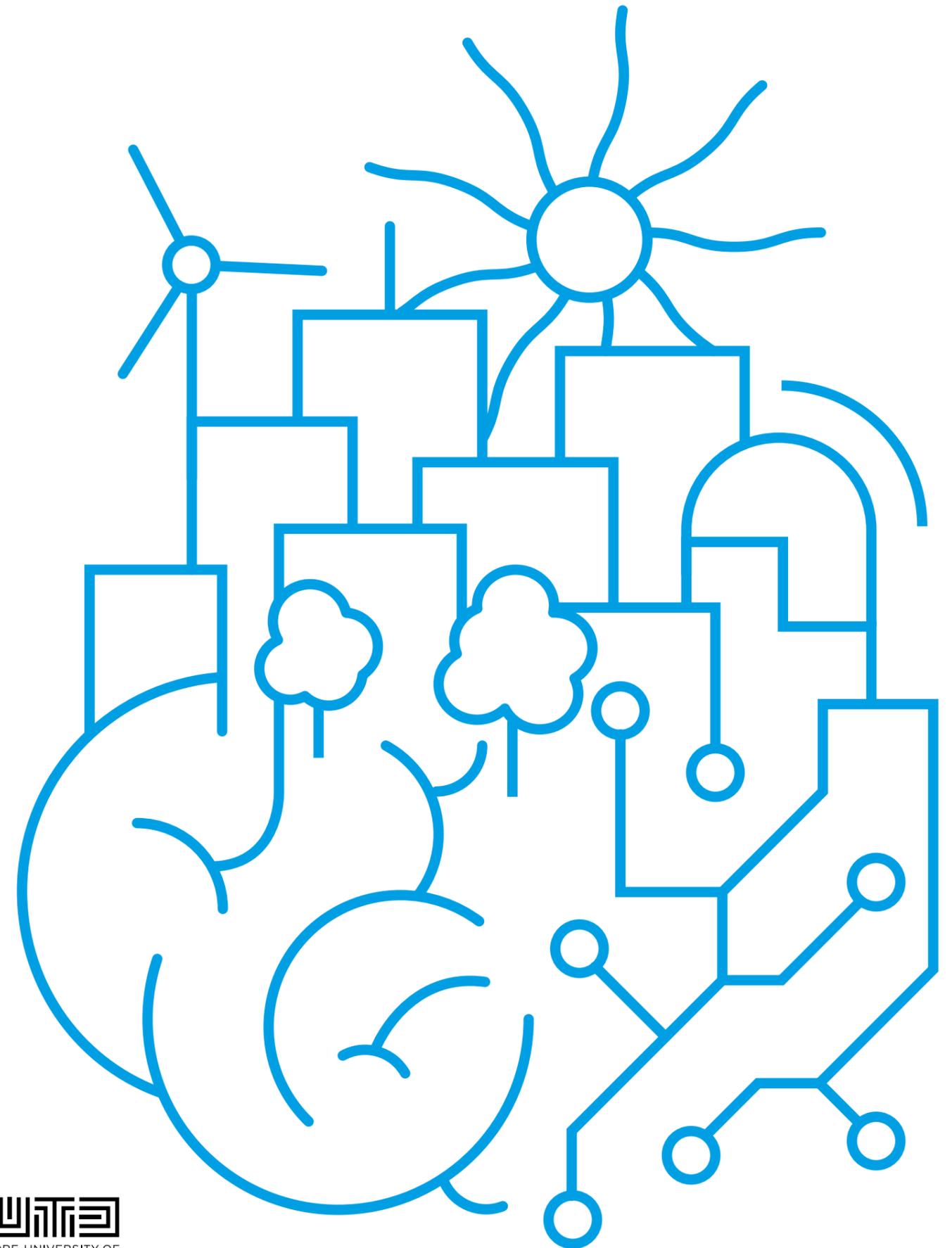


# Smart City Index 2020

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



A collaboration between:



*“A great city is that which has the greatest men and women.”*

**Walt Whitman**

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

**Plato**

# Preface

This is the second edition of the IMD-SUTD Smart City Index Report. Over the last twelve months, much has happened. Our view of cities in general, and of smart cities in particular, has been confronted to the reality of a sudden pandemic. At the time of writing this report (September 2020), it is still too early to draw the lessons of this experience. In a recent article<sup>1</sup>, Francis Fukuyama even expressed the view that it would take years to identify the deeper consequences of the current crisis: “Future historians will trace comparably large effects to the current coronavirus pandemic; the challenge is figuring them out ahead of time”.

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

*to the pandemic has pushed many cities to systematise the use of smart city tools more permanently, while staying alert and monitoring the risk of contagion.’*

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

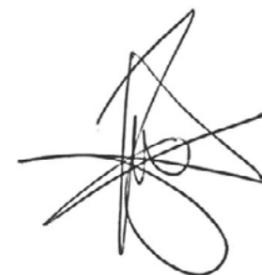
As stressed in last year’s SCI Report, it is the position of the authors of this report that smart cities will not generate their full potential unless priority attention is devoted to the necessary balance between the technological aspects of smart cities and their human aspects.

Since last year, and based on the very rich feedback received after the launch of the first edition of the SCI, improvements have been brought to the index methodology, as well as in the way main results are presented. Altogether, however, the approach has not changed: In line with previous and on-going efforts initiated and carried out by IMD’s World Competitiveness Center, the Smart City Index presented here remains a holistic attempt to capture the various

dimensions of how citizens could consider that their respective cities are becoming better cities by becoming smarter ones. Part of the SCI’s uniqueness is to rely first and foremost on the perceptions of those who live and work in the cities covered by the index, while providing a realistic recognition that not all cities start from the same level of development, nor with the same set of endowments and advantages. In SCI’s context, **a ‘smart city’ continues to be defined as an urban setting that applies technology to enhance the benefits and diminish the shortcomings of urbanization for its citizens.**

As for the first edition, this new SCI report is the result of a close cooperation between IMD and SUTD (Singapore University for Technology and Design), and benefitted from inputs by numerous experts and city specialists around the world, whom we want to thank most warmly.

Looking forward to more feedback and reactions to this second edition, it is our hope to continue to strengthen the visibility and relevance of the Smart City Index as a tool for action, and an instrument for the betterment of citizens’ lives in all parts of the world.



**Professor Arturo Bris**  
Director

IMD World Competitiveness Center



**Professor Chan Heng Chee**  
President

Lee Kuan Yew Centre for Innovative Cities



**Bruno Lanvin**  
President

IMD Smart City Observatory

<sup>1</sup> Foreign Affairs Magazine, July-August 2020

<sup>2</sup> ‘Cities responses to COVID’, OECD Centre for Entrepreneurship, SMEs, Regions and Cities (CFE) in collaboration with the OECD Working Party for Urban Policy and the OECD Champion Mayors Initiative for Inclusive Growth. <http://www.oecd.org/coronavirus/policy-responses/cities-policy-responses-fd1053ff/>, last consulted on 23 July 2020.

<sup>3</sup> See the introduction to this year’s report for details.



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## City Profiles

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Hong Kong.....	57	Rabat.....	93
Hyderabad.....	58	Rio de Janeiro.....	94
Jakarta.....	59	Riyadh.....	95
Kiev.....	60	Rome.....	96
Krakow.....	61	Rotterdam.....	97
Kuala Lumpur.....	62	San Francisco.....	98
Lagos.....	63	Santiago.....	99
Lisbon.....	64	São Paulo.....	100
London.....	65	Seattle.....	101
Los Angeles.....	66	Seoul.....	102
Lyon.....	67	Shanghai.....	103
Madrid.....	68	Shenzhen.....	104
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Manchester.....	70	Sofia.....	106
Manila.....	71	St. Petersburg.....	107
Marseille.....	72	Stockholm.....	108
Medan.....	73	Sydney.....	109
Medellin.....	74	Taipei City.....	110
Melbourne.....	75	Tallinn.....	111
Mexico City.....	76	Tel Aviv.....	112
Milan.....	77	The Hague.....	113
Montreal.....	78	Tianjin.....	114
Moscow.....	79	Tokyo.....	115
Mumbai.....	80	Toronto.....	116
Munich.....	81	Vancouver.....	117
Nairobi.....	82	Vienna.....	118
Nanjing.....	83	Warsaw.....	119
Newcastle.....	84	Washington D.C.....	120
New Delhi.....	85	Zaragoza.....	121
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# The IMD World Competitiveness Center

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:

<b>Professor Arturo Bris</b>	Director
<b>Christos Cabolis</b>	Chief Economist & Head of Operations
<b>Bruno Lanvin</b>	President, Smart City Observatory
<b>José Caballero</b>	Senior Economist
<b>Madeleine Hediger</b>	Data Research and Online Services Specialist
<b>Catherine Jobin</b>	Order and Sales Administrator
<b>William Milner</b>	Research Projects Associate Manager
<b>Marco Pistis</b>	Research Specialist
<b>Maryam Zargari</b>	Research Specialist



# City performance overview

## Alphabetical

City	Smart City Rank 2020	Change	Smart City Rating 2020	Smart City Rank 2019	Smart City Rating 2019
Abu Dhabi	42	▲ (+14)	BB	56	B
Abuja	107	▼ (-10)	D	97	D
Amsterdam	9	▲ (+2)	A	11	A
Ankara	57	▲ (+17)	B	74	CCC
Athens	99	▼ (-4)	C	95	C
Auckland	4	▲ (+2)	AA	6	A
Bangkok	71	▲ (+4)	CCC	75	CCC
Barcelona	49	▼ (-1)	BB	48	BB
Beijing	82	▼ (-22)	CC	60	B
Bengaluru	95	▼ (-16)	C	79	CC
Berlin	38	▲ (+1)	BBB	39	BBB
Bilbao	24	▼ (-15)	BBB	9	A
Birmingham	40	▲ (+12)	BBB	52	BB
Bogota	92	▲ (+6)	CC	98	D
Bologna	70	▼ (-52)	CCC	18	BBB
Boston	36	▼ (-4)	BBB	32	BBB
Bratislava	76	▲ (+8)	CCC	84	CC
Brisbane	14	▲ (+13)	A	27	BBB
Brussels	60	▲ (+4)	B	64	B
Bucharest	87	▼ (-2)	CC	85	CC
Budapest	77	▲ (+6)	CCC	83	CC
Buenos Aires	88	▼ (-1)	CC	87	CC
Busan	46	▲ (+4)	BB	50	BB
Cairo	106	▼ (-7)	D	99	D

City	Smart City Rank 2020	Change	Smart City Rating 2020	Smart City Rank 2019	Smart City Rating 2019
Cape Town	103	▼ (-10)	D	93	C
Chengdu	69	▼ (-11)	CCC	58	B
Chicago	41	▲ (+12)	BBB	53	BB
Chongqing	64	▼ (-22)	CCC	42	BB
Copenhagen	6	▼ (-1)	AA	5	AA
Denver	35	▼ (-2)	BBB	33	BBB
Dubai	43	▲ (+2)	BB	45	BB
Dublin	34	▼ (-4)	BBB	30	BBB
Dusseldorf	13	▼ (-3)	A	10	A
Geneva	7	▼ (-3)	AA	4	AA
Gothenburg	31	▼ (-3)	BBB	28	BBB
Guangzhou	68	▼ (-11)	CCC	57	B
Hamburg	22	new	A		
Hangzhou	65	▼ (-21)	CCC	44	BB
Hanoi	84	▼ (-18)	CC	66	CCC
Hanover	33	▼ (-7)	BBB	26	BBB
Helsinki	2	▲ (+6)	AA	8	A
Ho Chi Minh City	83	▼ (-18)	CC	65	CCC
Hong Kong	32	▲ (+5)	BBB	37	BBB
Hyderabad	85	▼ (-18)	CC	67	CCC
Jakarta	94	▼ (-13)	C	81	CC
Kiev	98	▼ (-6)	C	92	C
Krakov	58	▲ (+11)	B	69	CCC
Kuala Lumpur	54	▲ (+16)	B	70	CCC

City	Smart City Rank 2020	Change	Smart City Rating 2020	Smart City Rank 2019	Smart City Rating 2019
Lagos	109	▼ (-7)	D	102	D
Lisbon	75	▲ (+1)	CCC	76	CCC
London	15	▲ (+5)	A	20	BBB
Los Angeles	26	▲ (+9)	BBB	35	BBB
Lyon	51	▼ (-28)	BB	23	BBB
Madrid	45	▼ (-24)	BB	21	BBB
Makassar	96	▼ (-16)	C	80	CC
Manchester	17	new	A		
Manila	104	▼ (-10)	D	94	C
Marseille	78	new	CCC		
Medan	97	▼ (-15)	C	82	CC
Medellin	72	▲ (+19)	CCC	91	C
Melbourne	20	▲ (+4)	A	24	BBB
Mexico City	90	▼ (-2)	CC	88	CC
Milan	74	▼ (-52)	CCC	22	BBB
Montreal	21	▼ (-5)	A	16	A
Moscow	56	▲ (+16)	B	72	CCC
Mumbai	93	▼ (-15)	C	78	CC
Munich	11	new	A		
Nairobi	108	▼ (-8)	D	100	D
Nanjing	66	▼ (-11)	CCC	55	B
New Delhi	86	▼ (-18)	CC	68	CCC
New York	10	▲ (+28)	A	38	BBB
Newcastle	23	new	A		
Osaka	80	▼ (-17)	CCC	63	B
Oslo	5	▼ (-2)	AA	3	AA
Paris	61	▼ (-10)	B	51	BB
Philadelphia	52	▲ (+2)	BB	54	BB
Phoenix	39	new	BBB		
Prague	44	▼ (-25)	BB	19	BBB
Rabat	105	▼ (-4)	D	101	D

City	Smart City Rank 2020	Change	Smart City Rating 2020	Smart City Rank 2019	Smart City Rating 2019
Rio de Janeiro	102	▼ (-6)	C	96	C
Riyadh	53	▲ (+18)	B	71	CCC
Rome	101	▼ (-24)	C	77	CCC
Rotterdam	29	▲ (+7)	BBB	36	BBB
San Francisco	27	▼ (-15)	BBB	12	A
Santiago	91	▼ (-5)	CC	86	CC
Sao Paulo	100	▼ (-10)	C	90	CC
Seattle	37	▼ (-3)	BBB	34	BBB
Seoul	47	— (0)	BB	47	BB
Shanghai	81	▼ (-22)	CC	59	B
Shenzhen	67	▼ (-24)	CCC	43	BB
Singapore	1	— (0)	AAA	1	AAA
Sofia	89	— (0)	CC	89	CC
St. Petersburg	73	— (0)	CCC	73	CCC
Stockholm	16	▲ (+9)	A	25	BBB
Sydney	18	▼ (-4)	A	14	A
Taipei City	8	▼ (-1)	A	7	A
Tallinn	59	new	B		
Tel Aviv	50	▼ (-4)	BB	46	BB
The Hague	28	▲ (+1)	BBB	29	BBB
Tianjin	63	▼ (-22)	CCC	41	BB
Tokyo	79	▼ (-17)	CCC	62	B
Toronto	30	▼ (-15)	BBB	15	A
Vancouver	19	▼ (-6)	A	13	A
Vienna	25	▼ (-8)	BBB	17	BBB
Warsaw	55	▲ (+6)	B	61	B
Washington D.C.	12	▲ (+19)	A	31	BBB
Zaragoza	48	▲ (+1)	BB	49	BB
Zhuhai	62	▼ (-22)	CCC	40	BB
Zurich	3	▼ (-1)	AA	2	AAA

## By ranking

City	Smart City Rank 2020	Change	Smart City Rating 2020	Smart City Rank 2019	Smart City Rating 2019
Singapore	1	— (0)	AAA	1	AAA
Helsinki	2	▲ (+6)	AA	8	A
Zurich	3	▼ (-1)	AA	2	AAA
Auckland	4	▲ (+2)	AA	6	A
Oslo	5	▼ (-2)	AA	3	AA
Copenhagen	6	▼ (-1)	AA	5	AA
Geneva	7	▼ (-3)	AA	4	AA
Taipei City	8	▼ (-1)	A	7	A
Amsterdam	9	▲ (+2)	A	11	A
New York	10	▲ (+28)	A	38	BBB
Munich	11	new	A		
Washington D.C.	12	▲ (+19)	A	31	BBB
Dusseldorf	13	▼ (-3)	A	10	A
Brisbane	14	▲ (+13)	A	27	BBB
London	15	▲ (+5)	A	20	BBB
Stockholm	16	▲ (+9)	A	25	BBB
Manchester	17	new	A		
Sydney	18	▼ (-4)	A	14	A
Vancouver	19	▼ (-6)	A	13	A
Melbourne	20	▲ (+4)	A	24	BBB
Montreal	21	▼ (-5)	A	16	A
Hamburg	22	new	A		
Newcastle	23	new	A		
Bilbao	24	▼ (-15)	BBB	9	A
Vienna	25	▼ (-8)	BBB	17	BBB

City	Smart City Rank 2020	Change	Smart City Rating 2020	Smart City Rank 2019	Smart City Rating 2019
Los Angeles	26	▲ (+9)	BBB	35	BBB
San Francisco	27	▼ (-15)	BBB	12	A
The Hague	28	▲ (+1)	BBB	29	BBB
Rotterdam	29	▲ (+7)	BBB	36	BBB
Toronto	30	▼ (-15)	BBB	15	A
Gothenburg	31	▼ (-3)	BBB	28	BBB
Hong Kong	32	▲ (+5)	BBB	37	BBB
Hanover	33	▼ (-7)	BBB	26	BBB
Dublin	34	▼ (-4)	BBB	30	BBB
Denver	35	▼ (-2)	BBB	33	BBB
Boston	36	▼ (-4)	BBB	32	BBB
Seattle	37	▼ (-3)	BBB	34	BBB
Berlin	38	▲ (+1)	BBB	39	BBB
Phoenix	39	new	BBB		
Birmingham	40	▲ (+12)	BBB	52	BB
Chicago	41	▲ (+12)	BBB	53	BB
Abu Dhabi	42	▲ (+14)	BB	56	B
Dubai	43	▲ (+2)	BB	45	BB
Prague	44	▼ (-25)	BB	19	BBB
Madrid	45	▼ (-24)	BB	21	BBB
Busan	46	▲ (+4)	BB	50	BB
Seoul	47	— (0)	BB	47	BB
Zaragoza	48	▲ (+1)	BB	49	BB
Barcelona	49	▼ (-1)	BB	48	BB
Tel Aviv	50	▼ (-4)	BB	46	BB

City	Smart City Rank 2020	Change	Smart City Rating 2020	Smart City Rank 2019	Smart City Rating 2019
Lyon	51	▼ (-28)	BB	23	BBB
Philadelphia	52	▲ (+2)	BB	54	BB
Riyadh	53	▲ (+18)	B	71	CCC
Kuala Lumpur	54	▲ (+16)	B	70	CCC
Warsaw	55	▲ (+6)	B	61	B
Moscow	56	▲ (+16)	B	72	CCC
Ankara	57	▲ (+17)	B	74	CCC
Krakow	58	▲ (+11)	B	69	CCC
Tallinn	59	new	B		
Brussels	60	▲ (+4)	B	64	B
Paris	61	▼ (-10)	B	51	BB
Zhuhai	62	▼ (-22)	CCC	40	BB
Tianjin	63	▼ (-22)	CCC	41	BB
Chongqing	64	▼ (-22)	CCC	42	BB
Hangzhou	65	▼ (-21)	CCC	44	BB
Nanjing	66	▼ (-11)	CCC	55	B
Shenzhen	67	▼ (-24)	CCC	43	BB
Guangzhou	68	▼ (-11)	CCC	57	B
Chengdu	69	▼ (-11)	CCC	58	B
Bologna	70	▼ (-52)	CCC	18	BBB
Bangkok	71	▲ (+4)	CCC	75	CCC
Medellin	72	▲ (+19)	CCC	91	C
St. Petersburg	73	— (0)	CCC	73	CCC
Milan	74	▼ (-52)	CCC	22	BBB
Lisbon	75	▲ (+1)	CCC	76	CCC
Bratislava	76	▲ (+8)	CCC	84	CC
Budapest	77	▲ (+6)	CCC	83	CC
Marseille	78	new	CCC		
Tokyo	79	▼ (-17)	CCC	62	B
Osaka	80	▼ (-17)	CCC	63	B
Shanghai	81	▼ (-22)	CC	59	B

City	Smart City Rank 2020	Change	Smart City Rating 2020	Smart City Rank 2019	Smart City Rating 2019
Beijing	82	▼ (-22)	CC	60	B
Ho Chi Minh City	83	▼ (-18)	CC	65	CCC
Hanoi	84	▼ (-18)	CC	66	CCC
Hyderabad	85	▼ (-18)	CC	67	CCC
New Delhi	86	▼ (-18)	CC	68	CCC
Bucharest	87	▼ (-2)	CC	85	CC
Buenos Aires	88	▼ (-1)	CC	87	CC
Sofia	89	— (0)	CC	89	CC
Mexico City	90	▼ (-2)	CC	88	CC
Santiago	91	▼ (-5)	CC	86	CC
Bogota	92	▲ (+6)	CC	98	D
Mumbai	93	▼ (-15)	C	78	CC
Jakarta	94	▼ (-13)	C	81	CC
Bengaluru	95	▼ (-16)	C	79	CC
Makassar	96	▼ (-16)	C	80	CC
Medan	97	▼ (-15)	C	82	CC
Kiev	98	▼ (-6)	C	92	C
Athens	99	▼ (-4)	C	95	C
Sao Paulo	100	▼ (-10)	C	90	CC
Rome	101	▼ (-24)	C	77	CCC
Rio de Janeiro	102	▼ (-6)	C	96	C
Cape Town	103	▼ (-10)	D	93	C
Manila	104	▼ (-10)	D	94	C
Rabat	105	▼ (-4)	D	101	D
Cairo	106	▼ (-7)	D	99	D
Abuja	107	▼ (-10)	D	97	D
Nairobi	108	▼ (-8)	D	100	D
Lagos	109	▼ (-7)	D	102	D

# User's Guide to the Smart City Index

## Smart City Ranking

SMART CITY RANKING

42

Out of 109



56 in 2019

SMART CITY RATING

BB

B in 2019

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

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

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

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

The Methodology section provides the exact procedure for these calculations.

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

## Information

### BACKGROUND INFORMATION

City

Population  
1,145,000

(UN World Cities Report)



Country	2015	2016	2017	2018	1 yr change
HDI	0.860	0.863	0.864	0.866	+0.002
Life expectancy at Birth	77.3	77.5	77.6	77.8	+0.2
Expected years of schooling	13.7	13.6	13.6	13.6	+0.0
Mean years of schooling	10.6	10.8	10.9	11.0	+0.1
GNI per capita (PPP \$)	66,093	67,410	67,136	66,912	-224.0

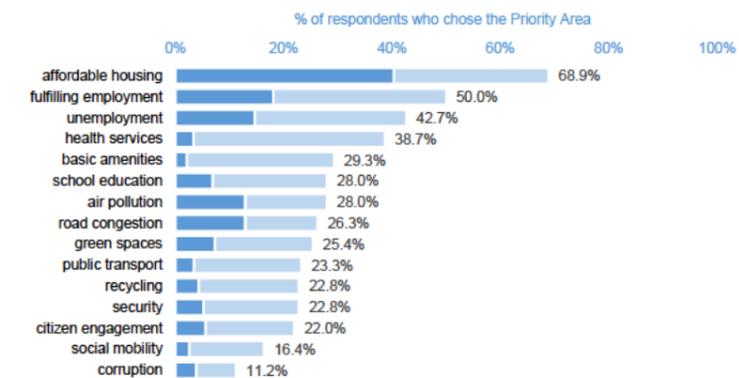
**Background Information:** This presents the UN Human Development Index and its four components of the parent economy of the city, as well as the city's position on the map. For Taipei City, the data is calculated using the same methodology and comparable data. This section also presents the population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

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

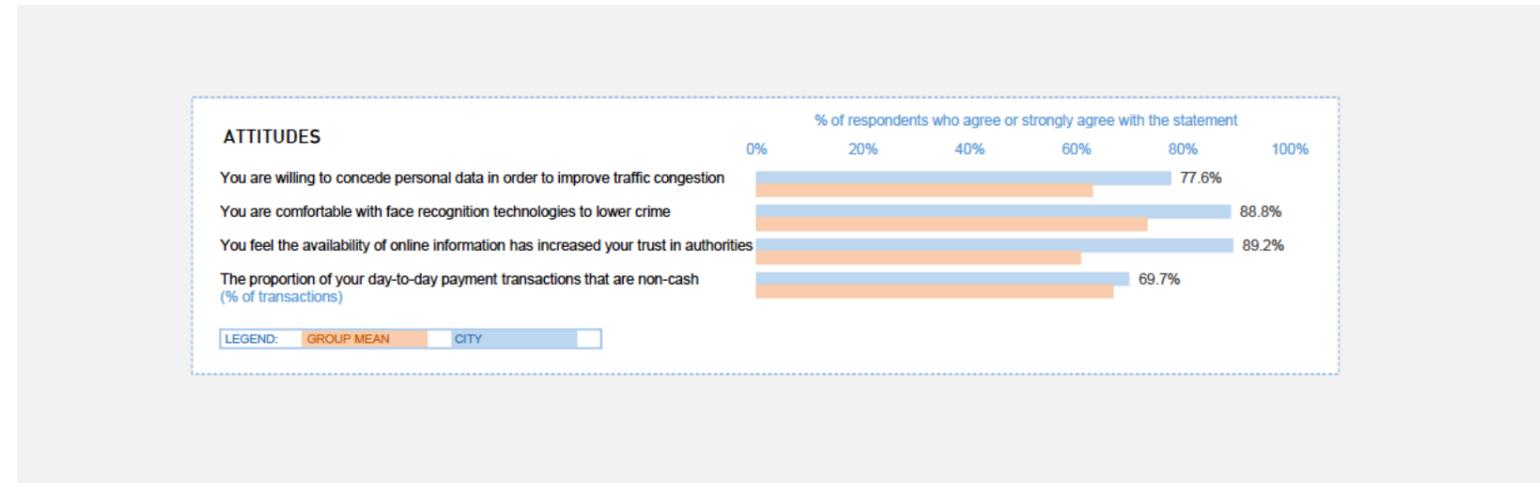
### PRIORITY AREAS

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:** 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 109 cities worldwide by capturing the perceptions of 120 residents in each city. The final score for each city is computed by using the perceptions of the last two years of the survey.
3. There are two pillars for which perceptions from residents are solicited: The Structures pillar referring to the existing infrastructure of the cities, and the Technology pillar describing the technological provisions and services available to the inhabitants.
4. Each pillar is evaluated over five key areas: health and safety, mobility, activities, opportunities, and governance.
5. The cities are distributed into four groups based on the UN Human Development Index (HDI) score of the economy they are part of.
6. Within each HDI group, cities are assigned a 'rating scale' (AAA to D) based on the perceptions-score of a given city compared to the scores of all other cities within the same group.

For group 1 (highest HDI quartile), scale  
For group 2 (second HDI quartile), scale  
For group 3 (third HDI quartile), scale  
For group 4 (lowest HDI quartile), scale

AAA-AA-A-BBB- BB  
A-BBB- BB-B- CCC  
BB-B- CCC-CC-C  
CCC-CC-C-D

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





CITY PROFILES



# Abu Dhabi

## SMART CITY RANKING

42

Out of 109



56 in 2019

## SMART CITY RATING

BB

B in 2019

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,145,000

(UN World Cities Report)



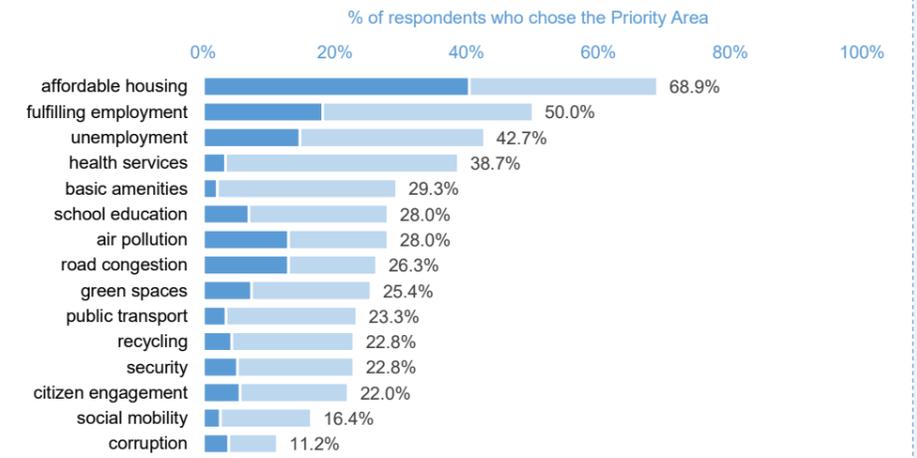
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.860	0.863	0.864	0.866	+0.002
Life expectancy at Birth	77.3	77.5	77.6	77.8	+0.2
Expected years of schooling	13.7	13.6	13.6	13.6	+0.0
Mean years of schooling	10.6	10.8	10.9	11.0	+0.1
GNI per capita (PPP \$)	66,093	67,410	67,136	66,912	-224.0

### PRIORITY AREAS

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

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



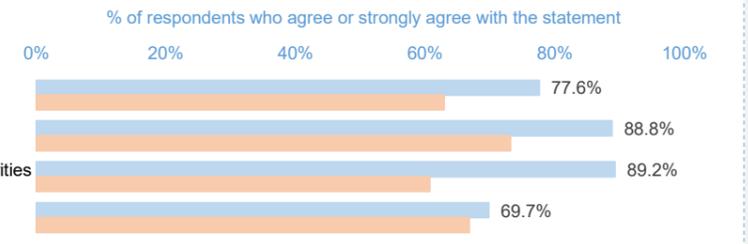
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

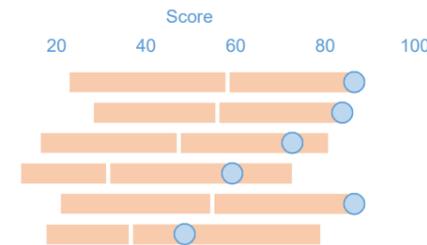
Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

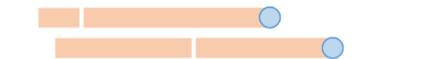
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory



#### Activities

Green spaces are satisfactory

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



#### Opportunities (Work & School)

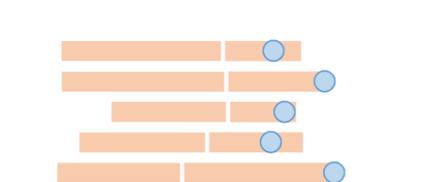
Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome



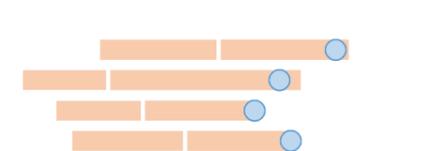
#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access



#### Mobility

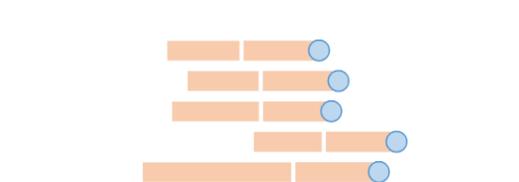
Car-sharing Apps have reduced congestion

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

Bicycle hiring has reduced congestion

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

The city provides information on traffic congestion through mobile phones



#### Activities

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



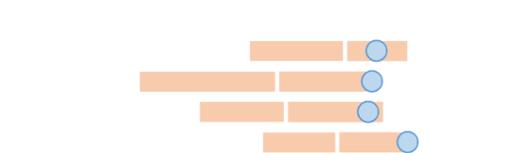
#### Opportunities (Work & School)

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

IT skills are taught well in schools

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

The current internet speed and reliability meet connectivity needs



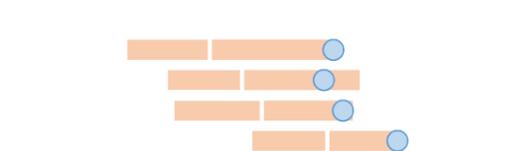
#### Governance

Online public access to city finances has reduced corruption

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



# Abuja

## SMART CITY RANKING

107

Out of 109



97 in 2019

## SMART CITY RATING

D

D in 2019

## FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,440,000

(UN World Cities Report)

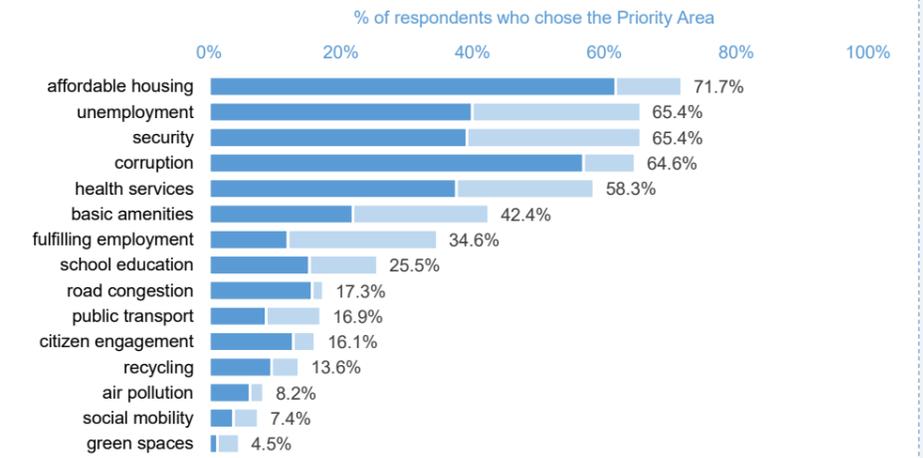


Country	2015	2016	2017	2018	1 yr change
HDI	0.527	0.528	0.533	0.534	+0.001
Life expectancy at Birth	53.1	53.5	54.0	54.3	+0.3
Expected years of schooling	9.7	9.5	9.7	9.7	+0.0
Mean years of schooling	6.2	6.3	6.5	6.5	+0.0
GNI per capita (PPP \$)	5,540	5,336	5,203	5,086	-117.0

### PRIORITY AREAS

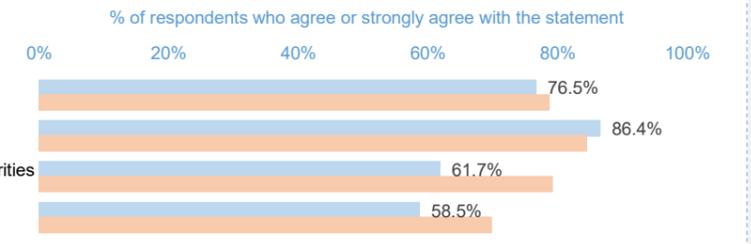
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

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



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

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

#### Activities

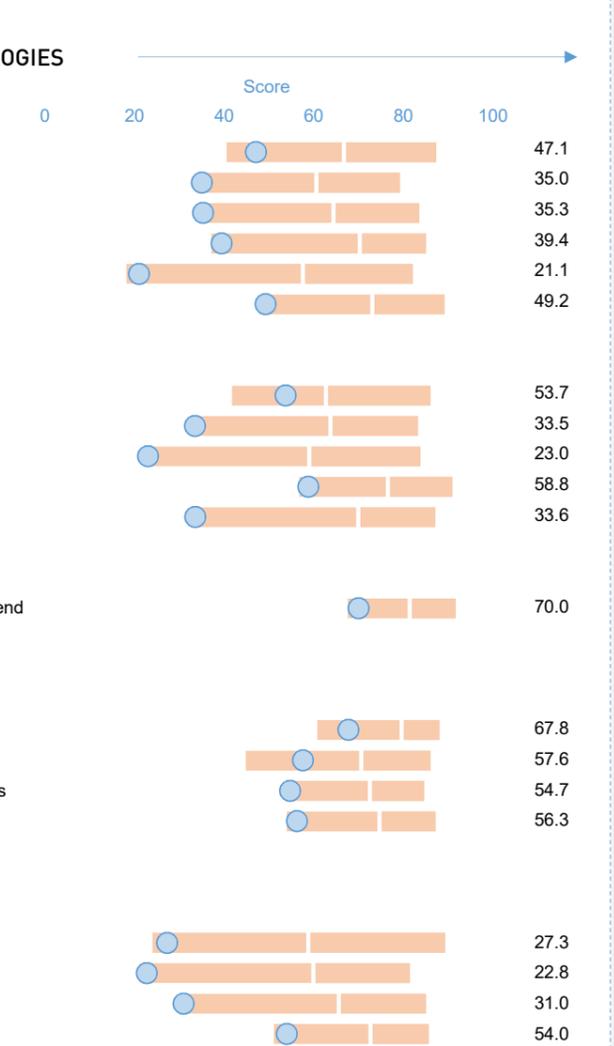
- Online purchasing of tickets to shows and museums has made it easier to attend

#### Opportunities (Work & School)

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

#### Governance

- Online public access to city finances has reduced corruption
- 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



# Amsterdam

## SMART CITY RANKING

9

Out of 109



11 in 2019

## SMART CITY RATING

A

A in 2019

## FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,091,000

(UN World Cities Report)

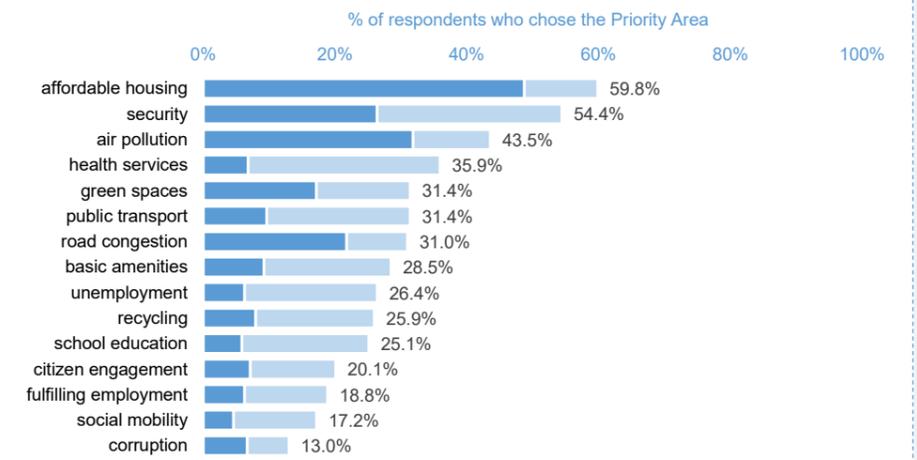


Country	2015	2016	2017	2018	1 yr change
HDI	0.927	0.929	0.932	0.934	+0.002
Life expectancy at Birth	81.7	81.9	82.0	82.1	+0.1
Expected years of schooling	18.1	18.0	18.0	18.0	+0.0
Mean years of schooling	12.1	12.2	12.2	12.2	+0.0
GNI per capita (PPP \$)	46,976	47,008	48,994	50,013	+1,019.0

### 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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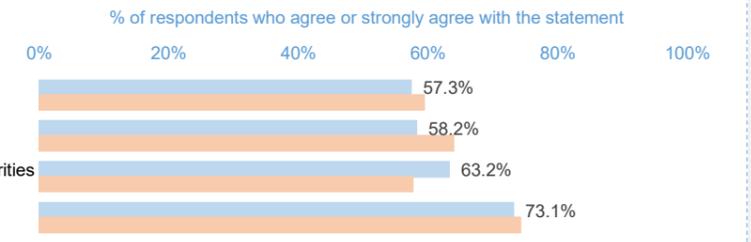
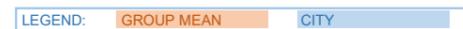
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

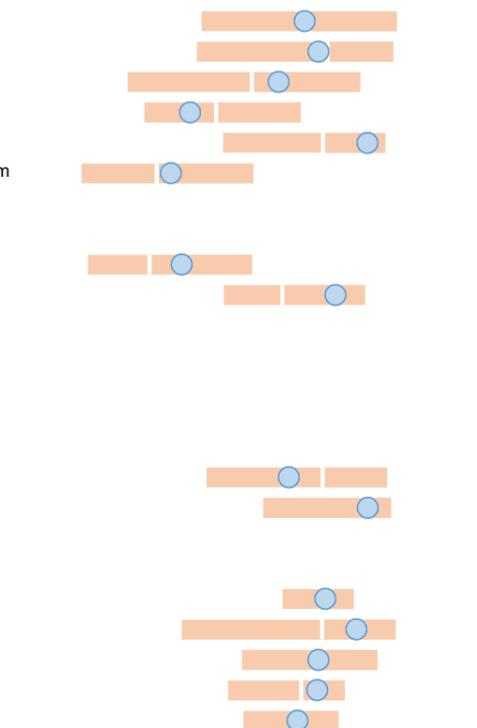
#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

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

Bicycle hiring has reduced congestion

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

The city provides information on traffic congestion through mobile phones

#### Activities

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

#### Opportunities (Work & School)

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

IT skills are taught well in schools

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

The current internet speed and reliability meet connectivity needs

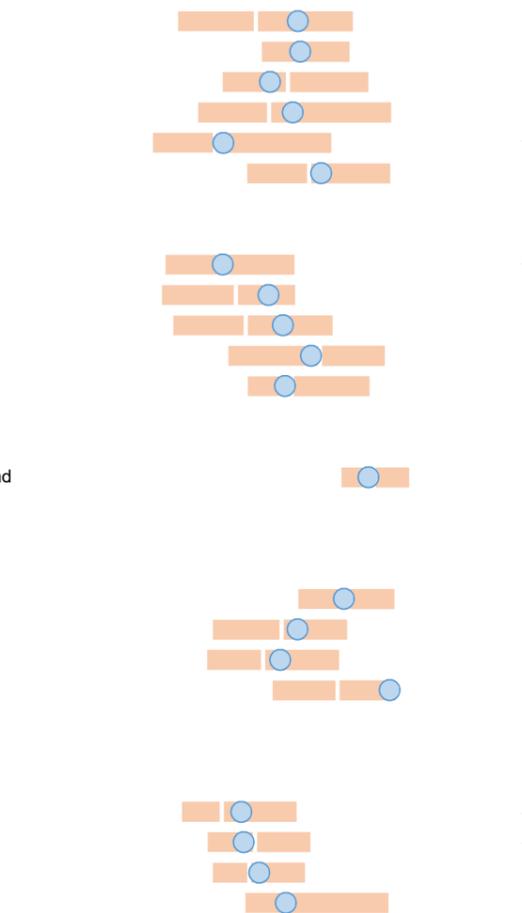
#### Governance

Online public access to city finances has reduced corruption

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



# Ankara

## SMART CITY RANKING

57

Out of 109



74 in 2019

## SMART CITY RATING

B

CCC in 2019

## FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
4,750,000

(UN World Cities Report)

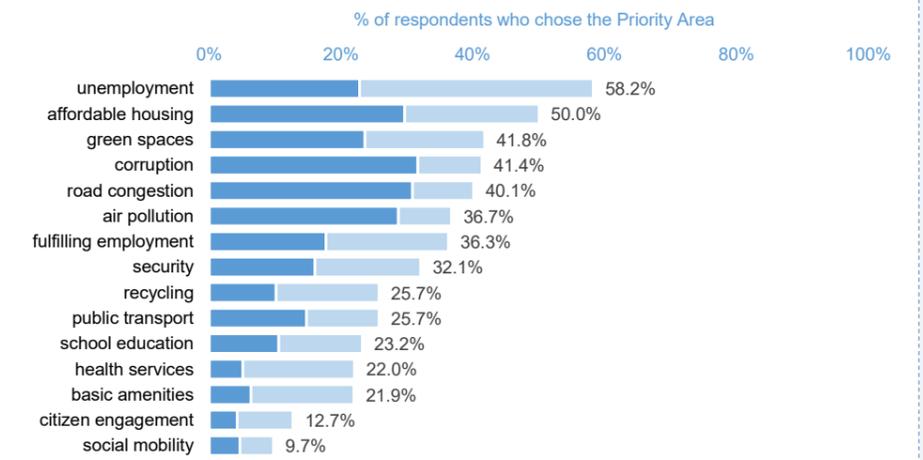


Country	2015	2016	2017	2018	1 yr change
HDI	0.800	0.800	0.805	0.807	+0.002
Life expectancy at Birth	76.5	76.9	77.2	77.4	+0.2
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	8.0	7.6	7.7	7.7	+0.0
GNI per capita (PPP \$)	23,048	23,409	24,702	24,905	+203.0

## PRIORITY AREAS

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

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



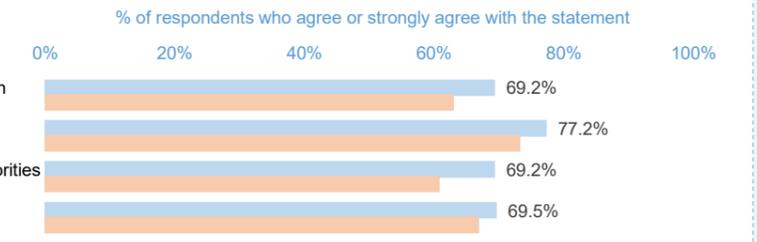
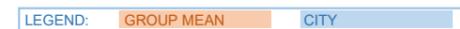
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

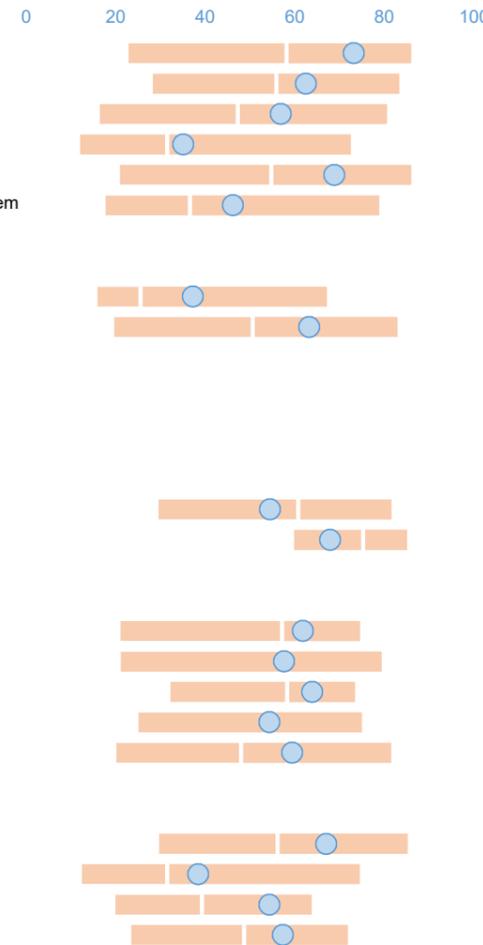
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

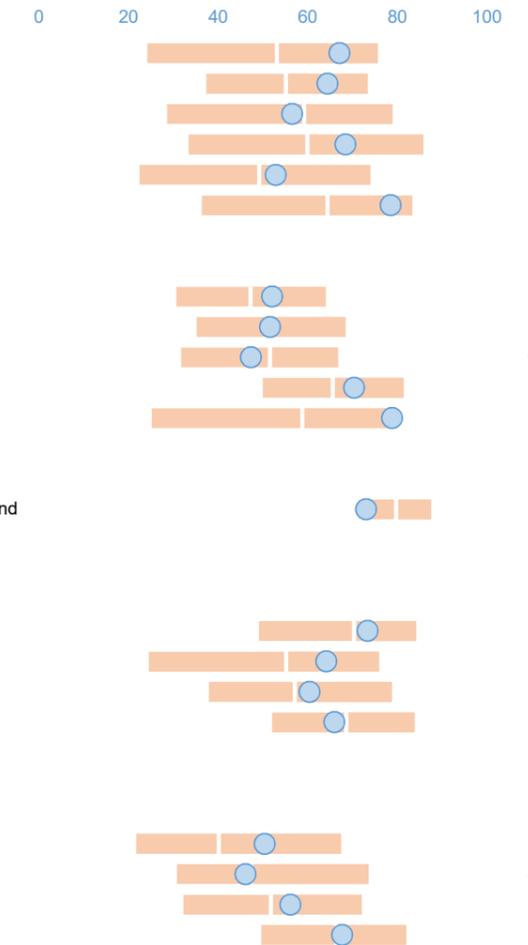
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Athens

## SMART CITY RANKING

99

Out of 109



95 in 2019

## SMART CITY RATING

C

C in 2019

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
3,052,000

(UN World Cities Report)



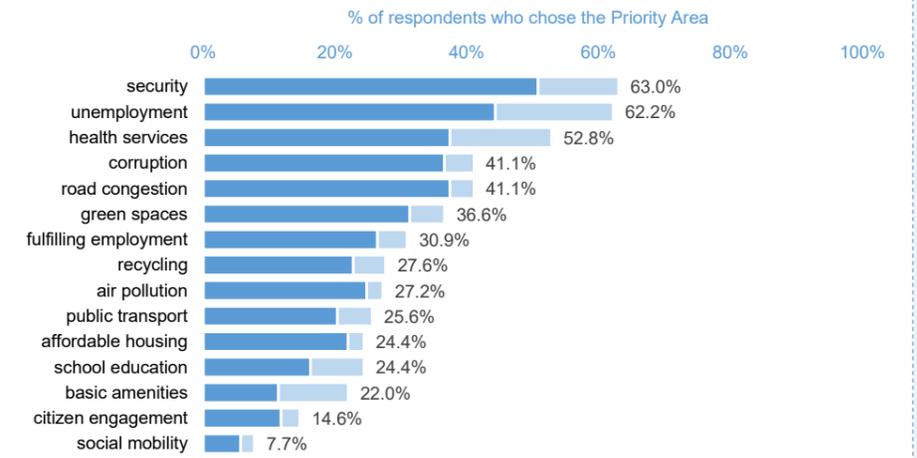
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.868	0.866	0.871	0.872	+0.001
Life expectancy at Birth	81.5	81.7	81.9	82.1	+0.2
Expected years of schooling	17.3	17.3	17.3	17.3	+0.0
Mean years of schooling	10.6	10.3	10.5	10.5	+0.0
GNI per capita (PPP \$)	24,165	24,187	24,647	24,909	+262.0

## 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.

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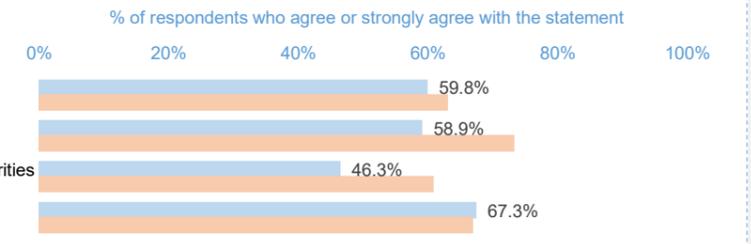
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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



### Mobility

Traffic congestion is not a problem

Public transport is satisfactory



### Activities

Green spaces are satisfactory

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



### Opportunities (Work & School)

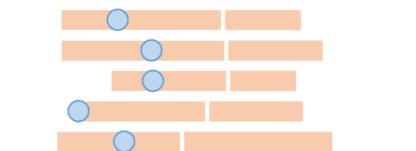
Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome



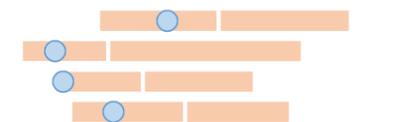
### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

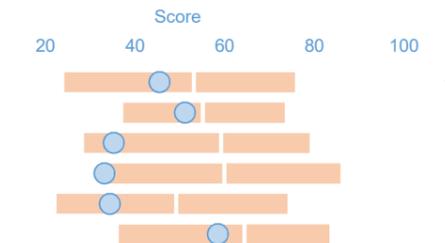
A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access



### Mobility

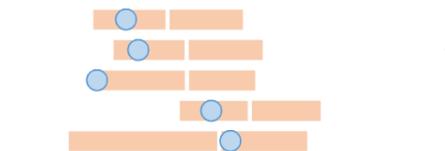
Car-sharing Apps have reduced congestion

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

Bicycle hiring has reduced congestion

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

The city provides information on traffic congestion through mobile phones



### Activities

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



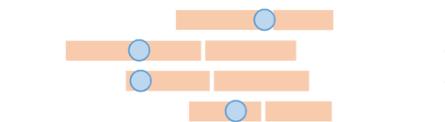
### Opportunities (Work & School)

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

IT skills are taught well in schools

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

The current internet speed and reliability meet connectivity needs



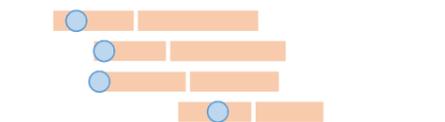
### Governance

Online public access to city finances has reduced corruption

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



# Auckland

## SMART CITY RANKING

4

Out of 109



6 in 2019

## SMART CITY RATING

AA

A in 2019

## FACTOR RATINGS

AA

STRUCTURES

AA

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,344,000

(UN World Cities Report)



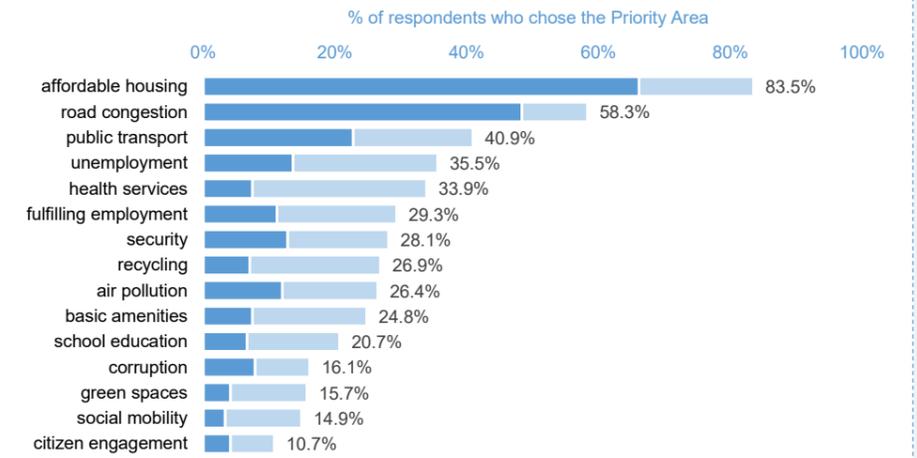
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### 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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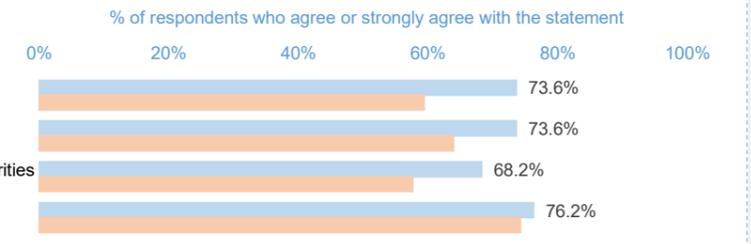
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

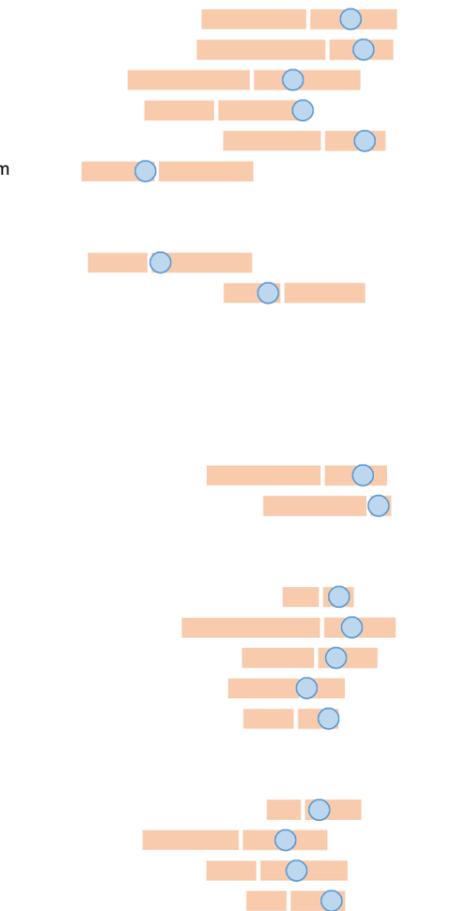
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

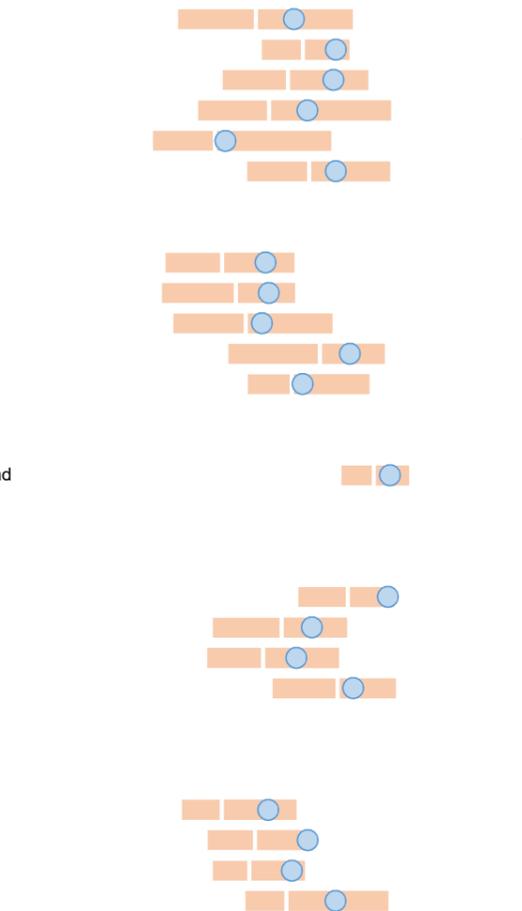
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Bangkok

## SMART CITY RANKING

71

Out of 109



75 in 2019

## SMART CITY RATING

CCC

CCC in 2019

## FACTOR RATINGS

CCC

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
9,270,000

(UN World Cities Report)

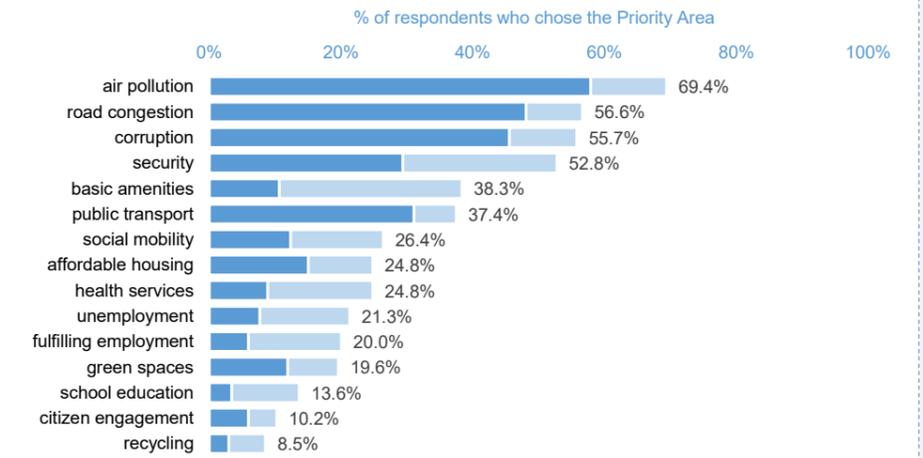


Country	2015	2016	2017	2018	1 yr change
HDI	0.746	0.753	0.762	0.765	+0.003
Life expectancy at Birth	76.1	76.4	76.7	76.9	+0.2
Expected years of schooling	13.9	14.3	14.7	14.7	+0.0
Mean years of schooling	7.6	7.6	7.7	7.7	+0.0
GNI per capita (PPP \$)	14,466	14,966	15,548	16,129	+581.0

### PRIORITY AREAS

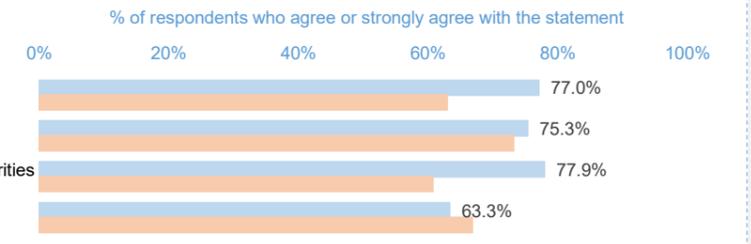
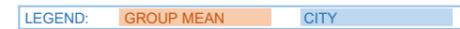
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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



### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

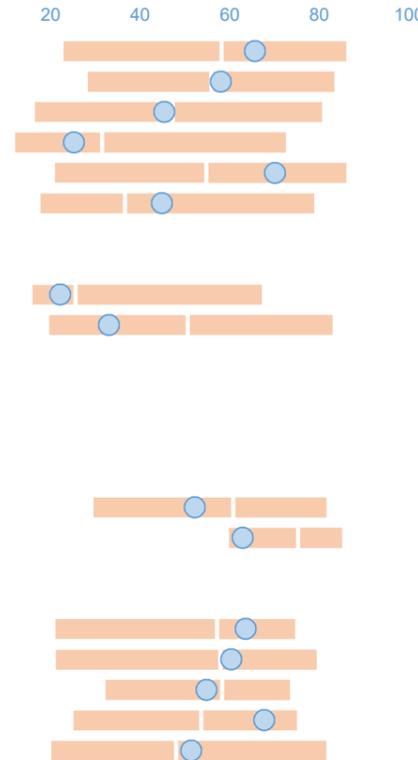
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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



Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

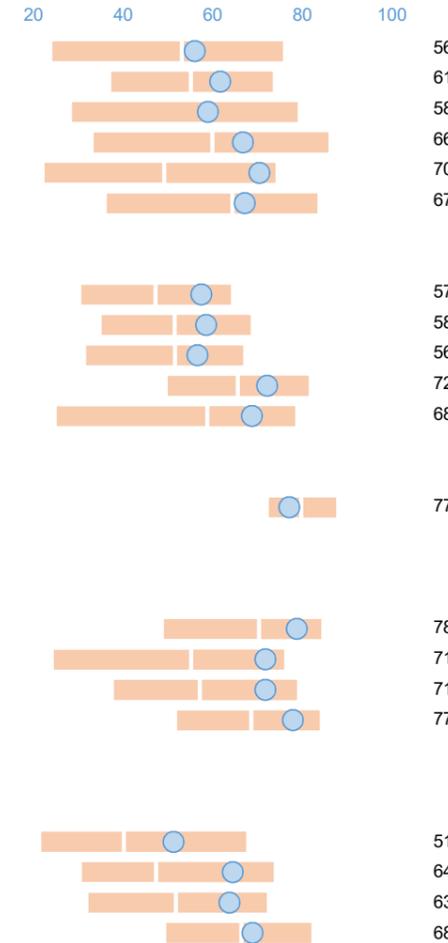
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Barcelona

## SMART CITY RANKING

49

Out of 109



48 in 2019

## SMART CITY RATING

BB

BB in 2019

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
5,258,000

(UN World Cities Report)

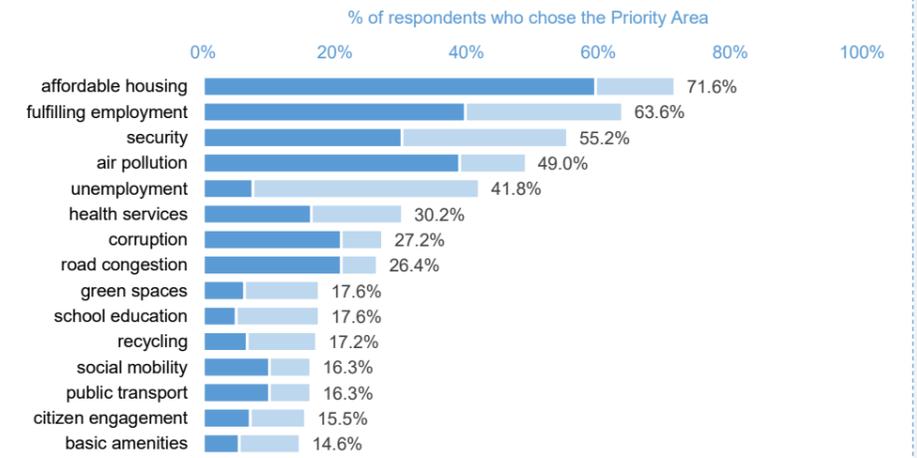


Country	2015	2016	2017	2018	1 yr change
HDI	0.885	0.888	0.891	0.893	+0.002
Life expectancy at Birth	83.0	83.1	83.3	83.4	+0.1
Expected years of schooling	17.8	17.8	17.9	17.9	+0.0
Mean years of schooling	9.7	9.8	9.8	9.8	+0.0
GNI per capita (PPP \$)	32,265	33,379	34,226	35,041	+815.0

### PRIORITY AREAS

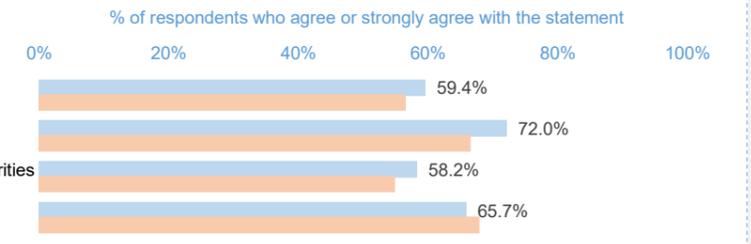
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

65.6  
62.8  
52.0  
26.3  
60.0  
20.4  
  
27.8  
66.5  
  
64.0  
80.5  
  
77.1  
63.5  
70.6  
46.2  
48.2

### TECHNOLOGIES

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
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#### Mobility

- Car-sharing Apps have reduced congestion
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#### Activities

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#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
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#### 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

Score 0 20 40 60 80 100

50.7  
56.5  
54.3  
50.8  
43.6  
71.3  
  
48.0  
51.1  
61.4  
67.6  
69.1  
  
77.2  
  
68.6  
54.7  
56.6  
72.1  
  
41.4  
46.7  
55.2  
66.7

# Beijing

## SMART CITY RANKING

82

Out of 109



60 in 2019

## SMART CITY RATING

CC

B in 2019

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
20,384,000

(UN World Cities Report)

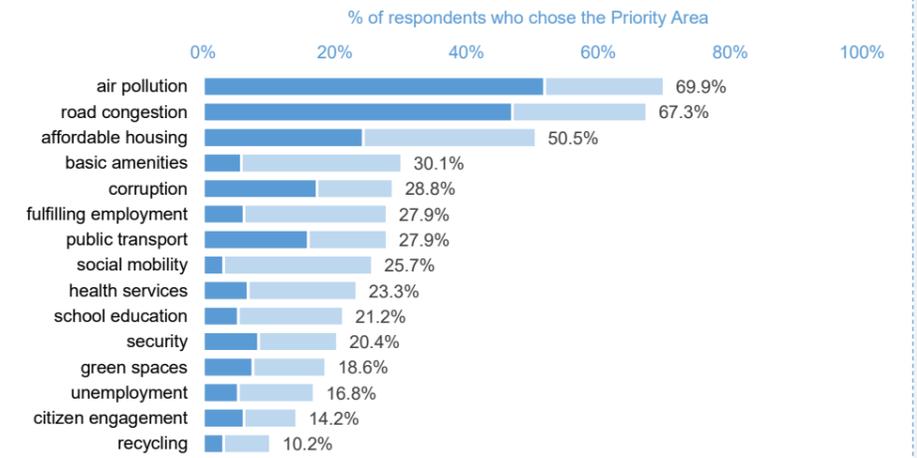


Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

## PRIORITY AREAS

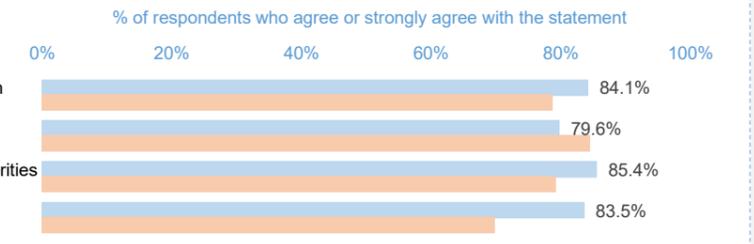
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

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

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

80.8  
72.2  
70.0  
35.0  
72.6  
54.9  
38.6  
54.6  
72.8  
79.0  
79.1  
71.8  
67.2  
79.3  
76.1

## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
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- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### Mobility

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### 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

Score 0 20 40 60 80 100

82.4  
69.5  
81.0  
78.5  
78.2  
88.2  
64.8  
74.7  
75.6  
88.0  
85.6  
90.6  
86.5  
80.3  
80.5  
85.8  
74.9  
71.7  
82.3  
78.0

# Bengaluru

## SMART CITY RANKING

95

Out of 109



79 in 2019

## SMART CITY RATING

C

CC in 2019

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
10,087,000

(UN World Cities Report)



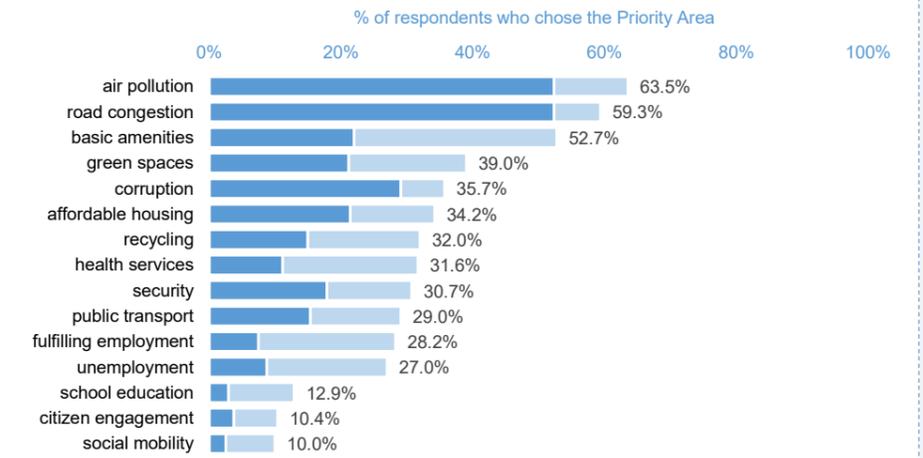
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

