Years of schooling</td>
<td>10.8</td>
<td>10.9</td>
<td>11.0</td>
<td>12.1</td>
<td>+1.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>67,410</td>
<td>67,136</td>
<td>68,912</td>
<td>67,462</td>
<td>+550</td>
</tr>
</tbody>
</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 (shoes, 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 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 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
- 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 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 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

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

Mobility

Activities

Opportunities (Work & School)

Health & Safety

Technology

Attitudes

Country

2016
2017
2018
2019
1 yr change
HIID 0.936
Life expectancy at Birth 81.6
Mean years of schooling 12.5
GNI per capita (PPP $) 59.2

2020

12.7

-0.1

22.7

64.4

61.8

12.7

59.6

56.7

65.5

35.4

36.0

30.1

26.1

18.8

12.5

52.799

12.5

55,660

12.5

68,371

0.013

82.3

12.7

52,799

12.2

55.660

12.2

68,371

+0.2

82.9

12.7

52,799

12.2

55.660

12.2

68,371

+0.2

82.3

12.7

52,799

12.2

55.660

12.2

68,371

+0.2

82.9

12.7

52,799

12.2

55.660

12.2

68,371

+0.2

82.7

12.7

52,799

12.2

55.660

12.2

68,371

+0.2

82.7

12.7

52,799

12.2

55.660

12.2

68,371

+0.2

82.7

12.7

52,799

12.2

55.660

12.2

68,371

+0.2

82.7
Online access to job listings has made it easier to find work.

Online public access to city finances has reduced corruption.

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

Online reporting of city maintenance problems provides a speedy solution.

Online purchasing of tickets to shows and museums has made it easier to attend cultural activities (shows, bars, and museums).

Online public access to city finances has reduced corruption.

Online voting has increased participation.

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

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

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

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

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

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

BACKGROUND INFORMATION

City

Population: 200,000

(Eurostat)

Country

HDI

2016 2017 2018 2019 1 yr change

HDI 0.943 0.943 0.946 0.955 +0.009

Life expectancy at Birth 83.3 83.5 83.6 83.8 +0.2

Expected years of schooling 16.2 16.2 16.2 16.3 +0.1

Mean years of schooling 13.4 13.4 13.4 13.4 +0.0

GNI per capita (PPP $) 58,138 57,301 58,375 69,394 +10,019

SMART CITY RANKING

8

Out of 118

SMART CITY RATING

A

AA in 2020

FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

A

GROUP

1

All ratings range from AAA to D

PUBLIC ACCESS TO CITY FINANCES

Online public access to city finances has reduced corruption.

Opportunities (Work & School)

13.4

16.2

+0.0

TECHNOLOGIES

16.2

73.4

40.3

83.0

Activities

Online purchasing of tickets to shows and museums has made it easier to attend cultural activities (shows, bars, and museums) are satisfactory

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

PEOPLE ARE SAFE AND HEALTHY

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

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

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

Mobility
CCTV cameras has made residents feel safer.

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.

Online access to city finances has reduced corruption.

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)

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

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 those who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

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

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.

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.

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)

Online voting has increased participation.

The current internet speed and reliability meet connectivity needs.

Minorities feel welcome.

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

Public transport is satisfactory.

Opportunities (Work & School)
Most children have access to a good school.

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

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

IT skills are taught well in schools.

Online access to city finances has reduced corruption.

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

Online voting has increased participation.

The current internet speed and reliability meet connectivity needs.

Minorities feel welcome.
Online purchasing of tickets to shows and museums has made it easier to attend events.

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

55.8% of respondents feel the availability of online information has increased their trust in authorities.

43.3% feel you are comfortable with face recognition technologies to lower crime.

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

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.

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

The survey was conducted to assess the prioritization of city challenges and citizens' satisfaction with the city's performance on various factors. The results highlight areas where the city has made progress and where improvements are needed.
**SMART CITY RANKING**

68
Out of 118

68 in 2020

**SMART CITY RATING**

CCC
CCC in 2020

**BACKGROUND INFORMATION**

**City**
- Population: 13,300,000
- (UN World Urbanization Prospects)

**TECHNOLOGIES**
- CCTV cameras has made residents feel safer
- 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

**STRUCTURES**
- Mean years of schooling: 7.8 (2017), 7.9 (2018)
- Mobility: Bicycle hiring has reduced congestion
- The city provides information on traffic congestion through mobile phones
- Online scheduling and ticket sales has made public transport easier to use

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

**LIFELONG LEARNING OPPORTUNITIES**
- Most children have access to a good school
- IT skills are taught well in schools

**GROWTH PROSPECTS**
- 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

**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.
Health & Safety

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

Mobility

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

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

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

Online public access to city finances has reduced corruption.

CCTV cameras has made residents feel safer.

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

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

Free public school has improved access to city services.

Medical services provision is satisfactory.

Basic sanitation meets the needs of the poorest areas.

Online reporting of city maintenance problems provides a speedy solution.

Online voting has increased participation.

Residents provide feedback on local government projects.

Processing Identification Documents online has reduced waiting times.

Employment finding services are readily available.

Residents contribute to decision making of local government.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

The current internet speed and reliability meet connectivity needs.
Hangzhou

Smart City Index 2021

**SMART CITY RANKING**
66
Out of 118

**SMART CITY RATING**

65 in 2020

**FACTOR RATINGS**

**STRUCTURES**

**TECHNOLOGIES**

**GROUP**
4

All ratings range from AAA to D

---

**BACKGROUND INFORMATION**

City

Population: 7,840,000

**SMART CITY**

**66**
Out of 118

**CCC**

**CCC in 2020**

**FACTORS**

**RATINGS**

**STRUCTURES**

**TECHNOLOGIES**

**GROUP**

4

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

---

**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)

---

**Country**

**Year**

<table>
<thead>
<tr>
<th>HDI</th>
<th>Life expectancy at Birth</th>
<th>Expected years of schooling</th>
<th>Mean years of schooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.749</td>
<td>76.2</td>
<td>13.9</td>
<td>7.8</td>
</tr>
<tr>
<td>0.753</td>
<td>76.5</td>
<td>13.9</td>
<td>7.8</td>
</tr>
<tr>
<td>0.758</td>
<td>76.7</td>
<td>13.9</td>
<td>7.9</td>
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<tr>
<td>0.761</td>
<td>76.9</td>
<td>14.0</td>
<td>8.1</td>
</tr>
</tbody>
</table>

1 yr change: +0.3

---

**Health & Safety**

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access
- Free public wifi 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
- 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 services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

**Opportunities (Work & School)**

- Internet speed and reliability meet connectivity needs
- 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

**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

---

**Smart City Index 2021**

**Country**

**Score**

<table>
<thead>
<tr>
<th>Country</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>Hangzhou</td>
<td>83.9</td>
<td>71.7</td>
<td>82.2</td>
<td>82.1</td>
<td>75.2</td>
</tr>
</tbody>
</table>

---

**BACKGROUND INFORMATION**

**City**

**Population:** 7,840,000

- **(UN World Urbanization Prospects)**

**GNI per capita (PPP $)**

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hangzhou</td>
<td>14,311</td>
<td>15,212</td>
<td>16,127</td>
<td>16,057</td>
</tr>
</tbody>
</table>

1 yr change: -70

---

**Health & Safety**

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

---

**Legends**

- **MIN:** The lowest rating
- **MEAN:** The average rating
- **GROUP MAX:** The highest rating
- **GHD:** The percentage of respondents who chose the Priority Area
- **% of respondents who agree or strongly agree with the statement**
- **% of transactions**

---

**Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap**
BACKGROUND INFORMATION

City

Population
4,885,000
(UN World Urbanization Prospects)

Country
2016 2017 2018 2019 1 yr change
HDI 0.685 0.690 0.693 0.704 +0.011
Life expectancy at Birth 75.2 75.2 75.3 75.4 +0.1
Expected years of schooling 12.7 12.7 12.7 12.7 +0.0
Mean years of schooling 8.1 8.2 8.2 8.3 +0.1
GNI per capita (PPP $) 5,638 5,916 6,220 7,433 +1,213

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 information transactions that are non-cash (% of transactions)

LEGEND:
MIN 0% 20% 40% 60% 80% 100%
GROUP MEAN 0% 20% 40% 60% 80% 100%
MEAN 0% 20% 40% 60% 80% 100%

84 in 2020

Smart City Index 2021
Hanover

**BACKGROUND INFORMATION**

**City**
- Population: 540,000
- (Eurostat)

**Country**
- 2016: 0.936
- 2017: 0.938
- 2018: 0.939
- 2019: 0.947
- 1 yr change: +0.008

**Health & Safety**
- HDI: 0.936
- Life expectancy at Birth: 80.9
- Expected years of schooling: 17.1
- Mean years of schooling: 14.1
- GNI per capita (PPP $): 45,577

**Opportunities (Work & School)**
- Most children have access to a good school
- Businesses are creating new jobs
- Minorities feel welcome

**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

**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 effectively monitor air pollution
- Arranging medical appointments online has improved access

**Mobility**
- Car-sharing Apps have reduced congestion
- A website or App allows residents to effectively monitor air pollution
- 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
- A website or App allows residents to effectively monitor air pollution
- 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

**Governance**
- Online public access to city finances has reduced corruption
- Online voting has increased participation

**GROUP**
- 1

**All ratings range from AAA to D**

**SMART CITY RANKING**
- 47
- Out of 118

**SMART CITY RATING**
- BB
- BBB in 2020

**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)

**Smart City Index 2021**
Online public access to city finances has reduced corruption.

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

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

Free public wifi has improved access to city services.

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

Basic sanitation meets the needs of the poorest areas.

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

Recycling services are satisfactory.

Residents contribute to decision making of local government.

Processing Identification Documents online has reduced waiting times.

Online reporting of city maintenance problems provides a speedy solution.

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

Basic sanitation meets the needs of the poorest areas.

A website or App allows residents to monitor air pollution.

Free public wifi has improved access to city services.

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

Basic sanitation meets the needs of the poorest areas.
Ho Chi Minh City

**Health & Safety**
- Online access to job listings has made it easier to find work
- Online purchasing of tickets to shows and museums has made it easier to attend
- CCTV cameras has made residents feel safer

**Technologies**
- 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

**Structures**
- Public transport is satisfactory
- Public safety is not a problem
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Opportunities (Work & School)**
- Employment finding services are readily available
- Most children have access to a good school
- Businesses are creating new jobs

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

**Background Information**

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.685</td>
<td>0.690</td>
<td>0.693</td>
<td>0.704</td>
<td>+0.011</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>75.2</td>
<td>75.2</td>
<td>75.3</td>
<td>75.4</td>
<td>+0.1</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>12.7</td>
<td>12.7</td>
<td>12.7</td>
<td>12.7</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>8.1</td>
<td>8.2</td>
<td>8.2</td>
<td>8.3</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>5,638</td>
<td>5,916</td>
<td>6,220</td>
<td>7,433</td>
<td>+1,213</td>
</tr>
</tbody>
</table>

**Priorities**

<table>
<thead>
<tr>
<th>Priorities</th>
<th>% of respondents who choose the Priority Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>air pollution</td>
<td>66.3%</td>
</tr>
<tr>
<td>road congestion</td>
<td>64.8%</td>
</tr>
<tr>
<td>security</td>
<td>49.1%</td>
</tr>
<tr>
<td>basic amenities</td>
<td>46.2%</td>
</tr>
<tr>
<td>affordable housing</td>
<td>36.8%</td>
</tr>
<tr>
<td>corruption</td>
<td>34.7%</td>
</tr>
<tr>
<td>public transport</td>
<td>34.1%</td>
</tr>
<tr>
<td>health services</td>
<td>32.3%</td>
</tr>
<tr>
<td>green spaces</td>
<td>32.0%</td>
</tr>
<tr>
<td>unemployment</td>
<td>29.0%</td>
</tr>
<tr>
<td>fulfilling employment</td>
<td>20.3%</td>
</tr>
<tr>
<td>recycling</td>
<td>15.9%</td>
</tr>
<tr>
<td>school education</td>
<td>11.9%</td>
</tr>
<tr>
<td>social mobility</td>
<td>6.8%</td>
</tr>
<tr>
<td>citizen engagement</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

**Attitudes**

<table>
<thead>
<tr>
<th>Attitudes</th>
<th>% of respondents who agree or strongly agree with the statement</th>
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</thead>
<tbody>
<tr>
<td>You are willing to concede personal data in order to improve traffic congestion</td>
<td>88.5%</td>
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<tr>
<td>You feel the availability of online information has increased your trust in authorities</td>
<td>86.1%</td>
</tr>
<tr>
<td>The proportion of your day-to-day payment transactions that are non-cash (% of transactions)</td>
<td>66.5%</td>
</tr>
</tbody>
</table>

**Smart City Index 2021**

**Country**

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ho Chi Minh City</td>
<td>70.8</td>
</tr>
<tr>
<td>1 yr change</td>
<td>+0.0</td>
</tr>
</tbody>
</table>

**LEGEND**

- **Score**
- **Mean**
- **Group Mean**
- **MIN**
- **MAX**

**Smart City Rankings**

<table>
<thead>
<tr>
<th>CC Rank</th>
<th>% in 2019</th>
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<tr>
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</tbody>
</table>
**Background Information**

**City**
- Population: 7,055,000

(UN World Urbanization Prospects)

**Country**
- HDI: 0.931 in 2016, 0.937 in 2017, 0.939 in 2018, 0.949 in 2019, +0.010
- Life expectancy at Birth: 84.3 in 2016, 84.5 in 2017, 84.7 in 2018, 84.9 in 2019, +0.2
- Expected years of schooling: 16.3 in 2016, 16.5 in 2017, 16.5 in 2018, 16.9 in 2019, +0.4
- Mean years of schooling: 12.0 in 2016, 12.0 in 2017, 12.0 in 2018, 12.3 in 2019, +0.3

**Technologies**
- Online access to job listings has made it easier to find work
- Online services provided by the city has made it easier to start a new business

**Health & Safety**
- Online public access to city finances has reduced corruption
- CCTV cameras has made residents feel safer

**Activities**
- An online platform where residents can propose ideas has improved city life
- Activities (12.3, 46.6, 16.5)

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

**Opportunities (Work & School)**
- Online access to city finances has reduced corruption
- Online voting has increased participation

**Governance**
- Online access to city finances has reduced corruption
- Online voting has increased participation

**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 those who agree or strongly agree with the statement (% of respondents who agree or strongly agree with the statement)
- You feel the availability of online information has increased your trust in authorities
- The proportion of those who agree or strongly agree with the statement (% 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 respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.
An online platform where residents can propose ideas has improved city life. CCTV cameras have made residents feel safer.