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

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



### ATTITUDES

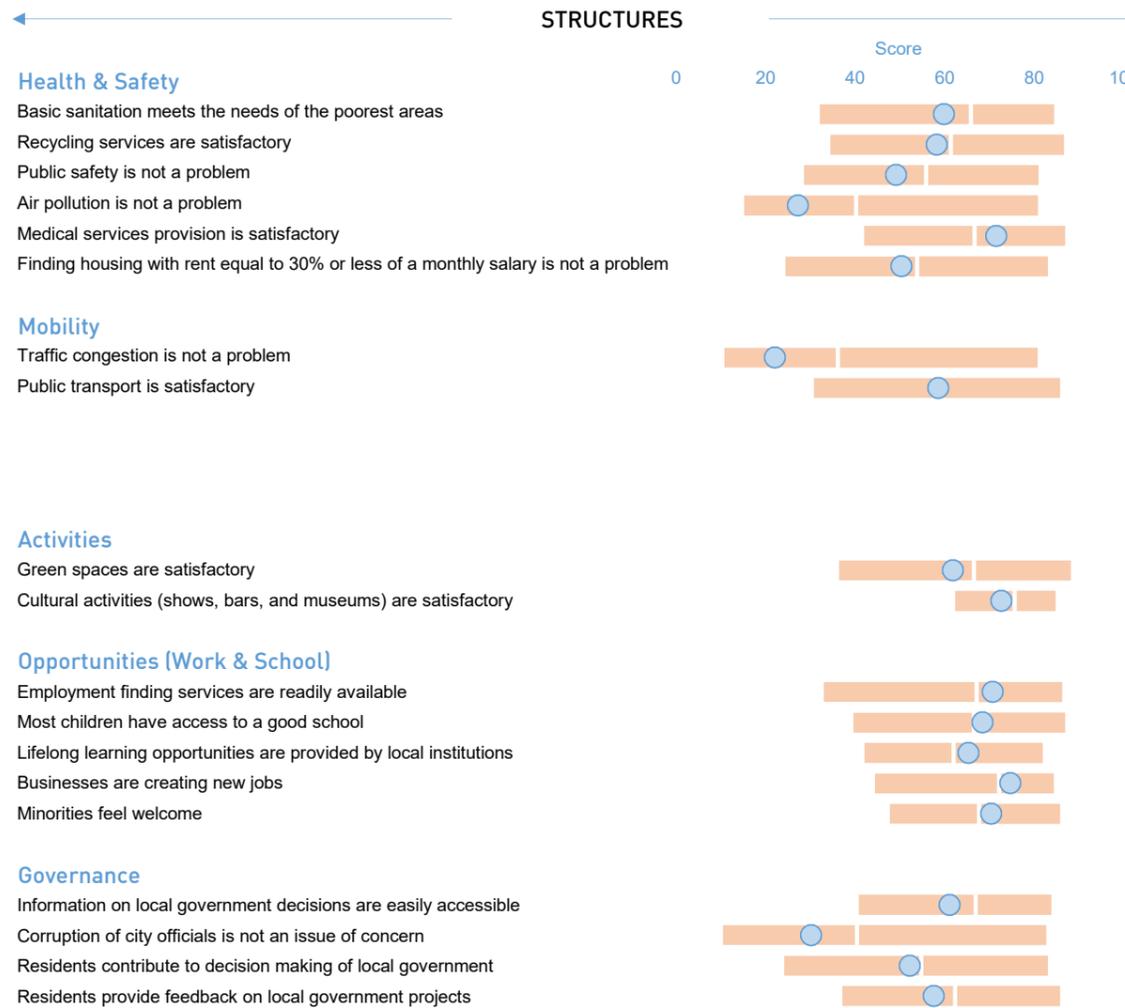
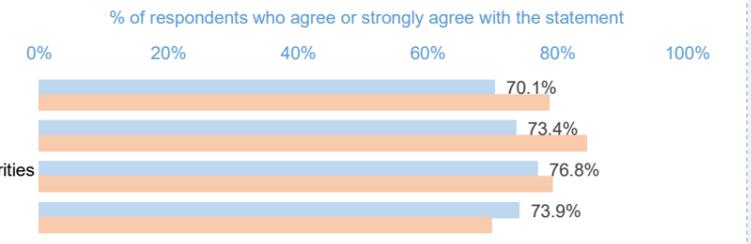
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



# Berlin

## SMART CITY RANKING

38

Out of 109



39 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
3,563,000

(UN World Cities Report)

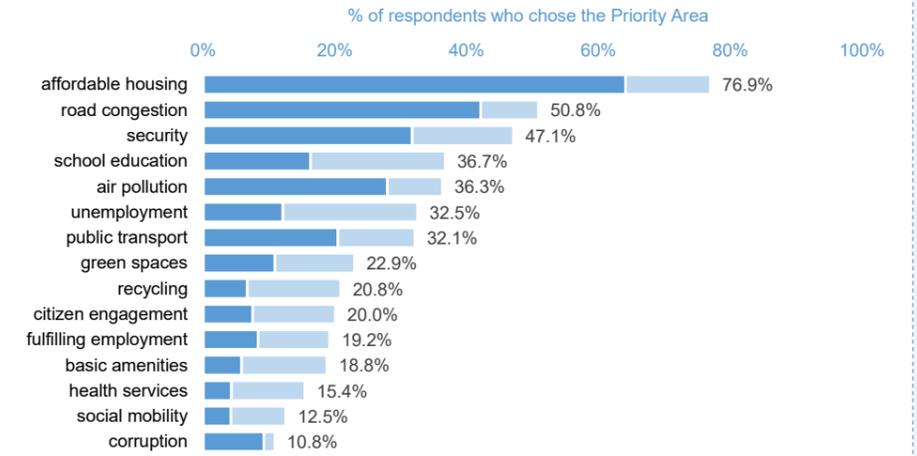


Country	2015	2016	2017	2018	1 yr change
HDI	0.933	0.936	0.938	0.939	+0.001
Life expectancy at Birth	80.8	80.9	81.0	81.2	+0.2
Expected years of schooling	17.0	17.1	17.1	17.1	+0.0
Mean years of schooling	14.1	14.1	14.1	14.1	+0.0
GNI per capita (PPP \$)	45,012	45,577	46,438	46,946	+508.0

## PRIORITY AREAS

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

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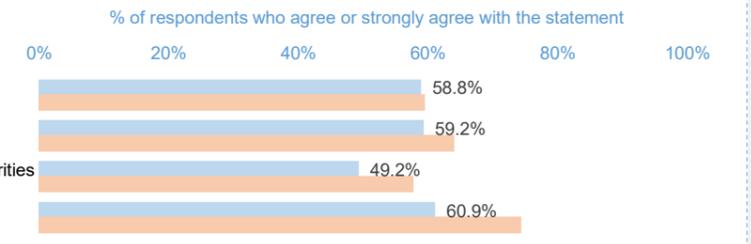
## ATTITUDES

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You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

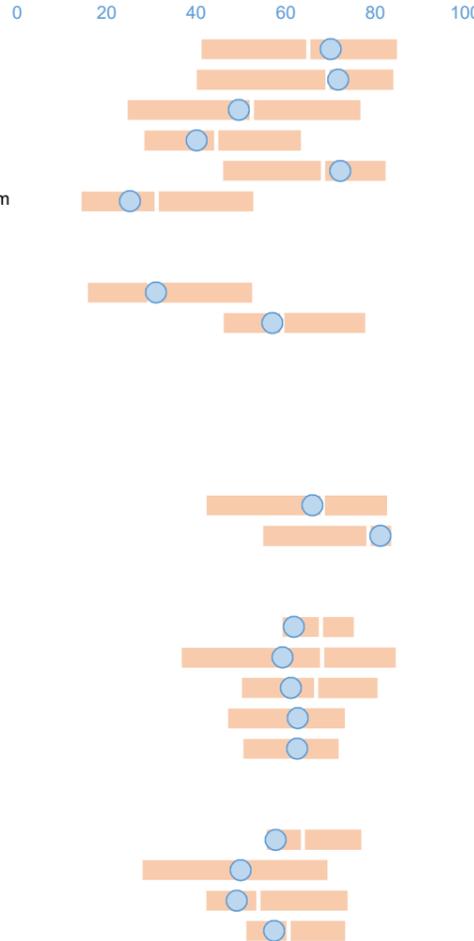
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

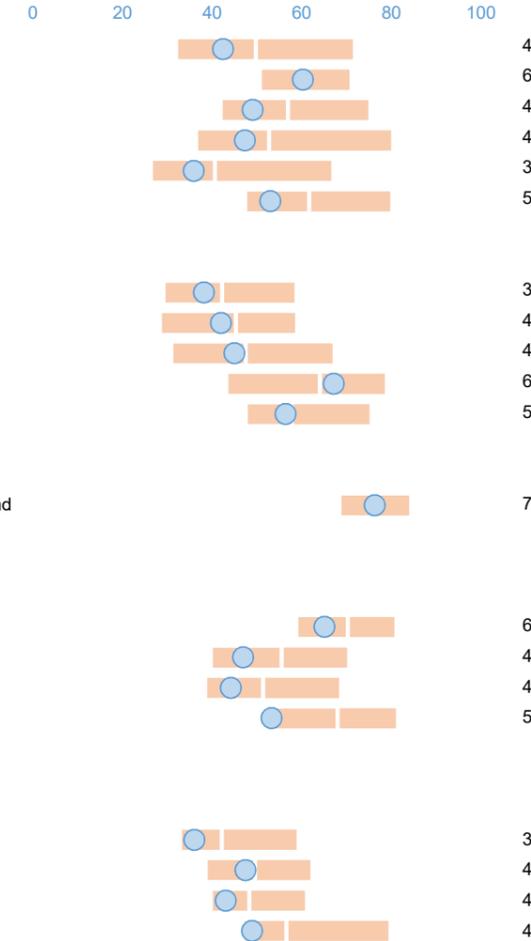
### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Bilbao

## SMART CITY RANKING

24

Out of 109



9 in 2019

## SMART CITY RATING

BBB

A in 2019

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
414,000

(Eurostat)



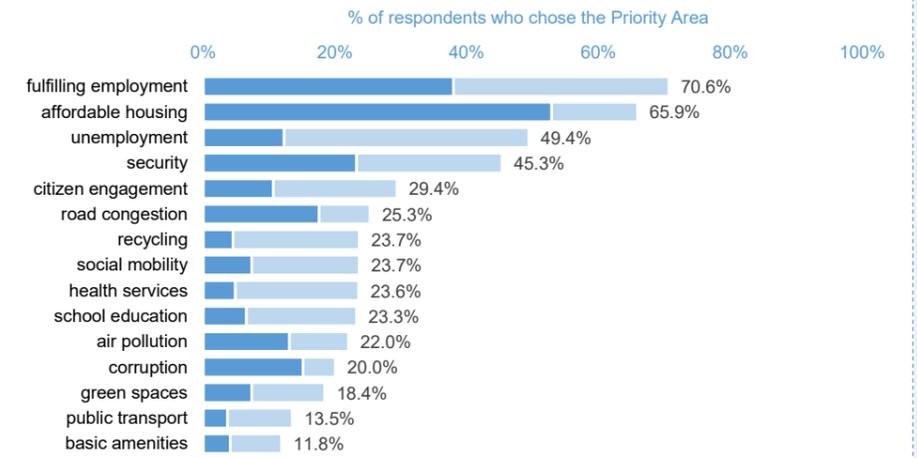
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## PRIORITY AREAS

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

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



## ATTITUDES

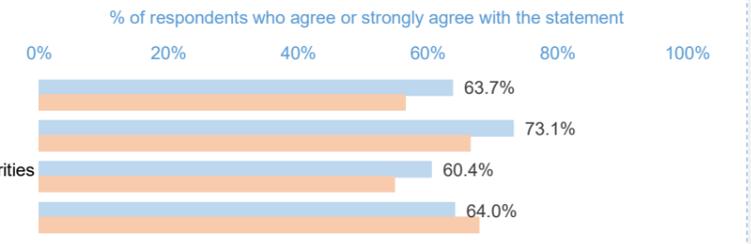
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

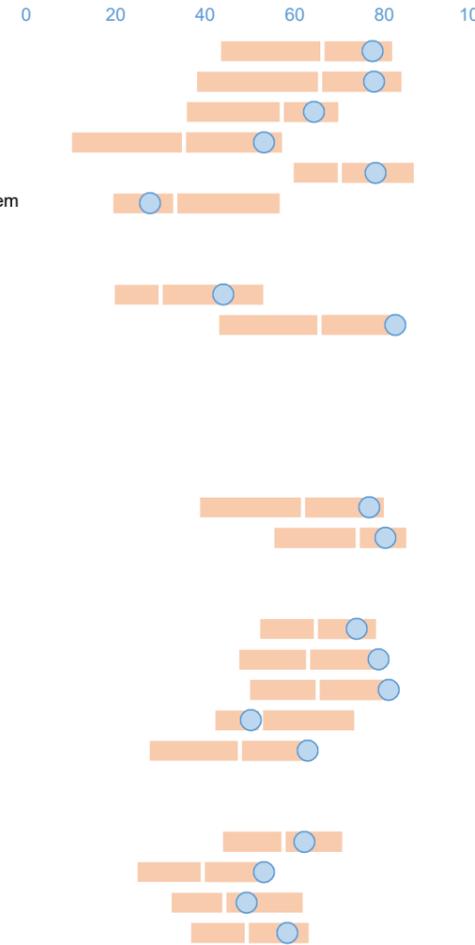
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

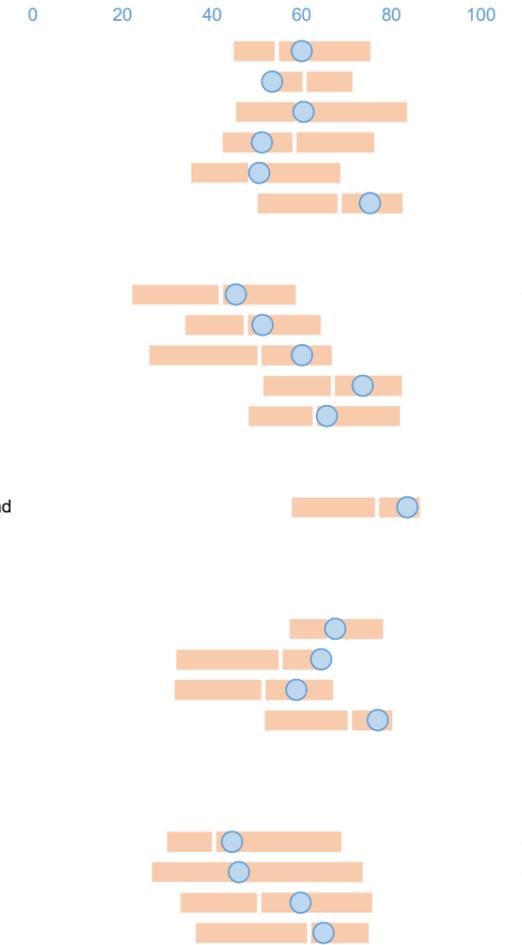
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Birmingham

## SMART CITY RANKING

40

Out of 109



52 in 2019

## SMART CITY RATING

BBB

BB in 2019

## FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,515,000

(UN World Cities Report)



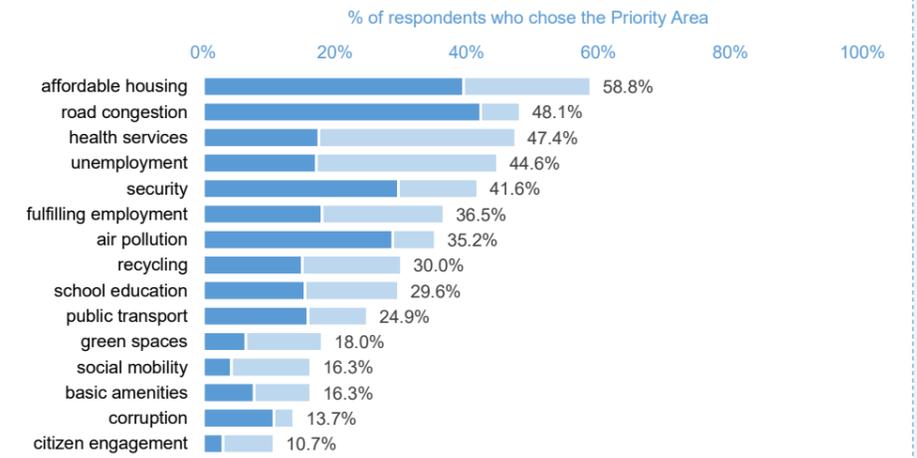
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

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

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



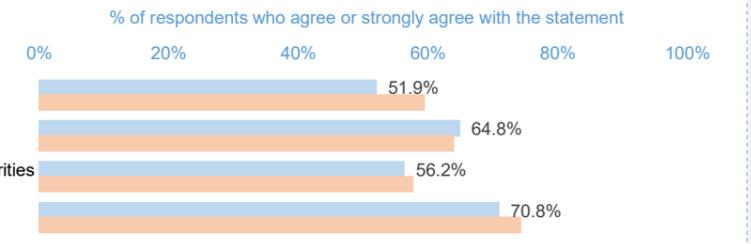
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

# Bogota

## SMART CITY RANKING

92

Out of 109



98 in 2019

## SMART CITY RATING

CC

D in 2019

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
9,765,000

(UN World Cities Report)

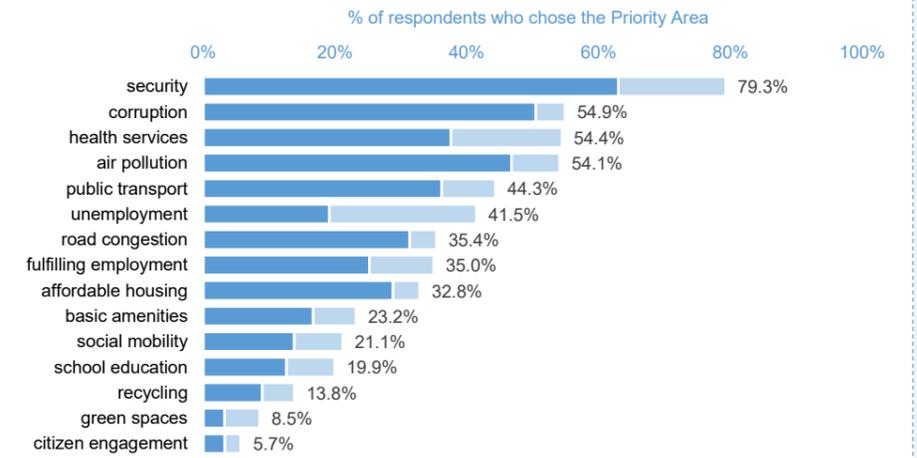


Country	2015	2016	2017	2018	1 yr change
HDI	0.753	0.759	0.760	0.761	+0.001
Life expectancy at Birth	76.5	76.7	76.9	77.1	+0.2
Expected years of schooling	14.4	14.6	14.6	14.6	+0.0
Mean years of schooling	8.1	8.3	8.3	8.3	+0.0
GNI per capita (PPP \$)	12,951	13,087	12,963	12,896	-67.0

### PRIORITY AREAS

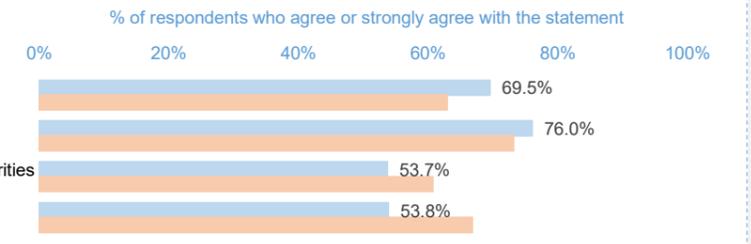
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

- 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)

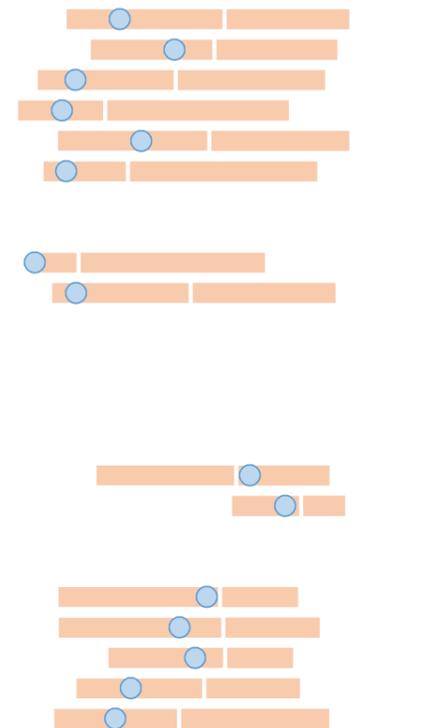
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- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

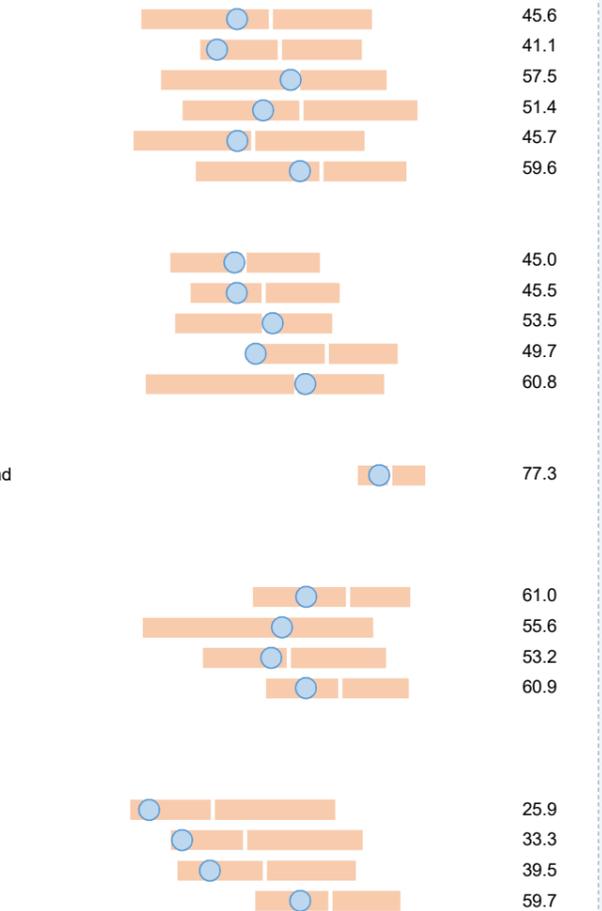
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Bologna

SMART CITY RANKING

70

Out of 109



18 in 2019

SMART CITY RATING

CCC

BBB in 2019

FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
784,000

(UN World Cities Report)



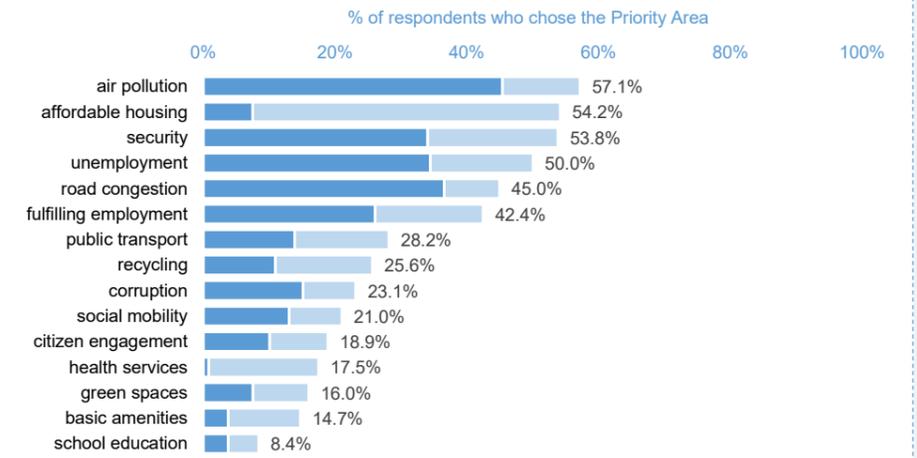
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.875	0.878	0.881	0.883	+0.002
Life expectancy at Birth	82.8	83.0	83.2	83.4	+0.2
Expected years of schooling	16.3	16.2	16.2	16.2	+0.0
Mean years of schooling	10.1	10.2	10.2	10.2	+0.0
GNI per capita (PPP \$)	34,105	34,818	35,573	36,141	+568.0

## PRIORITY AREAS

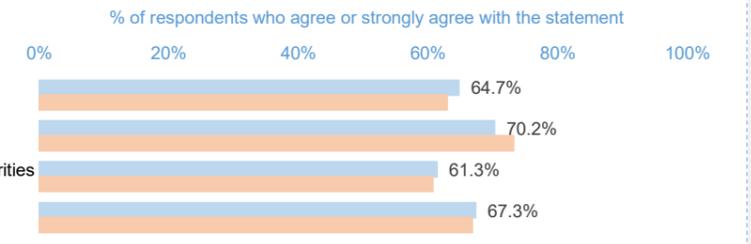
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

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

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

72.3  
73.3  
50.6  
30.7  
77.0  
79.3  
31.8  
64.0  
74.6  
83.0  
42.6  
71.8  
66.2  
49.4  
52.5

## TECHNOLOGIES

### Health & Safety

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

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

Score 0 20 40 60 80 100

57.5  
60.4  
62.5  
57.3  
48.2  
72.3  
47.2  
47.0  
56.8  
64.8  
50.0  
82.3  
65.3  
56.0  
48.3  
59.2  
47.9  
39.6  
47.6  
59.7

# Boston

## SMART CITY RANKING

36

Out of 109



32 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
4,249,000

(UN World Cities Report)



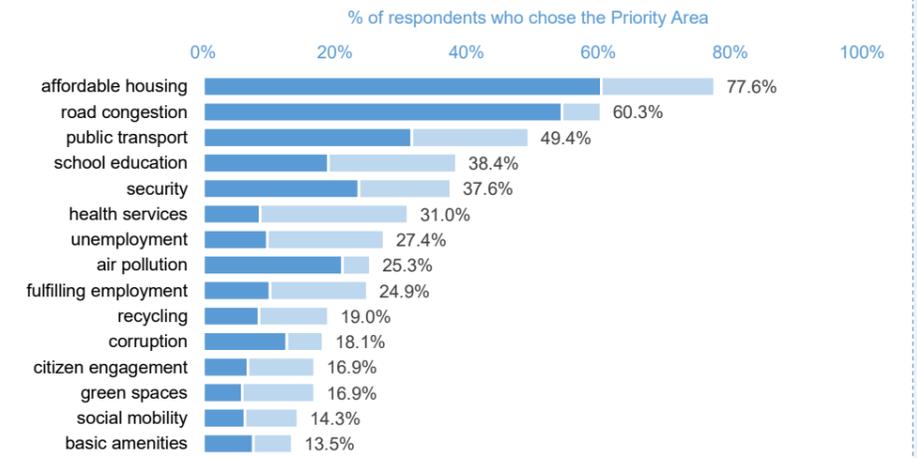
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## PRIORITY AREAS

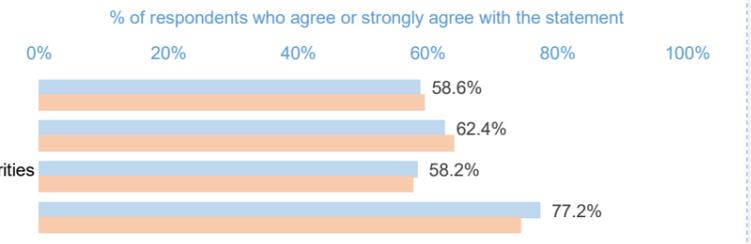
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

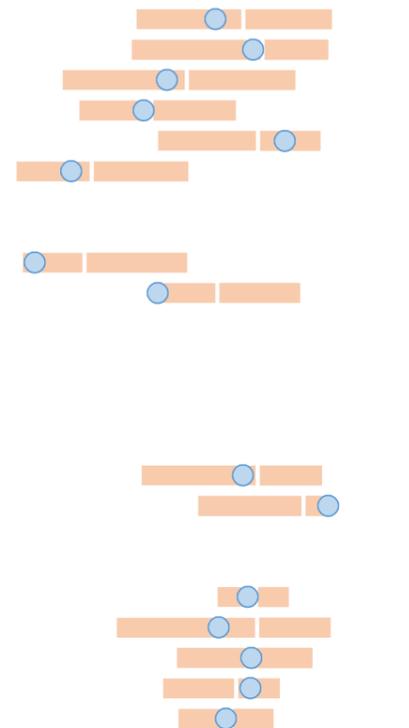
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

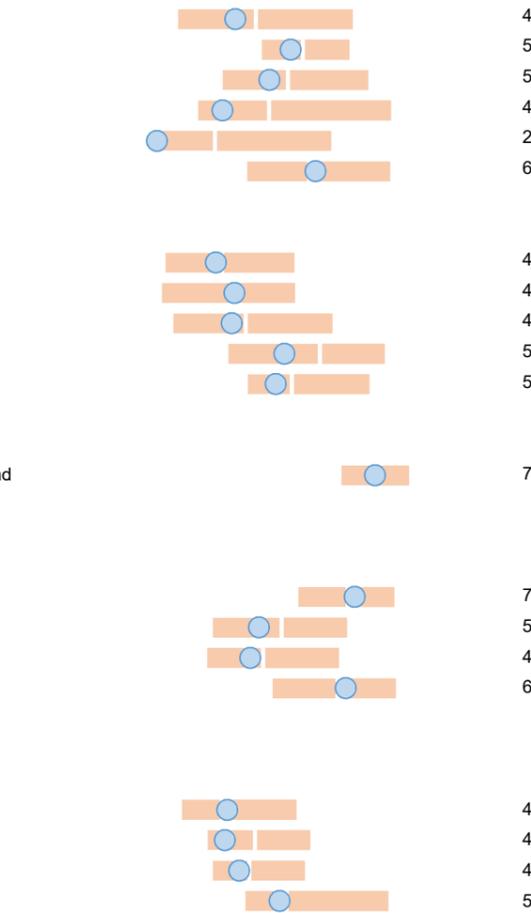
### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Bratislava

## SMART CITY RANKING

76

Out of 109



84 in 2019

## SMART CITY RATING

CCC

CC in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
433,000

(Eurostat)

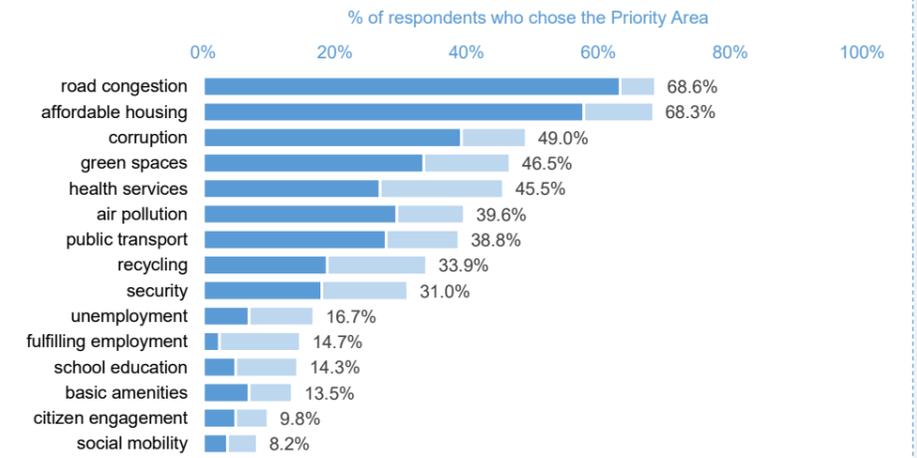


Country	2015	2016	2017	2018	1 yr change
HDI	0.849	0.851	0.854	0.857	+0.003
Life expectancy at Birth	76.8	77.0	77.2	77.4	+0.2
Expected years of schooling	14.7	14.5	14.5	14.5	+0.0
Mean years of schooling	12.5	12.6	12.6	12.6	+0.0
GNI per capita (PPP \$)	27,693	28,706	29,544	30,672	+1,128.0

## 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.



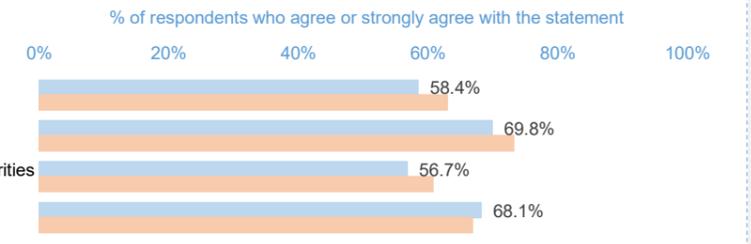
## ATTITUDES

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You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

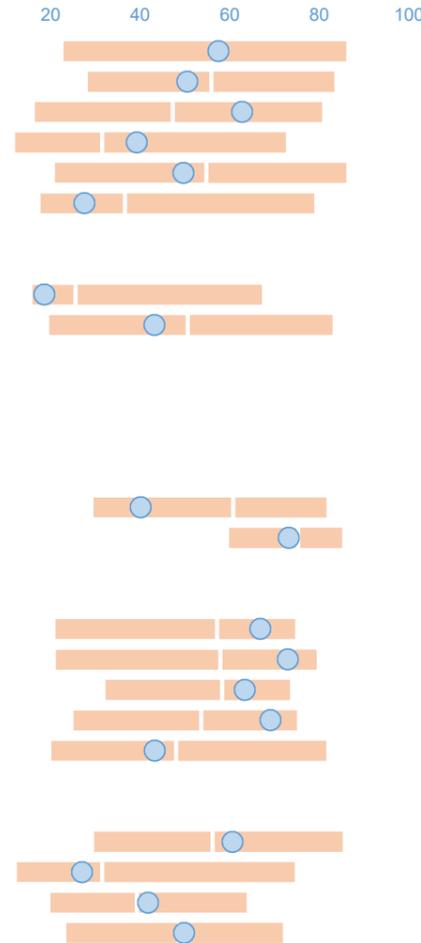
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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### 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

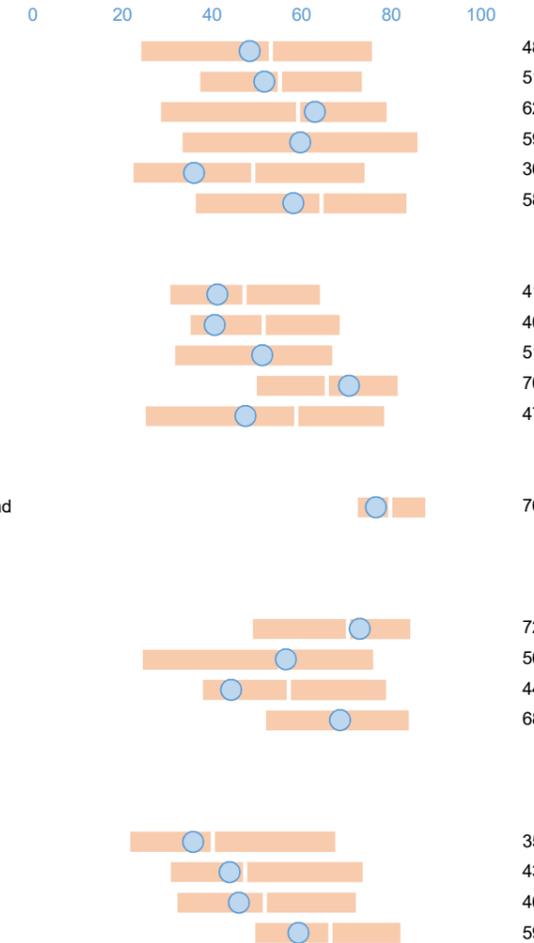
### Opportunities (Work & School)

- 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
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### 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

Score 0 20 40 60 80 100



# Brisbane

## SMART CITY RANKING

14

Out of 109



27 in 2019

## SMART CITY RATING

A

BBB in 2019

## FACTOR RATINGS

AA

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,202,000

(UN World Cities Report)



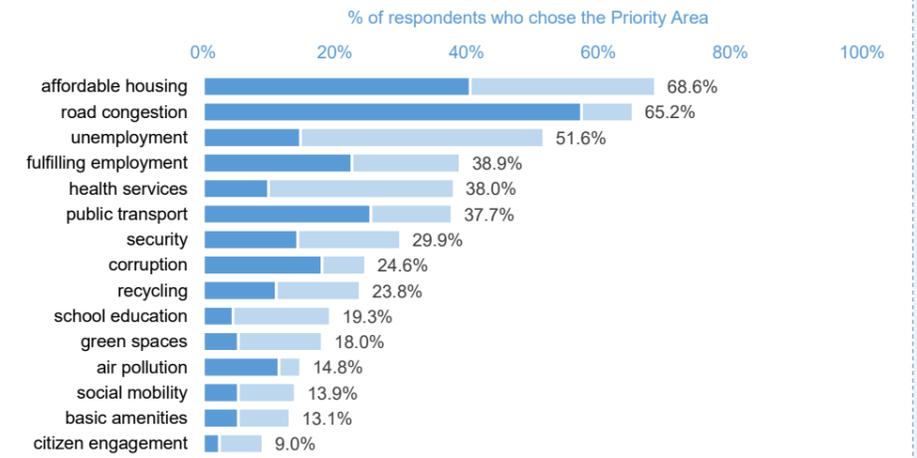
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.933	0.935	0.937	0.938	+0.001
Life expectancy at Birth	82.8	83.0	83.1	83.3	+0.2
Expected years of schooling	23.3	22.9	22.1	22.1	+0.0
Mean years of schooling	12.5	12.6	12.7	12.7	+0.0
GNI per capita (PPP \$)	43,246	43,653	43,756	44,097	+341.0

### PRIORITY AREAS

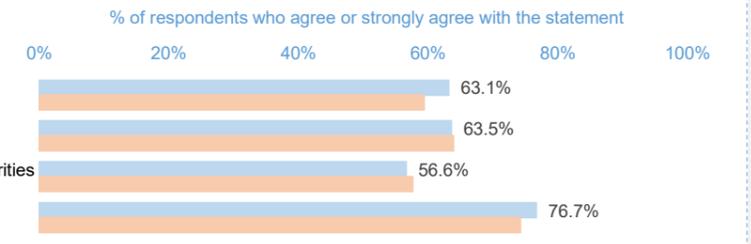
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

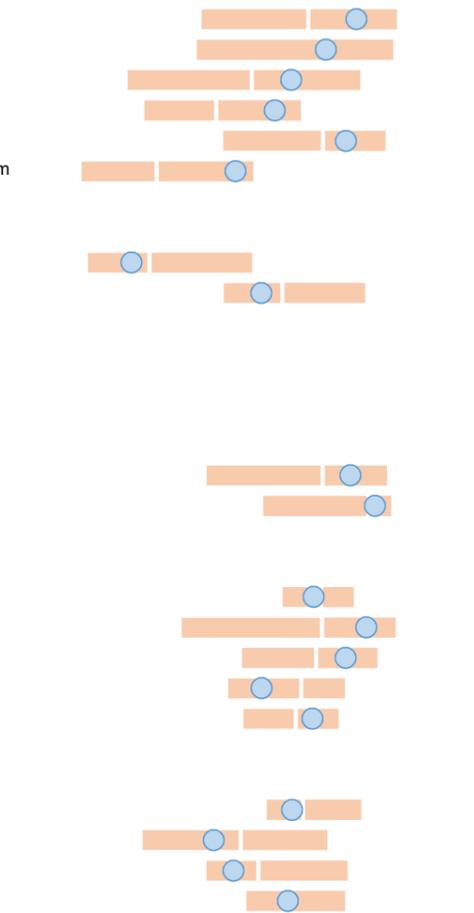
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

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

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

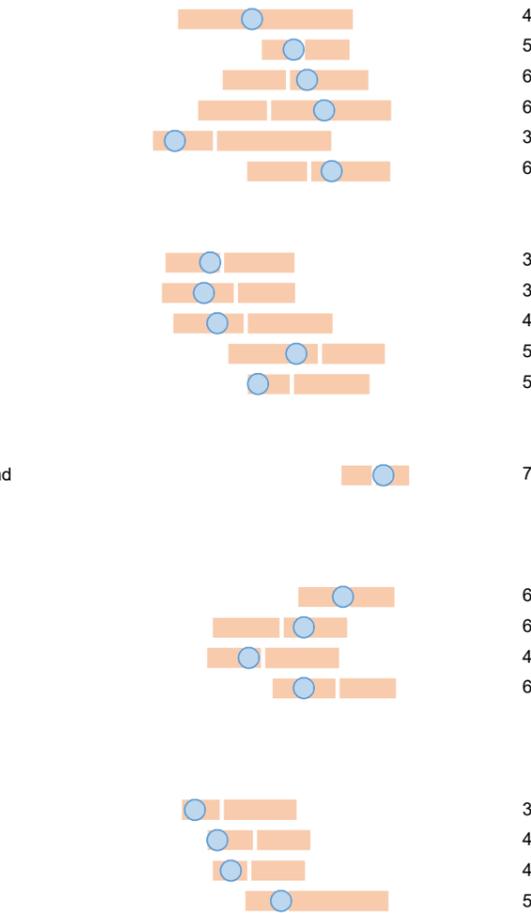
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Brussels

## SMART CITY RANKING

60

Out of 109



64 in 2019

## SMART CITY RATING

B

B in 2019

## FACTOR RATINGS

BB

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,205,000

(Eurostat)

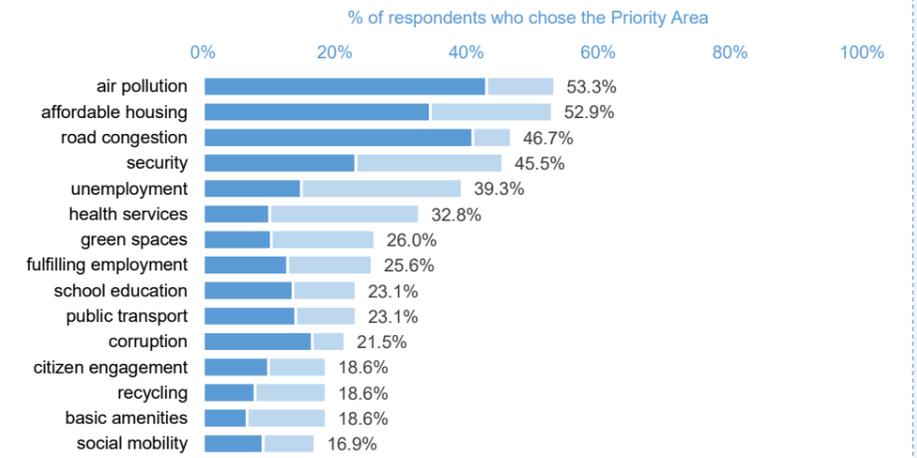


Country	2015	2016	2017	2018	1 yr change
HDI	0.913	0.915	0.917	0.919	+0.002
Life expectancy at Birth	81.0	81.1	81.3	81.5	+0.2
Expected years of schooling	19.7	19.7	19.7	19.7	+0.0
Mean years of schooling	11.7	11.8	11.8	11.8	+0.0
GNI per capita (PPP \$)	41,598	42,260	43,300	43,821	+521.0

## PRIORITY AREAS

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

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



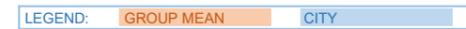
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

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

### Governance

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



57.1  
61.5  
52.4  
30.4  
68.5  
42.6  
  
26.4  
57.9  
  
67.4  
71.7  
  
65.1  
59.2  
63.4  
55.9  
48.6

## TECHNOLOGIES

### Health & Safety

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

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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



47.0  
59.4  
57.5  
52.6  
45.3  
58.8  
  
37.5  
41.7  
53.2  
61.0  
56.0  
  
72.8  
  
59.0  
51.7  
46.2  
67.6  
  
40.6  
44.4  
41.3  
58.8

# Bucharest

## SMART CITY RANKING

87

Out of 109



85 in 2019

## SMART CITY RATING

CC

CC in 2019

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

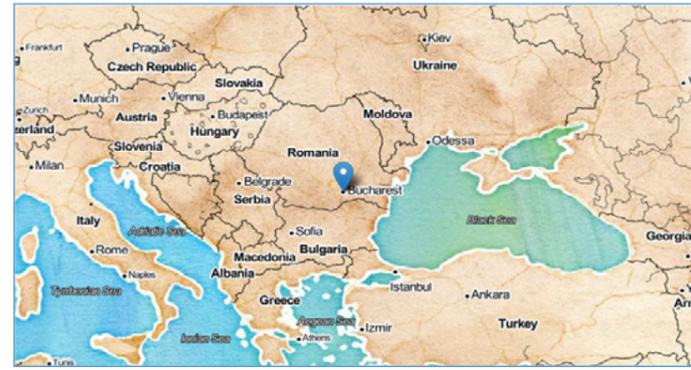
All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,868,000

(UN World Cities Report)



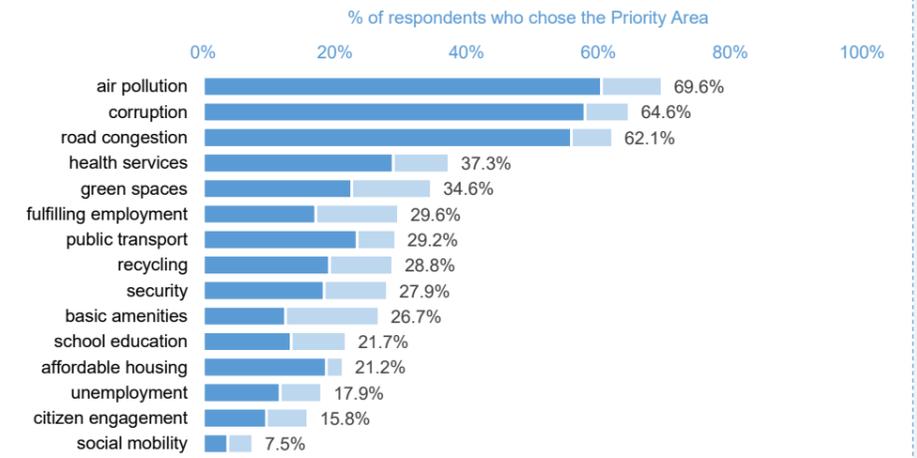
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## 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.



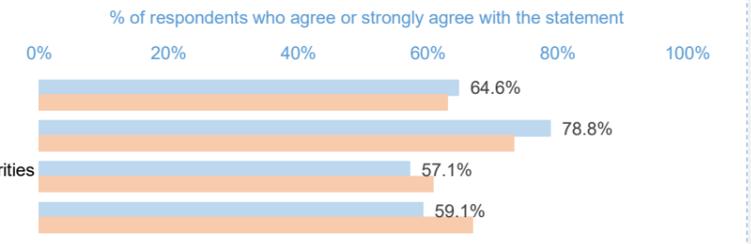
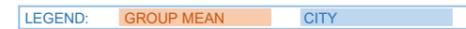
## ATTITUDES

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)



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

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

Bicycle hiring has reduced congestion

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

The city provides information on traffic congestion through mobile phones

### Activities

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

### Opportunities (Work & School)

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

IT skills are taught well in schools

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

The current internet speed and reliability meet connectivity needs

### Governance

Online public access to city finances has reduced corruption

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

# Budapest

## SMART CITY RANKING

77

Out of 109



83 in 2019

## SMART CITY RATING

CCC

CC in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,714,000

(UN World Cities Report)



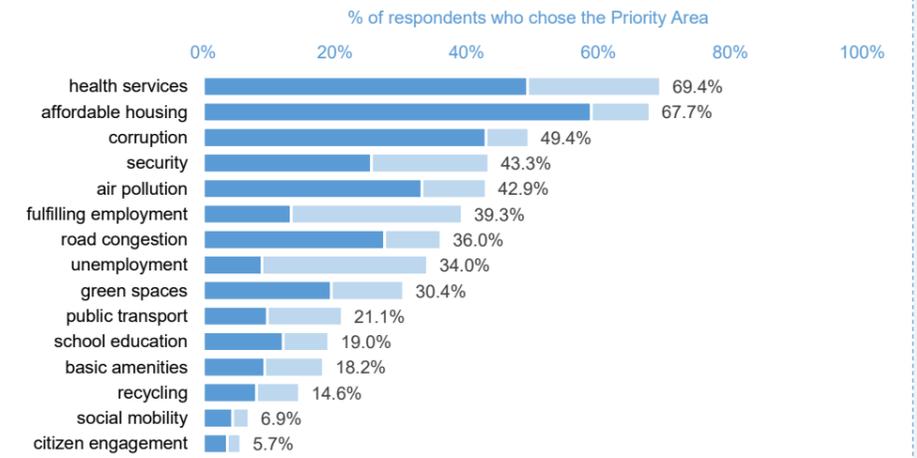
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.835	0.838	0.841	0.845	+0.004
Life expectancy at Birth	76.0	76.3	76.5	76.7	+0.2
Expected years of schooling	15.2	15.1	15.1	15.1	+0.0
Mean years of schooling	11.8	11.8	11.9	11.9	+0.0
GNI per capita (PPP \$)	23,965	25,081	25,774	27,144	+1,370.0

## PRIORITY AREAS

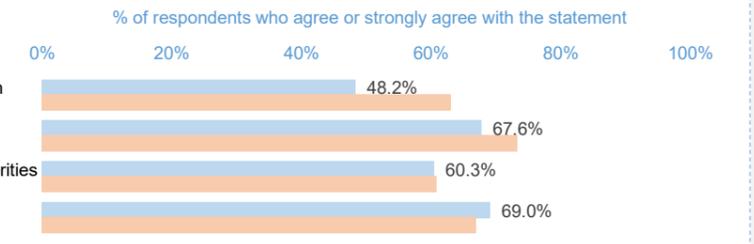
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## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

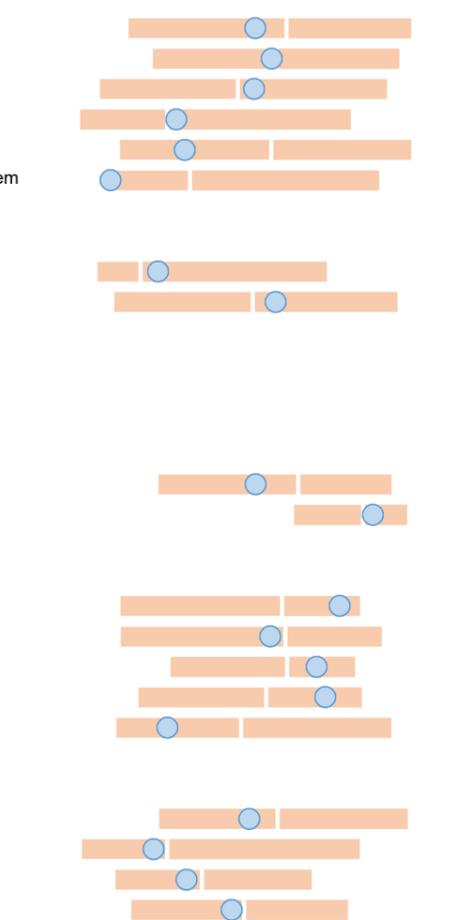
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### Mobility

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

### Activities

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

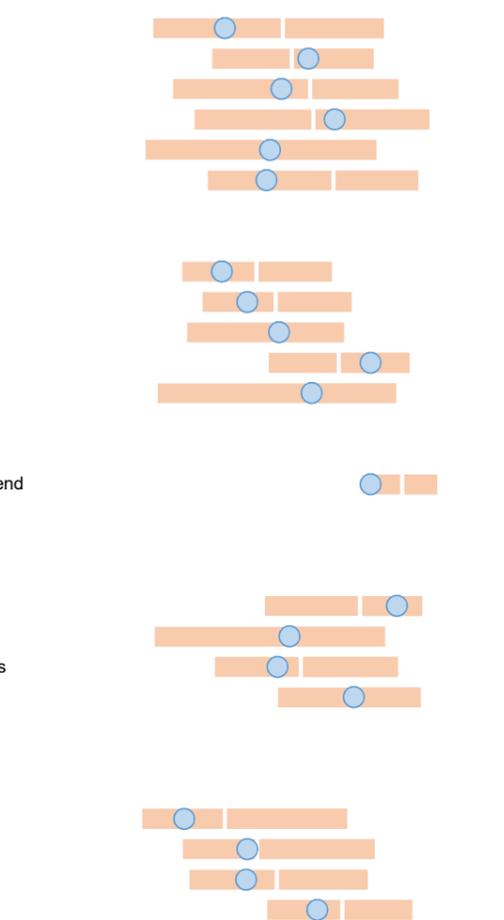
### Opportunities (Work & School)

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

### Governance

- Online public access to city finances has reduced corruption
- 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

Score 0 20 40 60 80 100



# Buenos Aires

## SMART CITY RANKING

88

Out of 109



87 in 2019

## SMART CITY RATING

CC

CC in 2019

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
15,180,000

(UN World Cities Report)



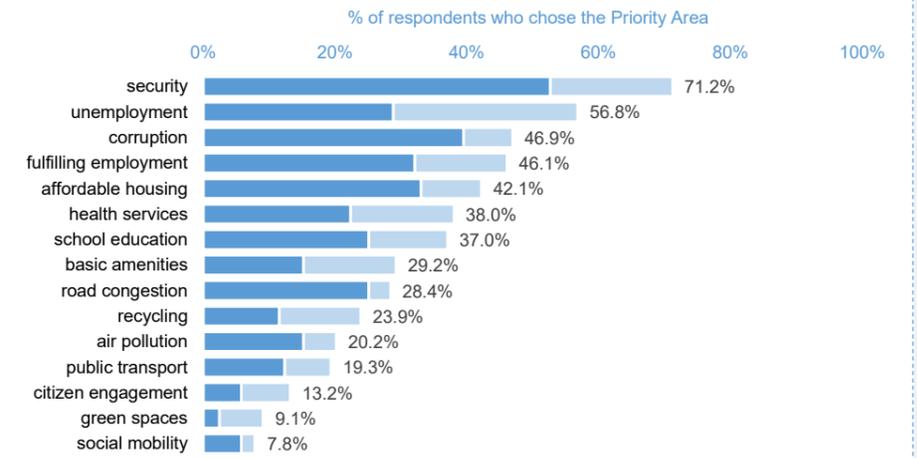
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### 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.

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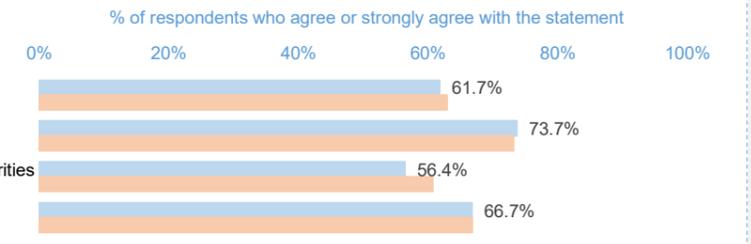
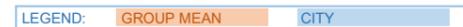
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

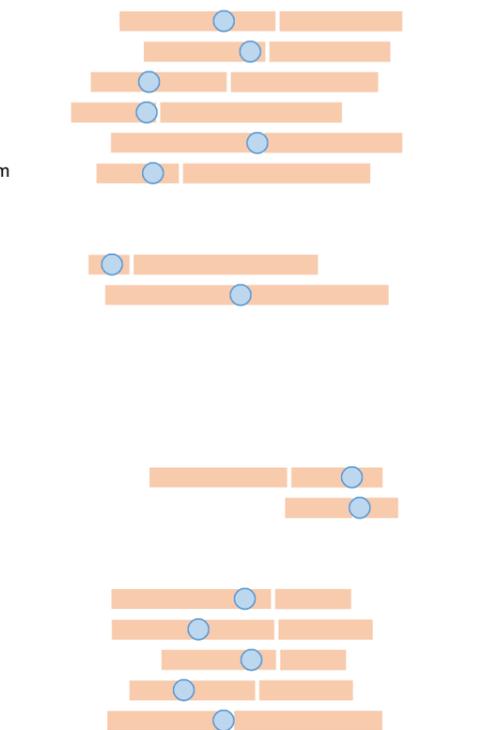
Residents contribute to decision making of local government

Residents provide feedback on local government projects



### Score

0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

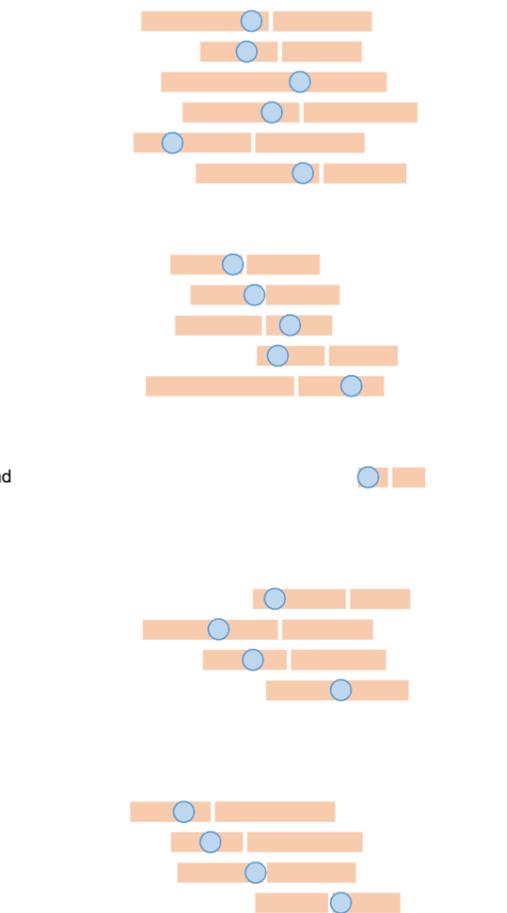
Online voting has increased participation

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

Processing Identification Documents online has reduced waiting times

### Score

0 20 40 60 80 100



# Busan

## SMART CITY RANKING

46

Out of 109



50 in 2019

## SMART CITY RATING

BB

BB in 2019

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
3,216,000

(UN World Cities Report)



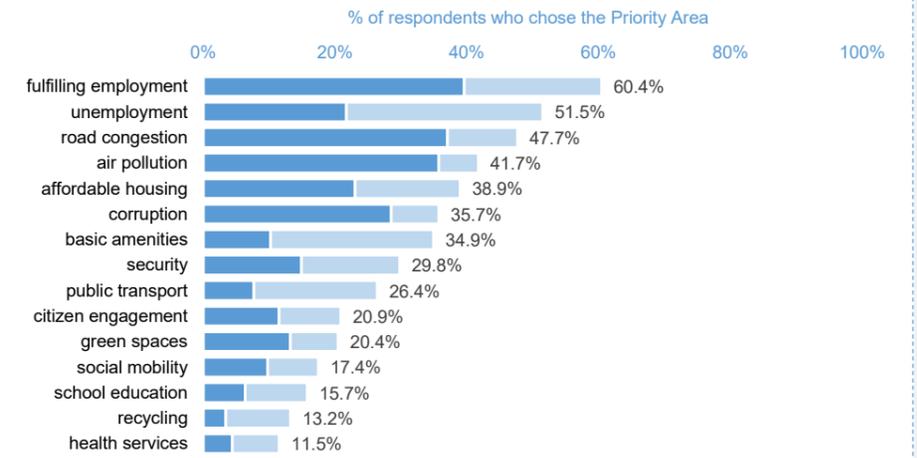
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.899	0.901	0.904	0.906	+0.002
Life expectancy at Birth	82.1	82.4	82.6	82.8	+0.2
Expected years of schooling	16.5	16.4	16.4	16.4	+0.0
Mean years of schooling	12.1	12.2	12.2	12.2	+0.0
GNI per capita (PPP \$)	34,276	35,122	35,945	36,757	+812.0

## 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.

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## ATTITUDES

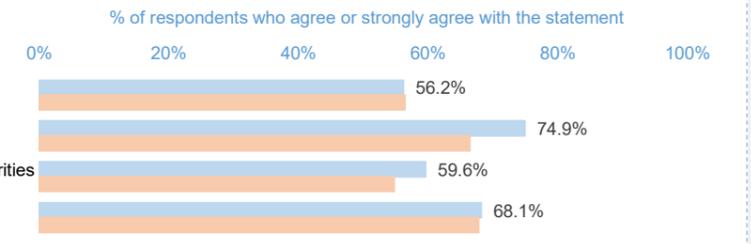
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

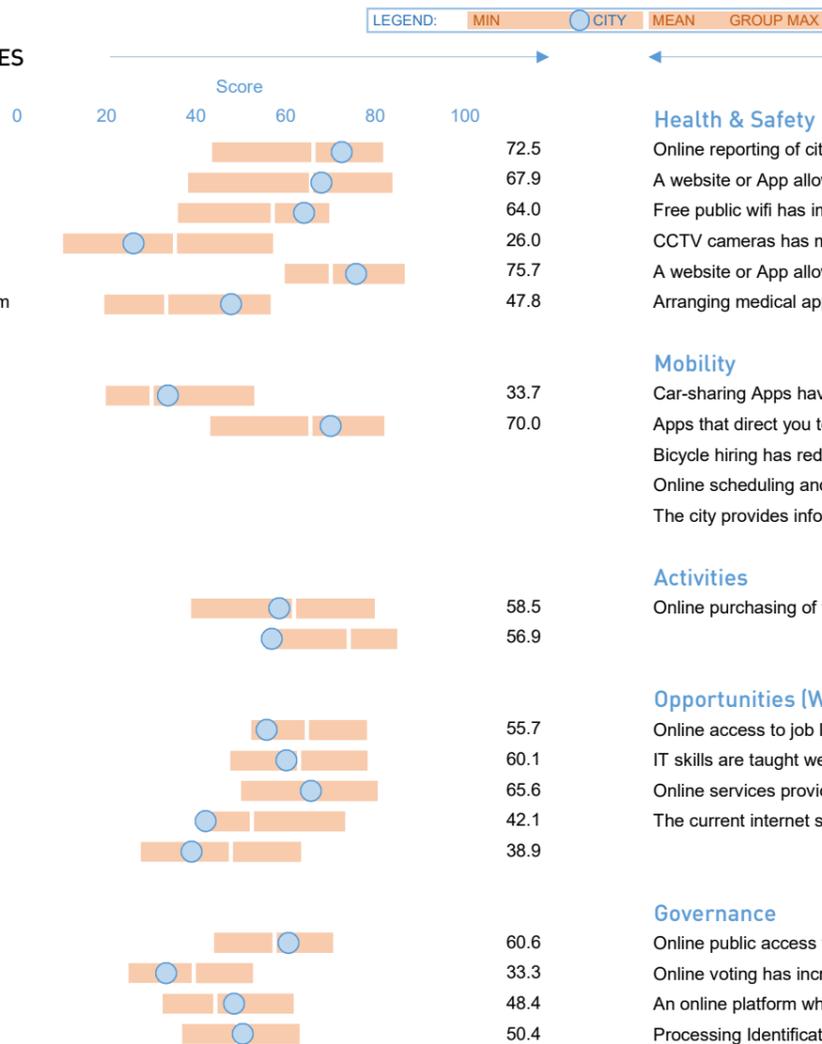
### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

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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

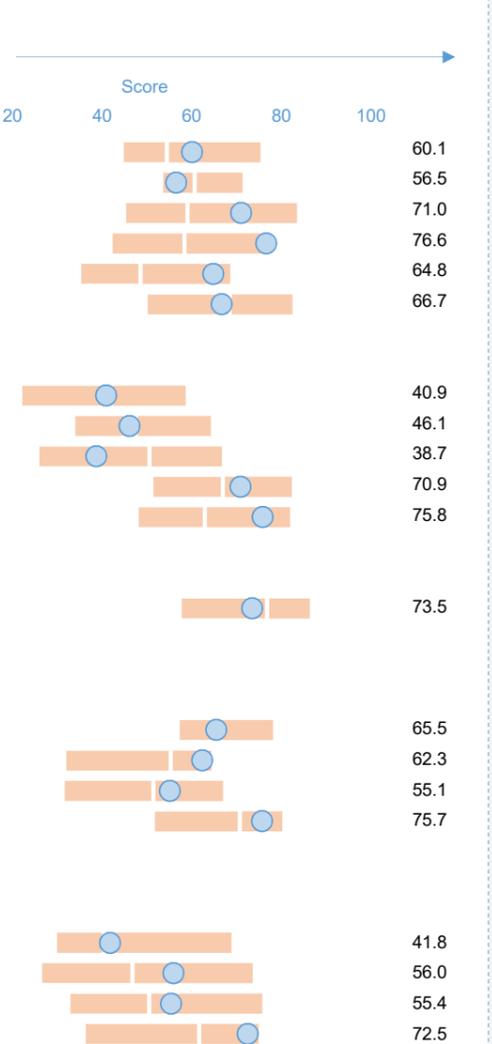
### Governance

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



# Cairo

## SMART CITY RANKING

106

Out of 109



99 in 2019

## SMART CITY RATING

D

D in 2019

## FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
18,772,000

(UN World Cities Report)



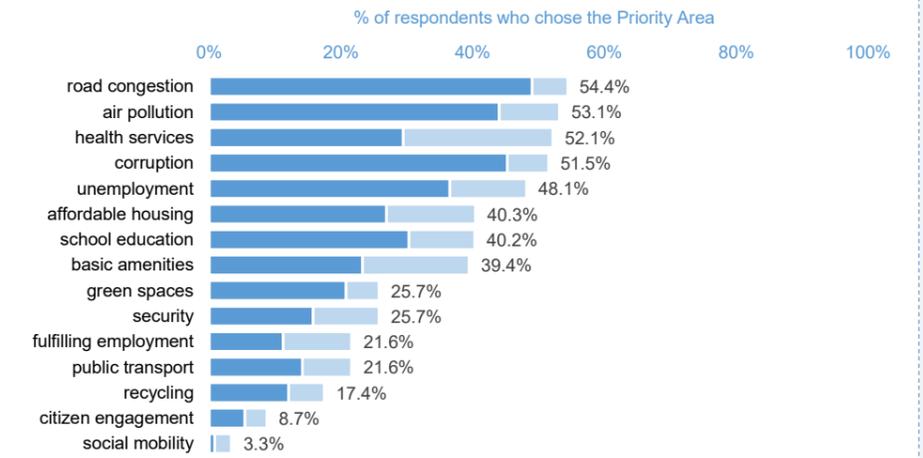
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.690	0.695	0.696	0.700	+0.004
Life expectancy at Birth	71.3	71.5	71.7	71.8	+0.1
Expected years of schooling	13.0	13.1	13.1	13.1	+0.0
Mean years of schooling	7.1	7.2	7.2	7.3	+0.1
GNI per capita (PPP \$)	10,069	10,323	10,473	10,744	+271.0

### 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.

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### ATTITUDES

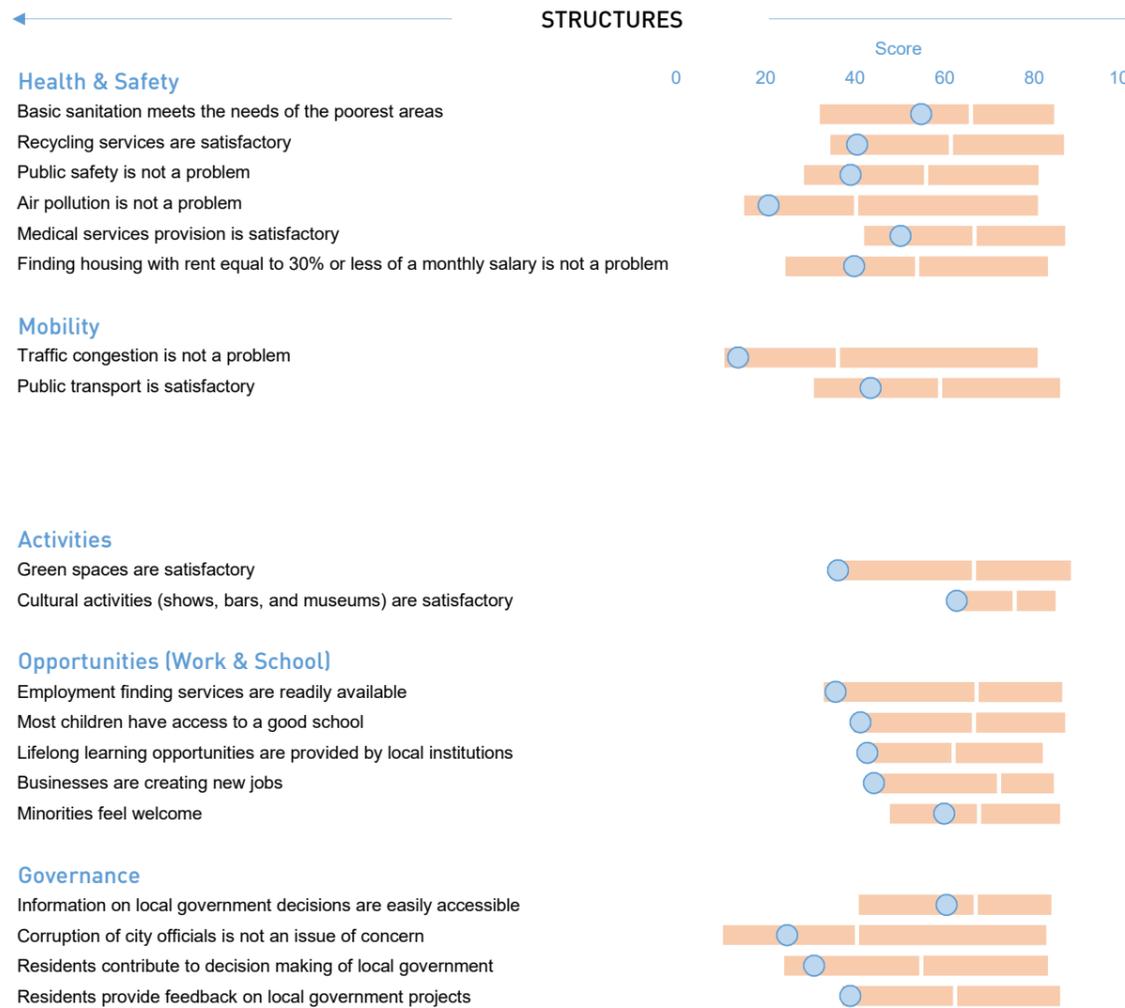
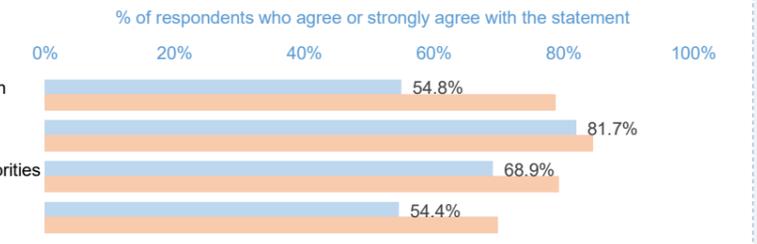
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



# Cape Town

## SMART CITY RANKING

103

Out of 109



93 in 2019

## SMART CITY RATING

D

C in 2019

## FACTOR RATINGS

D

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,660,000

(UN World Cities Report)



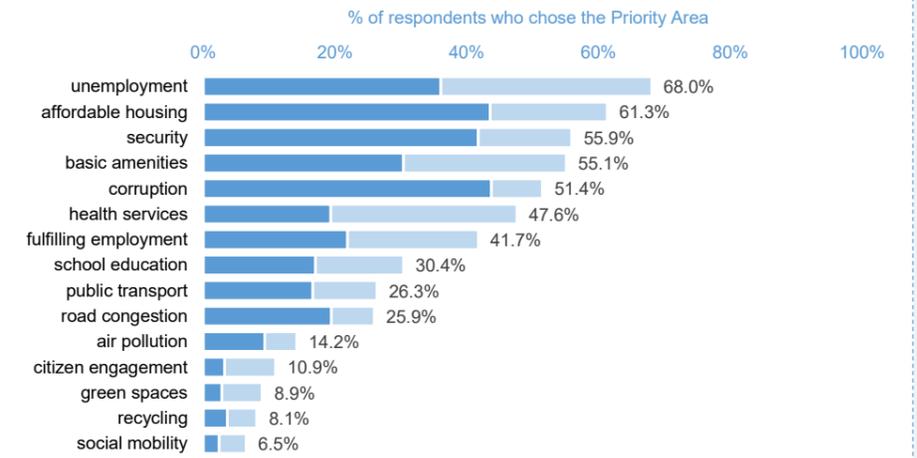
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

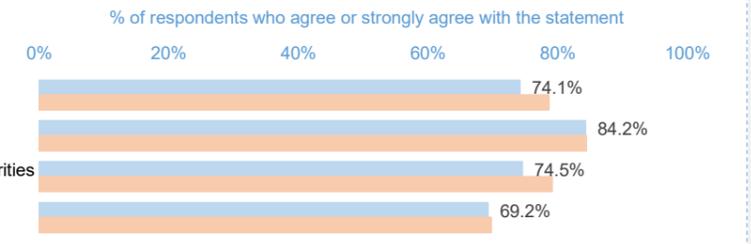
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

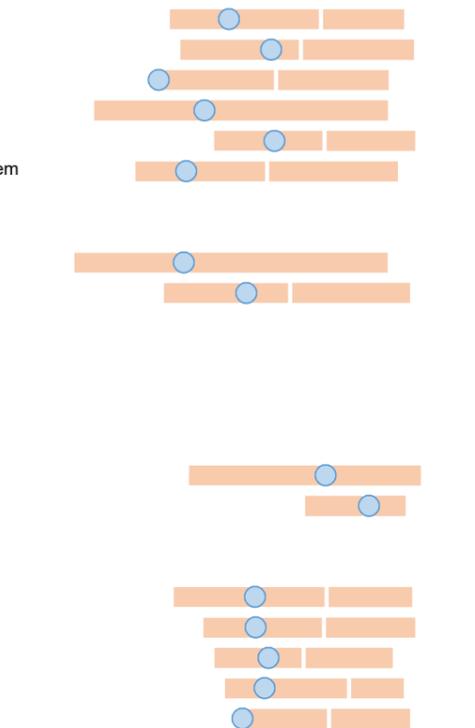
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

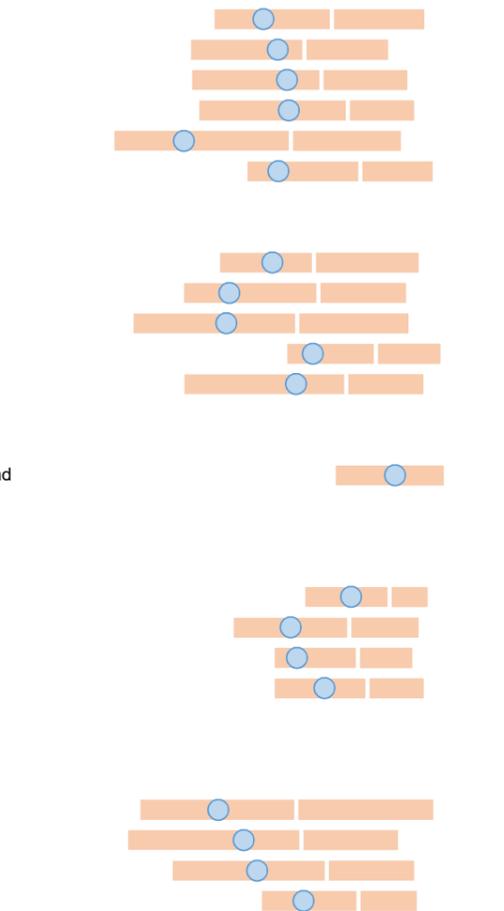
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Chengdu

## SMART CITY RANKING

69

Out of 109



58 in 2019

## SMART CITY RATING

CCC

B in 2019

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
7,556,000

(UN World Cities Report)

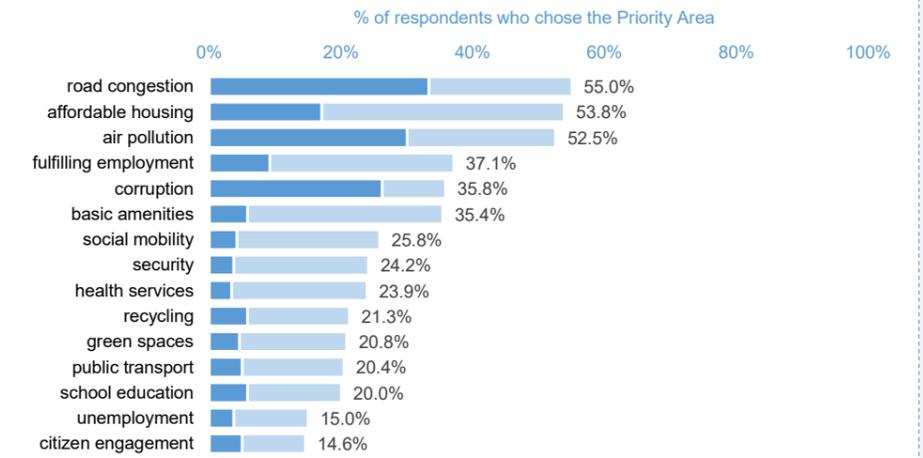


Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

## PRIORITY AREAS

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

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



## ATTITUDES

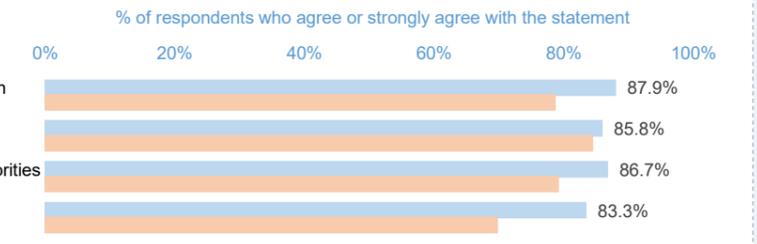
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

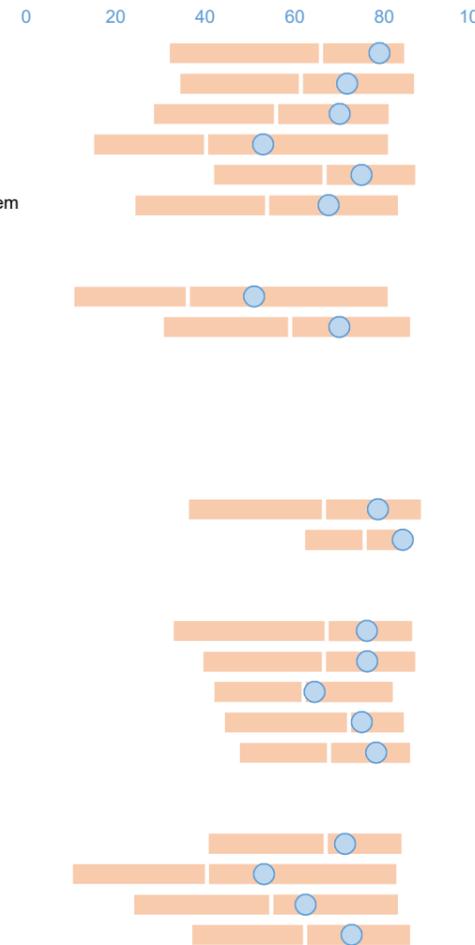
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

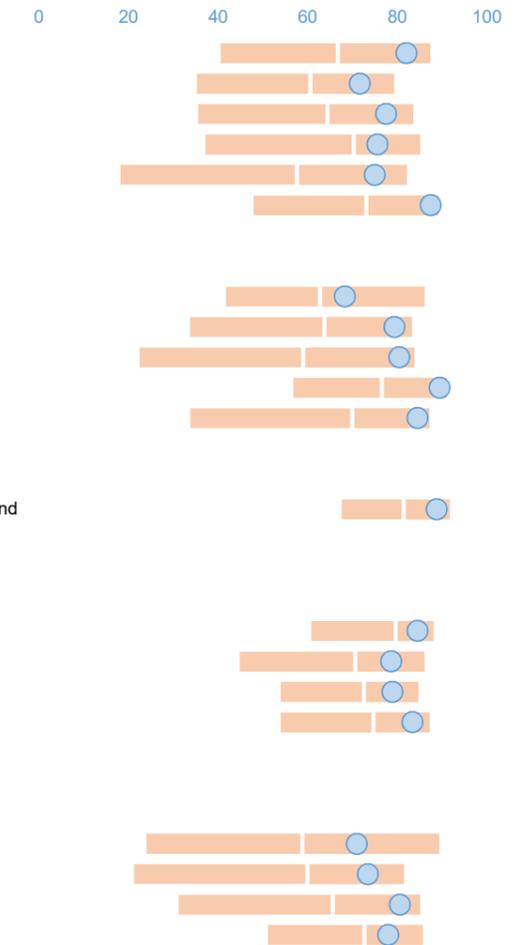
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Chicago

## SMART CITY RANKING

41

Out of 109



53 in 2019

## SMART CITY RATING

BBB

BB in 2019

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
8,745,000

(UN World Cities Report)



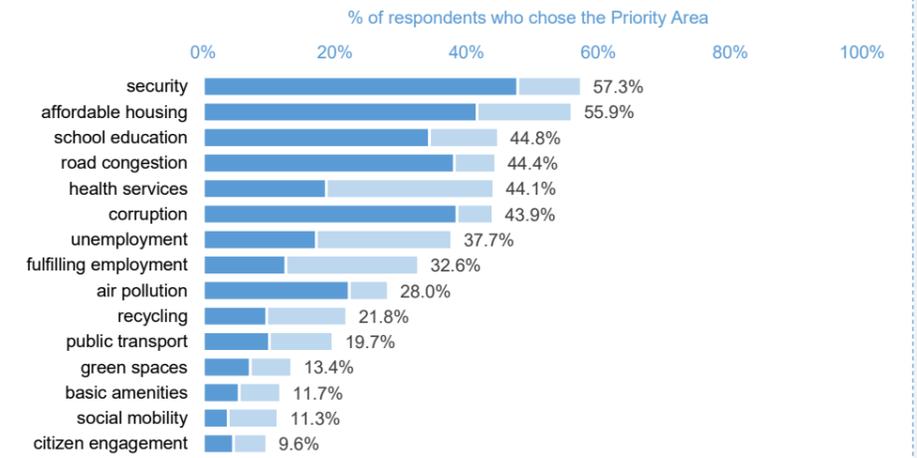
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

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

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



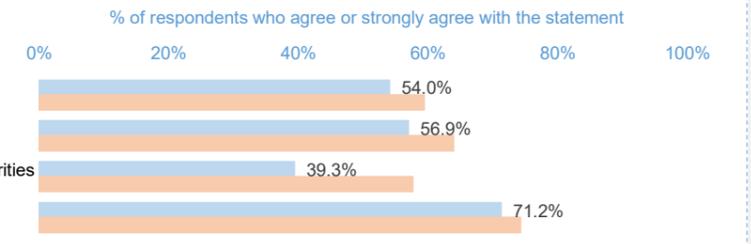
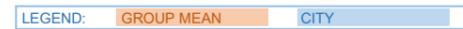
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

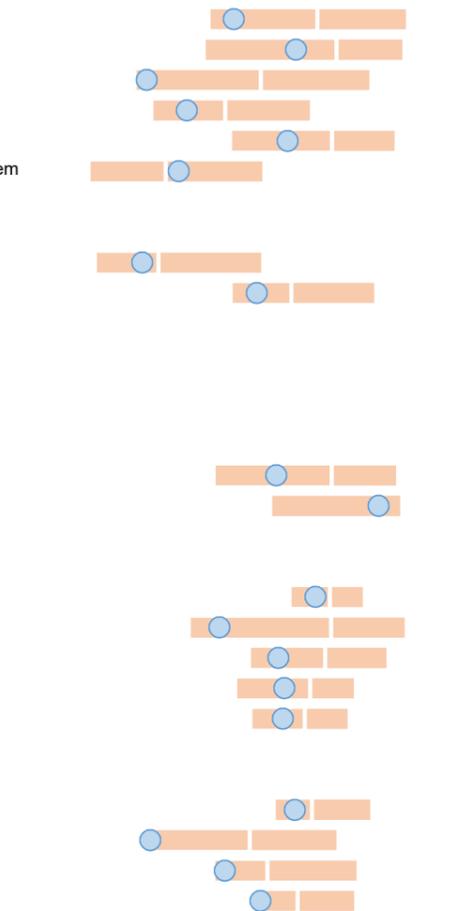
Residents contribute to decision making of local government

Residents provide feedback on local government projects



### Score

0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

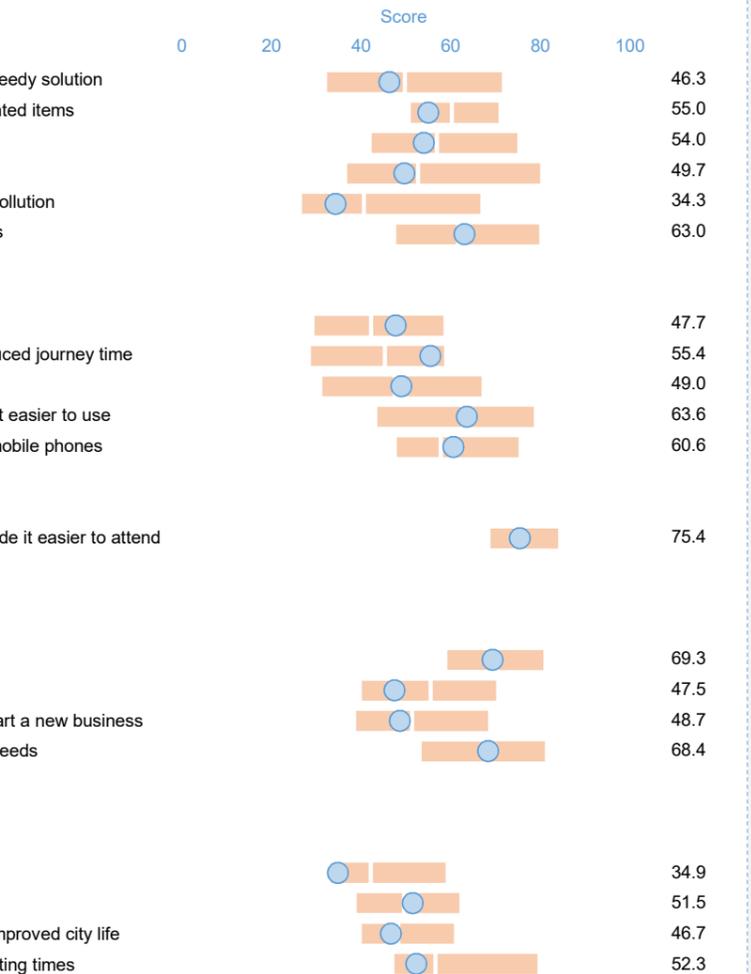
#### Governance

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



# Chongqing

## SMART CITY RANKING

64

Out of 109



42 in 2019

## SMART CITY RATING

CCC

BB in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

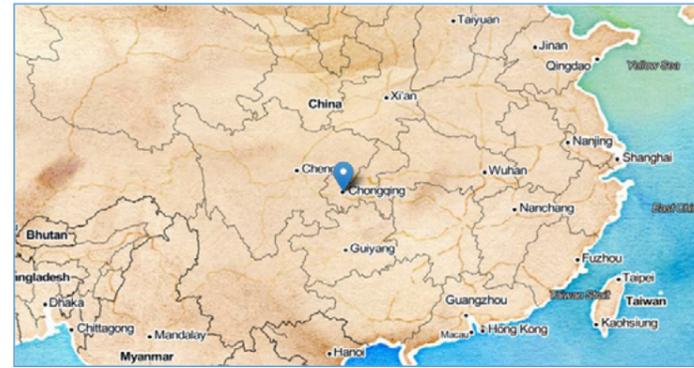
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
13,332,000

(UN World Cities Report)



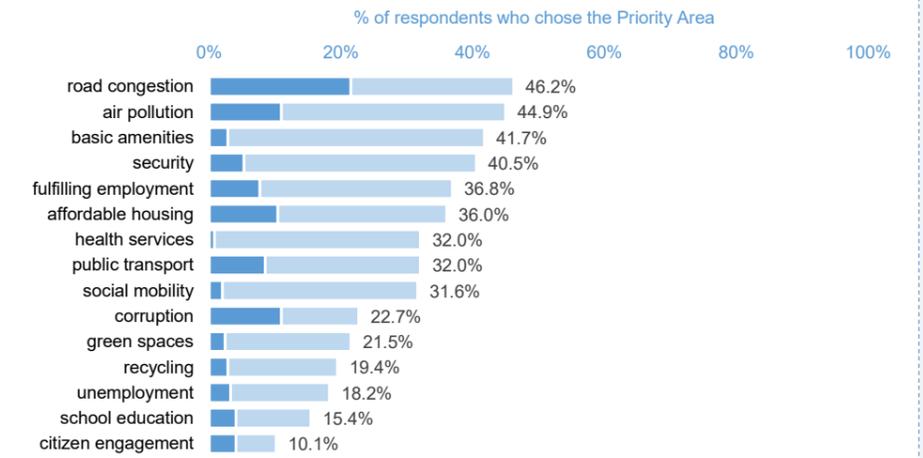
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

### PRIORITY AREAS

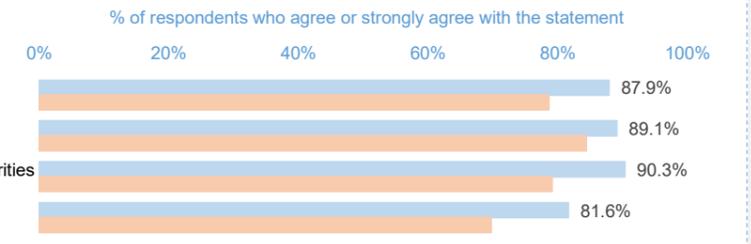
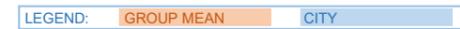
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)



### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

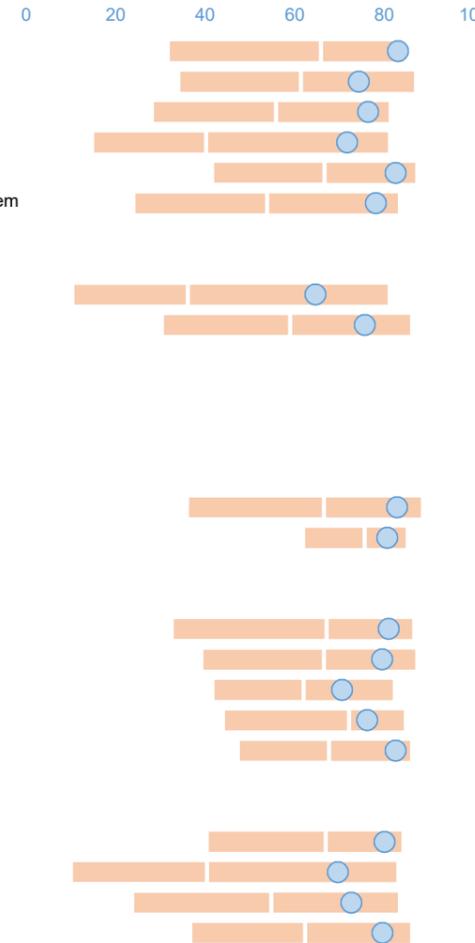
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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



### Score



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

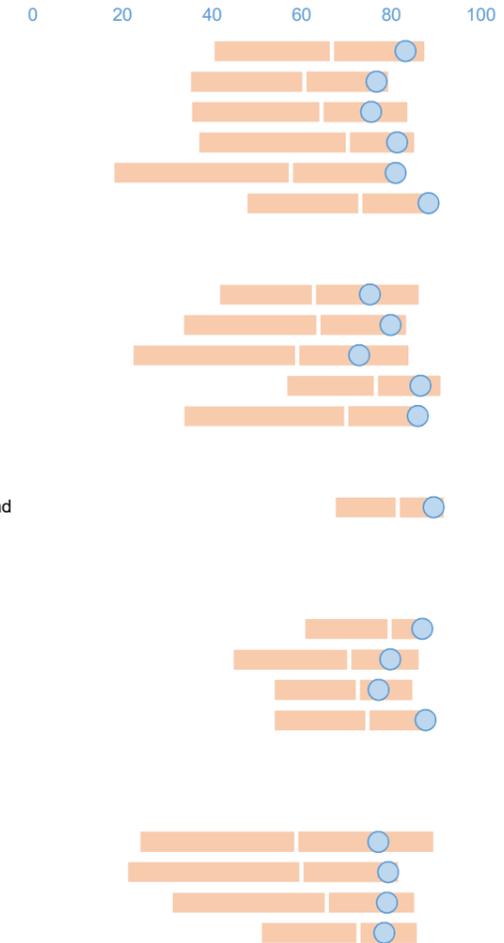
#### Opportunities (Work & School)

- 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

### Score



# Copenhagen

## SMART CITY RANKING

6

Out of 109



5 in 2019

## SMART CITY RATING

AA

AA in 2019

## FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,268,000

(UN World Cities Report)

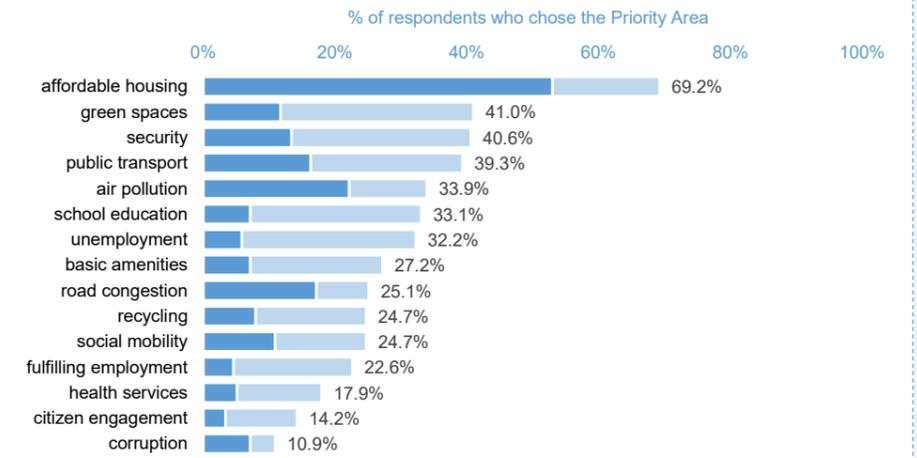


Country	2015	2016	2017	2018	1 yr change
HDI	0.926	0.928	0.929	0.930	+0.001
Life expectancy at Birth	80.5	80.6	80.7	80.8	+0.1
Expected years of schooling	19.2	19.1	19.1	19.1	+0.0
Mean years of schooling	12.5	12.6	12.6	12.6	+0.0
GNI per capita (PPP \$)	47,213	47,729	48,338	48,836	+498.0

## 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.

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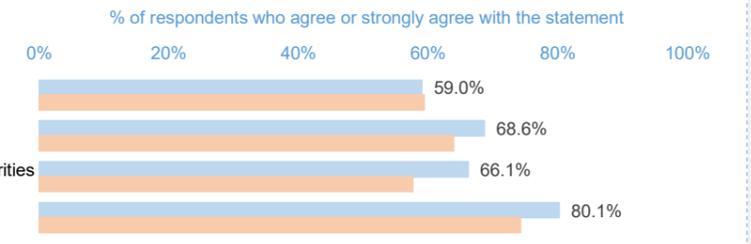
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You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

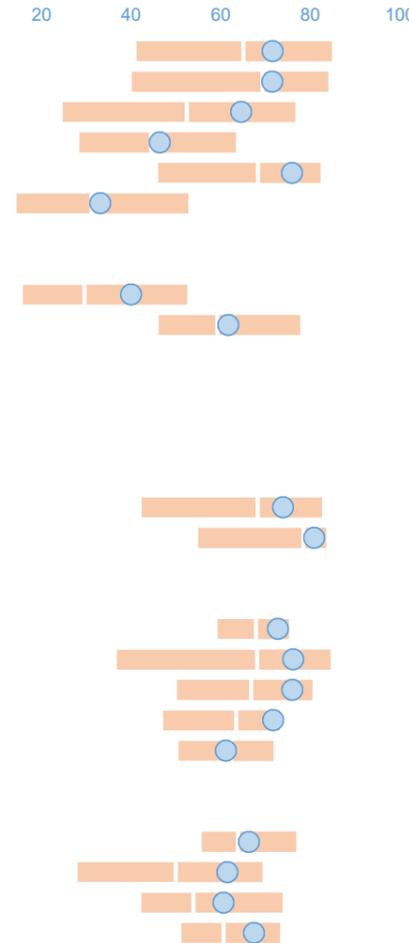
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

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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

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### Opportunities (Work & School)

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IT skills are taught well in schools

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The current internet speed and reliability meet connectivity needs

### Governance

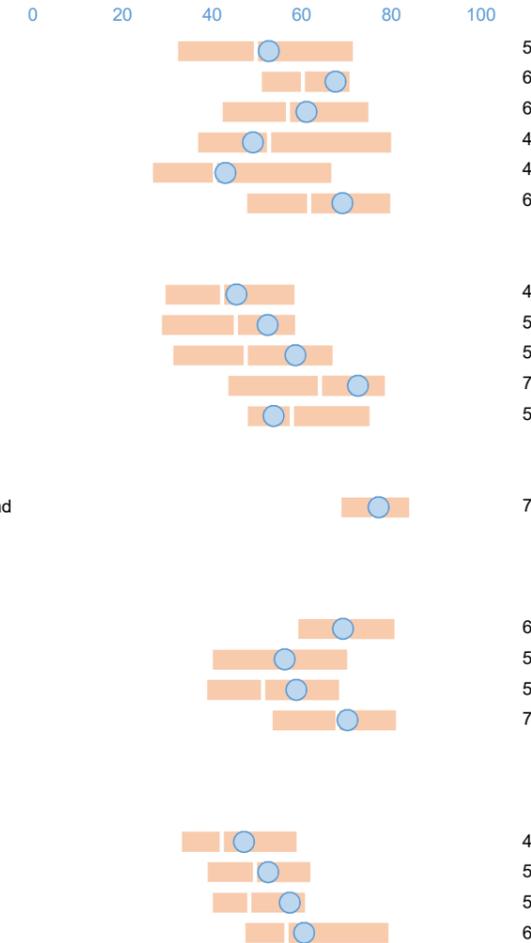
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Denver

## SMART CITY RANKING

35

Out of 109



33 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,599,000

(UN World Cities Report)

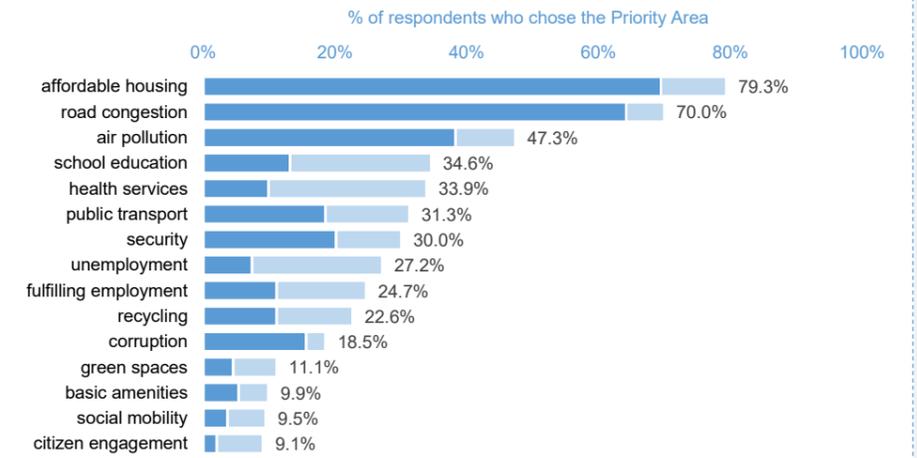


Country	2015	2016	2017	2018	1 yr change
HDI	0.917	0.919	0.919	0.920	+0.001
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.2	16.3	16.3	16.3	+0.0
Mean years of schooling	13.3	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,039	54,443	55,351	56,140	+789.0

### PRIORITY AREAS

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

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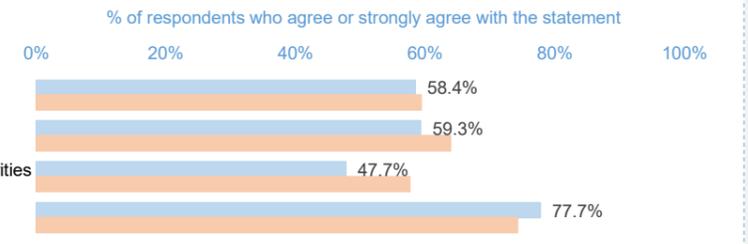
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You feel the availability of online information has increased your trust in authorities

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

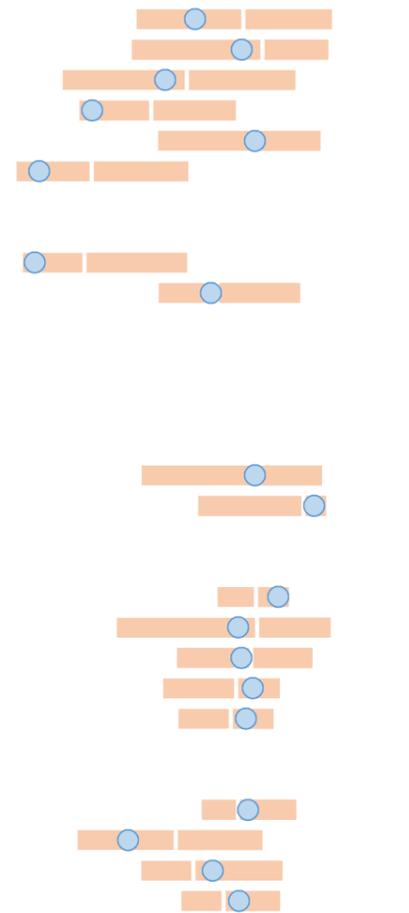
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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#### Mobility

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#### Activities

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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

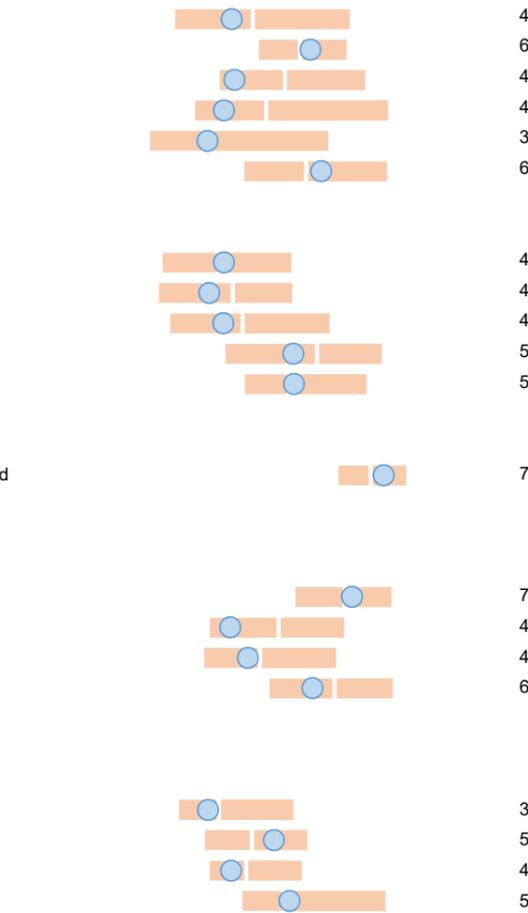
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Dubai

## SMART CITY RANKING

43

Out of 109



45 in 2019

## SMART CITY RATING

BB

BB in 2019

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,415,000

(UN World Cities Report)



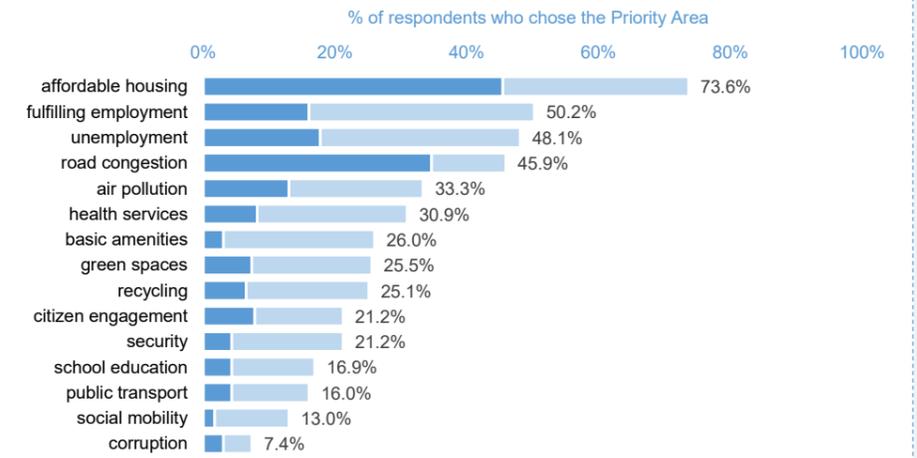
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.860	0.863	0.864	0.866	+0.002
Life expectancy at Birth	77.3	77.5	77.6	77.8	+0.2
Expected years of schooling	13.7	13.6	13.6	13.6	+0.0
Mean years of schooling	10.6	10.8	10.9	11.0	+0.1
GNI per capita (PPP \$)	66,093	67,410	67,136	66,912	-224.0

### PRIORITY AREAS

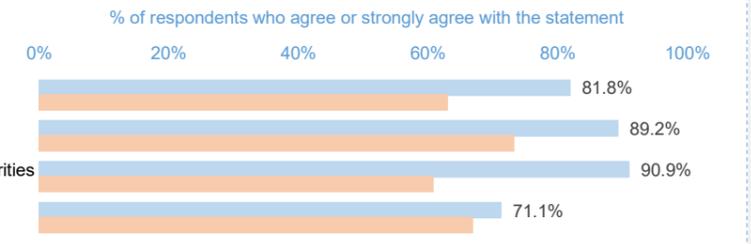
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

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



LEGEND: GROUP MEAN CITY

### 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

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#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

- Information on local government decisions are easily accessible
- 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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

84.6  
81.9  
79.4  
61.5  
81.6  
43.2  
45.5  
83.3  
81.2  
84.4  
68.5  
77.3  
70.0  
66.6  
77.9

### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

Score 0 20 40 60 80 100

75.3  
70.8  
79.4  
84.8  
57.6  
82.5  
61.2  
66.5  
60.8  
79.6  
78.6  
86.7  
74.3  
74.0  
79.2  
83.0  
67.9  
63.3  
72.5  
82.4

# Dublin

## SMART CITY RANKING

34

Out of 109



30 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,169,000

(UN World Cities Report)



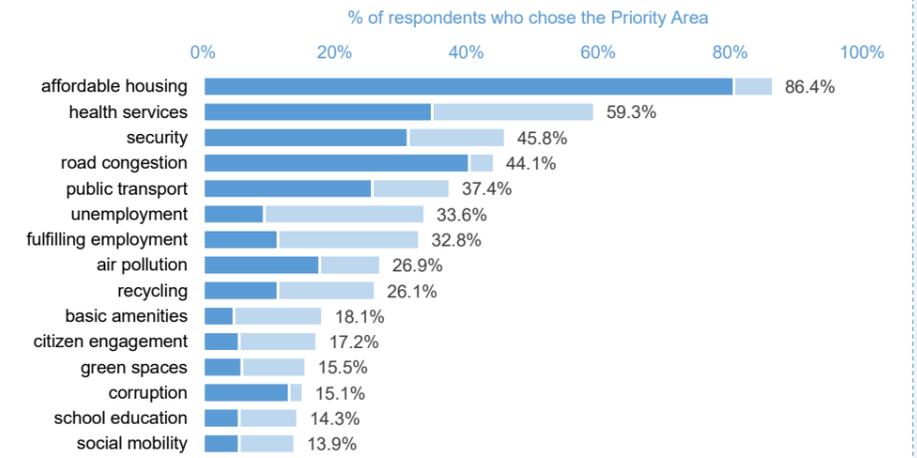
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.926	0.936	0.939	0.942	+0.003
Life expectancy at Birth	81.3	81.6	81.9	82.1	+0.2
Expected years of schooling	18.7	18.8	18.8	18.8	+0.0
Mean years of schooling	12.3	12.5	12.5	12.5	+0.0
GNI per capita (PPP \$)	45,809	50,911	52,799	55,660	+2,861.0

### PRIORITY AREAS

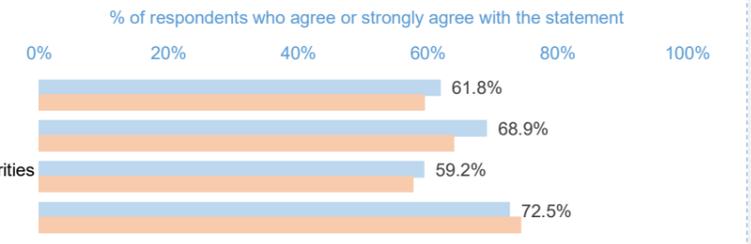
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

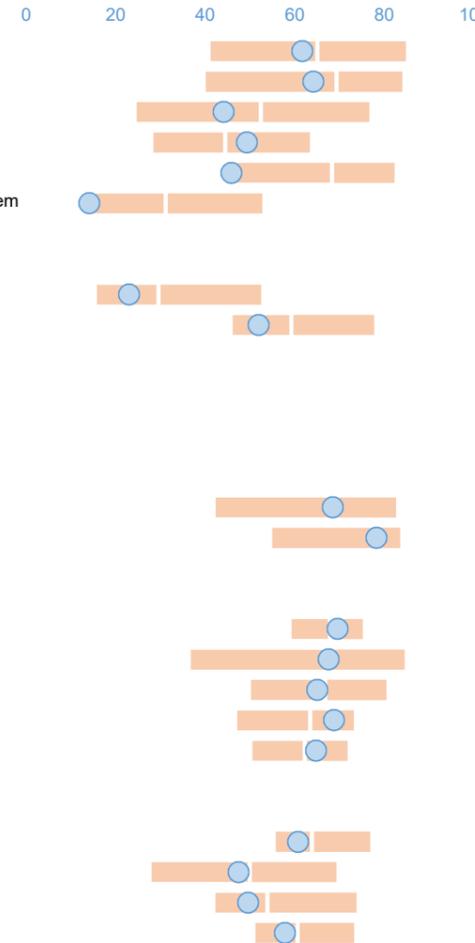
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

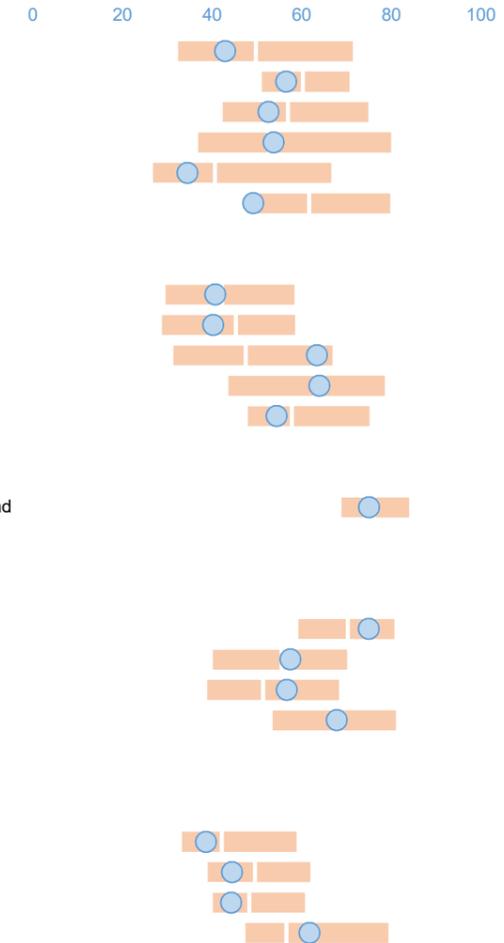
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Dusseldorf

## SMART CITY RANKING

13

Out of 109



10 in 2019

## SMART CITY RATING

A

A in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
617,000

(Eurostat)

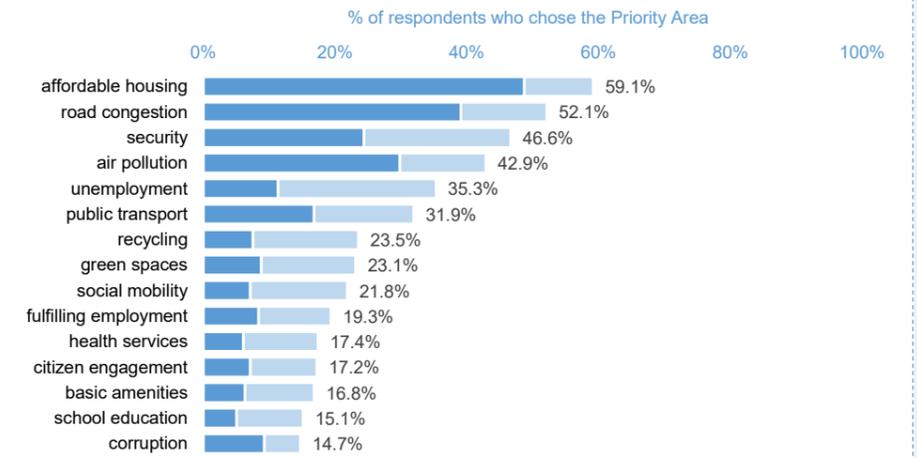


Country	2015	2016	2017	2018	1 yr change
HDI	0.933	0.936	0.938	0.939	+0.001
Life expectancy at Birth	80.8	80.9	81.0	81.2	+0.2
Expected years of schooling	17.0	17.1	17.1	17.1	+0.0
Mean years of schooling	14.1	14.1	14.1	14.1	+0.0
GNI per capita (PPP \$)	45,012	45,577	46,438	46,946	+508.0

## PRIORITY AREAS

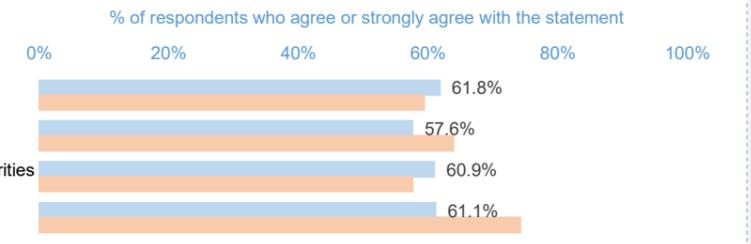
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

### Activities

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

### Opportunities (Work & School)

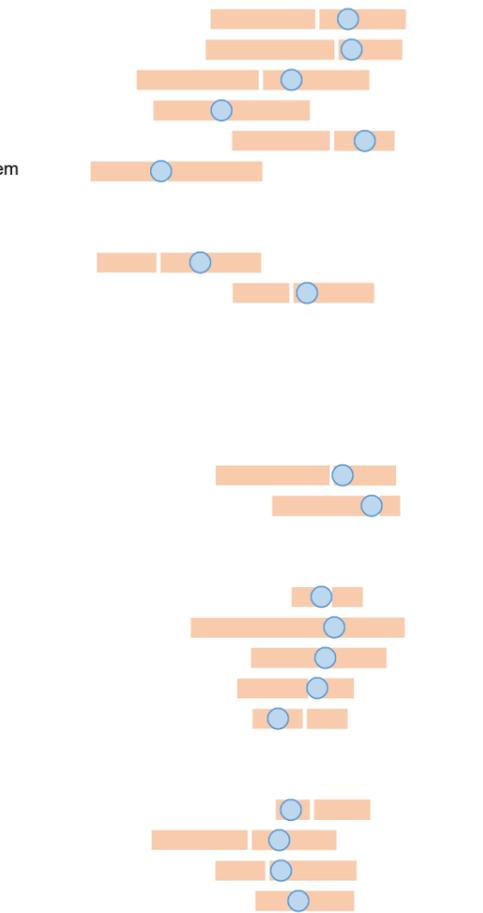
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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

### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space 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

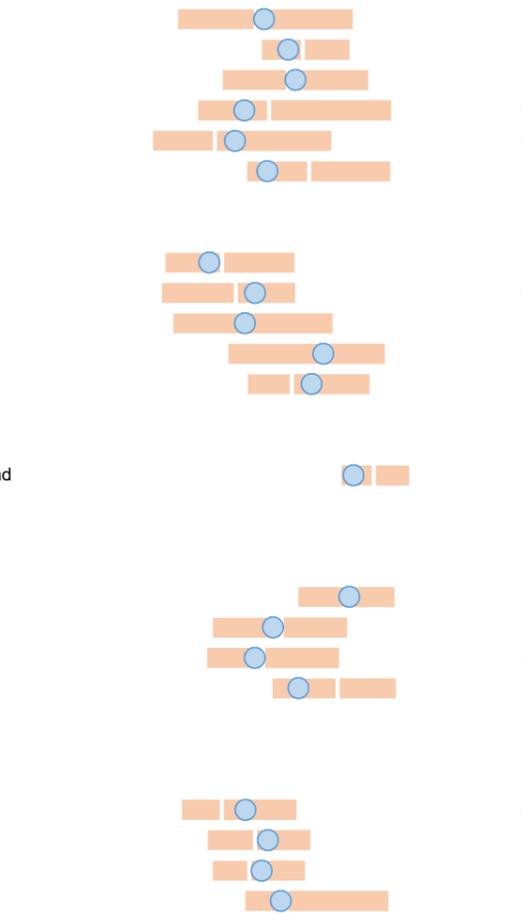
### Opportunities (Work & School)

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

Score 0 20 40 60 80 100



# Geneva

## SMART CITY RANKING

7

Out of 109



4 in 2019

## SMART CITY RATING

AA

AA in 2019

## FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
371,000

(Eurostat)



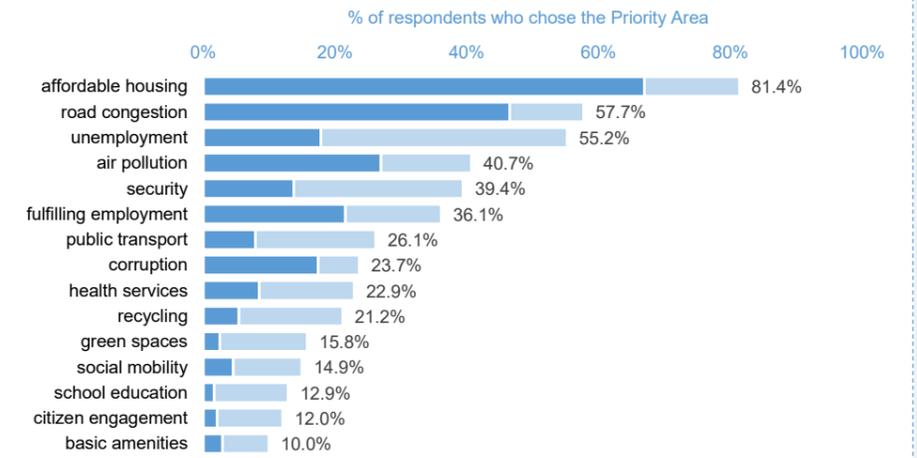
### Country

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

## PRIORITY AREAS

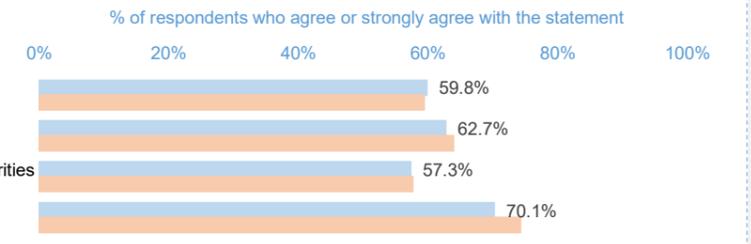
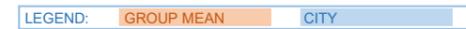
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



## ATTITUDES

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



## STRUCTURES

### Health & Safety

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

### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

### Activities

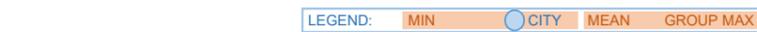
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

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

### Governance

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



## TECHNOLOGIES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

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

### Governance

Online public access to city finances has reduced corruption  
 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

# Gothenburg

## SMART CITY RANKING

31

Out of 109



28 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
557,000

(UN World Cities Report)

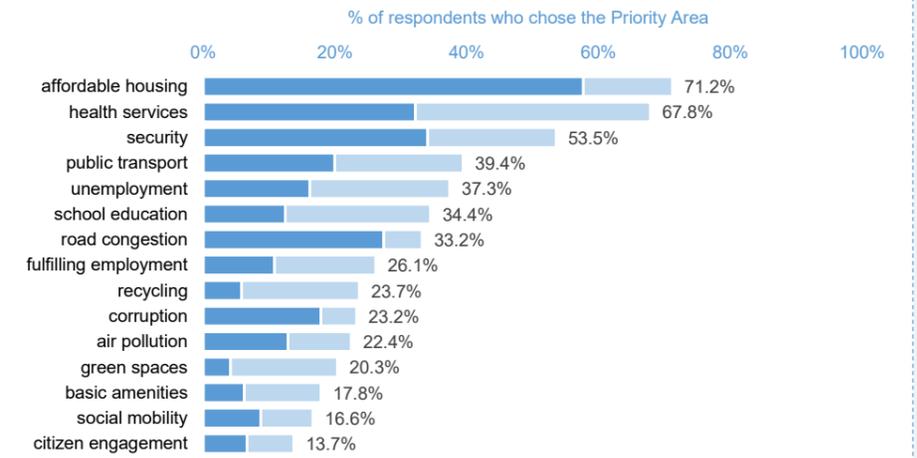


Country	2015	2016	2017	2018	1 yr change
HDI	0.932	0.934	0.935	0.937	+0.002
Life expectancy at Birth	82.3	82.4	82.5	82.7	+0.2
Expected years of schooling	18.6	18.8	18.8	18.8	+0.0
Mean years of schooling	12.4	12.4	12.4	12.4	+0.0
GNI per capita (PPP \$)	46,168	46,662	47,398	47,955	+557.0

## 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.

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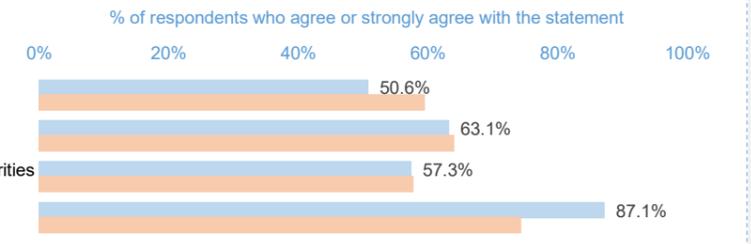
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

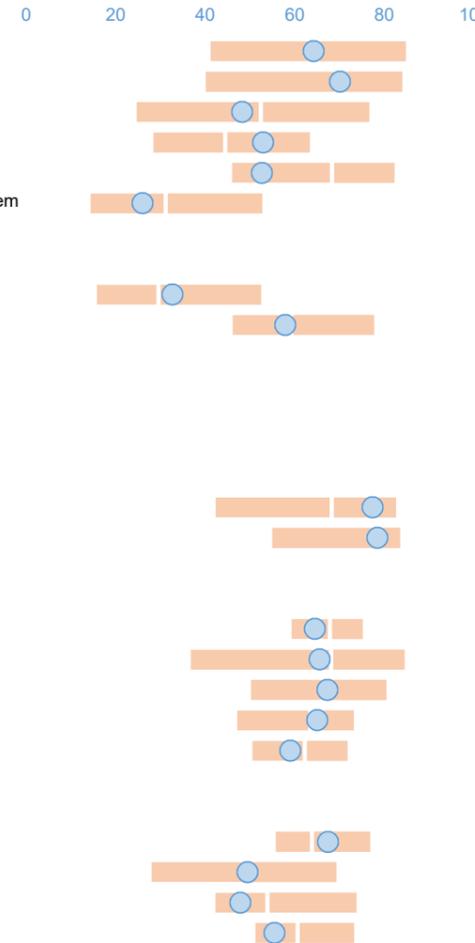
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

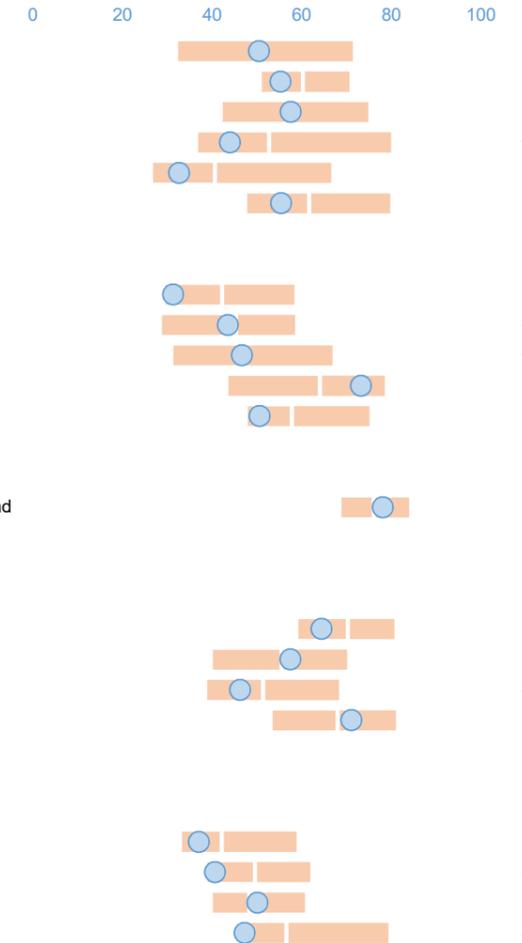
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Guangzhou

## SMART CITY RANKING

68

Out of 109



57 in 2019

## SMART CITY RATING

CCC

B in 2019

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
12,458,000

(UN World Cities Report)



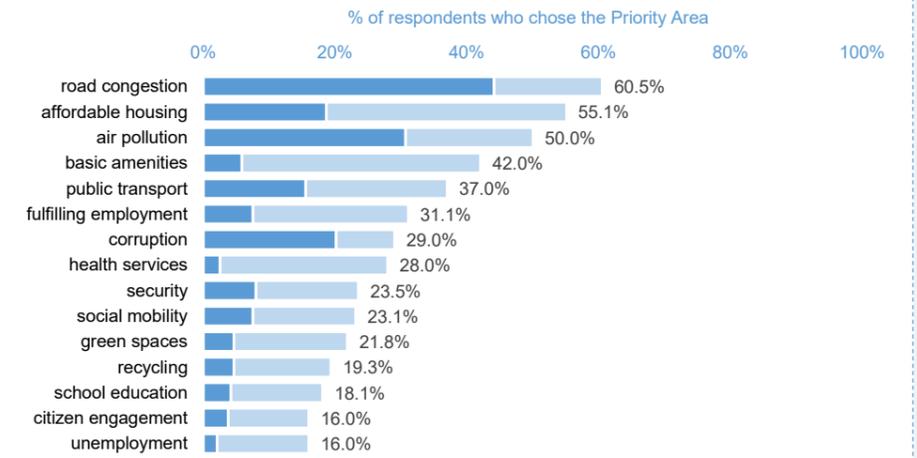
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

### 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.

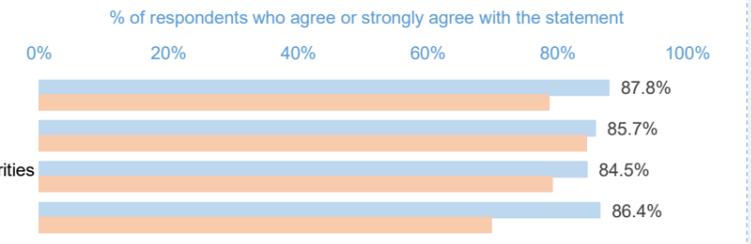
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### ATTITUDES

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

82.7  
74.2  
64.9  
47.5  
82.1  
57.5  
36.9  
63.0  
77.7  
83.5  
79.9  
77.7  
65.8  
79.6  
74.8  
73.5  
49.0  
65.3  
71.0

### TECHNOLOGIES

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
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#### Mobility

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#### 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
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#### Governance

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- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score 0 20 40 60 80 100

83.0  
73.5  
82.6  
80.2  
76.4  
89.2  
64.3  
76.2  
76.1  
91.4  
86.3  
91.2  
88.5  
83.3  
84.5  
86.3  
74.9  
74.9  
80.4  
83.9

# Hamburg

## SMART CITY RANKING

22

Out of 109

N/A

not in 2019

## SMART CITY RATING

A

not in 2019

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,831,000

(UN World Cities Report)

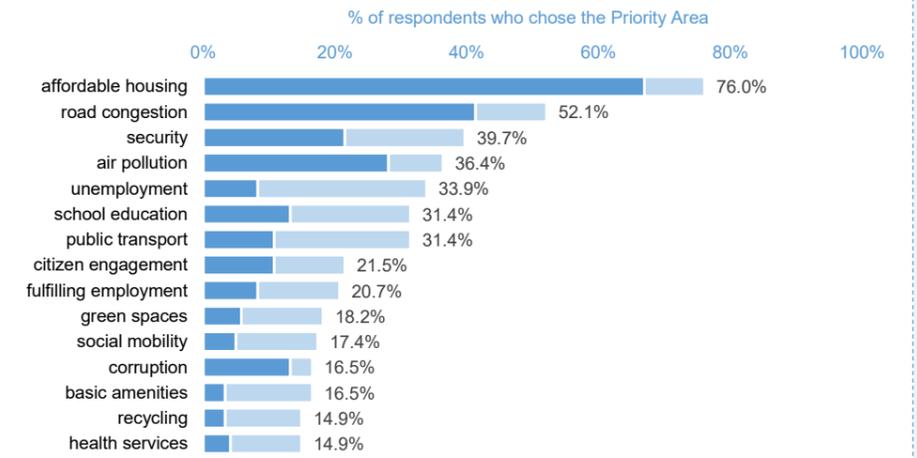


Country	2015	2016	2017	2018	1 yr change
HDI	0.933	0.936	0.938	0.939	+0.001
Life expectancy at Birth	80.8	80.9	81.0	81.2	+0.2
Expected years of schooling	17.0	17.1	17.1	17.1	+0.0
Mean years of schooling	14.1	14.1	14.1	14.1	+0.0
GNI per capita (PPP \$)	45,012	45,577	46,438	46,946	+508.0

### PRIORITY AREAS

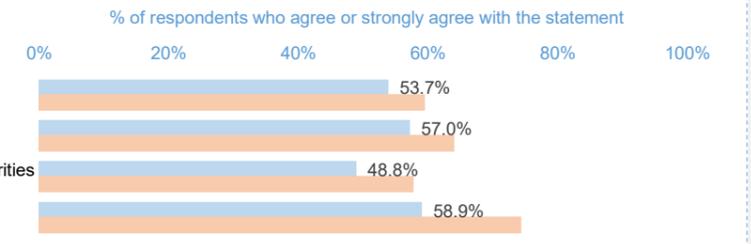
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

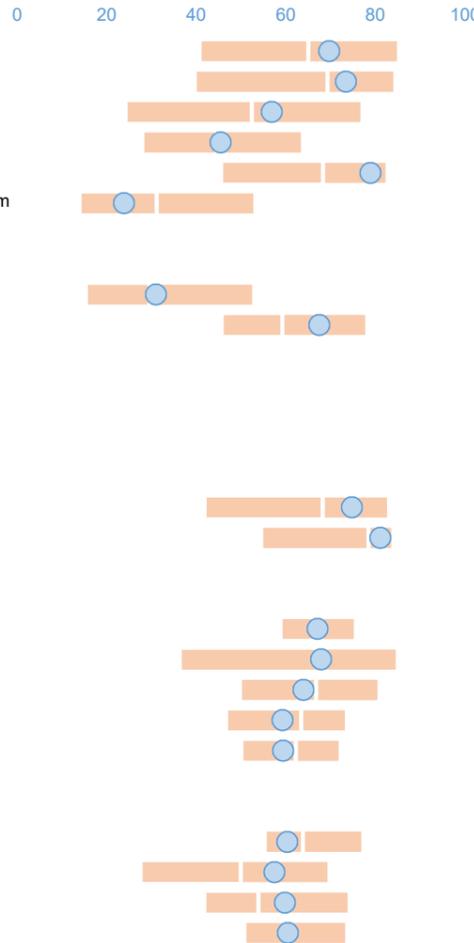
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

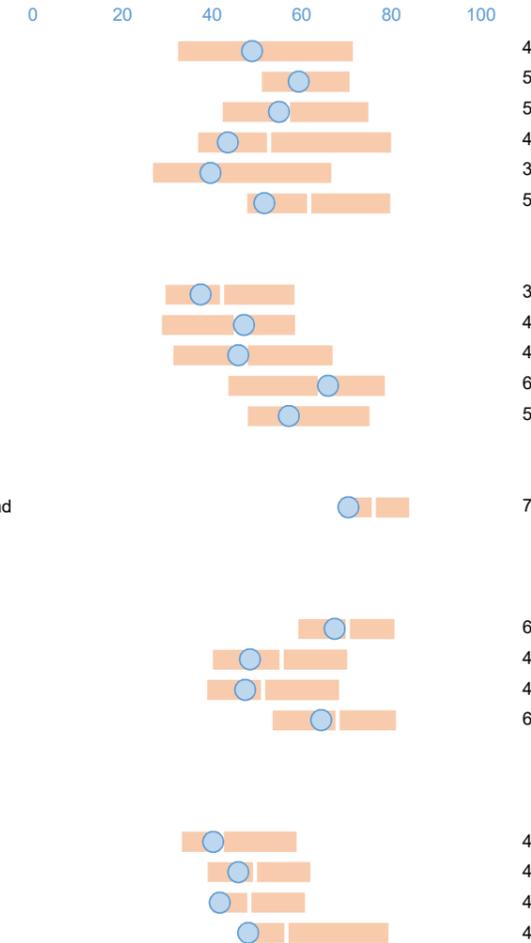
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Hangzhou

## SMART CITY RANKING

65

Out of 109



44 in 2019

## SMART CITY RATING

CCC

BB in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
6,391,000

(UN World Cities Report)



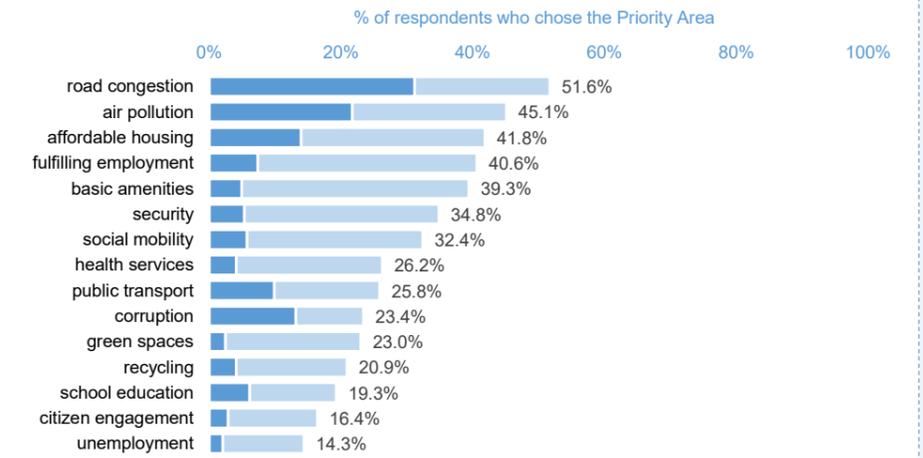
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

### PRIORITY AREAS

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

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



### ATTITUDES

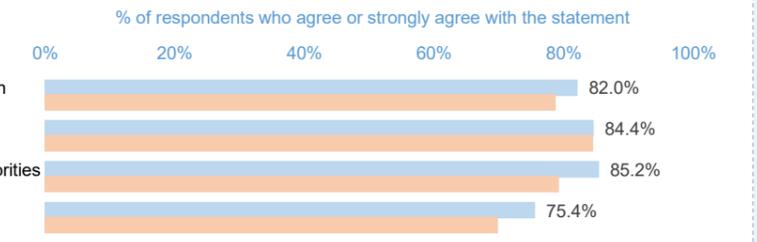
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

84.2

75.5

76.8

61.1

80.3

68.6

55.5

72.5

80.3

83.4

81.1

75.3

73.5

77.9

76.3

75.2

61.5

68.4

76.2

### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

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Online voting has increased participation

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

Processing Identification Documents online has reduced waiting times

Score 0 20 40 60 80 100

84.6

77.9

82.7

80.4

78.3

88.5

74.9

81.6

84.0

88.0

86.5

88.7

86.6

81.4

83.2

86.1

78.0

80.8

82.4

85.4

# Hanoi

## SMART CITY RANKING

84

Out of 109



66 in 2019

## SMART CITY RATING

CC

CCC in 2019

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,790,000

(UN World Cities Report)

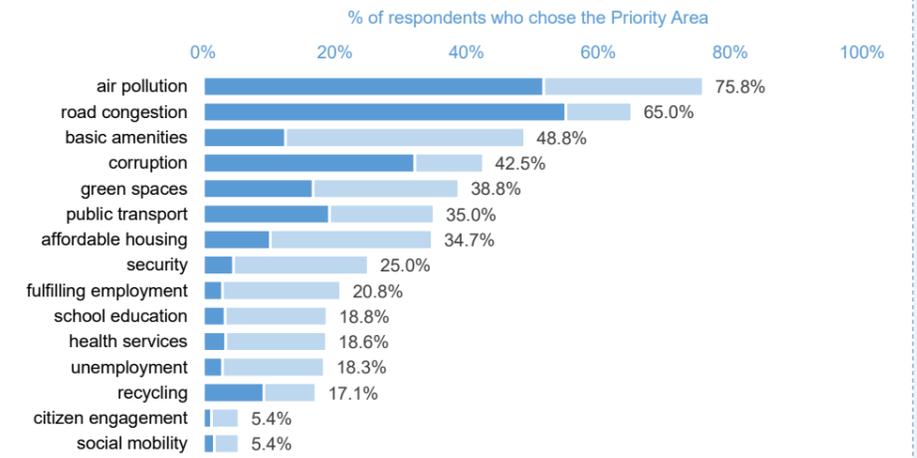


Country	2015	2016	2017	2018	1 yr change
HDI	0.680	0.685	0.690	0.693	+0.003
Life expectancy at Birth	75.1	75.2	75.2	75.3	+0.1
Expected years of schooling	12.7	12.7	12.7	12.7	+0.0
Mean years of schooling	8.0	8.1	8.2	8.2	+0.0
GNI per capita (PPP \$)	5,314	5,638	5,916	6,220	+304.0

### PRIORITY AREAS

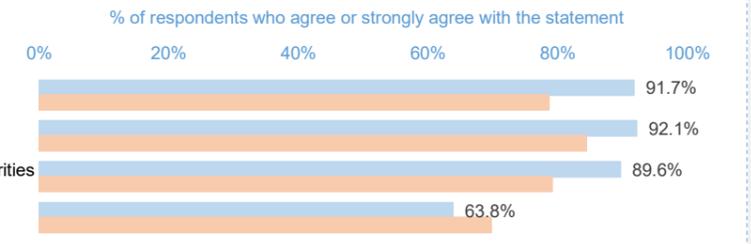
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

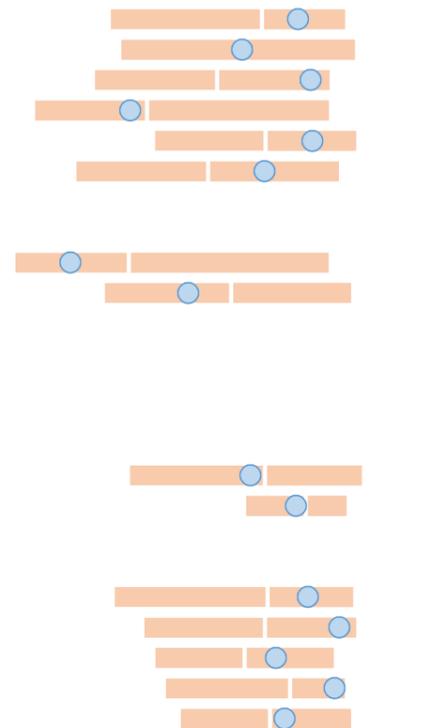
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

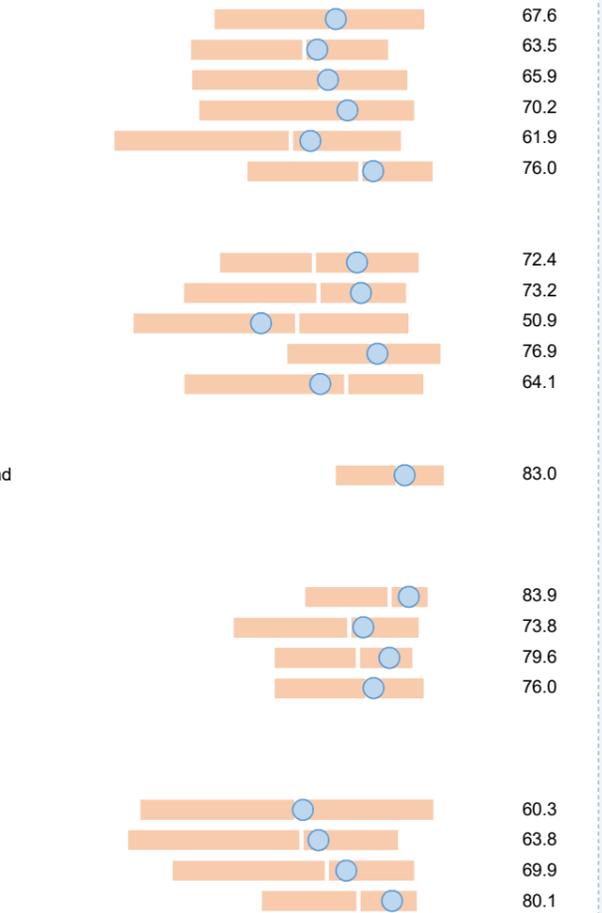
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Hanover