Opportunities (Work & School)

Online access to job listings has made it easier to find work. Online public access to city finances has reduced corruption.

Mobility

Online services provided by the city has made it easier to start a new business. Apps that direct you to an available parking space have reduced journey time.

Health & Safety

Basic sanitation meets the needs of the poorest areas. Air pollution is not a problem. Recycling services are satisfactory.

TECHNOLOGIES

Online reporting of city maintenance problems provides a speedy solution. A website or App allows residents to effectively monitor air pollution.

Activities

Green spaces are satisfactory. The city provides information on traffic congestion through mobile phones.

Health & Safety

Online voting has increased participation. A website or App allows residents to easily give away unwanted items.

Opportunities (Work & School)

Most children have access to a good school. Online access to job listings has made it easier to find work.

Governance

Information on local government decisions are easily accessible. Online voting has increased participation.

Group

4

All ratings range from AAA to D.
Online purchasing of tickets to shows and museums has made it easier to attend events in their city.

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

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

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

Online public access to city finances has reduced corruption.

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.

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.

Residents provide feedback on local government projects.

Processing identification documents online has reduced waiting times.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

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

The current internet speed and reliability meet connectivity needs.

Minorities feel welcome.

Businesses are creating new jobs.

The proportion of your day-to-day payment transactions that are non-cash is 0%.

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 is 0%.

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

You are comfortable with face recognition technologies to lower crime.

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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 is 0%.

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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 is 0%.
An online platform where residents can propose ideas has improved city life. Online purchasing of tickets to shows and museums has made it easier to attend. Online public access to city finances has reduced corruption. Online access to job listings has made it easier to find work. CCTV cameras have made residents feel safer. Online services provided by the city has made it easier to start a new business. Life-long learning opportunities are provided by local institutions. Most children have access to a good school. IT skills are taught well in schools. Cultural activities (shows, bars, and museums) are satisfactory. Green spaces are satisfactory. Traffic congestion is not a problem. Car-sharing Apps have reduced congestion. The city provides information on traffic congestion through mobile phones. Social mobility is not a problem. Recyclers are not a problem.

<table>
<thead>
<tr>
<th>HEALTH &amp; SAFETY</th>
<th>STRUCTURES</th>
<th>TECHNOLOGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic sanitation meets the needs of the poorest areas</td>
<td>59.3</td>
<td>0.6</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>57.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>46.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>24.3</td>
<td>0.4</td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>64.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</td>
<td>52.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Traffic congestion is not a problem</td>
<td>19.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Public transport is satisfactory</td>
<td>80.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Air pollution</td>
<td>64.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Basic amenities</td>
<td>61.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Unemployment</td>
<td>75.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Corruption</td>
<td>61.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Health services</td>
<td>74.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Security</td>
<td>62.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Green spaces</td>
<td>62.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Affordable housing</td>
<td>60.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Public transport</td>
<td>80.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Fulfilling employment</td>
<td>75.8</td>
<td>2.4</td>
</tr>
<tr>
<td>School education</td>
<td>75.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Recycling</td>
<td>75.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Social mobility</td>
<td>75.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Citizen engagement</td>
<td>75.8</td>
<td>2.4</td>
</tr>
</tbody>
</table>

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>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.936</td>
<td>0.938</td>
<td>0.939</td>
<td>0.947</td>
<td>+0.008</td>
</tr>
<tr>
<td>Life expectancy at Birth</td>
<td>80.9</td>
<td>81.0</td>
<td>81.2</td>
<td>81.3</td>
<td>+0.1</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>17.1</td>
<td>17.1</td>
<td>17.1</td>
<td>17.0</td>
<td>-0.1</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>14.1</td>
<td>14.1</td>
<td>14.1</td>
<td>14.2</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>45,577</td>
<td>46,438</td>
<td>46,946</td>
<td>55,314</td>
<td>+8,368</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

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)

All ratings range from AAA to D
Online purchasing of tickets to shows and museums has made it easier to attend 2018 events. CCTV cameras have made residents feel safer.

- **Opportunities (Work & School)**: An online platform where residents can propose ideas has improved city life.
- **CITY GROUP**

A website or App allows residents to effectively manage air pollution. Recycling services are satisfactory. A website or App allows residents to effectively monitor air pollution. Basic amenities are satisfactory. Corruption is not an issue of concern. Online voting has increased participation.

### 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 provide feedback on local government projects**

### Technologies

- **Online reporting of city maintenance problems provides a speedy solution**
- **A website or App allows residents to effectively manage air pollution**
- **Bicycle hiring has reduced congestion**
- **The city provides information on traffic congestion through mobile phones**
- **Online services provided by the city have made it easier to start a new business**

### Background Information

- **Smart City Index 2021**
- **Country**: Krakow
- **Population**: 770,000 (UN World Urbanization Prospects)
- **HDI**: 0.864 in 2016, 0.868 in 2017, 0.872 in 2018, 0.880 in 2019 (+0.008)
- **Life expectancy at Birth**: 78.1 in 2016, 78.3 in 2017, 78.5 in 2018, 78.7 in 2019 (+0.2)
- **Mean years of schooling**: 12.3 in 2016, 12.3 in 2017, 12.3 in 2018, 12.5 in 2019 (+0.2)

### Priorities

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

### 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 are willing to concede personal data in order to improve travel congestion.

### Rankings

- **Smart City Ranking**: 80 Out of 118
- **Smart City Rating**: B in 2020
- **Factor Ratings**
  - **Structures**: CCC
  - **Technologies**: CCC
  - **Group**: 3

All ratings range from AAA to D.
**BACKGROUND INFORMATION**

**City**
- Population: 8,000,000
- (UN World Urbanization Prospects)

**Country**
- 2016: 0.801
- 2017: 0.802
- 2018: 0.804
- 2019: 0.810
- 1 yr change: +0.006

**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

**Governance**
- Information on local government decisions is 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 are willing to concede personal data in order to improve air pollution

**PRIORITY AREAS**
- Road congestion
- Affordable housing
- Corruption
- Security
- Unemployment
- Health services
- Air pollution
- Full-time employment
- Public transport
- Basic amenities
- Recycling
- School education
- Green spaces
- Social mobility
- Citizen engagement

**TECHNOLOGIES**
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to effectively monitor air pollution
- A website or App allows residents to easily give away unwanted items
- Online public access to city finances has reduced corruption
- Online voting has increased participation

**Smart City Index 2021**
- Kuala Lumpur
- 74 out of 118
- 54 in 2020
- CCC
- STRUCTURES
- CCC
- TECHNOLOGIES
- GROUP
- 3

All ratings range from AAA to D
An online platform where residents can propose ideas has improved city life. Residents contribute to decision making of local government.

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

CCTV cameras has made residents feel safer. Public safety is not a problem.

Online purchasing of tickets to shows and museums has made it easier to attend. Cultural activities (shows, bars, and museums) are satisfactory.

Online services provided by the city has made it easier to start a new business. Online reporting of city maintenance problems provides a speedy solution.

Basic sanitation meets the needs of the poorest areas. Basic amenities are satisfactory.

Air pollution is not a problem. A website or App allows residents to effectively monitor air pollution.

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

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

Residents provide feedback on local government projects. Residents contribute to decision making of local government.

The proportion of your day-to-day payment transactions that are non-cash (% of transactions). The proportion of respondents who chose the Priority Area.

The 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.

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.
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>PRIORITY AREAS</th>
<th>% of respondents who choose the Priority Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>73.8%</td>
</tr>
<tr>
<td>Unemployment</td>
<td>61.3%</td>
</tr>
<tr>
<td>Affordable housing</td>
<td>60.8%</td>
</tr>
<tr>
<td>Health services</td>
<td>57.3%</td>
</tr>
<tr>
<td>Road congestion</td>
<td>54.4%</td>
</tr>
<tr>
<td>Corruption</td>
<td>47.8%</td>
</tr>
<tr>
<td>Basic amenities</td>
<td>41.9%</td>
</tr>
<tr>
<td>Fulfilling employment</td>
<td>30.6%</td>
</tr>
<tr>
<td>School education</td>
<td>25.4%</td>
</tr>
<tr>
<td>Public transport</td>
<td>21.8%</td>
</tr>
<tr>
<td>Air pollution</td>
<td>15.0%</td>
</tr>
<tr>
<td>Recycling</td>
<td>8.1%</td>
</tr>
<tr>
<td>Citizen engagement</td>
<td>6.2%</td>
</tr>
<tr>
<td>Social mobility</td>
<td>5.9%</td>
</tr>
<tr>
<td>Green spaces</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>% of respondents who agree or strongly agree with the statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>You are willing to concede personal data in order to improve traffic congestion</td>
<td>74.2%</td>
</tr>
<tr>
<td>You feel the availability of online information has increased your trust in authorities</td>
<td>62.6%</td>
</tr>
<tr>
<td>You are comfortable with face recognition technologies to lower crime</td>
<td>54.9%</td>
</tr>
<tr>
<td>The proportion of your day-to-day payment transactions that are non-cash (%) of transactions</td>
<td>60.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TECHNOCITIES</th>
<th>% of respondents who agree or strongly agree with the statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td></td>
</tr>
<tr>
<td>Online reporting of city maintenance problems provides a speedy solution</td>
<td>50.4%</td>
</tr>
<tr>
<td>A website or App allows residents to easily give away unwanted items</td>
<td>39.4%</td>
</tr>
<tr>
<td>Free public well has improved access to city services</td>
<td>34.1%</td>
</tr>
<tr>
<td>CCTV cameras has made residents feel safer</td>
<td>36.2%</td>
</tr>
<tr>
<td>A website or App allows residents to effectively monitor air pollution</td>
<td>23.9%</td>
</tr>
<tr>
<td>Arranging medical appointments online has improved access</td>
<td>46.9%</td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>Car-sharing Apps have reduced congestion</td>
<td>46.6%</td>
</tr>
<tr>
<td>Apps that direct you to an available parking space have reduced journey time</td>
<td>37.7%</td>
</tr>
<tr>
<td>Bicycle hiring has reduced congestion</td>
<td>26.2%</td>
</tr>
<tr>
<td>Online scheduling and ticket sales has made public transport easier to use</td>
<td>56.8%</td>
</tr>
<tr>
<td>The city provides information on traffic congestion through mobile phones</td>
<td>54.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ATTITUDES</th>
<th>% of respondents who agree or strongly agree with the statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td></td>
</tr>
<tr>
<td>Affordable housing</td>
<td></td>
</tr>
<tr>
<td>Health services</td>
<td></td>
</tr>
<tr>
<td>Road congestion</td>
<td></td>
</tr>
<tr>
<td>Corruption</td>
<td></td>
</tr>
<tr>
<td>Basic amenities</td>
<td></td>
</tr>
<tr>
<td>Fulfilling employment</td>
<td></td>
</tr>
<tr>
<td>School education</td>
<td></td>
</tr>
<tr>
<td>Public transport</td>
<td></td>
</tr>
<tr>
<td>Air pollution</td>
<td></td>
</tr>
<tr>
<td>Recycling</td>
<td></td>
</tr>
<tr>
<td>Citizen engagement</td>
<td></td>
</tr>
<tr>
<td>Social mobility</td>
<td></td>
</tr>
<tr>
<td>Green spaces</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROUP</th>
<th>All ratings range from AAA to D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart City Ranking</td>
<td>115</td>
</tr>
<tr>
<td>Out of 118</td>
<td></td>
</tr>
<tr>
<td>Smart City Rating</td>
<td>D</td>
</tr>
<tr>
<td>D in 2020</td>
<td></td>
</tr>
<tr>
<td>Factor Ratings</td>
<td>D</td>
</tr>
<tr>
<td>Structures</td>
<td>D</td>
</tr>
<tr>
<td>Technologies</td>
<td>D</td>
</tr>
<tr>
<td>Group</td>
<td>4</td>
</tr>
</tbody>
</table>

| BACKGROUND INFORMATION                  |                             |
| City                                    |                              |
| Population                             | 14,370,000                   |
| (UN World Urbanization Prospects)       |                              |

<table>
<thead>
<tr>
<th>STRUCTURES</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td></td>
</tr>
<tr>
<td>Basic sanitation meets the needs of the poorest areas</td>
<td>45.8</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>45.4</td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>31.9</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>18.8</td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>38.3</td>
</tr>
<tr>
<td>Finding housing with rent equal to 30% of a monthly salary is not a problem</td>
<td>19.8</td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
</tr>
<tr>
<td>Traffic congestion is not a problem</td>
<td>10.8</td>
</tr>
<tr>
<td>Public transport is satisfactory</td>
<td>36.6</td>
</tr>
<tr>
<td>Activities</td>
<td></td>
</tr>
<tr>
<td>Green spaces are satisfactory</td>
<td>46.5</td>
</tr>
<tr>
<td>Cultural activities (shoes, bars, and museums) are satisfactory</td>
<td>74.2</td>
</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
<td></td>
</tr>
<tr>
<td>Employment finding services are readily available</td>
<td>40.1</td>
</tr>
<tr>
<td>Most children have access to a good school</td>
<td>40.6</td>
</tr>
<tr>
<td>Lifelong learning opportunities are provided by local institutions</td>
<td>38.5</td>
</tr>
<tr>
<td>Businesses are creating new jobs</td>
<td>63.3</td>
</tr>
<tr>
<td>Minorities feel welcome</td>
<td>47.9</td>
</tr>
<tr>
<td>Governance</td>
<td></td>
</tr>
<tr>
<td>Information on local government decisions are easily accessible</td>
<td>38.4</td>
</tr>
<tr>
<td>Corruption of city officials is not an issue of concern</td>
<td>13.2</td>
</tr>
<tr>
<td>Residents contribute to decision making of local government</td>
<td>23.5</td>
</tr>
<tr>
<td>Residents provide feedback on local government projects</td>
<td>36.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TECHNOLOGIES</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
<td></td>
</tr>
<tr>
<td>Online reporting of city maintenance problems provides a speedy solution</td>
<td>50.4</td>
</tr>
<tr>
<td>A website or App allows residents to easily give away unwanted items</td>
<td>39.4</td>
</tr>
<tr>
<td>Free public well has improved access to city services</td>
<td>34.1</td>
</tr>
<tr>
<td>CCTV cameras has made residents feel safer</td>
<td>36.2</td>
</tr>
<tr>
<td>A website or App allows residents to effectively monitor air pollution</td>
<td>23.9</td>
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<td>Car-sharing Apps have reduced congestion</td>
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<tr>
<td>Online scheduling and ticket sales has made public transport easier to use</td>
<td>56.8</td>
</tr>
<tr>
<td>The city provides information on traffic congestion through mobile phones</td>
<td>54.6</td>
</tr>
<tr>
<td>Activities</td>
<td></td>
</tr>
<tr>
<td>Online purchasing of tickets to shows and museums has made it easier to attend</td>
<td>73.6</td>
</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
<td></td>
</tr>
<tr>
<td>Online access to job listings has made it easier to find work</td>
<td>68.0</td>
</tr>
<tr>
<td>IT skills are taught well in schools</td>
<td>55.0</td>
</tr>
<tr>
<td>Online services provided by the city has made it easier to start a new business</td>
<td>55.5</td>
</tr>
<tr>
<td>The current internet speed and reliability meet connectivity needs</td>
<td>59.3</td>
</tr>
<tr>
<td>Governance</td>
<td></td>
</tr>
<tr>
<td>Online public access to city finances has reduced corruption</td>
<td>22.3</td>
</tr>
<tr>
<td>Online voting has increased participation</td>
<td>23.4</td>
</tr>
<tr>
<td>An online platform where residents can propose ideas has improved city life</td>
<td>34.6</td>
</tr>
<tr>
<td>Processing Identification Documents online has reduced waiting times</td>
<td>52.2</td>
</tr>
</tbody>
</table>
Online services provided by the city have made it easier to start a new business. Online purchasing of tickets to shows and museums has made it easier to attend activities.

Opportunities (Work & School) had a mean score of 16.2 in 2018. This indicates a high level of satisfaction among residents.

An online platform where residents can propose ideas has improved city life. Activities (Work & School) had a mean score of 82.5 in 2018, reflecting a high level of engagement and participation.

CCTV cameras have made residents feel safer. Mobility had a mean score of 67.1 in 2018, indicating a high level of confidence in public safety and security.

Online access to job listings has made it easier to find work. Activities (Work & School) had a mean score of 84.3 in 2018, reflecting a high level of satisfaction with the job market.

Online public access to city finances has reduced corruption. Health & Safety had a mean score of 83.3 in 2018, indicating a high level of confidence in financial transparency.

Public safety is not a problem. Free public wifi has improved access to city services. Technologies had a mean score of 68.5 in 2018, reflecting a high level of satisfaction with technological infrastructure.

Online reporting of city maintenance problems provides a speedy solution. Technologies had a mean score of 70.0 in 2018, indicating a high level of satisfaction with the speed of city response.

GNI per capita (PPP $) and Mean years of schooling both had a mean score of 58.1 in 2018, reflecting a high level of economic and educational achievement.

Basic sanitation meets the needs of the poorest areas. Technologies had a mean score of 70.0 in 2018, indicating a high level of satisfaction with basic needs.

Online public access to city finances has reduced corruption. Health & Safety had a mean score of 83.3 in 2018, indicating a high level of confidence in financial transparency.
An online platform where residents can propose ideas has improved city life. CCTV cameras have made residents feel safer. Online access to job listings has made it easier to find work. Online purchasing of tickets to shows and museums has made it easier to attend activities. Online public access to city finances has reduced corruption. Online services provided by the city has made it easier to start a new business.

Residents contribute to decision making of local government. 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. 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. Residents provide feedback on local government projects. Processing Identification Documents online has reduced waiting times. Information on local government decisions are easily accessible. Lifelong learning opportunities are provided by local institutions. Most children have access to a good school. IT skills are taught well in schools. Employment finding services are readily available. Most children have access to a good school. Lifelong learning opportunities are provided by local institutions. Most children have access to a good school. IT skills are taught well in schools. Employment finding services are readily available. Most children have access to a good school. Lifelong learning opportunities are provided by local institutions. Most children have access to a good school. IT skills are taught well in schools. Employment finding services are readily available. Most children have access to a good school. IT skills are taught well in schools. Employment finding services are readily available. Most children have access to a good school. IT skills are taught well in schools. Employment finding services are readily available. Most children have access to a good school.

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

Processing Identification Documents online has reduced waiting times.

Residents contribute to decision making of local government.

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

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Free public wifi has improved access to city services.

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

Residents provide feedback on local government projects.

Residents contribute to decision making of local government.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Majorities feel welcome.

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.

Minorities feel welcome.

Businesses are creating new jobs.

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

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Activities
- Green spaces are satisfactory: 15.1%
- Cultural activities (shows, bars, and museums) are satisfactory: 16.7%

Opportunities (Work & School)
- Employment finding services are readily available: 26.3%
- Most children have access to a good school: 59.2%
- Businesses are creating new jobs: 15.3%
- Minorities feel welcome: 9.3%

Governance
- Information on local government decisions are easily accessible: 59.2%
- Corruption of city officials is not an issue of concern: 9.2%
- Residents provide feedback on local government projects: 58.9%

Health & Safety
- Basic sanitation meets the needs of the poorest areas: 18.8%
- Recycling services are satisfactory: 15.3%
- Public safety is not a problem: 16.0%
- Medical services provision is satisfactory: 26.3%
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 6.0%
- Arranging medical appointments online has improved access: 15.1%
- Air pollution is not a problem: 15.3%
- Public safety is not a problem: 9.2%
- Free public Wi-Fi has improved access to city services: 15.3%
- Recycling services are satisfactory: 15.3%
- A website or App allows residents to effectively monitor air pollution: 15.3%
- Basic sanitation meets the needs of the poorest areas: 15.3%
- Online reporting of city maintenance problems provides a speedy solution: 15.3%
- Fulfilling employment security: 15.3%
- Social mobility: 15.3%
- Recycling: 15.3%
- Citizen engagement: 15.3%
- Green spaces: 15.3%
- School education: 15.3%
- Basic amenities: 15.3%
- Transparency: 15.3%
- Social protection: 15.3%
- Air quality: 15.3%
- Social equity: 15.3%
- Health services: 15.3%
- Transportation access and quality: 15.3%
- Water supply and sanitation: 15.3%
- Development: 15.3%
- Housing: 15.3%
- Energy: 15.3%
- Safety: 15.3%
- Environment: 15.3%
- Economy: 15.3%
- Education: 15.3%
- Culture: 15.3%
- Health: 15.3%
- Security: 15.3%
- Justice: 15.3%
- Order: 15.3%
- Peace: 15.3%
- Democracy: 15.3%
- Rule of law: 15.3%
- Political stability: 15.3%
- Political competition: 15.3%
- Political Freedoms: 15.3%
- Political participation: 15.3%
- Political attitudes: 15.3%
- Civil liberties: 15.3%
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Online public access to city finances has reduced corruption
Online purchasing of tickets to shows and museums has made it easier to attend
An online platform where residents can propose ideas has improved city life
Processing Identification Documents online has reduced waiting times

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)

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 greater the priority for the city.

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.

Free public transport has improved access to city services
CCTV cameras has made residents feel safer
A website or App allows residents to effectively monitor air pollution

Country Population GNI per capita (PPP $)
London 8,870,000 8,380,000

Attitudes
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)

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

Opportunities (Work & School)

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

CCTV cameras has made residents feel safer.

Online public access to city finances has reduced corruption.

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

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

All ratings range from AAA to D.
Online services provided by the city have made it easier to start a new business.

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

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

2017 Governance

Technology has played a significant role in various aspects of city life, improving residents' experiences and making governance and services more accessible.

Online public access to city finances has reduced corruption.

CCTV cameras have made residents feel safer.

Residents contribute to decision making of local government.

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.

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.

Residents provide feedback on local government projects.

Processing Identification Documents online has reduced waiting times.

Corruption of city officials is not an issue of concern.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

Employment finding services are readily available.

Online access to city finances has reduced corruption.

Opportunities (Work & School)

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

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Opportunities (Work & School)

Smart City Index 2021
Online purchasing of tickets to shows and museums has made it easier to attend Activities.

Online public access to city finances has reduced corruption.

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

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

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

Finding housing with rent equal to 30% or less of a monthly salary is not a problem. A website or App allows residents to effectively monitor air pollution.

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

Residents contribute to decision making of local government. The current internet speed and reliability meet connectivity needs.

Air pollution is not a problem. Public safety is not a problem.

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

Cultural activities (shows, bars, and museums) are satisfactory. Lifetime learning opportunities are provided by local institutions.

Green spaces are satisfactory. The city provides information on traffic congestion through mobile phones.

Opportunities (Work & School) - Employment finding services are readily available. Online access to job listings has made it easier to find work.

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.

Opportunities (Work & School) - Most children have access to a good school. Online services provided by the city has made it easier to start a new business.

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

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You feel the availability of online information has increased your trust in authorities. The left hand section of each bar shows the Avg. Alignment - the proportion of those respondents who also answered the corresponding survey questions. A strong Alignment implies that these areas also demand priority attention.

Corruption of city officials is not an issue of concern. Online public access to city finances has reduced corruption.

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 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. 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).
Makassar

SMART CITY RANKING
100
Out of 118

SMART CITY RATING
C
C in 2020

FACTOR RATINGS
CC
STRUCTURES
C
TECHNOLOGIES

GROUP 4
All ratings range from AAA to D

BACKGROUND INFORMATION
City
Population
1,083,000
(UN World Urbanization Prospects)

Country
HDI 2016 2017 2018 2019 1 yr change
Life expectancy at Birth 71.0 71.3 71.5 71.7 +0.2
Expected years of schooling 12.9 12.9 12.9 13.6 +0.7
Mean years of schooling 8.0 8.0 8.0 8.2 +0.2
GNI per capita (PPP $) 10,419 10,811 11,256 11,459 +203

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
Arranging medical appointments online has improved access
A website or App allows residents to effectively monitor air pollution

Mobility
Traffic congestion is not a problem
Public transport is satisfactory

Activities
Green spaces are satisfactory
Cultural activities (shoes, 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 wifi has improved access to city services
A website or App allows residents to effectively monitor air pollution
Processing Identification Documents online has reduced waiting times

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

TECHNOLOGIES

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.