## SMART CITY RANKING

33

Out of 109



26 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
535,000

(Eurostat)



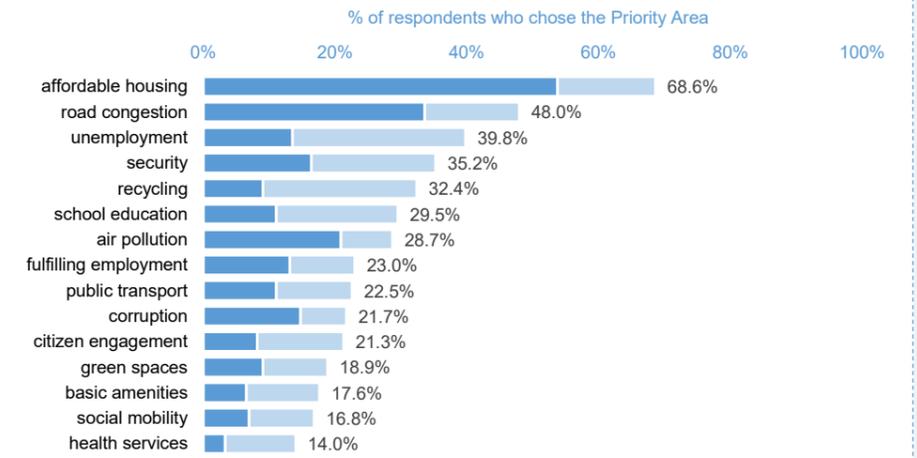
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.933	0.936	0.938	0.939	+0.001
Life expectancy at Birth	80.8	80.9	81.0	81.2	+0.2
Expected years of schooling	17.0	17.1	17.1	17.1	+0.0
Mean years of schooling	14.1	14.1	14.1	14.1	+0.0
GNI per capita (PPP \$)	45,012	45,577	46,438	46,946	+508.0

### PRIORITY AREAS

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

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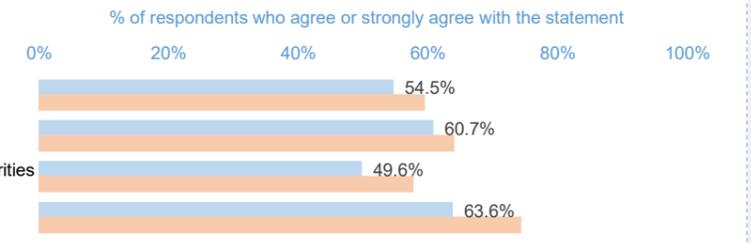
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You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

67.3  
74.0  
61.0  
51.1  
76.5  
33.2  
  
44.5  
68.2  
  
69.5  
77.1  
  
62.1  
68.6  
61.2  
58.9  
58.3

### TECHNOLOGIES

#### Health & Safety

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

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- 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
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#### Governance

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- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score 0 20 40 60 80 100

47.3  
52.4  
46.4  
42.6  
36.1  
47.6  
  
41.7  
42.8  
44.2  
68.6  
48.8  
  
69.2  
  
67.8  
43.2  
41.8  
53.9  
  
38.0  
49.6  
43.6  
49.0

# Helsinki

## SMART CITY RANKING

2

Out of 109



8 in 2019

## SMART CITY RATING

AA

A in 2019

## FACTOR RATINGS

AAA

STRUCTURES

AA

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,180,000

(UN World Cities Report)

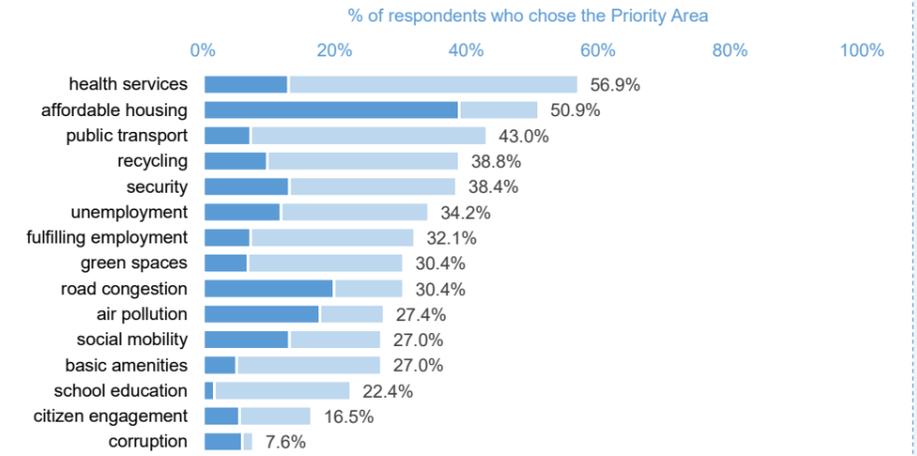


Country	2015	2016	2017	2018	1 yr change
HDI	0.919	0.922	0.924	0.925	+0.001
Life expectancy at Birth	81.2	81.4	81.6	81.7	+0.1
Expected years of schooling	19.3	19.3	19.3	19.3	+0.0
Mean years of schooling	12.4	12.4	12.4	12.4	+0.0
GNI per capita (PPP \$)	39,473	40,609	41,142	41,779	+637.0

### 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.

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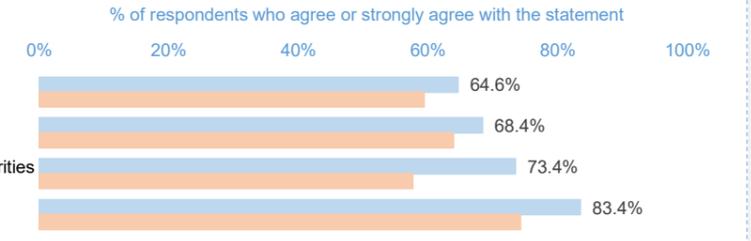
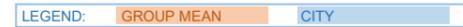
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

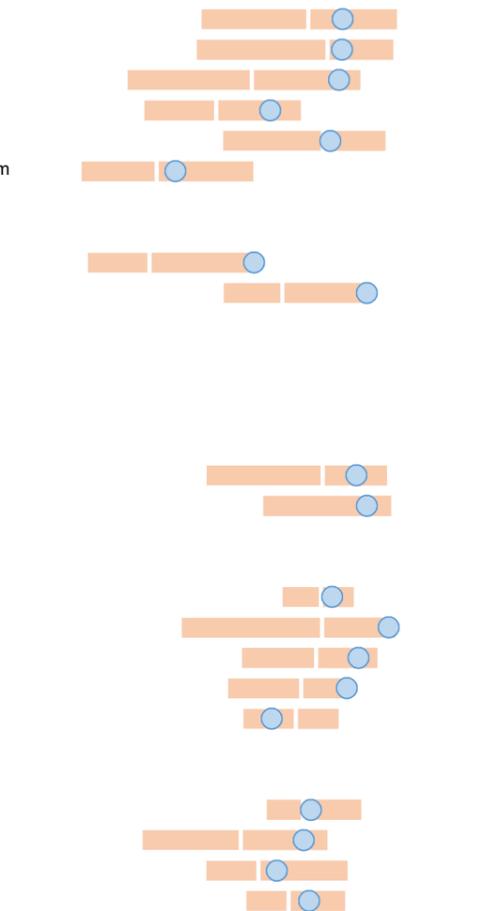
#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

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

Bicycle hiring has reduced congestion

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

The city provides information on traffic congestion through mobile phones

#### Activities

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

#### Opportunities (Work & School)

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

IT skills are taught well in schools

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

The current internet speed and reliability meet connectivity needs

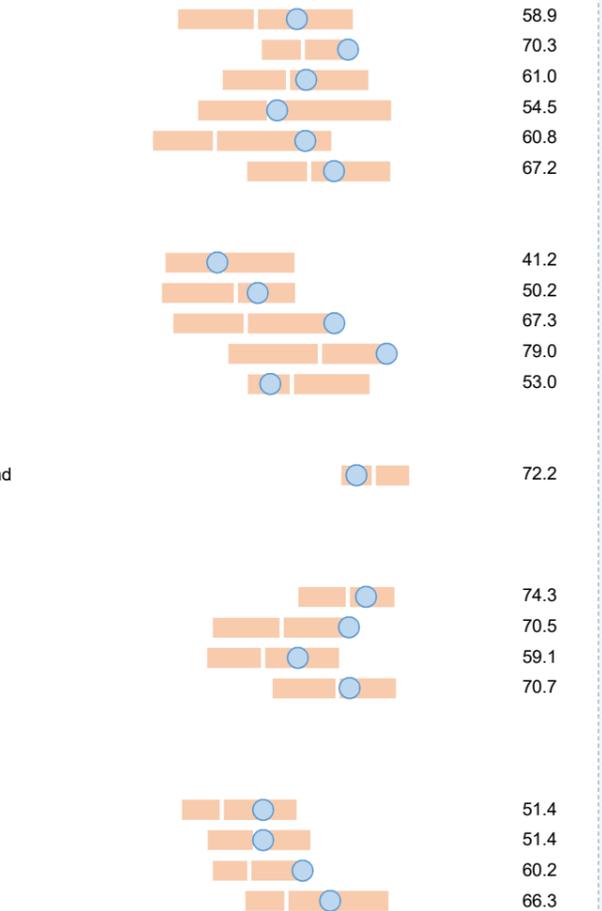
#### Governance

Online public access to city finances has reduced corruption

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



# Ho Chi Minh City

## SMART CITY RANKING

83

Out of 109



65 in 2019

## SMART CITY RATING

CC

CCC in 2019

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
7,298,000

(UN World Cities Report)



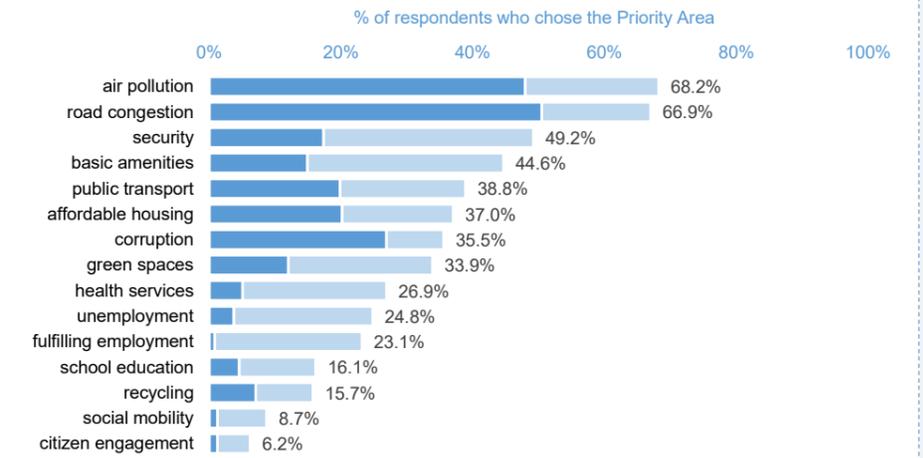
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## PRIORITY AREAS

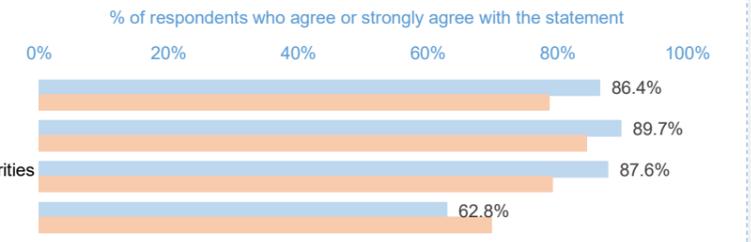
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 You are comfortable with face recognition technologies to lower crime  
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 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
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- 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

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

69.9

64.7

67.8

35.9

74.9

57.4

29.0

50.9

65.2

75.4

83.8

83.1

63.7

83.7

74.6

71.1

42.1

64.2

72.2

## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
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### Mobility

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### Governance

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- Online voting has increased participation
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- Processing Identification Documents online has reduced waiting times

Score 0 20 40 60 80 100

74.3

64.7

67.6

78.7

64.3

79.1

71.7

74.9

50.3

74.0

63.0

78.6

85.7

78.2

78.5

76.8

60.9

64.5

71.1

75.3

# Hong Kong

## SMART CITY RANKING

32

Out of 109



37 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

BB

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
7,314,000

(UN World Cities Report)



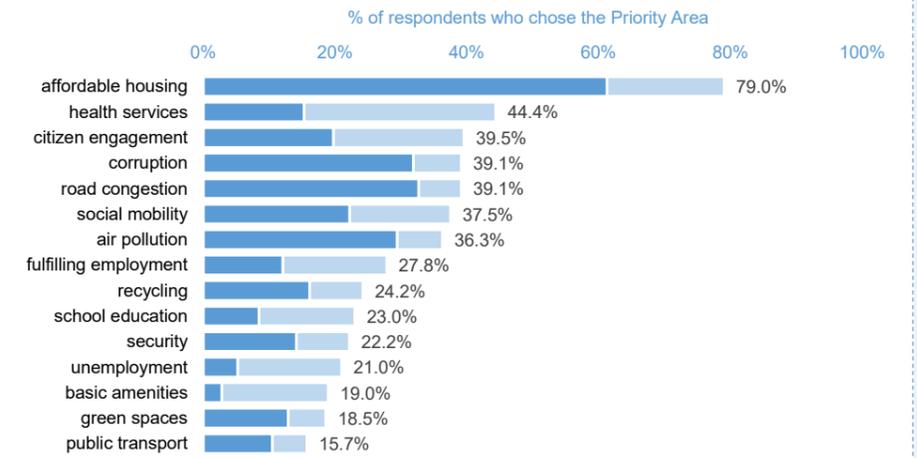
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.927	0.931	0.937	0.939	+0.002
Life expectancy at Birth	84.0	84.3	84.5	84.7	+0.2
Expected years of schooling	16.3	16.3	16.5	16.5	+0.0
Mean years of schooling	11.9	12.0	12.0	12.0	+0.0
GNI per capita (PPP \$)	54,608	55,816	58,553	60,221	+1,668.0

### PRIORITY AREAS

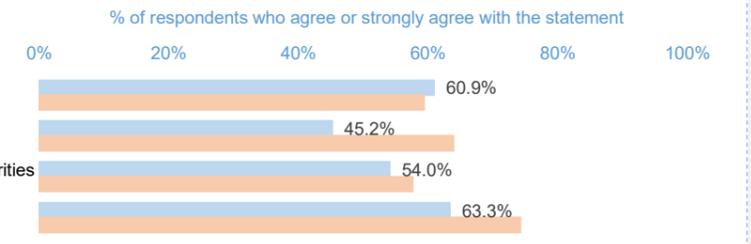
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
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- 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)

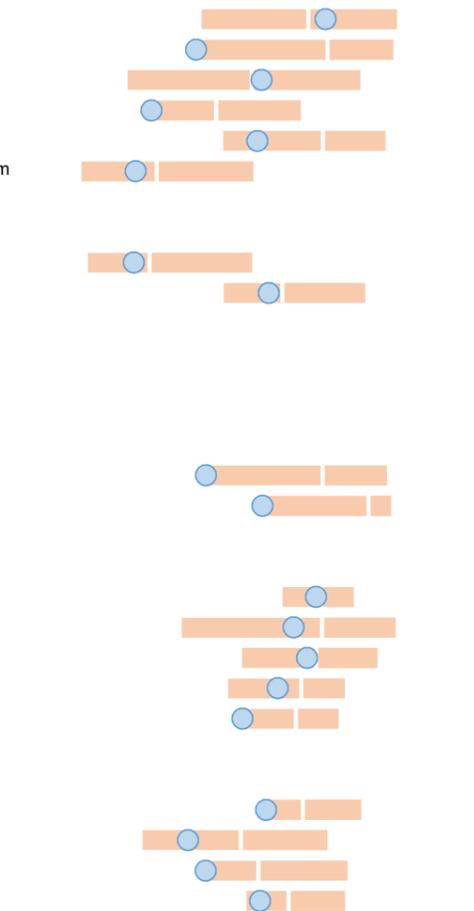
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

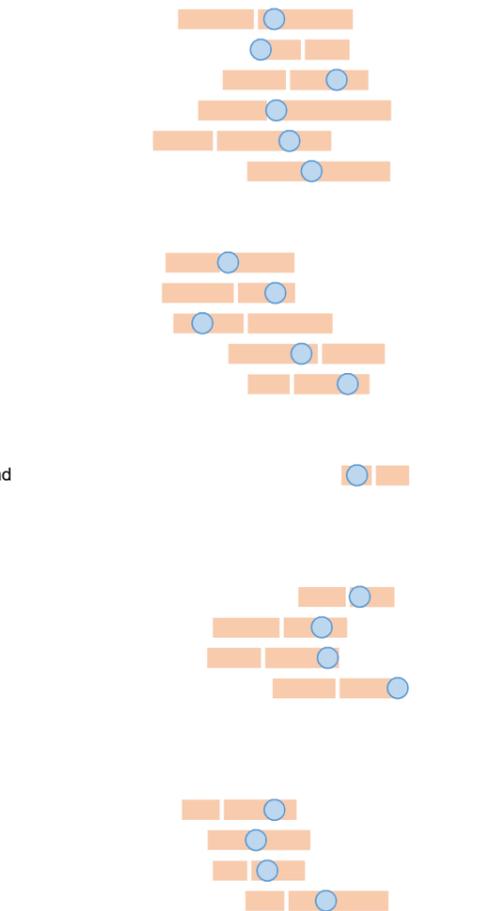
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Hyderabad

## SMART CITY RANKING

85

Out of 109



67 in 2019

## SMART CITY RATING

CC

CCC in 2019

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
10,716,000

(UN World Cities Report)

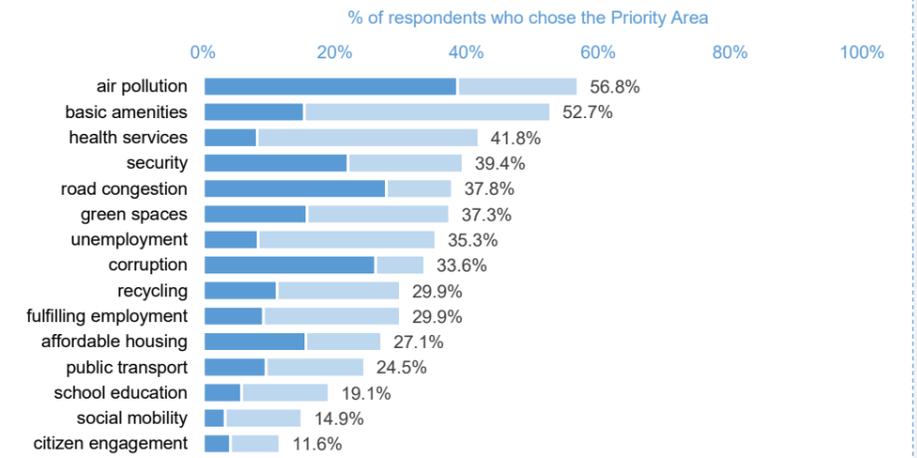


Country	2015	2016	2017	2018	1 yr change
HDI	0.627	0.637	0.643	0.647	+0.004
Life expectancy at Birth	68.6	68.9	69.2	69.4	+0.2
Expected years of schooling	12.0	12.3	12.3	12.3	+0.0
Mean years of schooling	6.2	6.4	6.5	6.5	+0.0
GNI per capita (PPP \$)	5,674	6,075	6,446	6,829	+383.0

### PRIORITY AREAS

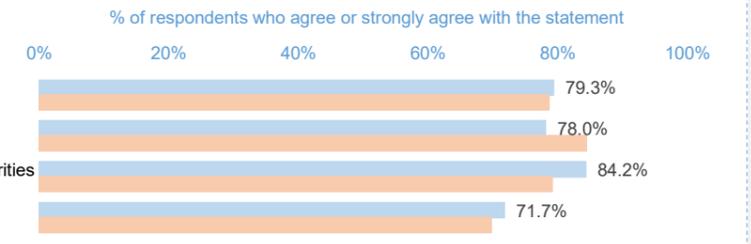
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

68.5

63.1

53.7

38.1

73.2

57.9

39.5

69.3

66.5

75.0

73.7

72.6

64.7

75.6

72.2

71.6

42.7

57.5

64.9

### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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
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#### 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

Score 0 20 40 60 80 100

62.2

58.3

59.8

79.4

48.7

74.1

67.4

56.8

59.0

79.5

69.1

80.2

79.3

71.4

80.0

75.3

58.1

58.2

69.0

73.3

# Jakarta

## SMART CITY RANKING

94

Out of 109



81 in 2019

## SMART CITY RATING

C

CC in 2019

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
10,323,000

(UN World Cities Report)



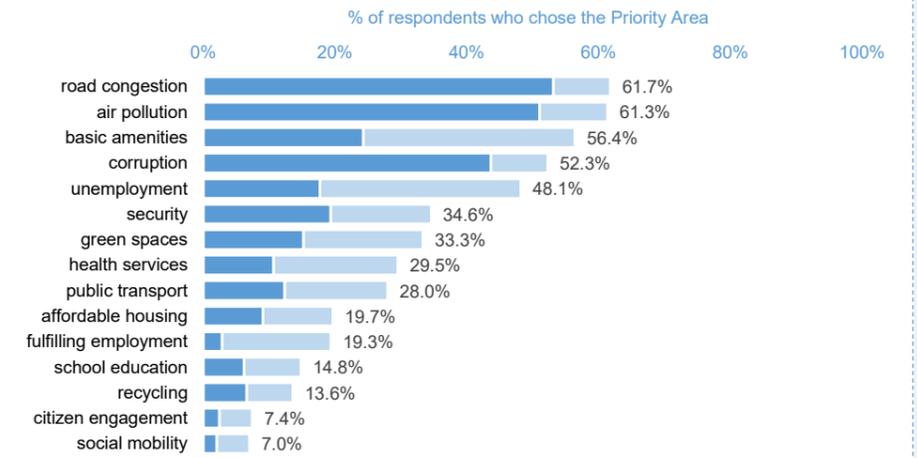
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.696	0.700	0.704	0.707	+0.003
Life expectancy at Birth	70.8	71.0	71.3	71.5	+0.2
Expected years of schooling	12.8	12.9	12.9	12.9	+0.0
Mean years of schooling	7.9	8.0	8.0	8.0	+0.0
GNI per capita (PPP \$)	10,029	10,419	10,811	11,256	+445.0

### PRIORITY AREAS

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

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



### ATTITUDES

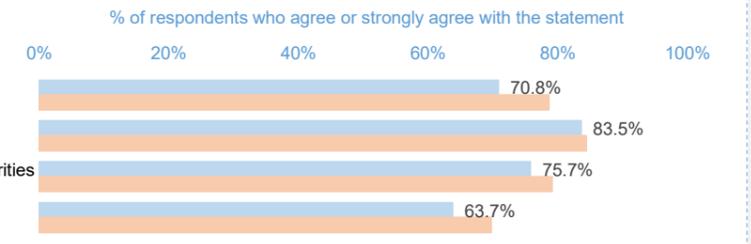
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

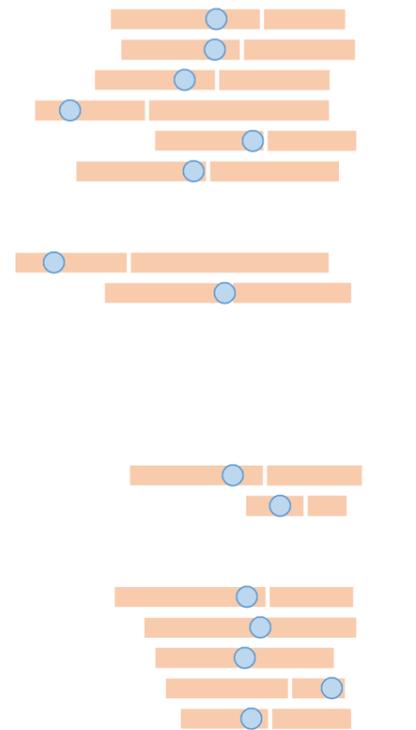
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

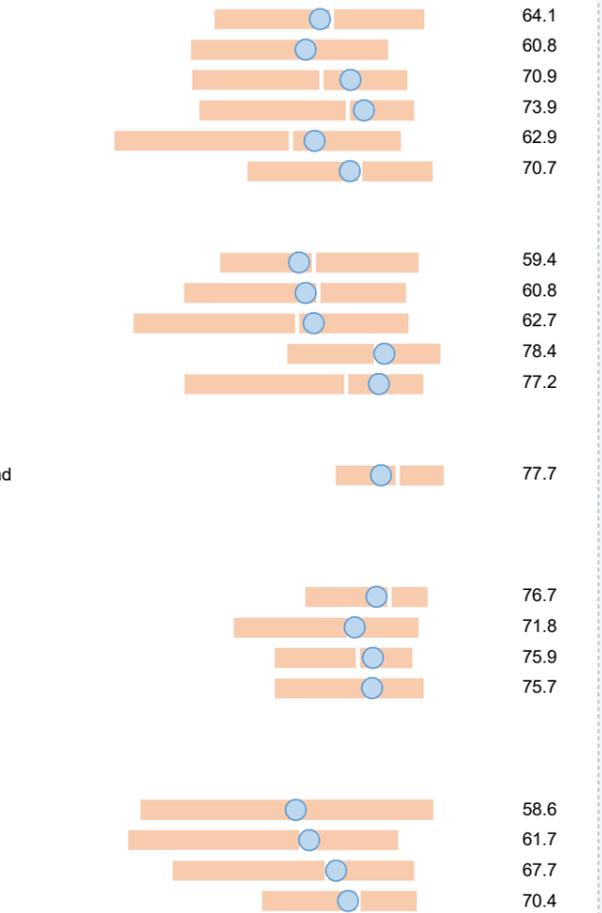
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Kiev

## SMART CITY RANKING

98

Out of 109



92 in 2019

## SMART CITY RATING

C

C in 2019

## FACTOR RATINGS

D

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,942,000

(UN World Cities Report)



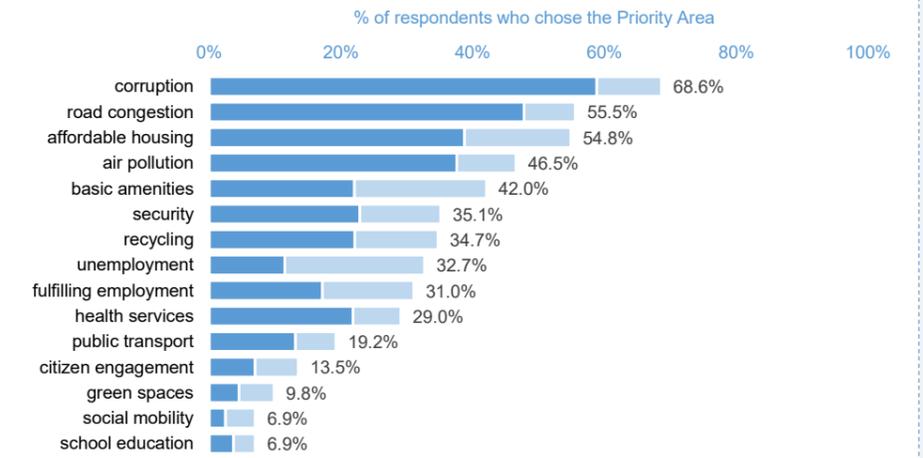
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.746	0.747	0.750	+0.003
Life expectancy at Birth	71.5	71.7	71.8	72.0	+0.2
Expected years of schooling	14.9	15.1	15.1	15.1	+0.0
Mean years of schooling	11.3	11.3	11.3	11.3	+0.0
GNI per capita (PPP \$)	7,373	7,601	7,670	7,994	+324.0

### PRIORITY AREAS

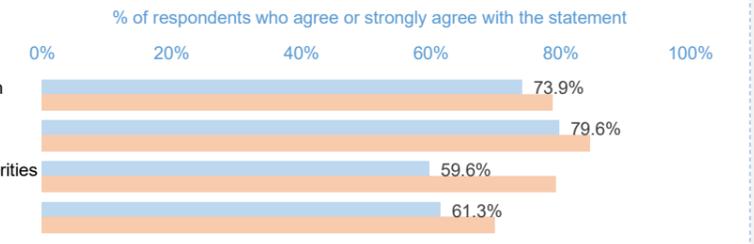
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

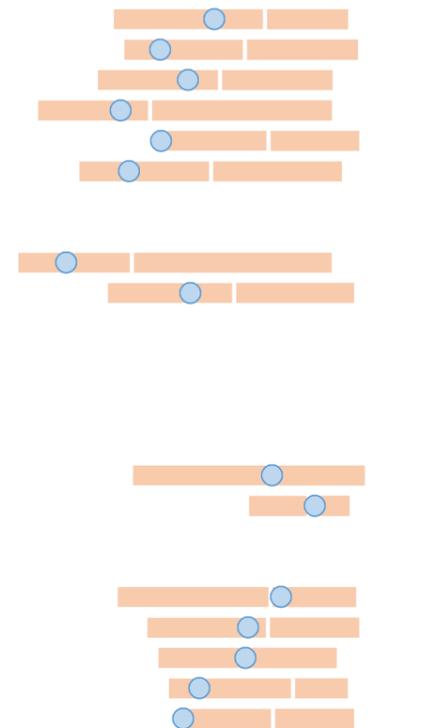
#### Opportunities (Work & School)

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

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

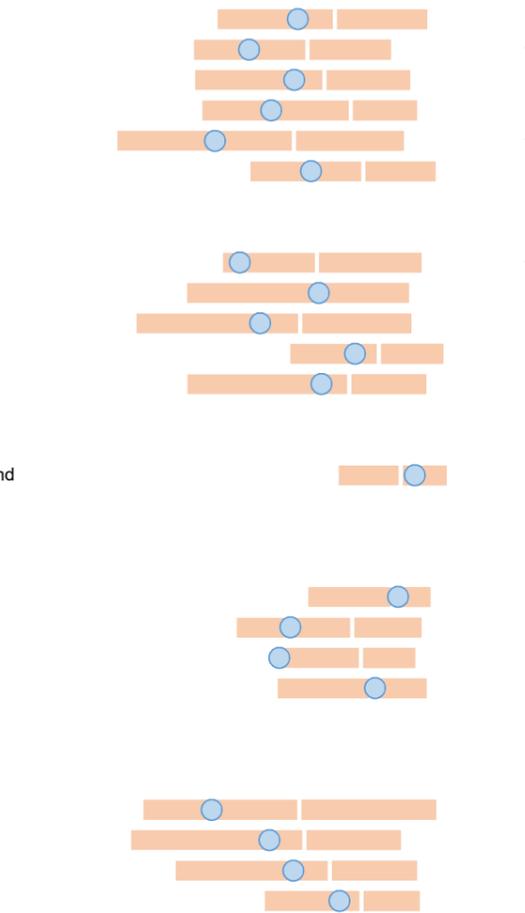
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Krakow

## SMART CITY RANKING

58

Out of 109



69 in 2019

## SMART CITY RATING

B

CCC in 2019

## FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
760,000

(UN World Cities Report)

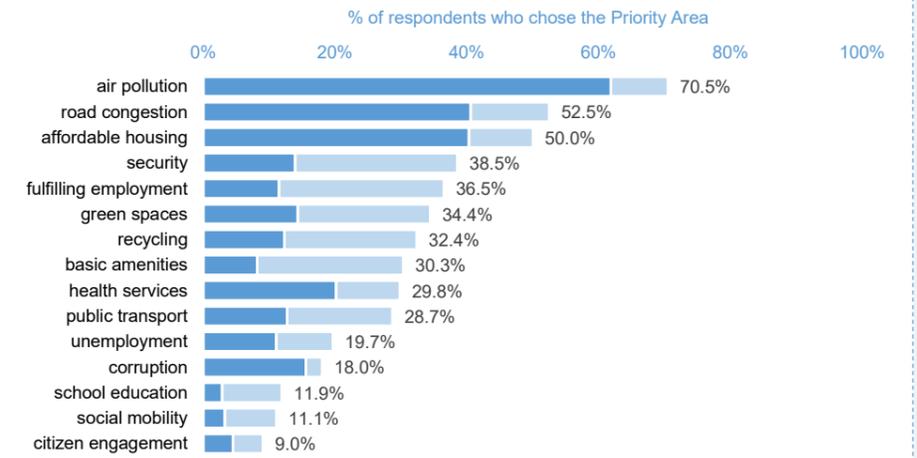


Country	2015	2016	2017	2018	1 yr change
HDI	0.858	0.864	0.868	0.872	+0.004
Life expectancy at Birth	77.9	78.1	78.3	78.5	+0.2
Expected years of schooling	16.1	16.4	16.4	16.4	+0.0
Mean years of schooling	12.2	12.3	12.3	12.3	+0.0
GNI per capita (PPP \$)	24,369	25,042	26,182	27,626	+1,444.0

### PRIORITY AREAS

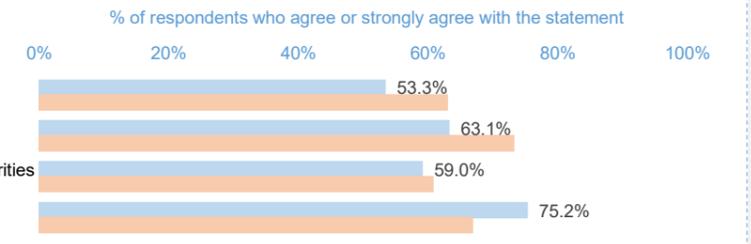
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

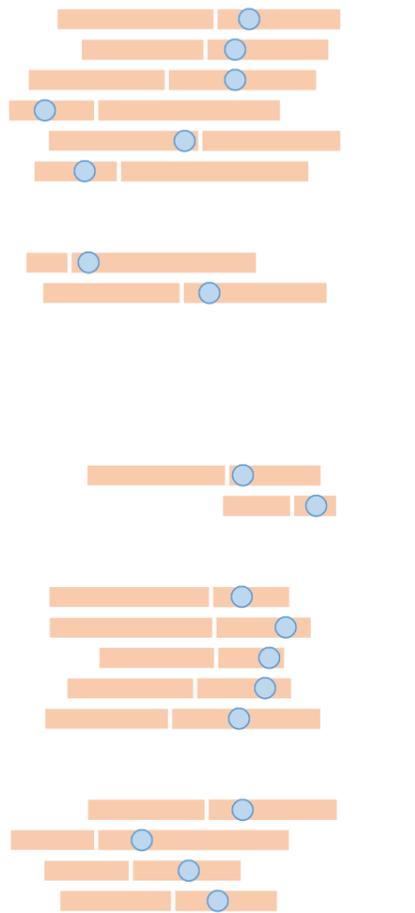
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

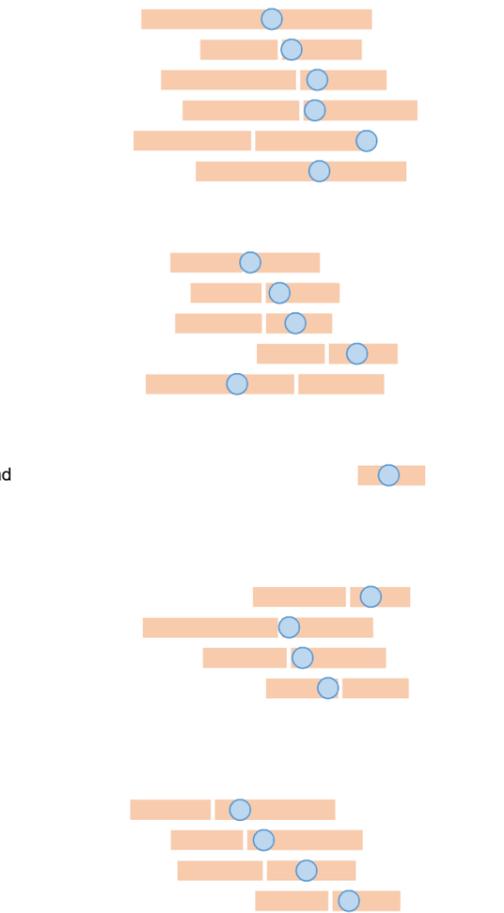
#### Opportunities (Work & School)

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

#### Governance

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- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score 0 20 40 60 80 100



# Kuala Lumpur

## SMART CITY RANKING

54

Out of 109



70 in 2019

## SMART CITY RATING

B

CCC in 2019

## FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
6,837,000

(UN World Cities Report)

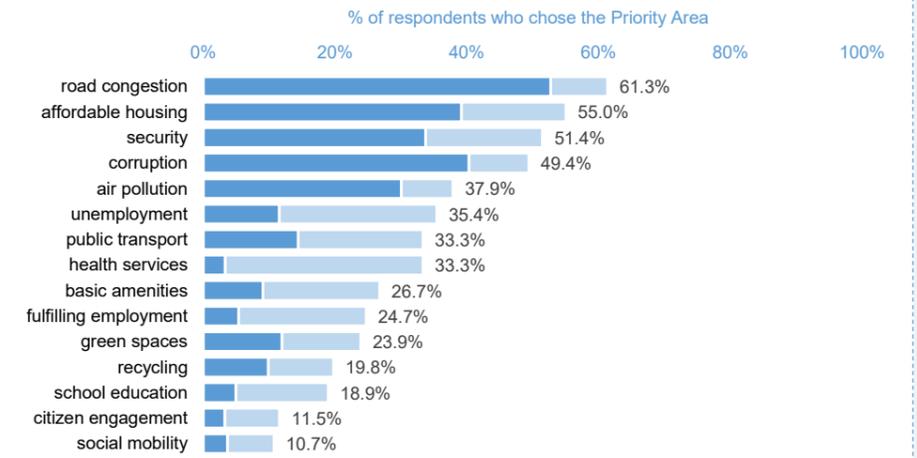


Country	2015	2016	2017	2018	1 yr change
HDI	0.797	0.801	0.802	0.804	+0.002
Life expectancy at Birth	75.5	75.6	75.8	76.0	+0.2
Expected years of schooling	13.5	13.7	13.5	13.5	+0.0
Mean years of schooling	10.2	10.2	10.2	10.2	+0.0
GNI per capita (PPP \$)	24,703	25,394	26,555	27,227	+672.0

## PRIORITY AREAS

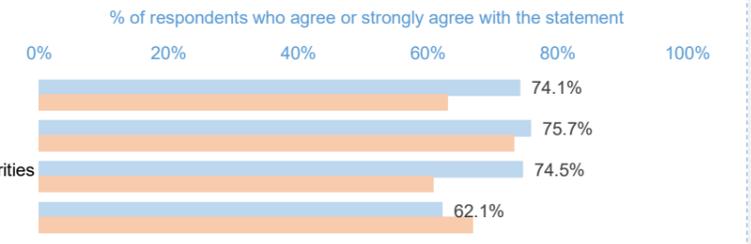
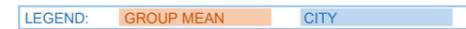
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



## ATTITUDES

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



## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

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

### Governance

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



## TECHNOLOGIES

### Health & Safety

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### Mobility

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### Activities

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- 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

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- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

## SMART CITY RANKING

# 109

Out of 109



102 in 2019

## SMART CITY RATING

# D

D in 2019

## FACTOR RATINGS

# D

STRUCTURES

# D

TECHNOLOGIES

## GROUP

# 4

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
13,123,000

(UN World Cities Report)



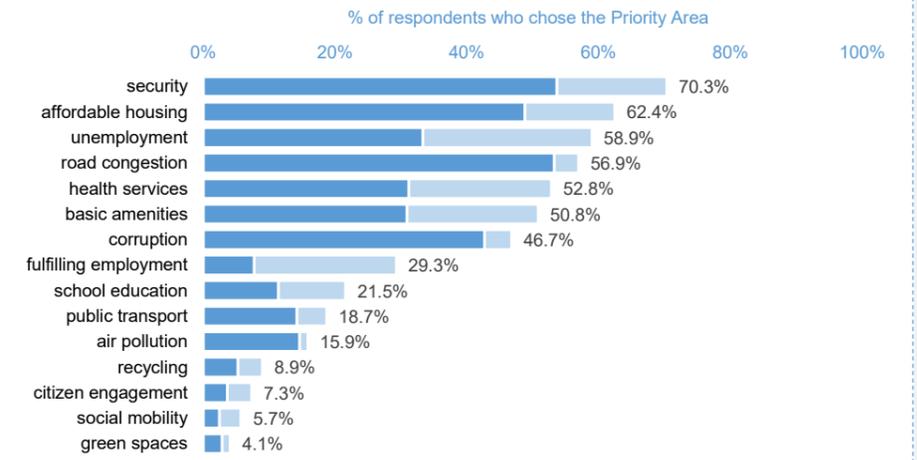
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.527	0.528	0.533	0.534	+0.001
Life expectancy at Birth	53.1	53.5	54.0	54.3	+0.3
Expected years of schooling	9.7	9.5	9.7	9.7	+0.0
Mean years of schooling	6.2	6.3	6.5	6.5	+0.0
GNI per capita (PPP \$)	5,540	5,336	5,203	5,086	-117.0

## PRIORITY AREAS

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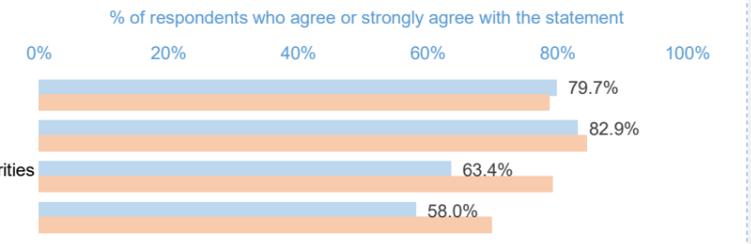
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The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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### Opportunities (Work & School)

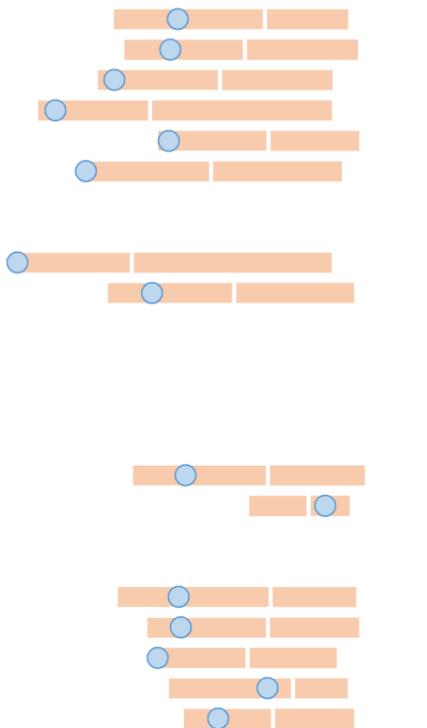
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### Governance

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- Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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- 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

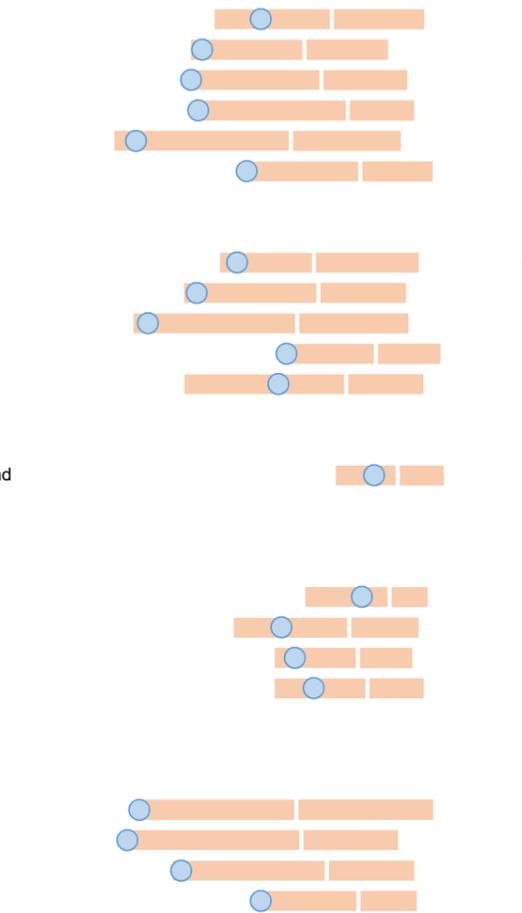
### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Lisbon

## SMART CITY RANKING

75

Out of 109



76 in 2019

## SMART CITY RATING

CCC

CCC in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,884,000

(UN World Cities Report)

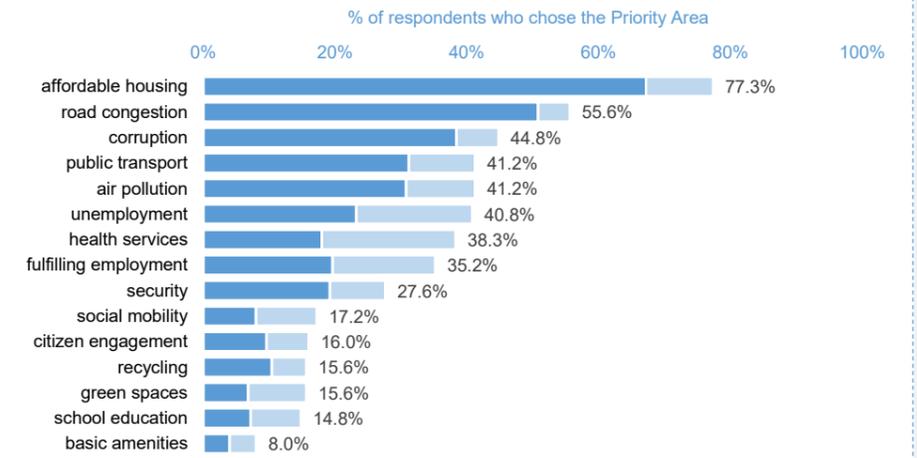


Country	2015	2016	2017	2018	1 yr change
HDI	0.843	0.846	0.848	0.850	+0.002
Life expectancy at Birth	81.2	81.4	81.7	81.9	+0.2
Expected years of schooling	16.4	16.3	16.3	16.3	+0.0
Mean years of schooling	9.1	9.2	9.2	9.2	+0.0
GNI per capita (PPP \$)	25,860	26,559	27,404	27,935	+531.0

### PRIORITY AREAS

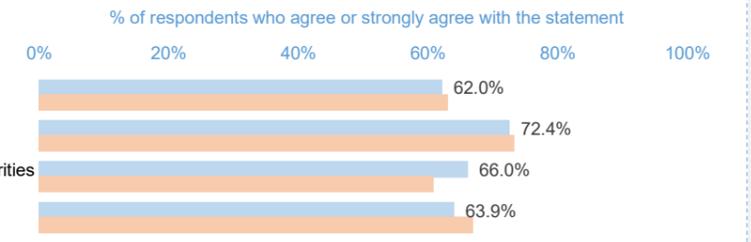
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

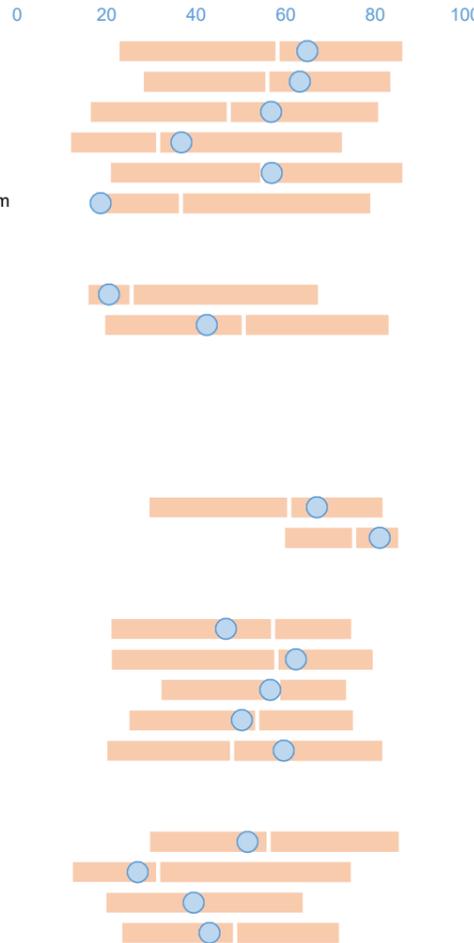
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

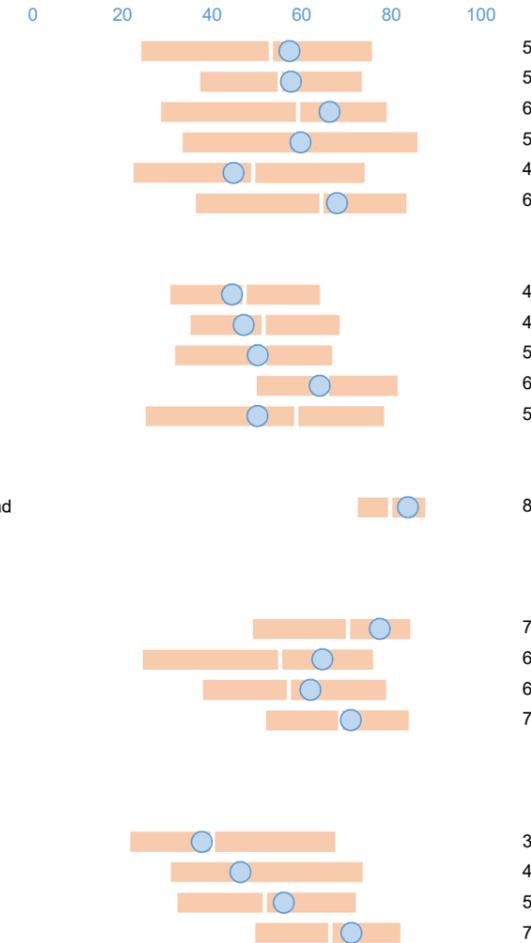
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# London

## SMART CITY RANKING

15

Out of 109



20 in 2019

## SMART CITY RATING

A

BBB in 2019

## FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
10,313,000

(UN World Cities Report)



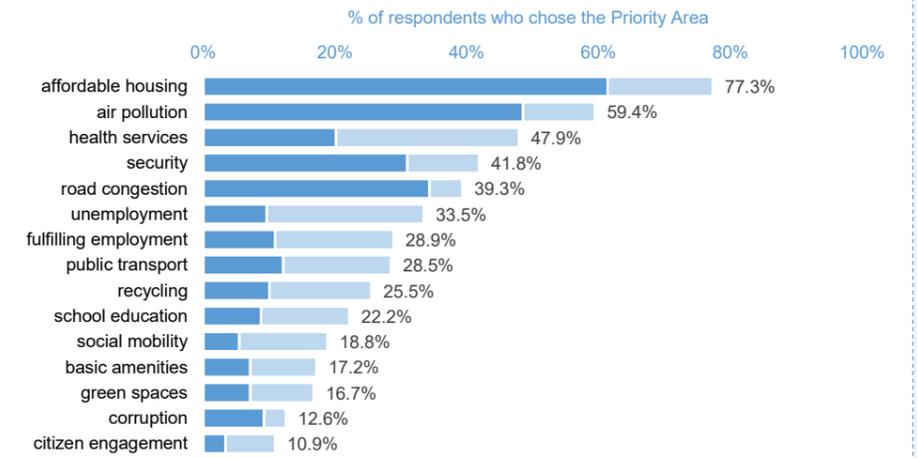
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## PRIORITY AREAS

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

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



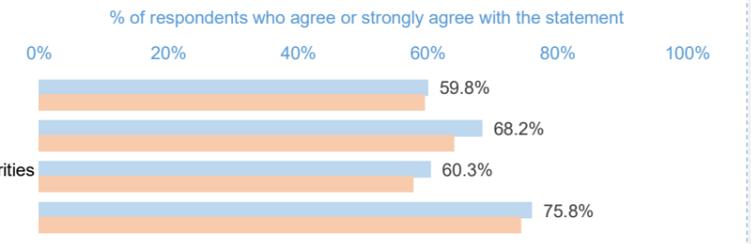
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

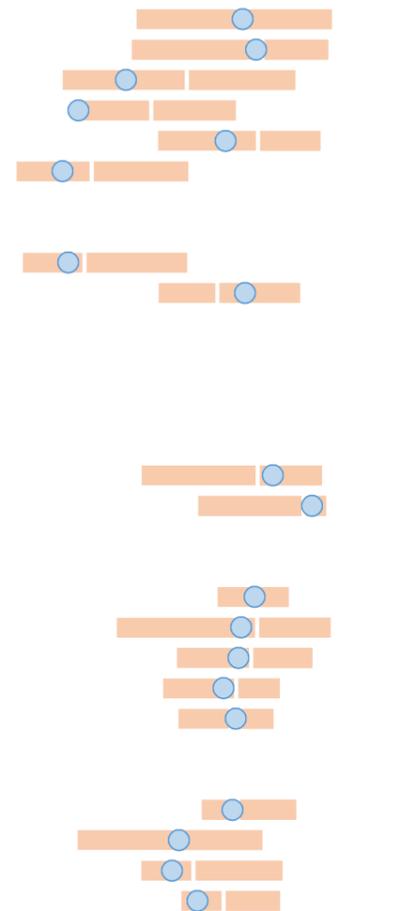
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

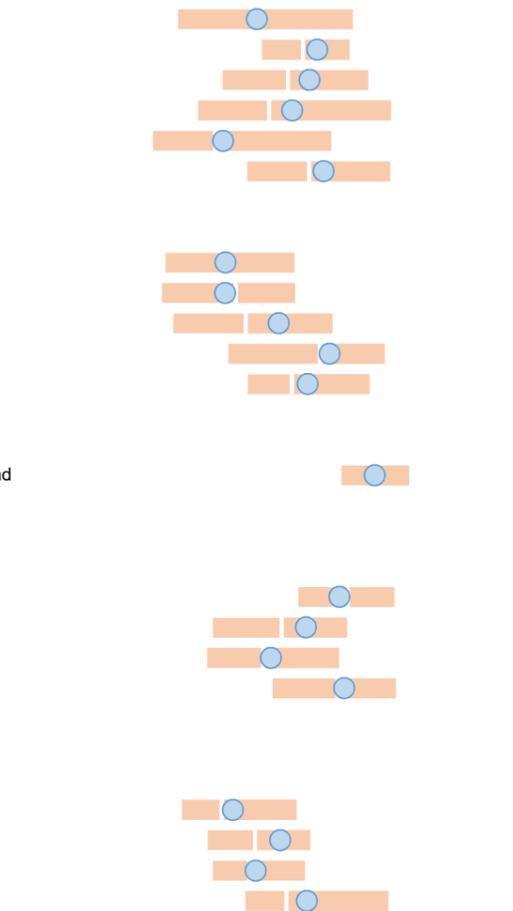
### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Los Angeles

## SMART CITY RANKING

26

Out of 109



35 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
12,310,000

(UN World Cities Report)



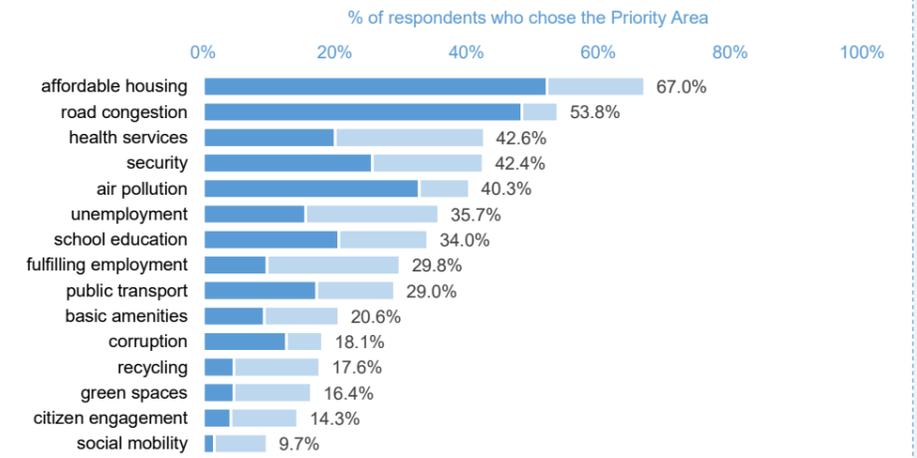
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

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

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



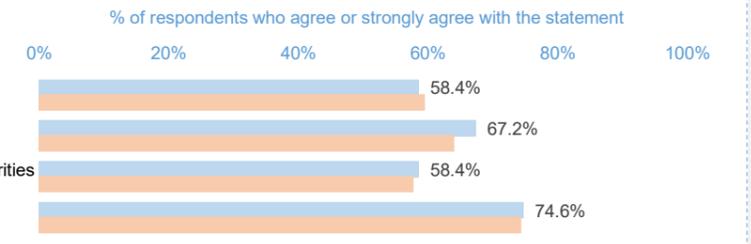
### ATTITUDES

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

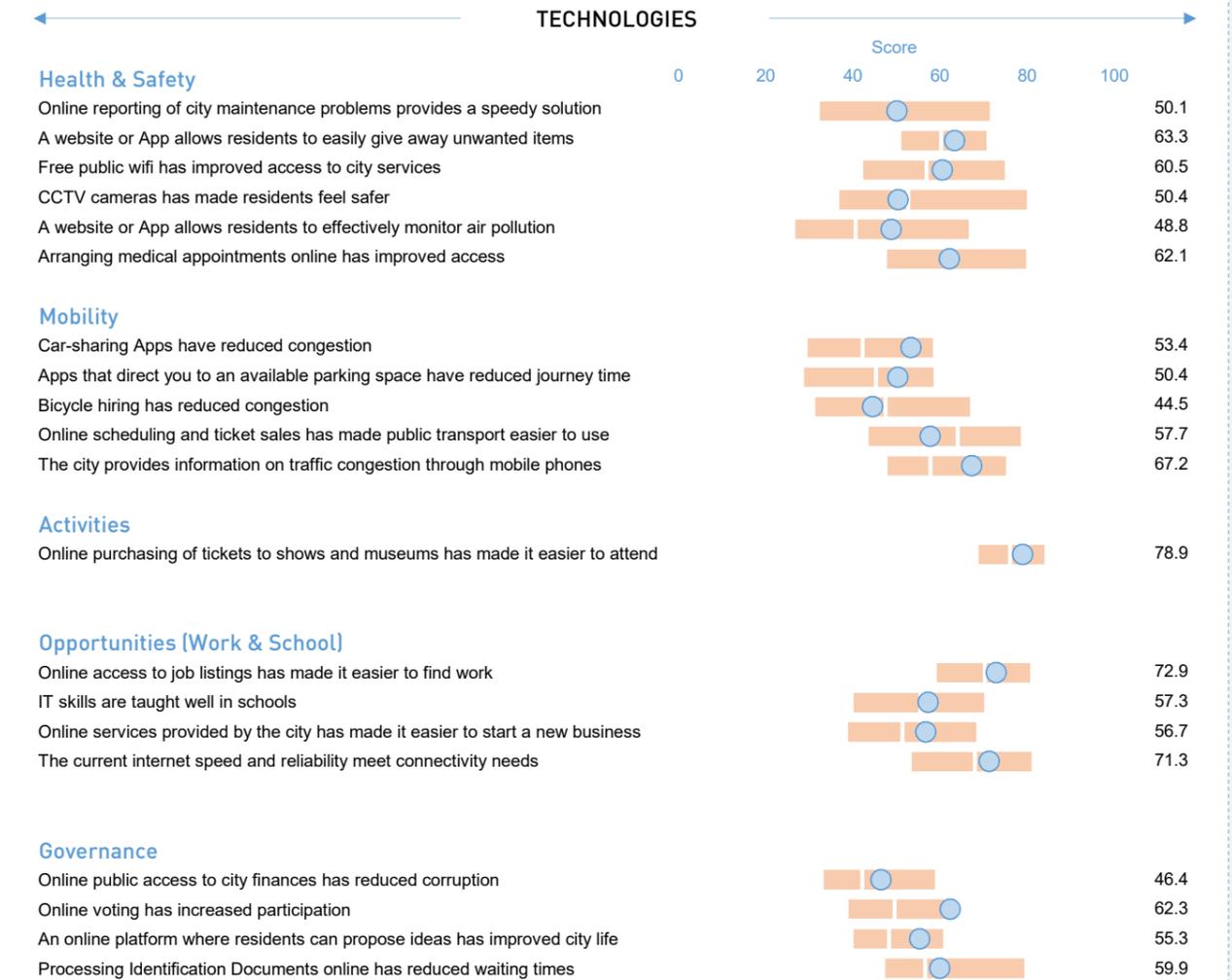
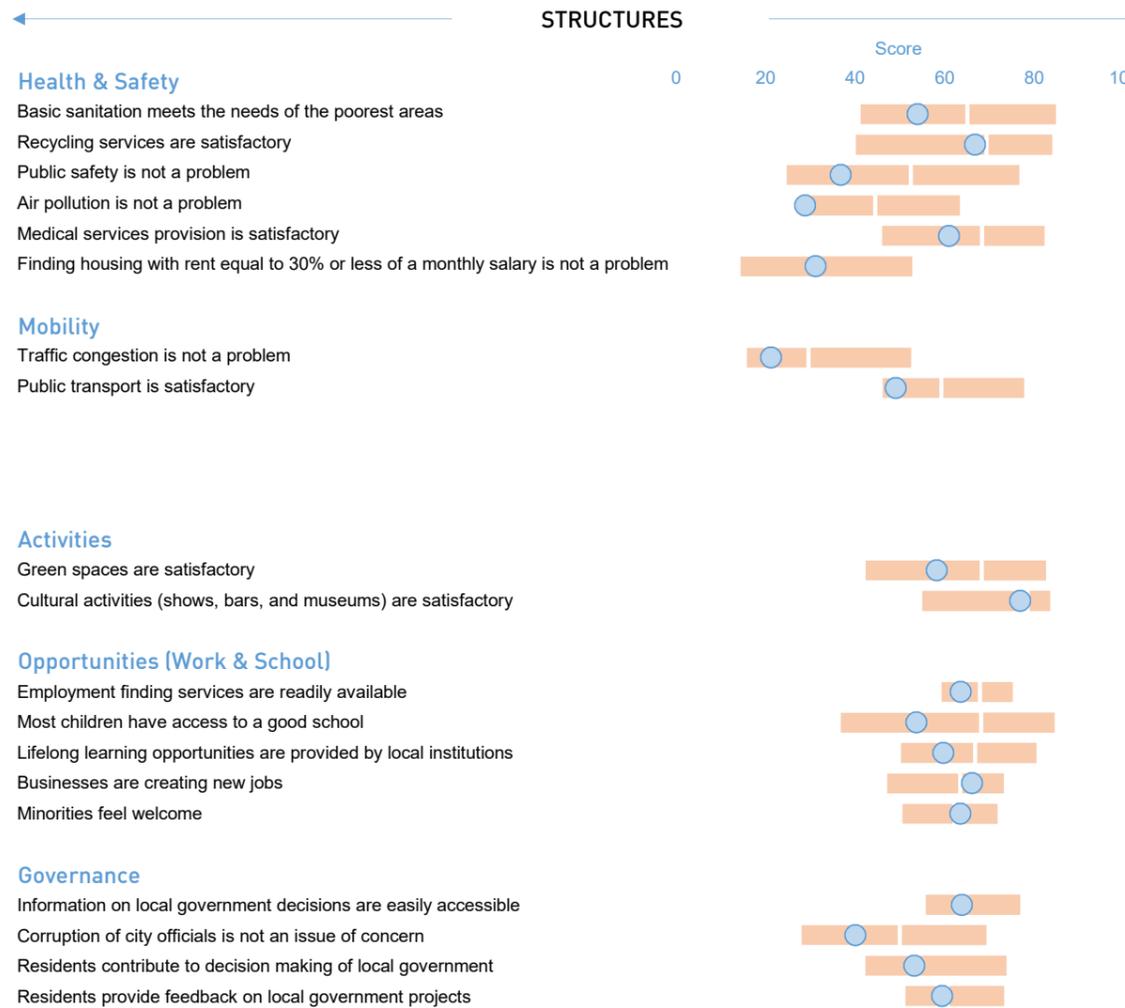
You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY



## SMART CITY RANKING

51

Out of 109



23 in 2019

## SMART CITY RATING

BB

BBB in 2019

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,609,000

(UN World Cities Report)



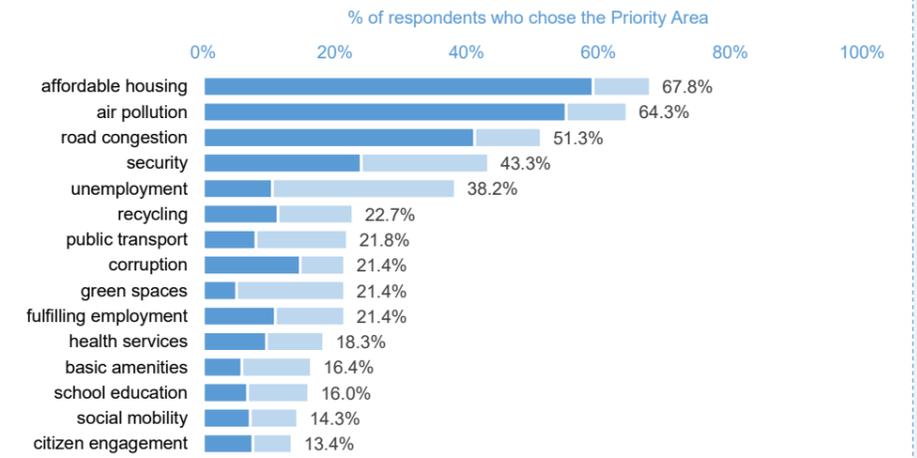
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## 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.

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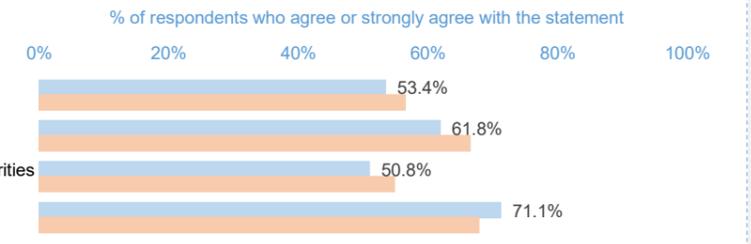
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

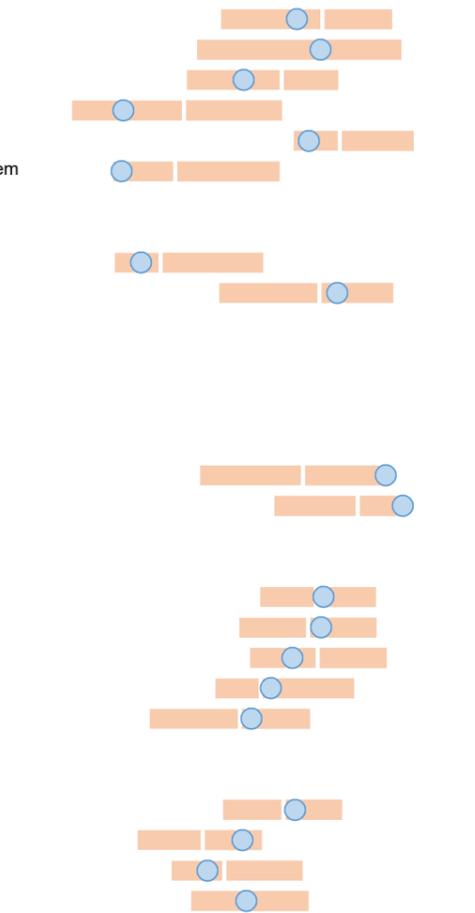
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

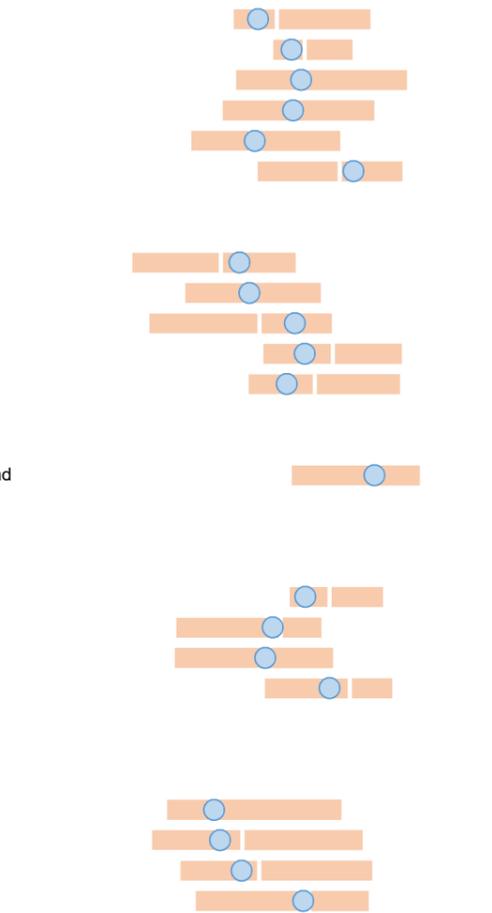
### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Madrid

## SMART CITY RANKING

45

Out of 109



21 in 2019

## SMART CITY RATING

BB

BBB in 2019

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
6,199,000

(UN World Cities Report)

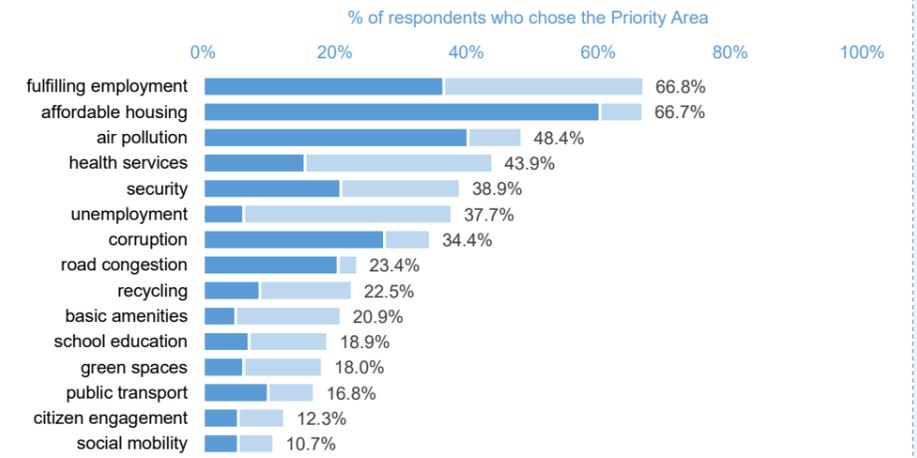


Country	2015	2016	2017	2018	1 yr change
HDI	0.885	0.888	0.891	0.893	+0.002
Life expectancy at Birth	83.0	83.1	83.3	83.4	+0.1
Expected years of schooling	17.8	17.8	17.9	17.9	+0.0
Mean years of schooling	9.7	9.8	9.8	9.8	+0.0
GNI per capita (PPP \$)	32,265	33,379	34,226	35,041	+815.0

### PRIORITY AREAS

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

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



### ATTITUDES

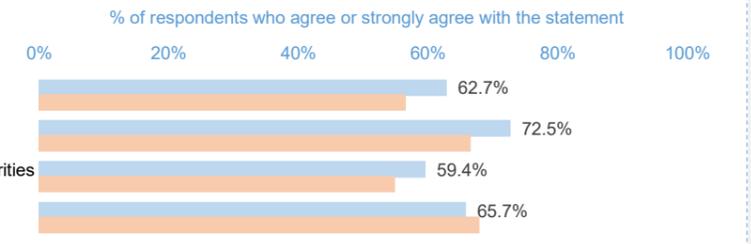
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

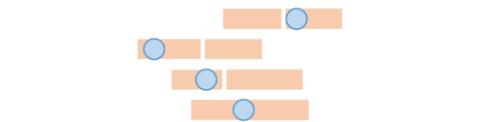
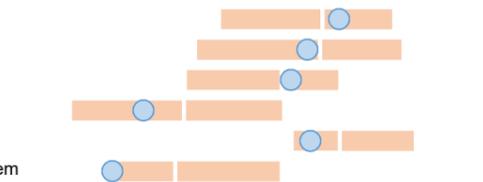
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

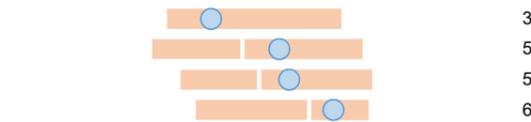
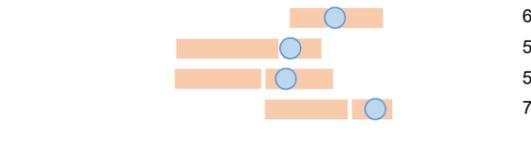
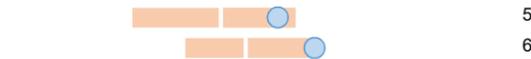
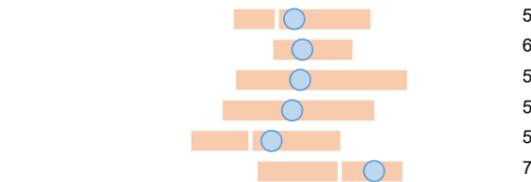
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Makassar

## SMART CITY RANKING

96

Out of 109



80 in 2019

## SMART CITY RATING

C

CC in 2019

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,489,000

(UN World Cities Report)



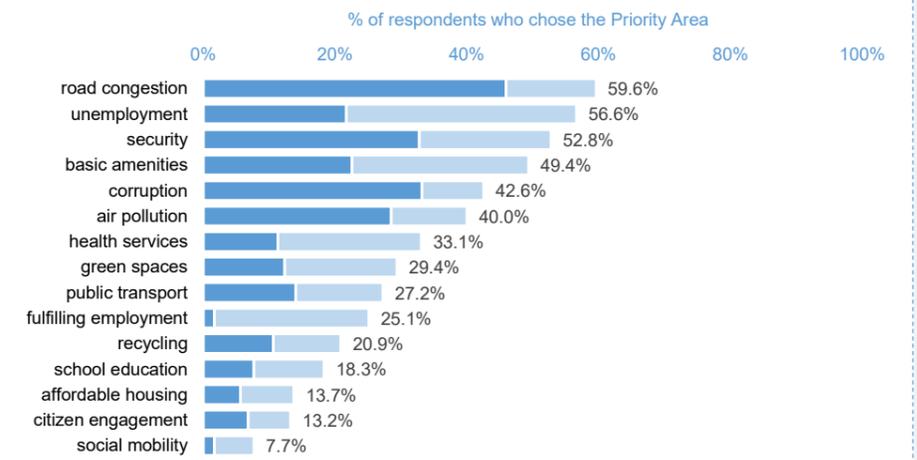
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.696	0.700	0.704	0.707	+0.003
Life expectancy at Birth	70.8	71.0	71.3	71.5	+0.2
Expected years of schooling	12.8	12.9	12.9	12.9	+0.0
Mean years of schooling	7.9	8.0	8.0	8.0	+0.0
GNI per capita (PPP \$)	10,029	10,419	10,811	11,256	+445.0

### 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.

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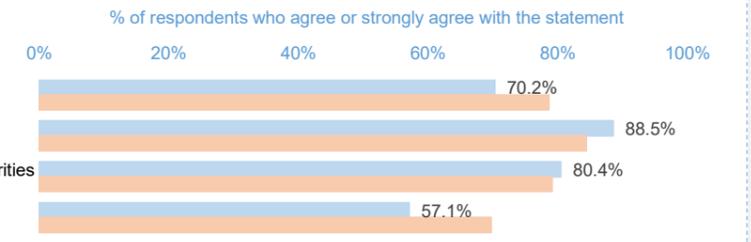
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

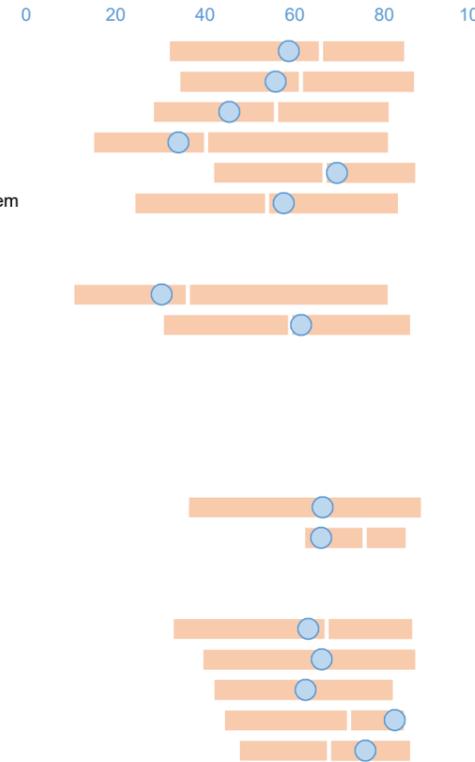
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

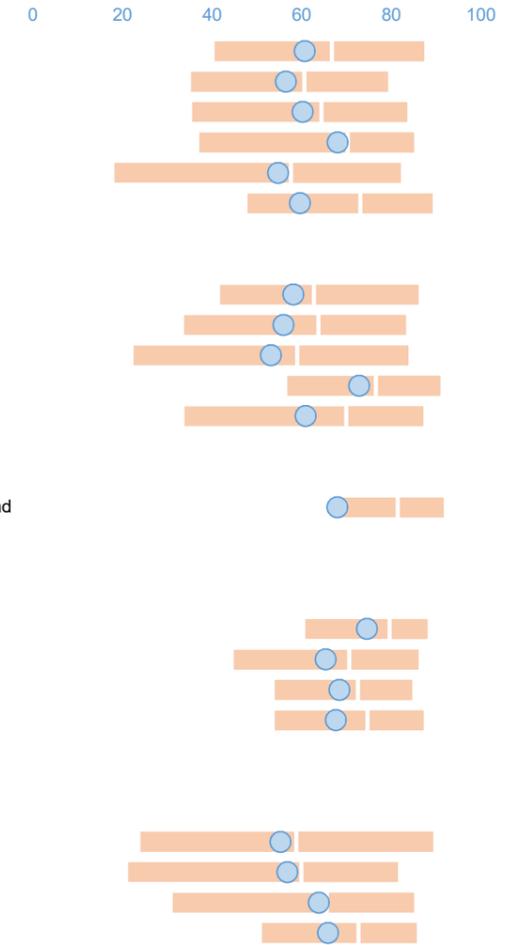
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Manchester

## SMART CITY RANKING

17

Out of 109

N/A

not in 2019

## SMART CITY RATING

A

not in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
2,646,000

(UN World Cities Report)

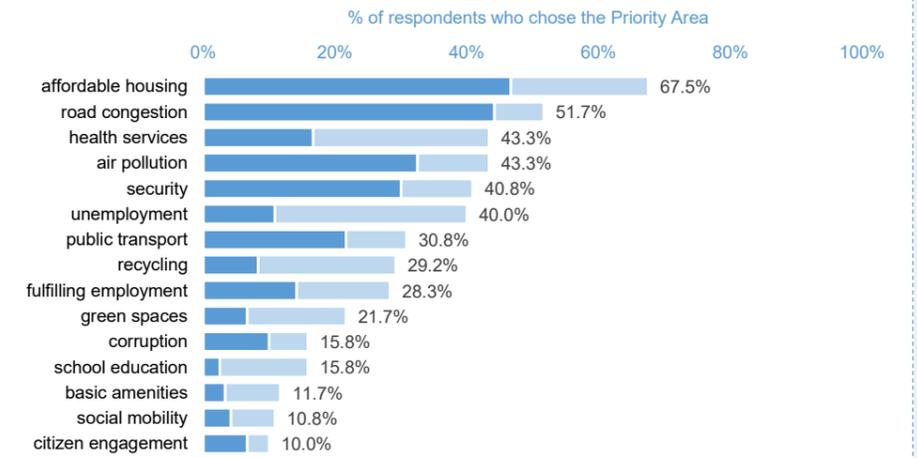


Country	2015	2016	2017	2018	1 yr change
HDI	0.916	0.918	0.919	0.920	+0.001
Life expectancy at Birth	81.1	81.1	81.2	81.2	+0.0
Expected years of schooling	17.4	17.4	17.4	17.4	+0.0
Mean years of schooling	12.8	12.9	12.9	13.0	+0.1
GNI per capita (PPP \$)	38,116	38,421	39,216	39,507	+291.0

## PRIORITY AREAS

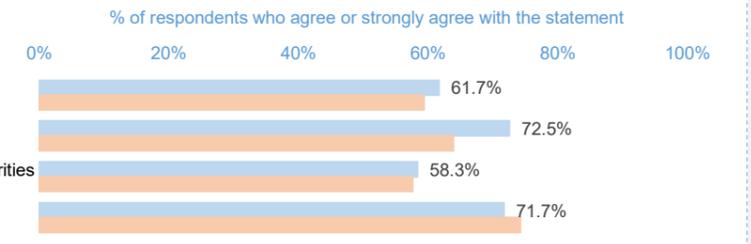
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

### Activities

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

### Opportunities (Work & School)

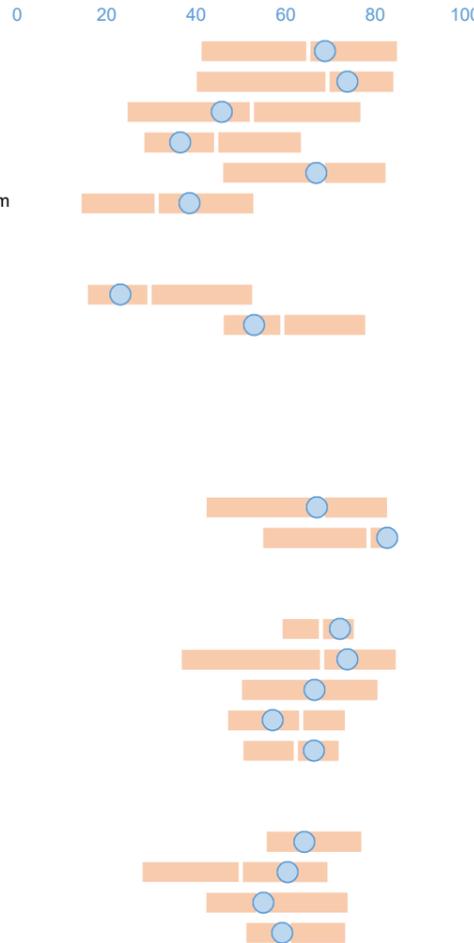
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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

### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space 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

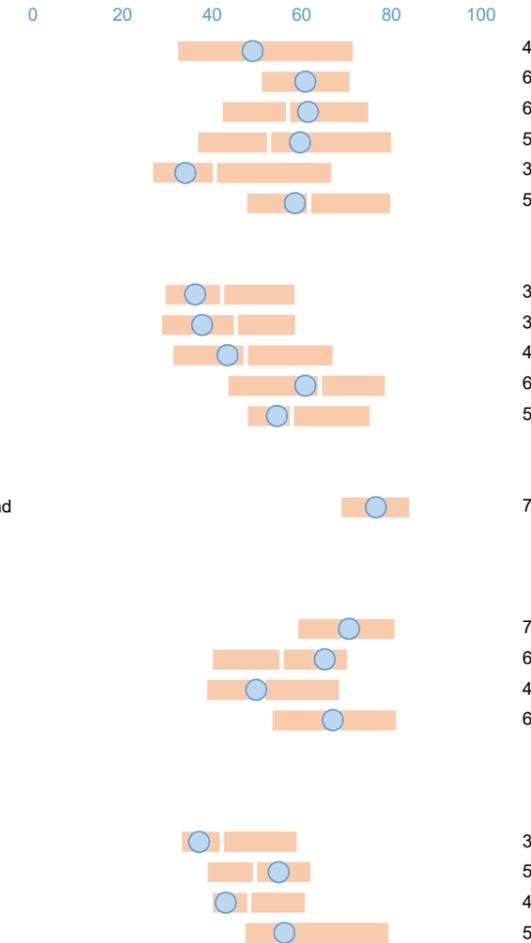
### Opportunities (Work & School)

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

Score 0 20 40 60 80 100



# Manila

## SMART CITY RANKING

104

Out of 109



94 in 2019

## SMART CITY RATING

D

C in 2019

## FACTOR RATINGS

D

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
12,946,000

(UN World Cities Report)

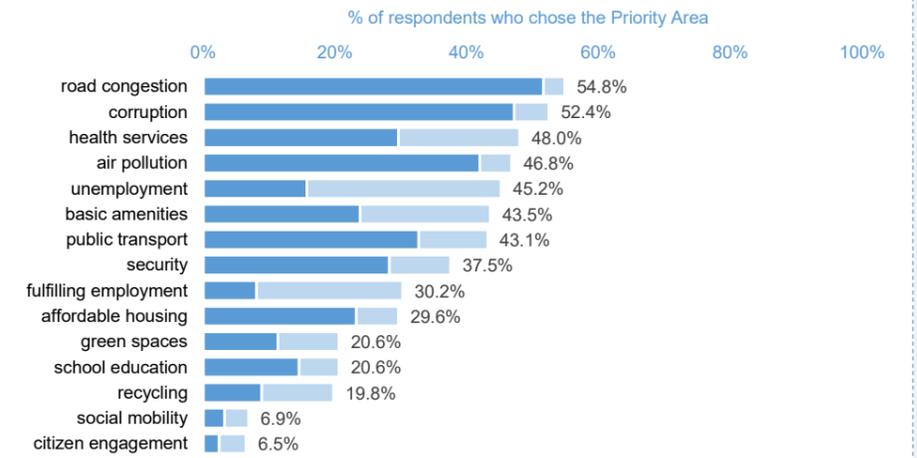


Country	2015	2016	2017	2018	1 yr change
HDI	0.702	0.704	0.709	0.712	+0.003
Life expectancy at Birth	70.6	70.8	71.0	71.1	+0.1
Expected years of schooling	12.8	12.7	12.7	12.7	+0.0
Mean years of schooling	9.3	9.3	9.4	9.4	+0.0
GNI per capita (PPP \$)	8,290	8,701	9,133	9,540	+407.0

### 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.

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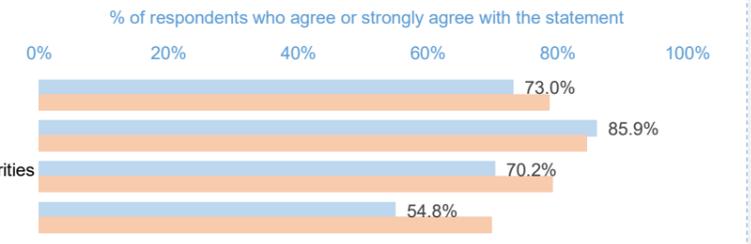
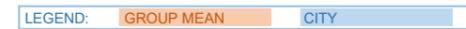
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

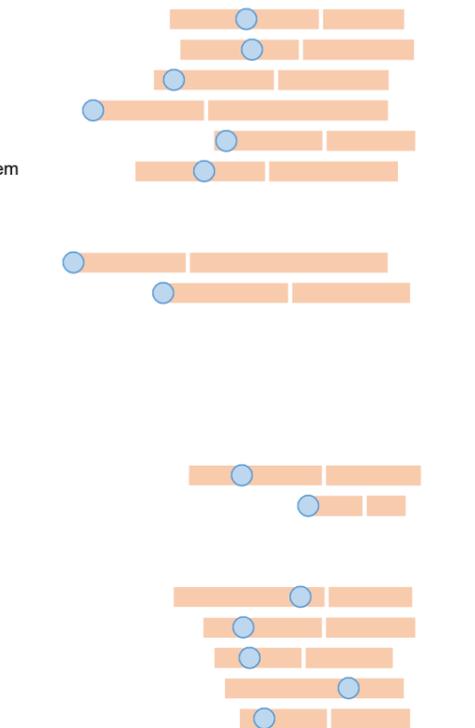
#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

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

Bicycle hiring has reduced congestion

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

The city provides information on traffic congestion through mobile phones

#### Activities

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

#### Opportunities (Work & School)

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

IT skills are taught well in schools

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

The current internet speed and reliability meet connectivity needs

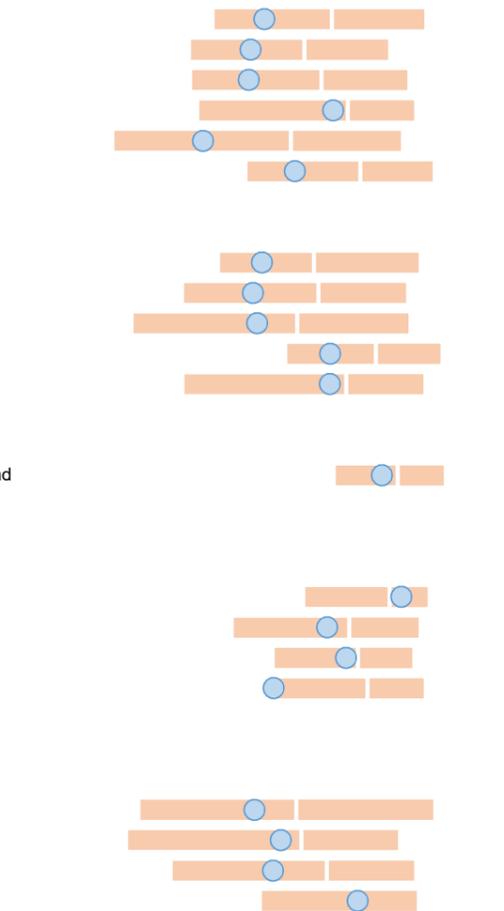
#### Governance

Online public access to city finances has reduced corruption

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



# Marseille

## SMART CITY RANKING

78

Out of 109

N/A

not in 2019

## SMART CITY RATING

CCC

not in 2019

## FACTOR RATINGS

CCC

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,605,000

(UN World Cities Report)



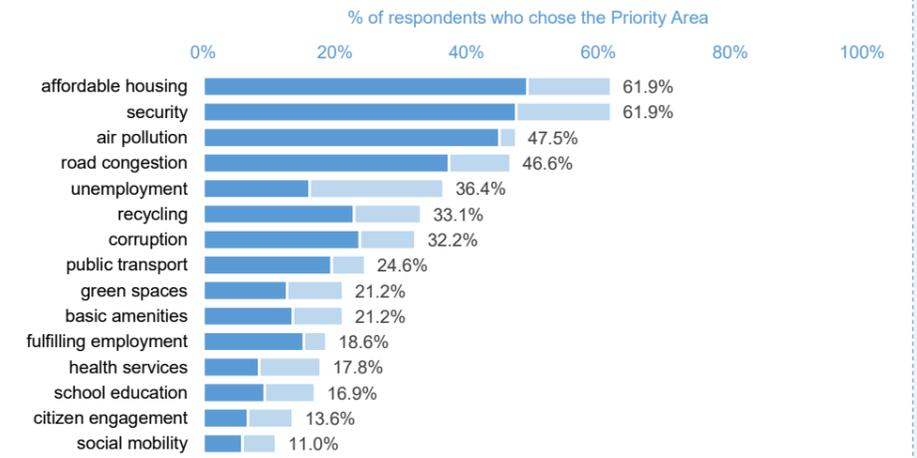
#### Country

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

### 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.

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### ATTITUDES

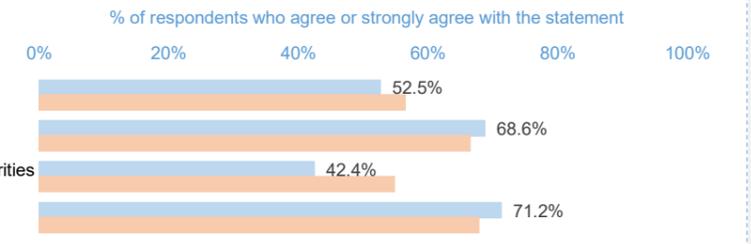
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You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

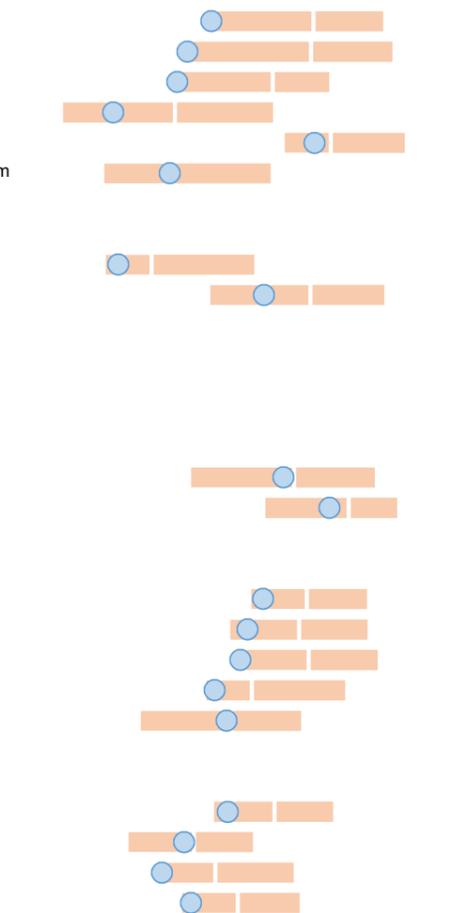
#### Governance

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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

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#### Mobility

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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

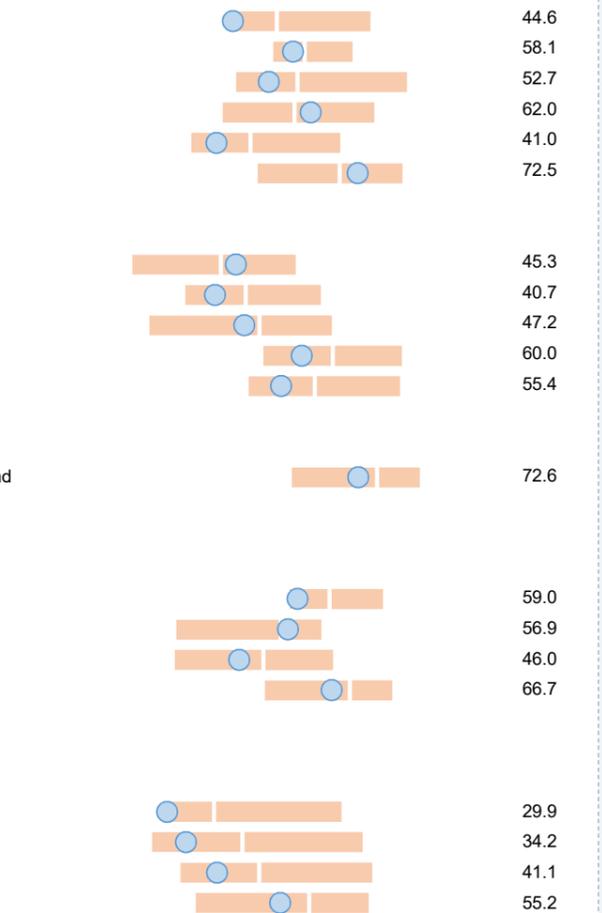
#### Governance

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



# Medan

## SMART CITY RANKING

97

Out of 109



82 in 2019

## SMART CITY RATING

C

CC in 2019

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,204,000

(UN World Cities Report)



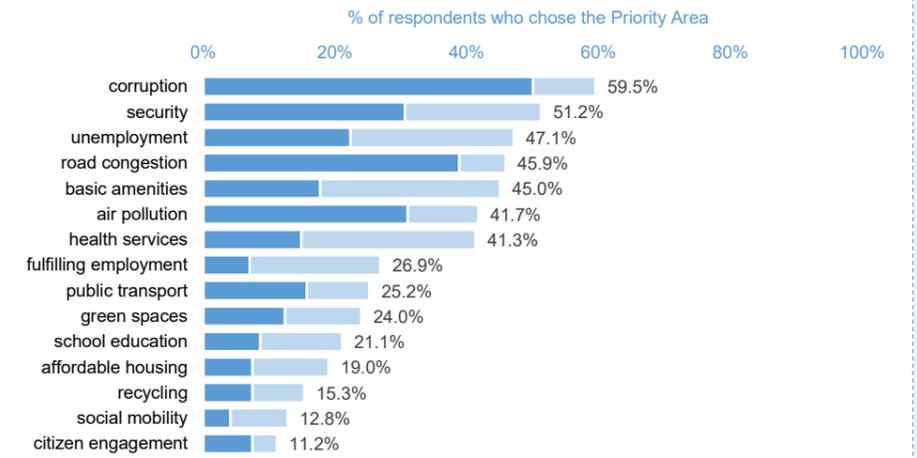
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.696	0.700	0.704	0.707	+0.003
Life expectancy at Birth	70.8	71.0	71.3	71.5	+0.2
Expected years of schooling	12.8	12.9	12.9	12.9	+0.0
Mean years of schooling	7.9	8.0	8.0	8.0	+0.0
GNI per capita (PPP \$)	10,029	10,419	10,811	11,256	+445.0

### PRIORITY AREAS

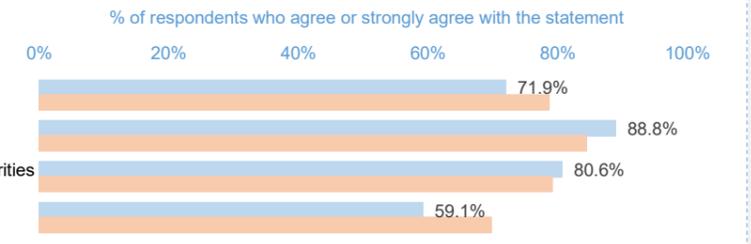
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

57.2  
51.7  
50.6  
34.4  
61.3  
61.2

29.6  
54.1

57.7  
62.1

55.8  
62.2  
54.0  
76.6  
69.3

59.9  
25.3  
56.1  
57.9

### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

- Online public access to city finances has reduced corruption
- 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

Score 0 20 40 60 80 100

55.3  
53.3  
60.5  
65.6  
54.1  
66.8

56.0  
51.9  
51.1  
73.1  
59.6

67.4

76.2  
69.5  
68.5  
72.2

54.3  
56.5  
59.9  
65.1

# Medellin

## SMART CITY RANKING

72

Out of 109



91 in 2019

## SMART CITY RATING

CCC

C in 2019

## FACTOR RATINGS

CCC

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,911,000

(UN World Cities Report)



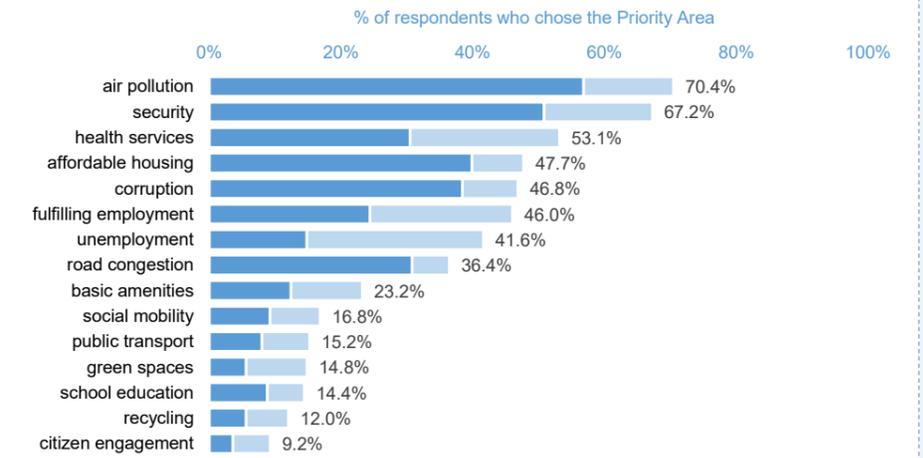
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.753	0.759	0.760	0.761	+0.001
Life expectancy at Birth	76.5	76.7	76.9	77.1	+0.2
Expected years of schooling	14.4	14.6	14.6	14.6	+0.0
Mean years of schooling	8.1	8.3	8.3	8.3	+0.0
GNI per capita (PPP \$)	12,951	13,087	12,963	12,896	-67.0

### 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.

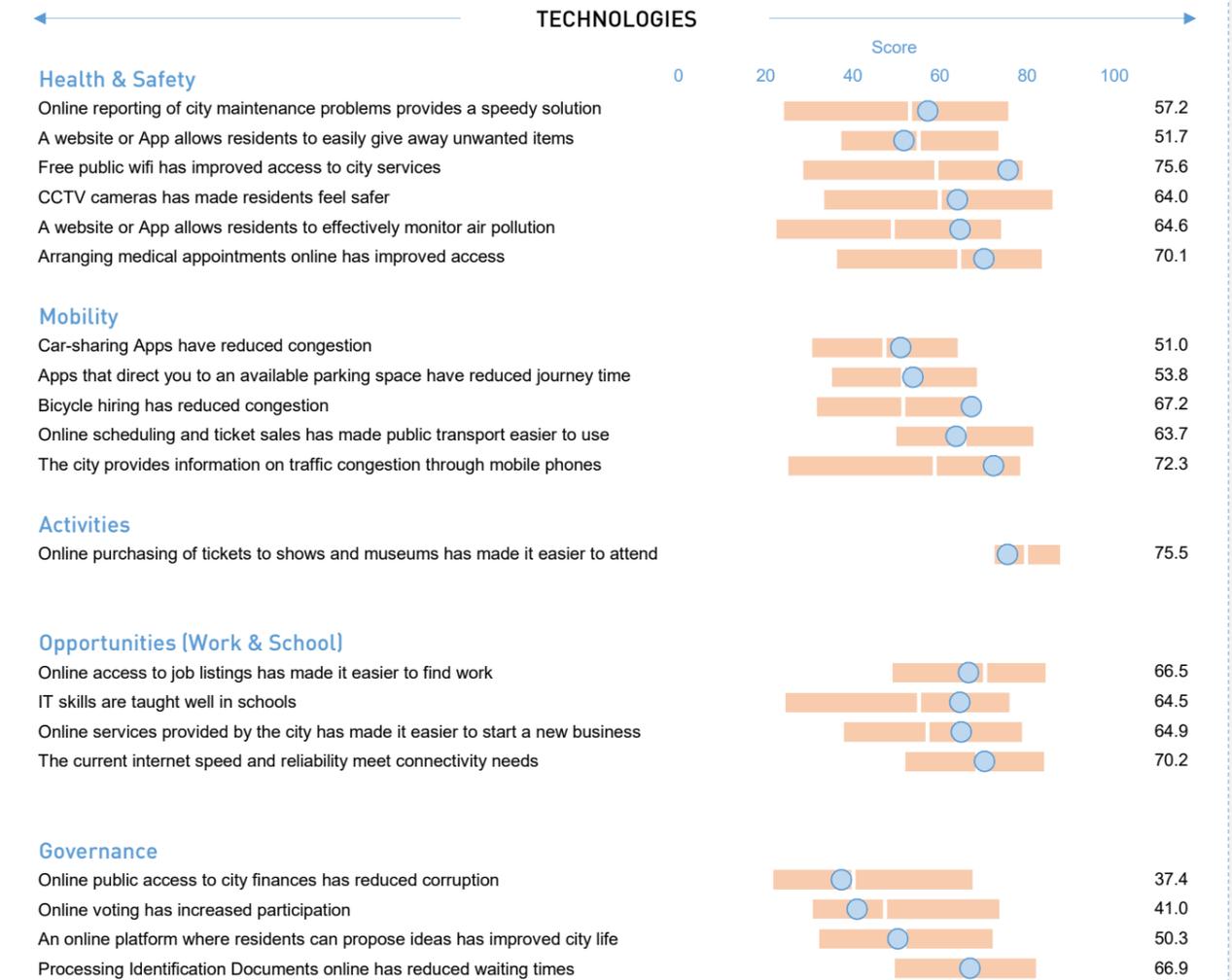
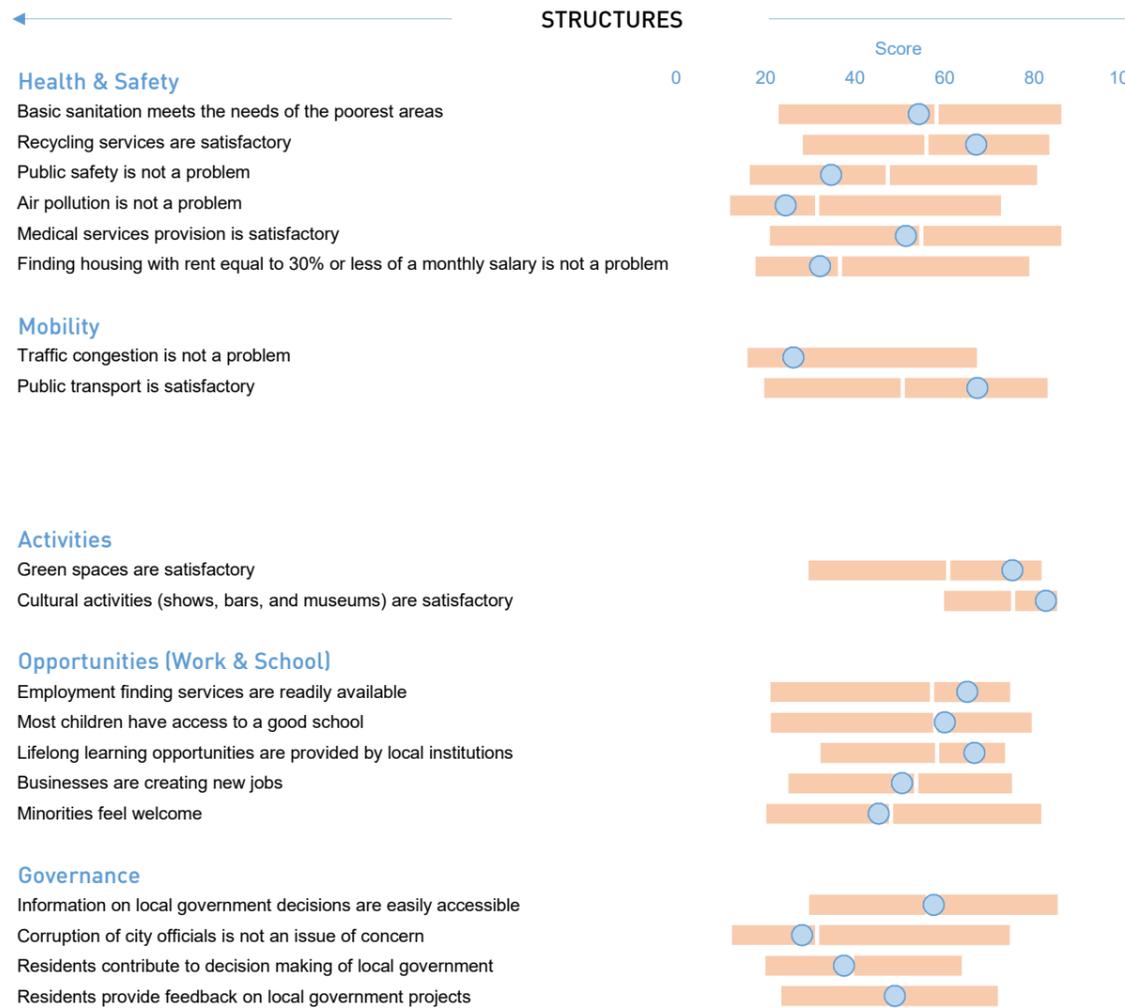
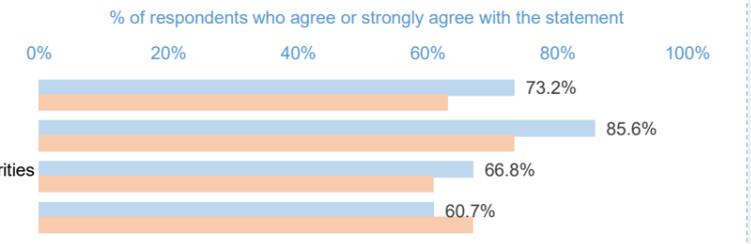
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### ATTITUDES

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

LEGEND: GROUP MEAN CITY



# Melbourne

## SMART CITY RANKING

20

Out of 109



24 in 2019

## SMART CITY RATING

A

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,203,000

(UN World Cities Report)



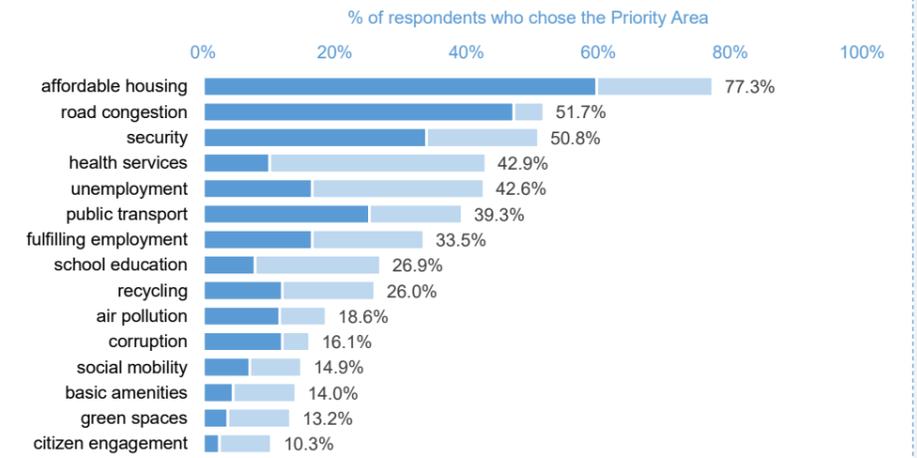
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.933	0.935	0.937	0.938	+0.001
Life expectancy at Birth	82.8	83.0	83.1	83.3	+0.2
Expected years of schooling	23.3	22.9	22.1	22.1	+0.0
Mean years of schooling	12.5	12.6	12.7	12.7	+0.0
GNI per capita (PPP \$)	43,246	43,653	43,756	44,097	+341.0

### PRIORITY AREAS

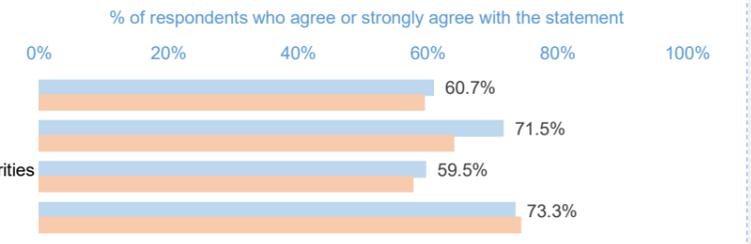
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### ATTITUDES

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LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

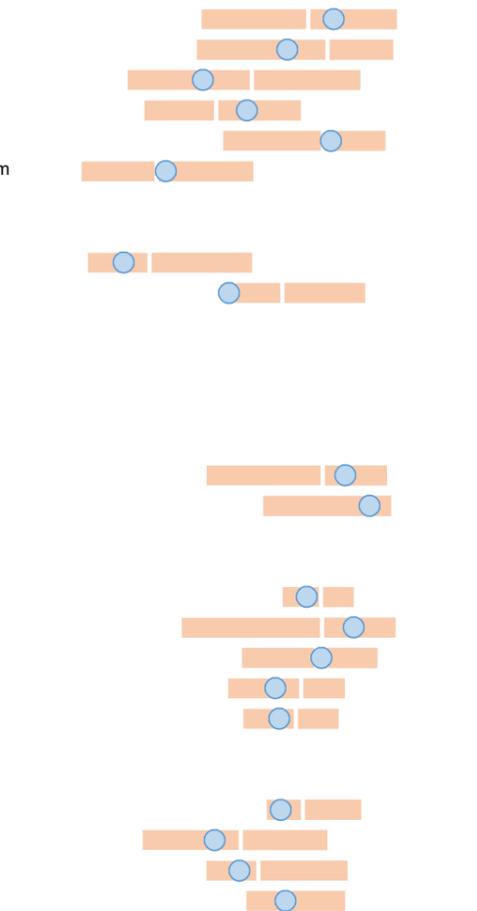
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

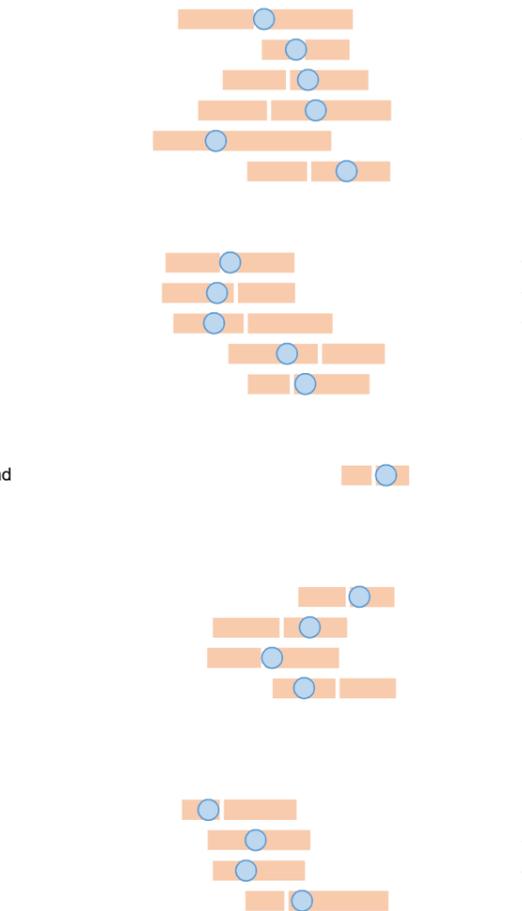
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Mexico City

## SMART CITY RANKING

90

Out of 109



88 in 2019

## SMART CITY RATING

CC

CC in 2019

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
20,999,000

(UN World Cities Report)



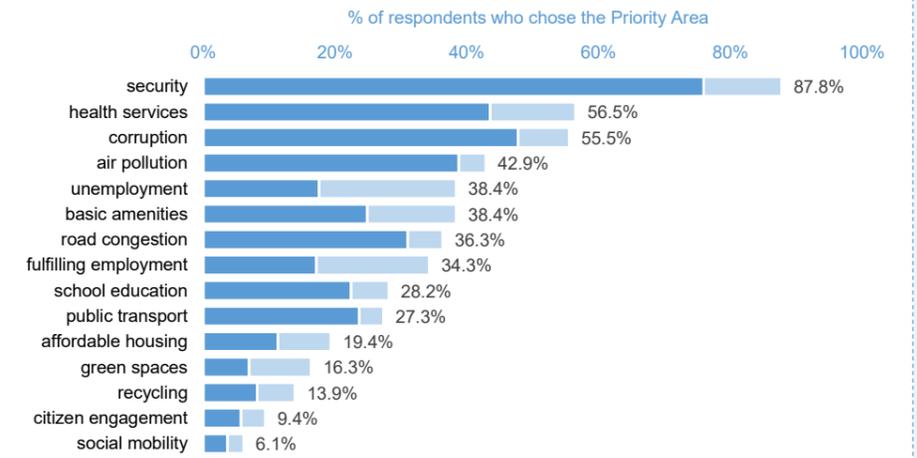
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## PRIORITY AREAS

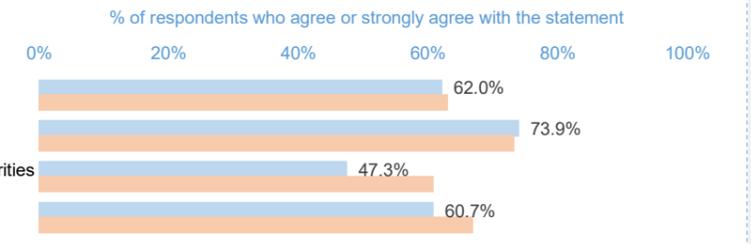
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## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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



### Mobility

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



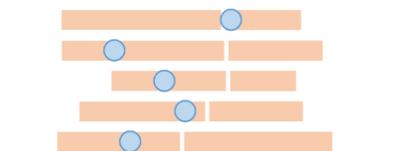
### Activities

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



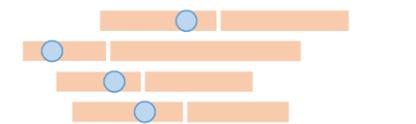
### Opportunities (Work & School)

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



### Governance

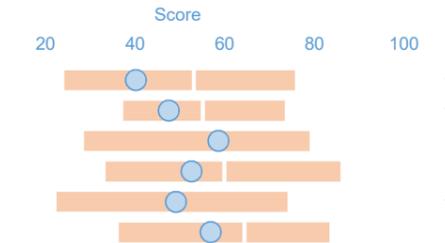
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



## TECHNOLOGIES

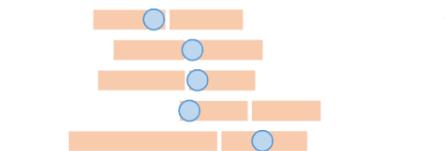
### Health & Safety

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



### Mobility

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



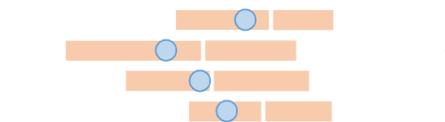
### Activities

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



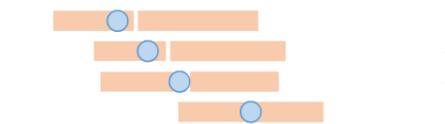
### Opportunities (Work & School)

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



### Governance

- Online public access to city finances has reduced corruption
- 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



# Milan

## SMART CITY RANKING

74

Out of 109



22 in 2019

## SMART CITY RATING

CCC

BBB in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
3,099,000

(UN World Cities Report)



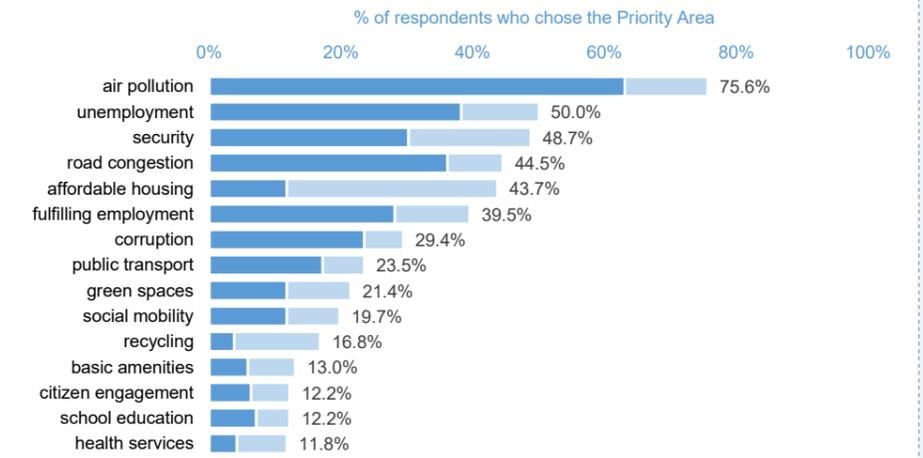
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.875	0.878	0.881	0.883	+0.002
Life expectancy at Birth	82.8	83.0	83.2	83.4	+0.2
Expected years of schooling	16.3	16.2	16.2	16.2	+0.0
Mean years of schooling	10.1	10.2	10.2	10.2	+0.0
GNI per capita (PPP \$)	34,105	34,818	35,573	36,141	+568.0

## PRIORITY AREAS

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

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



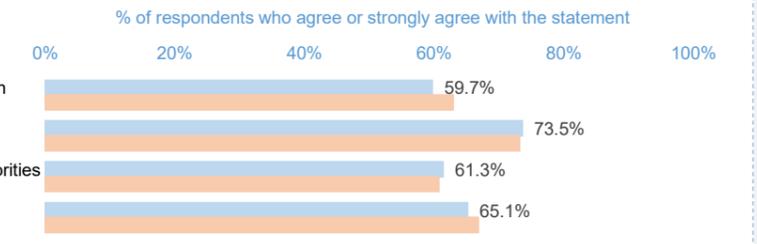
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY



## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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



### Mobility

Traffic congestion is not a problem

Public transport is satisfactory



### Activities

Green spaces are satisfactory

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



### Opportunities (Work & School)

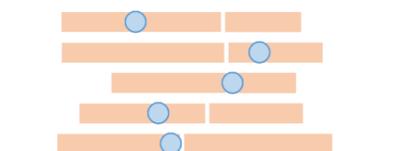
Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome



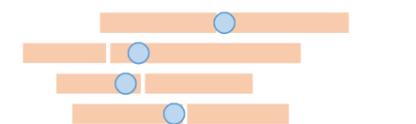
### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

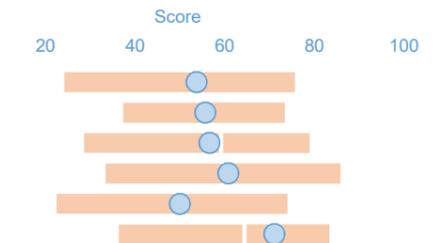
A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access



### Mobility

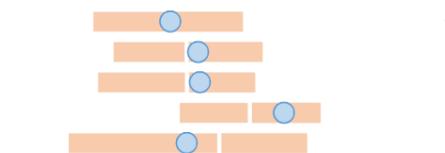
Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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



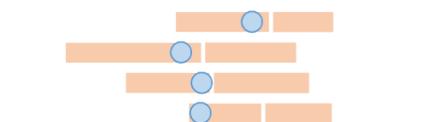
### Opportunities (Work & School)

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



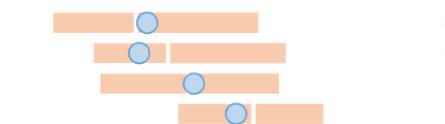
### Governance

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



# Montreal

## SMART CITY RANKING

21

Out of 109



16 in 2019

## SMART CITY RATING

A

A in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,981,000

(UN World Cities Report)



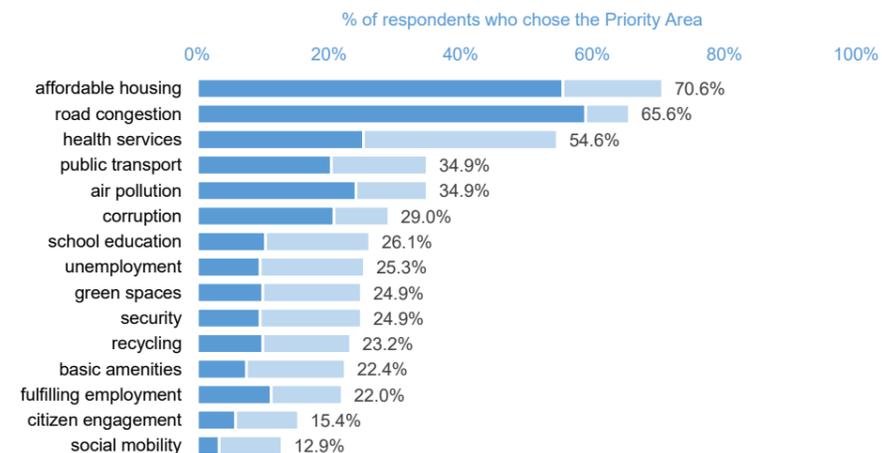
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.917	0.920	0.921	0.922	+0.001
Life expectancy at Birth	82.0	82.1	82.2	82.3	+0.1
Expected years of schooling	16.0	16.1	16.1	16.1	+0.0
Mean years of schooling	13.2	13.3	13.3	13.3	+0.0
GNI per capita (PPP \$)	42,567	42,691	43,496	43,602	+106.0

### PRIORITY AREAS

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

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



### ATTITUDES

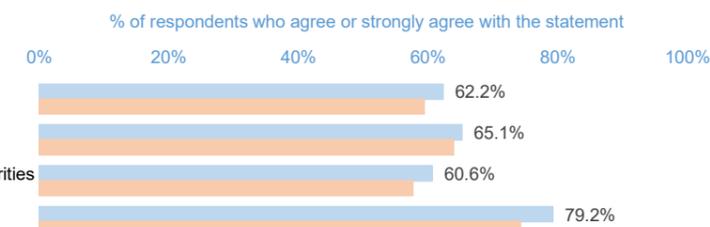
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

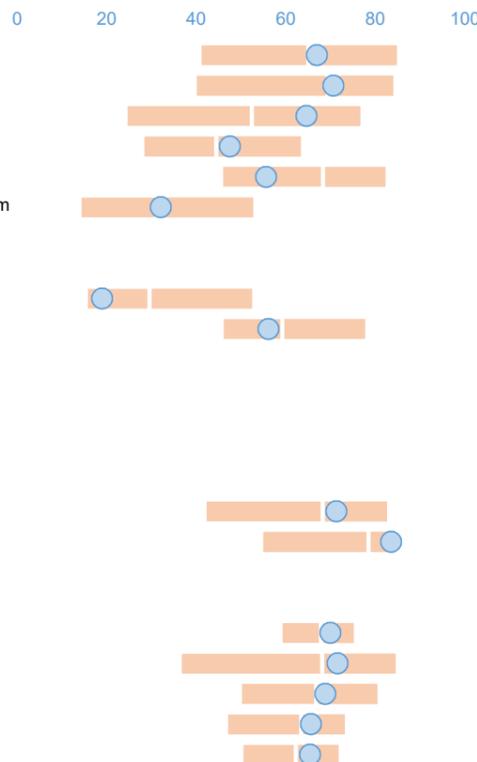
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

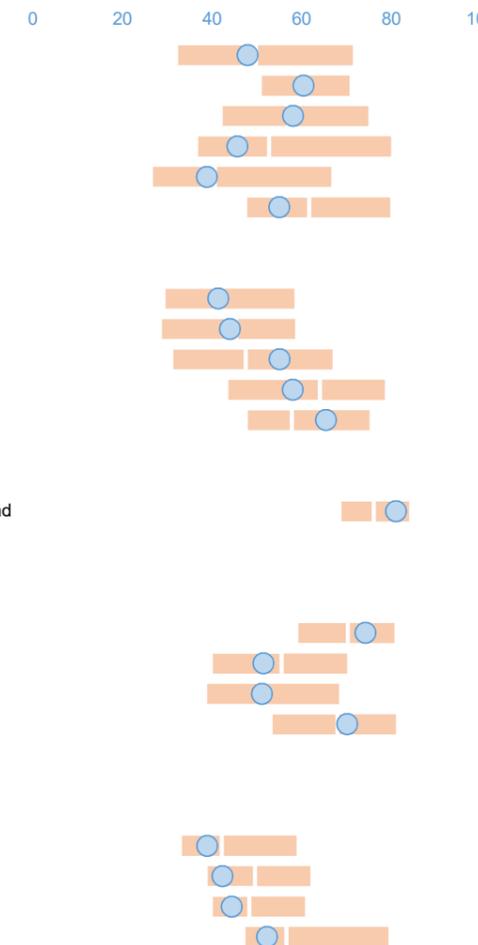
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Moscow

## SMART CITY RANKING

56

Out of 109



72 in 2019

## SMART CITY RATING

B

CCC in 2019

## FACTOR RATINGS

CCC

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
12,166,000

(UN World Cities Report)



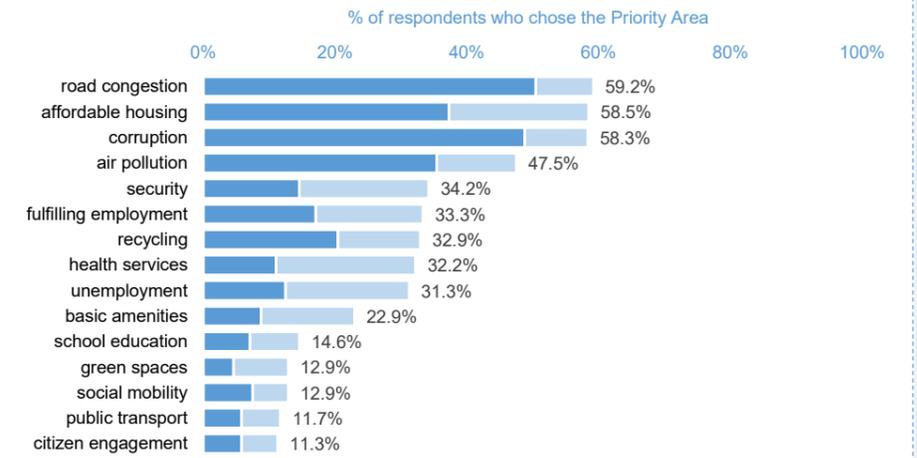
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.813	0.817	0.822	0.824	+0.002
Life expectancy at Birth	71.5	71.8	72.1	72.4	+0.3
Expected years of schooling	15.4	15.5	15.5	15.5	+0.0
Mean years of schooling	11.8	11.8	12.0	12.0	+0.0
GNI per capita (PPP \$)	24,032	24,096	24,472	25,036	+564.0

## PRIORITY AREAS

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

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



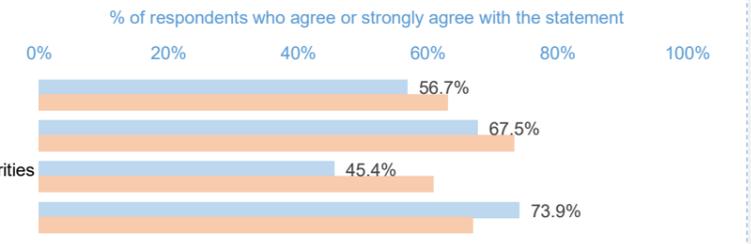
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

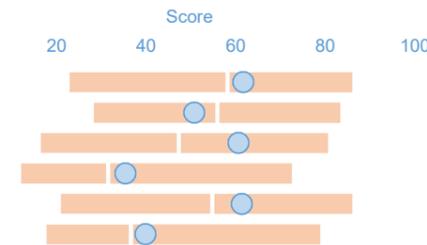
Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

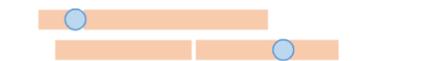
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

Traffic congestion is not a problem

Public transport is satisfactory



### Activities

Green spaces are satisfactory

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



### Opportunities (Work & School)

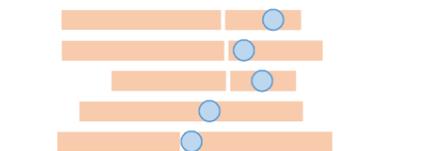
Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome



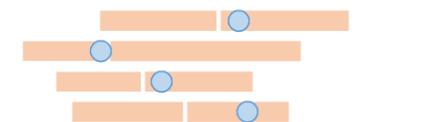
### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

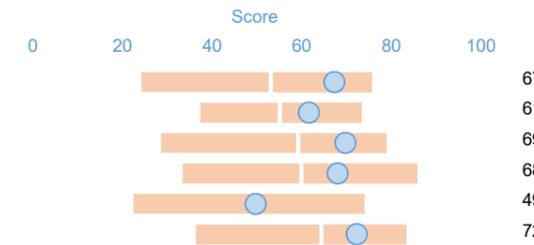
A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access



### Mobility

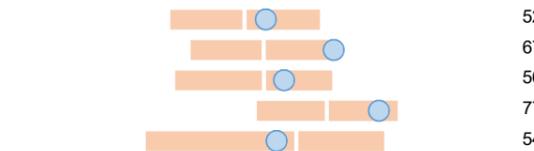
Car-sharing Apps have reduced congestion

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

Bicycle hiring has reduced congestion

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

The city provides information on traffic congestion through mobile phones



### Activities

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



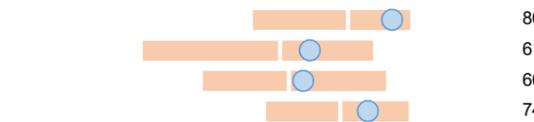
### Opportunities (Work & School)

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

IT skills are taught well in schools

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

The current internet speed and reliability meet connectivity needs



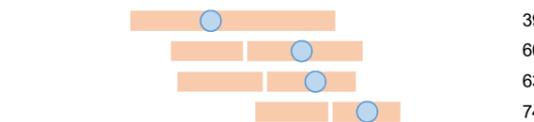
### Governance

Online public access to city finances has reduced corruption

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



# Mumbai

## SMART CITY RANKING

93

Out of 109



78 in 2019

## SMART CITY RATING

C

CC in 2019

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
21,043,000

(UN World Cities Report)



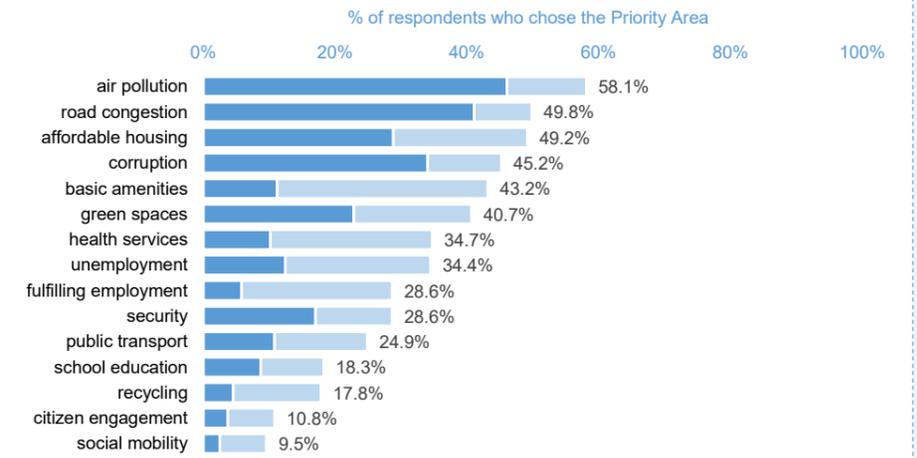
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

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

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



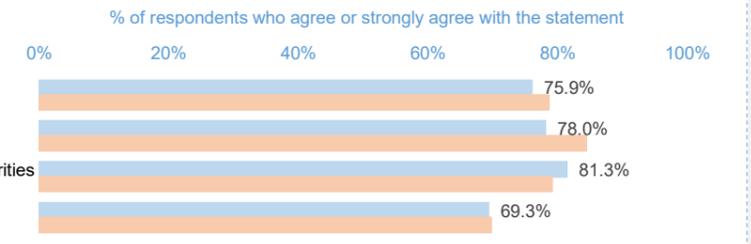
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

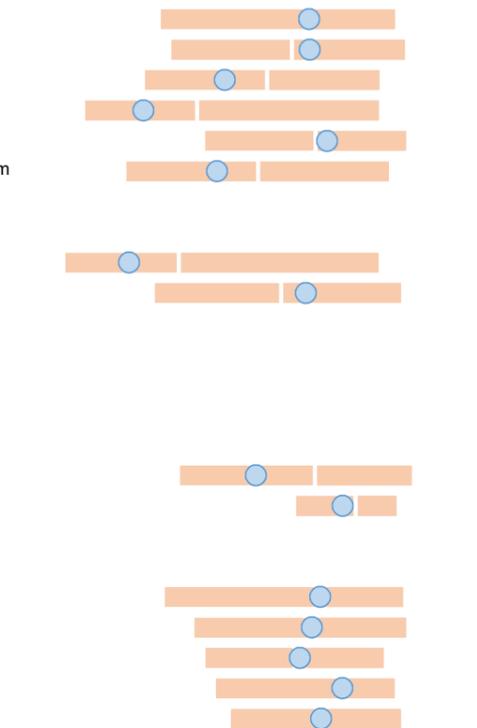
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

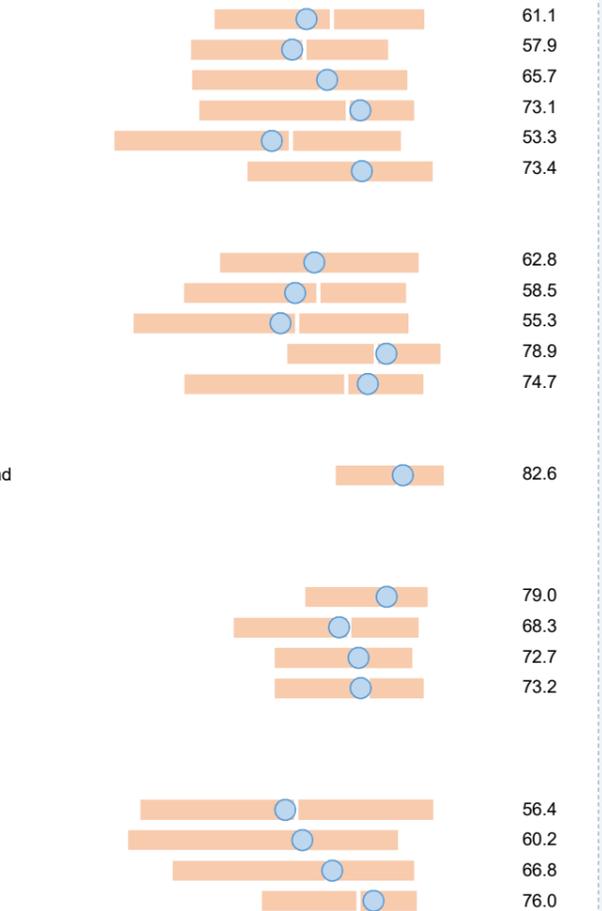
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Munich

## SMART CITY RANKING

11

Out of 109

N/A

not in 2019

## SMART CITY RATING

A

not in 2019

## FACTOR RATINGS

AA

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,438,000

(UN World Cities Report)

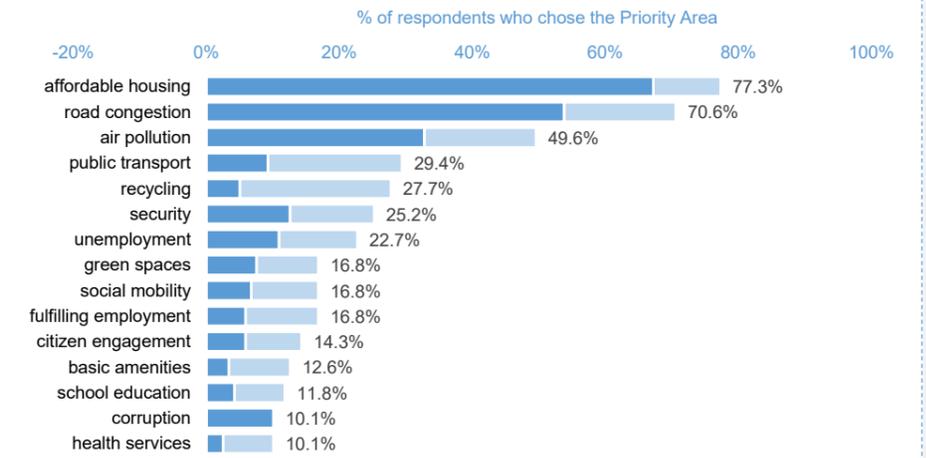


Country	2015	2016	2017	2018	1 yr change
HDI	0.933	0.936	0.938	0.939	+0.001
Life expectancy at Birth	80.8	80.9	81.0	81.2	+0.2
Expected years of schooling	17.0	17.1	17.1	17.1	+0.0
Mean years of schooling	14.1	14.1	14.1	14.1	+0.0
GNI per capita (PPP \$)	45,012	45,577	46,438	46,946	+508.0

## PRIORITY AREAS

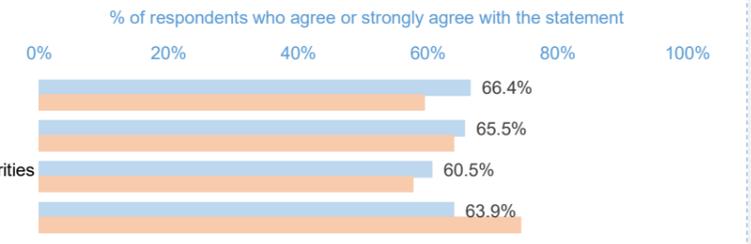
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

### Activities

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

### Opportunities (Work & School)

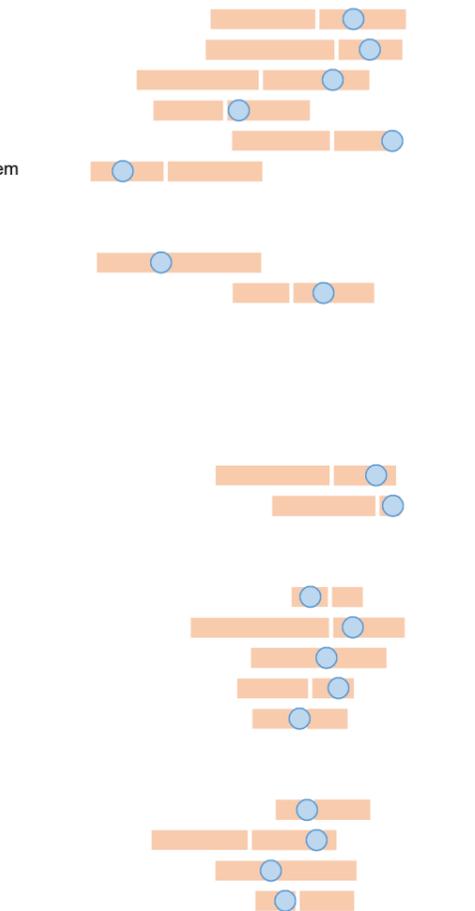
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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

### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space 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