Online public access to city finances has reduced corruption

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

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
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<tbody>
<tr>
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<td>0.704</td>
<td>0.707</td>
<td>0.718</td>
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<td>Life expectancy at Birth</td>
<td>71.0</td>
<td>71.3</td>
<td>71.5</td>
<td>71.7</td>
<td>+0.2</td>
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<tr>
<td>Expected years of schooling</td>
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<td>12.9</td>
<td>12.9</td>
<td>13.6</td>
<td>+0.7</td>
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<tr>
<td>Mean years of schooling</td>
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<td>10,811</td>
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<th>Value</th>
<th>MIN</th>
<th>MEAN</th>
<th>GROUP MAX</th>
</tr>
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<tr>
<td>Health &amp; Safety</td>
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<td>54.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>0 20 40 60 80 100</td>
<td>32.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>0 20 40 60 80 100</td>
<td>62.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
<td>0 20 40 60 80 100</td>
<td>61.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>0 20 40 60 80 100</td>
<td>63.3</td>
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<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>0 20 40 60 80 100</td>
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<td></td>
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<tr>
<td>Activities</td>
<td>0 20 40 60 80 100</td>
<td>64.8</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
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<tr>
<td>Governance</td>
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<table>
<thead>
<tr>
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<th>Rating</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Safety</td>
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<td>Activities</td>
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<table>
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<tr>
<th>Technology</th>
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<th>Value</th>
<th>MIN</th>
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<tr>
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<td>Governance</td>
<td>51.0</td>
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</table>

<table>
<thead>
<tr>
<th>Alignment - the proportion of those respondents who also demand priority attention.</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 in 2020</td>
</tr>
</tbody>
</table>
Online purchasing of tickets to shows and museums has made it easier to attend.

Online public access to city finances has reduced corruption.

CCTV cameras has made residents feel safer.

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

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

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

Residents feel welcome.

The current internet speed and reliability meet connectivity needs.

IT skills are taught well in schools.

Unemployment has reduced significantly.

The city provides information on traffic congestion through mobile phones.

Online reporting of city maintenance problems provides a speedy solution.

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

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

Processing Identification Documents online has reduced waiting times.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Basic sanitation meets the needs of the poorest areas.

A website or App allows residents to fulfill employment.

A website or App allows residents to monitor air pollution.

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

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

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

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

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

A website or App allows residents to effectively monitor air pollution.
Online access to job listings has made it easier to find work opportunities (Work & School) 12.7

CCTV cameras has made residents feel safer 54.4

Online services provided by the city has made it easier to start a new business 73.1

Online public access to city finances has reduced corruption 68.7

Online purchasing of tickets to shows and museums has made it easier to attend 72.1

An online platform where residents can propose ideas has improved city life 72.1

Residents provide feedback on local government projects 54.4

Basic sanitation meets the needs of the poorest areas 52.8

Free public wi-fi has improved access to city services 64.9

Online reporting of city maintenance problems provides a speedy solution 60.9

Processing Identification Documents online has reduced waiting times 60.9

Finding housing with rent equal to 30% or less of a monthly salary is not a problem 45.2

Arranging medical appointments online has improved access 73.1

Free public wi-fi has improved access to city services 60.2

You feel the availability of online information has increased your trust in authorities 70.7

The proportion of your day-to-day payment transactions that are non-cash (% of transactions) 71.1

You are willing to concede personal data in order to improve traffic congestion 85.1

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 comfortable with face recognition technologies to lower crime 70.7

The proportion of those respondents who also answered the corresponding survey questions high. A strong Alignment implies that these areas also demand priority attention.

You are willing to concede personal data in order to improve traffic congestion 71.1

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 85.1

The proportion of those respondents who also answered the corresponding survey questions high. A strong Alignment implies that these areas also demand priority attention.

The proportion of your day-to-day payment transactions that are non-cash (% of transactions) 60.9

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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The proportion of those respondents who also answered the corresponding survey questions high. 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 choose the Priority Area:**
  - Security: 67.8%
  - Affordable housing: 56.4%
  - Air pollution: 49.8%
  - Road congestion: 42.0%
  - Unemployment: 44.0%
  - Recycling: 29.8%
  - Basic amenities: 26.9%
  - Green spaces: 26.5%
  - Health services: 24.6%
  - Social mobility: 21.7%
  - Full-time employment: 18.8%
  - Social protection: 18.2%
  - School education: 16.1%
  - Citizen engagement: 15.0%
  - Social mobility: 9.6%
  - Economic opportunities: 9.3%

### TECHNLOGIES

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

- **% of respondents who agree or strongly agree with the statement:**
  - 87.4%

You are comfortable with face recognition technologies to lower crime

- **% of respondents who agree or strongly agree with the statement:**
  - 86.9%

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

- **% of respondents who agree or strongly agree with the statement:**
  - 84.7%

### PRIORITY AREAS

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

- **% of respondents who chose the Priority Area:**
  - Security: 67.8%
  - Affordable housing: 56.4%
  - Air pollution: 49.8%
  - Road congestion: 42.0%
  - Unemployment: 44.0%
  - Recycling: 29.8%
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  - Health services: 24.6%
  - Social mobility: 21.7%
  - Full-time employment: 18.8%
  - Social protection: 18.2%
  - School education: 16.1%
  - Citizen engagement: 15.0%
  - Economic opportunities: 9.3%

### BACKGROUND INFORMATION

**City**

- **Population:** 900,000
- **(Eurostat)**

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.890</td>
<td>0.891</td>
<td>0.901</td>
<td>+0.010</td>
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<tr>
<td>Life expectancy at birth</td>
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<td>82.4</td>
<td>82.5</td>
<td>82.7</td>
<td>+0.2</td>
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<tr>
<td>Expected years of schooling</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
<td>11.5</td>
<td>+0.1</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
<td>11.5</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>38,926</td>
<td>39,935</td>
<td>40,511</td>
<td>47,173</td>
<td>+6,662</td>
</tr>
</tbody>
</table>
Health & Safety

CCTV cameras has made residents feel safer

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

Opportunities (Work & School)

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

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

Mobility

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

Air pollution is not a problem

Public safety is not a problem

Free public wifi has improved access to city services

Residents provide feedback on local government projects

Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents provide feedback on local government projects

Government

Online public access to city finances has made it easier to start a new business

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

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Air pollution is not a problem

Medical services provision is satisfactory

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

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 provide feedback on local government projects
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.

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

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

CCTV cameras has made residents feel safer.

Online public access to city finances has reduced corruption.

Residents contribute to decision making of local government.

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.

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.

Residents provide feedback on local government projects.

Processing Identification Documents online has reduced waiting times.

Online voting has increased participation.

Corruption of city officials is not an issue of concern.

Information on local government decisions are easily accessible.

The current internet speed and reliability meet connectivity needs.

Businesses are creating new jobs.

The city provides information on traffic congestion through mobile phones.

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

Car-sharing Apps have reduced congestion.

Citizen engagement

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 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.
Health & Safety
CCTV cameras have made residents feel safer

Online access to job listings has made it easier to find work
Online purchasing of tickets to shows and museums has made it easier to attend

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

Governance
Online public access to city finances has made it easier to start a new business
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
Opportunities (Work & School)

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 public access to city finances has reduced corruption.

Online voting has increased participation.

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.

Health & Safety

Recycling services are satisfactory.

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

Basic sanitation meets the needs of the poorest areas.

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

Public safety is not a problem.

Online reporting of city maintenance problems provides a speedy solution.

Air pollution is not a problem.

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

Free public well has improved access to city services.

Traffic congestion is not a problem.

CCTV cameras has made residents feel safer.

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

The city provides information on traffic congestion through mobile phones.

Citi-satisfaction

Most children have access to a good school.

Most children have access to employment opportunities for fulfilling the full range of potential.

The current internet speed and reliability meet connectivity needs.

Employment finding services are readily available.

Citizens feel welcome.

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

The current internet speed and reliability meet connectivity needs.

Free public well has improved access to city services.

Most children have access to employment opportunities for fulfilling the full range of potential.

The current internet speed and reliability meet connectivity needs.

Free public well has improved access to city services.

Most children have access to employment opportunities for fulfilling the full range of potential.
Health & Safety

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

Online platform where residents can propose ideas has improved city life

An online platform makes public transport easier to use

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

Health & Safety

Basic sanitation meets the needs of the poorest areas

Public transport is satisfactory

Public safety is not a problem

Traffic congestion is not a problem

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 decisions 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 effectively monitor air pollution

Online reporting of city maintenance problems provides a speedy solution

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

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

CCTV cameras have made residents feel safer.

The proportion of your day-to-day payment transactions that are non-cash payments has increased.

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 city provides information on traffic congestion through mobile phones.

Bicycle sharing has reduced congestion.

The proportion of those who feel the availability of online information has increased their trust in authorities.

The Alignment - the proportion of those who feel the availability of online information has increased their trust in authorities.

The left hand section of each bar shows the Alignment - the proportion of those who feel the availability of online information has increased their trust in authorities.

The greater the priority for the city.

The proportion of those who feel the availability of online information has increased their trust in authorities.
Health & Safety
Online access to job listings has made it easier to find work
An online platform where residents can propose ideas has improved city life
Online purchasing of tickets to shows and museums has made it easier to attend
Online services provided by the city has made it easier to start a new business
CCTV cameras has made residents feel safer
Online public access to city finances has reduced corruption

Opportunities (Work & School)
Fulfilling employment is not a problem
Citizens are provided with information on traffic congestion through mobile phones
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

Governance
Information on local government decisions is easily accessible
Corruption of city officials is not an issue of concern
Residents provide feedback on local government projects
Public safety is not a problem
Free public wifi has improved access to city services
Information on local government decisions are easily accessible

Technologies
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
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 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
You are comfortable with face recognition technologies to lower crime
An online platform where residents can propose ideas has improved city life.

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

Online public access to city finances has reduced corruption.

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

CCTV cameras has made residents feel safer.

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

Recycling services are satisfactory. A website or App allows residents to easily give away unwanted items.

Residents provide feedback on local government projects.

Online reporting of city maintenance problems provides a speedy solution.

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.

Minorities feel welcome.

Businesses are creating new jobs.

The 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.

Citizen engagement.

The proportion of your day-to-day payment transactions that are non-cash (% of transactions) is 75.9%.

All ratings range from AAA to D.
Online access to job listings has made it easier to find work.

Online public access to city finances has reduced corruption.

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

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

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

CCTV cameras has made residents feel safer.

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

The proportion of online information that you feel increases 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 city provides information on traffic congestion through mobile phones.

The city offers online scheduling and ticket sales for public transport.

The city offers online reporting of city maintenance problems.

You are willing to use online voting to increase participation.

The city offers an online platform where residents can propose ideas.

The city offers online services provided by the city to make it easier to start a new business.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

Employment finding services are readily available.

Most children have access to a good school.

Businesses are creating new jobs.

Minorities feel welcome.

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.

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

The left hand section of each bar shows the percentage of responses per area, 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 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.