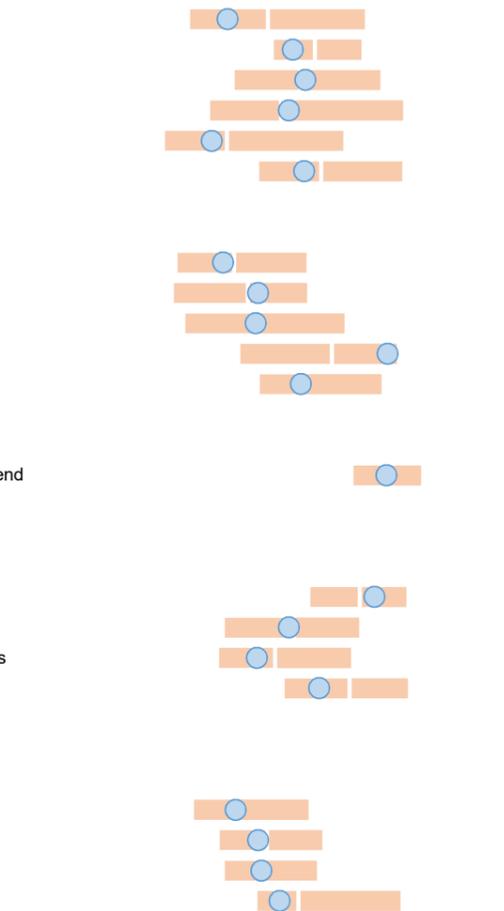
### Opportunities (Work & School)

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

Score 0 20 40 60 80 100



# Nairobi

## SMART CITY RANKING

108

Out of 109



100 in 2019

## SMART CITY RATING

D

D in 2019

## FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,915,000

(UN World Cities Report)



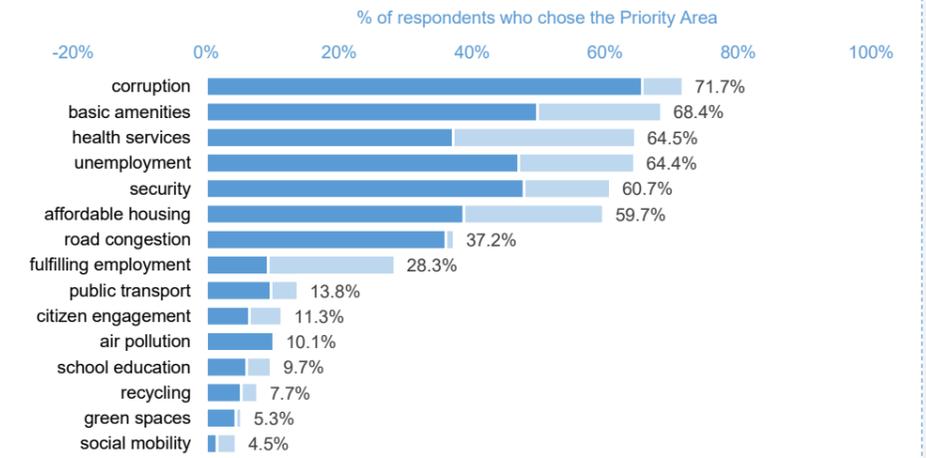
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.562	0.568	0.574	0.579	+0.005
Life expectancy at Birth	64.8	65.4	65.9	66.3	+0.4
Expected years of schooling	10.9	11.0	11.1	11.1	+0.0
Mean years of schooling	6.3	6.4	6.5	6.6	+0.1
GNI per capita (PPP \$)	2,768	2,875	2,936	3,052	+116.0

### PRIORITY AREAS

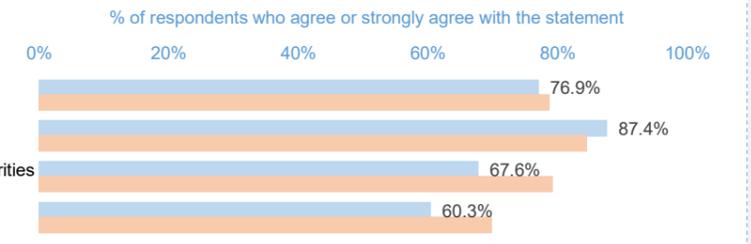
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

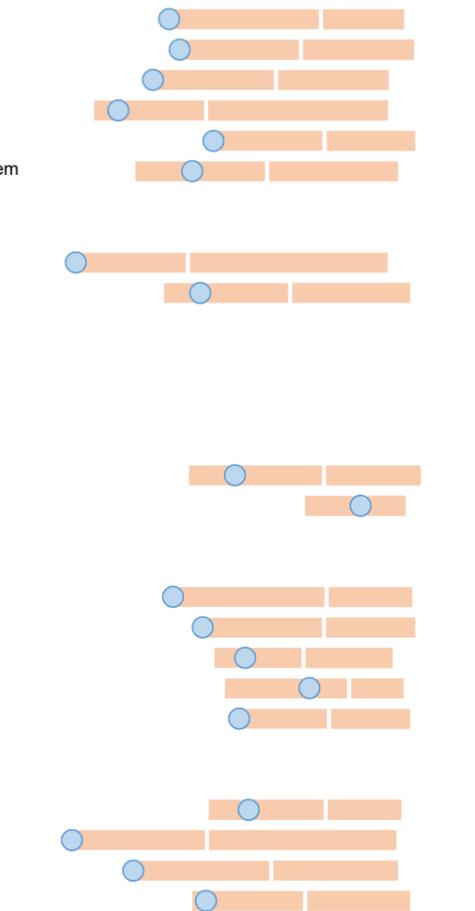
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

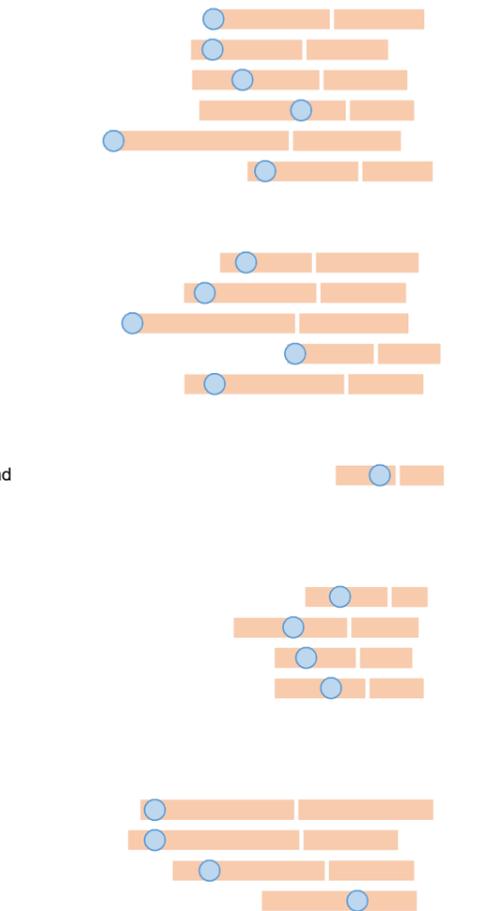
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Nanjing

## SMART CITY RANKING

66

Out of 109



55 in 2019

## SMART CITY RATING

CCC

B in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
7,369,000

(UN World Cities Report)



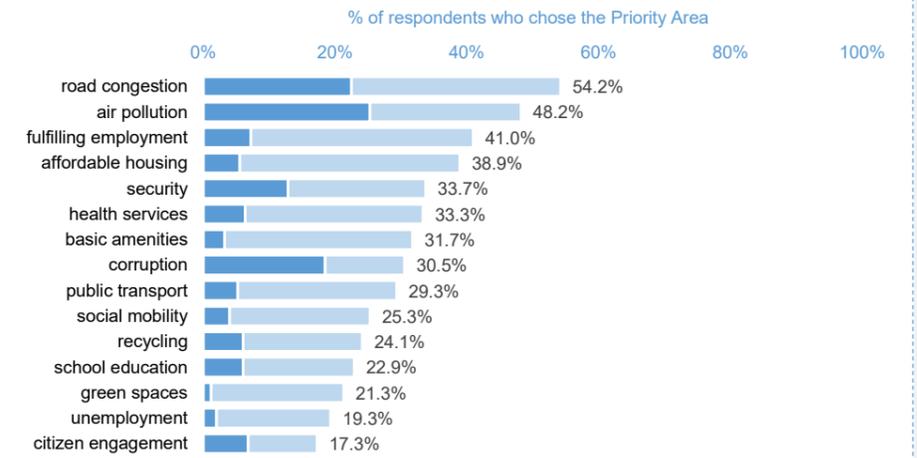
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

### PRIORITY AREAS

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

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



### ATTITUDES

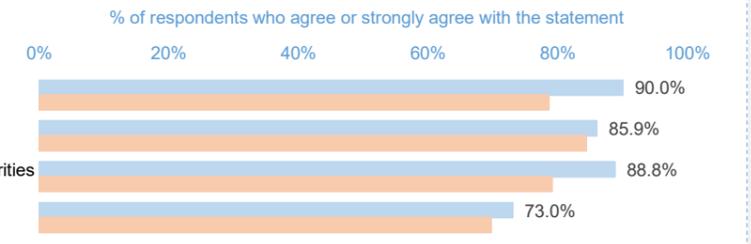
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

84.7

73.2

70.5

55.8

78.0

74.5

61.8

77.1

82.6

80.7

81.8

76.1

74.7

76.4

78.4

79.1

61.8

67.1

73.1

### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

Score 0 20 40 60 80 100

82.3

75.4

82.5

81.4

79.4

86.7

74.0

81.3

81.7

87.1

86.5

87.7

85.6

86.5

80.3

84.7

77.3

76.6

81.6

78.1

# New Delhi

## SMART CITY RANKING

86

Out of 109



68 in 2019

## SMART CITY RATING

CC

CCC in 2019

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
25,703,000

(UN World Cities Report)



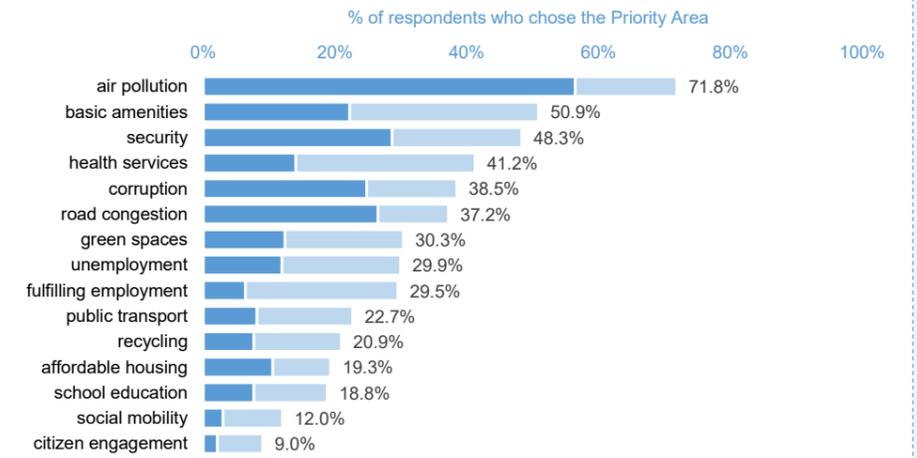
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

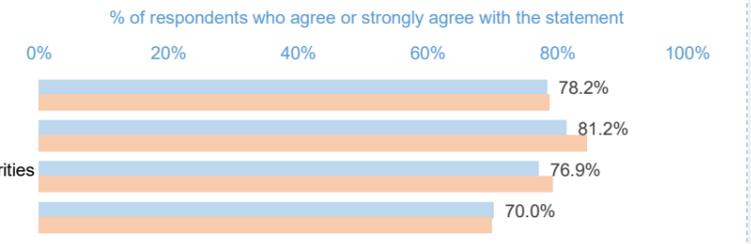
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

#### Activities

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

#### Opportunities (Work & School)

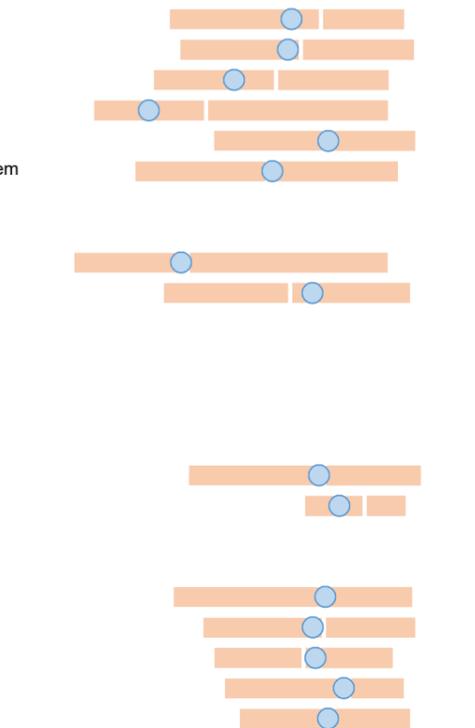
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space 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

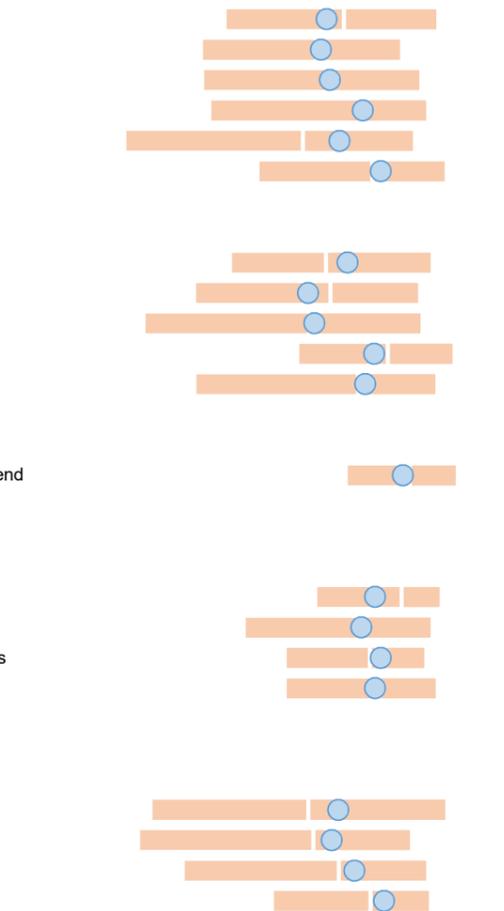
#### Opportunities (Work & School)

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

Score 0 20 40 60 80 100



# New York

## SMART CITY RANKING

10

Out of 109



38 in 2019

## SMART CITY RATING

A

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

AA

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
18,593,000

(UN World Cities Report)



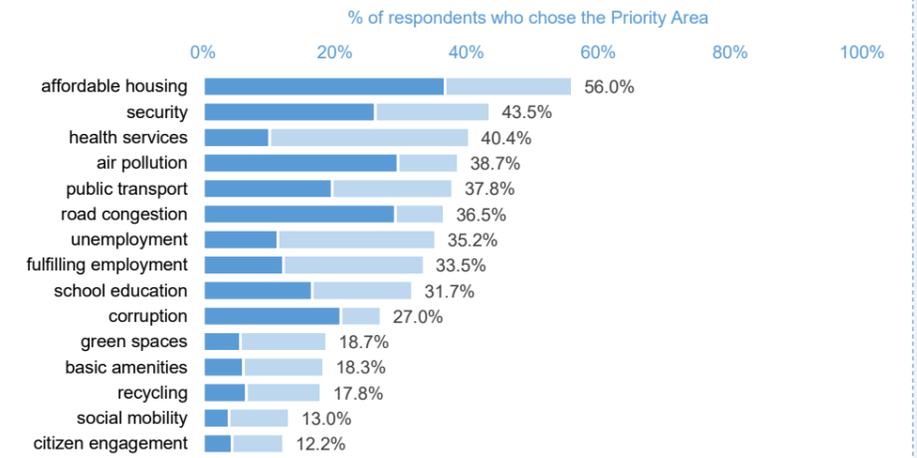
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

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

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



### ATTITUDES

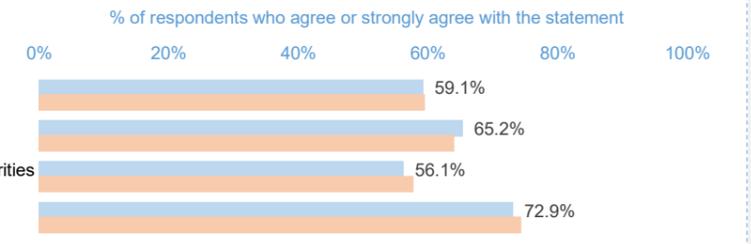
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

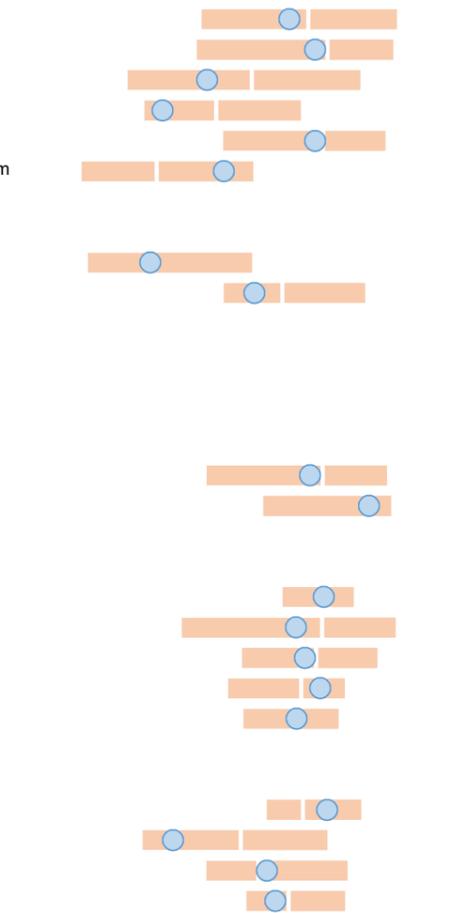
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

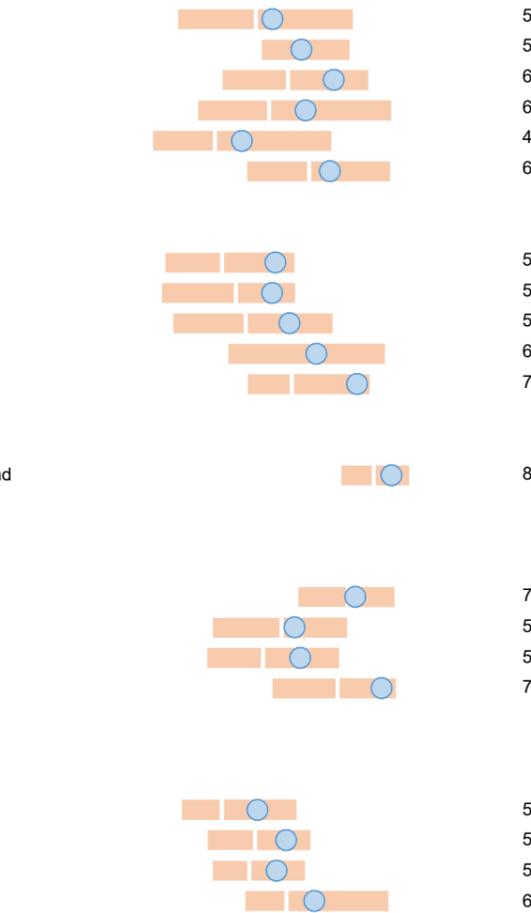
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Newcastle

## SMART CITY RANKING

23

Out of 109

N/A

not in 2019

## SMART CITY RATING

A

not in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
791,000

(UN World Cities Report)

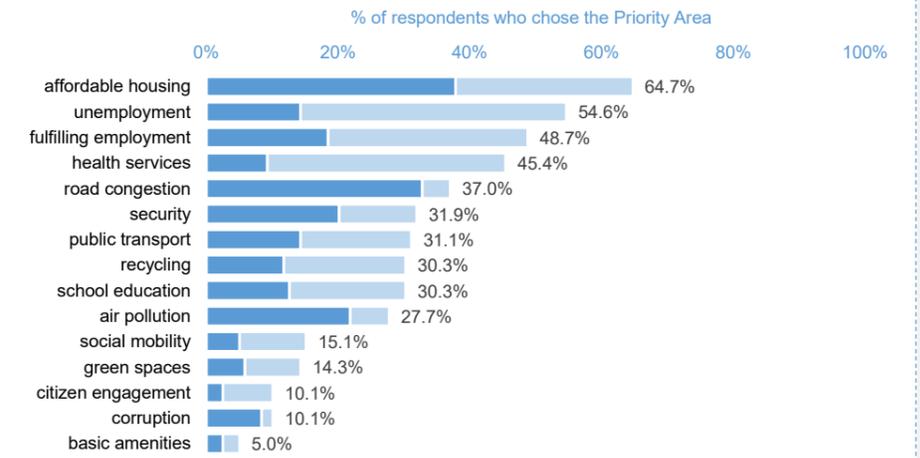


Country	2015	2016	2017	2018	1 yr change
HDI	0.916	0.918	0.919	0.920	+0.001
Life expectancy at Birth	81.1	81.1	81.2	81.2	+0.0
Expected years of schooling	17.4	17.4	17.4	17.4	+0.0
Mean years of schooling	12.8	12.9	12.9	13.0	+0.1
GNI per capita (PPP \$)	38,116	38,421	39,216	39,507	+291.0

## 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

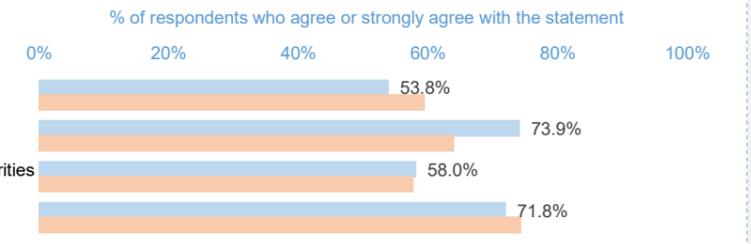
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

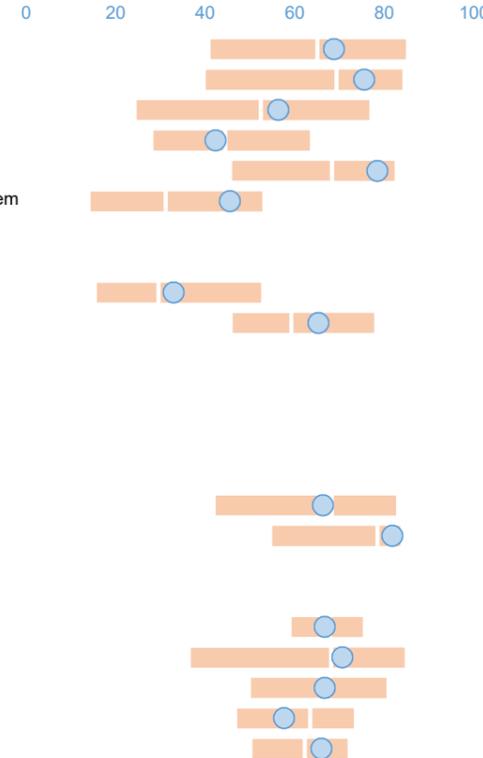
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

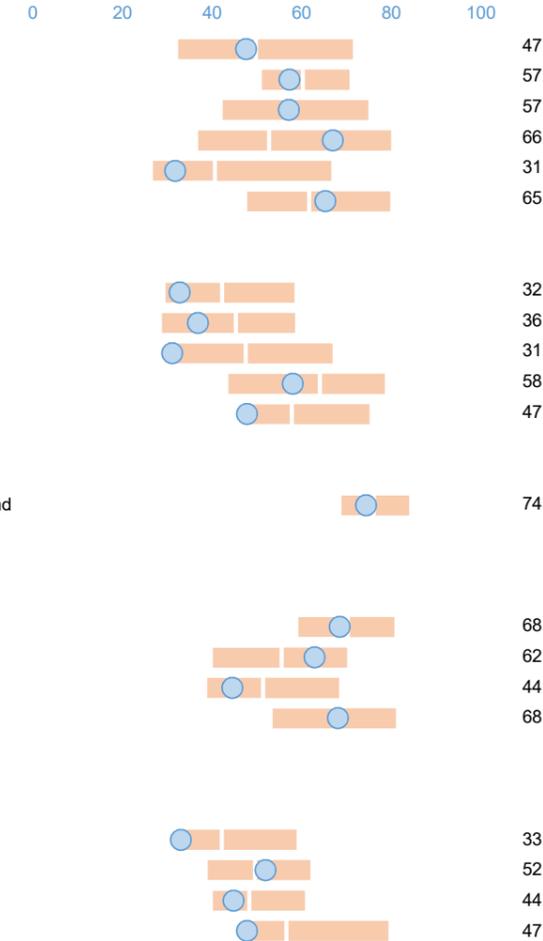
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Osaka

## SMART CITY RANKING

80

Out of 109



63 in 2019

## SMART CITY RATING

CCC

B in 2019

## FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
20,238,000

(UN World Cities Report)



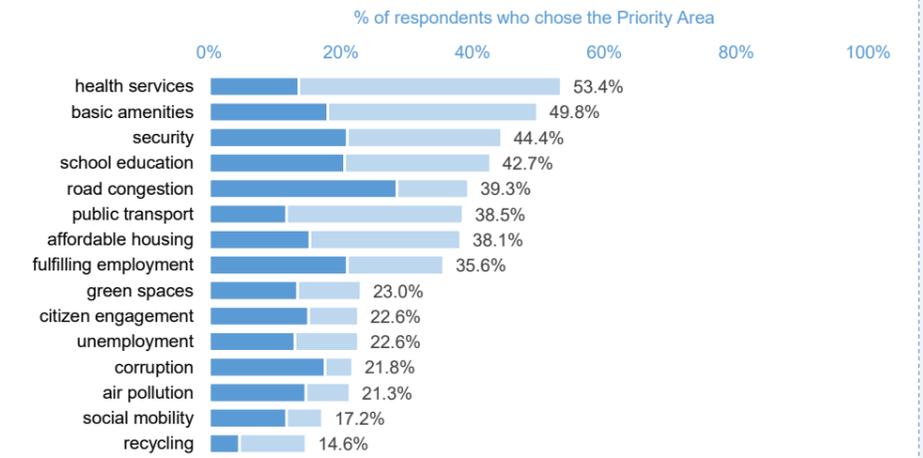
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.906	0.910	0.913	0.915	+0.002
Life expectancy at Birth	83.9	84.1	84.3	84.5	+0.2
Expected years of schooling	15.2	15.2	15.2	15.2	+0.0
Mean years of schooling	12.5	12.7	12.8	12.8	+0.0
GNI per capita (PPP \$)	39,297	39,407	40,343	40,799	+456.0

## PRIORITY AREAS

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## ATTITUDES

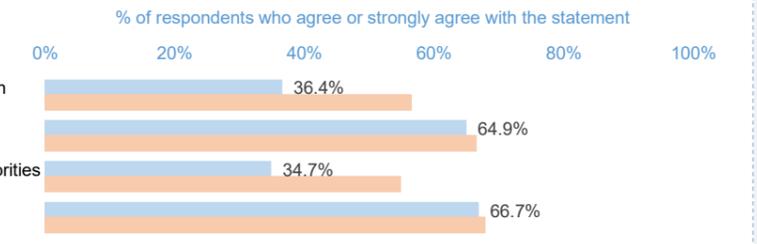
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

66.1

60.7

57.0

51.1

69.2

57.1

36.1

68.8

41.4

55.2

52.1

50.8

54.6

44.1

32.7

51.0

34.1

45.8

41.6

## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

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CCTV cameras has made residents feel safer

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### Mobility

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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

Score 0 20 40 60 80 100

50.8

57.0

48.0

53.6

36.4

49.9

23.2

33.8

25.8

51.2

51.1

57.5

60.1

31.8

31.5

51.6

33.1

26.4

32.7

36.1

## SMART CITY RANKING

5

Out of 109



3 in 2019

## SMART CITY RATING

AA

AA in 2019

## FACTOR RATINGS

AAA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
986,000

(UN World Cities Report)



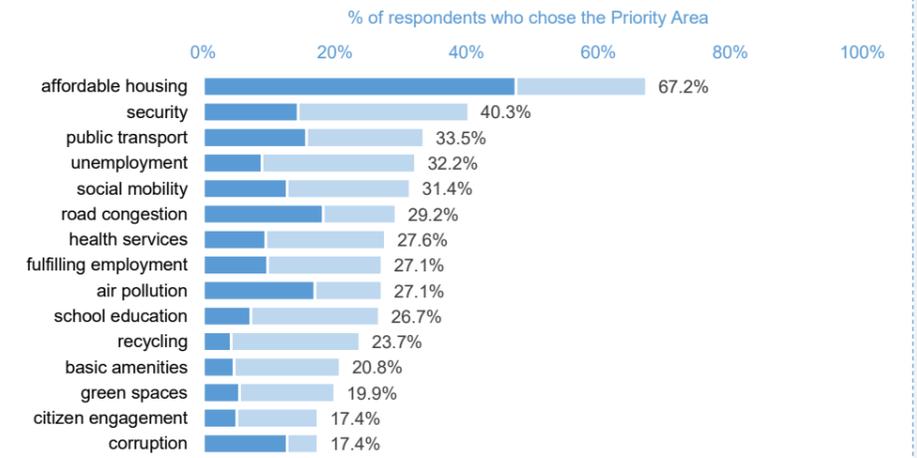
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.948	0.951	0.953	0.954	+0.001
Life expectancy at Birth	81.9	82.0	82.1	82.3	+0.2
Expected years of schooling	17.8	18.0	18.1	18.1	+0.0
Mean years of schooling	12.5	12.6	12.6	12.6	+0.0
GNI per capita (PPP \$)	66,584	66,746	67,529	68,059	+530.0

## PRIORITY AREAS

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

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



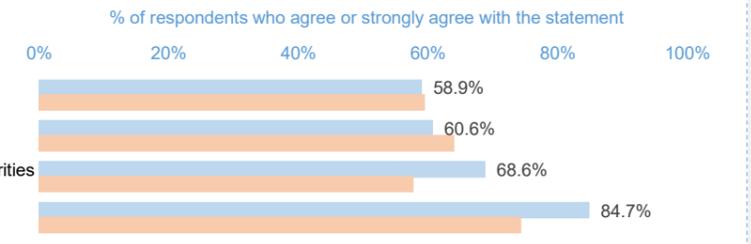
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

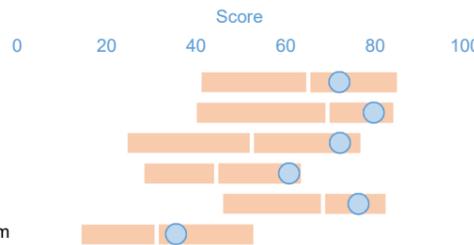
Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

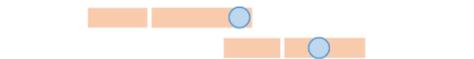
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

Traffic congestion is not a problem

Public transport is satisfactory



### Activities

Green spaces are satisfactory

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



### Opportunities (Work & School)

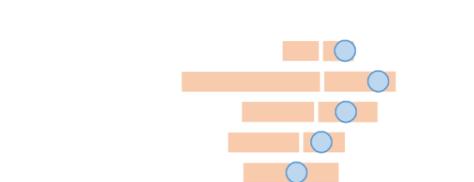
Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome



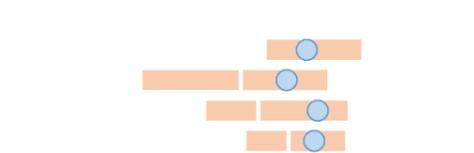
### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

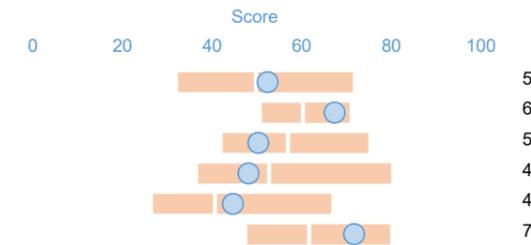
A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access



### Mobility

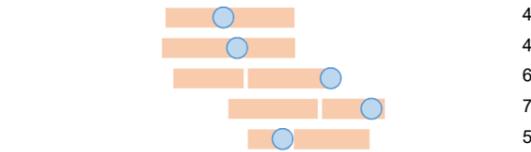
Car-sharing Apps have reduced congestion

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

Bicycle hiring has reduced congestion

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

The city provides information on traffic congestion through mobile phones



### Activities

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



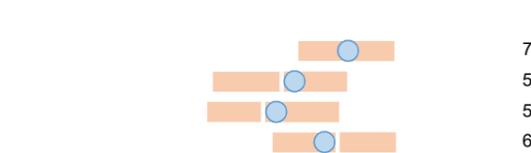
### Opportunities (Work & School)

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

IT skills are taught well in schools

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

The current internet speed and reliability meet connectivity needs



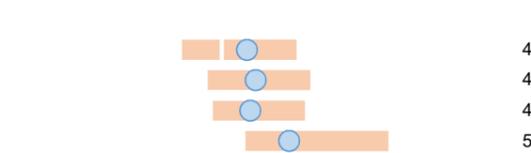
### Governance

Online public access to city finances has reduced corruption

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



# Paris

## SMART CITY RANKING

61

Out of 109



51 in 2019

## SMART CITY RATING

B

BB in 2019

## FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
10,843,000

(UN World Cities Report)



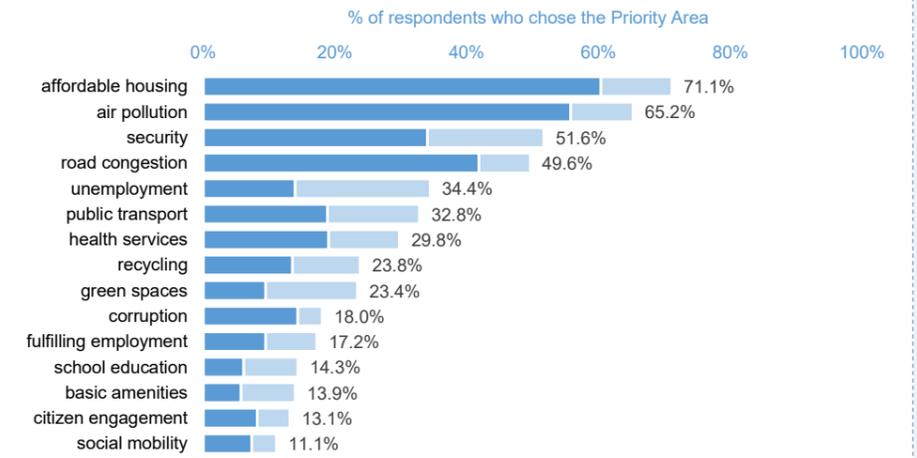
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## PRIORITY AREAS

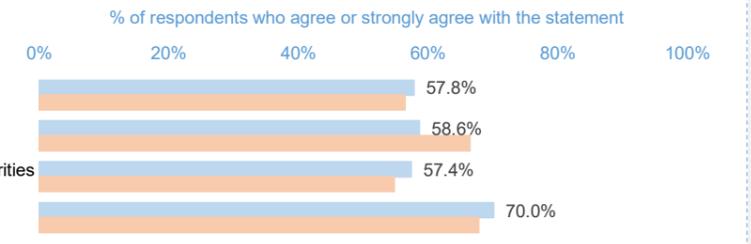
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

### Activities

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

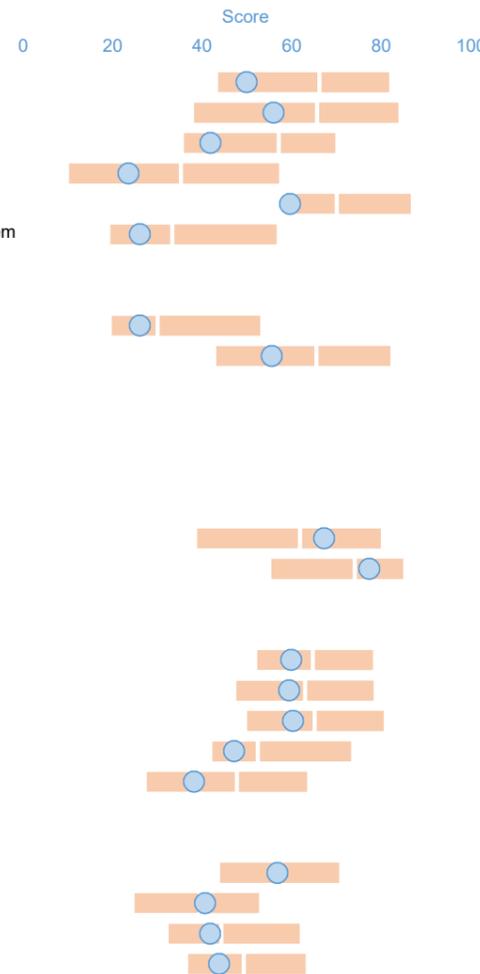
### Opportunities (Work & School)

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

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX



## TECHNOLOGIES

### Health & Safety

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

### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space 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

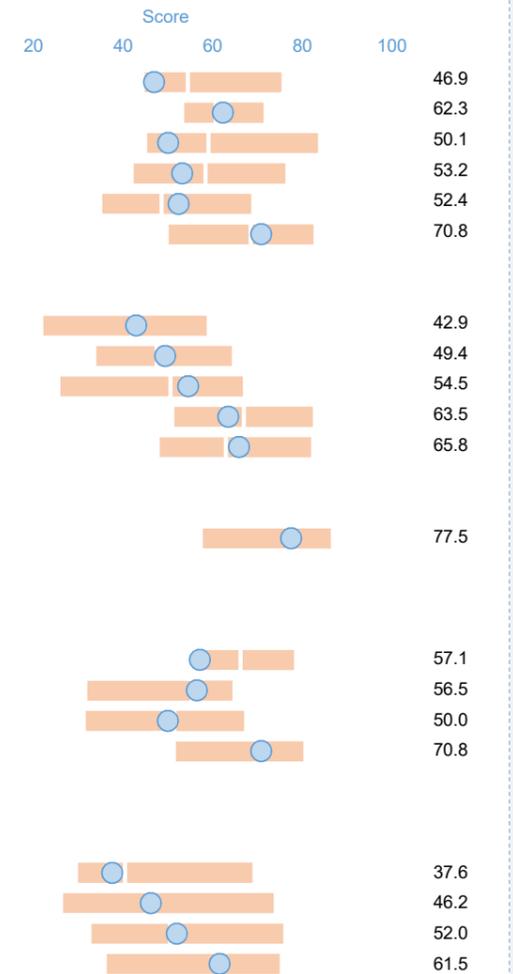
Online purchasing of tickets to shows and museums has made it easier to attend

### 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



# Philadelphia

## SMART CITY RANKING

52

Out of 109



54 in 2019

## SMART CITY RATING

BB

BB in 2019

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
5,585,000

(UN World Cities Report)



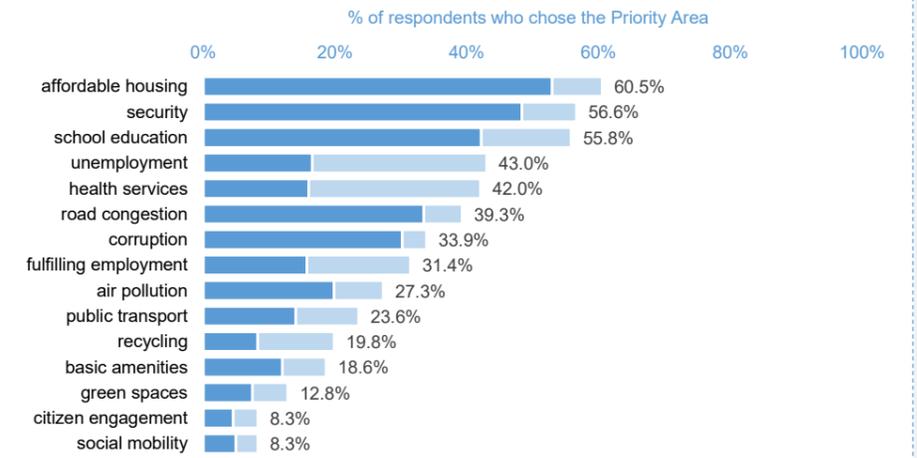
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

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

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



### ATTITUDES

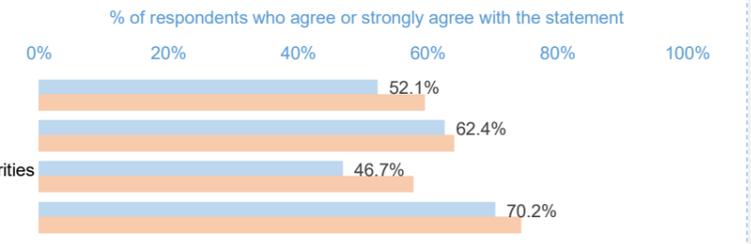
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

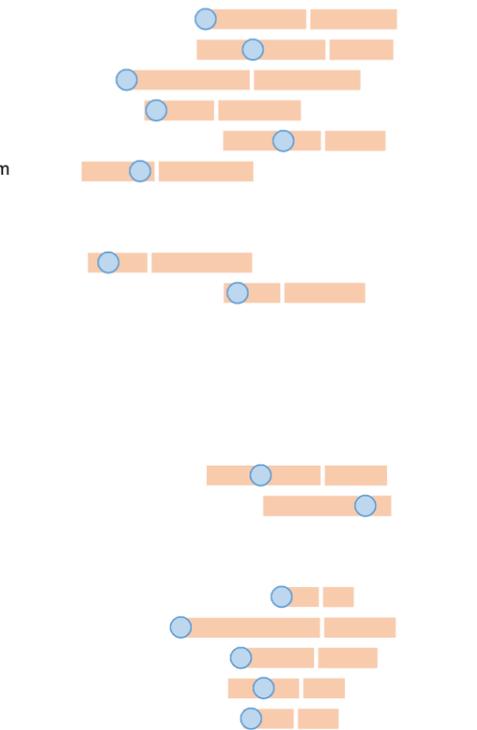
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

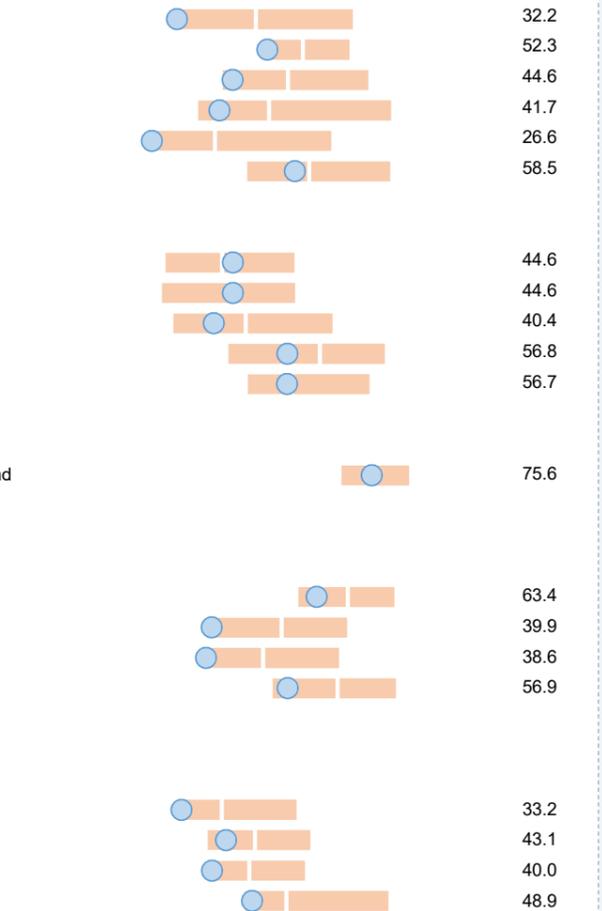
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Phoenix

## SMART CITY RANKING

39

Out of 109

N/A

not in 2019

## SMART CITY RATING

BBB

not in 2019

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,063,000

(UN World Cities Report)



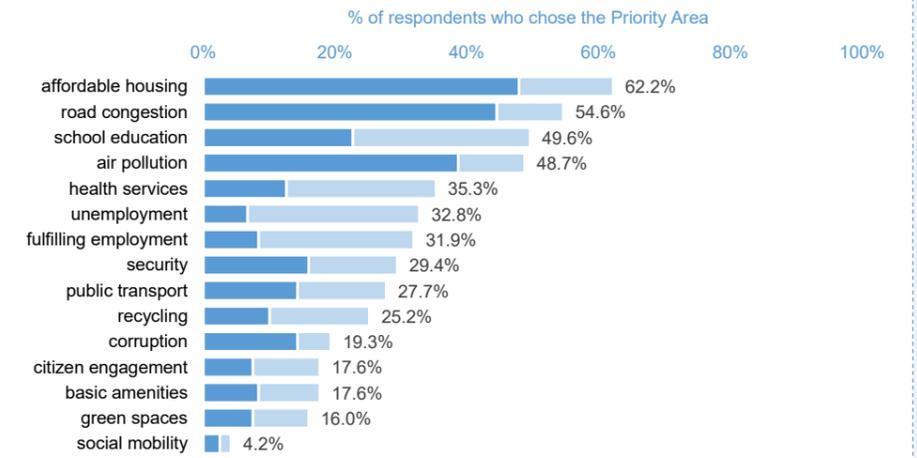
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

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

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



### ATTITUDES

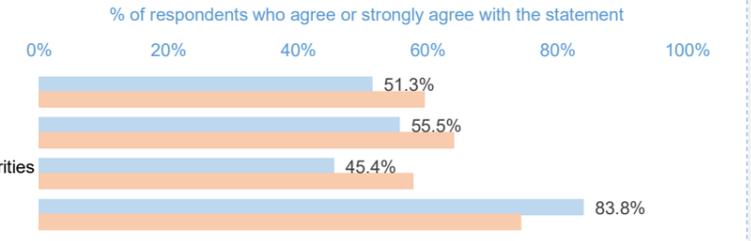
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

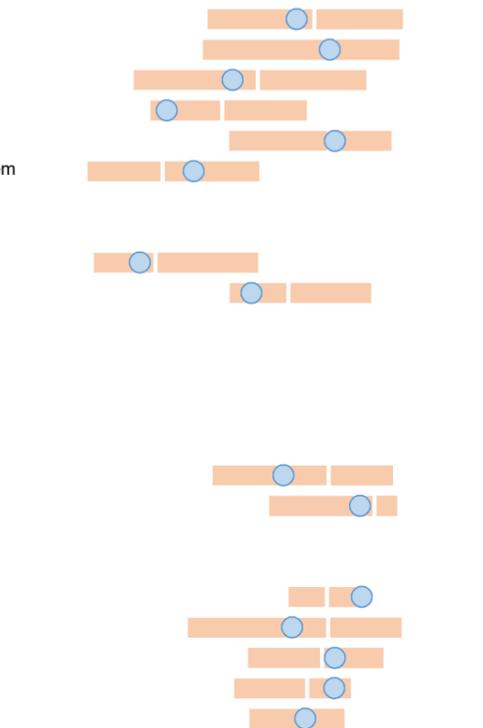
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

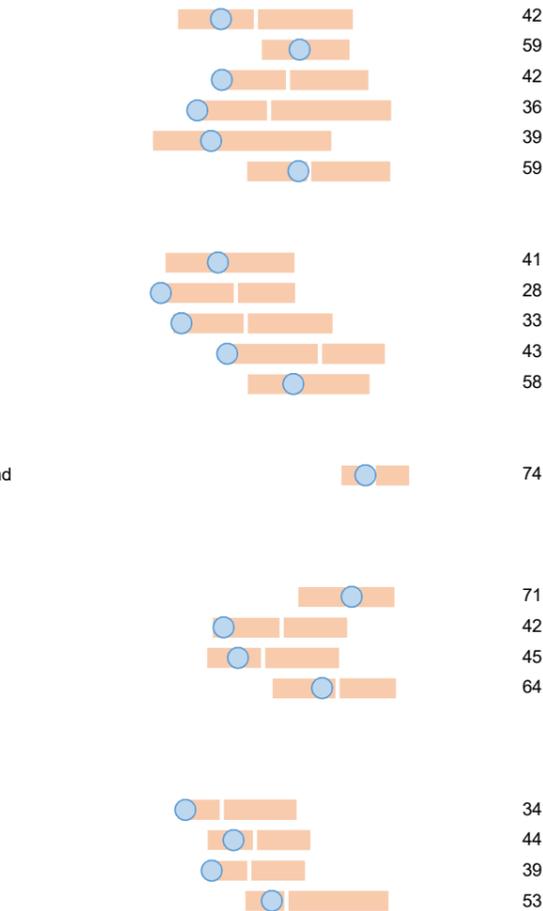
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Prague

## SMART CITY RANKING

44

Out of 109



19 in 2019

## SMART CITY RATING

BB

BBB in 2019

## FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,314,000

(UN World Cities Report)

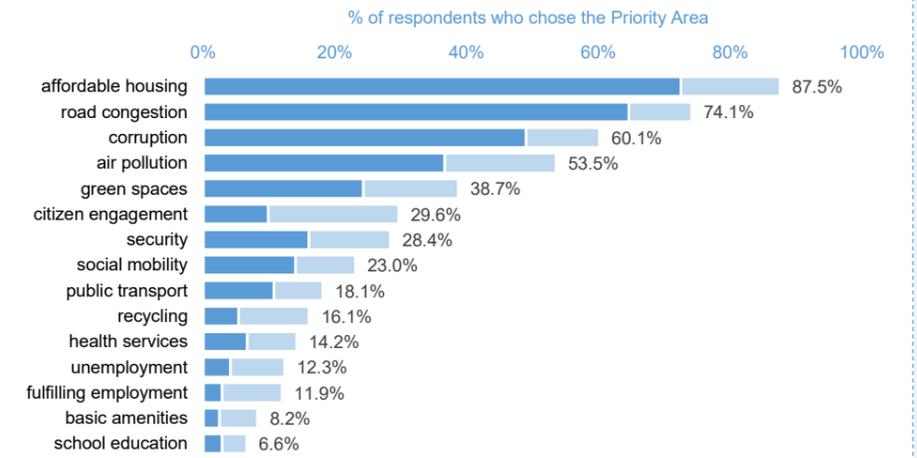


Country	2015	2016	2017	2018	1 yr change
HDI	0.882	0.885	0.888	0.891	+0.003
Life expectancy at Birth	78.7	78.9	79.1	79.2	+0.1
Expected years of schooling	16.9	16.8	16.8	16.8	+0.0
Mean years of schooling	12.7	12.7	12.7	12.7	+0.0
GNI per capita (PPP \$)	28,498	29,211	30,530	31,597	+1,067.0

## PRIORITY AREAS

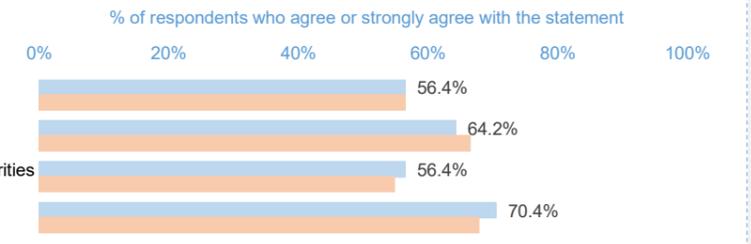
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

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

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

68.4

68.8

64.8

42.0

72.4

24.7

21.6

66.7

50.7

82.7

78.5

75.8

74.1

73.7

50.3

66.5

33.1

46.4

59.9

## TECHNOLOGIES

Score 0 20 40 60 80 100

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

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

### Governance

- Online public access to city finances has reduced corruption
- 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

54.1

66.6

60.8

63.6

49.2

65.4

38.0

47.5

44.9

77.2

48.3

82.9

78.5

59.3

49.7

76.7

38.3

52.1

52.7

67.7

# Rabat

## SMART CITY RANKING

105

Out of 109



101 in 2019

## SMART CITY RATING

D

D in 2019

## FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,967,000

(UN World Cities Report)



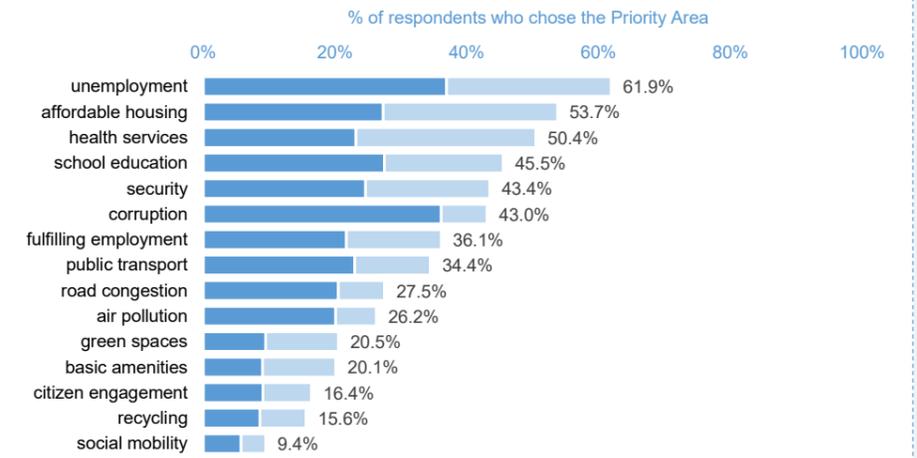
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.660	0.669	0.675	0.676	+0.001
Life expectancy at Birth	75.7	76.0	76.2	76.5	+0.3
Expected years of schooling	12.6	12.9	13.1	13.1	+0.0
Mean years of schooling	5.0	5.4	5.5	5.5	+0.0
GNI per capita (PPP \$)	7,183	7,169	7,342	7,480	+138.0

## PRIORITY AREAS

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

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



## ATTITUDES

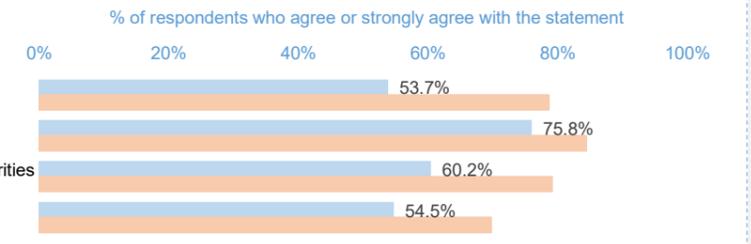
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

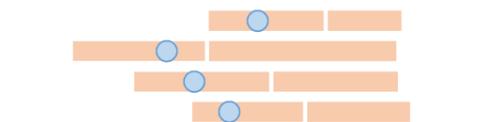
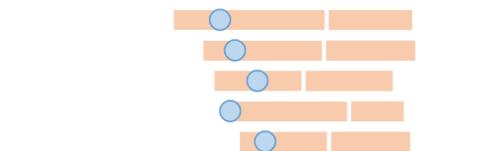
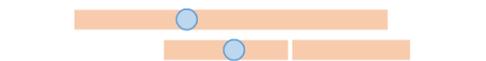
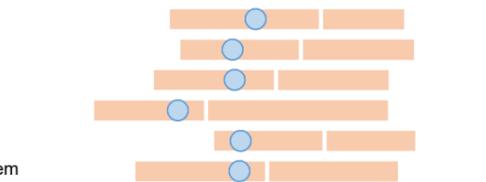
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

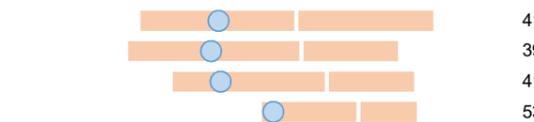
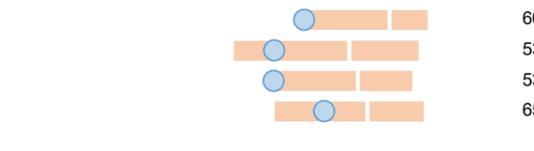
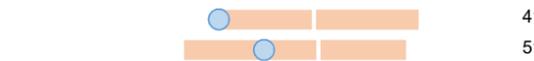
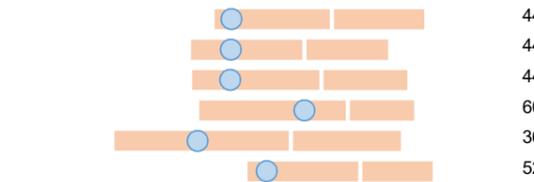
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Rio de Janeiro

## SMART CITY RANKING

102

Out of 109



96 in 2019

## SMART CITY RATING

C

C in 2019

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
12,902,000

(UN World Cities Report)



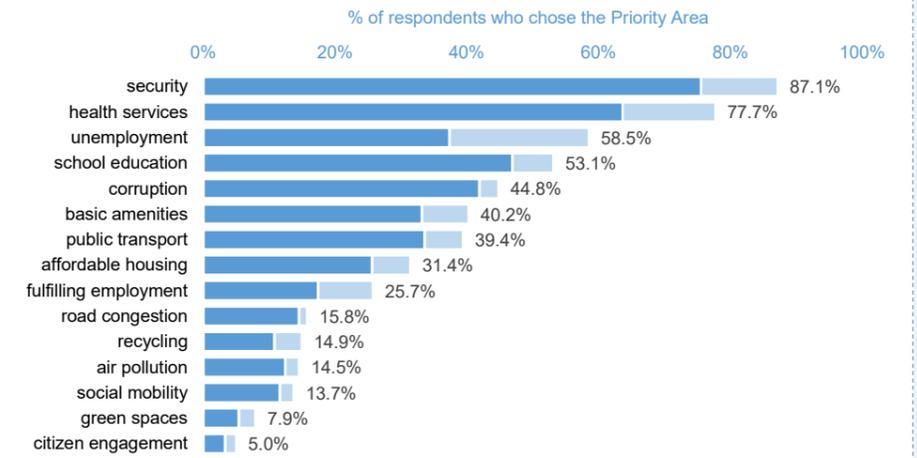
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.755	0.757	0.760	0.761	+0.001
Life expectancy at Birth	75.0	75.2	75.5	75.7	+0.2
Expected years of schooling	15.3	15.4	15.4	15.4	+0.0
Mean years of schooling	7.6	7.7	7.8	7.8	+0.0
GNI per capita (PPP \$)	14,490	13,907	13,975	14,068	+93.0

### PRIORITY AREAS

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

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



### ATTITUDES

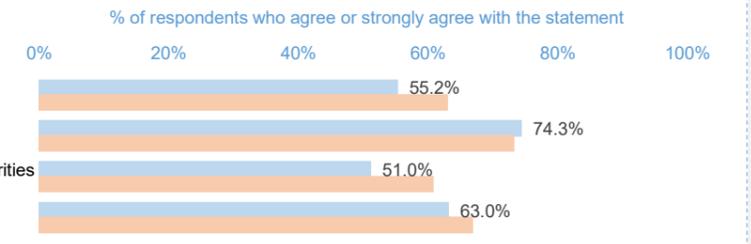
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

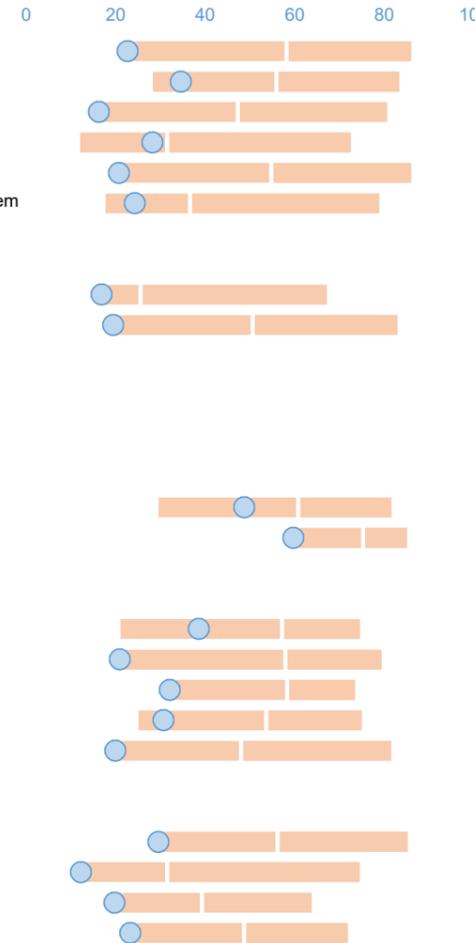
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

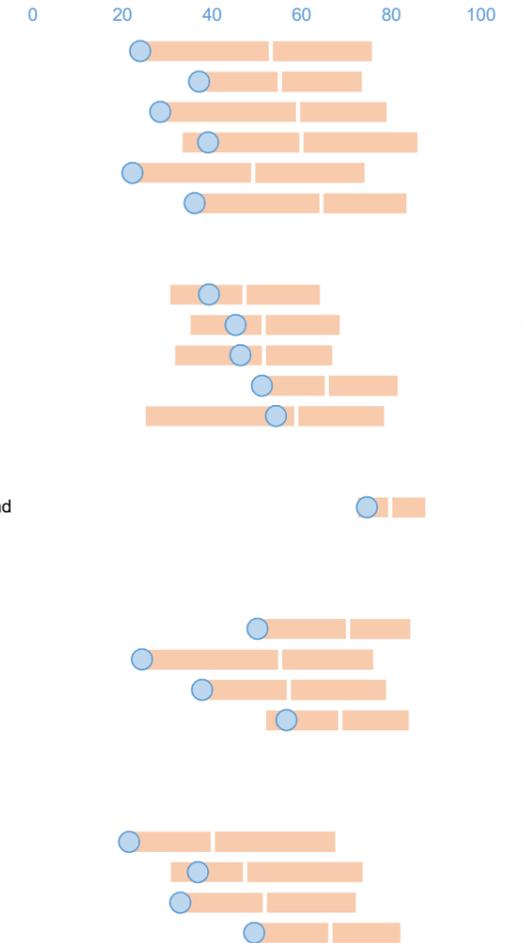
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Riyadh

## SMART CITY RANKING

53

Out of 109



71 in 2019

## SMART CITY RATING

B

CCC in 2019

## FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
6,370,000

(UN World Cities Report)



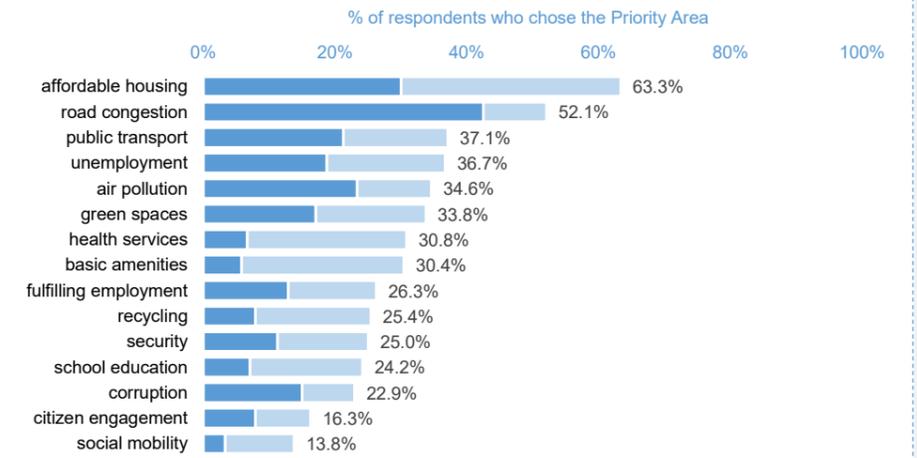
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.857	0.857	0.856	0.857	+0.001
Life expectancy at Birth	74.7	74.8	74.9	75.0	+0.1
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	9.6	9.7	9.7	9.7	+0.0
GNI per capita (PPP \$)	51,509	51,099	49,371	49,338	-33.0

### 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.

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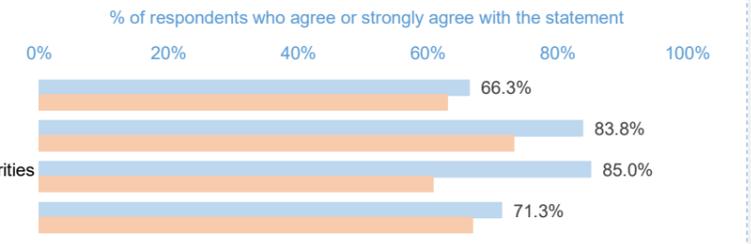
### ATTITUDES

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You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

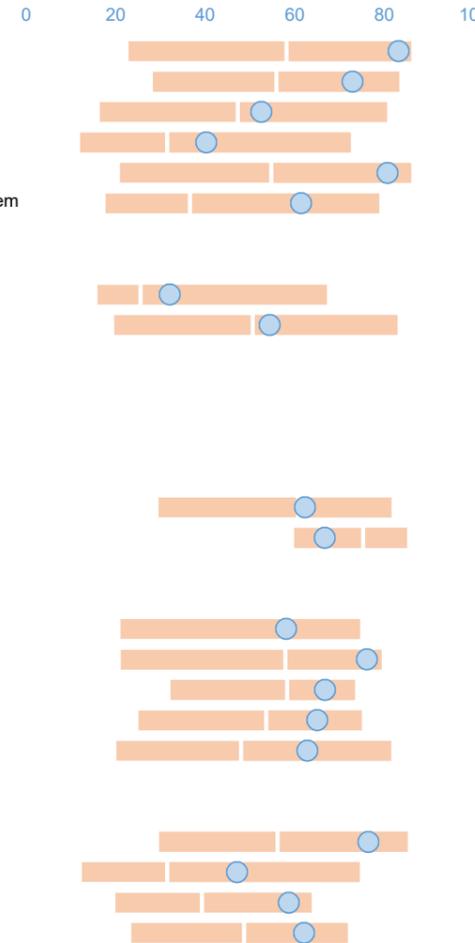
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

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A website or App allows residents to effectively monitor air pollution

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#### 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

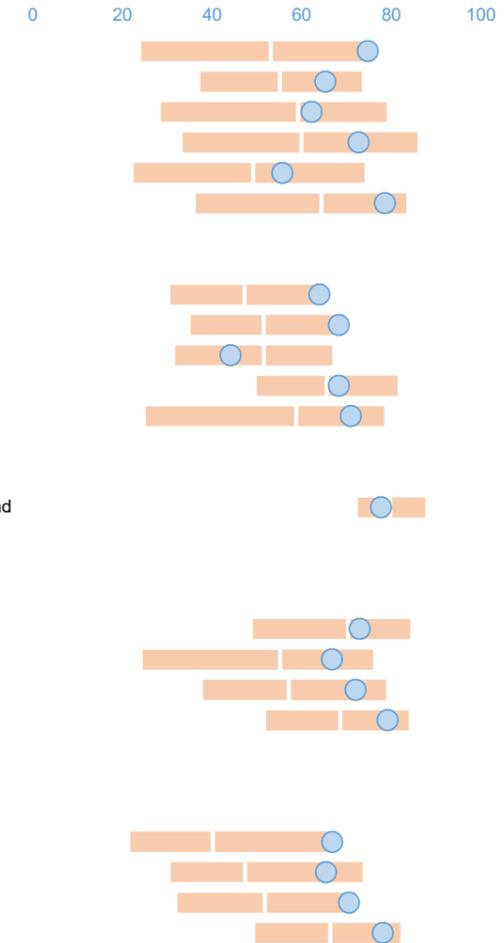
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Rome

## SMART CITY RANKING

101

Out of 109



77 in 2019

## SMART CITY RATING

C

CCC in 2019

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
3,718,000

(UN World Cities Report)



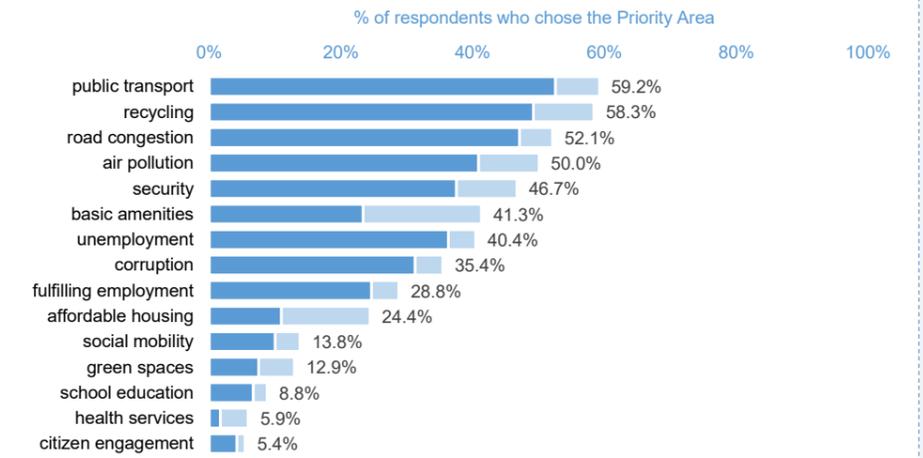
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.875	0.878	0.881	0.883	+0.002
Life expectancy at Birth	82.8	83.0	83.2	83.4	+0.2
Expected years of schooling	16.3	16.2	16.2	16.2	+0.0
Mean years of schooling	10.1	10.2	10.2	10.2	+0.0
GNI per capita (PPP \$)	34,105	34,818	35,573	36,141	+568.0

## 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.

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## ATTITUDES

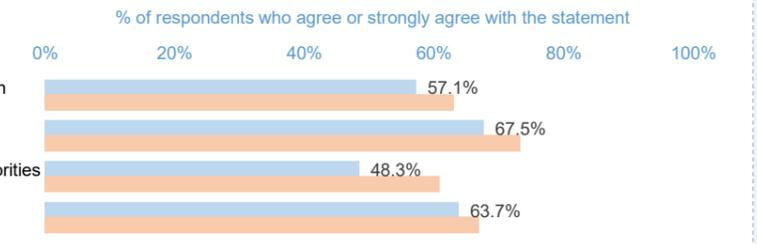
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You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

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

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

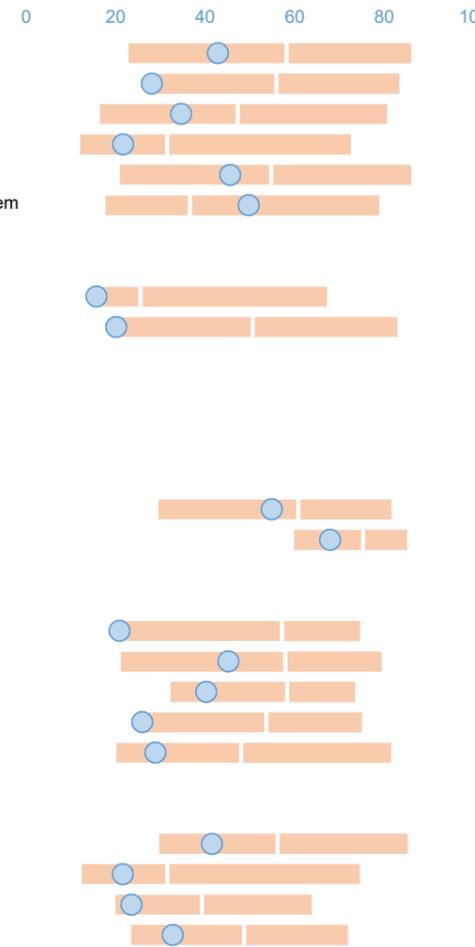
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

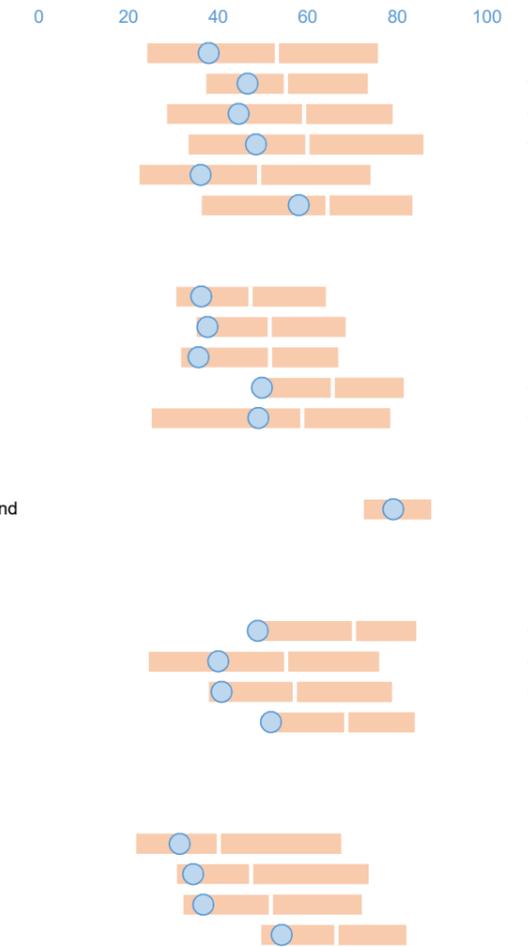
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Rotterdam

## SMART CITY RANKING

29

Out of 109



36 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
993,000

(UN World Cities Report)

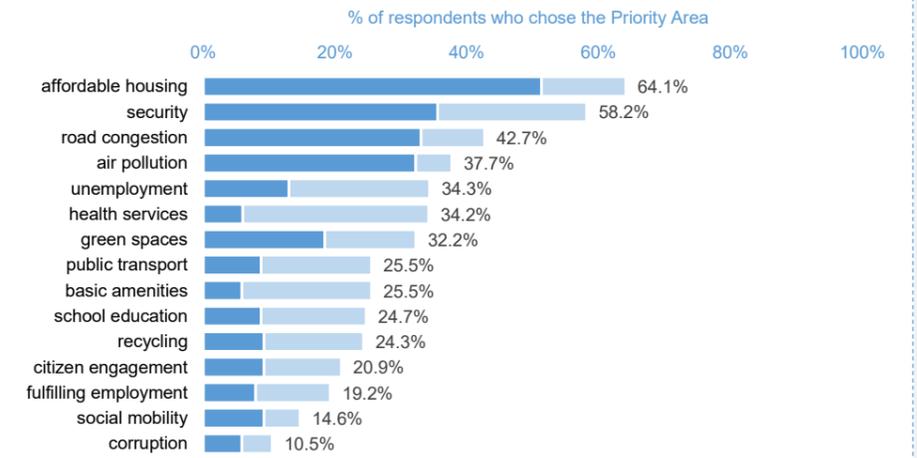


Country	2015	2016	2017	2018	1 yr change
HDI	0.927	0.929	0.932	0.934	+0.002
Life expectancy at Birth	81.7	81.9	82.0	82.1	+0.1
Expected years of schooling	18.1	18.0	18.0	18.0	+0.0
Mean years of schooling	12.1	12.2	12.2	12.2	+0.0
GNI per capita (PPP \$)	46,976	47,008	48,994	50,013	+1,019.0

## PRIORITY AREAS

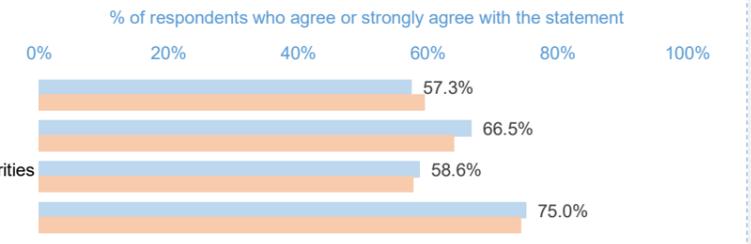
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



## ATTITUDES

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

### Activities

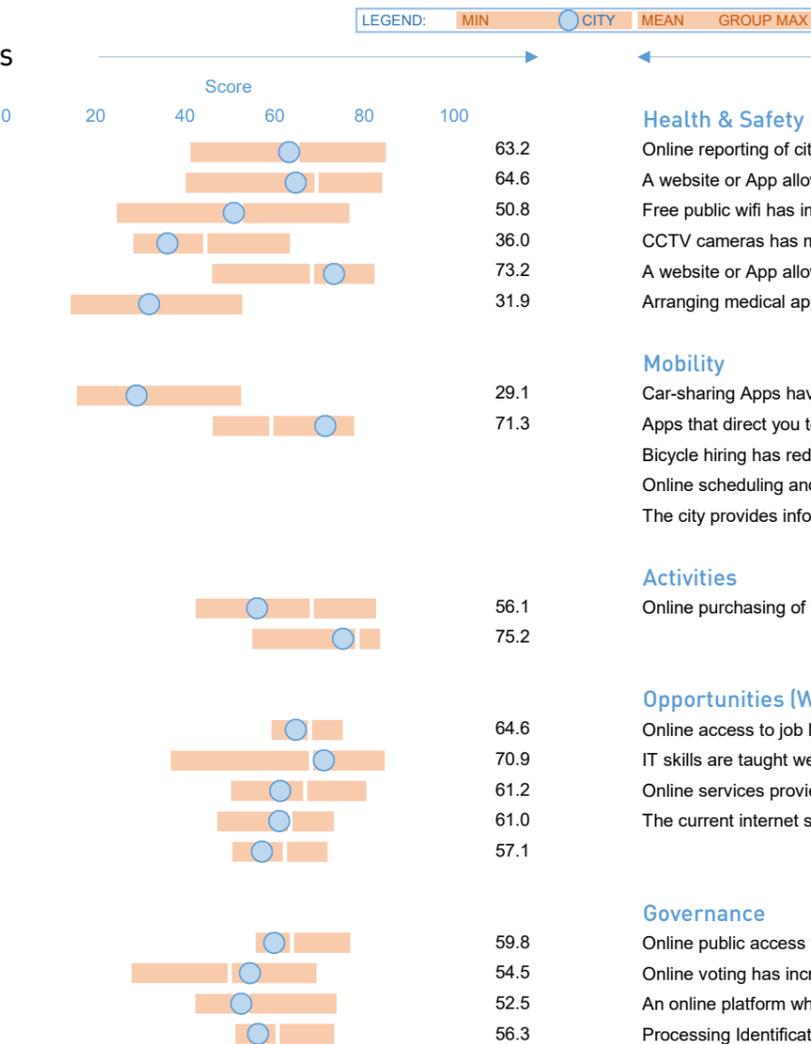
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

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

### Governance

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



## TECHNOLOGIES

### Health & Safety

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

### Mobility

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

### Activities

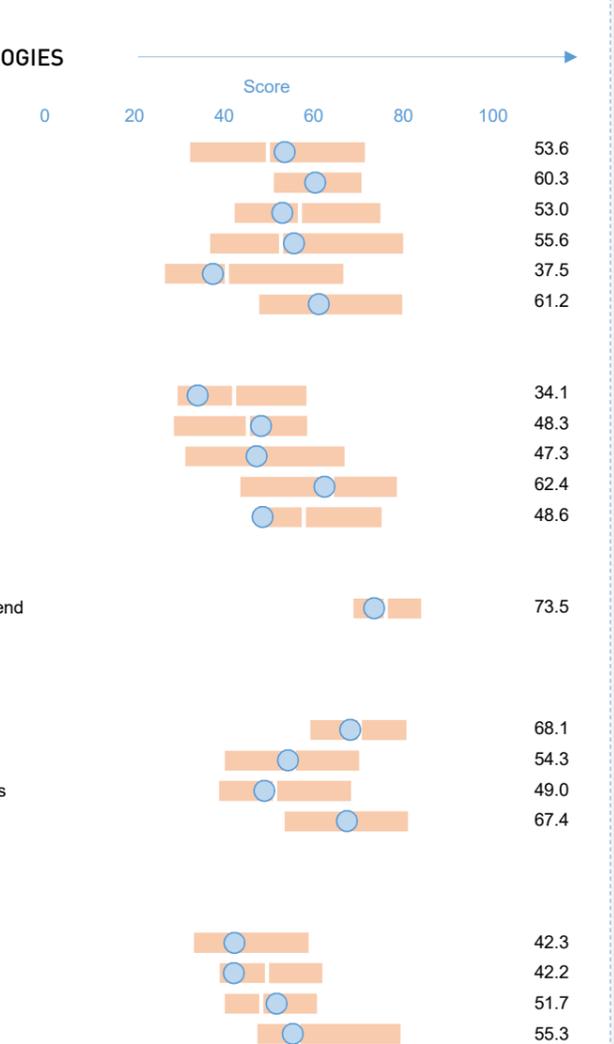
Online purchasing of tickets to shows and museums has made it easier to attend

### Opportunities (Work & School)

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

### Governance

Online public access to city finances has reduced corruption  
 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



# San Francisco

## SMART CITY RANKING

27

Out of 109



12 in 2019

## SMART CITY RATING

BBB

A in 2019

## FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,300,000

(UN World Cities Report)



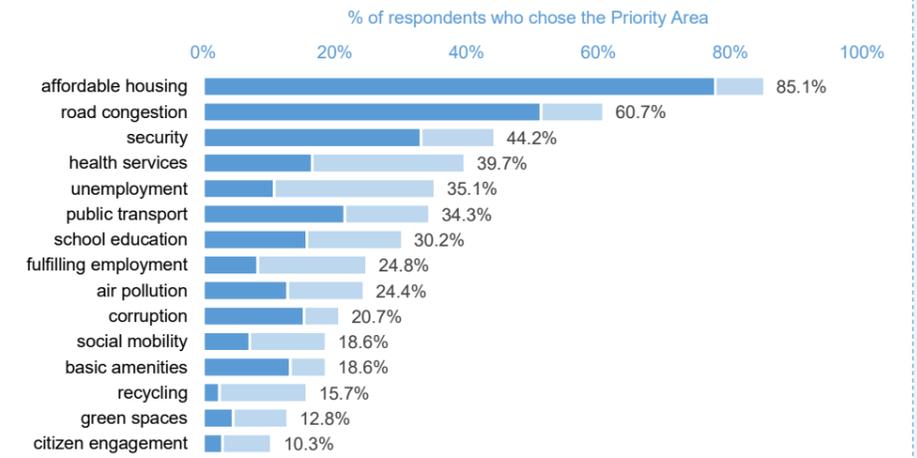
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

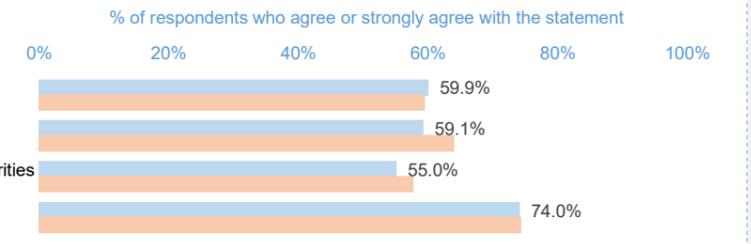
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

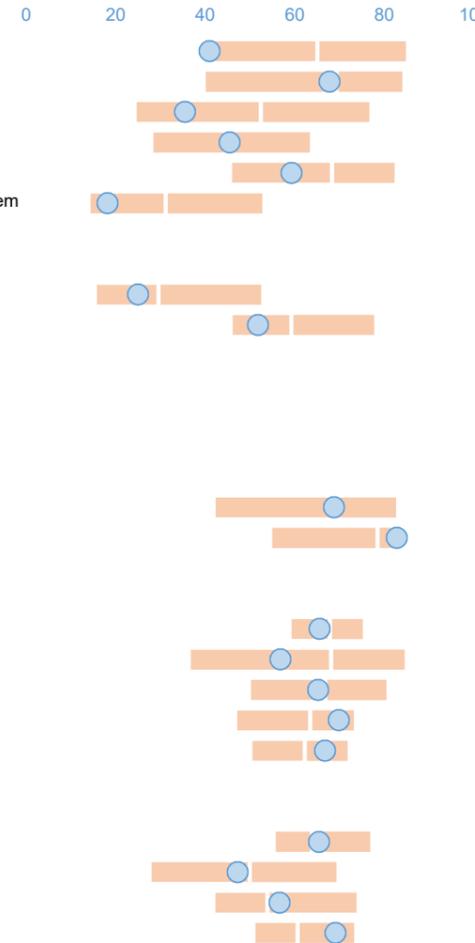
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

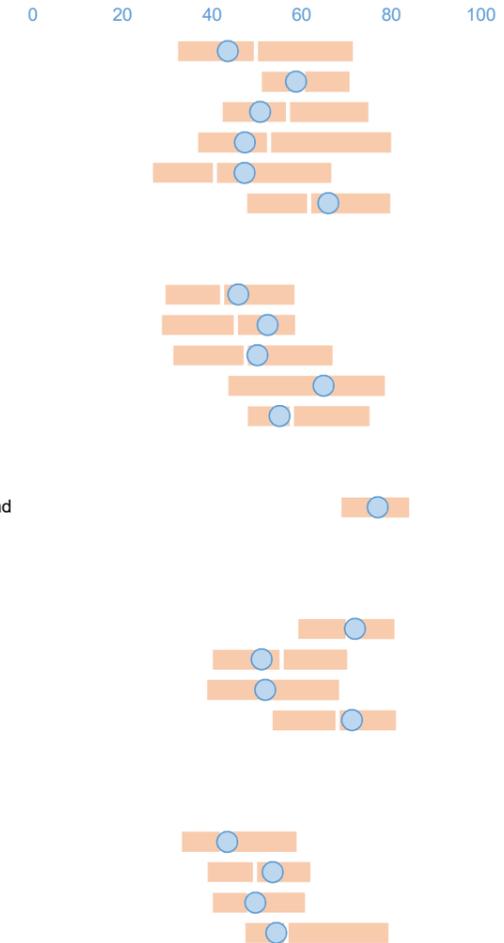
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Santiago

## SMART CITY RANKING

91

Out of 109



86 in 2019

## SMART CITY RATING

CC

CC in 2019

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
6,507,000

(UN World Cities Report)



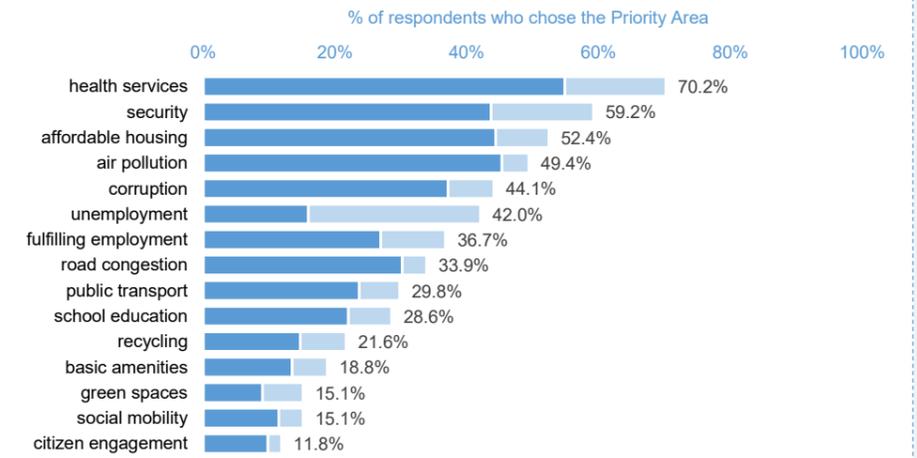
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.839	0.843	0.845	0.847	+0.002
Life expectancy at Birth	79.6	79.8	79.9	80.0	+0.1
Expected years of schooling	16.3	16.4	16.5	16.5	+0.0
Mean years of schooling	10.2	10.3	10.4	10.4	+0.0
GNI per capita (PPP \$)	21,653	21,776	21,415	21,972	+557.0

### PRIORITY AREAS

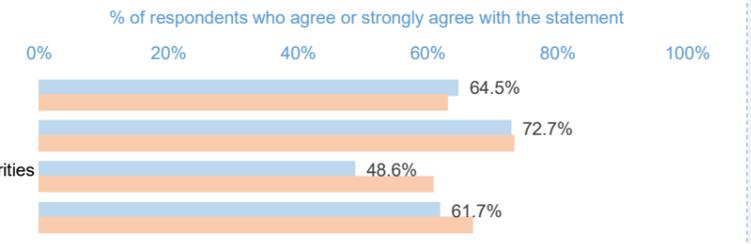
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### ATTITUDES

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



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

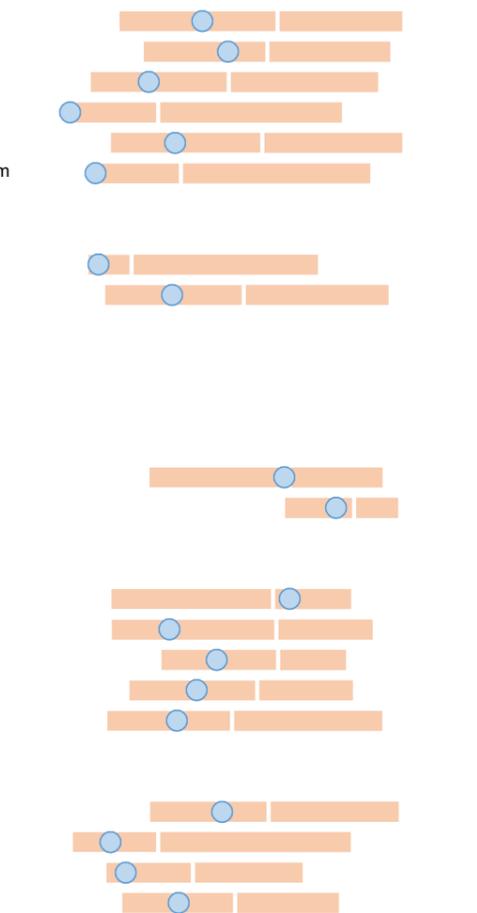
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

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

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

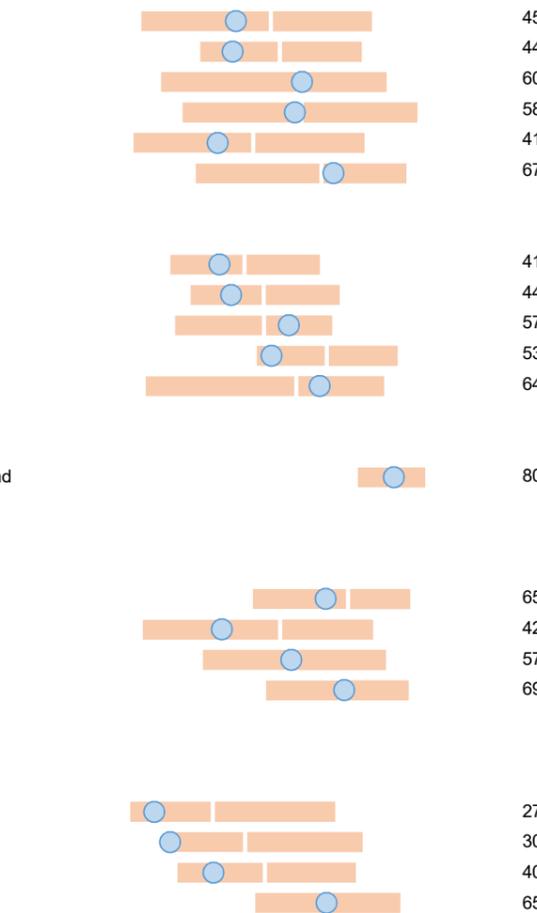
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Sao Paulo

## SMART CITY RANKING

100

Out of 109



90 in 2019

## SMART CITY RATING

C

CC in 2019

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
21,066,000

(UN World Cities Report)



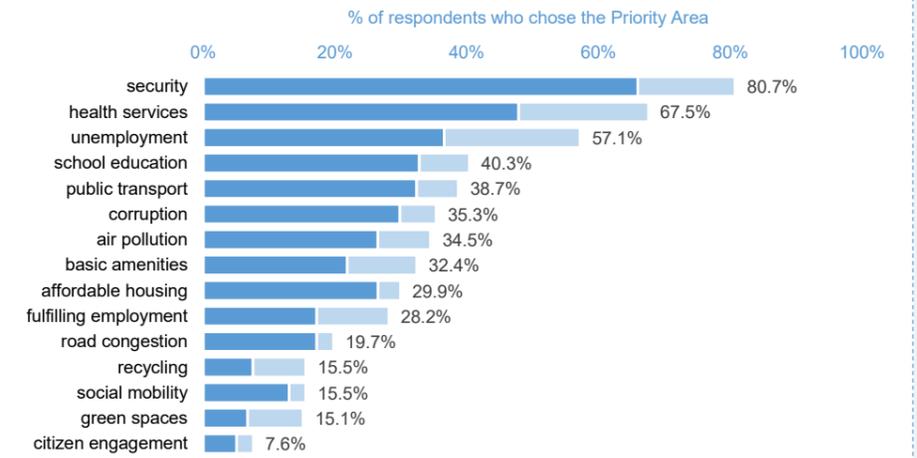
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.755	0.757	0.760	0.761	+0.001
Life expectancy at Birth	75.0	75.2	75.5	75.7	+0.2
Expected years of schooling	15.3	15.4	15.4	15.4	+0.0
Mean years of schooling	7.6	7.7	7.8	7.8	+0.0
GNI per capita (PPP \$)	14,490	13,907	13,975	14,068	+93.0

### 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.

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### ATTITUDES

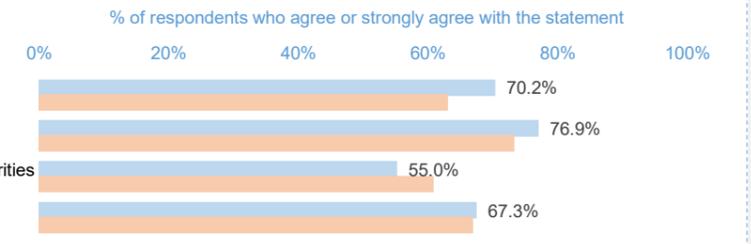
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You are comfortable with face recognition technologies to lower crime

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

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

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

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

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

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

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

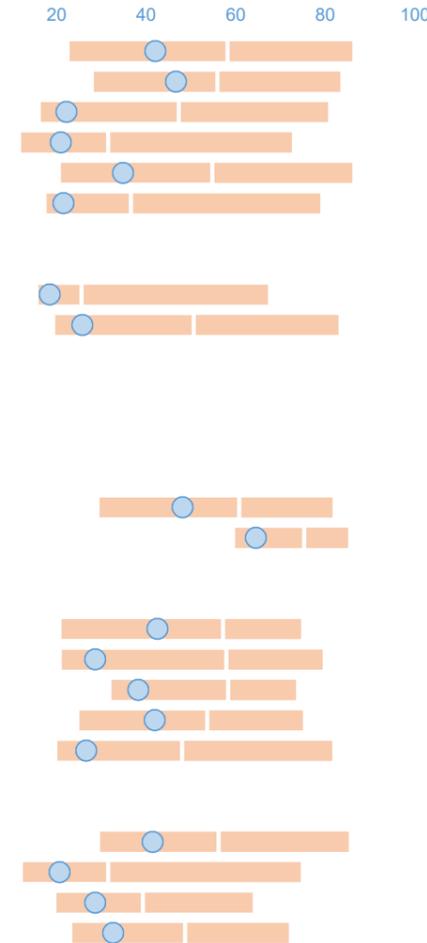
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

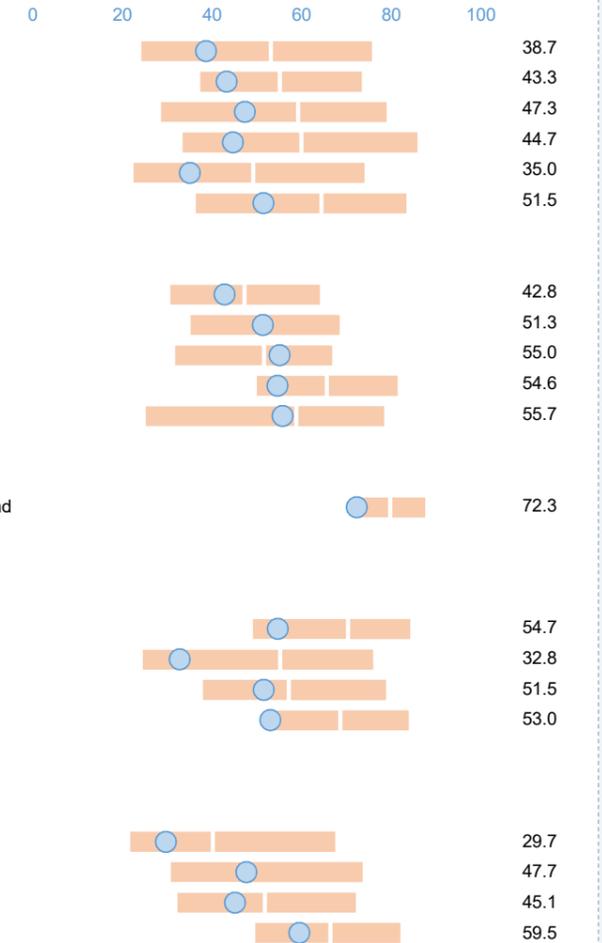
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Seattle

## SMART CITY RANKING

37

Out of 109



34 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
3,249,000

(UN World Cities Report)



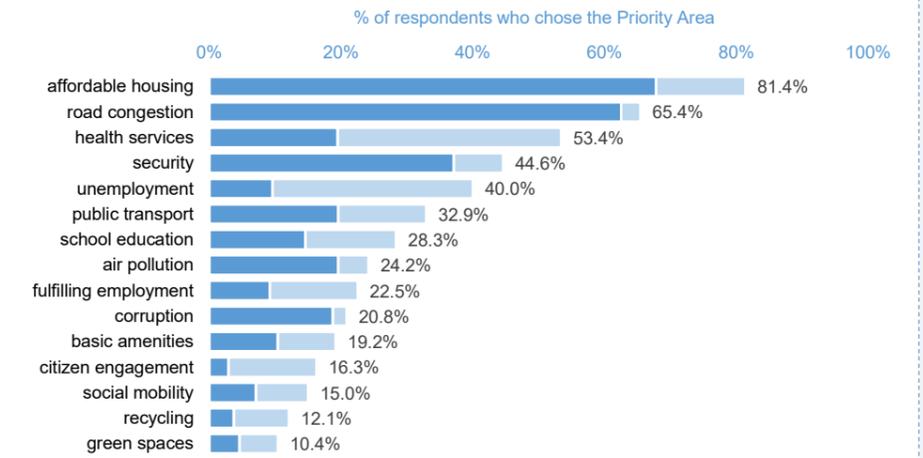
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## PRIORITY AREAS

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

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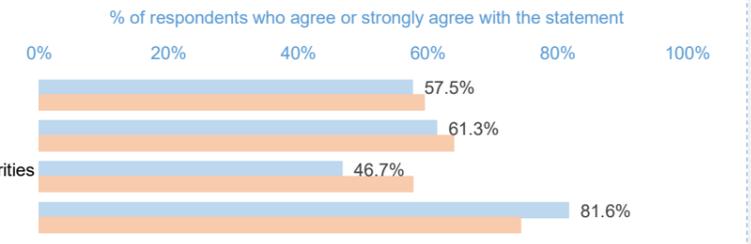
## ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

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

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



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

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

### Mobility

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

### Activities

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

### Opportunities (Work & School)

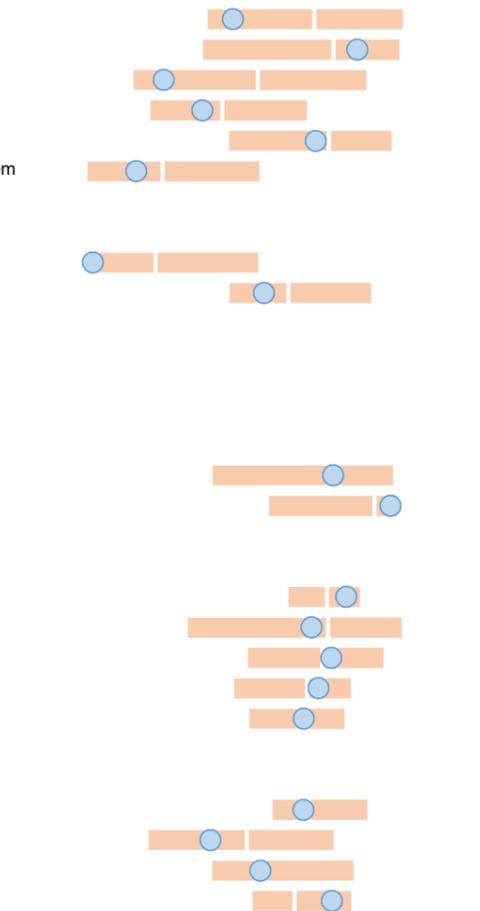
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
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### Activities

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

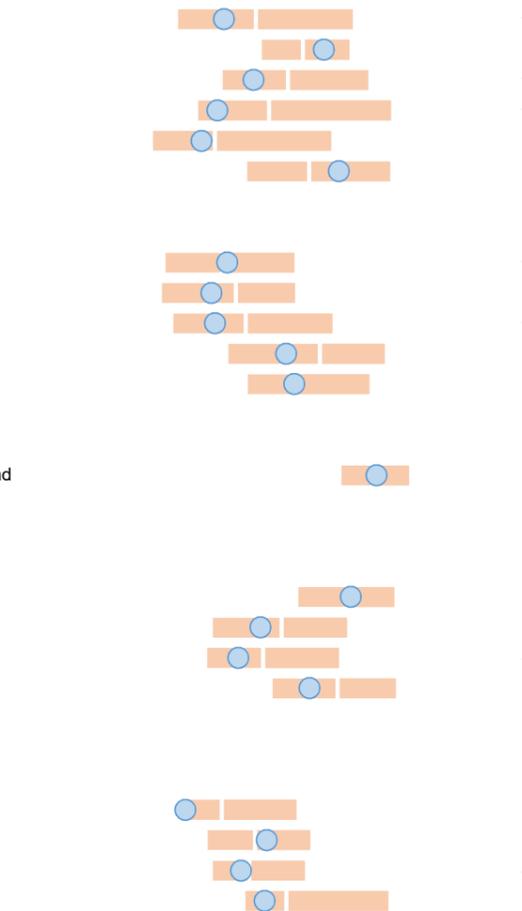
### Opportunities (Work & School)

- 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
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### 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

Score 0 20 40 60 80 100



# Seoul

## SMART CITY RANKING

47

Out of 109

47 in 2019

## SMART CITY RATING

BB

BB in 2019

## FACTOR RATINGS

B

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
9,774,000

(UN World Cities Report)

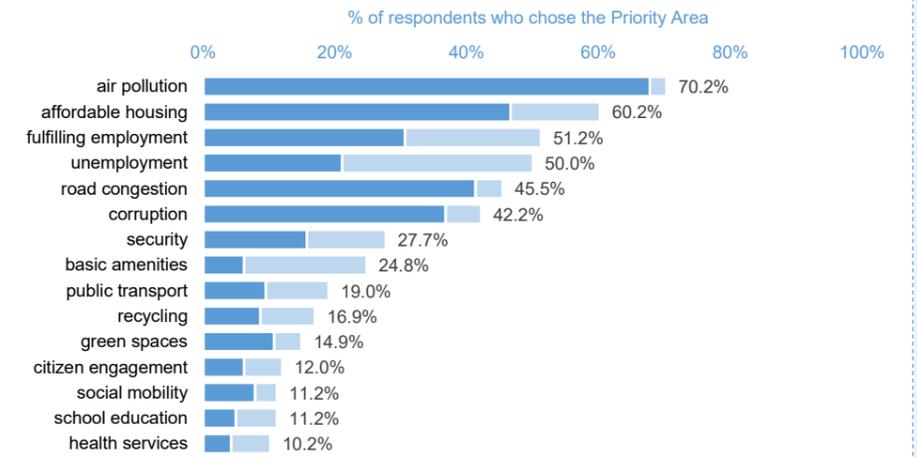


Country	2015	2016	2017	2018	1 yr change
HDI	0.899	0.901	0.904	0.906	+0.002
Life expectancy at Birth	82.1	82.4	82.6	82.8	+0.2
Expected years of schooling	16.5	16.4	16.4	16.4	+0.0
Mean years of schooling	12.1	12.2	12.2	12.2	+0.0
GNI per capita (PPP \$)	34,276	35,122	35,945	36,757	+812.0

### PRIORITY AREAS

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### ATTITUDES

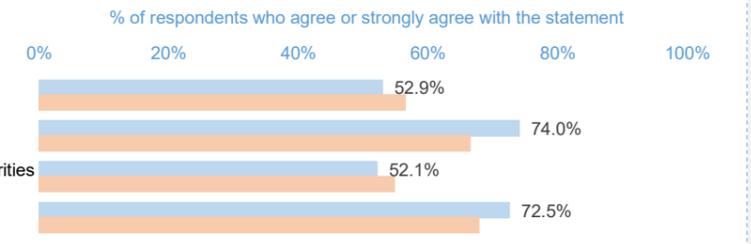
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The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND: GROUP MEAN CITY



### 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

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Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

72.2

68.3

58.5

10.0

73.5

32.6

22.4

71.1

50.6

70.7

54.7

57.0

60.9

42.3

27.4

57.8

24.7

46.3

48.3

### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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

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#### Governance

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Online voting has increased participation

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

Processing Identification Documents online has reduced waiting times

Score 0 20 40 60 80 100

61.2

68.6

75.6

75.0

69.0

65.9

45.0

50.3

47.0

74.7

82.3

81.1

68.4

63.7

56.5

80.6

43.5

58.5

56.3

75.3

# Shanghai

## SMART CITY RANKING

81

Out of 109



59 in 2019

## SMART CITY RATING

CC

B in 2019

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
23,741,000

(UN World Cities Report)



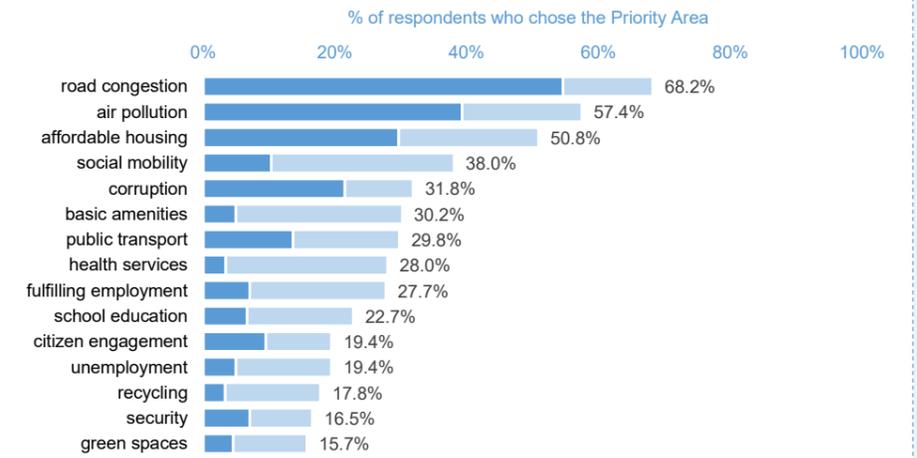
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

### PRIORITY AREAS

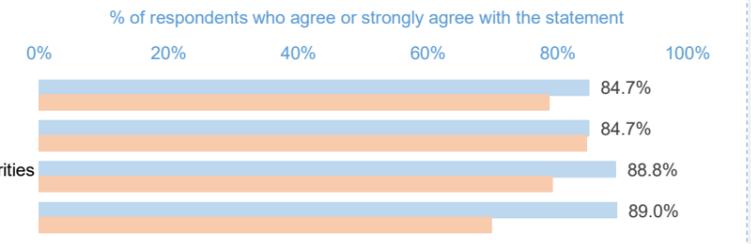
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 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

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

#### Mobility

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

#### Activities

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

#### Opportunities (Work & School)

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

#### Governance

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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

82.7

77.8

67.9

46.0

77.5

50.7

31.6

62.5

75.3

85.0

79.0

75.3

68.9

79.1

70.9

76.7

48.7

59.6

65.8

### TECHNOLOGIES

#### Health & Safety

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

- Car-sharing Apps have reduced congestion
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- The city provides information on traffic congestion through mobile phones

#### Activities

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

Score 0 20 40 60 80 100

82.9

73.5

80.4

80.1

78.2

86.8

64.0

79.1

72.9

88.9

87.6

91.3

86.4

85.5

82.8

86.4

73.0

72.2

80.4

81.7

# Shenzhen

## SMART CITY RANKING

67

Out of 109



43 in 2019

## SMART CITY RATING

CCC

BB in 2019

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
10,749,000

(UN World Cities Report)



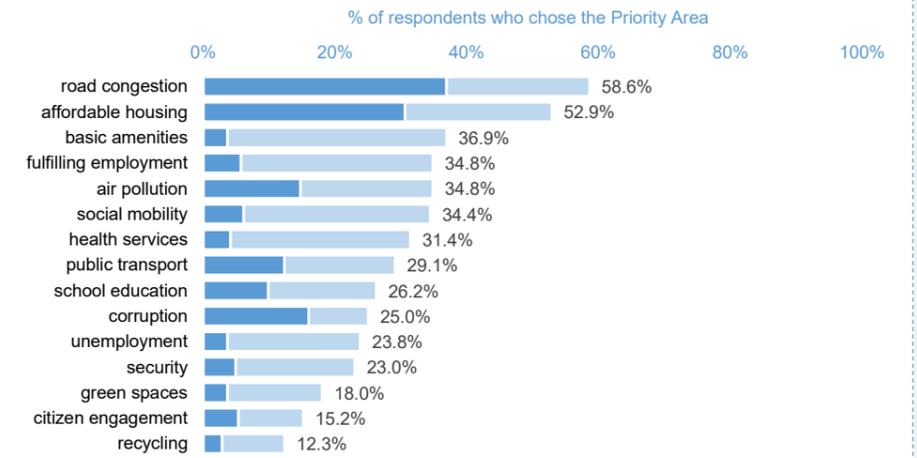
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

### PRIORITY AREAS

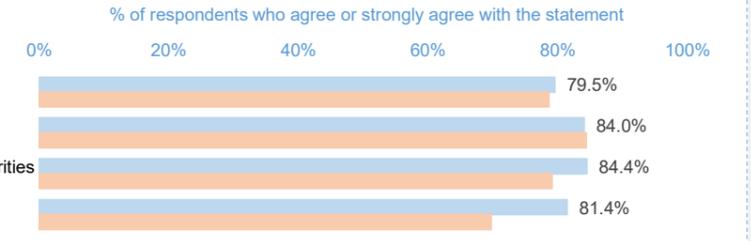
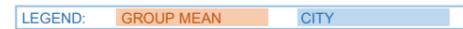
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 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



### STRUCTURES

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



81.6

76.2

67.7

61.1

78.5

54.0

47.8

68.3

79.6

82.7

82.9

72.2

63.3

79.8

73.5

74.9

55.7

62.8

71.0

### TECHNOLOGIES

#### Health & Safety

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#### Governance

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85.4

77.5

79.5

82.6

78.1

89.6

67.7

77.5

76.8

90.2

85.0

92.1

86.8

82.4

84.3

82.0

74.1

74.2

78.2

84.7

# Singapore

## SMART CITY RANKING

1

Out of 109



1 in 2019

## SMART CITY RATING

AAA

AAA in 2019

## FACTOR RATINGS

AAA

STRUCTURES

AAA

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
5,619,000

(UN World Cities Report)



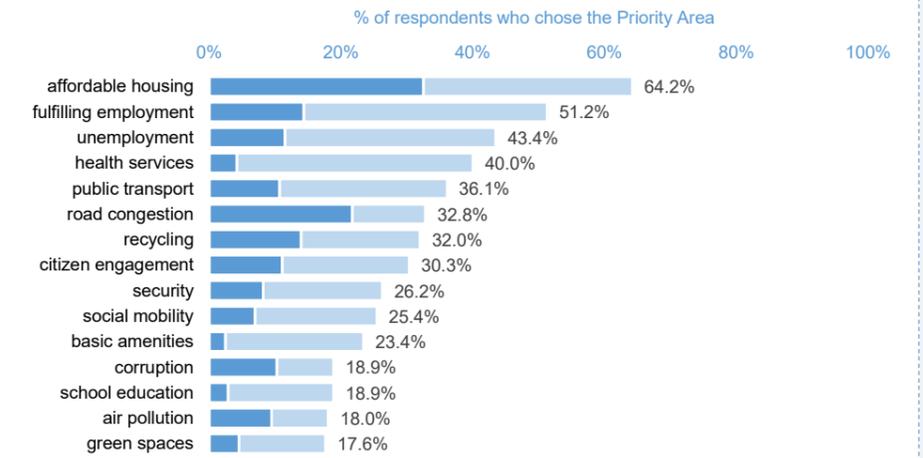
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.929	0.933	0.934	0.935	+0.001
Life expectancy at Birth	82.9	83.1	83.3	83.5	+0.2
Expected years of schooling	16.1	16.3	16.3	16.3	+0.0
Mean years of schooling	11.4	11.5	11.5	11.5	+0.0
GNI per capita (PPP \$)	77,686	78,759	81,500	83,793	+2,293.0

## PRIORITY AREAS

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

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



## ATTITUDES

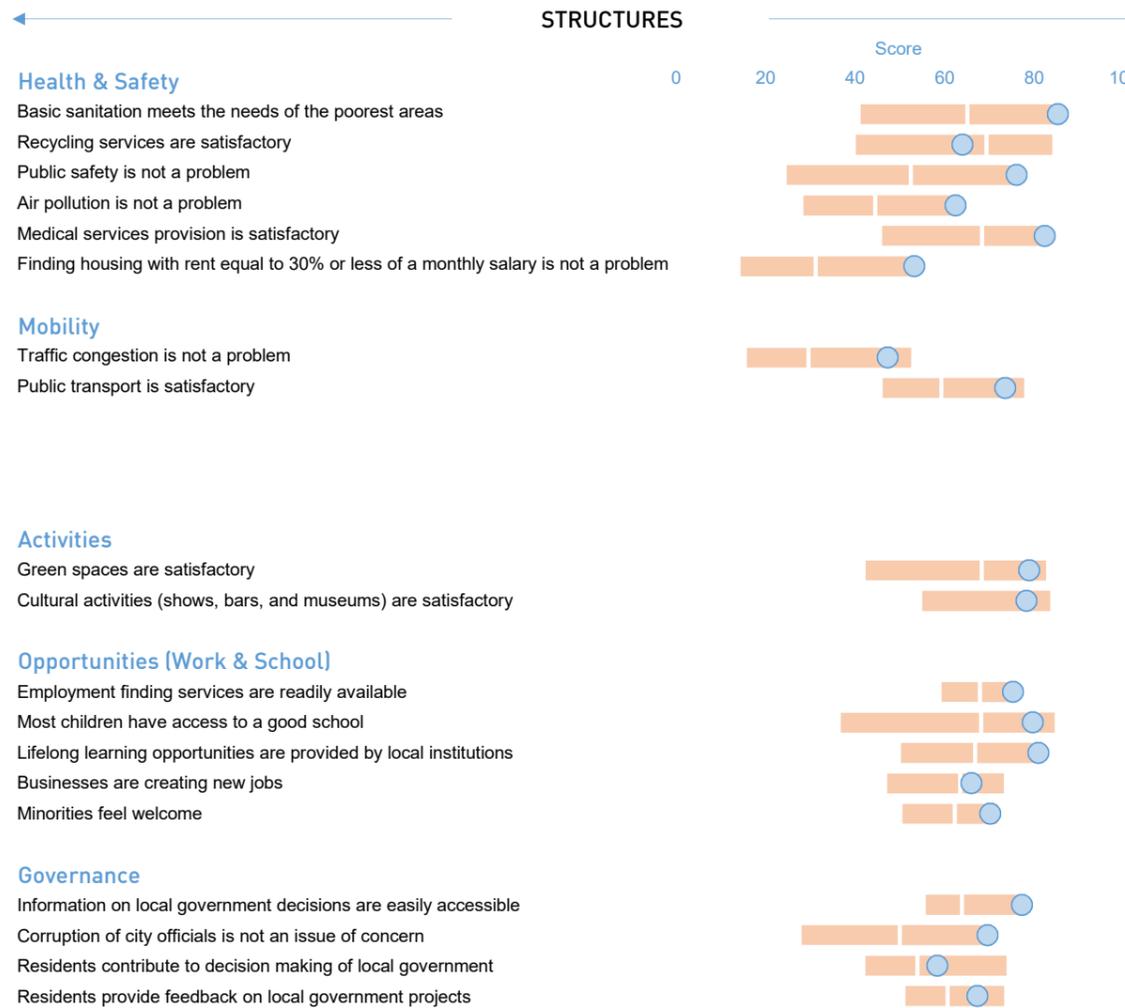
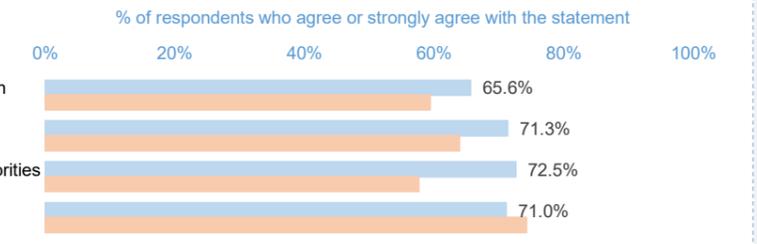
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND: GROUP MEAN CITY



## SMART CITY RANKING

# 89

Out of 109

89 in 2019

## SMART CITY RATING

# CC

CC in 2019

## FACTOR RATINGS

# CC

STRUCTURES

# CC

TECHNOLOGIES

## GROUP

# 3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,226,000

(UN World Cities Report)

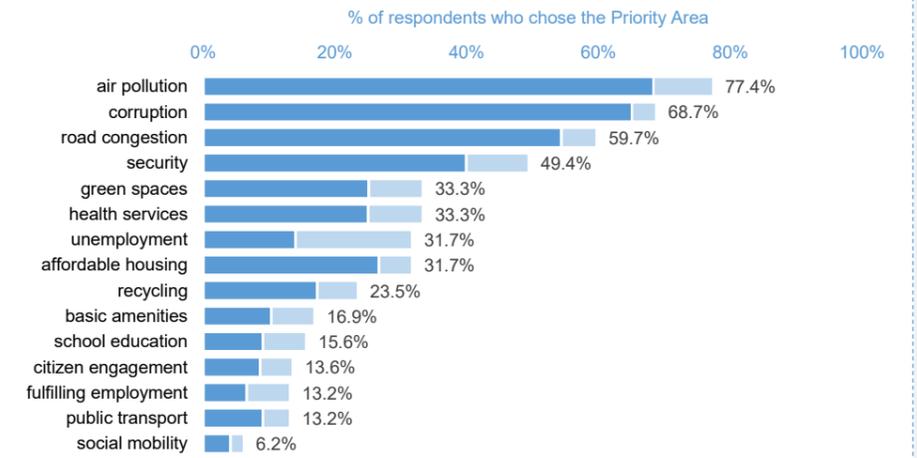


Country	2015	2016	2017	2018	1 yr change
HDI	0.807	0.812	0.813	0.816	+0.003
Life expectancy at Birth	74.6	74.7	74.8	74.9	+0.1
Expected years of schooling	15.1	15.1	14.8	14.8	+0.0
Mean years of schooling	11.8	11.8	11.8	11.8	+0.0
GNI per capita (PPP \$)	16,662	17,757	18,874	19,646	+772.0

## PRIORITY AREAS

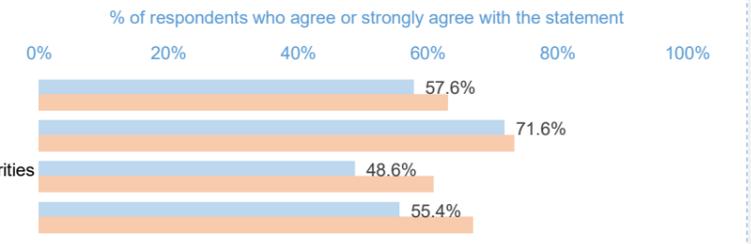
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## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

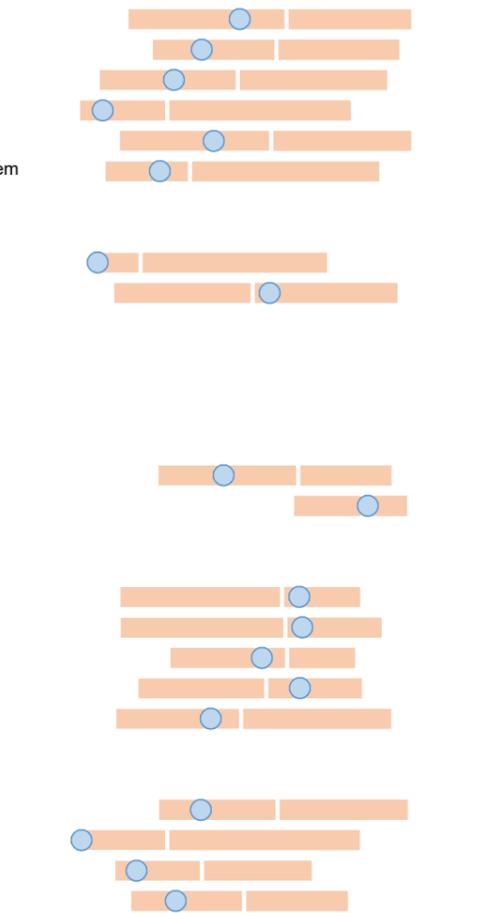
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

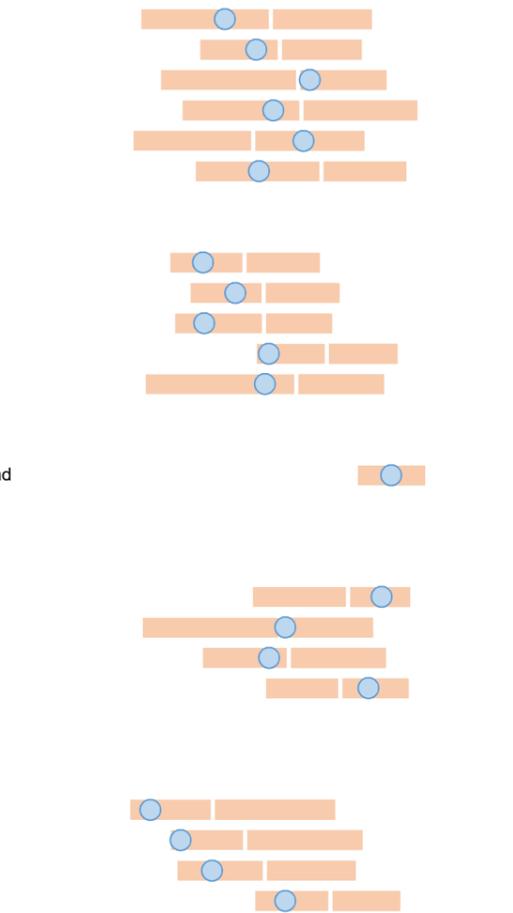
### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# St. Petersburg

## SMART CITY RANKING

73

Out of 109

73 in 2019

## SMART CITY RATING

CCC

CCC in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
4,993,000

(UN World Cities Report)



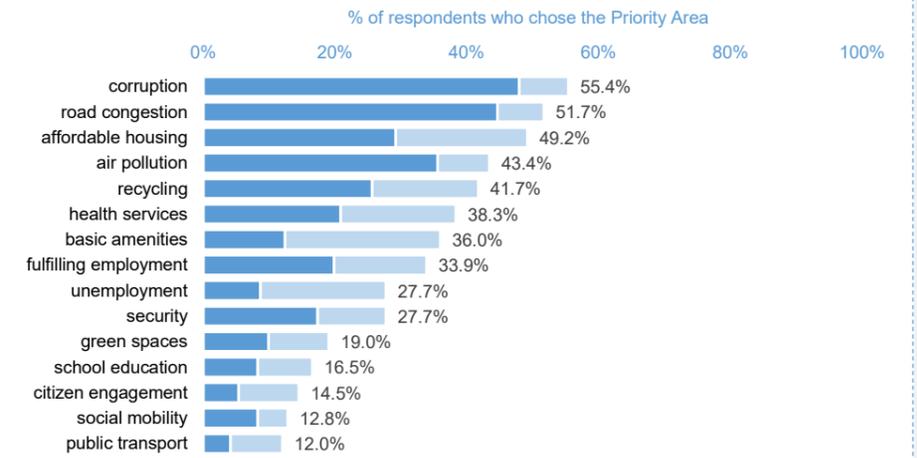
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.813	0.817	0.822	0.824	+0.002
Life expectancy at Birth	71.5	71.8	72.1	72.4	+0.3
Expected years of schooling	15.4	15.5	15.5	15.5	+0.0
Mean years of schooling	11.8	11.8	12.0	12.0	+0.0
GNI per capita (PPP \$)	24,032	24,096	24,472	25,036	+564.0

## 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.

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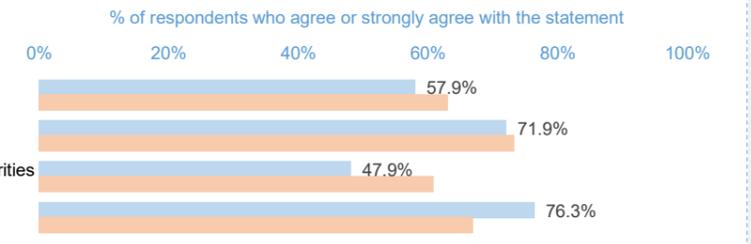
## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

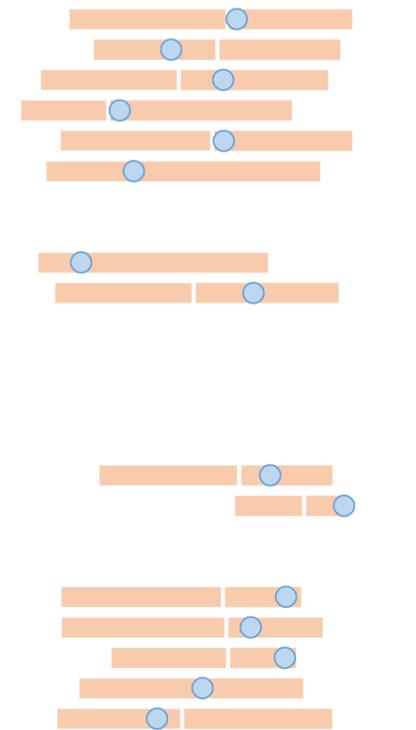
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

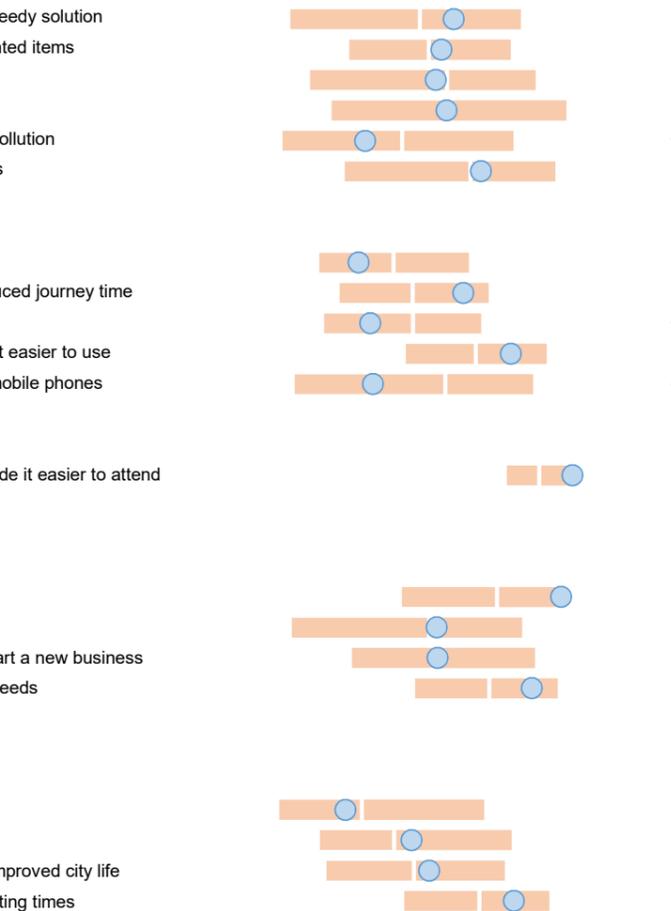
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Stockholm

## SMART CITY RANKING

16

Out of 109



25 in 2019

## SMART CITY RATING

A

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,486,000

(UN World Cities Report)

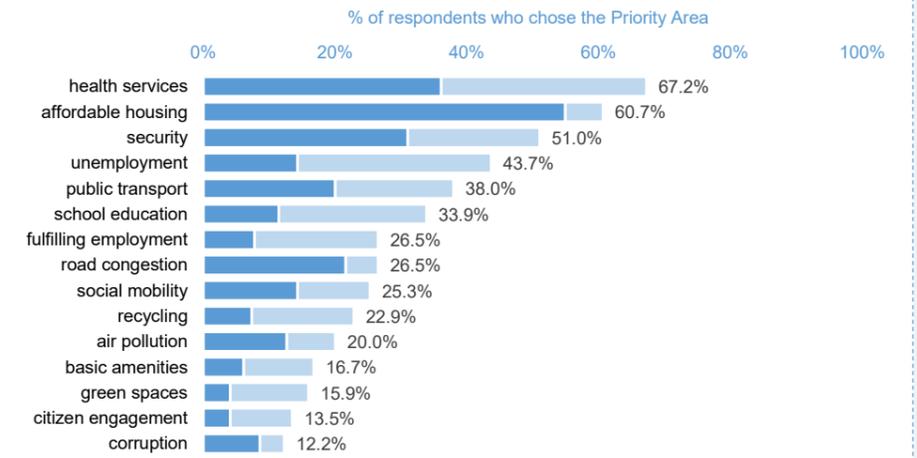


Country	2015	2016	2017	2018	1 yr change
HDI	0.932	0.934	0.935	0.937	+0.002
Life expectancy at Birth	82.3	82.4	82.5	82.7	+0.2
Expected years of schooling	18.6	18.8	18.8	18.8	+0.0
Mean years of schooling	12.4	12.4	12.4	12.4	+0.0
GNI per capita (PPP \$)	46,168	46,662	47,398	47,955	+557.0

### PRIORITY AREAS

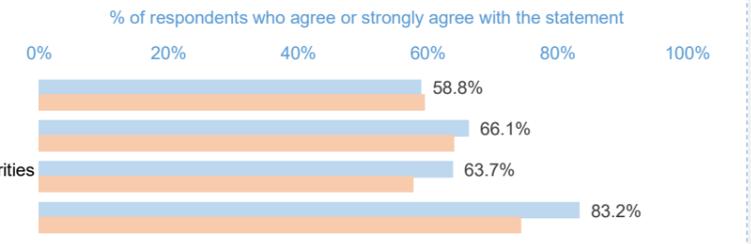
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### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas  
 Recycling services are satisfactory  
 Public safety is not a problem  
 Air pollution is not a problem  
 Medical services provision is satisfactory  
 Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

#### Activities

Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

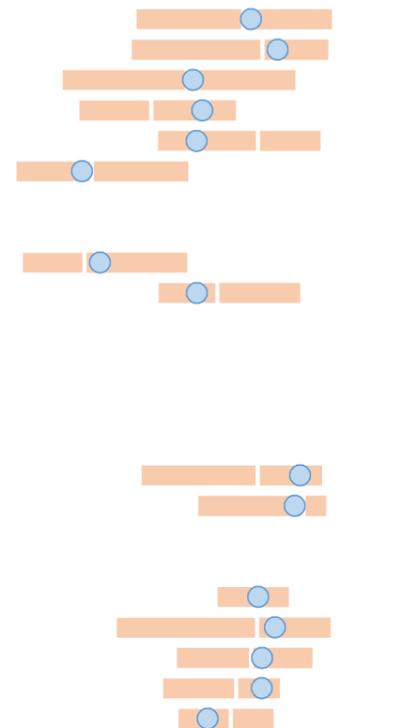
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible  
 Corruption of city officials is not an issue of concern  
 Residents contribute to decision making of local government  
 Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
 A website or App allows residents to easily give away unwanted items  
 Free public wifi has improved access to city services  
 CCTV cameras has made residents feel safer  
 A website or App allows residents to effectively monitor air pollution  
 Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space 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

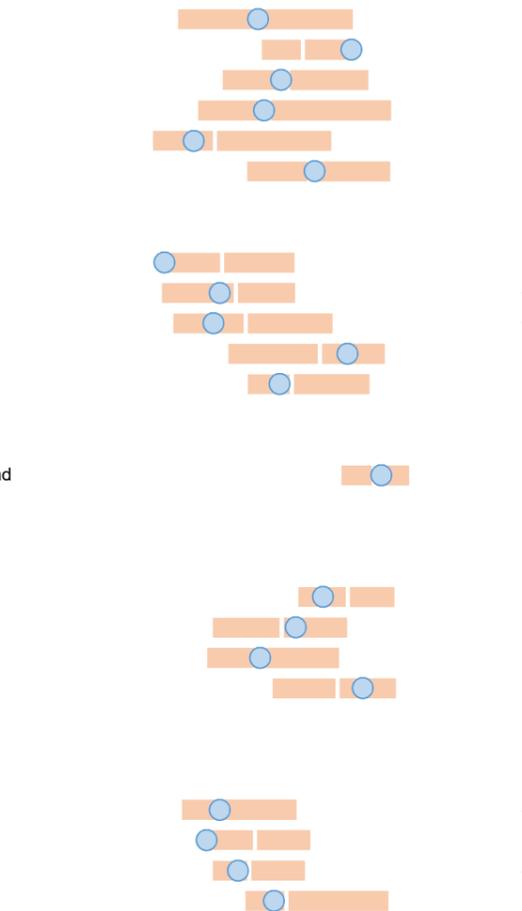
#### Opportunities (Work & School)

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

Score 0 20 40 60 80 100



# Sydney

## SMART CITY RANKING

18

Out of 109



14 in 2019

## SMART CITY RATING

A

A in 2019

## FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
4,505,000

(UN World Cities Report)



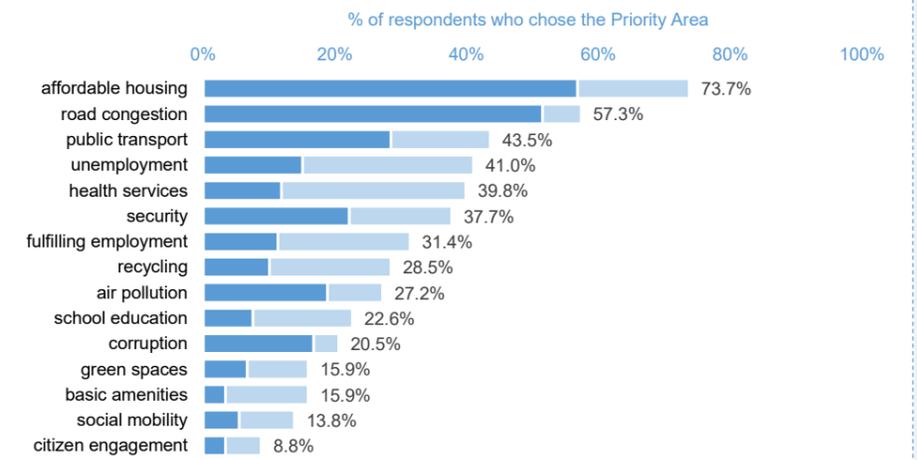
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.933	0.935	0.937	0.938	+0.001
Life expectancy at Birth	82.8	83.0	83.1	83.3	+0.2
Expected years of schooling	23.3	22.9	22.1	22.1	+0.0
Mean years of schooling	12.5	12.6	12.7	12.7	+0.0
GNI per capita (PPP \$)	43,246	43,653	43,756	44,097	+341.0

## PRIORITY AREAS

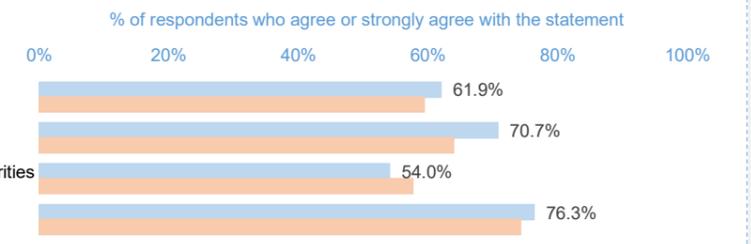
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## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas  
 Recycling services are satisfactory  
 Public safety is not a problem  
 Air pollution is not a problem  
 Medical services provision is satisfactory  
 Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

### Activities

Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

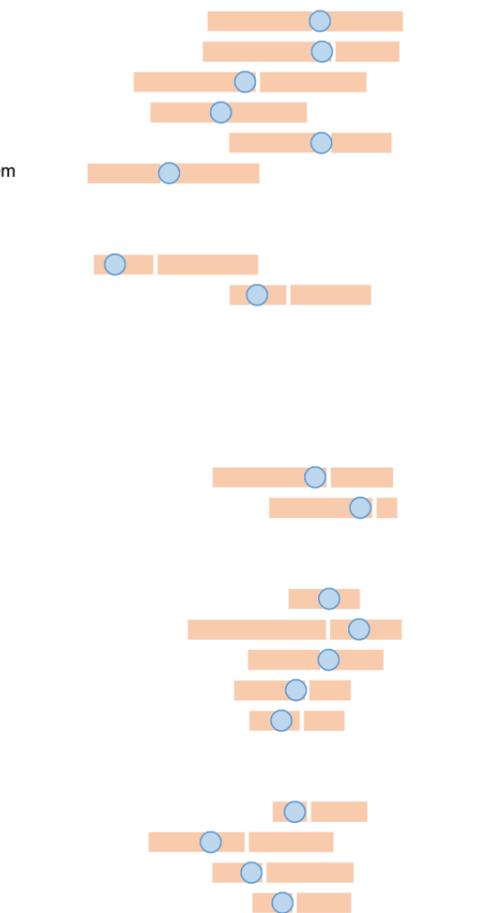
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

### Governance

Information on local government decisions are easily accessible  
 Corruption of city officials is not an issue of concern  
 Residents contribute to decision making of local government  
 Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
 A website or App allows residents to easily give away unwanted items  
 Free public wifi has improved access to city services  
 CCTV cameras has made residents feel safer  
 A website or App allows residents to effectively monitor air pollution  
 Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space 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

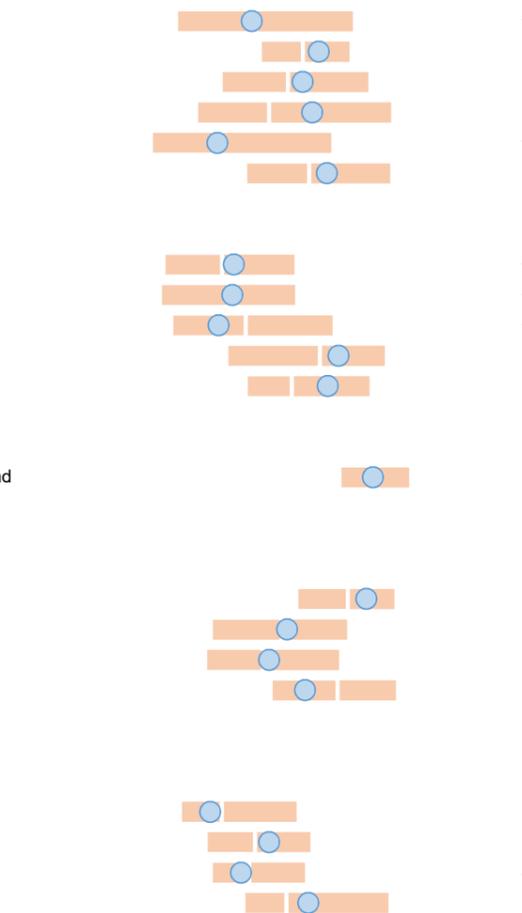
### Opportunities (Work & School)

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

Score 0 20 40 60 80 100



# Taipei City

## SMART CITY RANKING

8

Out of 109



7 in 2019

## SMART CITY RATING

A

A in 2019

## FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
2,666,000

(UN World Cities Report)



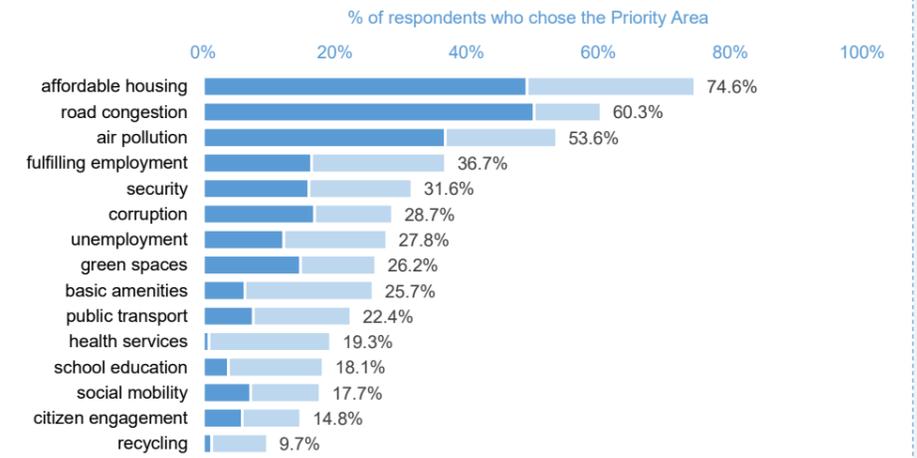
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.885	0.903	0.907	0.911	+0.004
Life expectancy at Birth	80.2	80.0	80.4	80.7	+0.3
Expected years of schooling	16.6	16.6	16.6	16.5	-0.1
Mean years of schooling	11.9	12.0	12.1	12.2	+0.1
GNI per capita (PPP \$)	45,547	46,054	47,144	49,403	+2,259.0