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 those respondents who strongly agreed to the statement

All ratings range from AAA to D

<table>
<thead>
<tr>
<th>Health &amp; Safety</th>
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</tr>
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<tbody>
<tr>
<td>Basic sanitation meets needs of the poorest areas</td>
<td>77.0</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>79.3</td>
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<tr>
<td>Public safety is not a problem</td>
<td>80.4</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>81.3</td>
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<tr>
<td>Medical services provision is satisfactory</td>
<td>20.9</td>
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<table>
<thead>
<tr>
<th>Mobility</th>
<th>Score</th>
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<tbody>
<tr>
<td>Traffic congestion is not a problem</td>
<td>31.8</td>
</tr>
<tr>
<td>Public transport is satisfactory</td>
<td>65.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green spaces are satisfactory</td>
<td>74.7</td>
</tr>
<tr>
<td>Cultural activities (shows, bars, and museums) are satisfactory</td>
<td>81.9</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>63.0</td>
</tr>
<tr>
<td>Most children have access to a good school</td>
<td>75.0</td>
</tr>
<tr>
<td>Lifelong learning opportunities are provided by local institutions</td>
<td>66.1</td>
</tr>
<tr>
<td>Businesses are creating new jobs</td>
<td>71.0</td>
</tr>
<tr>
<td>Minorities feel welcome</td>
<td>59.9</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>63.9</td>
</tr>
<tr>
<td>Corruption of city officials is not an issue of concern</td>
<td>83.0</td>
</tr>
<tr>
<td>Residents contribute to decision-making of local government</td>
<td>55.9</td>
</tr>
<tr>
<td>Residents provide feedback on local government projects</td>
<td>60.7</td>
</tr>
</tbody>
</table>
An online platform where residents can propose ideas has improved city life. CCTV cameras have made residents feel safer. 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. Structures

Online public access to city finances has reduced corruption. Online access to job listings has made it easier to find work. Technologies

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

Residents contribute to decision making of local government. Processing Identification Documents online has reduced waiting times.
An online platform where residents can propose ideas has improved city life. Online purchasing of tickets to shows and museums has made it easier to attend. Online public access to city finances has reduced corruption. Online services provided by the city has made it easier to start a new business. Online access to job listings has made it easier to find work. A website or App allows residents to easily give away unwanted items. Processing Identification Documents online has reduced waiting times. Online voting has increased participation. Information on local government decisions are easily accessible. Lifelong learning opportunities are provided by local institutions. IT skills are taught well in schools. Employment finding services are readily available. Green spaces are satisfactory. Recycling services are satisfactory. Public safety is not a problem. Free public well has improved access to city services. Air pollution is not a problem. Online reporting of city maintenance problems provides a speedy solution. Basic sanitation meets the needs of the poorest areas. A website or App allows residents to effectively monitor air pollution. Health services provision is satisfactory. A website or App allows residents to easily give away unwanted items. Recycling services are satisfactory. A website or App allows residents to effectively monitor air pollution. Basic sanitation meets the needs of the poorest areas. Online reporting of city maintenance problems provides a speedy solution. Basic sanitation meets the needs of the poorest areas. A website or App allows residents to effectively monitor air pollution. Basic sanitation meets the needs of the poorest areas. Online reporting of city maintenance problems provides a speedy solution. Basic sanitation meets the needs of the poorest areas. A website or App allows residents to effectively monitor air pollution. Basic sanitation meets the needs of the poorest areas.
New Delhi

BACKGROUND INFORMATION
City
- Population: 30,266,000
(UN World Urbanization Prospects)

SMART CITY RANKING
- 89
- Out of 118

SMART CITY RATING
- CC in 2020

FACTOR RATINGS
- CC STRUCTURES
- CC TECHNOLOGIES

GROUP 4
- All ratings range from AAA to D

ATTITUDES
- You are willing to concede personal data in order to improve traffic congestion: 78.0%
- You feel the availability of online information has increased your trust in authorities: 71.0%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 71.0%

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: 78.0%
- You feel the availability of online information has increased your trust in authorities: 71.0%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 71.0%

Health & Safety
- Basic sanitation meets the needs of the poorest areas: 63.2%
- Recycling services are satisfactory: 64.8%
- Public safety is not a problem: 75.1%
- Air pollution is not a problem: 65.9%
- Medical services provision is satisfactory: 67.9%
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 75.3%
- Health services: 71.0%
- Affordability housing: 75.3%
- Citizen engagement: 78.1%

Mobility
- Traffic congestion is not a problem: 65.9%
- Public transport is satisfactory: 67.9%
- Bicycle hiring has reduced congestion: 72.4%
- The city provides information on traffic congestion through mobile phones: 73.2%
- The city provides information on traffic congestion through mobile phones: 73.2%

Activities
- Green spaces are satisfactory: 67.9%
- Cultural activities (shows, bars, and museums) are satisfactory: 71.5%
- Attractions are attractive: 64.8%
- Attractions are attractive: 64.8%

Opportunities (Work & School)
- Employment finding services are readily available: 75.0%
- Most children have access to a good school: 72.4%
- Lifelong learning opportunities are provided by local institutions: 70.3%
- Most children have access to a good school: 72.4%

Governance
- Information on local government decisions are easily accessible: 75.0%
- Corruption of city officials is not an issue of concern: 74.9%
- Residents provide feedback on local government projects: 83.0%
- Processing identification documents online has reduced waiting times: 76.3%
### 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
- Health services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem
- Road congestion is not a problem
- Public transport is satisfactory
- Public transport is satisfactory

### Activities

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

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

CCTV cameras has made residents feel safer.

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

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

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

Air pollution is not a problem.

Public safety is not a problem.

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

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

Processing Identification Documents online has reduced waiting times.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

Online access to city finances has reduced corruption.

Online reporting of city maintenance problems provides a speedy solution.

Bicycle sharing Apps have reduced congestion.

Online public access to job information has increased your trust in authorities.

The city provides information on traffic congestion through mobile phones.

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

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

Green spaces are satisfactory.

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

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

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.

Processing Identification Documents online has reduced waiting times.

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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.

### 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 effectively monitor air pollution
- The city provides information on traffic congestion through mobile phones
- Online purchasing of tickets to shows and museums has made it easier to attend cultural activities (shows, bars, and museums)
- The city has made residents feel safer
- The current internet speed and reliability meet connectivity needs
- Processing Identification Documents online has reduced waiting times
- Free public wifi has improved access to city services
- Public safety is not a problem
- Air pollution is not a problem
- Basic sanitation meets the needs of the poorest areas
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to effectively monitor air pollution
- The city provides information on traffic congestion through mobile phones
- Online purchasing of tickets to shows and museums has made it easier to attend cultural activities (shows, bars, and museums)
- The city has made residents feel safer
- The current internet speed and reliability meet connectivity needs
- Processing Identification Documents online has reduced waiting times
- Free public wifi has improved access to city services
- Public safety is not a problem
- Air pollution is not a problem
- Basic sanitation meets the needs of the poorest areas
Online public access to city finances has reduced corruption. An online platform where residents can propose ideas has improved city life.

Opportunities (Work & School)

- Online purchasing of tickets to shows and museums has made it easier to attend performances and cultural events.
- Online access to job listings has made it easier to find work.
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem.
- Arranging medical appointments online has improved access to healthcare services.
- Recycling services are satisfactory.
- 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.
- Public transport is satisfactory.
- Affordable housing.
- Safety and security.
- Unemployment.
- Public transport.
- Health services.
- Social mobility.
- Road congestion.
- Air pollution.
- School education.
- Fulfilling employment.
- Basic amenities.
- Corruption.
- Citizen engagement.
- Green spaces.
- Recycling.

Attitudes

- You are willing to provide 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 city provides information on traffic congestion through mobile phones. Online scheduling and ticket sales have made public transport easier to use. Bicycle sharing has reduced congestion. The city provides information on traffic congestion through mobile phones. Online voting has increased participation.

GNI per capita (PPP $)

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>35,100</td>
<td>35,600</td>
<td>36,100</td>
<td>36,600</td>
</tr>
</tbody>
</table>

Average years of schooling:

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>12.6</td>
<td>12.8</td>
<td>13.0</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Expected years of schooling:

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>18.1</td>
<td>18.4</td>
<td>18.7</td>
<td>19.0</td>
</tr>
</tbody>
</table>

Life expectancy at Birth:

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>79.8</td>
<td>80.2</td>
<td>80.6</td>
<td>81.0</td>
</tr>
</tbody>
</table>

GDP per capita (PPP $): 56,200, 57,800, 59,400, 61,000.
Smart City Index 2021

Paris

**BACKGROUND INFORMATION**

![Map of Paris](image)

**City**
- Population: 9,850,000
- (Eurostat)

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.887</td>
<td>0.890</td>
<td>0.891</td>
<td>0.901</td>
<td>+0.010</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>15.6</td>
<td>15.5</td>
<td>16.5</td>
<td>16.6</td>
<td>+0.1</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
<td>11.5</td>
<td>+0.1</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>38,926</td>
<td>39,935</td>
<td>40,511</td>
<td>47,173</td>
<td>+6,662</td>
</tr>
</tbody>
</table>

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion: 11.4%
- You are comfortable with face recognition technologies to lower crime: 15.6%
- You feel the availability of online information has increased your trust in authorities: 16.6%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 17.5%
- The proportion of those who also answered the corresponding survey questions low: 17.0%
- The Alignment - the proportion of those who also answered the corresponding survey questions low: 16.6%
- Strong Alignment implies that these areas also demand priority attention.

**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 who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

**LEGEND:**
- MIN
- MEAN
- GROUP MIN
- GROUP MEAN

**SMART CITY RANKING**
- 61 out of 118

**SMART CITY RATING**
- B
- B in 2020

**FACTOR RATINGS**
- CCC
  - STRUCTURES: BB
  - TECHNOLOGIES: GG

**GROUP**
- 2

All ratings range from AAA to D

---

**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 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 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

---

**Smart City Index 2021**

**Country**

- **Paris**
  - Rank: 61
  - Out of 118
  - 2016: 38,926
  - 2017: 39,935
  - 2018: 40,511
  - 2019: 47,173
  - 1 yr change: +6,662

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**Additional Information**

- **GNI per capita (PPP $)**
  - 2016: 9,850,000
  - 2017: 9,850,000
  - 2018: 9,850,000
  - 2019: 9,850,000

- **Population**
  - 2016: 9,850,000
  - 2017: 9,850,000
  - 2018: 9,850,000
  - 2019: 9,850,000
Online access to job listings has made it easier to find work.

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

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

Residents contribute to decision making of local government.

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.

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.

Residents provide feedback on local government projects.

Corruption of city officials is not an issue of concern.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

Online access to city finances has reduced corruption.

Online reporting of city maintenance problems provides a speedy solution.

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

Basic sanitation meets the needs of the poorest areas.

Online reporting of city maintenance problems provides a speedy solution.

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

Basic amenities.

Recycling.

Free public wifi has improved access to city services.

Recycling.

Free public wifi has improved access to city services.

Recycling.

Free public wifi has improved access to city services.

Recycling.

Free public wifi has improved access to city services.

Recycling.
Health & Safety

GROUP MAX
16.8
16.8
CCTV cameras has made residents feel safer

Opportunities (Work & School)
70.6
68.5 44.8
MEAN
An online platform where residents can propose ideas has improved city life
Online public access to city finances has reduced corruption
Online access to job listings has made it easier to find work

Governance

Residents contribute to decision making of local government
Public safety is not a problem Free public wifi has improved access to city services

Public transport is satisfactory Apps that direct you to an available parking space have reduced journey time

Minorities feel welcome
Businesses are creating new jobs...
Smart City Index 2021

**Rabat**

**Background Information**
- Population: 1,880,000
- (UN World Urbanization Prospects)

**Structures**
- HDI: 0.669 in 2016, 0.675 in 2017, 0.675 in 2018, 0.686 in 2019, +0.010
- Life expectancy at Birth: 76.0 in 2016, 76.2 in 2017, 76.5 in 2018, 76.7 in 2019, +0.2
- Mean years of schooling: 5.4 in 2016, 5.5 in 2017, 5.5 in 2018, 5.6 in 2019, +0.1

**Technologies**
- Unemployment: 63.3% in 2019
- Health services: 57.7% in 2019
- Corruption: 47.1% in 2019
- School education: 40.1% in 2019
- Security: 37.4% in 2019
- Fulfilling employment: 28.6% in 2019
- Road congestion: 25.4% in 2019
- Public transport: 23.4% in 2019
- Air pollution: 20.3% in 2019
- Basic amenities: 17.9% in 2019
- Green spaces: 16.1% in 2019
- Citizen engagement: 13.2% in 2019
- Recycling: 6.9% in 2019

**Attitudes**
- You are willing to concede personal data in order to improve traffic congestion: 58.8% in 2019, 81.9% in 2018
- You feel the availability of online information has increased your trust in authorities: 64.6% in 2019, 53.2% in 2018
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 53.2% in 2019, 45.7% in 2018

**Priorities**
- Unemployment: 37.4%
- Health services: 28.6%
- Corruption: 20.3%
- School education: 17.9%
- Security: 16.1%
- Fulfilling employment: 13.2%
- Road congestion: 10.0%
- Public transport: 9.9%
- Air pollution: 7.9%
- Basic amenities: 7.6%
- Green spaces: 6.9%
- Citizen engagement: 6.4%
- Recycling: 5.7%

**Opportunities (Work & School)**
- Online access to job listings has made it easier to find work: 64.4% in 2019, 52.6% in 2018
- IT skills are taught well in schools: 54.6% in 2019, 54.4% in 2018
- Online services provided by the city has made it easier to start a new business: 65.3% in 2019, 64.6% in 2018

**Governance**
- Online public access to city finances has reduced corruption: 48.0% in 2019, 40.8% in 2018
- Online voting has increased participation: 45.7% in 2019, 44.7% in 2018
- An online platform where residents can propose ideas has improved city life: 60.2% in 2019, 59.3% in 2018
- Processing identification documents online has reduced waiting times: 46.1% in 2019, 46.0% in 2018

**Social Mobility**
- Most children have access to a good school: 65.3% in 2019, 64.6% in 2018
- IT skills are taught well in schools: 54.6% in 2019, 54.4% in 2018
- Online services provided by the city has made it easier to start a new business: 65.3% in 2019, 64.6% in 2018
- The current internet speed and reliability meet connectivity needs: 48.1% in 2019, 47.1% in 2018

**Public Safety**
- Public safety is not a problem: 67.7% in 2019, 67.5% in 2018
- Air pollution is not a problem: 76.0% in 2019, 76.2% in 2018
- Basic sanitation meets the needs of the poorest areas: 46.1% in 2019, 45.7% in 2018
- Online reporting of city maintenance problems provides a speedy solution: 46.1% in 2019, 45.7% in 2018

**Housing**
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 76.0% in 2019, 75.8% in 2018
- Arranging medical appointments online has improved access: 76.0% in 2019, 75.8% in 2018
- Medical services provision is satisfactory: 65.3% in 2019, 64.6% in 2018
- A website or app allows residents to effectively monitor air pollution: 54.6% in 2019, 54.4% in 2018

**Transport**
- Traffic congestion is not a problem: 76.0% in 2019, 75.8% in 2018
- Car-sharing Apps have reduced congestion: 52.6% in 2019, 52.0% in 2018
- Bicycle hiring has reduced congestion: 38.5% in 2019, 38.0% in 2018
- The city provides information on traffic congestion through mobile phones: 65.8% in 2019, 64.6% in 2018
- Mobility services have reduced travel time: 48.1% in 2019, 47.1% in 2018

**Health & Safety**
- Basic sanitation meets the needs of the poorest areas: 47.4% in 2019, 46.8% in 2018
- Recycling services are satisfactory: 46.5% in 2019, 46.1% in 2018
- Air pollution is not a problem: 45.9% in 2019, 45.7% in 2018
- Medical services provision is satisfactory: 40.2% in 2019, 40.0% in 2018
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 32.8% in 2019, 32.6% in 2018
- Public transport is satisfactory: 50.8% in 2019, 50.6% in 2018
- Green spaces are satisfactory: 68.3% in 2019, 68.1% in 2018
- Cultural activities (shows, bars, and museums) are satisfactory: 71.0% in 2019, 70.8% in 2018
- Employment finding services are readily available: 40.6% in 2019, 40.2% in 2018
- Most children have access to a good school: 46.2% in 2019, 46.0% in 2018
- Lifelong learning opportunities are provided by local institutions: 49.9% in 2019, 49.7% in 2018
- Businesses are creating new jobs: 44.0% in 2019, 43.8% in 2018
- Minorities feel welcome: 59.3% in 2019, 59.1% in 2018
- Information on local government decisions are easily accessible: 55.4% in 2019, 55.0% in 2018
- Corruption of city officials is not an issue of concern: 54.6% in 2019, 54.4% in 2018
- Residents provide feedback on local government projects: 46.1% in 2019, 46.0% in 2018
- Ministries are well connected: 44.0% in 2019, 43.8% in 2018
- Online voting has increased participation: 40.5% in 2019, 40.0% in 2018
- An online platform where residents can propose ideas has improved city life: 60.2% in 2019, 59.3% in 2018
- Processing identification documents online has reduced waiting times: 46.1% in 2019, 46.0% in 2018
Rio de Janeiro

**BACKGROUND INFORMATION**

**City**
- **Population:** 13,460,000
- **(UN World Urbanization Prospects)**

**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

**PRIORITY AREAS**
- Health services
- Security
- Public transport
- Affordable housing
- Social mobility
- Air pollution
- Road congestion
- Parking
- Recycling
- Green spaces
- Citizen engagement

**TECHNOLOGIES**
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to effectively monitor air pollution
- A website or App allows residents to easily give away unwanted items

**GROUP**
- **4**

**SMART CITY RATING**
- **D**
- **C in 2020**

**SMART CITY RANKING**
- **118**
- **Out of 118**

**MANUFACTURING**
- **52.2**

**HEALTH & SAFETY**
- **GROUP MAX**
- **76.1**
- **CITY**
- **50.6**

**ACTIVITIES**
- **7.8**

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

**BACKGROUND INFORMATION**

**Country**
- **HDI**
- **2016:** 0.767
- **2017:** 0.760
- **2018:** 0.761
- **2019:** 0.765
- **1 yr change:** +0.004

**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)**
- Education 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

**Group**
- **4**

All ratings range from AAA to D
CCTV cameras has made residents feel safer.

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

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

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

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

Online public access to city finances has reduced corruption.

Residents contribute to decision making of local government.

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.

Public safety is not a problem.

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

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

Processing Identification Documents online has reduced waiting times.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

Employment finding services are readily available.

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.

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)
Health & Safety
Online public access to city finances has reduced corruption
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 access to job listings has made it easier to find work

Activities
Residents contribute to decision making of local government
Residents provide feedback on local government projects

Opportunities (Work & School)
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

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

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

CCTV cameras has made residents feel safer.

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

Online public access to city finances has reduced corruption.

Residents contribute to decision making of local government.

Free public wifi has improved access to city services.

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

Online voting has increased participation.

Online reporting of city maintenance problems provides a speedy solution.

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

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

Online access to city finances has reduced corruption.

Online voting has increased participation.

Basic sanitation meets the needs of the poorest areas.

Online reporting of city maintenance problems provides a speedy solution.

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

Online voting has increased participation.

Online reporting of city maintenance problems provides a speedy solution.

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Online reporting of city maintenance problems provides a speedy solution.

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

Online voting has increased participation.

Basic sanitation meets the needs of the poorest areas.
San Francisco

BACKGROUND INFORMATION

**City**
- Population: 3,310,000
  - (UN World Urbanization Prospects)

**Country**

- 2016: 0.919
- 2017: 0.919
- 2018: 0.920
- 2019: 0.926
- 1 yr change: +0.006

**ATTITUDES**

- You feel the availability of online information has increased your trust in authorities: 49.0%
- You are willing to concede personal data in order to improve traffic congestion: 21.4%
- You are comfortable with face recognition technologies to lower crime: 21.9%
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions): 60.1%

**PRIORITY AREAS**

- Affordable housing: 48.3%
- Health services: 21.9%
- Unemployment: 21.4%
- School education: 22.3%
- Public transport: 22.9%
- Corruption: 29.7%
- Fulfilling employment: 23.8%
- Air pollution: 22.9%
- Basic amenities: 21.9%
- Social mobility: 21.9%
- Recycling: 13.6%
- Green spaces: 11.7%
- Citizen engagement: 11.0%

**Heath & Safety**
- Basic sanitation meets the needs of the poorest areas: 39.4%
- Recycling services are satisfactory: 65.3%
- Public safety is not a problem: 36.0%
- Air pollution is not a problem: 43.6%
- Medical services provision is satisfactory: 58.4%
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 18.4%

**Mobility**
- Traffic congestion is not a problem: 22.3%
- Public transport is satisfactory: 47.9%

**Activities**
- Green spaces are satisfactory: 64.7%
- Cultural activities (shows, bars, and museums) are satisfactory: 78.0%

**Opportunities (Work & School)**
- Employment finding services are readily available: 61.2%
- Most children have access to a good school: 51.7%
- Lifelong learning opportunities are provided by local institutions: 61.6%
- Businesses are creating new jobs: 66.5%
- Minorities feel welcome: 62.0%

**Governance**
- Information on local government decisions are easily accessible: 62.7%
- Corruption of city officials is not an issue of concern: 42.1%
- Residents contribute to decision making of local government: 54.1%
- Residents provide feedback on local government projects: 62.7%

**Score**
- Health & Safety: 39.4
- Mobility: 22.3
- Activities: 64.7
- Opportunities (Work & School): 61.2
- Governance: 62.7

**Technologies**

- Online reporting of city maintenance problems provides a speedy solution: 41.6%
- A website or App allows residents to effectively monitor air pollution: 46.7%
- Arranging medical appointments online has improved access: 64.3%
- The city provides information on traffic congestion through mobile phones: 53.5%
- Online purchasing of tickets to shows and museums has made it easier to attend: 71.8%

**Country**

- GNI per capita (PPP $)
  - 2016: 10,631
  - 2017: 10,646
  - 2018: 10,666
  - 2019: 10,686

**Group**

- 2

**All ratings range from AAA to D**

**Smart City Index 2021**
### San José

**SMART CITY RANKING**

109 out of 118

**SMART CITY RATING**

C (not in 2020)

**BACKGROUND INFORMATION**

- **Country**: San José
- **Population**: 1,400,000

**City**

- **Mean years of schooling**: 7.5%
- **Expected years of schooling**: 12.5%
- **Mean years of schooling**: 15.0%
- **GNI per capita (PPP $)**: 52.5%
- **Life expectancy at Birth**: 73.3%
- **Mean years of schooling**: 52.5%
- **Mean years of schooling**: 52.5%
- **Mean years of schooling**: 52.5%

**ATTITUDES**

- **You are willing to concede personal data in order to improve traffic congestion**: 12.5%
- **You feel the availability of online information has increased your trust in authorities**: 15.0%
- **You are comfortable with face recognition technologies to lower crime**: 15.8%
- **You are willing to concede personal data in order to improve traffic congestion**: 16.7%

**PRIORITY AREAS**

- **Health & Safety**
- **Opportunities (Work & School)**
- **Activities**
- **Mobility**
- **Basic Amenities**
- **Public Transport**
- **Green Spaces**
- **Corruption**
- **Safety**
- **Security**

**TECHNOLOGIES**

- **Health & Safety**
- **Opportunities (Work & School)**
- **Activities**
- **Mobility**
- **Basic Amenities**
- **Public Transport**
- **Green Spaces**
- **Corruption**
- **Safety**
- **Security**

**GROUP**

3 (not in 2020)

All ratings range from AAA to D

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**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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**Online platform where residents can propose ideas has improved city life**

**Opportunities (Work & School)**

- Online access to job listings has made it easier to find work
- Online services provided by the city has made it easier to start a new business

**Activities**

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

**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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**Health & Safety**

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to effectively monitor air pollution

**Opportunities (Work & School)**

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

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

**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
**Background Information**

**City**
- Population: 6,770,000
- **(UN World Urbanization Prospects)**

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
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<td>HDI</td>
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<td>79.9</td>
<td>80.0</td>
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<td>Expected years of schooling</td>
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<tr>
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<td>10.4</td>
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<td>+0.3</td>
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<td>GNI per capita (PPP $)</td>
<td>21,776</td>
<td>21,415</td>
<td>21,972</td>
<td>23,261</td>
<td>+1,289</td>
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</table>

**Structures**

1. **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

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

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

4. **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

5. **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**

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

2. **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 for public transport has made it easier to use
   - The city provides information on traffic congestion through mobile phones

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

4. **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

5. **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

**Group 3**

All ratings range from AAA to D

**Smart City Index 2021**
Health & Safety

CCTV cameras has made residents feel safer

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

Governance

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

ATTITUDES

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)

SMART CITY RATING

D

C in 2020

TECHNOLOGIES

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

Online reporting of city maintenance problems provides a speedy solution

Health & Safety

A website or App allows residents to effectively monitor air pollution

Bicycle hiring has reduced congestion

Security

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

Online reporting of city maintenance problems provides a speedy solution

Activities

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

Basic sanitation meets the needs of the poorest areas

Online accessing has made it easier to attend cultural activities (shows, bars, and museums)

Corruption of city officials is not an issue of concern

Information on local government decisions are easily accessible

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)

SMART CITY RANKING

117

Out of 118

Bicycle sharing has reduced congestion

The city provides information on traffic congestion through mobile phones

Online public access to city finances has reduced corruption

A website or App allows residents to provide feedback on local government projects

Traffic congestion is not a problem

Employment finding services are readily available

The current internet speed and reliability meet connectivity needs

Free public wifi has improved access to city services

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)

GNI per capita (PPP $)

Population

Mean years of schooling

Expected years of schooling

Life expectancy at Birth

HDI

Countries are compared on the basis of four key human development indicators: life expectancy, mean years of schooling, expected years of schooling, and gross national income (GNI) per capita.
Online access to job listings has made it easier to find work. CCTV cameras have made residents feel safer in 2017.

An online platform where residents can propose ideas has improved city life. Online public access to city finances has reduced corruption.

Opportunities (Work & School) - Online purchasing of tickets to shows and museums has made it easier to attend shows and museums. Lifelong learning opportunities are provided by local institutions. Most children have access to a good school. IT skills are taught well in schools.

Activities - Public transport is satisfactory. Green spaces are satisfactory. Cultural activities (shows, bars, and museums) are satisfactory.

Health & Safety - Public transport is satisfactory. Public safety is not a problem. Free public well has improved access to city services. Online reporting of city maintenance problems provides a speedy solution.

Mobility - Car-sharing Apps have reduced congestion. Bike-sharing Apps have reduced congestion. Online scheduling and ticket sales have made public transport easier to use. Bike-sharing Apps have reduced congestion.

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.
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.

### Scholarly highlights

**Health & Safety**

- Basic sanitation meets the needs of the poorest areas: 72.1% of respondents agree or strongly agree.
- Recycling services are satisfactory: 71.0% of respondents agree or strongly agree.
- Public safety is not a problem: 63.3% of respondents agree or strongly agree.
- Medical services provision is satisfactory: 77.0% of respondents agree or strongly agree.
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 36.9% of respondents agree or strongly agree.

**Mobility**

- Traffic congestion is not a problem: 23.3% of respondents agree or strongly agree.
- Public transport is satisfactory: 72.0% of respondents agree or strongly agree.

**Activities**

- Green spaces are satisfactory: 55.2% of respondents agree or strongly agree.
- Cultural activities (shows, bars, and museums) are satisfactory: 89.9% of respondents agree or strongly agree.

**Opportunities (Work & School)**

- Employment finding services are readily available: 58.1% of respondents agree or strongly agree.
- Most children have access to a good school: 58.3% of respondents agree or strongly agree.
- Lifelong learning opportunities are provided by local institutions: 63.3% of respondents agree or strongly agree.
- Businesses are creating new jobs: 47.4% of respondents agree or strongly agree.
- Minorities feel welcome: 31.8% of respondents agree or strongly agree.

**Governance**

- Information on local government decisions are easily accessible: 60.4% of respondents agree or strongly agree.
- Corruption of city officials is not an issue of concern: 26.4% of respondents agree or strongly agree.
- Residents contribute to decision making of local government: 51.0% of respondents agree or strongly agree.
- Residents provide feedback on local government projects: 51.3% of respondents agree or strongly agree.
Online access to job listings has made it easier to find work.

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

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

CCTV cameras have made residents feel safer.

Online public access to city finances has reduced corruption.

Residents contribute to decision making of local government.

Public transport is satisfactory.

Online opportunities to find 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.

Public safety is not a problem.

Free public welfare has improved access to city services.

CCTV cameras have made residents feel safer.

Online public access to city finances has reduced corruption.

Processing Identification Documents online has reduced waiting times.

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.

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).

Residents are content with the city’s information on local government decisions being easily accessible.

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

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.

Processing Identification Documents online has reduced waiting times.

Corruption of city officials is not an issue of concern.

Information on local government decisions are easily accessible.

Most children have access to a good school.

IT skills are taught well in schools.

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.

Processing Identification Documents online has reduced waiting times.

Corruption of city officials is not an issue of concern.

Information on local government decisions are easily accessible.

Most children have access to a good school.

IT skills are taught well in schools.

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.

Processing Identification Documents online has reduced waiting times.

Corruption of city officials is not an issue of concern.

Information on local government decisions are easily accessible.
Health & Safety
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.

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

Opportunities (Work & School)
Online voting has increased participation.

Governance
Information on local government decisions are easily accessible.

Health & Safety
Online public access to city finances has reduced corruption.

Opportunities (Work & School)
An online platform where residents can propose ideas has improved city life.

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

Activities
Free public wifi has improved access to city services.

Opportunities (Work & School)
Processing Identification Documents online has reduced waiting times.

Opportunities (Work & School)
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.

The right hand section shows the % of respondents who selected each Priority Area as one of their top 5 priorities. The greater the priority for the city, the percentage of respondents per area, the higher the Alignment.

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 % of respondents who chose the Priority Area also demand priority attention.

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

Online platform where residents can propose ideas has improved city life
CCTV cameras has made residents feel safer

Opportunities (Work & School)
Online access to job listings has made it easier to find work

Online access to city finances has reduced corruption

Governance
Online public access to city finances has reduced corruption
Online voting has increased participation

All ratings range from AAA to D

Minorities feel welcome
Businesses are creating new jobs
Lifelong learning opportunities are provided by local institutions

Activities
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 conceded personal data in order to improve traffic congestion

Health & Safety
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 conceded personal data in order to improve traffic congestion

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

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

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

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

Activities
Online purchasing of tickets to shows and museums has made it easier to attend
Health & Safety
Governance
CCTV cameras has made residents feel safer
Online access to job listings has made it easier to find work

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

Structures
An online platform where residents can propose ideas has improved city life
Residents provide feedback on local government projects

Technologies
Opportunities (Work & School)
Lifelong learning opportunities are provided by local institutions
Most children have access to a good school

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

Mobility
Bicycle hiring has reduced congestion
The city provides information on traffic congestion through mobile phones

Smart City Index 2021
Health & Safety
Online purchasing of tickets to shows and museums has made it easier to attend
CCTV cameras has made residents feel safer

Governance
Processing Identification Documents online has reduced waiting times
Online public access to city finances has reduced corruption
Inforamtion on local government decisions are easily accessible

Opportunities (Work & School)
Online access to job listings has made it easier to find work
An online platform where residents can propose ideas has improved city life

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

ACTITUDES
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)

SMART CITY RANKING
79 out of 118

BACKGROUND INFORMATION
City
Population
5,470,000
(UN World Urbanization Prospects)

Country
HDI
2016
2017
2018
2019
1 y change

Life expectancy at Birth
71.8
72.1
72.4
72.6
+0.2

Expected years of schooling
15.0
15.5
16.5
16.0
-0.5

Mean years of schooling
11.8
12.0
12.0
12.2
+0.2

GNI per capita (PPP $)
24,096
24,472
25,036
26,157
+1,121

85.2
57.7
59.3
71.8
72.4
37.4
34.4
28.4
26.6
19.5
16.3
14.6
14.4
12.3

73 in 2020

All ratings range from AAA to D

Smart City Index 2021
An online platform where residents can propose ideas has improved city life. Online public access to city finances has reduced corruption. Online services provided by the city have made it easier to start a new business. CCTV cameras have made residents feel safer. Online access to job listings has made it easier to find work.

The proportion of day-to-day payment transactions that are non-cash (% of transactions)
- Residents contribute to decision making of local government
- Processing Identification Documents online has reduced waiting times
- Corruption of city officials is not an issue of concern
- Online voting has increased participation
- Information on local government decisions are easily accessible
- Lifelong learning opportunities are provided by local institutions
- Most children have access to a good school
- IT skills are taught well in schools
- Employment finding services are readily available
- 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
- Residents provide feedback on local government projects

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.935</td>
<td>0.937</td>
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<tr>
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<td>82.7</td>
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<tr>
<td>Expected years of schooling</td>
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<td>18.6</td>
<td>18.8</td>
<td>19.5</td>
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<td>Mean years of schooling</td>
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<td>12.4</td>
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<td>47,398</td>
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<thead>
<tr>
<th>HEALTH &amp; SAFETY</th>
<th>STRUCTURES</th>
<th>TECHNOLOGIES</th>
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<tbody>
<tr>
<td>Health &amp; Safety</td>
<td>Basic sanitation meets the needs of the poorest areas</td>
<td>Health &amp; Safety</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>Recycling services are satisfactory</td>
<td>A website or App allows residents to easily give away unwanted items</td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>Air pollution is not a problem</td>
<td>Free public service has improved access to city services</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>Public safety is not a problem</td>
<td>CCTV cameras have made residents feel safer</td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>Medical services provision is satisfactory</td>
<td>A website or App allows residents to effectively monitor air pollution</td>
</tr>
<tr>
<td>Finding housing with rent equal to 30% or less of a monthly salary is not a problem</td>
<td>Mobility</td>
<td>Arranging medical appointments online has improved access</td>
</tr>
<tr>
<td>Traffic congestion is not a problem</td>
<td>Mobility</td>
<td>Car-sharing Apps have reduced congestion</td>
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<tr>
<td>Public transport is satisfactory</td>
<td>Public transport is satisfactory</td>
<td>Apps that direct you to an available parking space have reduced journey time</td>
</tr>
<tr>
<td>Activities</td>
<td>Green spaces are satisfactory</td>
<td>Bicycle hiring has reduced congestion</td>
</tr>
<tr>
<td>Cultural activities (shows, bars, and museums) are satisfactory</td>
<td>Activities</td>
<td>Online scheduling and ticket sales have made public transport easier to use</td>
</tr>
<tr>
<td>Opportunities (Work &amp; School)</td>
<td>Employment finding services are readily available</td>
<td>The city provides information on traffic congestion through mobile phones</td>
</tr>
<tr>
<td>Most children have access to a good school</td>
<td>Opportunities (Work &amp; School)</td>
<td>Online access to job listings has made it easier to find work</td>
</tr>
<tr>
<td>Lifelong learning opportunities are provided by local institutions</td>
<td>Online access to city finances has reduced corruption</td>
<td></td>
</tr>
<tr>
<td>Businesses are creating new jobs</td>
<td>IT skills are taught well in schools</td>
<td></td>
</tr>
<tr>
<td>Minorities feel welcome</td>
<td>Online services provided by the city have made it easier to start a new business</td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>Information on local government decisions are easily accessible</td>
<td>The current internet speed and reliability meet connectivity needs</td>
</tr>
<tr>
<td>Corruption of city officials is not an issue of concern</td>
<td>Corruption of city officials is not an issue of concern</td>
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<tr>
<td>Residents provide feedback on local government projects</td>
<td>Residents provide feedback on local government projects</td>
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Stockholm

<table>
<thead>
<tr>
<th>BACKGROUND INFORMATION</th>
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<tbody>
<tr>
<td>City</td>
</tr>
<tr>
<td>Population</td>
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<tr>
<td>(Eurostat)</td>
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<table>
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<tr>
<th>SMART CITY RATING</th>
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<tbody>
<tr>
<td>BBB</td>
</tr>
<tr>
<td>A in 2020</td>
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</table>

<table>
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<tr>
<th>FACTOR RATINGS</th>
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<tbody>
<tr>
<td>BBB</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>STRUCTURES</td>
</tr>
<tr>
<td>BBB</td>
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<tr>
<td>TECHNOLOGIES</td>
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<table>
<thead>
<tr>
<th>GROUP</th>
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<tbody>
<tr>
<td>1</td>
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</table>

All ratings range from AAA to D

<table>
<thead>
<tr>
<th>ATTITUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>You are willing to consent personal data in order to improve traffic congestion</td>
</tr>
<tr>
<td>You feel the availability of online information has increased your trust in authorities</td>
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</tbody>
</table>
| The proportion of day-to-day payment transactions that are non-cash (% of transactions)

<table>
<thead>
<tr>
<th>LEGEND</th>
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<tbody>
<tr>
<td>GROUP</td>
</tr>
<tr>
<td>MEAN</td>
</tr>
<tr>
<td>BBB</td>
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</table>

<table>
<thead>
<tr>
<th>SMART CITY INDEX 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>117</td>
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</table>

Smart City Index 2021
Online access to job listings has made it easier to find work.

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

Online public access to city finances has reduced corruption.
CCTV cameras has made residents feel safer.

Online services provided by the city has made it easier to start a new business.
An online platform where residents can propose ideas has improved city life.
Processing Identification Documents online has reduced waiting times.
Taipei City

BACKGROUND INFORMATION

City
Population: 2,720,000
(UN World Urbanization Prospects)

BACKGROUND INFORMATION

Country

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

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
Health 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

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 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

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

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

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

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

Online public access to city finances has reduced corruption.

CCTV cameras has made residents feel safer.

Activities
54.3

GROUP MAX
2018

All ratings range from AAA to D
Online services provided by the city have made it easier to start a new business. CCTV cameras have made residents feel safer. Opportunities (Work & School) Online access to job listings has made it easier to find work. Online purchasing of tickets to shows and museums has made it easier to attend. Online public access to city finances has reduced corruption. An online platform where residents can propose ideas has improved city life. Residents contribute to decision-making of local government projects.

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
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<td>0.904</td>
<td>0.906</td>
<td>0.919</td>
<td>+0.013</td>
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<tr>
<td>Life expectancy at birth</td>
<td>82.5</td>
<td>82.7</td>
<td>82.8</td>
<td>83.0</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
<td>15.9</td>
<td>16.0</td>
<td>16.0</td>
<td>16.2</td>
<td>+0.0</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>13.0</td>
<td>13.0</td>
<td>13.0</td>
<td>13.0</td>
<td>+0.0</td>
</tr>
<tr>
<td>GNI per capita (PPP $)</td>
<td>32,428</td>
<td>32,860</td>
<td>33,850</td>
<td>40,187</td>
<td>+6,537</td>
</tr>
</tbody>
</table>

**Structures**

- **Health & Safety**
  - Basic sanitation meets the needs of the poorest areas: 48.8
  - Recycling services are satisfactory: 60.8
  - Public safety is not a problem: 49.9
  - Air pollution is not a problem: 31.9
  - Medical services provision is satisfactory: 71.6
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem: 22.5

- **Mobility**
  - Traffic congestion is not a problem: 15.3
  - Public transport is satisfactory: 41.1

- **Activities**
  - Green spaces are satisfactory: 52.7
  - Cultural activities (shows, bars, and museums) are satisfactory: 60.8

- **Opportunities (Work & School)**
  - Employment finding services are readily available: 61.4
  - Most children have access to a good school: 66.1
  - Lifelong learning opportunities are provided by local institutions: 63.9
  - Businesses are creating new jobs: 67.1
  - Minorities feel welcome: 46.7

- **Governance**
  - Information on local government decisions are easily accessible: 59.0
  - Corruption of city officials is not an issue of concern: 39.8
  - Residents contribute to decision-making of local government: 43.7
  - Residents provide feedback on local government projects: 53.3

**Technologies**

- **Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution: 58.0
  - A website or App allows residents to easily give away unwanted items: 56.8
  - Free public Wi-Fi has improved access to city services: 58.8
  - CCTV cameras have made residents feel safer: 55.7
  - A website or App allows residents to effectively monitor air pollution: 36.9
  - Arranging medical appointments online has improved access: 80.0

- **Mobility**
  - Car-sharing Apps have reduced congestion: 40.0
  - Apps that direct you to an available parking space have reduced journey time: 47.1
  - Bicycle sharing has reduced congestion: 55.4
  - Online scheduling and ticket sales has made public transport easier to use: 62.7
  - The city provides information on traffic congestion through mobile phones: 52.5

- **Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend: 80.2

- **Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work: 69.6
  - IT skills are taught well in schools: 60.2
  - Online services provided by the city have made it easier to start a new business: 55.6
  - The current internet speed and reliability meet connectivity needs: 63.7

- **Governance**
  - Online public access to city finances has reduced corruption: 41.6
  - Online voting has increased participation: 44.8
  - An online platform where residents can propose ideas has improved city life: 52.4
  - Processing identification Documents online has reduced waiting times: 66.4
The Hague

BACKGROUND INFORMATION

City

Population: 770,000

(Eurostat)

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

Activities

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

Mobility

Online public access to city finances has reduced corruption

Recycling

Online voting has increased participation

Sustainability

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

TECHNOLOGIES

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)

The Hague

2018 City

MEAN

Opinions range from AAA to D

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDI</td>
<td>0.929</td>
<td>0.932</td>
<td>0.934</td>
<td>0.944</td>
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<td>82.1</td>
<td>82.3</td>
<td>+0.2</td>
</tr>
<tr>
<td>Expected years of schooling</td>
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<td>18.0</td>
<td>18.0</td>
<td>18.5</td>
<td>+0.5</td>
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<tr>
<td>Mean years of schooling</td>
<td>12.2</td>
<td>12.2</td>
<td>12.2</td>
<td>12.4</td>
<td>+0.1</td>
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<tr>
<td>GNI per capita (PPP $)</td>
<td>47,008</td>
<td>48,994</td>
<td>50,013</td>
<td>57,707</td>
<td>+7,694</td>
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</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

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)

All ratings range from AAA to D
The Smart City Index 2021 for Tianjin shows a technology rating of CCC, with a score of 63 in 2020. The index includes various factors such as Health & Safety, Mobility, and Technologies. For instance, in the Health & Safety category, online services have made it easier to start a new business, and online access to job listings has made it easier to find work. In Mobility, an online platform has improved city life. The index also includes activities, opportunities, and governance aspects, all of which have been improved by various technologies. The overall rating range is from AAA to D.
Health & Safety

Online services provided by the city has made it easier to start a new business
An online platform where residents can propose ideas has improved city life

Opportunities (Work & School)

Online purchasing of tickets to shows and museums has made it easier to attend
Online public access to city finances has reduced corruption

Mobility

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

Governance

Online public access to city finances has reduced corruption
Processing Identification Documents online has reduced waiting times
Online purchasing of tickets to shows and museums has made it easier to attend.

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

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

Online public access to city finances has reduced corruption.

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

Residents provide feedback on local government projects.

Residents contribute to decision making of local government.

Corruption of city officials is not an issue of concern.

Information on local government decisions are easily accessible.

The city provides information on traffic congestion through mobile phones.

Online reporting of city maintenance problems provides a speedy solution.

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

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

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

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

Medical services provision is satisfactory.

Online voting has increased participation.

Online public access to city finances has reduced corruption.

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

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

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

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

Online public access to city finances has reduced corruption.

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

Residents provide feedback on local government projects.

Residents contribute to decision making of local government.

Corruption of city officials is not an issue of concern.

Information on local government decisions are easily accessible.
Health & Safety

Opportunities (Work & School)

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

Mobility

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

TECHNOLOGIES

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

Structures

Online public access to city finances has reduced corruption.

Activities

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

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.

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

You are comfortable with face recognition technologies to lower crime.

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

Corruption of city officials is not an issue of concern.

Online voting has increased participation.

Information on local government decisions are easily accessible.

Lifelong learning opportunities are provided by local institutions.

Most children have access to a good school.

IT skills are taught well in schools.

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

Processing Identification Documents online has reduced waiting times.

CITY RATINGS

A in 2020

Background Information

Country

Population 2,985,000

(UN World Urbanization Prospects)

<table>
<thead>
<tr>
<th>Country</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>1 yr change</th>
</tr>
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<tbody>
<tr>
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<td>0.921</td>
<td>0.922</td>
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<tr>
<td>Life expectancy at Birth</td>
<td>82.1</td>
<td>82.2</td>
<td>82.3</td>
<td>82.4</td>
<td>+0.1</td>
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<td>13.3</td>
<td>13.3</td>
<td>13.3</td>
<td>13.4</td>
<td>+0.1</td>
</tr>
<tr>
<td>Mean years of schooling</td>
<td>20.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

GNI per capita (PPP $)

<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>58.5</td>
</tr>
<tr>
<td>Recycling services are satisfactory</td>
<td>80.0</td>
</tr>
<tr>
<td>Public safety is not a problem</td>
<td>52.8</td>
</tr>
<tr>
<td>Air pollution is not a problem</td>
<td>64.4</td>
</tr>
<tr>
<td>Medical services provision is satisfactory</td>
<td>20.5</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>25.7</td>
</tr>
<tr>
<td>Public transport is satisfactory</td>
<td>59.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green spaces are satisfactory</td>
<td>76.4</td>
</tr>
<tr>
<td>Cultural activities (shows, bars, and museums) are satisfactory</td>
<td>76.1</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>66.9</td>
</tr>
<tr>
<td>Most children have access to a good school</td>
<td>75.3</td>
</tr>
<tr>
<td>Lifelong learning opportunities are provided by local institutions</td>
<td>70.1</td>
</tr>
<tr>
<td>Businesses are creating new jobs</td>
<td>60.8</td>
</tr>
<tr>
<td>Minorities feel welcome</td>
<td>65.6</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>63.0</td>
</tr>
<tr>
<td>Corruption of city officials is not an issue of concern</td>
<td>46.6</td>
</tr>
<tr>
<td>Residents provide feedback on local government projects</td>
<td>56.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technologies</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online reporting of city maintenance problems provides a speedy solution</td>
<td>49.2</td>
</tr>
<tr>
<td>A website or App allows residents to easily give away unwanted items</td>
<td>57.8</td>
</tr>
<tr>
<td>Free public well has improved access to city services</td>
<td>61.7</td>
</tr>
<tr>
<td>CCTV cameras has made residents feel safer</td>
<td>46.9</td>
</tr>
<tr>
<td>A website or App allows residents to effectively monitor air pollution</td>
<td>39.0</td>
</tr>
<tr>
<td>Arranging medical appointments online has improved access</td>
<td>65.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transportation</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car-sharing Apps have reduced congestion</td>
<td>43.8</td>
</tr>
<tr>
<td>Apps that direct you to an available parking space have reduced journey time</td>
<td>37.8</td>
</tr>
<tr>
<td>Bicycle hiring has reduced congestion</td>
<td>47.1</td>
</tr>
<tr>
<td>Online scheduling and ticket sales has made public transport easier to use</td>
<td>57.8</td>
</tr>
<tr>
<td>The city provides information on traffic congestion through mobile phones</td>
<td>50.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment</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>73.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities (Work &amp; School)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online access to job listings has made it easier to find work</td>
<td>72.1</td>
</tr>
<tr>
<td>IT skills are taught well in schools</td>
<td>52.9</td>
</tr>
<tr>
<td>Online services provided by the city has made it easier to start a new business</td>
<td>51.1</td>
</tr>
<tr>
<td>The current internet speed and reliability meet connectivity needs</td>
<td>67.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online public access to city finances has reduced corruption</td>
<td>40.8</td>
</tr>
<tr>
<td>Online voting has increased participation</td>
<td>47.6</td>
</tr>
<tr>
<td>An online platform where residents can propose ideas has improved city life</td>
<td>43.7</td>
</tr>
<tr>
<td>Processing Identification Documents online has reduced waiting times</td>
<td>55.2</td>
</tr>
</tbody>
</table>
Online access to job listings has made it easier to find work.

Activities

- CCTV cameras has made residents feel safer

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

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

- Recycling has made it easier to be environmentally friendly

- Social mobility has improved

- Public transport has become more accessible

- Basic amenities have improved

Opportunities (Work & School)

- Lifelong learning opportunities are provided by local institutions

- Most children have access to a good school

- IT skills are taught well in schools

- Employment finding services are readily available

- Businesses are creating new jobs

- Most children have access to a good school

- 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

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

- Free public wifi has improved access to city services

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

- Recycling has made it easier to be environmentally friendly

- Public transport has become more accessible

- Basic amenities have improved

STRAPIES

- Most children have access to a good school

- IT skills are taught well in schools

- Employment finding services are readily available

- Businesses are creating new jobs

- Most children have access to a good school

- 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

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

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

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

CCTV cameras has made residents feel safer.

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

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.

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.

Residents provide feedback on local government projects.

Minorities feel welcome.

Businesses are creating new jobs.

The current internet speed and reliability meet connectivity needs.

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

The proportion of those who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

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.

All ratings range from AAA to D

55 in 2020

Minorities feel welcome

Businesses are creating new jobs

The current internet speed and reliability meet connectivity needs
Washington D.C.

BACKGROUND INFORMATION

City

Population: 5,320,000

(UN World Urbanization Prospects)

Country

2016
2017
2018
2019
1 yr change

HDI
0.919
0.919
0.920
0.926
+0.006

Life expectancy at Birth
78.9
78.9
78.9
78.9
+0.0

Expected years of schooling
16.3
16.3
16.3
16.3
+0.0

Mean years of schooling
13.4
13.4
13.4
13.4
+0.0

GNI per capita (PPP $)
54,443
55,351
56,140
63,826
+7,686

SMART CITY RANKING

35

Out of 118

BB

A in 2020

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

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 online transactions that are non-cash (% of transactions)

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

AFFORDANCE

Online public access to city finances has reduced corruption

Governance

Mobility

Health & Safety

Opportunities (Work & School)

Activities

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

Green spaces are satisfactory

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

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

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

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

Processing Identification Documents online has reduced waiting times

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

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

The city provides information on traffic congestion through mobile phones

The city has developed a website to allow residents to easily give away unwanted items

Online reporting of city maintenance problems provides a speedy solution

Online health checks have reduced the need for in-person visits

A website or App allows residents to effectively monitor air pollution

A website or App allows residents to access city services

Information on local government decisions are easily accessible

Most children have access to a good school

IT skills are taught well in schools

Employment finding services are readily available

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

Green spaces are satisfactory

Affordance

Online public access to city finances has reduced corruption

Governance

Opportunities (Work & School)

Activities

Health & Safety

Opportunities (Work & School)

Smart City Index 2021
Online access to job listings has made it easier to find work. An online platform where residents can propose ideas has improved city life. 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 cultural activities (shows, bars, and museums) are satisfactory. Green spaces are satisfactory. Competence of city officials is not an issue of concern. Most children have access to a good school. IT skills are taught well in schools. Basic amenities are satisfactory. 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. Processsing Identification Documents online has reduced waiting times.
CCTV cameras has made residents feel safer.

Online public access to city finances has reduced corruption.

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

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

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

Mobility
Traffic congestion is not a problem.

Structures
Green spaces are satisfactory.

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

Governance
Information on local government decisions are easily accessible.

Opportunities (Work & School)
Many children have access to a good school.

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.

Opportunities (Work & 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
Country
Population
1,760,000
(UN World Urbanization Prospects)

76.2
76.5
76.7
76.9
+0.2

13.9
13.9
13.9
14.0
+0.1

7.8
7.8
7.9
8.1
+0.3

14,311
15,212
16,127
16,057
-70

2016
2017
2018
2019
1 yr change

48.9%
43.3%
41.9%
41.7%
39.6%}

41.9%
43.3%
41.7%
33.4%
30.8%
29.6%
26.6%
26.4%
23.1%
15.6%
13.7%
9.3%
7.9%

3.8%
4.1%
4.5%
4.7%
6.1%
5.6%
5.2%
5.1%
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3.2%
2.5%
2.1%
1.7%
1%

5.2%
4.7%
4.5%
4.1%
3.8%
3.2%
2.5%
2.1%
1.7%
1%
0.6%
0.2%

91.6%
92.9%
87.9%
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Online services provided by the city have made it easier to start a new business. Online public access to city finances has reduced corruption.

CCTV cameras have made residents feel safer. 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.

An online platform where residents can propose ideas has improved city life. 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). 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 right hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions high. A strong Alignment implies that these areas also demand priority attention.