## PRIORITY AREAS

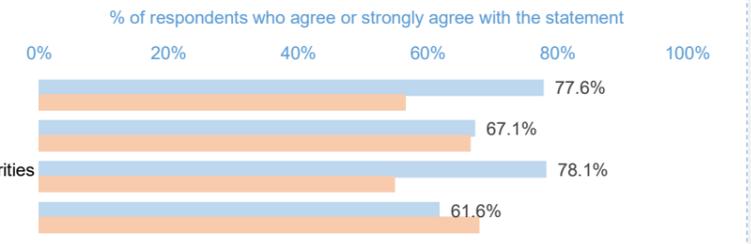
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## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX



80.0  
81.2  
66.1  
37.4  
87.0  
39.9  
26.7  
66.2  
59.0  
74.7  
64.6  
63.1  
67.7  
60.8  
63.9  
71.0  
48.0  
62.2  
63.5

## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
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- 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



75.7  
71.7  
83.9  
75.2  
67.3  
82.9  
59.1  
64.7  
67.2  
82.8  
76.5  
86.8  
71.0  
64.8  
67.4  
77.2  
69.3  
74.1  
76.2  
75.0

# Tallinn

## SMART CITY RANKING

59

Out of 109

N/A

not in 2019

## SMART CITY RATING

B

not in 2019

## FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
570,000

(Eurostat)



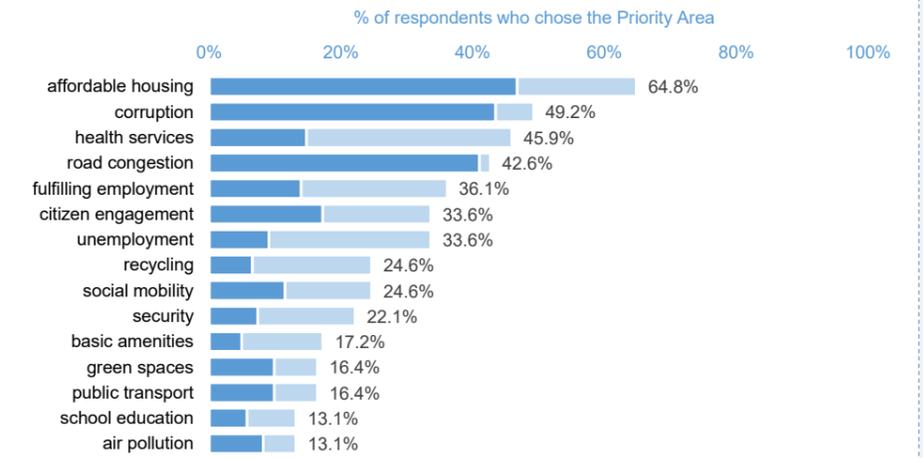
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.871	0.875	0.879	0.882	+0.003
Life expectancy at Birth	77.8	78.1	78.4	78.6	+0.2
Expected years of schooling	16.1	16.1	16.1	16.1	+0.0
Mean years of schooling	12.9	13.1	13.0	13.0	+0.0
GNI per capita (PPP \$)	27,001	27,915	29,320	30,379	+1,059.0

## PRIORITY AREAS

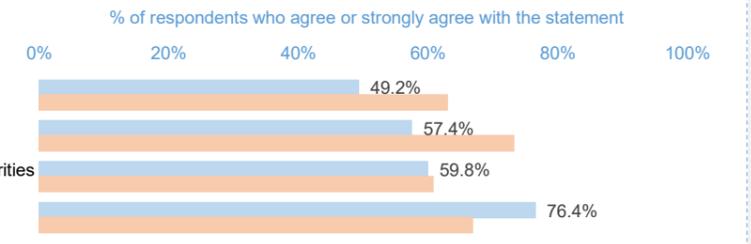
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

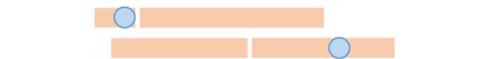
### Health & Safety

Basic sanitation meets the needs of the poorest areas  
 Recycling services are satisfactory  
 Public safety is not a problem  
 Air pollution is not a problem  
 Medical services provision is satisfactory  
 Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory



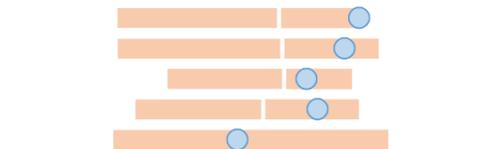
### Activities

Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory



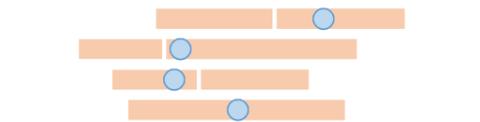
### Opportunities (Work & School)

Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome



### Governance

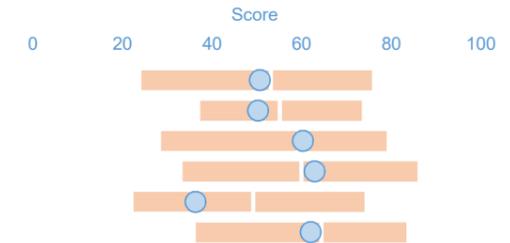
Information on local government decisions are easily accessible  
 Corruption of city officials is not an issue of concern  
 Residents contribute to decision making of local government  
 Residents provide feedback on local government projects



## TECHNOLOGIES

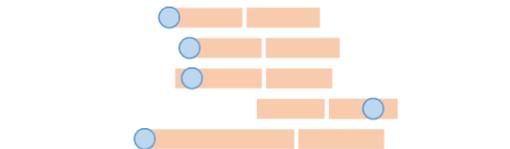
### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
 A website or App allows residents to easily give away unwanted items  
 Free public wifi has improved access to city services  
 CCTV cameras has made residents feel safer  
 A website or App allows residents to effectively monitor air pollution  
 Arranging medical appointments online has improved access



### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space have reduced journey time  
 Bicycle hiring has reduced congestion  
 Online scheduling and ticket sales has made public transport easier to use  
 The city provides information on traffic congestion through mobile phones



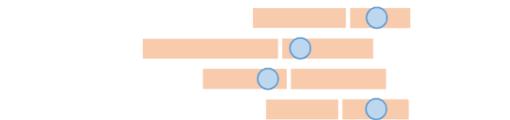
### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



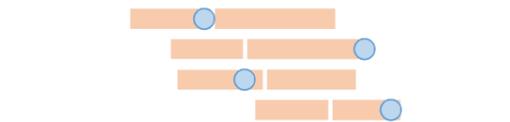
### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
 IT skills are taught well in schools  
 Online services provided by the city has made it easier to start a new business  
 The current internet speed and reliability meet connectivity needs



### Governance

Online public access to city finances has reduced corruption  
 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 RANKING

50

Out of 109



46 in 2019

## SMART CITY RATING

BB

BB in 2019

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,608,000

(UN World Cities Report)



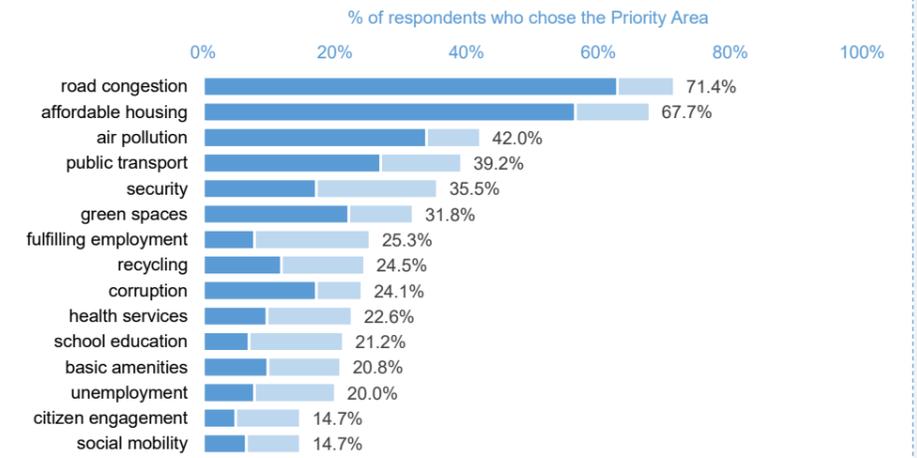
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.901	0.902	0.904	0.906	+0.002
Life expectancy at Birth	82.3	82.5	82.7	82.8	+0.1
Expected years of schooling	16.0	15.9	16.0	16.0	+0.0
Mean years of schooling	12.9	13.0	13.0	13.0	+0.0
GNI per capita (PPP \$)	31,814	32,428	32,860	33,650	+790.0

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



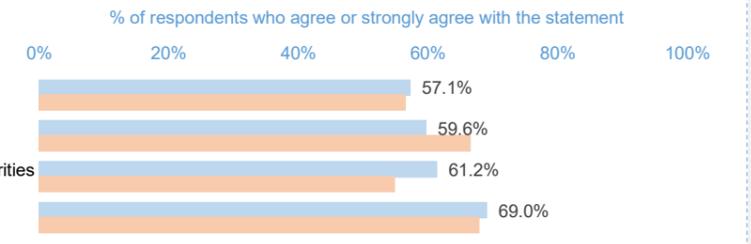
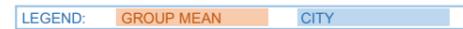
### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

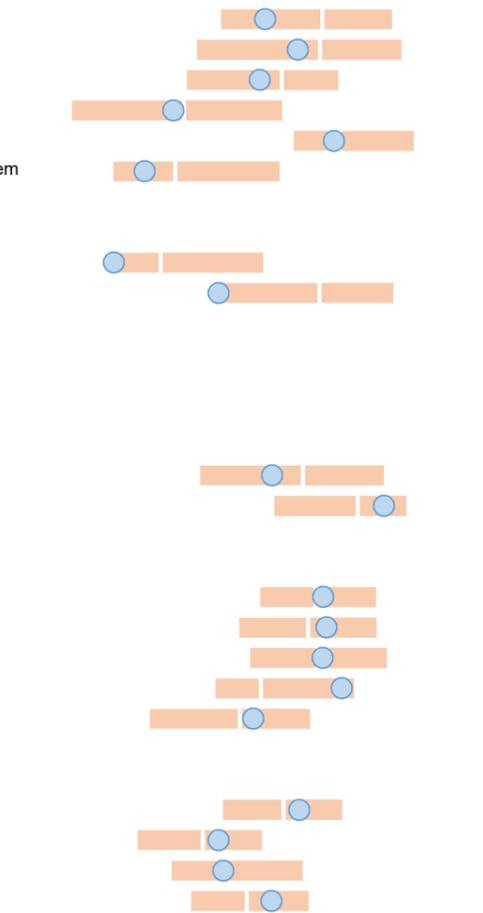
#### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

A website or App allows residents to easily give away unwanted items

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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

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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)

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The current internet speed and reliability meet connectivity needs

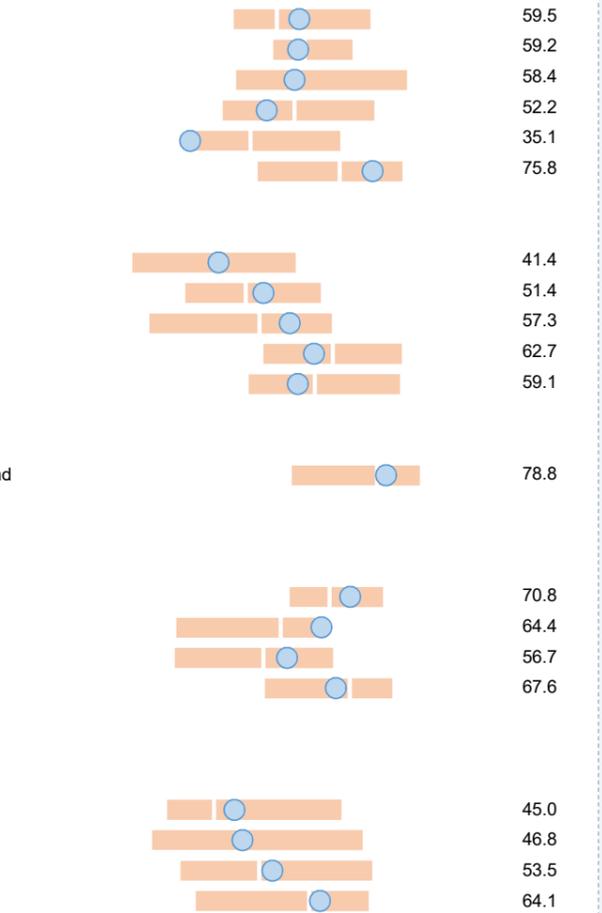
#### Governance

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



# The Hague

## SMART CITY RANKING

28

Out of 109



29 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
854,000

(Eurostat)



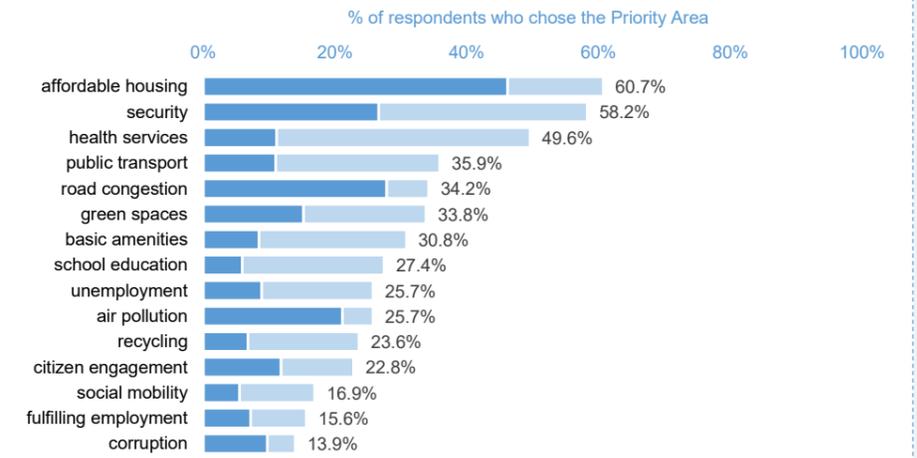
#### Country

	2015	2016	2017	2018	1 yr change
HDI	0.927	0.929	0.932	0.934	+0.002
Life expectancy at Birth	81.7	81.9	82.0	82.1	+0.1
Expected years of schooling	18.1	18.0	18.0	18.0	+0.0
Mean years of schooling	12.1	12.2	12.2	12.2	+0.0
GNI per capita (PPP \$)	46,976	47,008	48,994	50,013	+1,019.0

### 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

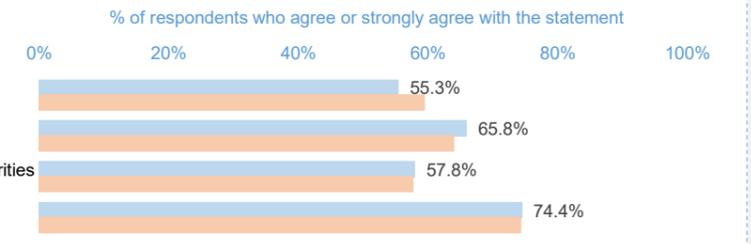
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The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND: GROUP MEAN CITY



### STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

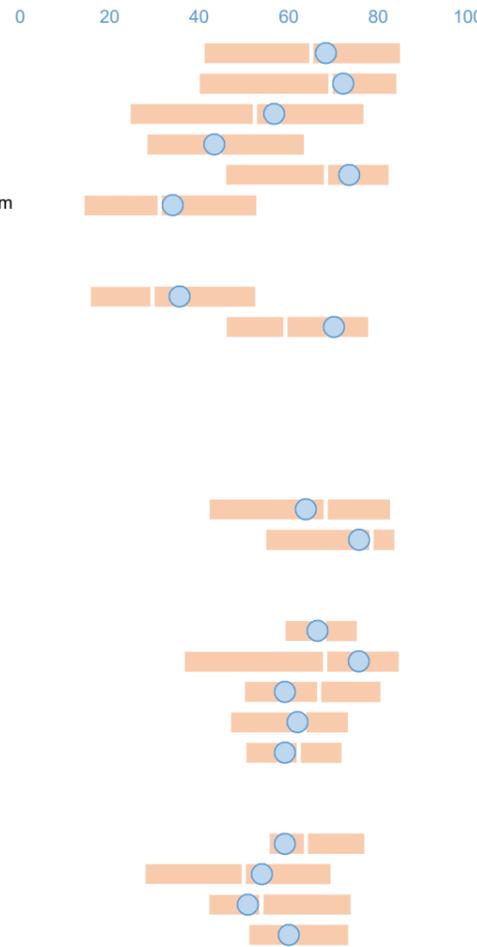
#### Governance

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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

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#### Mobility

Car-sharing Apps have reduced congestion

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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

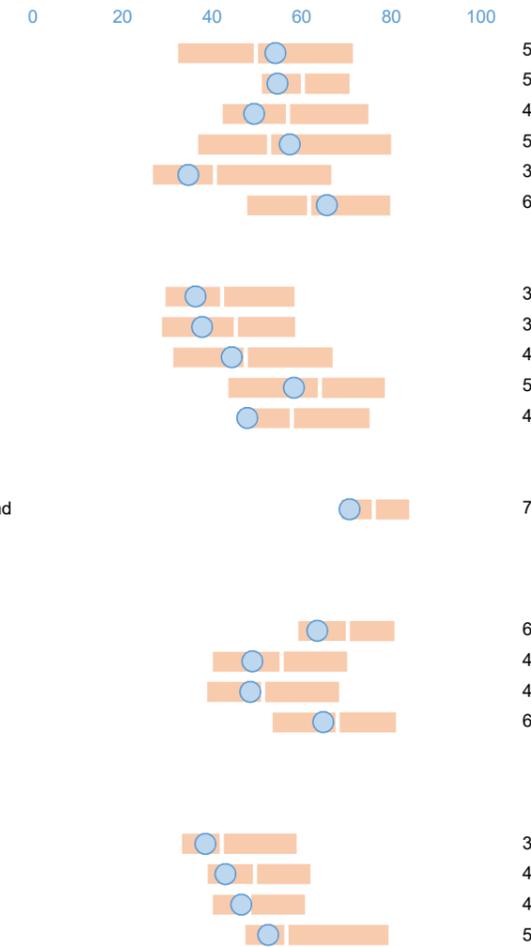
#### Governance

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



# Tianjin

## SMART CITY RANKING

63

Out of 109



41 in 2019

## SMART CITY RATING

CCC

BB in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
11,210,000

(UN World Cities Report)

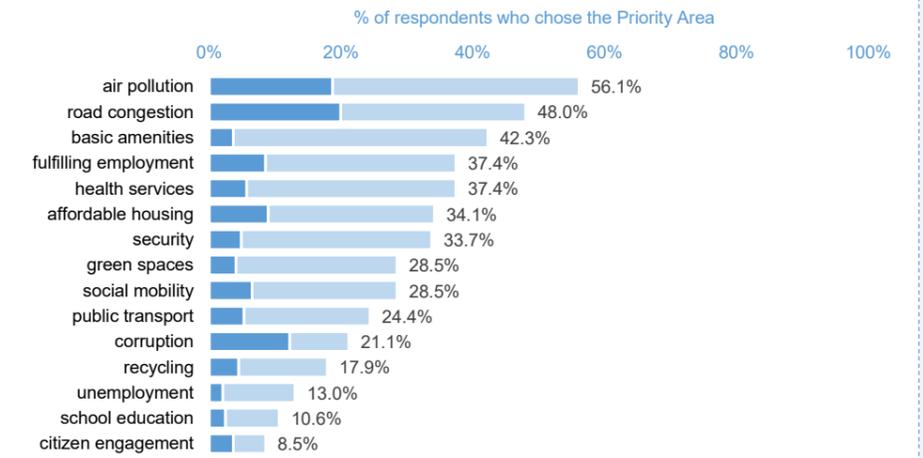


Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

## PRIORITY AREAS

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## ATTITUDES

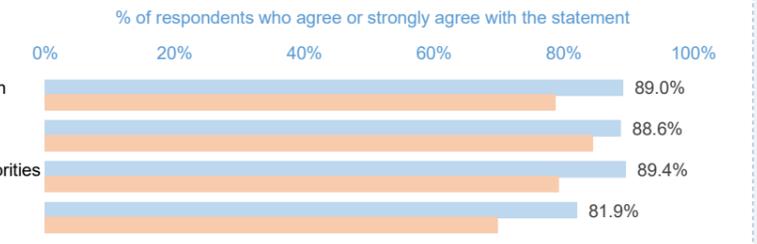
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You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

80.8

80.4

75.8

64.4

79.5

76.2

65.9

76.6

77.8

82.7

80.0

79.8

75.0

74.8

79.0

78.5

67.4

71.1

72.9

## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

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A website or App allows residents to effectively monitor air pollution

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### 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

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Online voting has increased participation

An online platform where residents can propose ideas has improved city life

Processing Identification Documents online has reduced waiting times

Score 0 20 40 60 80 100

86.2

74.9

83.9

85.5

80.5

88.2

80.9

79.8

82.2

87.4

84.8

88.8

88.1

81.6

80.5

86.2

81.4

75.8

84.4

84.1

# Tokyo

## SMART CITY RANKING

79

Out of 109



62 in 2019

## SMART CITY RATING

CCC

B in 2019

## FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
38,001,000

(UN World Cities Report)



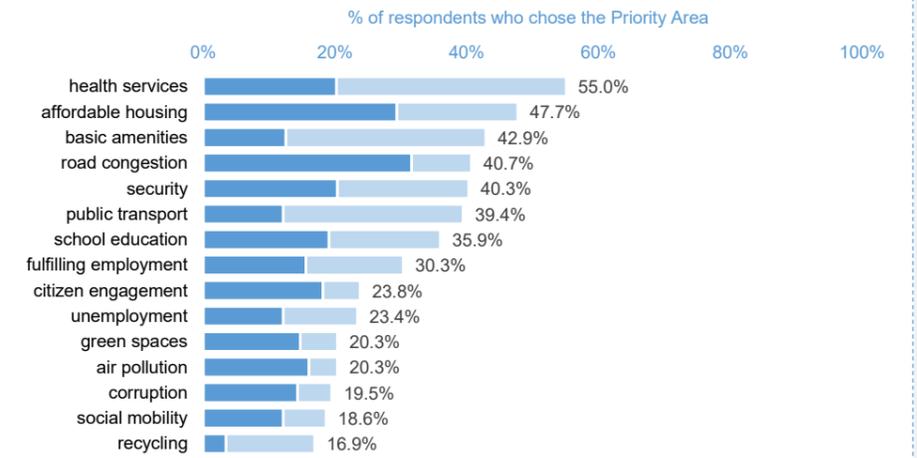
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.906	0.910	0.913	0.915	+0.002
Life expectancy at Birth	83.9	84.1	84.3	84.5	+0.2
Expected years of schooling	15.2	15.2	15.2	15.2	+0.0
Mean years of schooling	12.5	12.7	12.8	12.8	+0.0
GNI per capita (PPP \$)	39,297	39,407	40,343	40,799	+456.0

## PRIORITY AREAS

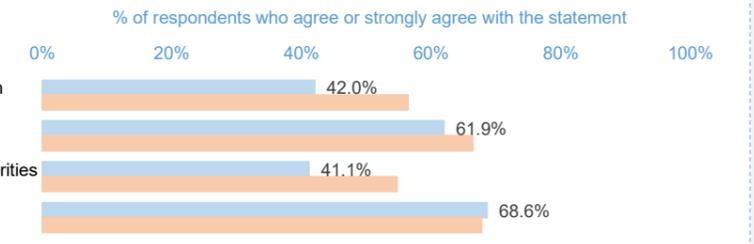
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The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

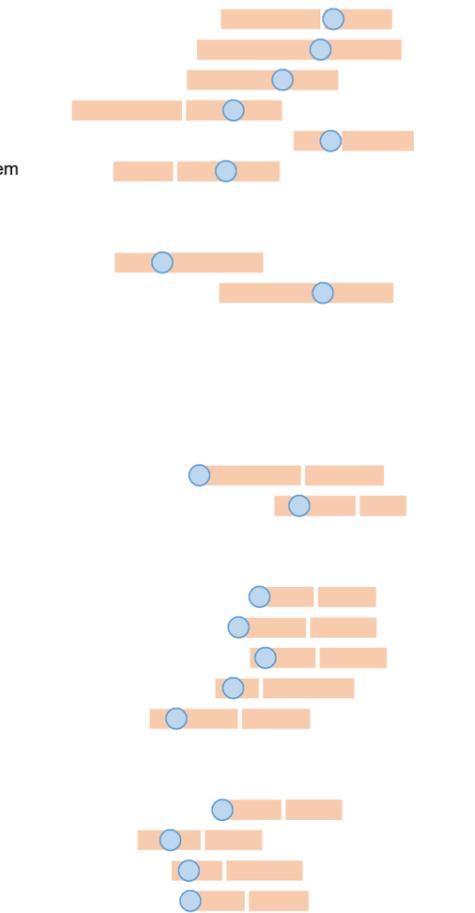
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

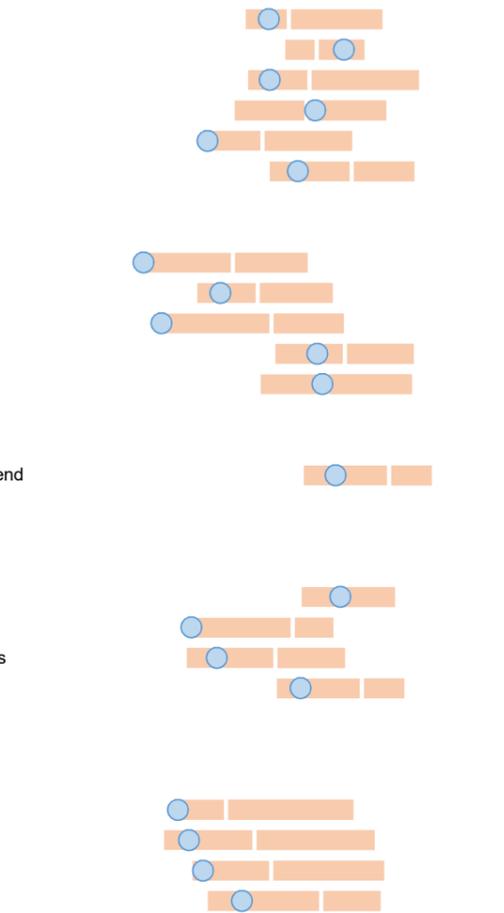
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- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity 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

Score 0 20 40 60 80 100



# Toronto

## SMART CITY RANKING

30

Out of 109



15 in 2019

## SMART CITY RATING

BBB

A in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
5,993,000

(UN World Cities Report)



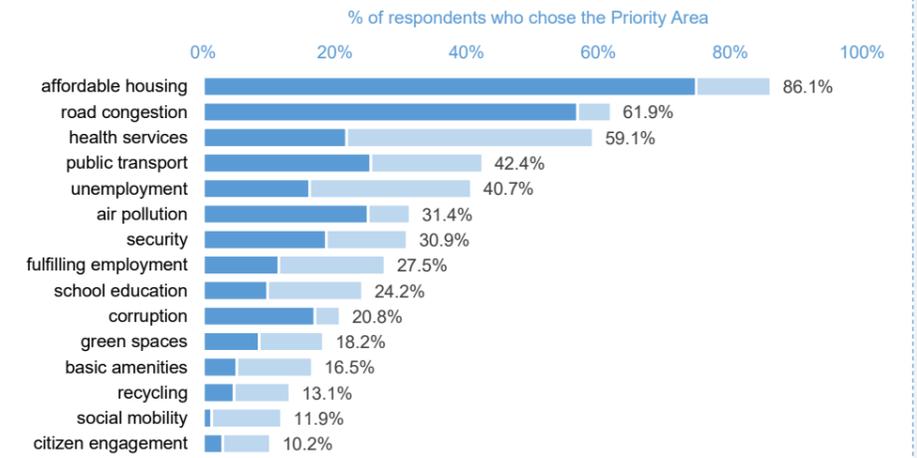
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.917	0.920	0.921	0.922	+0.001
Life expectancy at Birth	82.0	82.1	82.2	82.3	+0.1
Expected years of schooling	16.0	16.1	16.1	16.1	+0.0
Mean years of schooling	13.2	13.3	13.3	13.3	+0.0
GNI per capita (PPP \$)	42,567	42,691	43,496	43,602	+106.0

## PRIORITY AREAS

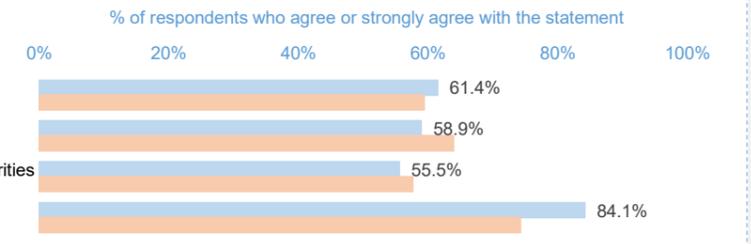
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## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
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- 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)

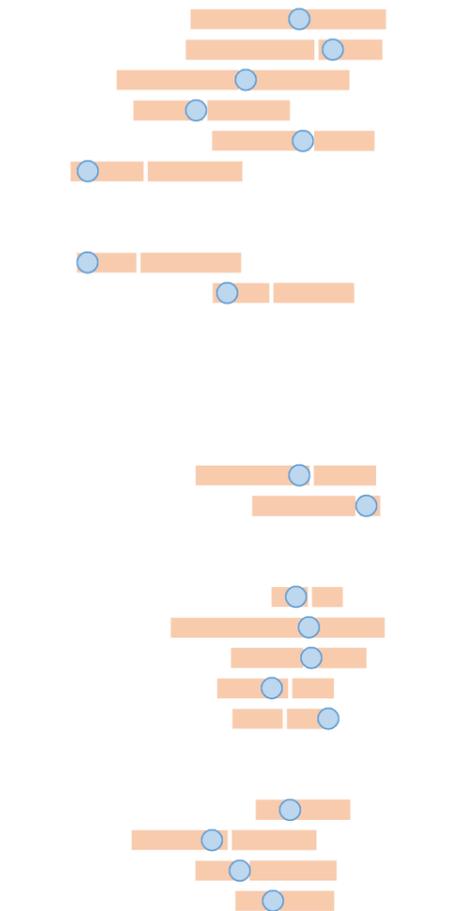
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

- Information on local government decisions are easily accessible
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- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

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### Mobility

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- Online scheduling and ticket sales has made public transport easier to use
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### Activities

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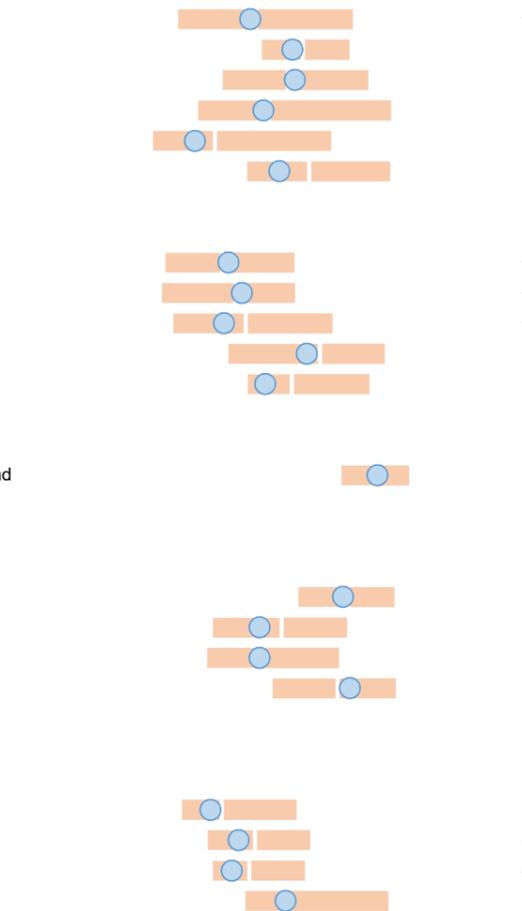
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

### 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

Score 0 20 40 60 80 100



# Vancouver

## SMART CITY RANKING

19

Out of 109



13 in 2019

## SMART CITY RATING

A

A in 2019

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,485,000

(UN World Cities Report)

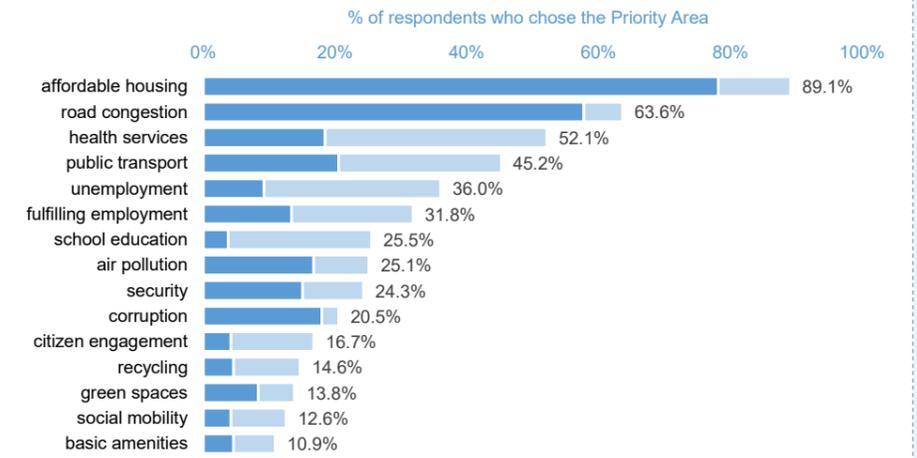


Country	2015	2016	2017	2018	1 yr change
HDI	0.917	0.920	0.921	0.922	+0.001
Life expectancy at Birth	82.0	82.1	82.2	82.3	+0.1
Expected years of schooling	16.0	16.1	16.1	16.1	+0.0
Mean years of schooling	13.2	13.3	13.3	13.3	+0.0
GNI per capita (PPP \$)	42,567	42,691	43,496	43,602	+106.0

### PRIORITY AREAS

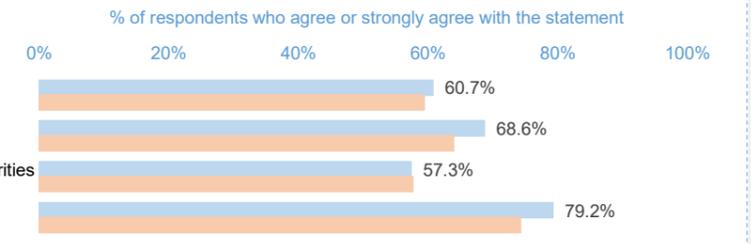
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### ATTITUDES

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 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
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- Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

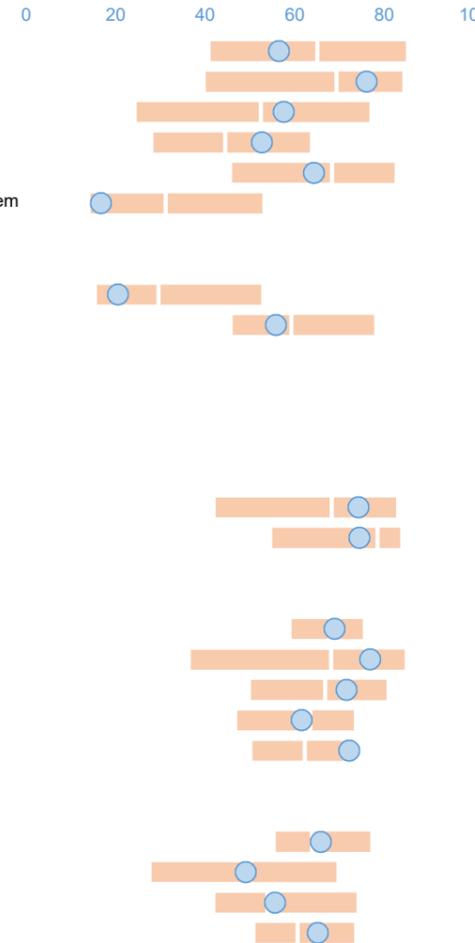
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space 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

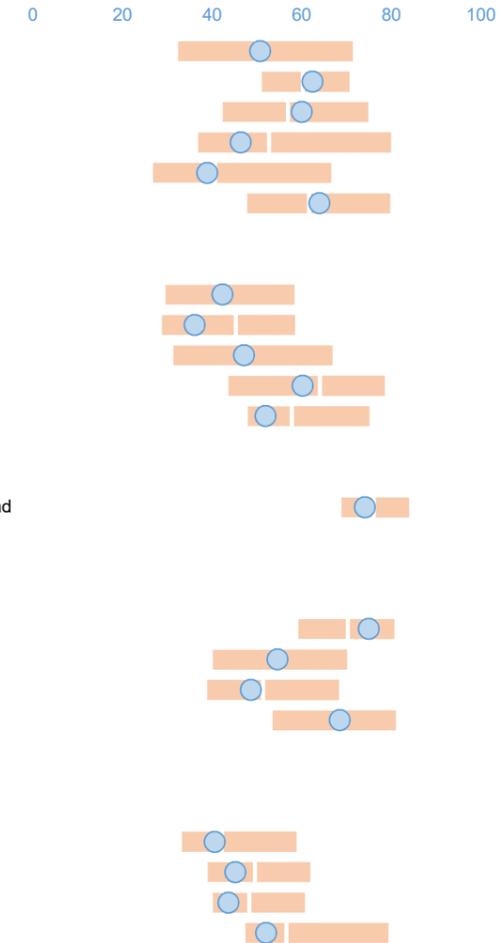
#### Opportunities (Work & School)

- 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

Score 0 20 40 60 80 100



# Vienna

## SMART CITY RANKING

25

Out of 109



17 in 2019

## SMART CITY RATING

BBB

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,753,000

(UN World Cities Report)

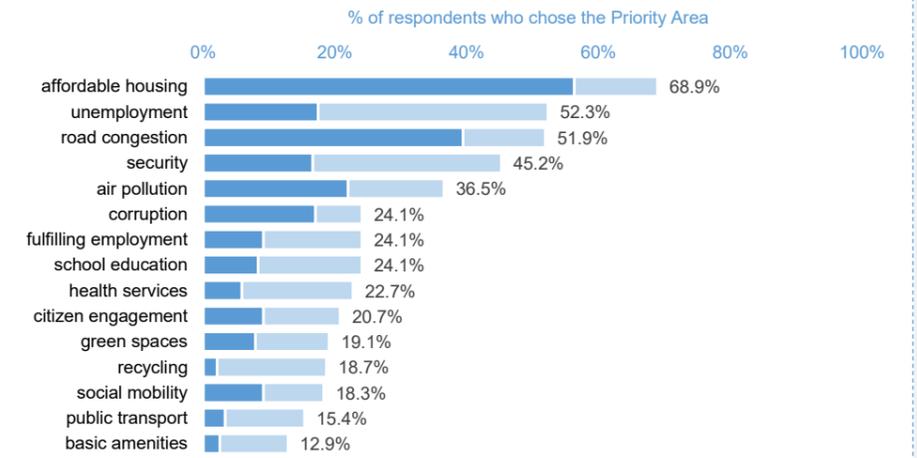


Country	2015	2016	2017	2018	1 yr change
HDI	0.906	0.909	0.912	0.914	+0.002
Life expectancy at Birth	81.2	81.3	81.3	81.4	+0.1
Expected years of schooling	15.9	16.1	16.3	16.3	+0.0
Mean years of schooling	12.6	12.6	12.6	12.6	+0.0
GNI per capita (PPP \$)	43,822	44,621	45,375	46,231	+856.0

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



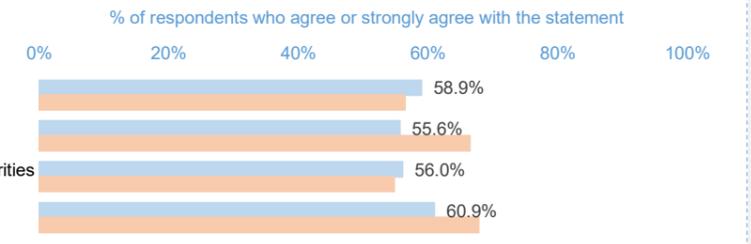
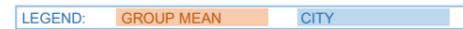
## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

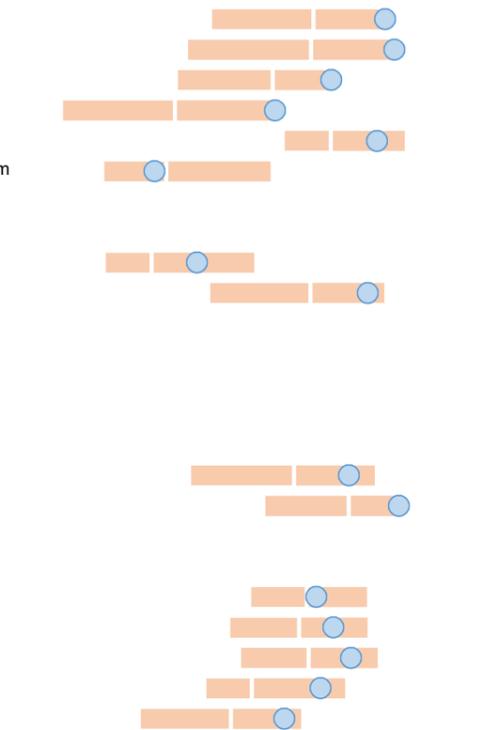
### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space have reduced journey time

Bicycle hiring has reduced congestion

Online scheduling and ticket sales has made public transport easier to use

The city provides information on traffic congestion through mobile phones

### Activities

Online purchasing of tickets to shows and museums has made it easier to attend

### Opportunities (Work & School)

Online access to job listings has made it easier to find work

IT skills are taught well in schools

Online services provided by the city has made it easier to start a new business

The current internet speed and reliability meet connectivity needs

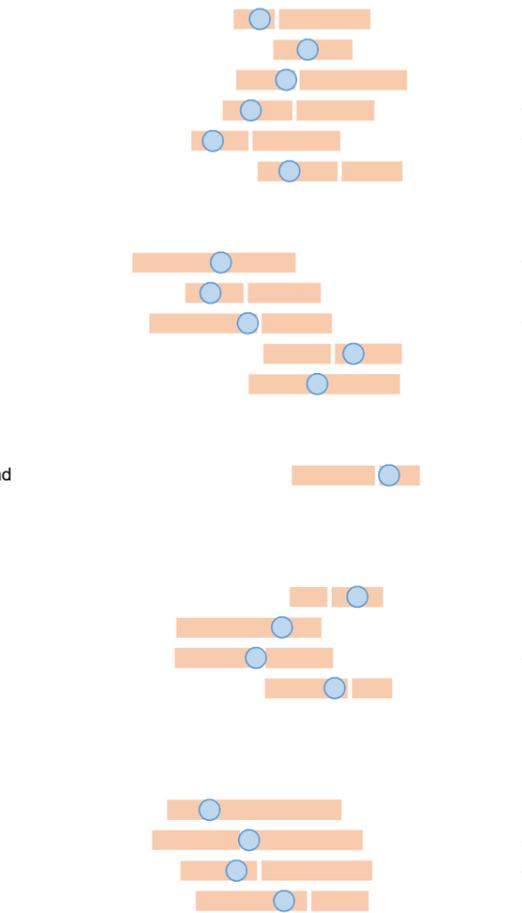
### Governance

Online public access to city finances has reduced corruption

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



# Warsaw

## SMART CITY RANKING

55

Out of 109



61 in 2019

## SMART CITY RATING

B

B in 2019

## FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,722,000

(UN World Cities Report)



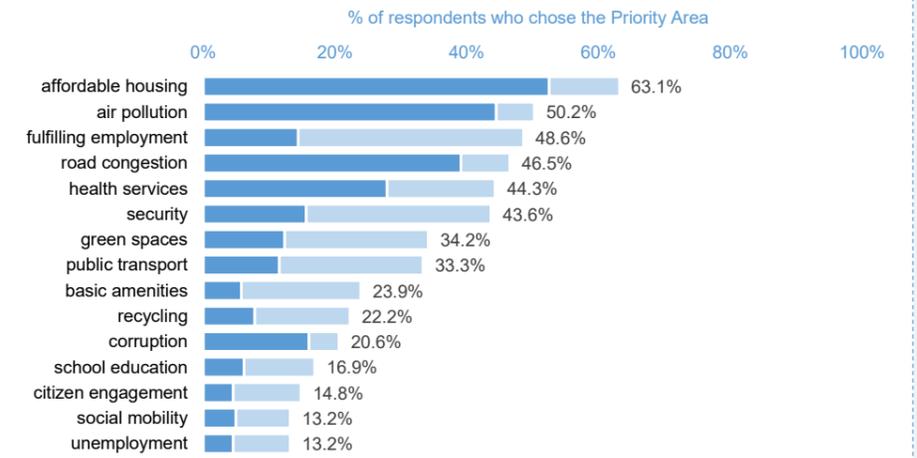
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.858	0.864	0.868	0.872	+0.004
Life expectancy at Birth	77.9	78.1	78.3	78.5	+0.2
Expected years of schooling	16.1	16.4	16.4	16.4	+0.0
Mean years of schooling	12.2	12.3	12.3	12.3	+0.0
GNI per capita (PPP \$)	24,369	25,042	26,182	27,626	+1,444.0

## 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

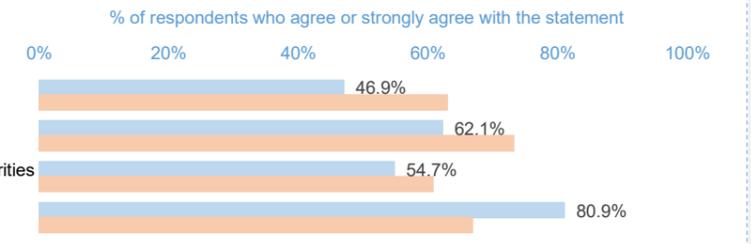
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You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

### Activities

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

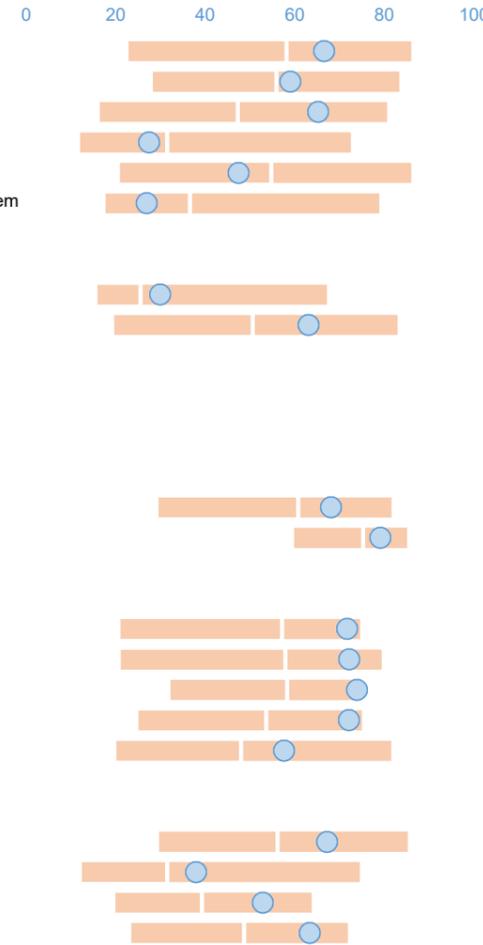
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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

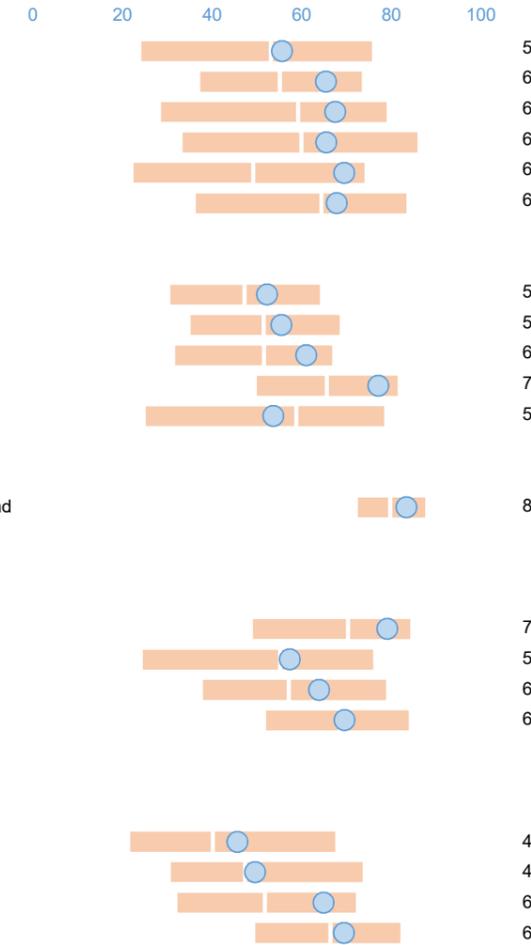
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Washington D.C.

## SMART CITY RANKING

12

Out of 109



31 in 2019

## SMART CITY RATING

A

BBB in 2019

## FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,955,000

(UN World Cities Report)



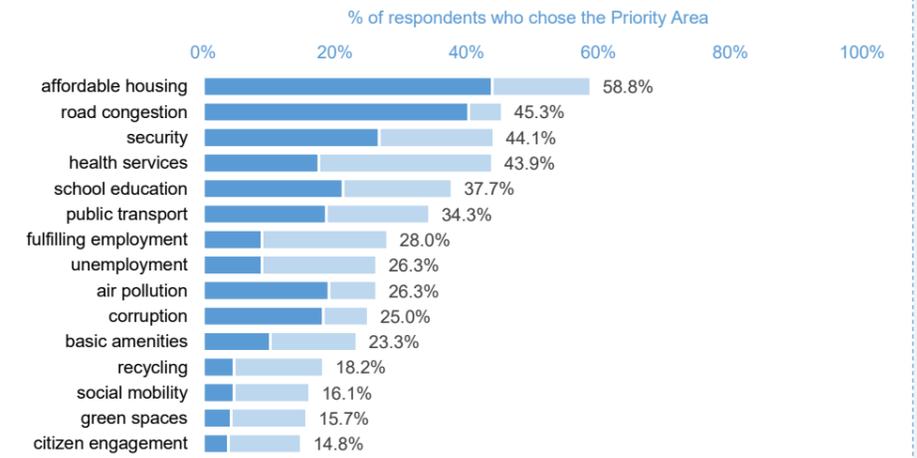
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.917	0.919	0.919	0.920	+0.001
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.2	16.3	16.3	16.3	+0.0
Mean years of schooling	13.3	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,039	54,443	55,351	56,140	+789.0

### PRIORITY AREAS

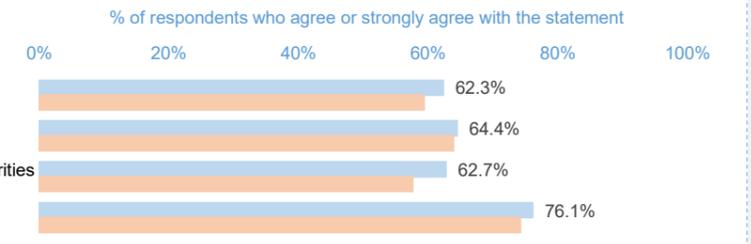
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.



### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas  
 Recycling services are satisfactory  
 Public safety is not a problem  
 Air pollution is not a problem  
 Medical services provision is satisfactory  
 Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

#### Activities

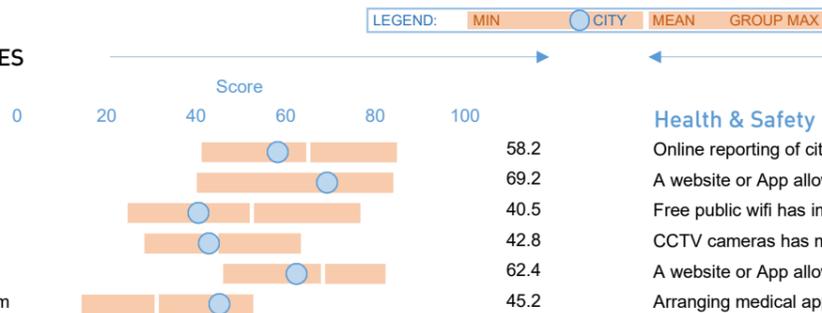
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible  
 Corruption of city officials is not an issue of concern  
 Residents contribute to decision making of local government  
 Residents provide feedback on local government projects



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
 A website or App allows residents to easily give away unwanted items  
 Free public wifi has improved access to city services  
 CCTV cameras has made residents feel safer  
 A website or App allows residents to effectively monitor air pollution  
 Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space have reduced journey time  
 Bicycle hiring has reduced congestion  
 Online scheduling and ticket sales has made public transport easier to use  
 The city provides information on traffic congestion through mobile phones

#### Activities

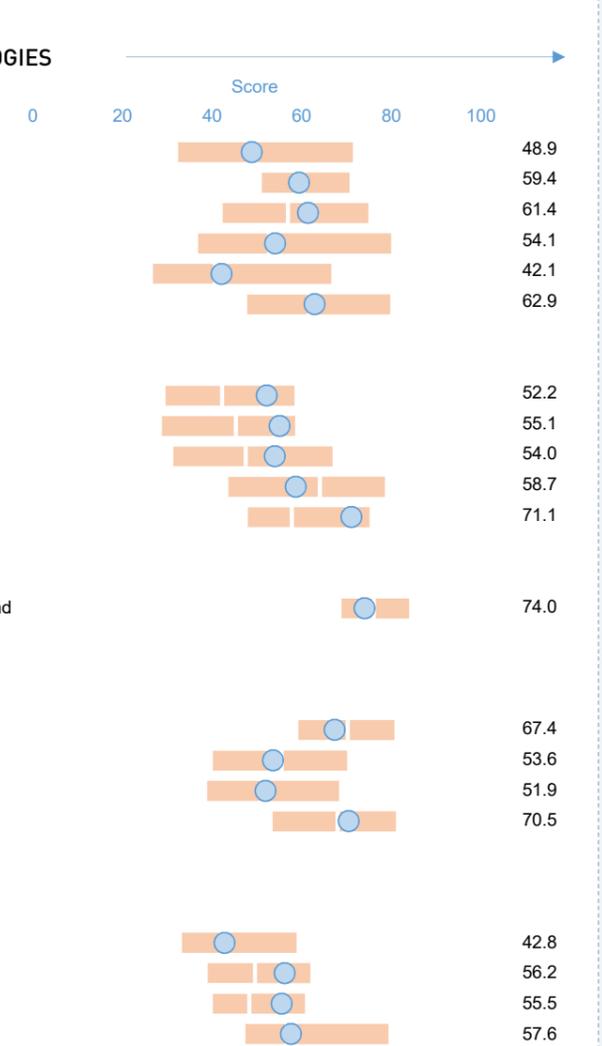
Online purchasing of tickets to shows and museums has made it easier to attend

#### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
 IT skills are taught well in schools  
 Online services provided by the city has made it easier to start a new business  
 The current internet speed and reliability meet connectivity needs

#### Governance

Online public access to city finances has reduced corruption  
 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



# Zaragoza

## SMART CITY RANKING

48

Out of 109



49 in 2019

## SMART CITY RATING

BB

BB in 2019

## FACTOR RATINGS

BBB

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
667,000

(Eurostat)



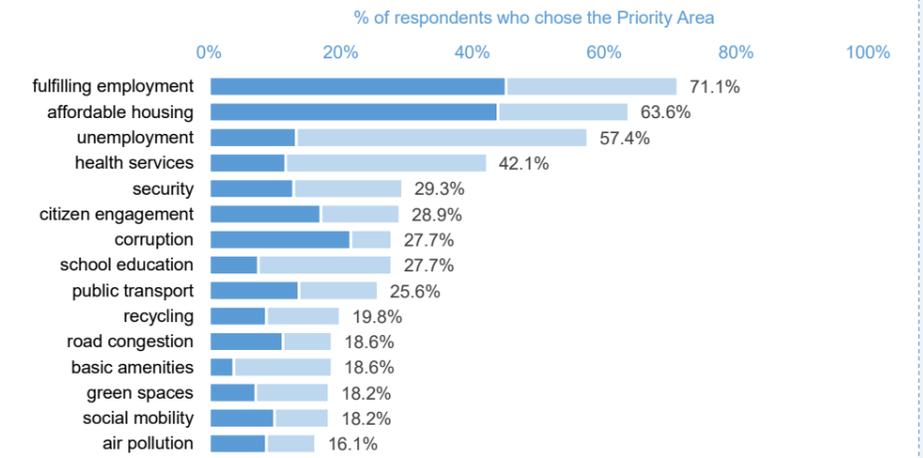
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.885	0.888	0.891	0.893	+0.002
Life expectancy at Birth	83.0	83.1	83.3	83.4	+0.1
Expected years of schooling	17.8	17.8	17.9	17.9	+0.0
Mean years of schooling	9.7	9.8	9.8	9.8	+0.0
GNI per capita (PPP \$)	32,265	33,379	34,226	35,041	+815.0

### 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

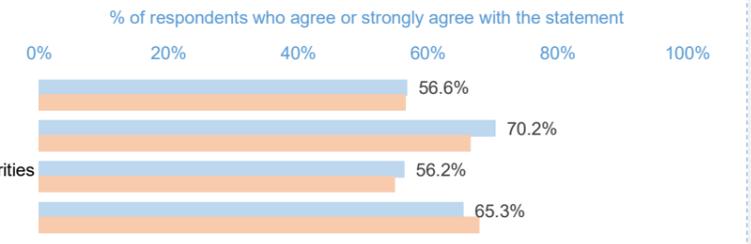
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND: GROUP MEAN CITY



### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas

Recycling services are satisfactory

Public safety is not a problem

Air pollution is not a problem

Medical services provision is satisfactory

Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility

Traffic congestion is not a problem

Public transport is satisfactory

#### Activities

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

#### Governance

Information on local government decisions are easily accessible

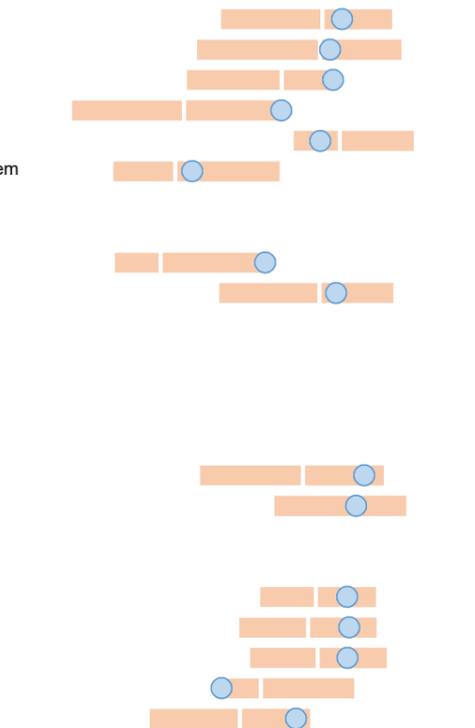
Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution

A website or App allows residents to easily give away unwanted items

Free public wifi has improved access to city services

CCTV cameras has made residents feel safer

A website or App allows residents to effectively monitor air pollution

Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion

Apps that direct you to an available parking space 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)

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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

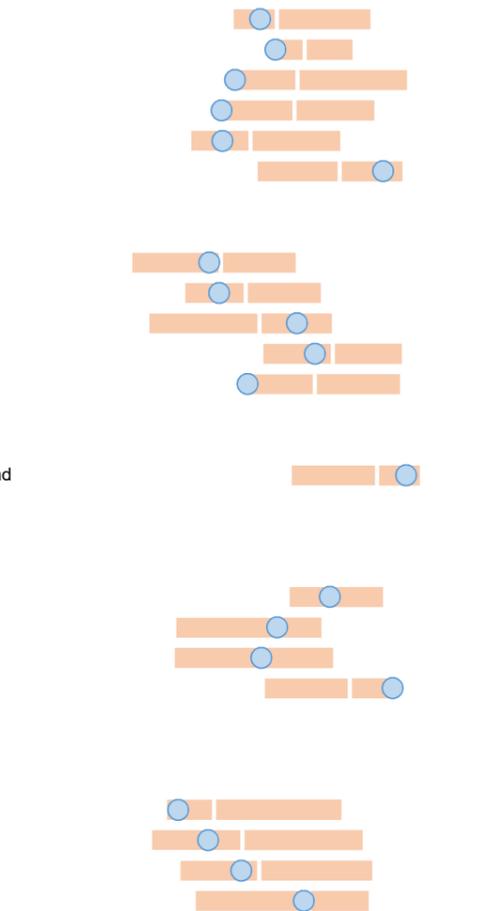
Online public access to city finances has reduced corruption

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

Score 0 20 40 60 80 100



# Zhuhai

## SMART CITY RANKING

62

Out of 109



40 in 2019

## SMART CITY RATING

CCC

BB in 2019

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,542,000

(UN World Cities Report)



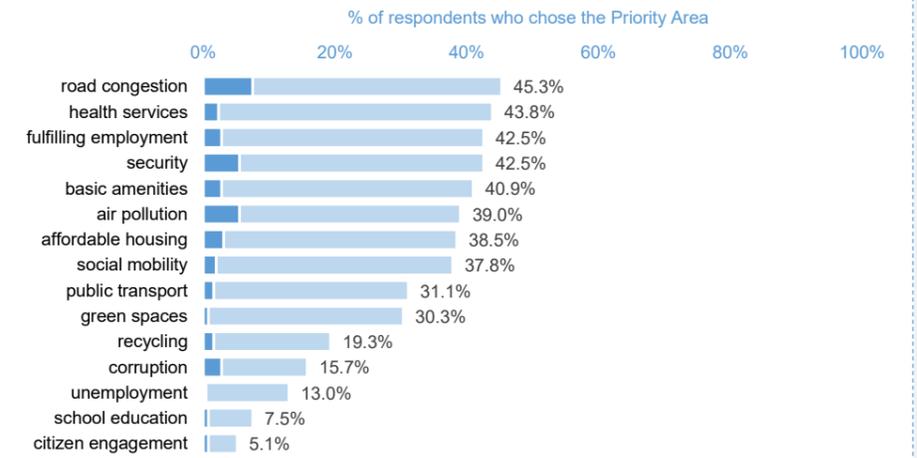
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2015	2016	2017	2018	1 yr change
HDI	0.742	0.749	0.753	0.758	+0.005
Life expectancy at Birth	75.9	76.2	76.5	76.7	+0.2
Expected years of schooling	13.8	13.9	13.9	13.9	+0.0
Mean years of schooling	7.7	7.8	7.8	7.9	+0.1
GNI per capita (PPP \$)	13,485	14,311	15,212	16,127	+915.0

## 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

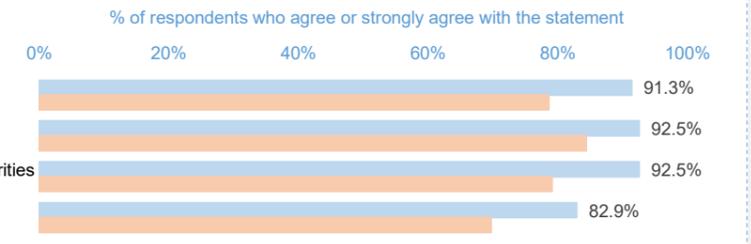
You are willing to concede personal data in order to improve traffic congestion

You are comfortable with face recognition technologies to lower crime

You feel the availability of online information has increased your trust in authorities

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

LEGEND: GROUP MEAN CITY



## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100

84.8  
87.0  
81.4  
81.2  
87.3  
83.5  
  
81.2  
86.2  
  
88.6  
85.2  
  
86.6  
87.3  
82.3  
84.8  
86.2

## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
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- CCTV cameras has made residents feel safer
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- 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

Score 0 20 40 60 80 100

87.8  
79.7  
80.0  
84.2  
82.5  
86.7  
  
86.5  
83.7  
84.3  
86.1  
83.1  
  
90.2  
  
87.4  
83.1  
85.1  
84.6  
  
89.8  
81.9  
85.5  
86.1

# Zurich

## SMART CITY RANKING

3

Out of 109



2 in 2019

## SMART CITY RATING

AA

AAA in 2019

## FACTOR RATINGS

AAA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,246,000

(UN World Cities Report)

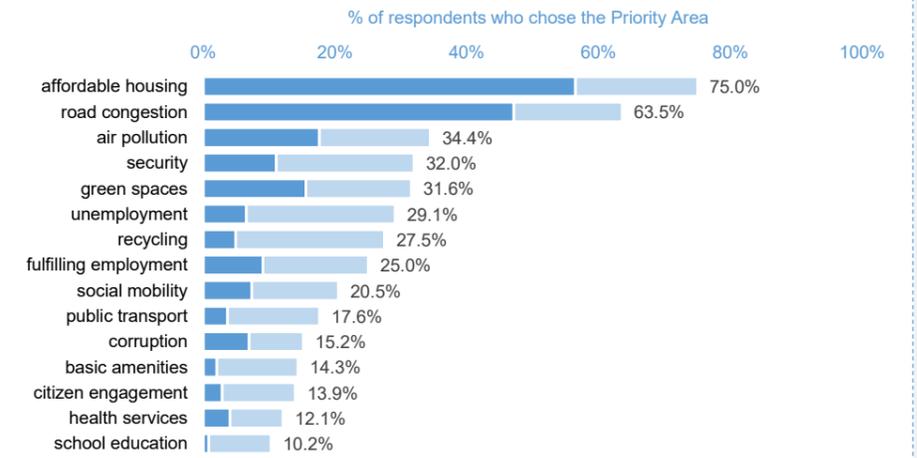


Country	2015	2016	2017	2018	1 yr change
HDI	0.943	0.943	0.943	0.946	+0.003
Life expectancy at Birth	83.1	83.3	83.5	83.6	+0.1
Expected years of schooling	16.2	16.2	16.2	16.2	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	58,723	58,138	57,301	59,375	+2,074.0

## PRIORITY AREAS

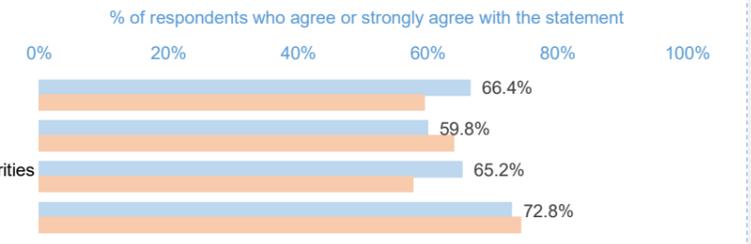
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## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas  
 Recycling services are satisfactory  
 Public safety is not a problem  
 Air pollution is not a problem  
 Medical services provision is satisfactory  
 Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

Traffic congestion is not a problem  
 Public transport is satisfactory

### Activities

Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

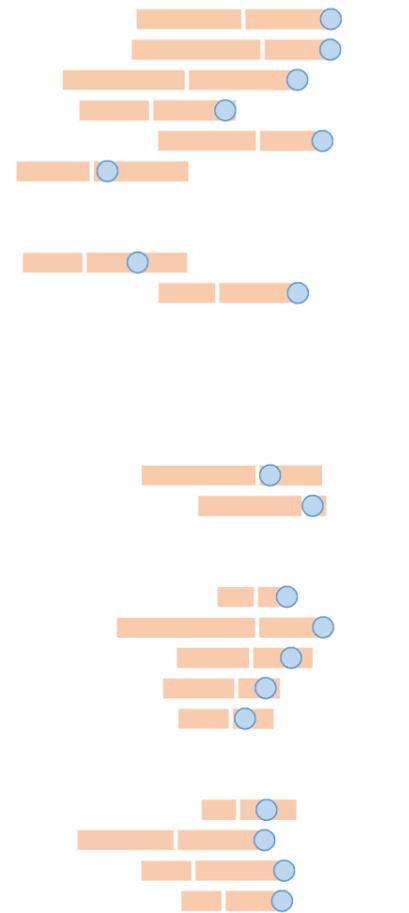
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

### Governance

Information on local government decisions are easily accessible  
 Corruption of city officials is not an issue of concern  
 Residents contribute to decision making of local government  
 Residents provide feedback on local government projects

LEGEND: MIN CITY MEAN GROUP MAX

Score 0 20 40 60 80 100



## TECHNOLOGIES

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
 A website or App allows residents to easily give away unwanted items  
 Free public wifi has improved access to city services  
 CCTV cameras has made residents feel safer  
 A website or App allows residents to effectively monitor air pollution  
 Arranging medical appointments online has improved access

### Mobility

Car-sharing Apps have reduced congestion  
 Apps that direct you to an available parking space 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

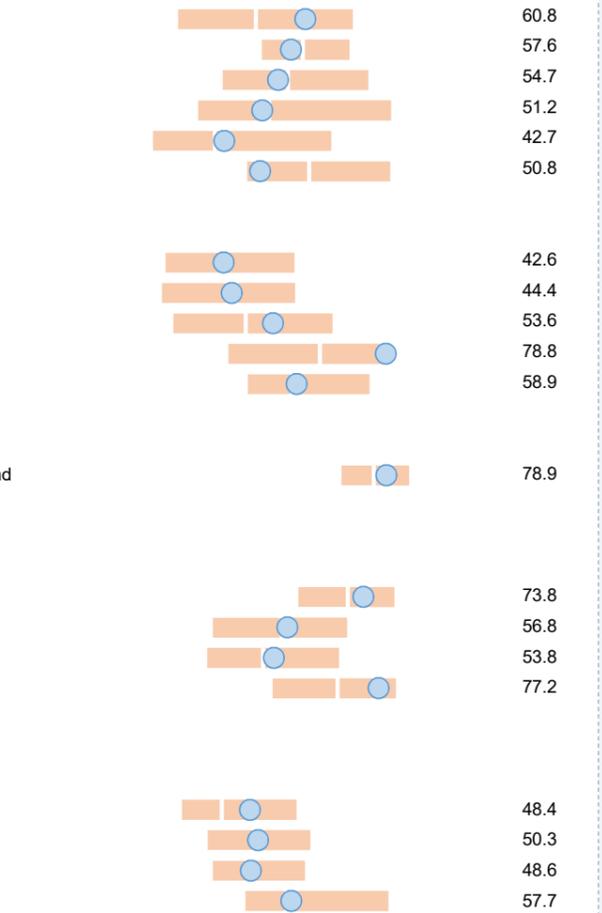
### Opportunities (Work & School)

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

Score 0 20 40 60 80 100



A collaboration between:

