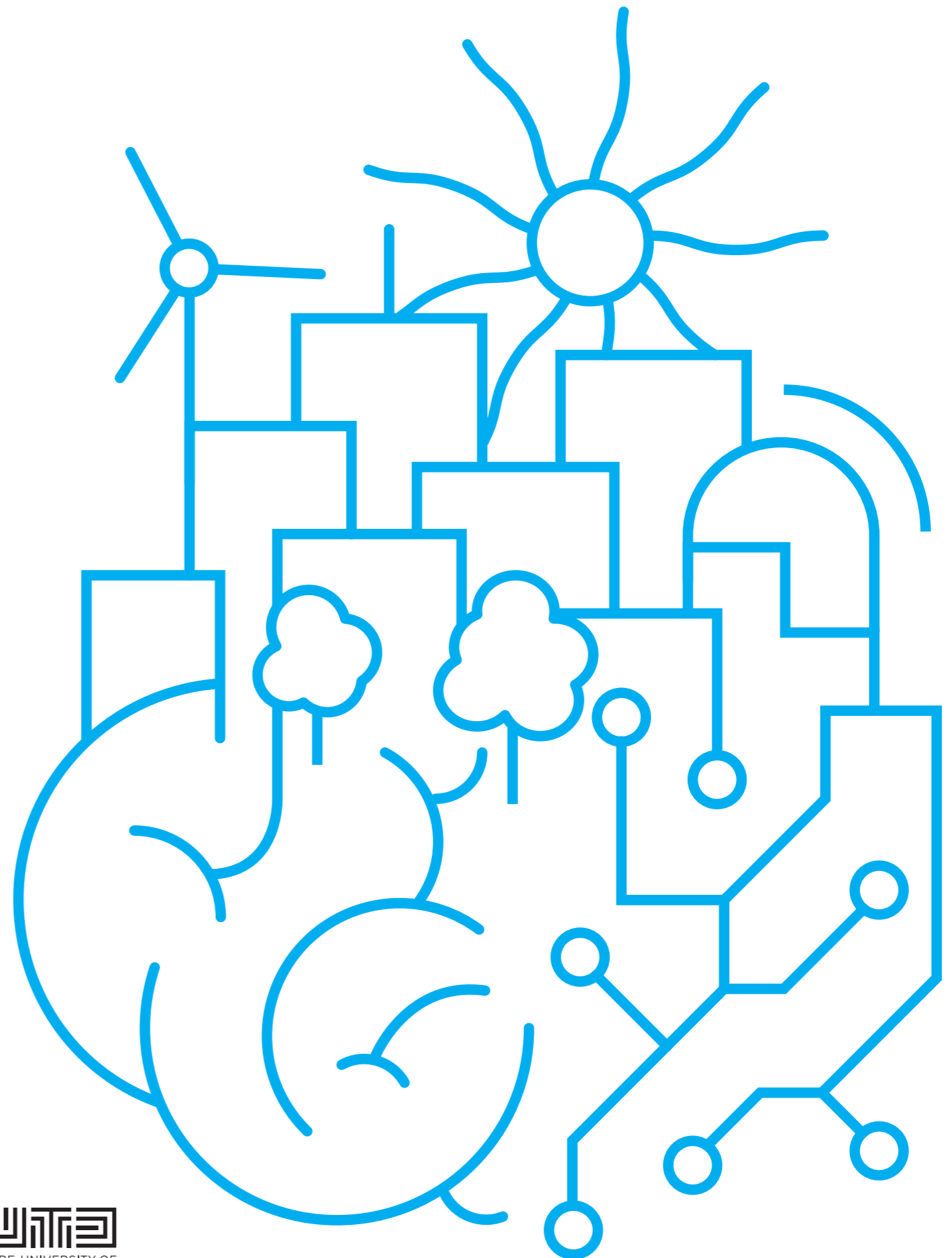


# Smart City Index 2021

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

A collaboration between:



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

**Charles Baudelaire, *Mademoiselle Bistouri***

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

**Italo Calvino, *Invisible Cities***



# Preface

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

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

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

Health-related emergencies have had dire consequences on cities and on their populations. However, they did not relegate other emergencies (including climate-related issues) to the back burner. As this year's report data show, quality of life, safety, mobility and waste management remained high on the list of citizens' concerns in all parts of the world. Moreover, the same data seems to indicate that

the acceleration of deep processes such as digitization has changed some perceptions, creating significant differences between last year's rankings and this year's.

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

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

Since the creation of the Smart City Index (SCI), we insisted on the fact that it is the position of the authors of this report that smart cities will not generate their full potential unless priority attention is devoted to the necessary balance between the technological aspects of smart cities and their human aspects. The recent crisis has underlined the relevance and importance of this mantra.

On the methodological side, we pursue our efforts to make the SCI methodology and coverage ever better and more relevant to decision makers and analysts. We also strive to maintain the degree of coherence and continuity that will progressively allow the index to generate the longer-term

time series required for urban policies and strategies. Fundamentally, the approach has not changed: In line with previous and ongoing efforts initiated and carried out by IMD's World Competitiveness Centre, the Smart City Index presented here remains a holistic attempt to capture the various dimensions of how citizens could consider that their respective cities are becoming better cities by becoming smarter ones. Part of the SCI's uniqueness is to rely first and foremost on the perceptions of those who live and work in the cities covered by the index, while providing a realistic recognition that not all cities start from the same level of development, nor with the same set of endowments and advantages. In SCI's context, **a 'smart city' continues to be defined as an urban setting that applies technology to enhance the benefits and diminish the shortcomings of urbanization for its citizens.**

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

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

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

**Professor Arturo Bris**

Director

IMD World Competitiveness Center

**Professor Cheong Koon Hean**

Chair

Lee Kuan Yew Centre for Innovative Cities

**Bruno Lanvin**

President

IMD Smart City Observatory



# Table of contents

Preface.....	3
Table of contents .....	4
The IMD World Competitiveness Center .....	6
City performance overview.....	7
Alphabetical.....	7
By ranking.....	9
User's Guide to the Smart City Index.....	11
Methodology in a nutshell.....	13
City profiles .....	14

## City Profiles

---

Abu Dhabi .....	15	Budapest.....	36
Abuja .....	16	Buenos Aires .....	37
Amsterdam .....	17	Busan.....	38
Ankara.....	18	Cairo.....	39
Athens .....	19	Cape Town.....	40
Auckland .....	20	Chengdu.....	41
Bangkok.....	21	Chicago .....	42
Barcelona.....	22	Chongqing.....	43
Beijing .....	23	Copenhagen.....	44
Bengaluru .....	24	Denver .....	45
Berlin .....	25	Dubai.....	46
Bilbao .....	26	Dublin.....	47
Birmingham.....	27	Dusseldorf .....	48
Bogota.....	28	Geneva .....	49
Bologna .....	29	Glasgow .....	50
Bordeaux.....	30	Gothenburg .....	51
Boston.....	31	Guangzhou.....	52
Bratislava.....	32	Hamburg.....	53
Brisbane.....	33	Hangzhou.....	54
Brussels.....	34	Hanoi.....	55
Bucharest .....	35	Hanover.....	56

Helsinki	57	Osaka	95
Ho Chi Minh City	58	Oslo	96
Hong Kong	59	Paris	97
Hyderabad	60	Philadelphia	98
Istanbul	61	Phoenix	99
Jakarta	62	Prague	100
Kiel	63	Rabat	101
Kiev	64	Rio de Janeiro	102
Krakow	65	Riyadh	103
Kuala Lumpur	66	Rome	104
Lagos	67	Rotterdam	105
Lausanne	68	San Francisco	106
Leeds	69	San José	107
Lille	70	Santiago	108
Lisbon	71	Sao Paulo	109
London	72	Seattle	110
Los Angeles	73	Seoul	111
Lyon	74	Shanghai	112
Madrid	75	Shenzhen	113
Makassar	76	Singapore	114
Manchester	77	Sofia	115
Manila	78	St. Petersburg	116
Marseille	79	Stockholm	117
Medan	80	Sydney	118
Medellin	81	Taipei City	119
Medina	82	Tallinn	120
Melbourne	83	Tel Aviv	121
Mexico City	84	The Hague	122
Milan	85	Tianjin	123
Montreal	86	Tokyo	124
Moscow	87	Toronto	125
Mumbai	88	Vancouver	126
Munich	89	Vienna	127
Nairobi	90	Warsaw	128
Nanjing	91	Washington D.C.	129
New Delhi	92	Zaragoza	130
New York	93	Zhuhai	131
Newcastle	94	Zurich	132

# 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 2021	Smart City Rating 2021	Structure 2021	Technology 2021	Smart City Rank 2020	Change
Abu Dhabi	28	BB	BB	BB	42	▲ +14
Abuja	114	D	C	D	107	▼ -7
Amsterdam	17	BBB	A	A	9	▼ -8
Ankara	55	B	B	B	57	▲ +2
Athens	111	C	C	C	99	▼ -12
Auckland	9	A	A	A	4	▼ -5
Bangkok	76	CCC	CC	B	71	▼ -5
Barcelona	58	B	B	BB	49	▼ -9
Beijing	69	CCC	CC	CCC	82	▲ +13
Bengaluru	93	CC	CC	CC	95	▲ +2
Berlin	50	BB	BBB	BB	38	▼ -12
Bilbao	10	BBB	A	BBB	24	▲ +14
Birmingham	51	BB	BB	BBB	40	▼ -11
Bogota	116	D	D	D	92	▼ -24
Bologna	77	CCC	B	CCC	70	▼ -7
Bordeaux	32	BB	BBB	BB	NEW	—
Boston	57	B	BBB	B	36	▼ -21
Bratislava	96	CC	CC	CC	76	▼ -20
Brisbane	16	BBB	A	BBB	14	▼ -2
Brussels	52	BB	BB	BBB	60	▲ +8
Bucharest	106	C	C	CC	87	▼ -19
Budapest	97	CC	CC	CC	77	▼ -20
Buenos Aires	98	CC	C	CC	88	▼ -10
Busan	37	BB	B	BBB	46	▲ +9
Cairo	104	C	D	C	106	▲ +2
Cape Town	105	C	C	C	103	▼ -2
Chengdu	72	CCC	CC	CCC	69	▼ -3
Chicago	59	B	B	BB	41	▼ -18
Chongqing	67	CCC	CCC	CCC	64	▼ -3

City	Smart City Rank 2021	Smart City Rating 2021	Structure 2021	Technology 2021	Smart City Rank 2020	Change
Copenhagen	7	A	AA	A	6	▼ -1
Denver	45	BB	BB	B	35	▼ -10
Dubai	29	BB	BB	BB	43	▲ +14
Dublin	48	BB	BB	BBB	34	▼ -14
Dusseldorf	20	BBB	A	BBB	13	▼ -7
Geneva	8	A	AA	A	7	▼ -1
Glasgow	49	BB	BB	BBB	NEW	—
Gothenburg	46	BB	BBB	BBB	31	▼ -15
Guangzhou	68	CCC	CCC	CCC	68	—
Hamburg	40	BB	A	BBB	22	▼ -18
Hangzhou	66	CCC	CCC	CCC	65	▼ -1
Hanoi	87	CC	CC	CC	84	▼ -3
Hanover	47	BB	A	BB	33	▼ -14
Helsinki	6	A	AA	A	2	▼ -4
Ho Chi Minh City	88	CC	CC	CC	83	▼ -5
Hong Kong	41	BB	BB	A	32	▼ -9
Hyderabad	92	CC	CC	CC	85	▼ -7
Istanbul	94	CC	CC	B	NEW	—
Jakarta	91	CC	CC	CC	94	▲ +3
Kiel	53	BB	BBB	BB	NEW	—
Kiev	82	CCC	CC	CCC	98	▲ +16
Krakow	80	CCC	CCC	CCC	58	▼ -22
Kuala Lumpur	74	CCC	CCC	CCC	54	▼ -20
Lagos	115	D	D	D	109	▼ -6
Lausanne	5	A	AAA	A	NEW	—
Leeds	24	BBB	BBB	A	NEW	—
Lille	44	BB	B	BB	NEW	—
Lisbon	95	CC	CC	CCC	75	▼ -20
London	22	BBB	BBB	A	15	▼ -7

City	Smart City Rank 2021	Smart City Rating 2021	Structure 2021	Technology 2021	Smart City Rank 2020	Change
Los Angeles	31	BB	BB	BBB	26	▼ -5
Lyon	39	BB	BB	BB	51	▲ +12
Madrid	34	BB	B	BBB	45	▲ +11
Makassar	100	C	CC	C	96	▼ -4
Manchester	26	BBB	BBB	BBB	17	▼ -9
Manila	102	C	C	C	104	▲ +2
Marseille	83	CCC	CCC	B	78	▼ -5
Medan	99	C	C	CC	97	▼ -2
Medellin	101	C	C	C	72	▼ -29
Medina	73	CCC	CCC	CCC	NEW	—
Melbourne	19	BBB	BBB	A	20	▲ +1
Mexico City	108	C	C	CC	90	▼ -18
Milan	81	CCC	CCC	CCC	74	▼ -7
Montreal	38	BB	BBB	BB	21	▼ -17
Moscow	54	B	B	B	56	▲ +2
Mumbai	90	CC	CC	CC	93	▲ +3
Munich	14	BBB	AA	BBB	11	▼ -3
Nairobi	113	D	D	D	108	▼ -5
Nanjing	64	CCC	CCC	CCC	66	▲ +2
New Delhi	89	CC	CC	CC	86	▼ -3
New York	12	BBB	BB	BBB	10	▼ -2
Newcastle	21	BBB	A	BBB	23	▲ +2
Osaka	86	CCC	B	CCC	80	▼ -6
Oslo	3	AA	AAA	A	5	▲ +2
Paris	61	B	CCC	BB	61	—
Philadelphia	85	CCC	CCC	B	52	▼ -33
Phoenix	62	B	BB	B	39	▼ -23
Prague	78	CCC	B	CCC	44	▼ -34
Rabat	103	C	C	D	105	▲ +2
Rio de Janeiro	118	D	D	D	102	▼ -16

City	Smart City Rank 2021	Smart City Rating 2021	Structure 2021	Technology 2021	Smart City Rank 2020	Change
Riyadh	30	BB	B	BB	53	▲ +23
Rome	112	C	C	C	101	▼ -11
Rotterdam	27	BBB	BBB	BBB	29	▲ +2
San Francisco	60	B	B	B	27	▼ -33
San José	109	C	C	C	NEW	—
Santiago	110	C	C	CC	91	▼ -19
Sao Paulo	117	D	D	D	100	▼ -17
Seattle	43	BB	BB	BB	37	▼ -6
Seoul	13	BBB	B	A	47	▲ +34
Shanghai	71	CCC	CC	CCC	81	▲ +10
Shenzhen	65	CCC	CCC	CCC	67	▲ +2
Singapore	1	AAA	AAA	AAA	1	—
Sofia	107	C	C	CC	89	▼ -18
St. Petersburg	79	CCC	CCC	CCC	73	▼ -6
Stockholm	25	BBB	A	BBB	16	▼ -9
Sydney	18	BBB	BBB	A	18	—
Taipei City	4	A	A	A	8	▲ +4
Tallinn	56	B	B	CCC	59	▲ +3
Tel Aviv	42	BB	B	BB	50	▲ +8
The Hague	23	BBB	A	BBB	28	▲ +5
Tianjin	70	CCC	CCC	CCC	63	▼ -7
Tokyo	84	CCC	B	CCC	79	▼ -5
Toronto	36	BB	BBB	BB	30	▼ -6
Vancouver	33	BB	BBB	BB	19	▼ -14
Vienna	11	BBB	A	BB	25	▲ +14
Warsaw	75	CCC	CCC	CCC	55	▼ -20
Washington D.C.	35	BB	BBB	BB	12	▼ -23
Zaragoza	15	BBB	A	BB	48	▲ +33
Zhuhai	63	CCC	CCC	CCC	62	▼ -1
Zurich	2	AA	AAA	A	3	▲ +1



## By ranking

Smart City Rank 2021	City	Smart City Rating 2021	Structure 2021	Technology 2021	Smart City Rank 2020	Change
1	Singapore	AAA	AAA	AAA	1	—
2	Zurich	AA	AAA	A	3	▲ +1
3	Oslo	AA	AAA	A	5	▲ +2
4	Taipei City	A	A	A	8	▲ +4
5	Lausanne	A	AAA	A	NEW	—
6	Helsinki	A	AA	A	2	▼ -4
7	Copenhagen	A	AA	A	6	▼ -1
8	Geneva	A	AA	A	7	▼ -1
9	Auckland	A	A	A	4	▼ -5
10	Bilbao	BBB	A	BBB	24	▲ +14
11	Vienna	BBB	A	BB	25	▲ +14
12	New York	BBB	BB	BBB	10	▼ -2
13	Seoul	BBB	B	A	47	▲ +34
14	Munich	BBB	AA	BBB	11	▼ -3
15	Zaragoza	BBB	A	BB	48	▲ +33
16	Brisbane	BBB	A	BBB	14	▼ -2
17	Amsterdam	BBB	A	A	9	▼ -8
18	Sydney	BBB	BBB	A	18	—
19	Melbourne	BBB	BBB	A	20	▲ +1
20	Dusseldorf	BBB	A	BBB	13	▼ -7
21	Newcastle	BBB	A	BBB	23	▲ +2
22	London	BBB	BBB	A	15	▼ -7
23	The Hague	BBB	A	BBB	28	▲ +5
24	Leeds	BBB	BBB	A	NEW	—
25	Stockholm	BBB	A	BBB	16	▼ -9
26	Manchester	BBB	BBB	BBB	17	▼ -9
27	Rotterdam	BBB	BBB	BBB	29	▲ +2
28	Abu Dhabi	BB	BB	BB	42	▲ +14
29	Dubai	BB	BB	BB	43	▲ +14

Smart City Rank 2021	City	Smart City Rating 2021	Structure 2021	Technology 2021	Smart City Rank 2020	Change
30	Riyadh	BB	B	BB	53	▲ +23
31	Los Angeles	BB	BB	BBB	26	▼ -5
32	Bordeaux	BB	BBB	BB	NEW	—
33	Vancouver	BB	BBB	BB	19	▼ -14
34	Madrid	BB	B	BBB	45	▲ +11
35	Washington D.C.	BB	BBB	BB	12	▼ -23
36	Toronto	BB	BBB	BB	30	▼ -6
37	Busan	BB	B	BBB	46	▲ +9
38	Montreal	BB	BBB	BB	21	▼ -17
39	Lyon	BB	BB	BB	51	▲ +12
40	Hamburg	BB	A	BBB	22	▼ -18
41	Hong Kong	BB	BB	A	32	▼ -9
42	Tel Aviv	BB	B	BB	50	▲ +8
43	Seattle	BB	BB	BB	37	▼ -6
44	Lille	BB	B	BB	NEW	—
45	Denver	BB	BB	B	35	▼ -10
46	Gothenburg	BB	BBB	BBB	31	▼ -15
47	Hanover	BB	A	BB	33	▼ -14
48	Dublin	BB	BB	BBB	34	▼ -14
49	Glasgow	BB	BB	BBB	NEW	—
50	Berlin	BB	BBB	BB	38	▼ -12
51	Birmingham	BB	BB	BBB	40	▼ -11
52	Brussels	BB	BB	BBB	60	▲ +8
53	Kiel	BB	BBB	BB	NEW	—
54	Moscow	B	B	B	56	▲ +2
55	Ankara	B	B	B	57	▲ +2
56	Tallinn	B	B	CCC	59	▲ +3
57	Boston	B	BBB	B	36	▼ -21
58	Barcelona	B	B	BB	49	▼ -9

Smart City Rank 2021	City	Smart City Rating 2021	Structure 2021	Technology 2021	Smart City Rank 2020	Change
59	Chicago	B	B	BB	41	▼ -18
60	San Francisco	B	B	B	27	▼ -33
61	Paris	B	CCC	BB	61	—
62	Phoenix	B	BB	B	39	▼ -23
63	Zhuhai	CCC	CCC	CCC	62	▼ -1
64	Nanjing	CCC	CCC	CCC	66	▲ +2
65	Shenzhen	CCC	CCC	CCC	67	▲ +2
66	Hangzhou	CCC	CCC	CCC	65	▼ -1
67	Chongqing	CCC	CCC	CCC	64	▼ -3
68	Guangzhou	CCC	CCC	CCC	68	—
69	Beijing	CCC	CC	CCC	82	▲ +13
70	Tianjin	CCC	CCC	CCC	63	▼ -7
71	Shanghai	CCC	CC	CCC	81	▲ +10
72	Chengdu	CCC	CC	CCC	69	▼ -3
73	Medina	CCC	CCC	CCC	NEW	—
74	Kuala Lumpur	CCC	CCC	CCC	54	▼ -20
75	Warsaw	CCC	CCC	CCC	55	▼ -20
76	Bangkok	CCC	CC	B	71	▼ -5
77	Bologna	CCC	B	CCC	70	▼ -7
78	Prague	CCC	B	CCC	44	▼ -34
79	St. Petersburg	CCC	CCC	CCC	73	▼ -6
80	Krakow	CCC	CCC	CCC	58	▼ -22
81	Milan	CCC	CCC	CCC	74	▼ -7
82	Kiev	CCC	CC	CCC	98	▲ +16
83	Marseille	CCC	CCC	B	78	▼ -5
84	Tokyo	CCC	B	CCC	79	▼ -5
85	Philadelphia	CCC	CCC	B	52	▼ -33
86	Osaka	CCC	B	CCC	80	▼ -6
87	Hanoi	CC	CC	CC	84	▼ -3
88	Ho Chi Minh City	CC	CC	CC	83	▼ -5

Smart City Rank 2021	City	Smart City Rating 2021	Structure 2021	Technology 2021	Smart City Rank 2020	Change
89	Delhi	CC	CC	CC	86	▼ -3
90	Mumbai	CC	CC	CC	93	▲ +3
91	Jakarta	CC	CC	CC	94	▲ +3
92	Hyderabad	CC	CC	CC	85	▼ -7
93	Bengaluru	CC	CC	CC	95	▲ +2
94	Istanbul	CC	CC	B	NEW	—
95	Lisbon	CC	CC	CCC	75	▼ -20
96	Bratislava	CC	CC	CC	76	▼ -20
97	Budapest	CC	CC	CC	77	▼ -20
98	Buenos Aires	CC	C	CC	88	▼ -10
99	Medan	C	C	CC	97	▼ -2
100	Makassar	C	CC	C	96	▼ -4
101	Medellin	C	C	C	72	▼ -29
102	Manila	C	C	C	104	▲ +2
103	Rabat	C	C	D	105	▲ +2
104	Cairo	C	D	C	106	▲ +2
105	Cape Town	C	C	C	103	▼ -2
106	Bucharest	C	C	CC	87	▼ -19
107	Sofia	C	C	CC	89	▼ -18
108	Mexico City	C	C	CC	90	▼ -18
109	San José	C	C	C	NEW	—
110	Santiago	C	C	CC	91	▼ -19
111	Athens	C	C	C	99	▼ -12
112	Rome	C	C	C	101	▼ -11
113	Nairobi	D	D	D	108	▼ -5
114	Abuja	D	C	D	107	▼ -7
115	Lagos	D	D	D	109	▼ -6
116	Bogota	D	D	D	92	▼ -24
117	Sao Paulo	D	D	D	100	▼ -17
118	Rio de Janeiro	D	D	D	102	▼ -16

# User's Guide to the Smart City Index

## Smart City Ranking

SMART CITY RANKING

28

Out of 118



42 in 2020

SMART CITY RATING

BB

BB in 2020

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 118 cities measured, based upon the Rating and its components.

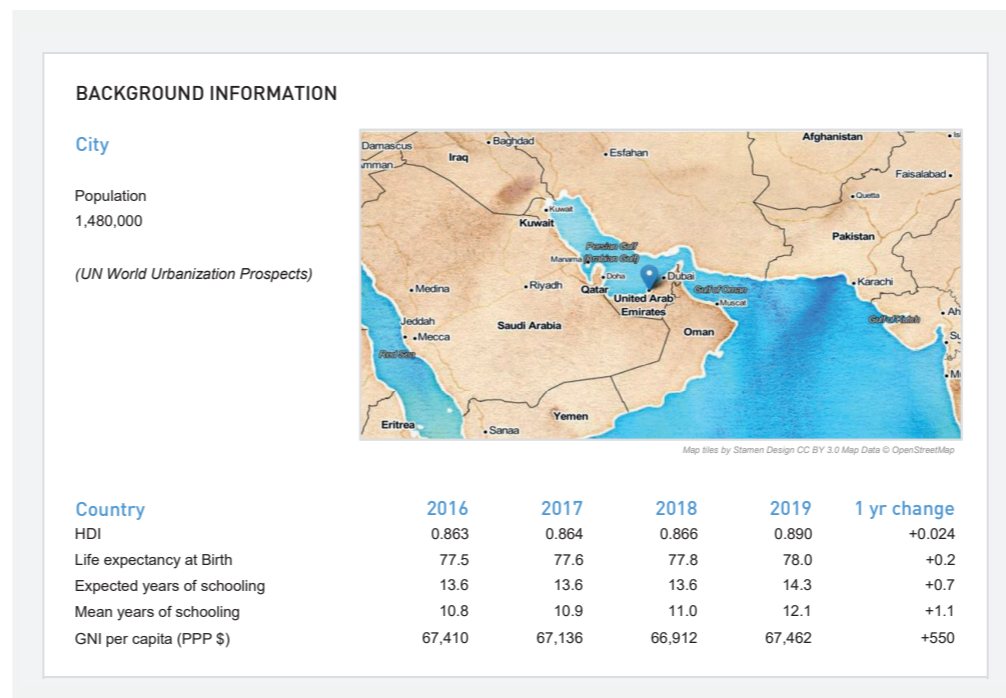
**Group:** Each city is assigned to one of four groups, based upon its HDI values.

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

The Methodology section provides the exact procedure for these calculations.

The 2021 Ranking and Rating are also shown for the 109 cities included in last year's index.

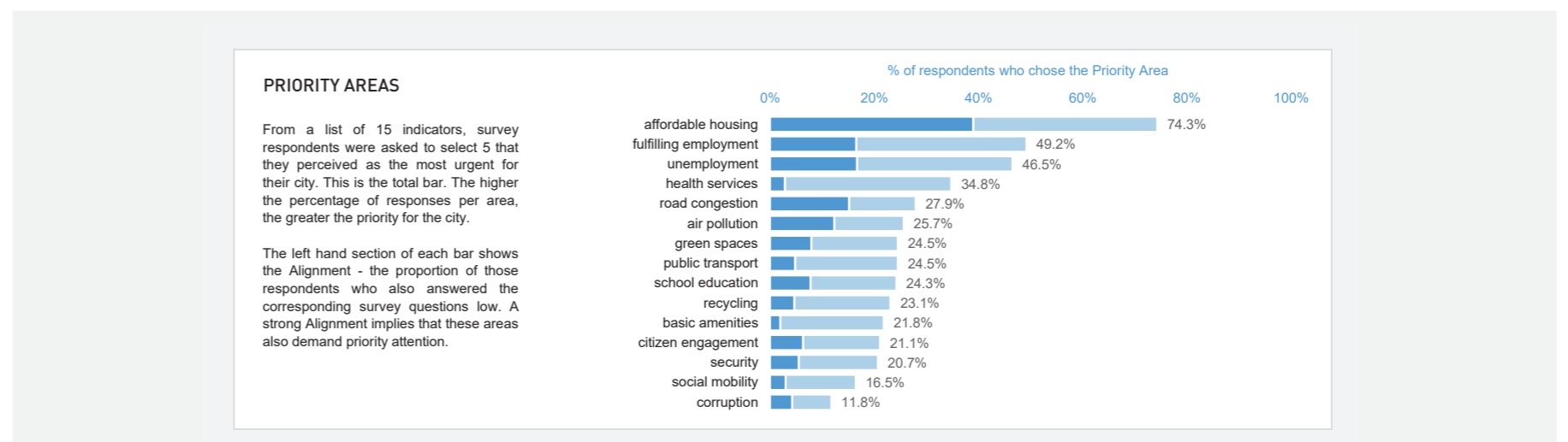
## Background Information



This presents the *UN Human Development Index* and its four components of the parent economy of the city, as well as the city's position on the map. For Taipei City, the data is calculated using the same methodology and comparable data. This section also presents the population of the city as defined through the *UN World Urbanization Prospects* for the majority of cities or *Eurostat* for a number of European cities.

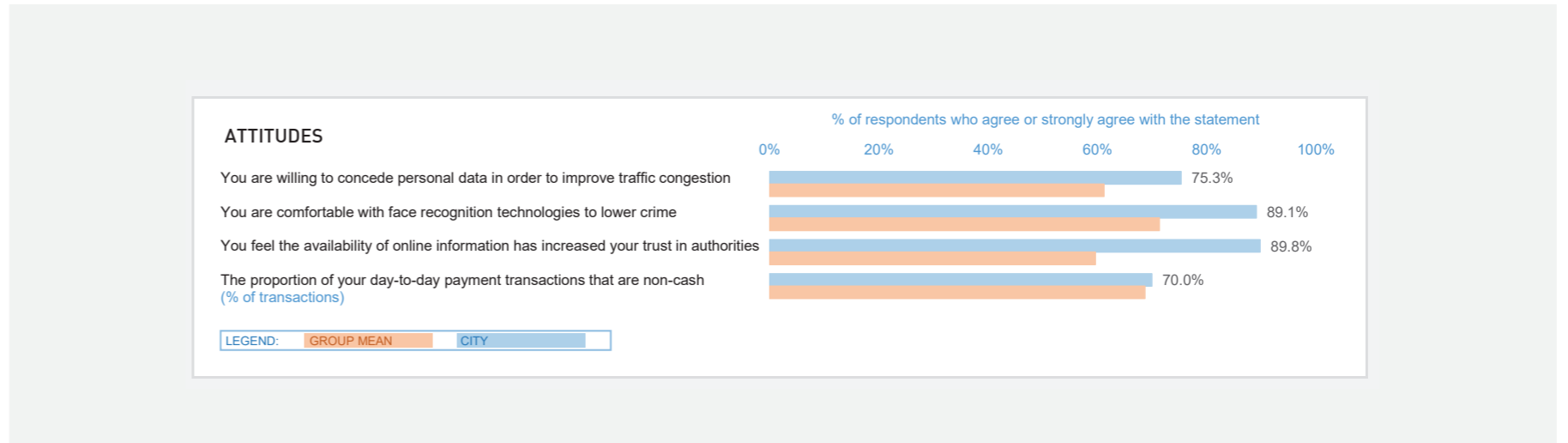
## Priority Areas

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



# Attitudes

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

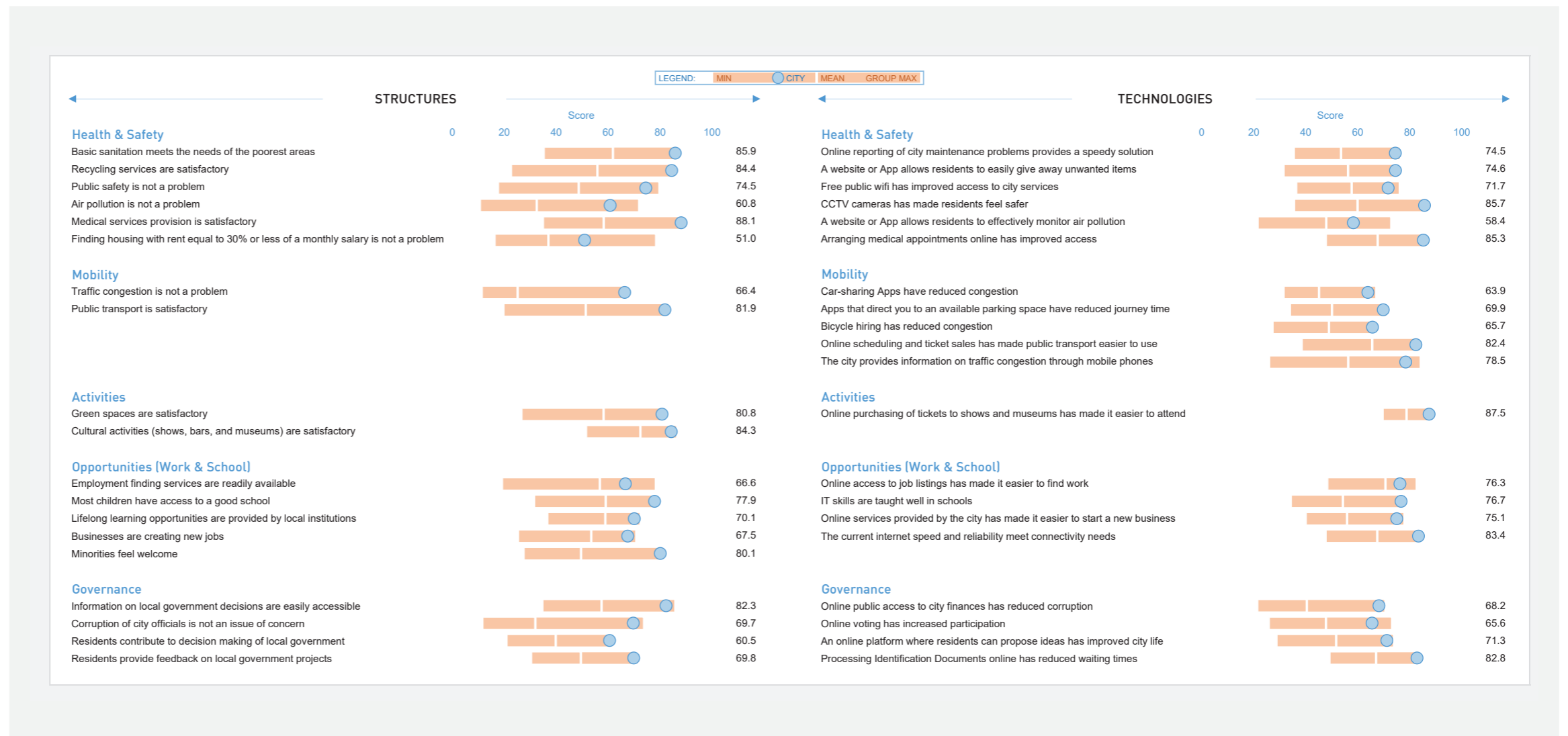


# Structures and Technologies

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

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

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



# Methodology in a nutshell

1. The IMD-SUTD Smart City Index (SCI) assesses the perceptions of residents on issues related to structures and technology applications available to them in their city.
2. This edition of the SCI ranks 118 cities worldwide by capturing the perceptions of 120 residents in each city. The final score for each city is computed by using the perceptions of the last three years of the survey, with the weight of 3:2:1 for 2021:2020:2019.
3. There are two pillars for which perceptions from residents are solicited: The Structures pillar referring to the existing infrastructure of the cities, and the Technology pillar describing the technological provisions and services available to the inhabitants.
4. Each pillar is evaluated over five key areas: health and safety, mobility, activities, opportunities, and governance.
5. The cities are distributed into four groups based on the UN Human Development Index (HDI) score of the economy they are part of.
6. Within each HDI group, cities are assigned a 'rating scale' (AAA to D) based on the perceptions-score of a given city compared to the scores of all other cities within the same group.

For group 1 (highest HDI quartile), scale  
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 118)
  - a rating for each pillar and overall





CITY PROFILES



# Abu Dhabi

## SMART CITY RANKING

28

Out of 118



42 in 2020

## SMART CITY RATING

BB

BB in 2020

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,480,000

(UN World Urbanization Prospects)



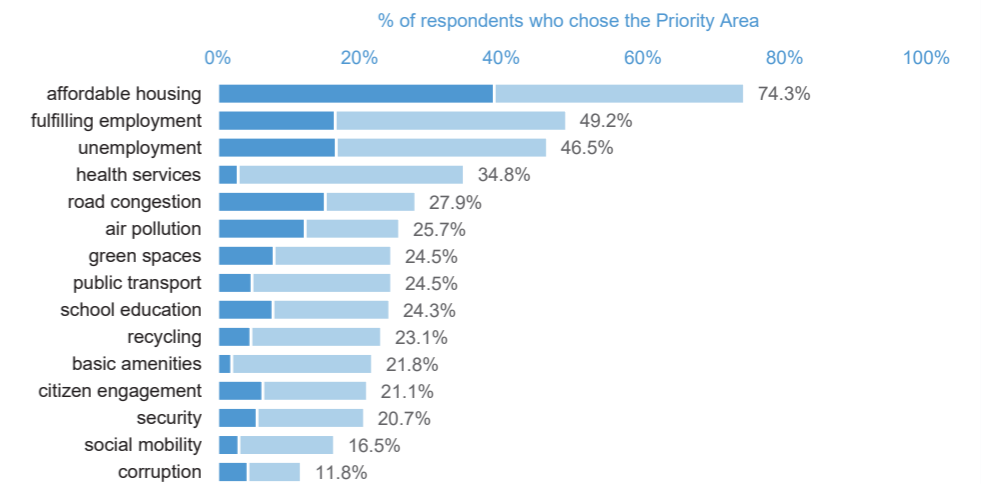
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.863	0.864	0.866	0.890	+0.024
Life expectancy at Birth	77.5	77.6	77.8	78.0	+0.2
Expected years of schooling	13.6	13.6	13.6	14.3	+0.7
Mean years of schooling	10.8	10.9	11.0	12.1	+1.1
GNI per capita (PPP \$)	67,410	67,136	66,912	67,462	+550

### PRIORITY AREAS

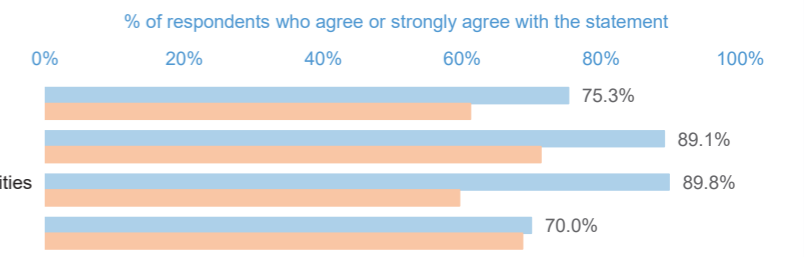
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

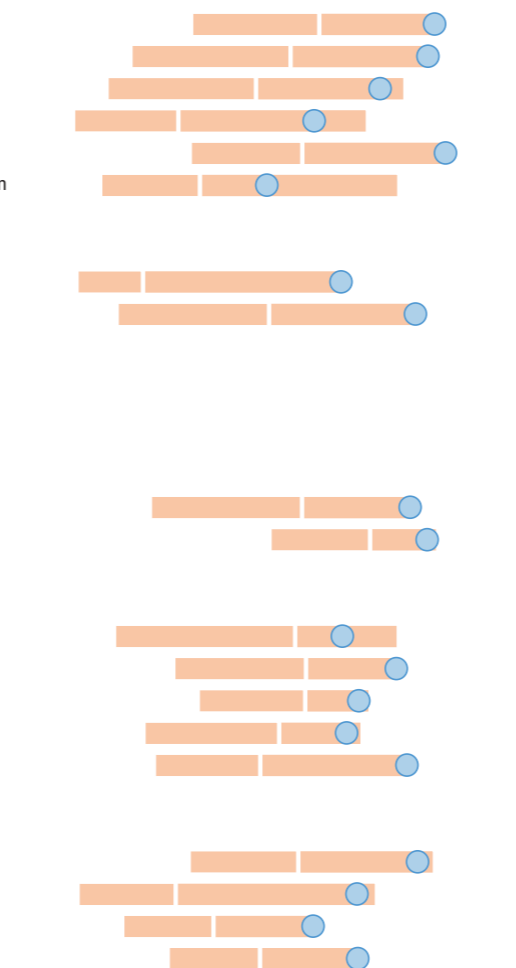
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### 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

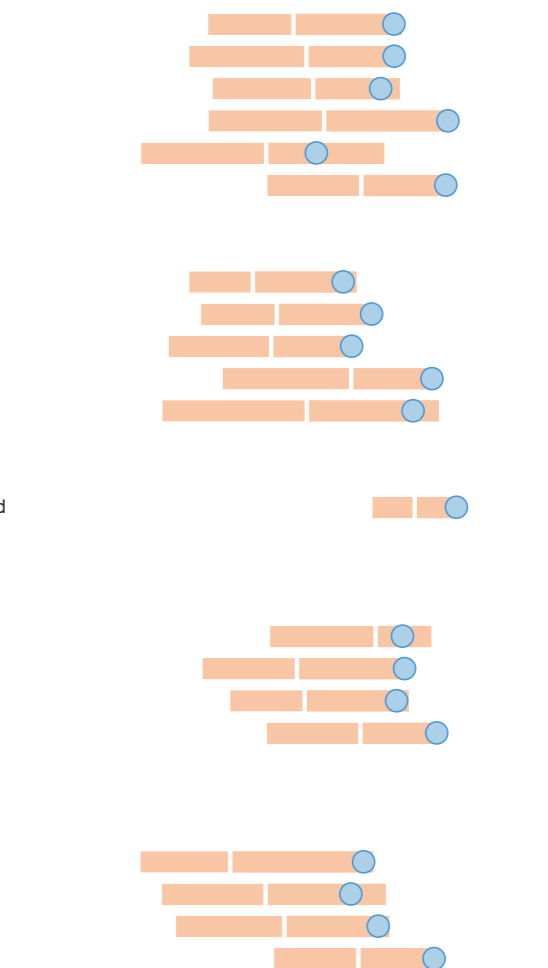
#### Opportunities (Work & School)

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



# Abuja

## SMART CITY RANKING

114

Out of 118



107 in 2020

## SMART CITY RATING

D

D in 2020

## FACTOR RATINGS

C

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,280,000

(UN World Urbanization Prospects)

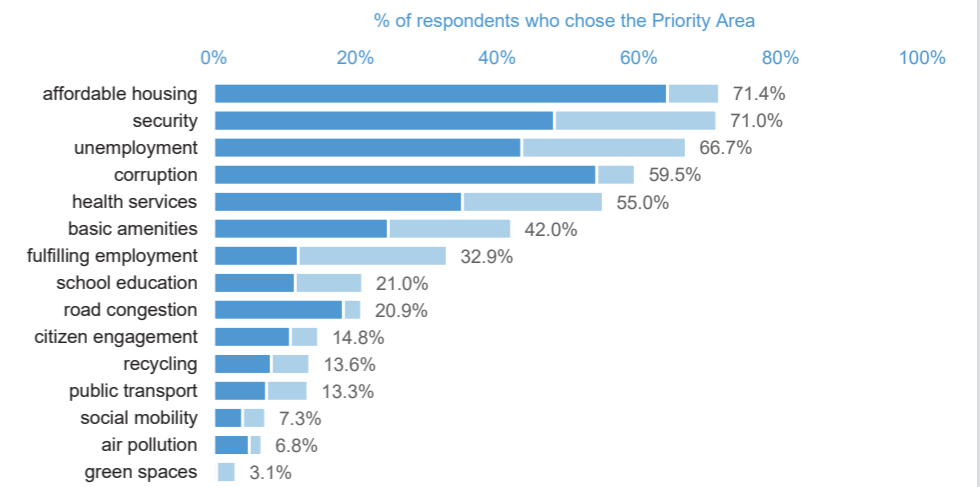


Country	2016	2017	2018	2019	1 yr change
HDI	0.528	0.533	0.534	0.539	+0.005
Life expectancy at Birth	53.5	54.0	54.3	54.7	+0.4
Expected years of schooling	9.5	9.7	9.7	10.0	+0.3
Mean years of schooling	6.3	6.5	6.5	6.7	+0.2
GNI per capita (PPP \$)	5,336	5,203	5,086	4,910	-176

### PRIORITY AREAS

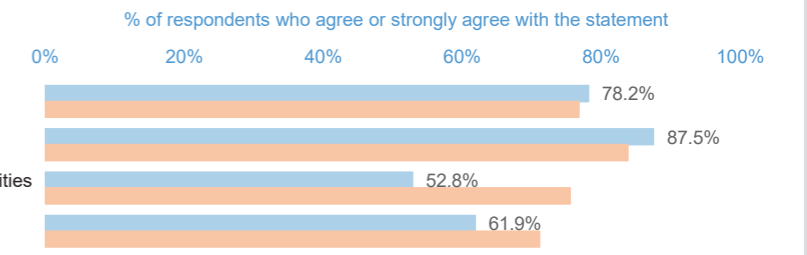
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

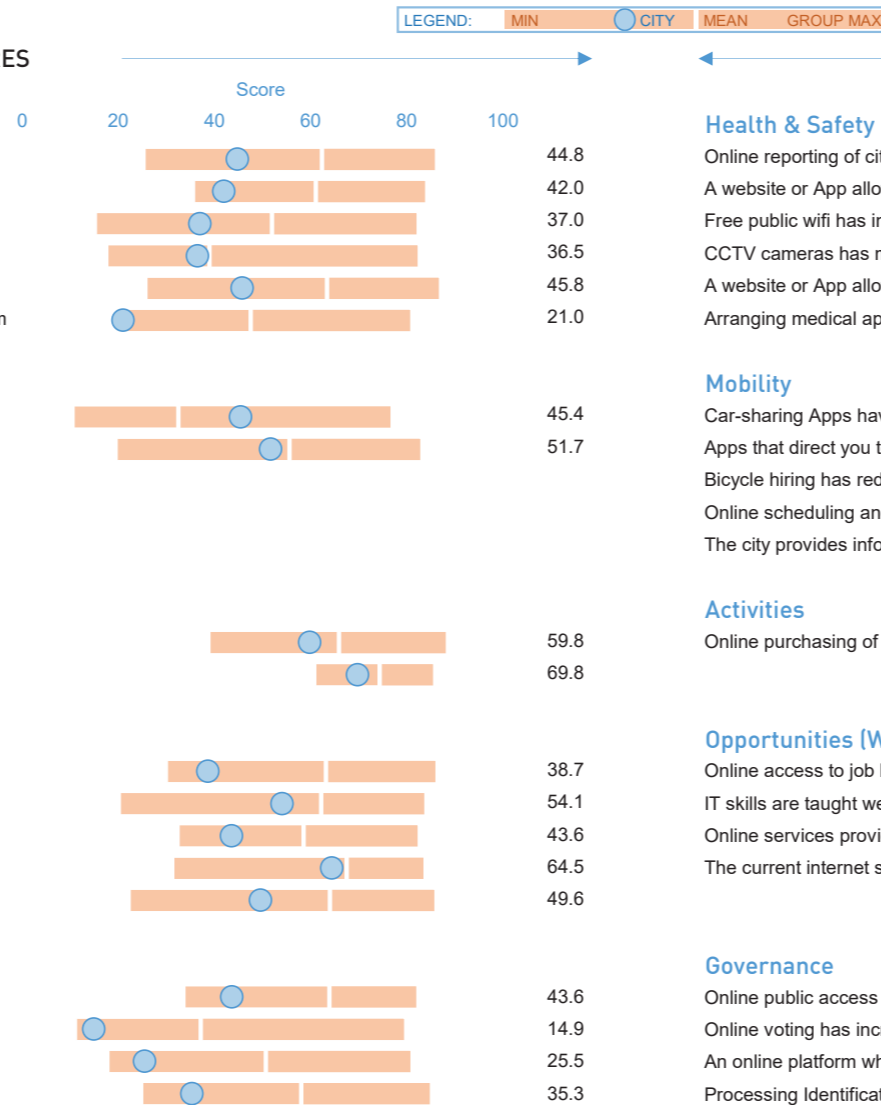
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

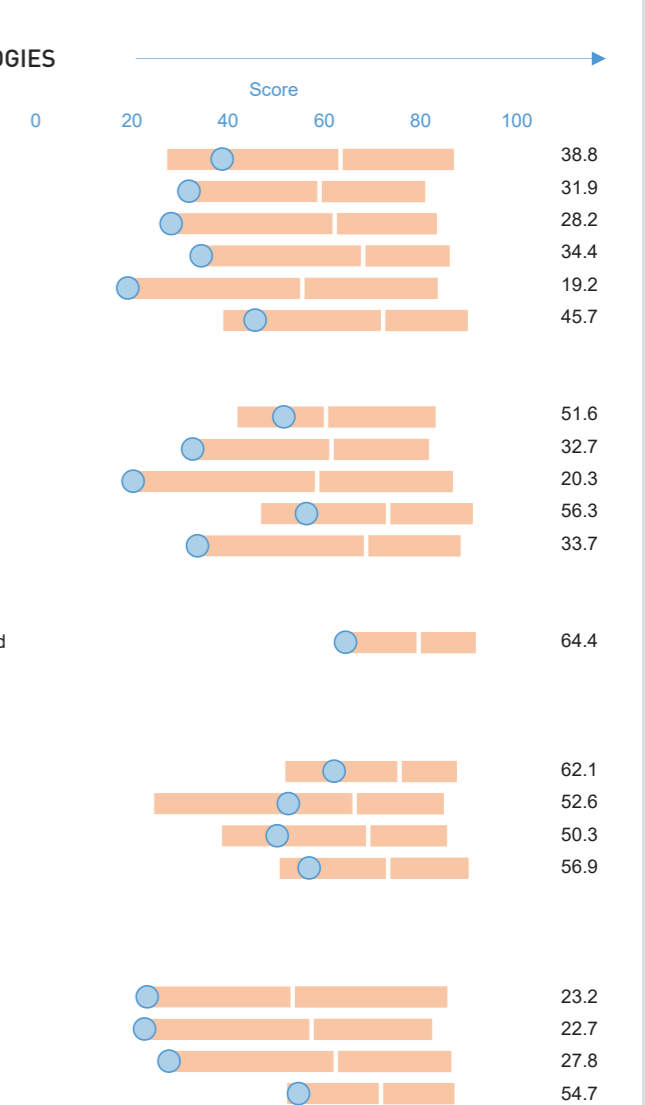
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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

17

Out of 118



9 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,000,000

(Eurostat)

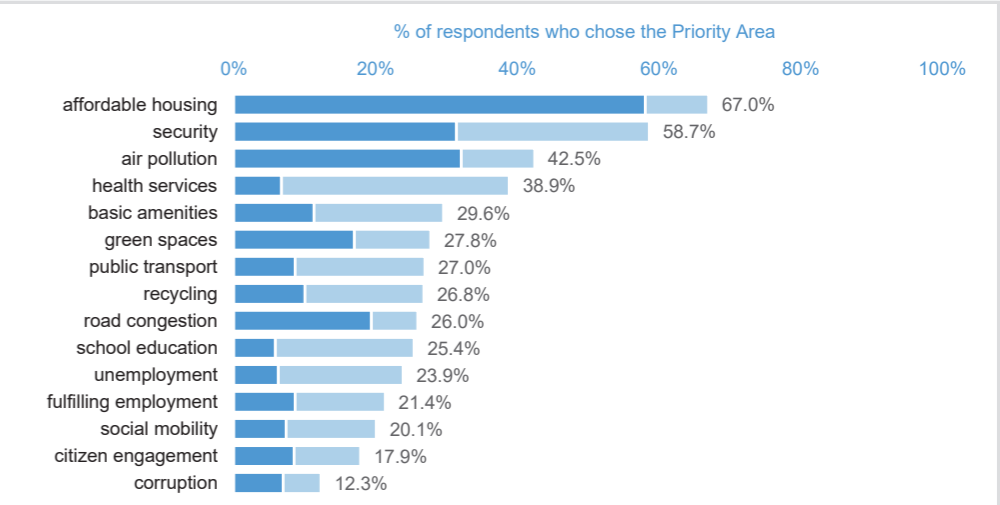


Country	2016	2017	2018	2019	1 yr change
HDI	0.929	0.932	0.934	0.944	+0.010
Life expectancy at Birth	81.9	82.0	82.1	82.3	+0.2
Expected years of schooling	18.0	18.0	18.0	18.5	+0.5
Mean years of schooling	12.2	12.2	12.2	12.4	+0.2
GNI per capita (PPP \$)	47,008	48,994	50,013	57,707	+7,694

### PRIORITY AREAS

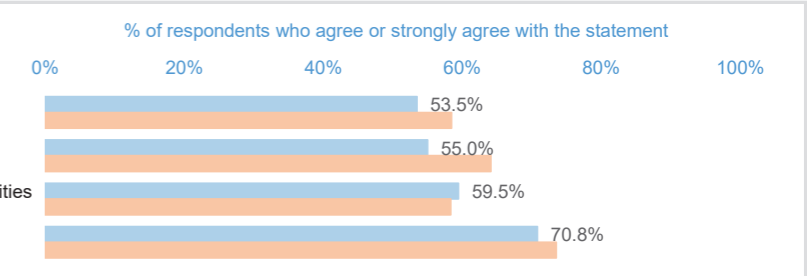
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.



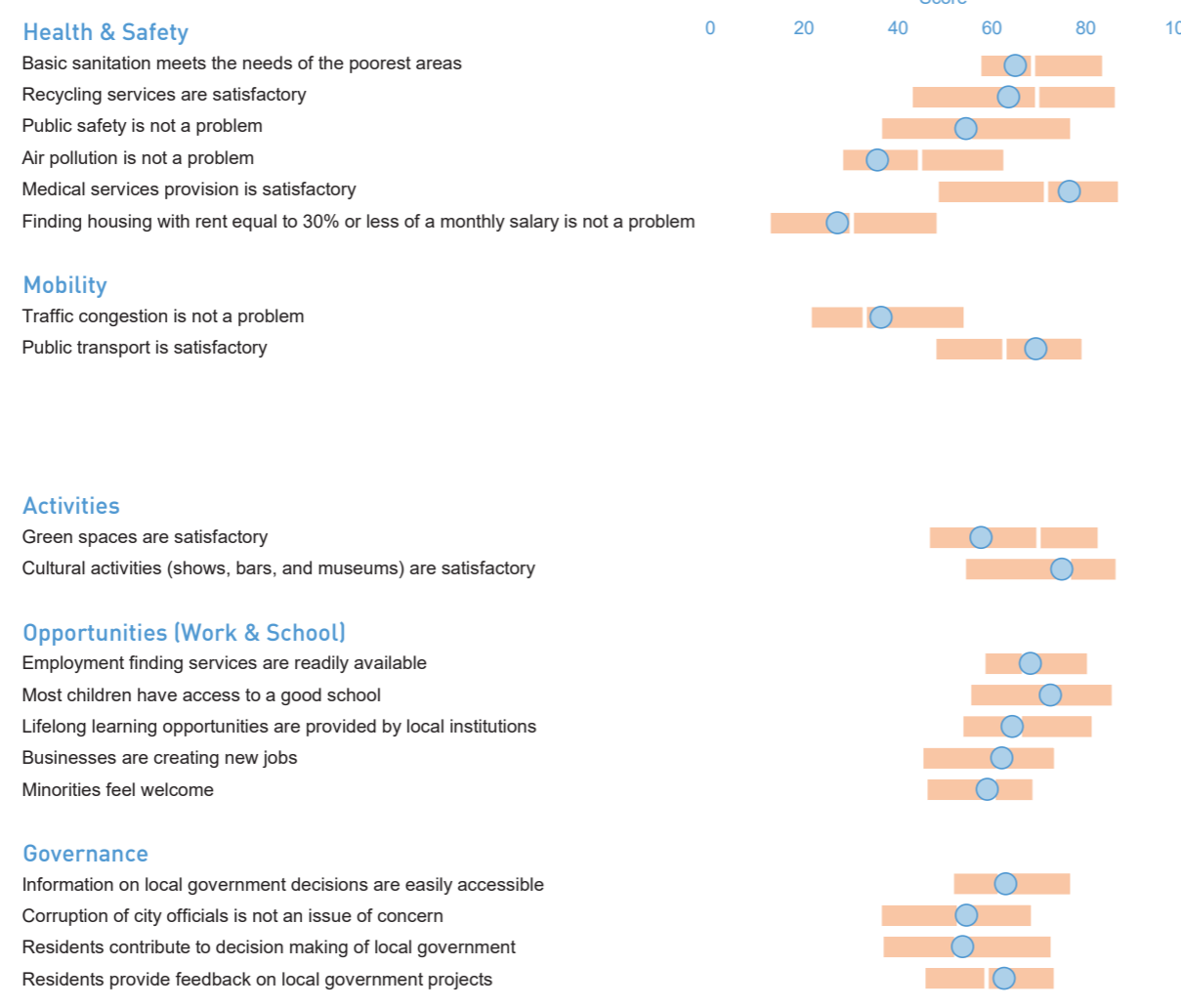
### ATTITUDES

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



### TECHNOLOGIES



# Ankara

## SMART CITY RANKING

55

Out of 118



57 in 2020

## SMART CITY RATING

B

B in 2020

## FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
5,120,000

(UN World Urbanization Prospects)

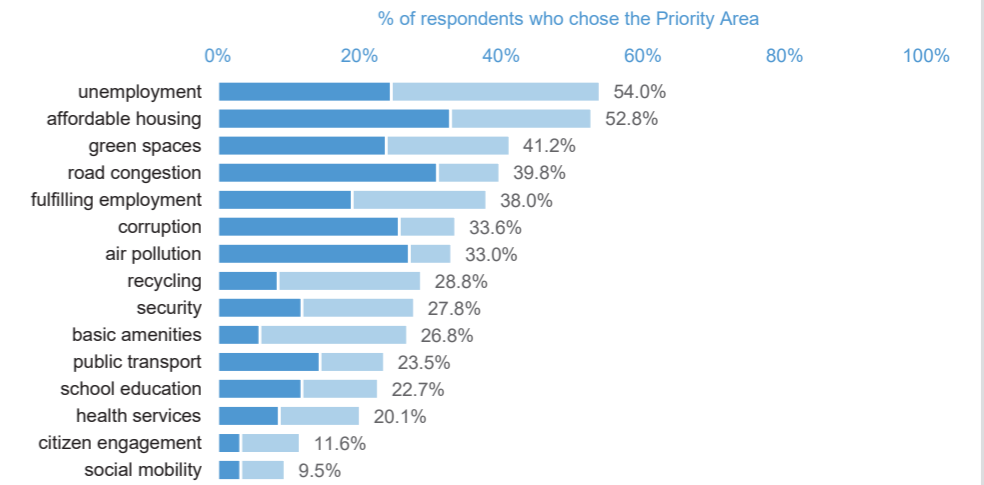


Country	2016	2017	2018	2019	1 yr change
HDI	0.800	0.805	0.807	0.820	+0.013
Life expectancy at Birth	76.9	77.2	77.4	77.7	+0.3
Expected years of schooling	16.4	16.4	16.4	16.6	+0.2
Mean years of schooling	7.6	7.7	7.7	8.1	+0.4
GNI per capita (PPP \$)	23,409	24,702	24,905	27,701	+2,796

### PRIORITY AREAS

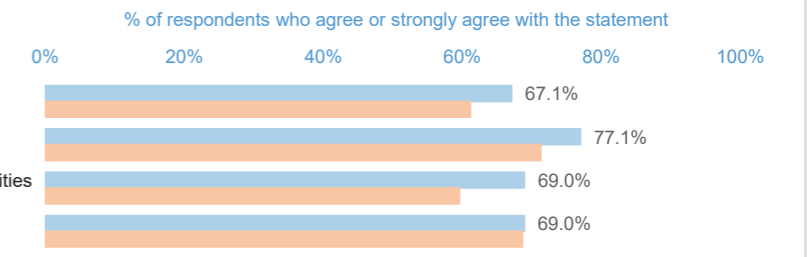
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

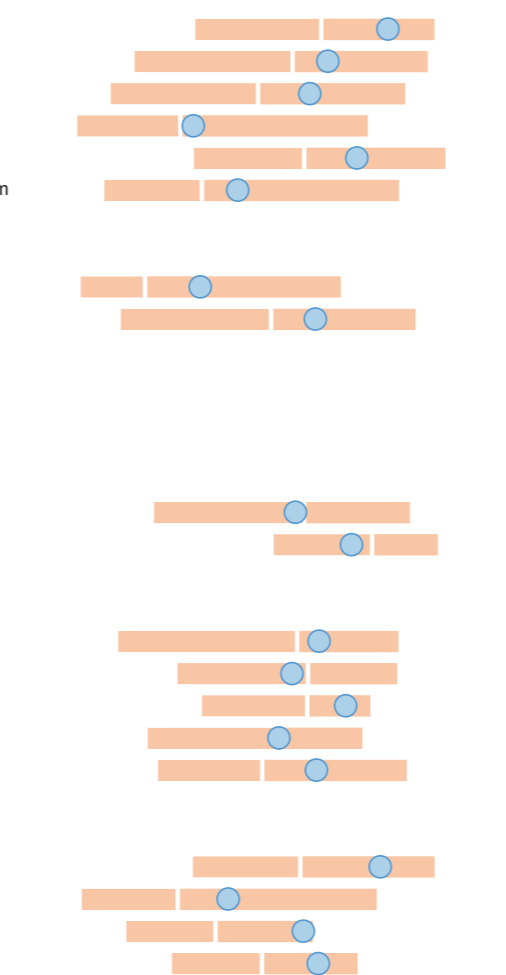
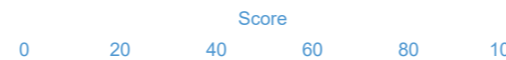
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

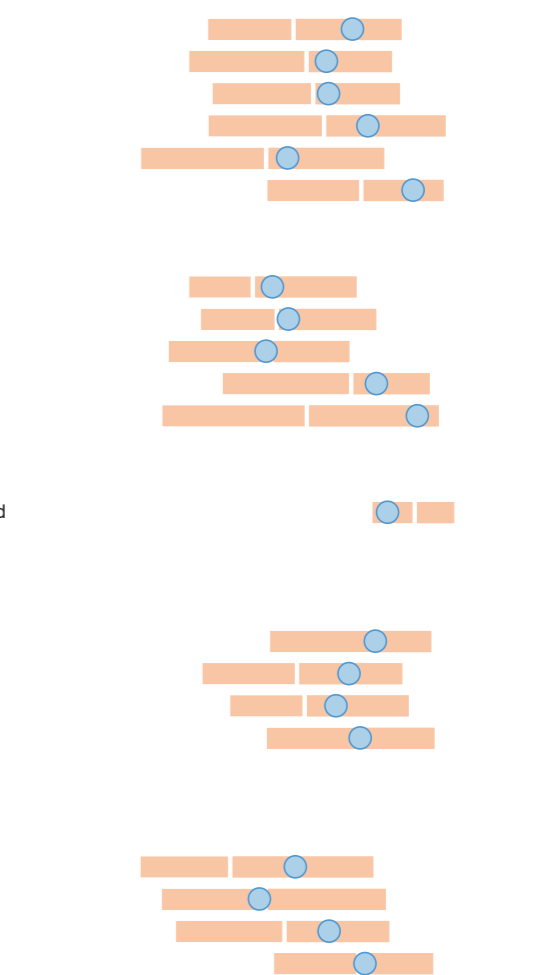
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Athens

## SMART CITY RANKING

111

Out of 118



99 in 2020

## SMART CITY RATING

C

C in 2020

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,150,000

(UN World Urbanization Prospects)



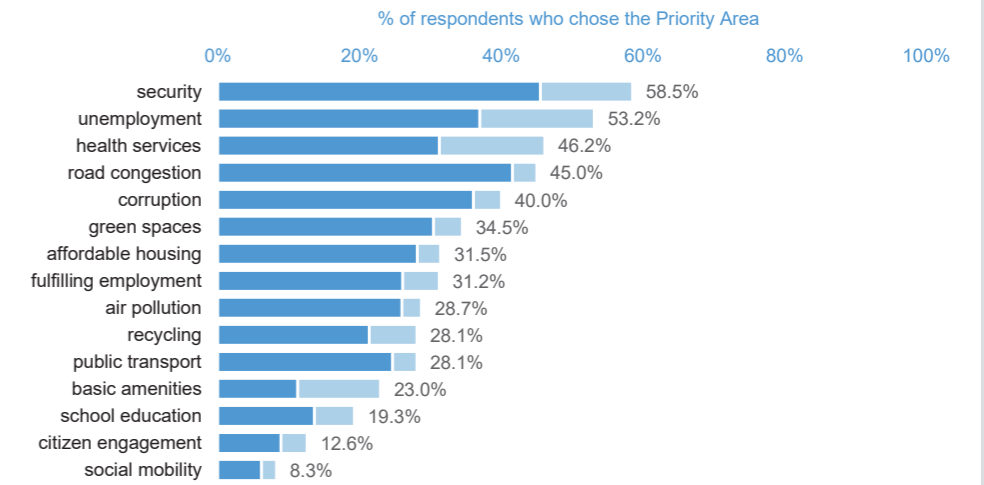
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.866	0.871	0.872	0.888	+0.016
Life expectancy at Birth	81.7	81.9	82.1	82.2	+0.1
Expected years of schooling	17.3	17.3	17.3	17.9	+0.6
Mean years of schooling	10.3	10.5	10.5	10.6	+0.1
GNI per capita (PPP \$)	24,187	24,647	24,909	30,155	+5,246

### PRIORITY AREAS

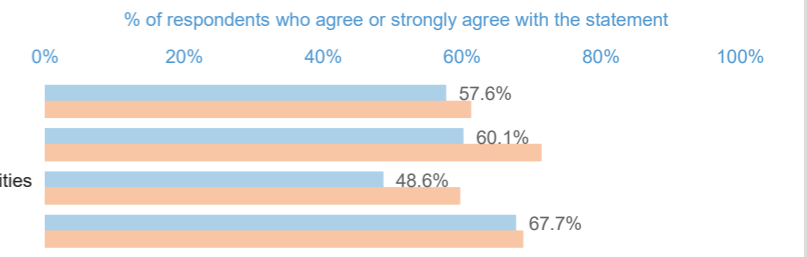
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

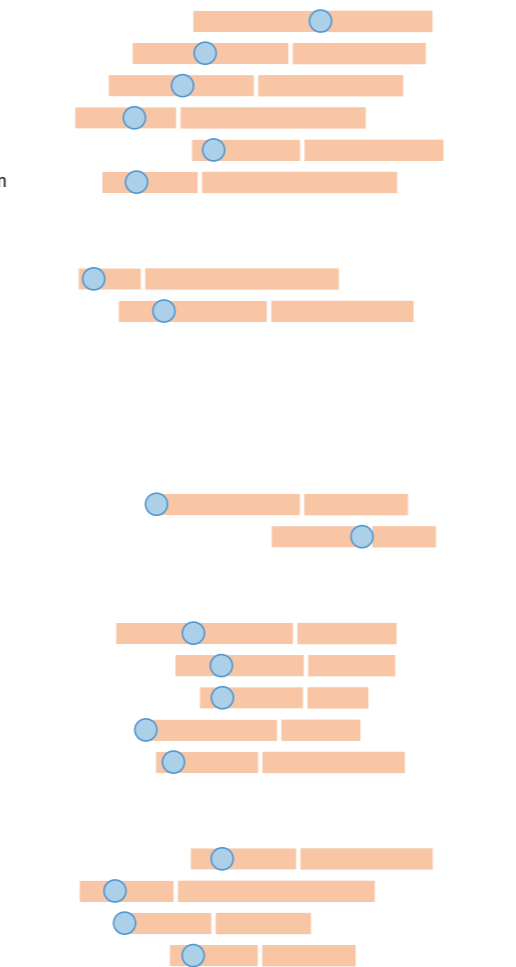
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

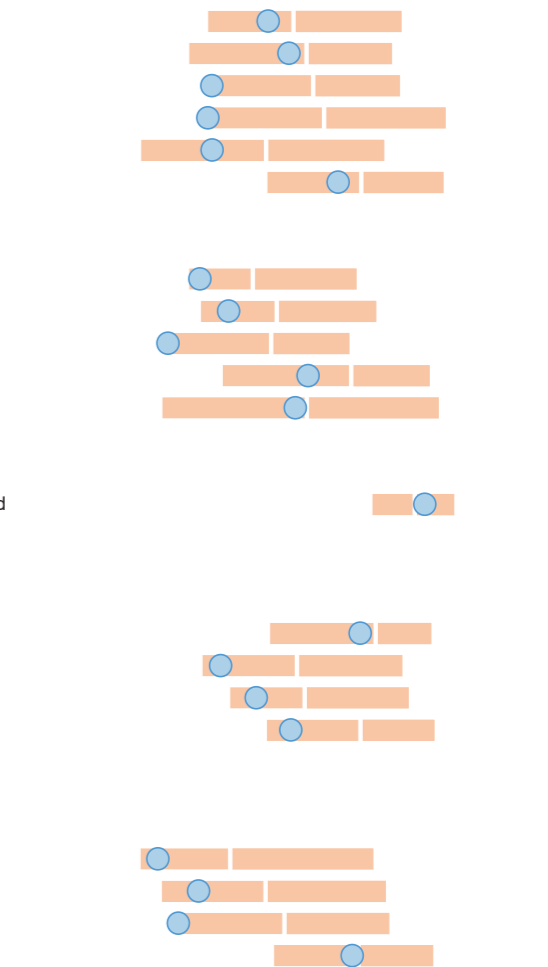
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Auckland

## SMART CITY RANKING

9

Out of 118



4 in 2020

## SMART CITY RATING

A

AA in 2020

## FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,610,000

(UN World Urbanization Prospects)



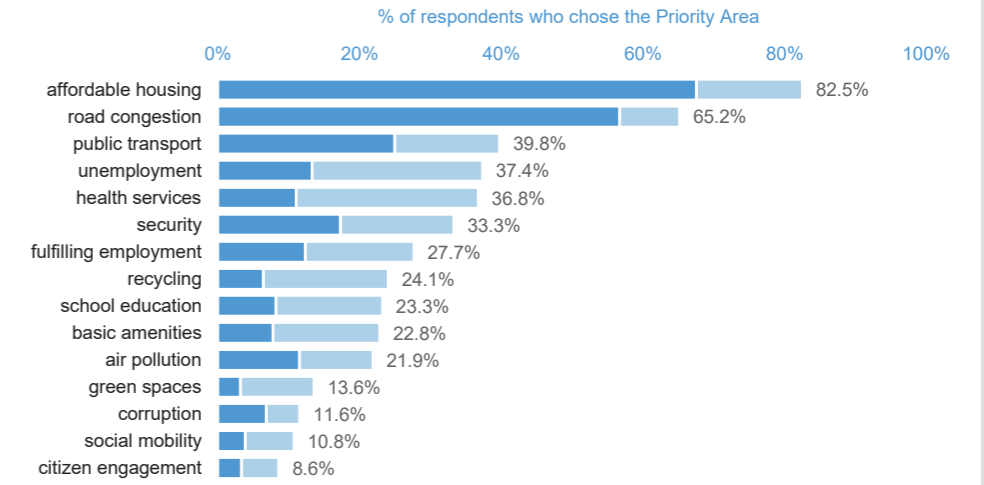
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.917	0.920	0.921	0.931	+0.010
Life expectancy at Birth	81.9	82.0	82.1	82.3	+0.2
Expected years of schooling	18.1	18.8	18.8	18.8	+0.0
Mean years of schooling	12.6	12.7	12.7	12.8	+0.1
GNI per capita (PPP \$)	34,538	34,668	35,108	40,799	+5,691

### PRIORITY AREAS

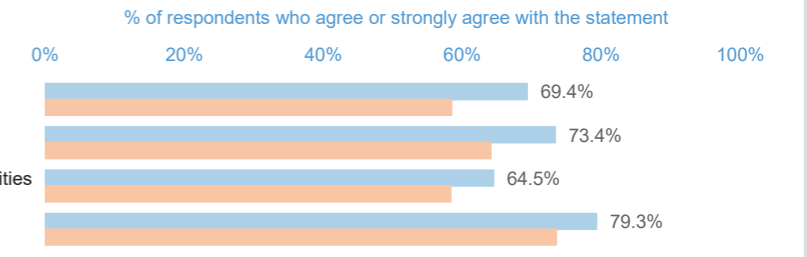
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

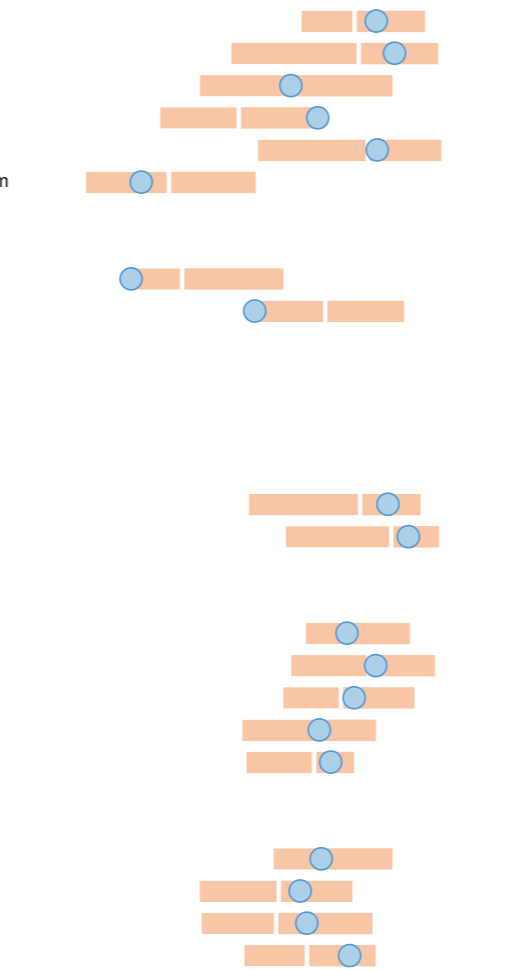
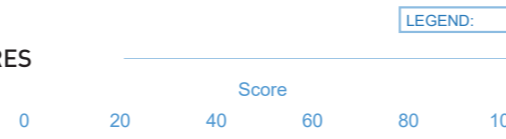
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

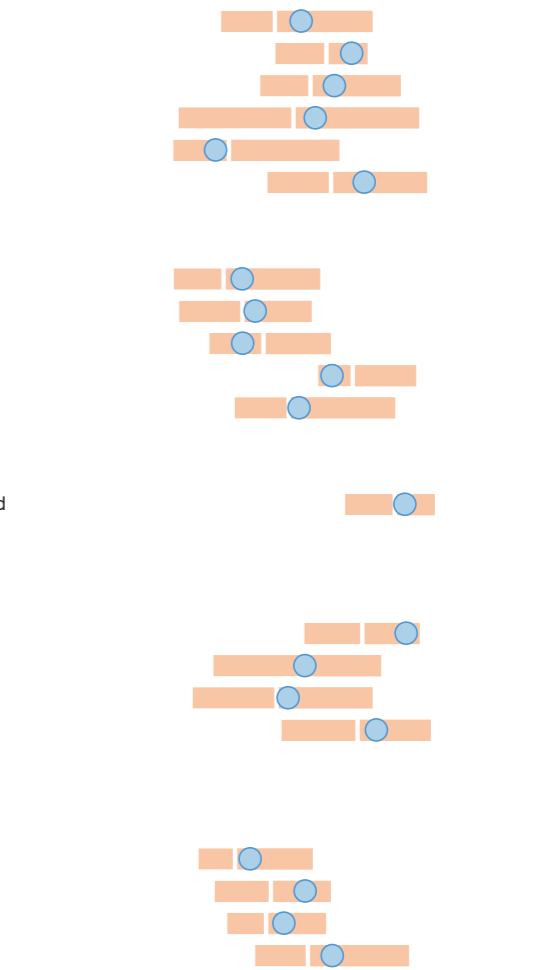
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Bangkok

## SMART CITY RANKING

76

Out of 118



71 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CC

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
10,540,000

(UN World Urbanization Prospects)

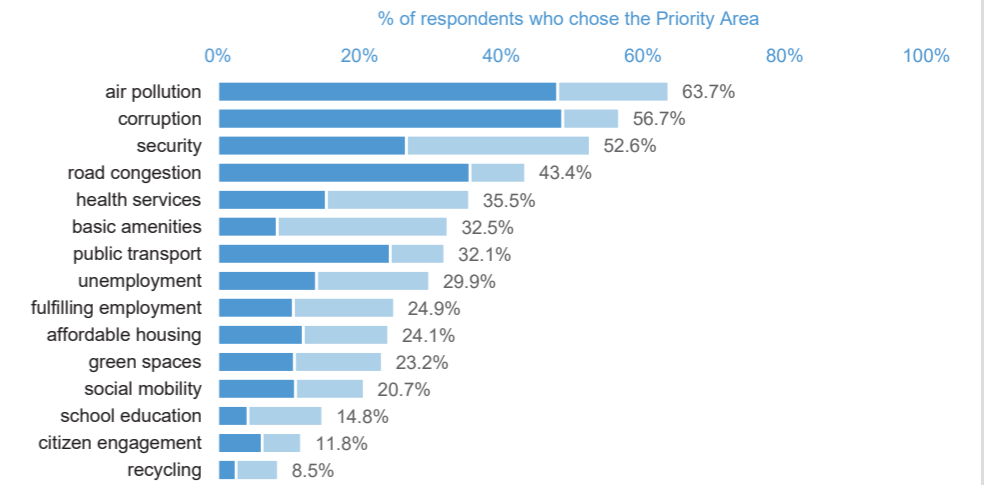


Country	2016	2017	2018	2019	1 yr change
HDI	0.753	0.762	0.765	0.777	+0.012
Life expectancy at Birth	76.4	76.7	76.9	77.2	+0.3
Expected years of schooling	14.3	14.7	14.7	15.0	+0.3
Mean years of schooling	7.6	7.7	7.7	7.9	+0.2
GNI per capita (PPP \$)	14,966	15,548	16,129	17,781	+1,652

### PRIORITY AREAS

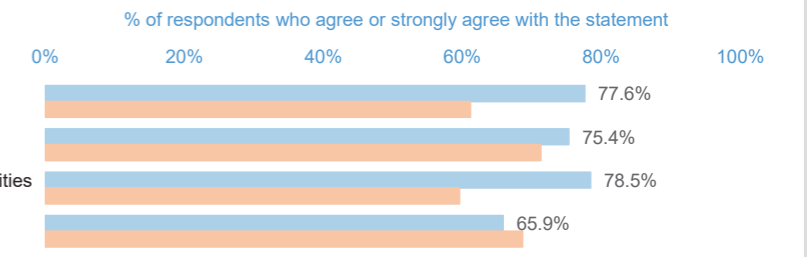
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

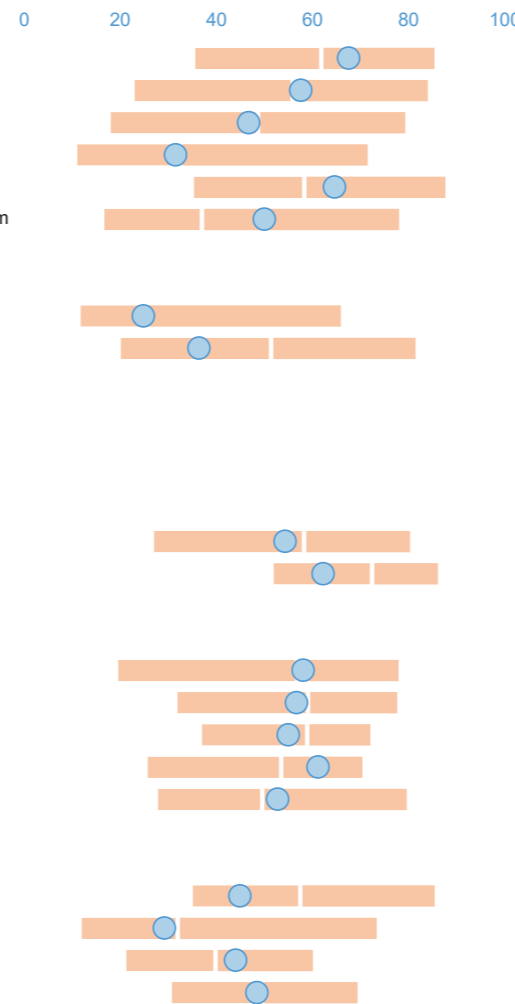
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

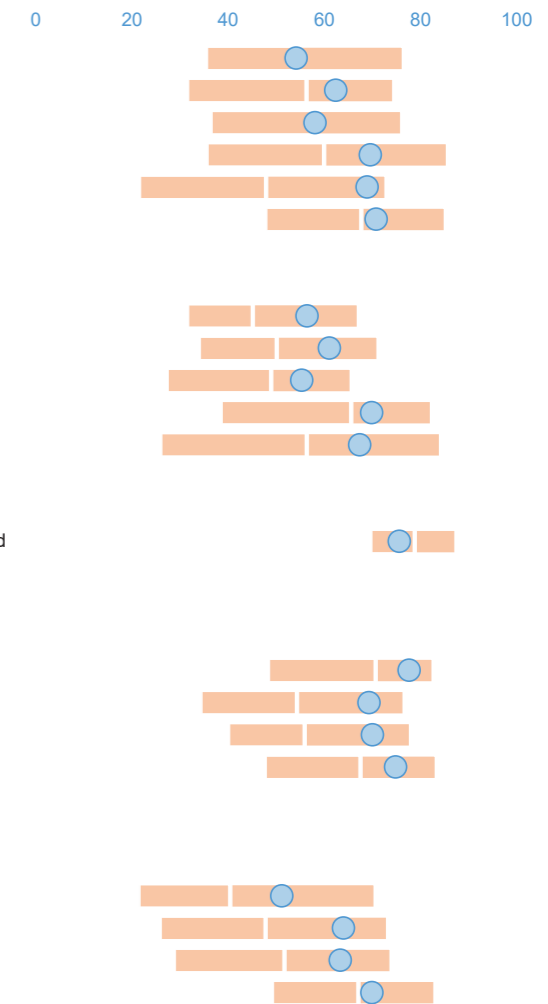
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Barcelona

## SMART CITY RANKING

58

Out of 118



49 in 2020

## SMART CITY RATING

B

BB in 2020

## FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,640,000

(Eurostat)



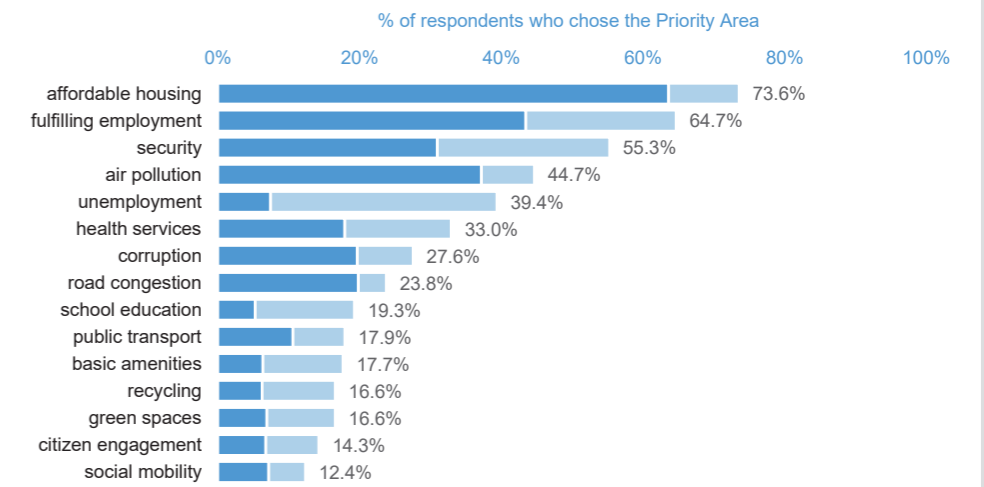
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

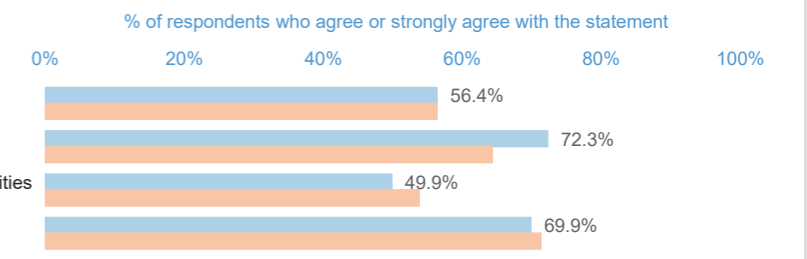
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

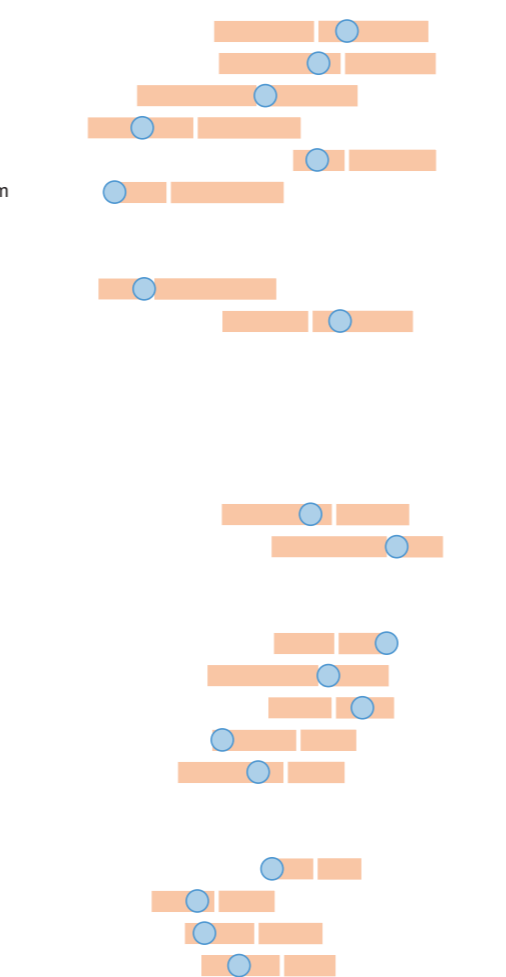
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

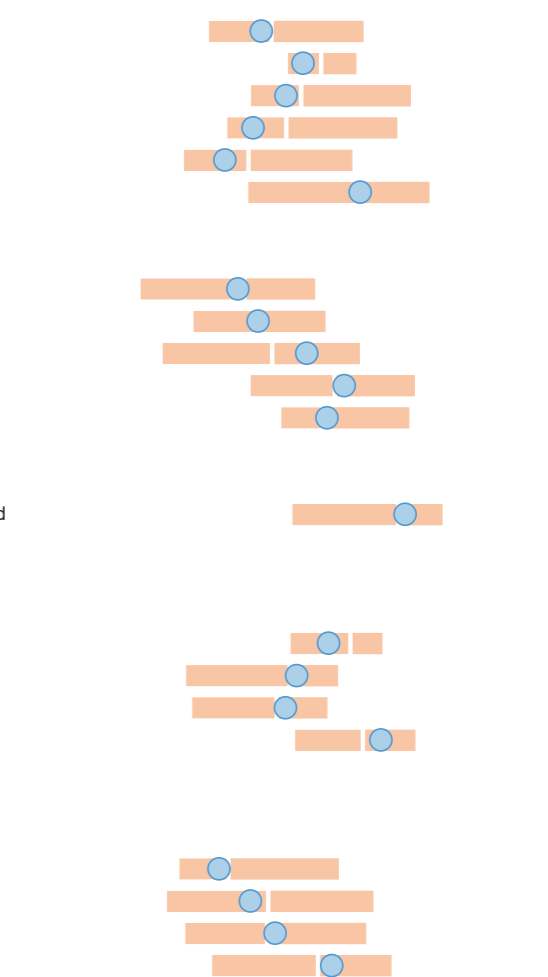
#### Opportunities (Work & School)

- 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



# Beijing

## SMART CITY RANKING

69

Out of 118



82 in 2020

## SMART CITY RATING

CCC

CC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
20,460,000

(UN World Urbanization Prospects)

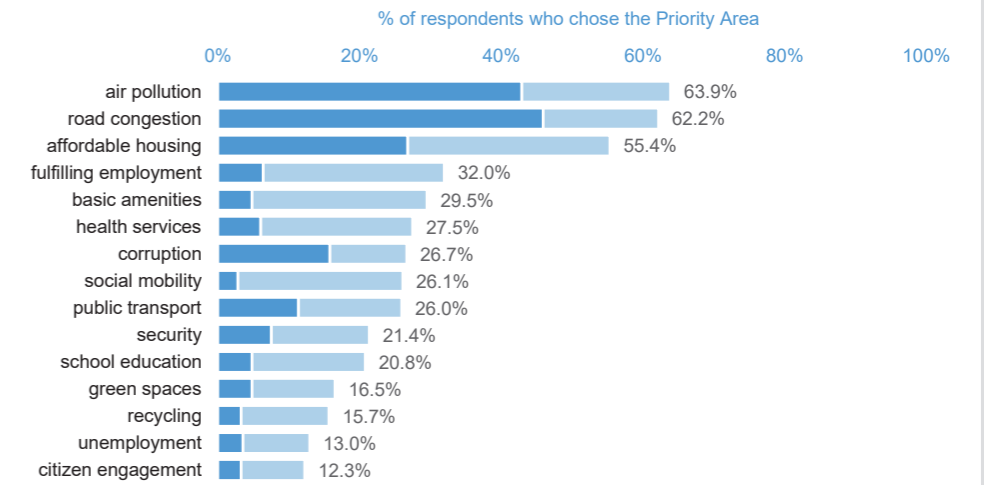


Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

### PRIORITY AREAS

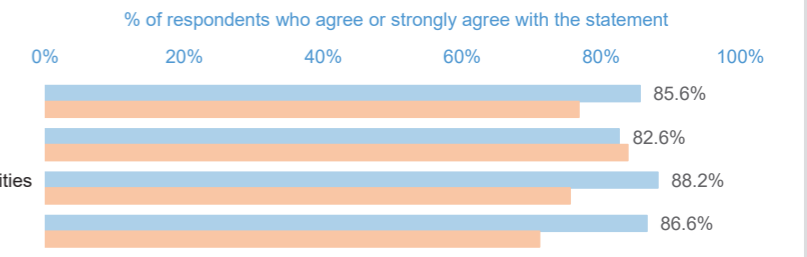
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

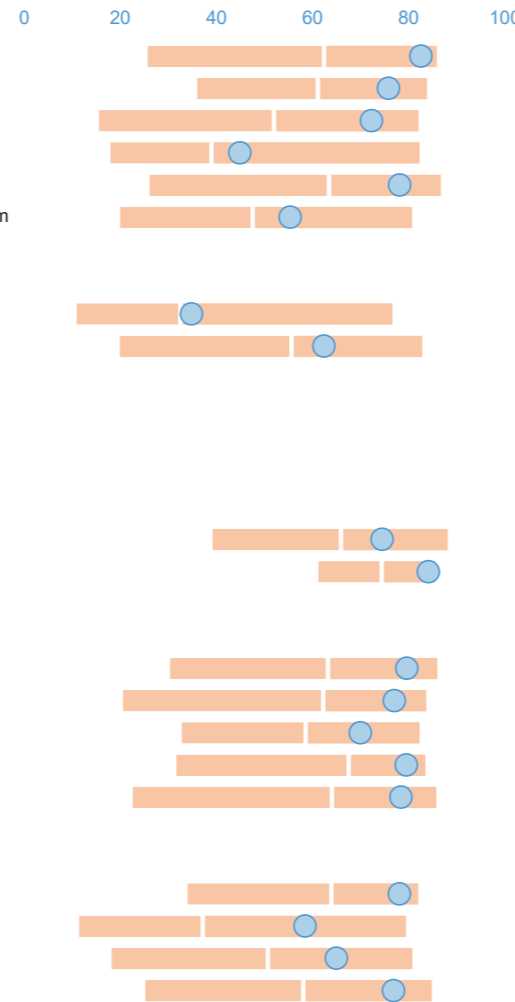
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

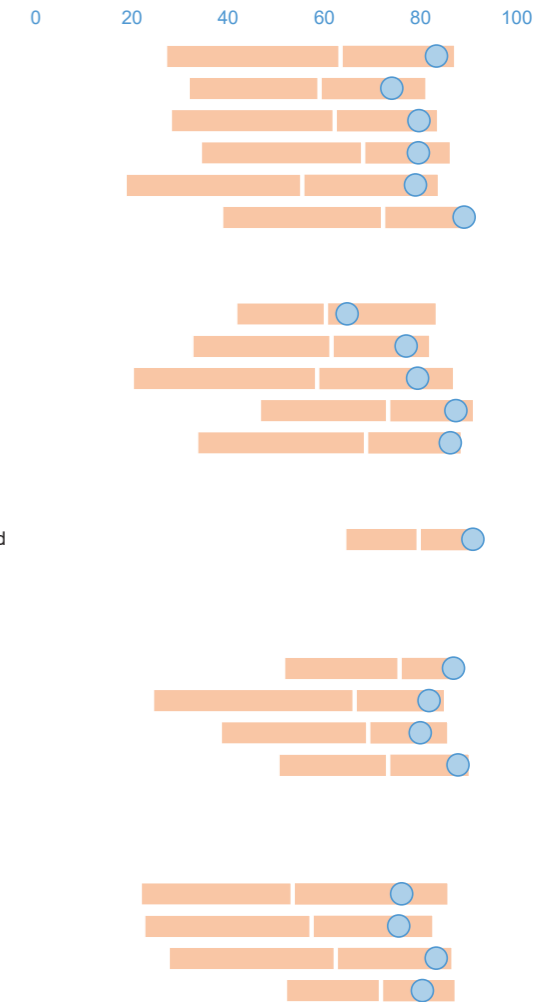
#### Opportunities (Work & School)

- 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



# Bengaluru

## SMART CITY RANKING

93

Out of 118



95 in 2020

## SMART CITY RATING

CC

C in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

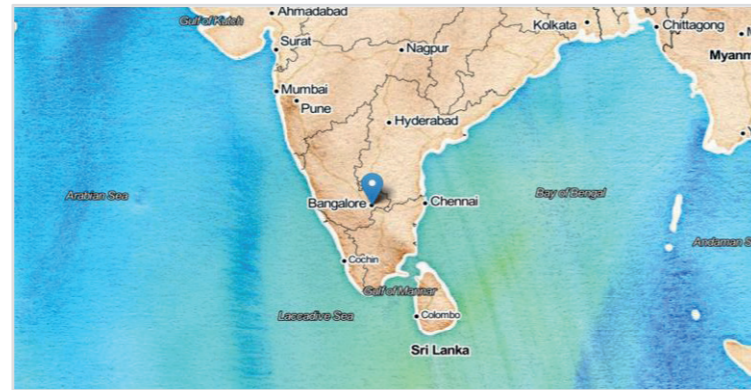
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
12,330,000

(UN World Urbanization Prospects)



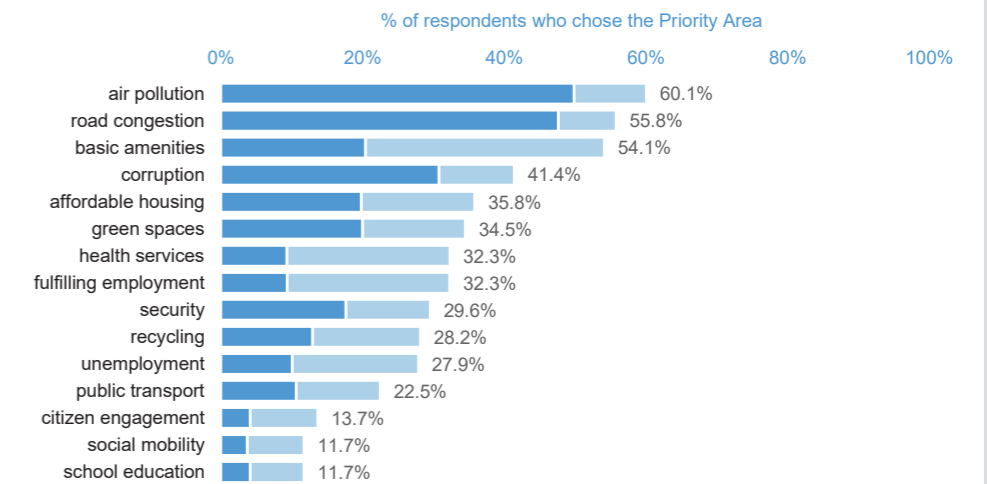
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.637	0.643	0.647	0.645	-0.002
Life expectancy at Birth	68.9	69.2	69.4	69.7	+0.3
Expected years of schooling	12.3	12.3	12.3	12.2	-0.1
Mean years of schooling	6.4	6.5	6.5	6.5	+0.0
GNI per capita (PPP \$)	6,075	6,446	6,829	6,681	-148

### PRIORITY AREAS

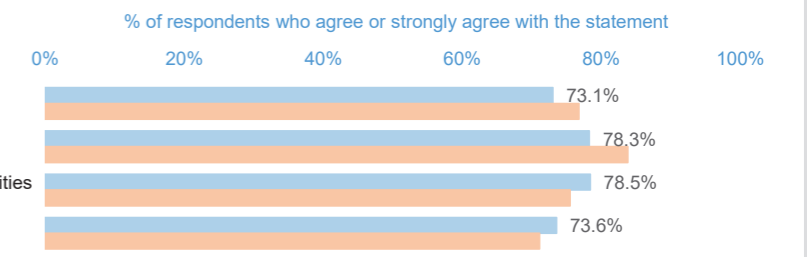
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

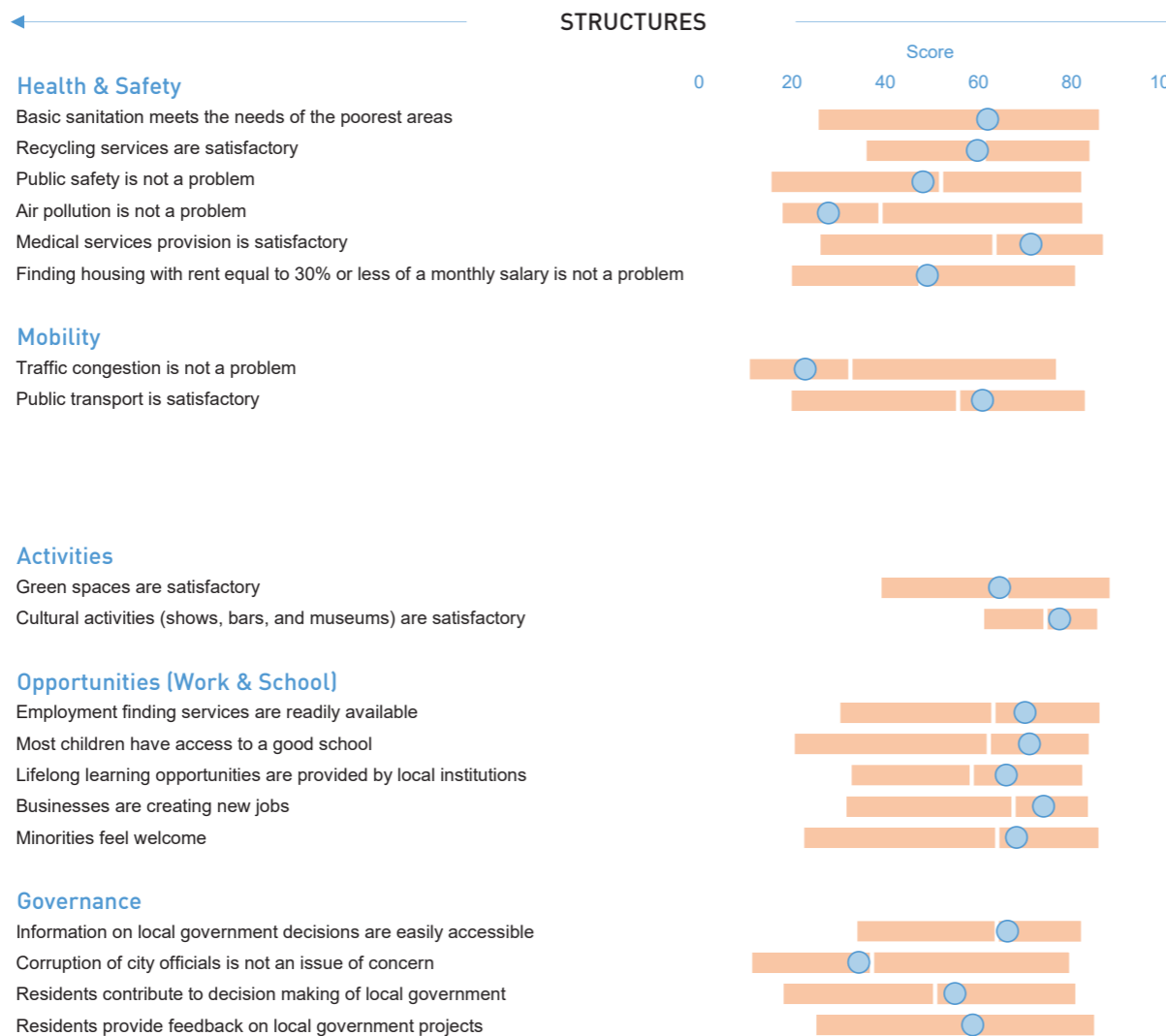


### ATTITUDES

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

50

Out of 118



38 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,670,000

(Eurostat)

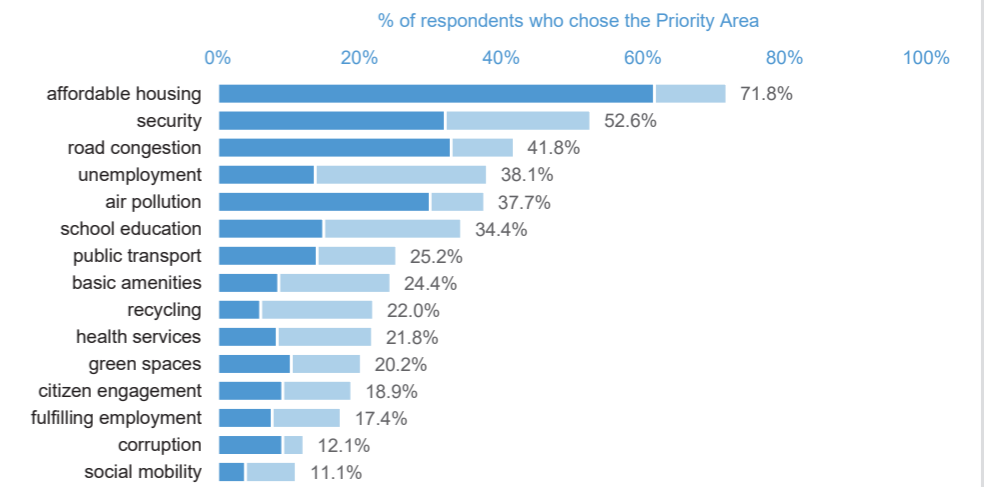


Country	2016	2017	2018	2019	1 yr change
HDI	0.936	0.938	0.939	0.947	+0.008
Life expectancy at Birth	80.9	81.0	81.2	81.3	+0.1
Expected years of schooling	17.1	17.1	17.1	17.0	-0.1
Mean years of schooling	14.1	14.1	14.1	14.2	+0.1
GNI per capita (PPP \$)	45,577	46,438	46,946	55,314	+8,368

### PRIORITY AREAS

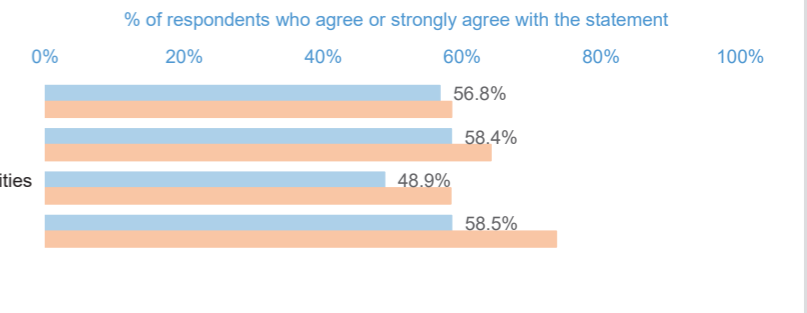
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



68.7

70.1

51.6

38.6

69.6

26.7

34.3

59.0

64.2

74.1

59.2

55.4

57.2

57.2

57.1

53.1

48.6

46.5

53.6

### 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



38.4

62.4

49.2

42.4

36.2

56.8

35.8

40.8

44.0

64.6

53.4

72.6

61.8

45.1

43.5

55.9

37.1

49.1

45.1

51.0

## SMART CITY RANKING

# 10

Out of 118



24 in 2020

## SMART CITY RATING

# BBB

BBB in 2020

## FACTOR RATINGS

# A

STRUCTURES

# BBB

TECHNOLOGIES

## GROUP

# 2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
350,000

(Eurostat)

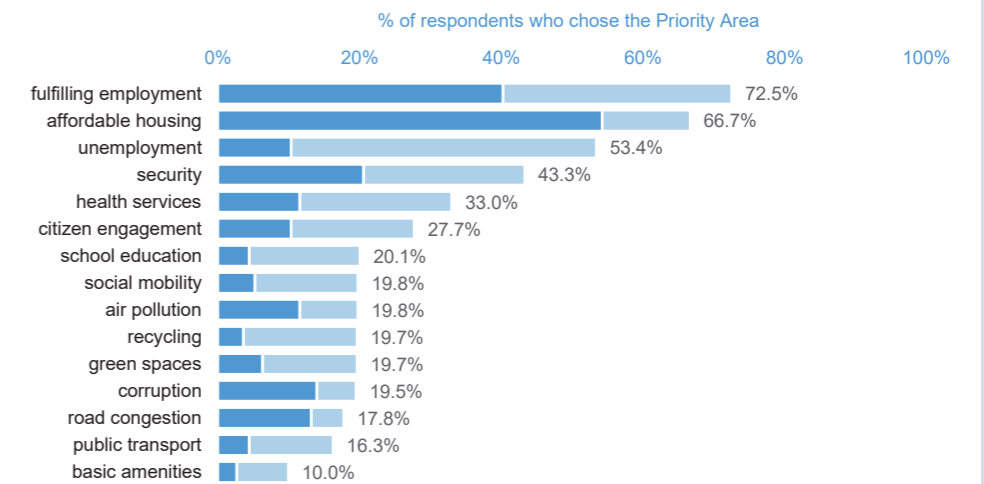


Country	2016	2017	2018	2019	1 yr change
HDI	0.888	0.891	0.893	0.904	+0.011
Life expectancy at Birth	83.1	83.3	83.4	83.6	+0.2
Expected years of schooling	17.8	17.9	17.9	17.6	-0.3
Mean years of schooling	9.8	9.8	9.8	10.3	+0.5
GNI per capita (PPP \$)	33,379	34,226	35,041	40,975	+5,934

## PRIORITY AREAS

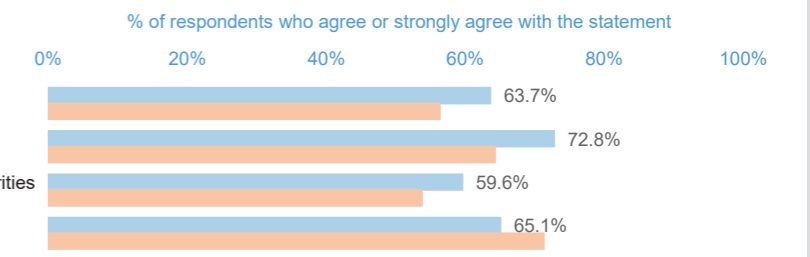
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

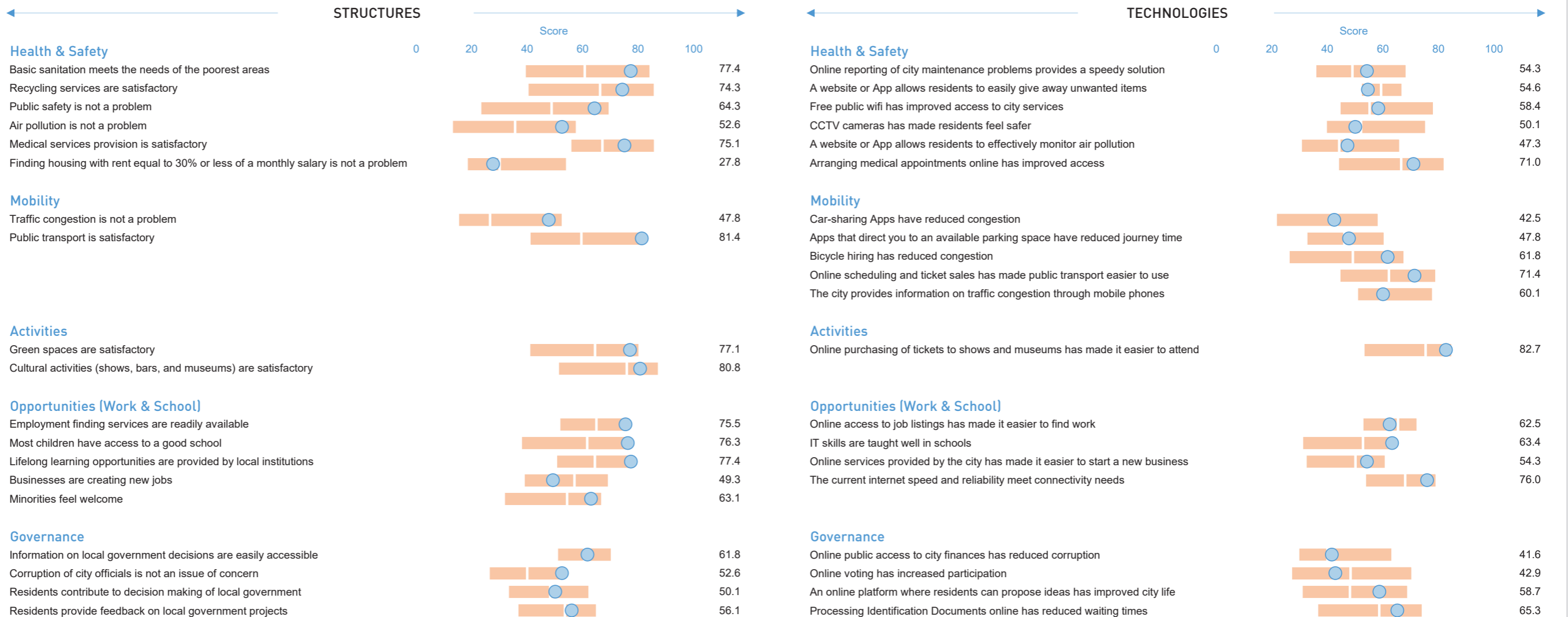


## ATTITUDES

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



# Birmingham

## SMART CITY RANKING

51

Out of 118



40 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,140,000

(Eurostat)



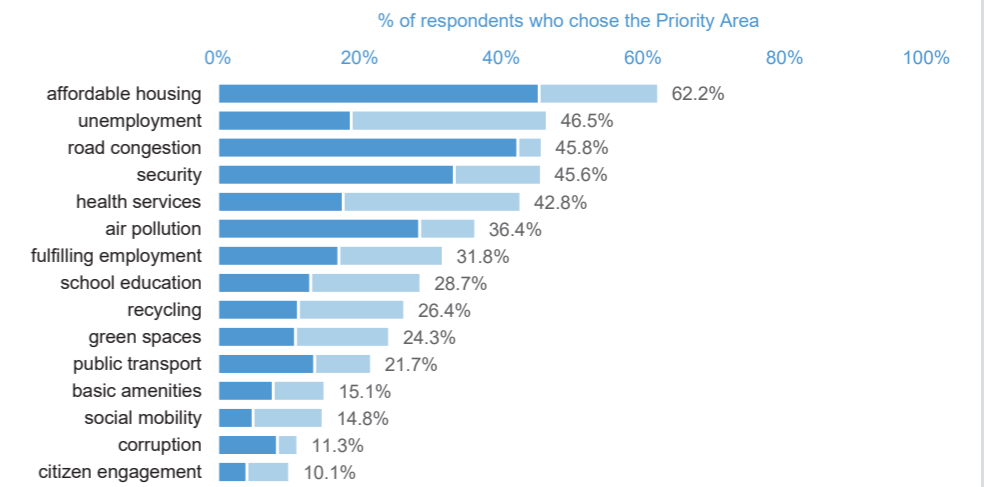
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.918	0.919	0.920	0.932	+0.012
Life expectancy at Birth	81.1	81.2	81.2	81.3	+0.1
Expected years of schooling	17.4	17.4	17.4	17.5	+0.1
Mean years of schooling	12.9	12.9	13.0	13.2	+0.2
GNI per capita (PPP \$)	38,421	39,216	39,507	46,071	+6,564

### PRIORITY AREAS

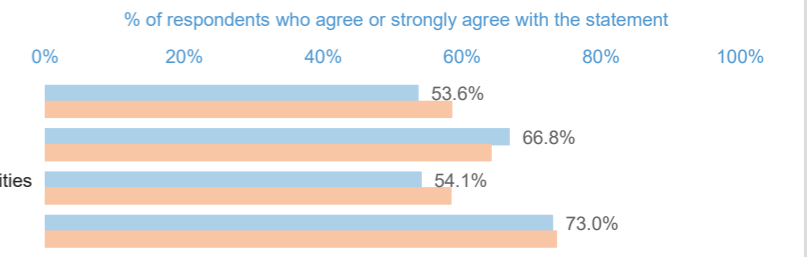
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



# Bogota

## SMART CITY RANKING

116

Out of 118



92 in 2020

## SMART CITY RATING

D

CC in 2020

## FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
10,980,000

(UN World Urbanization Prospects)

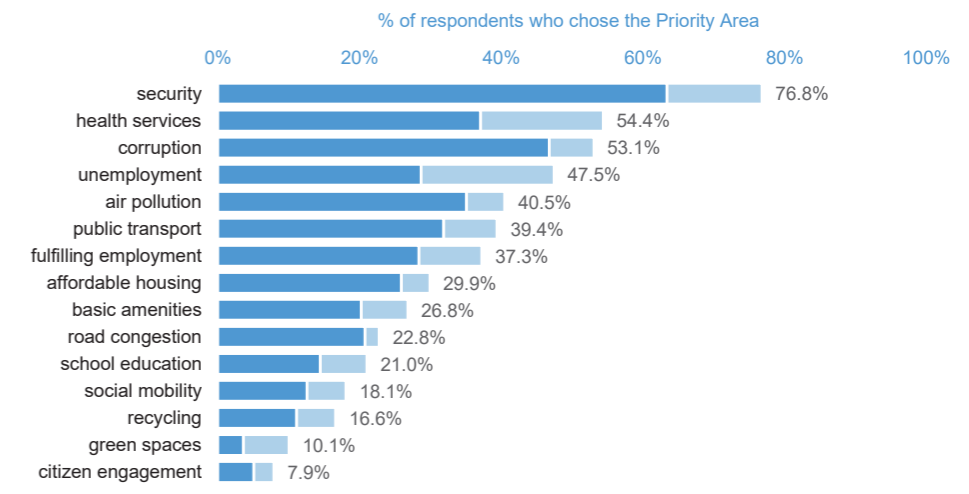


Country	2016	2017	2018	2019	1 yr change
HDI	0.759	0.760	0.761	0.767	+0.006
Life expectancy at Birth	76.7	76.9	77.1	77.3	+0.2
Expected years of schooling	14.6	14.6	14.6	14.4	-0.2
Mean years of schooling	8.3	8.3	8.3	8.5	+0.2
GNI per capita (PPP \$)	13,087	12,963	12,896	14,257	+1,361

### PRIORITY AREAS

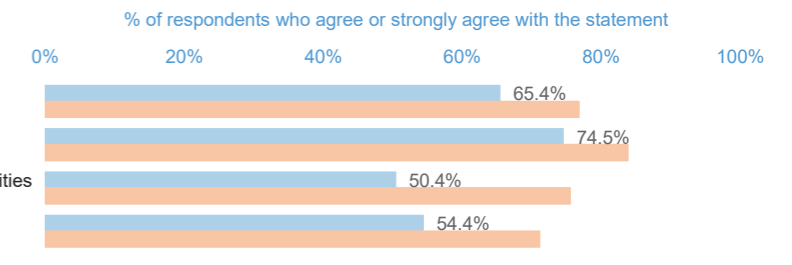
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.



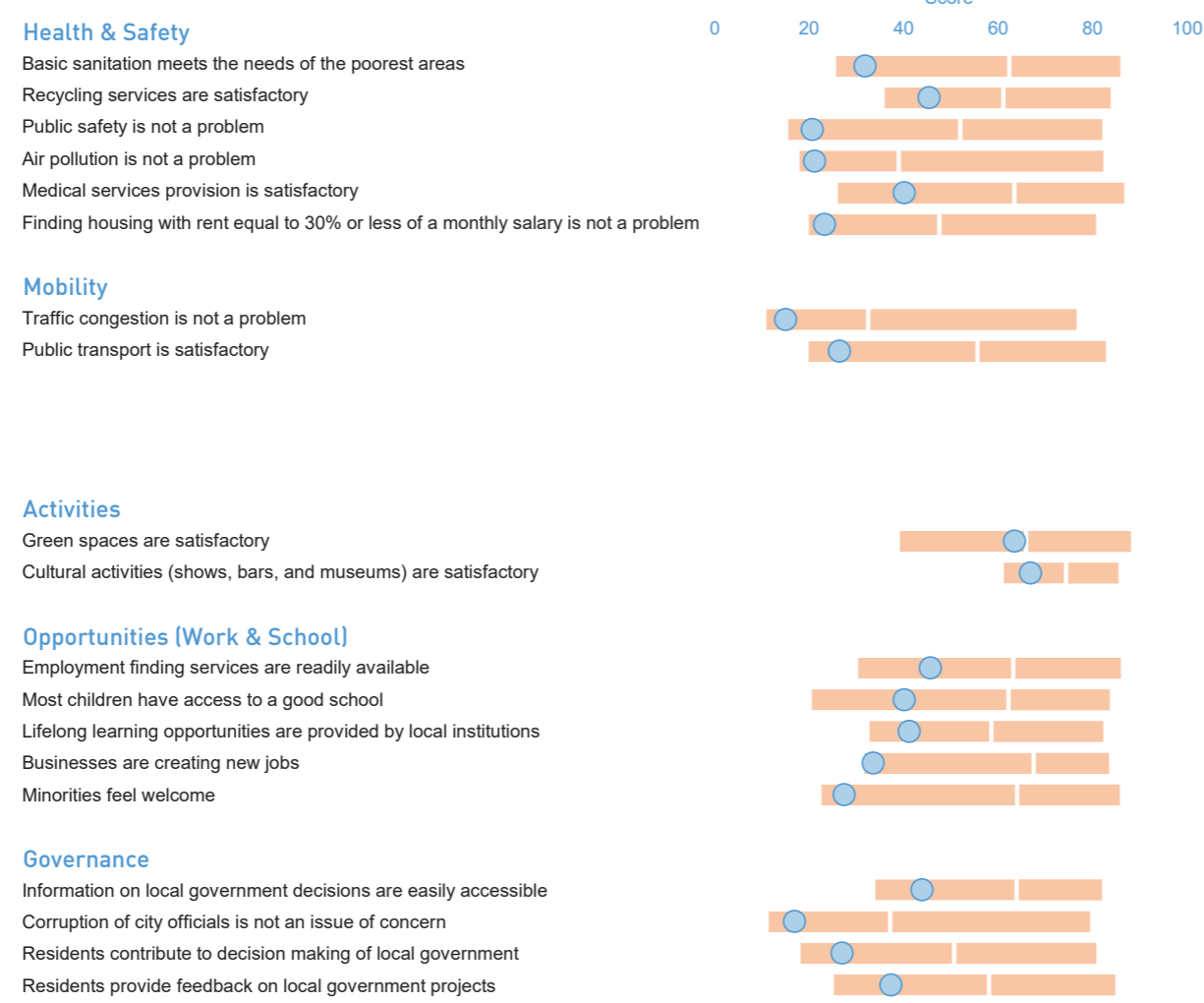
### ATTITUDES

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)

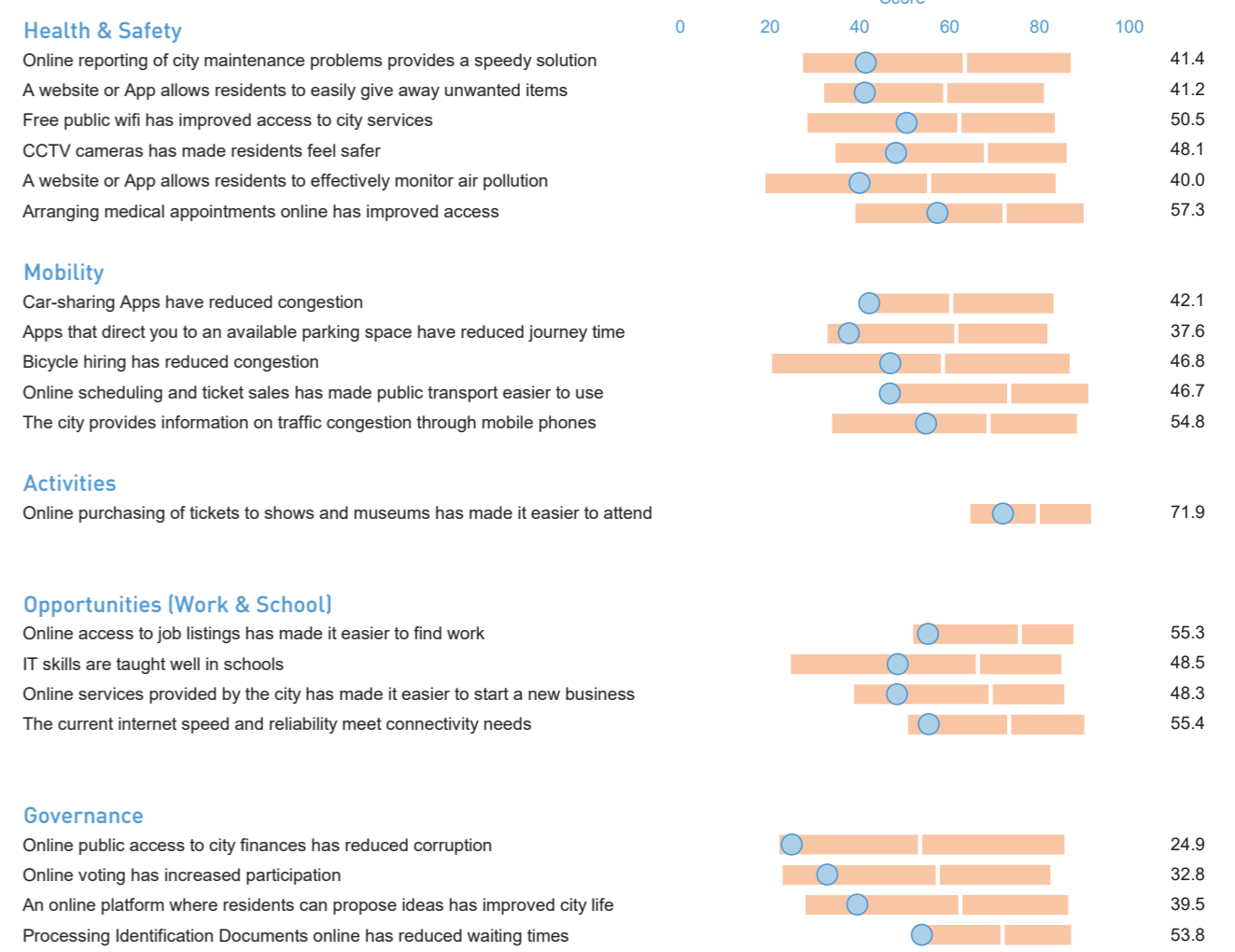


LEGEND: GROUP MEAN CITY

### STRUCTURES



### TECHNOLOGIES



# Bologna

## SMART CITY RANKING

77

Out of 118



70 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
400,000

(Eurostat)

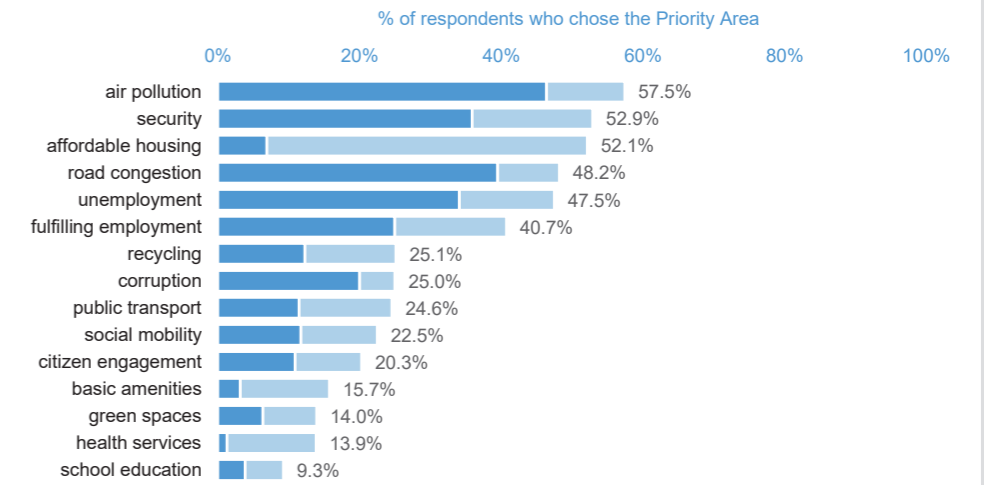


Country	2016	2017	2018	2019	1 yr change
HDI	0.878	0.881	0.883	0.892	+0.009
Life expectancy at Birth	83.0	83.2	83.4	83.5	+0.1
Expected years of schooling	16.2	16.2	16.2	16.1	-0.1
Mean years of schooling	10.2	10.2	10.2	10.4	+0.2
GNI per capita (PPP \$)	34,818	35,573	36,141	42,776	+6,635

### PRIORITY AREAS

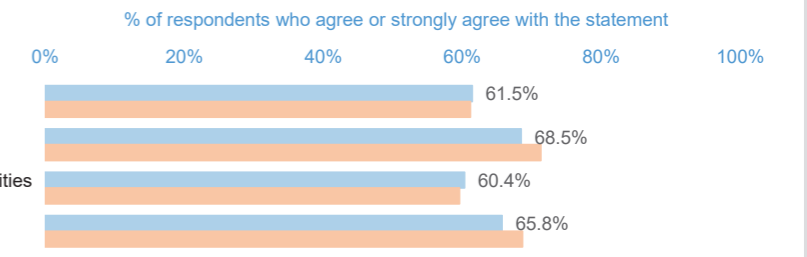
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

73.9  
71.8  
48.8  
29.1  
78.2  
78.5  
  
32.0  
64.1  
  
75.6  
82.8  
  
39.9  
72.9  
67.5  
50.6  
52.2  
  
61.8  
45.0  
44.3  
52.9

### 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

53.5  
57.7  
61.5  
57.4  
47.4  
75.0  
  
44.5  
45.0  
56.5  
66.6  
49.8  
  
82.9  
  
64.8  
53.5  
50.6  
58.7  
  
44.7  
40.5  
47.6  
60.9

# Bordeaux

## SMART CITY RANKING

32

Out of 118

N/A

not in 2020

## SMART CITY RATING

BB

not in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

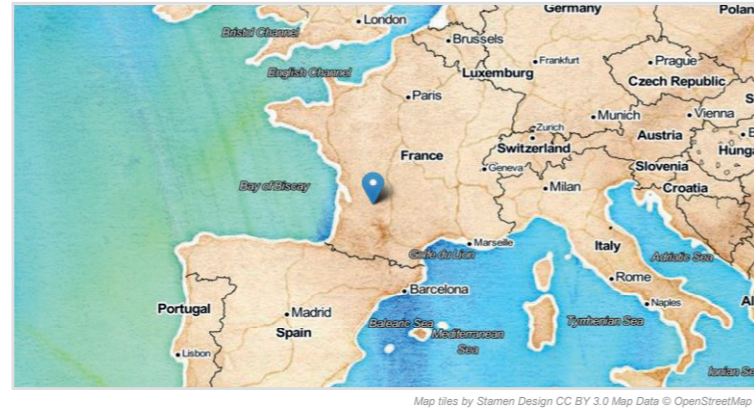
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
650,000

(Eurostat)

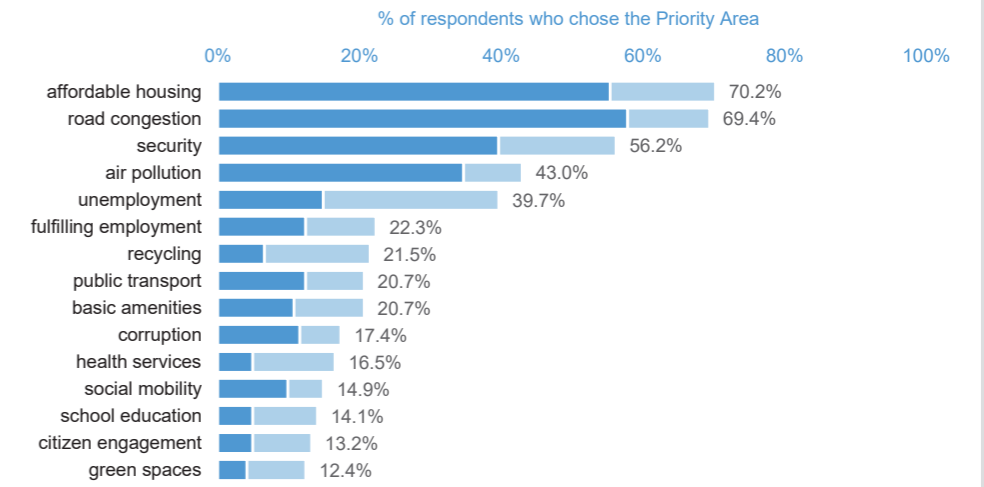


Country	2016	2017	2018	2019	1 yr change
HDI	0.887	0.890	0.891	0.901	+0.010
Life expectancy at Birth	82.3	82.4	82.5	82.7	+0.2
Expected years of schooling	15.5	15.5	15.5	15.6	+0.1
Mean years of schooling	11.4	11.4	11.4	11.5	+0.1
GNI per capita (PPP \$)	38,926	39,935	40,511	47,173	+6,662

### PRIORITY AREAS

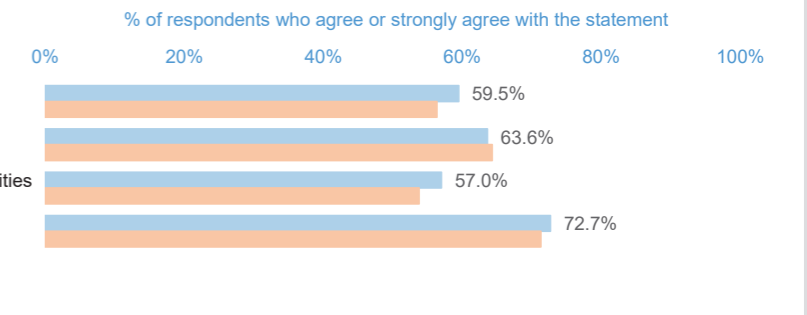
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

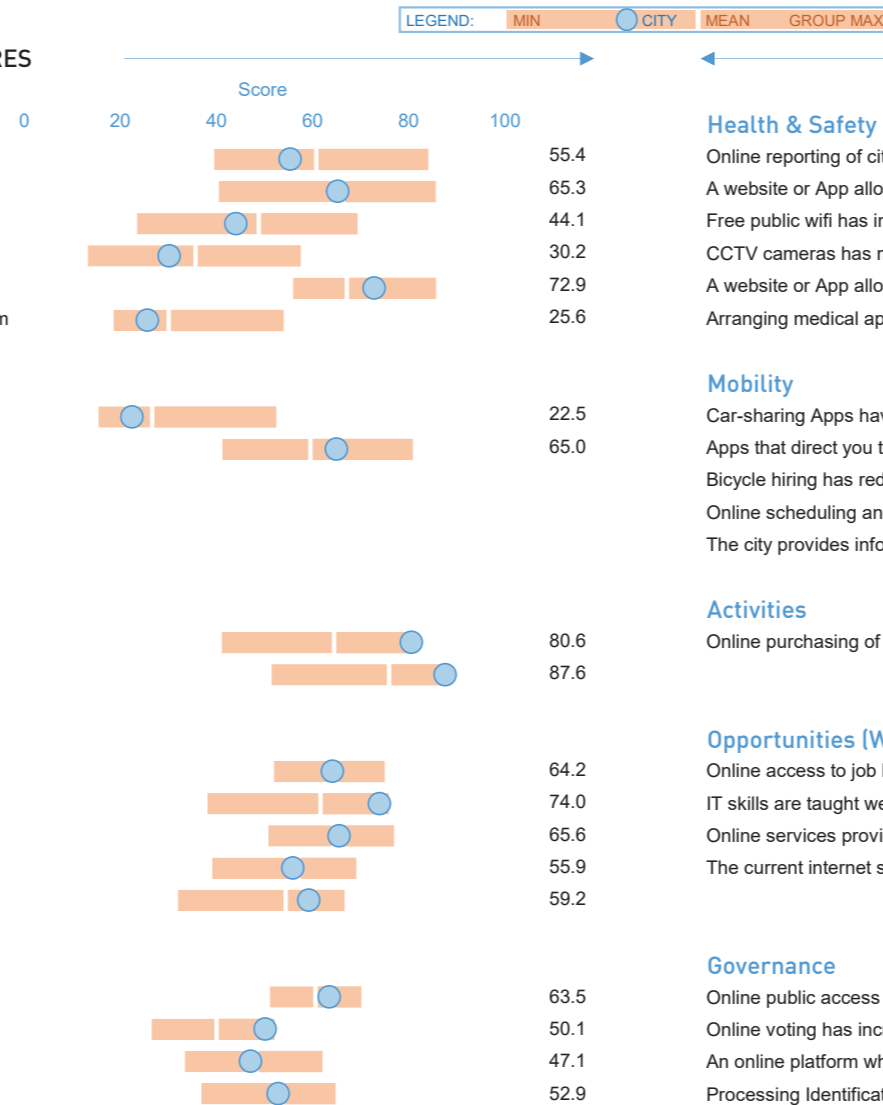
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

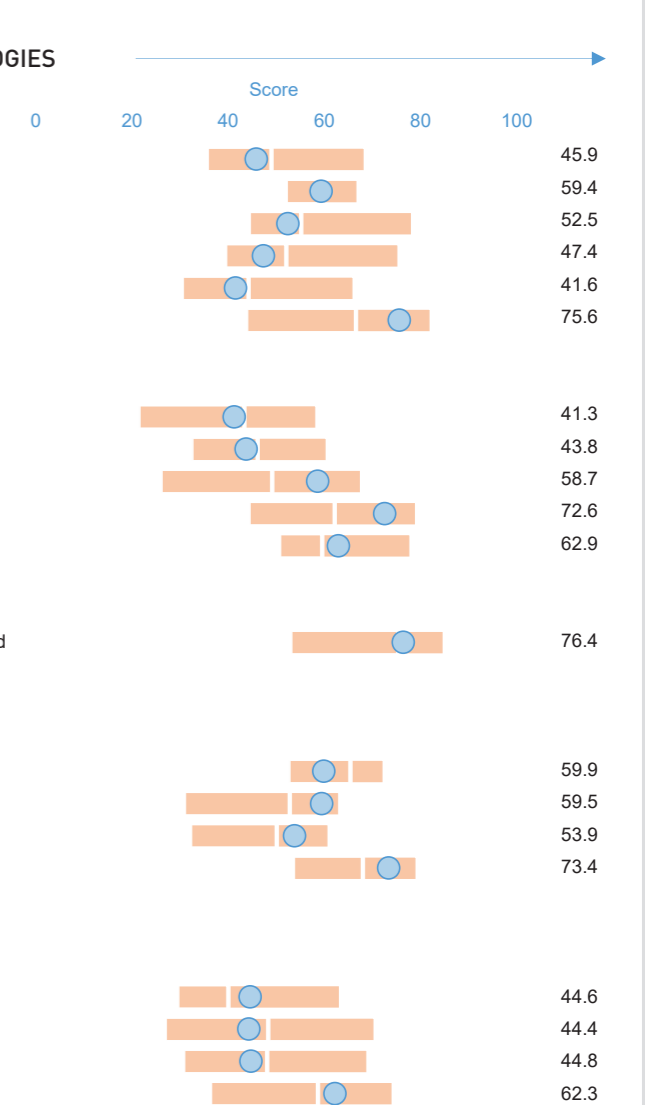
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Boston

## SMART CITY RANKING

57

Out of 118



36 in 2020

## SMART CITY RATING

B

BBB in 2020

## FACTOR RATINGS

BBB

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,310,000

(UN World Urbanization Prospects)

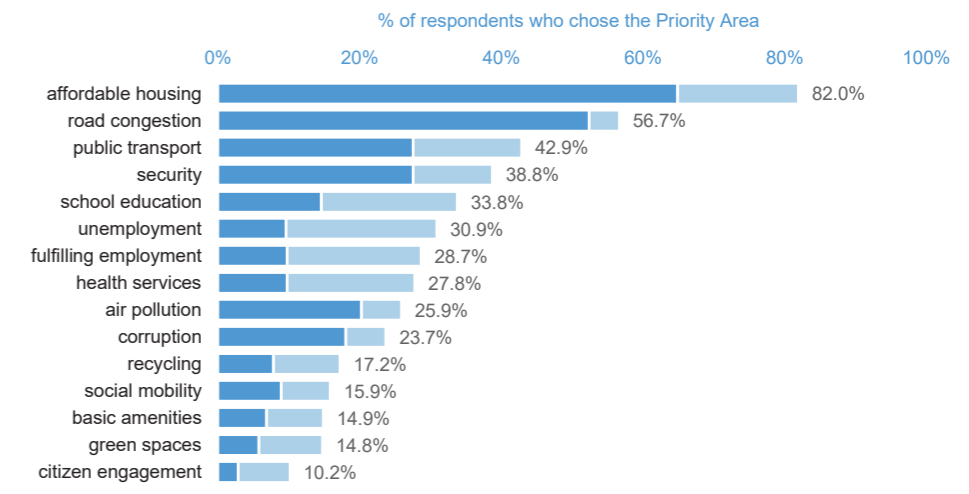


Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

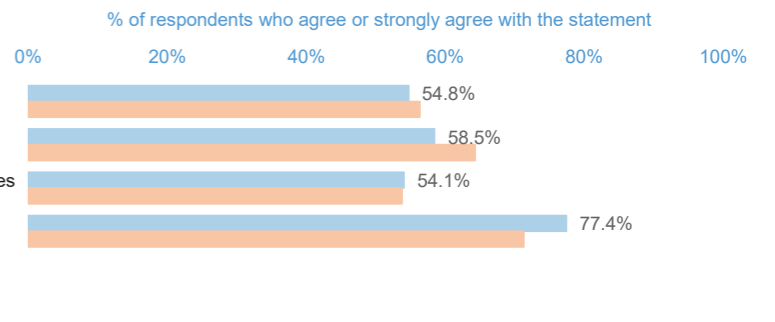
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

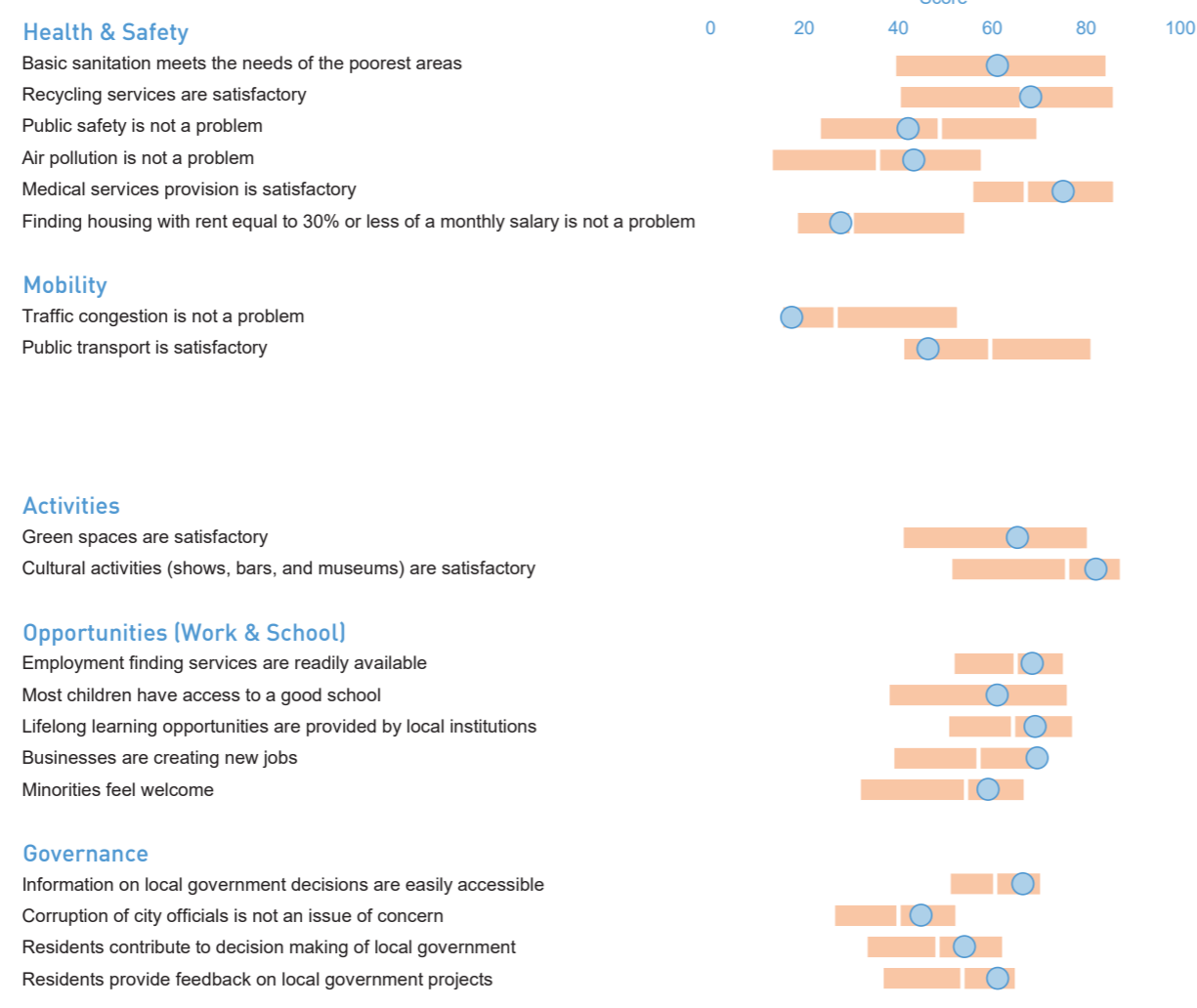


### ATTITUDES

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)

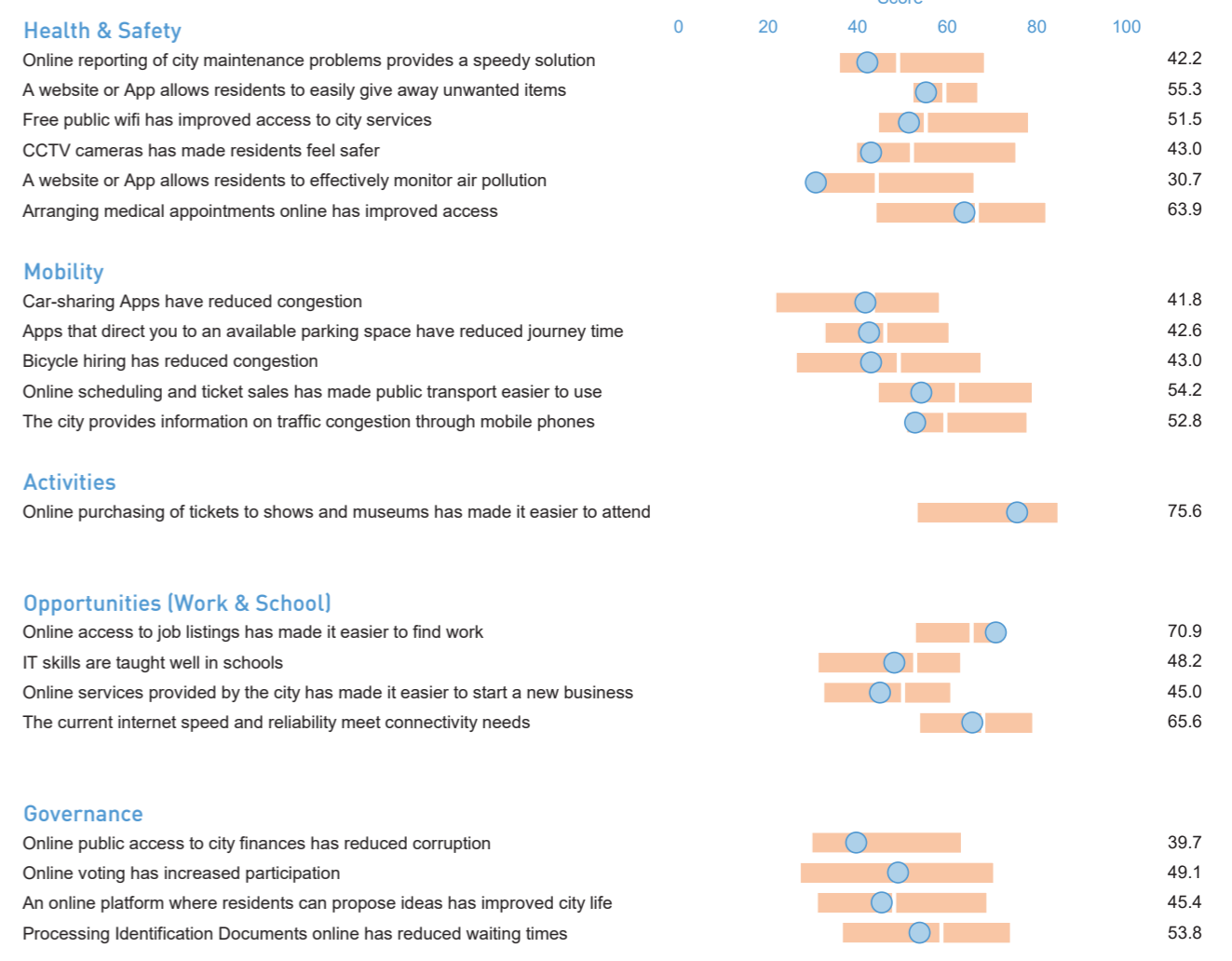


### STRUCTURES



LEGEND: MIN CITY MEAN GROUP MAX

### TECHNOLOGIES



# Bratislava

## SMART CITY RANKING

96

Out of 118



76 in 2020

## SMART CITY RATING

CC

CCC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
440,000

(Eurostat)

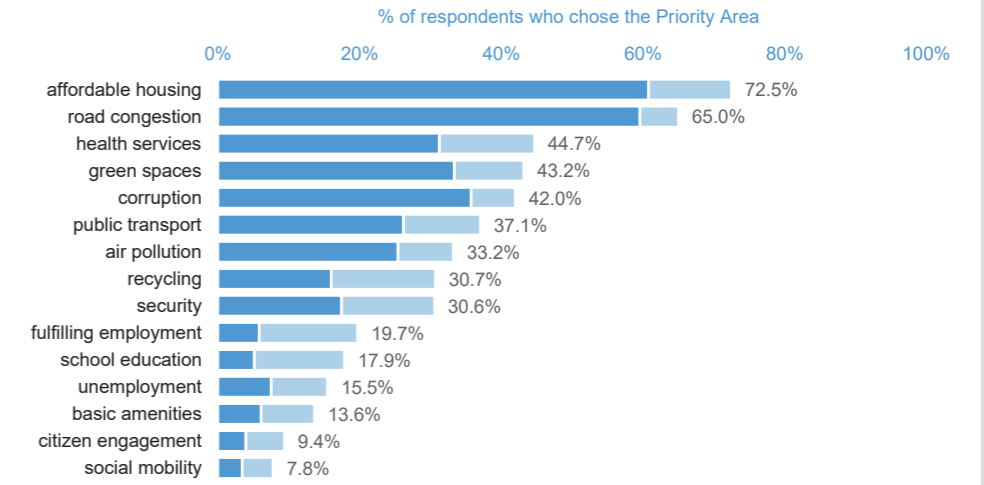


Country	2016	2017	2018	2019	1 yr change
HDI	0.851	0.854	0.857	0.860	+0.003
Life expectancy at Birth	77.0	77.2	77.4	77.5	+0.1
Expected years of schooling	14.5	14.5	14.5	14.5	+0.0
Mean years of schooling	12.6	12.6	12.6	12.7	+0.1
GNI per capita (PPP \$)	28,706	29,544	30,672	32,113	+1,441

### PRIORITY AREAS

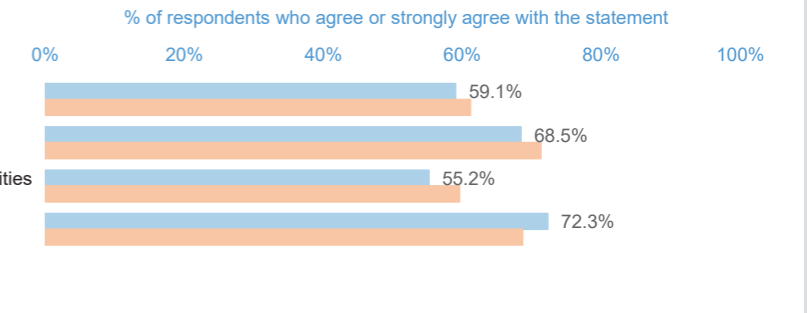
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

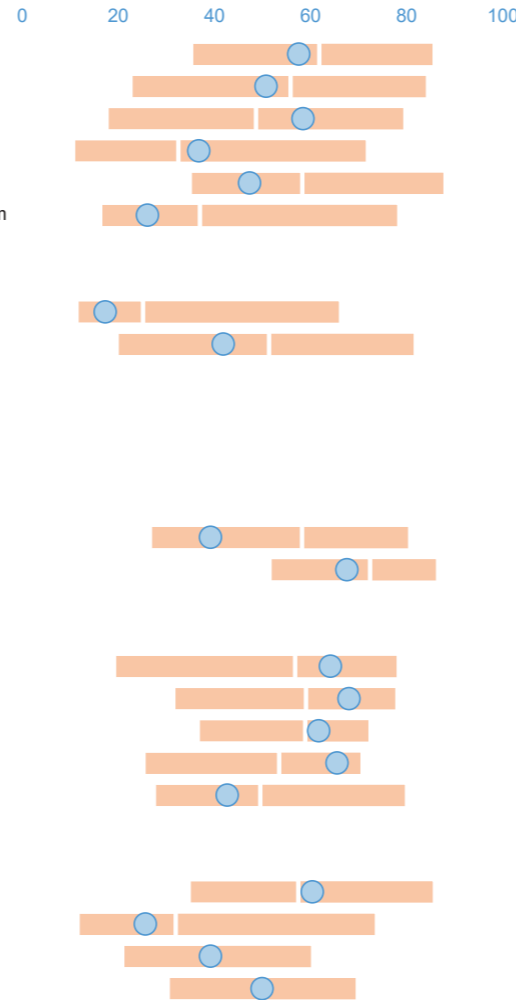
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

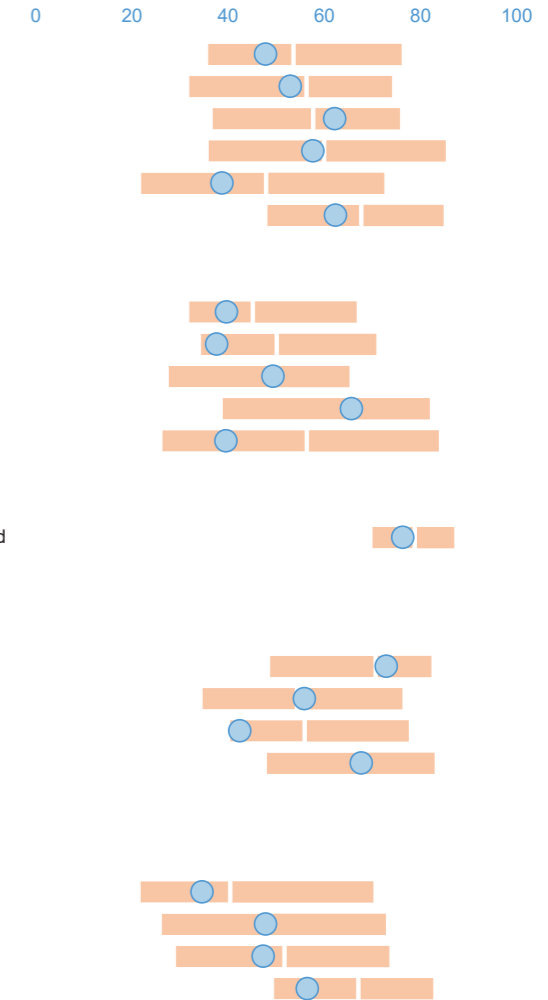
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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





# Brisbane

## SMART CITY RANKING

16

Out of 118



14 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

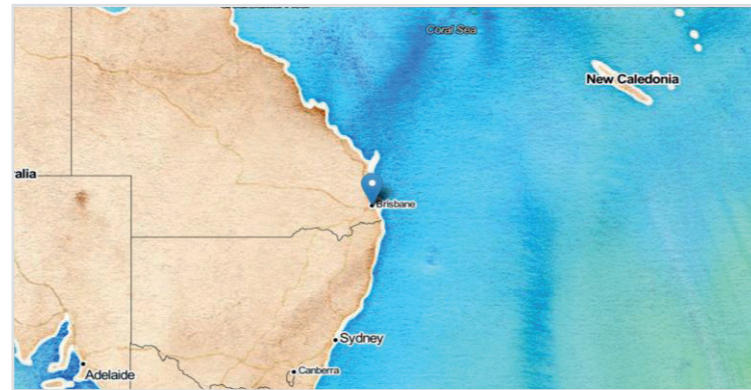
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,410,000

(UN World Urbanization Prospects)



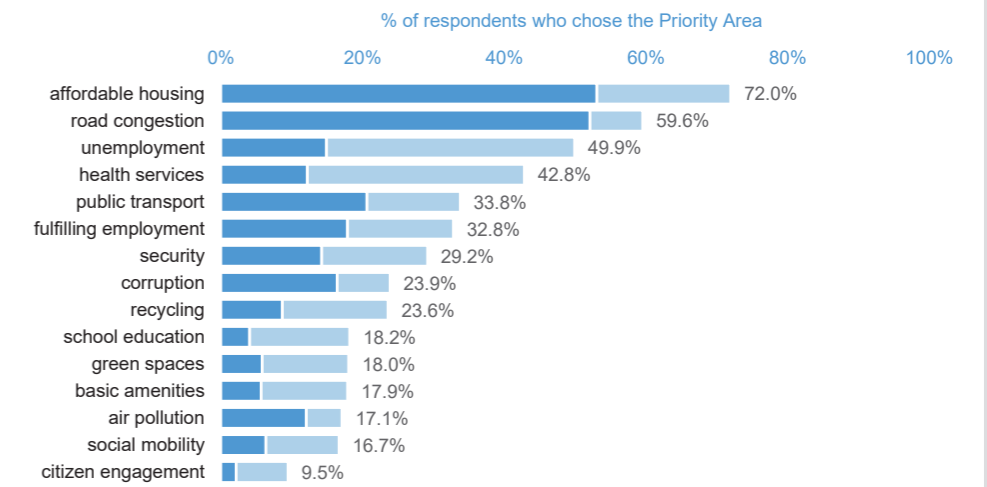
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.935	0.937	0.938	0.944	+0.006
Life expectancy at Birth	83.0	83.1	83.3	83.4	+0.1
Expected years of schooling	22.9	22.1	22.1	22.0	-0.1
Mean years of schooling	12.6	12.7	12.7	12.7	+0.0
GNI per capita (PPP \$)	43,653	43,756	44,097	48,085	+3,988

### PRIORITY AREAS

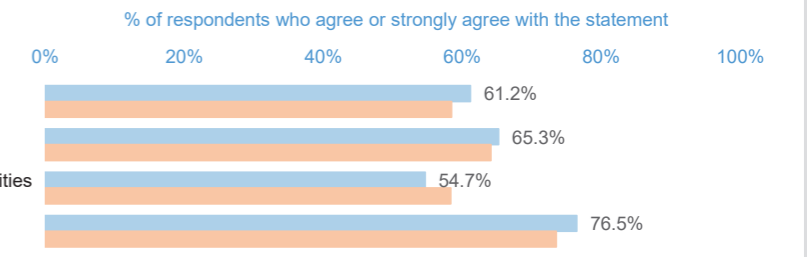
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

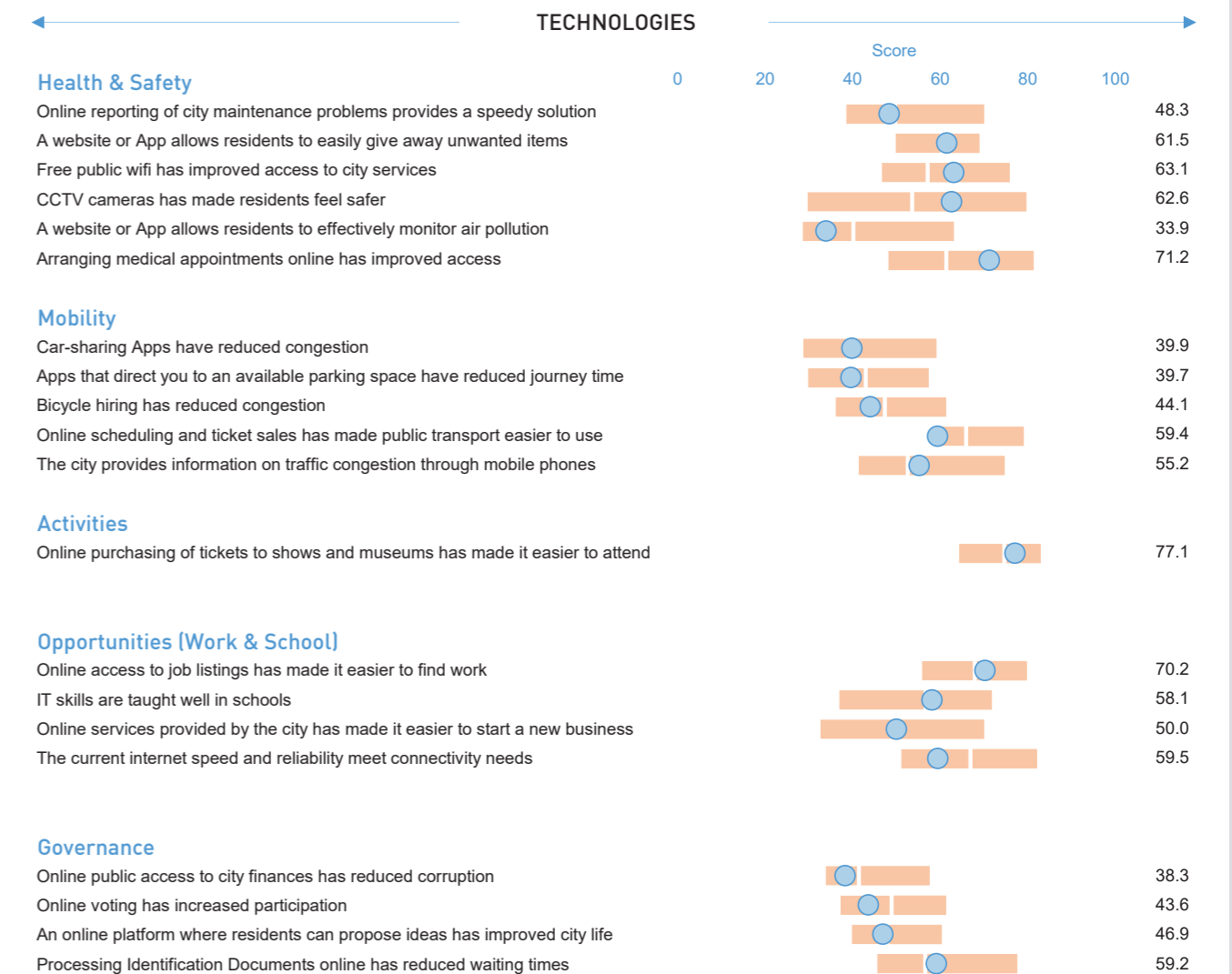
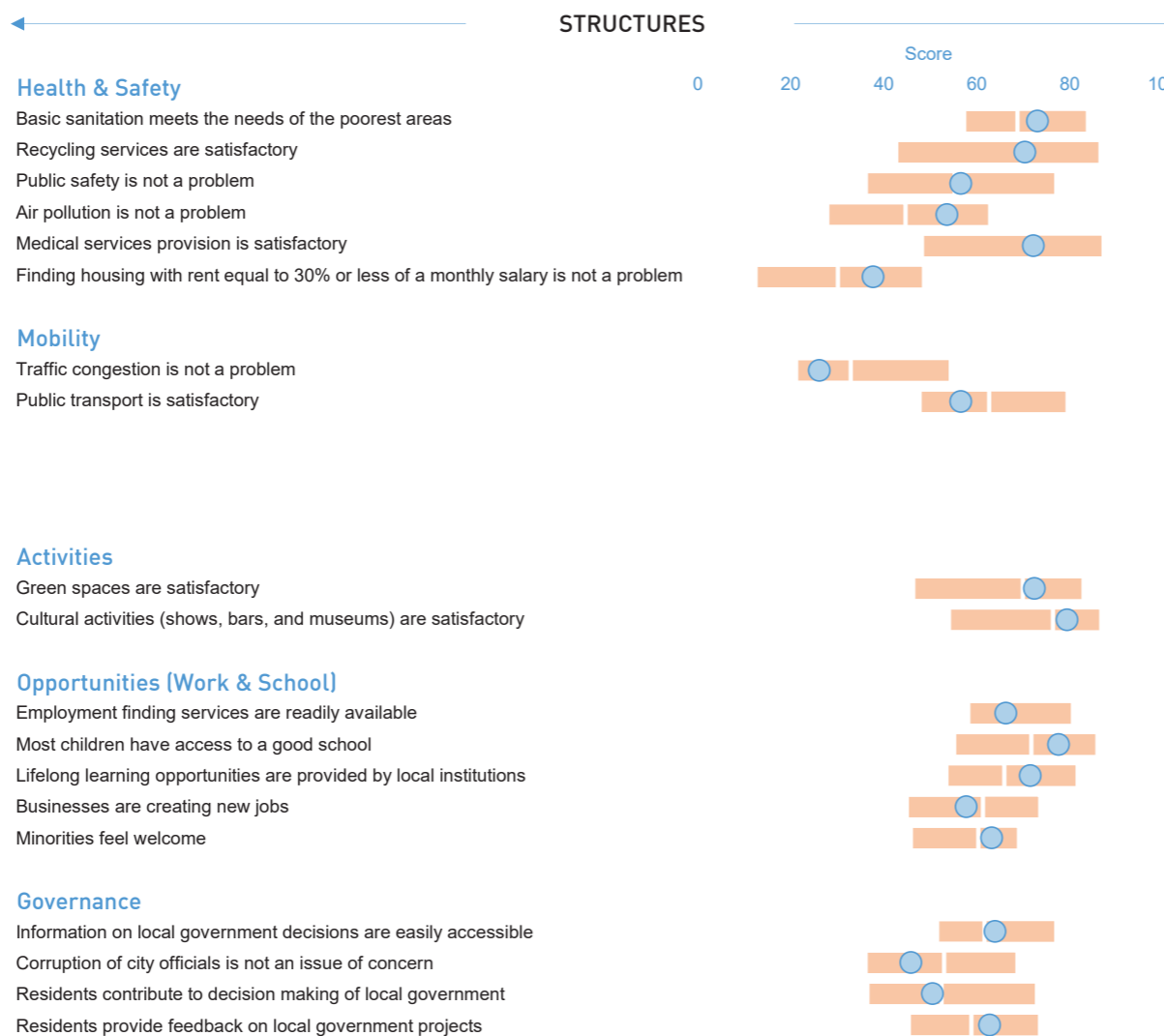


### ATTITUDES

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



# Brussels

## SMART CITY RANKING

52

Out of 118



60 in 2020

## SMART CITY RATING

BB

B in 2020

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,220,000

(Eurostat)



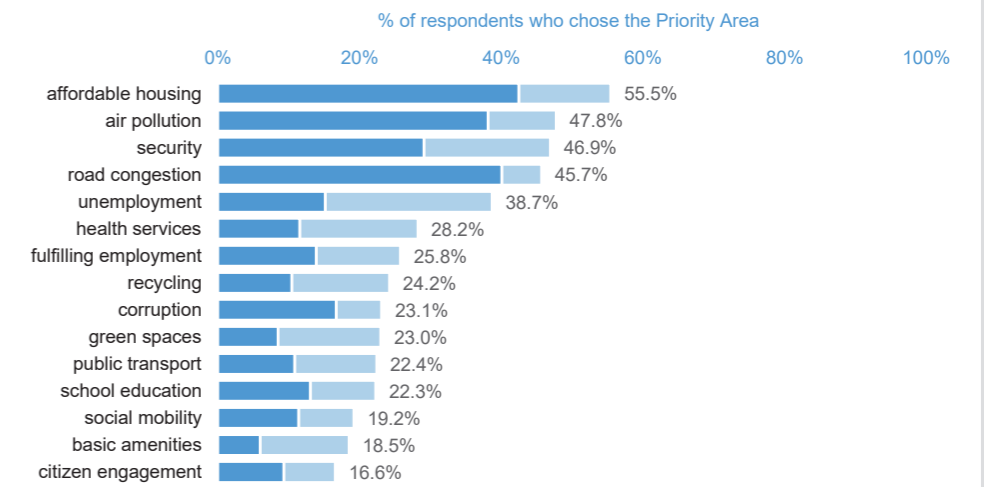
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.915	0.917	0.919	0.931	+0.012
Life expectancy at Birth	81.1	81.3	81.5	81.6	+0.1
Expected years of schooling	19.7	19.7	19.7	19.8	+0.1
Mean years of schooling	11.8	11.8	11.8	12.1	+0.3
GNI per capita (PPP \$)	42,260	43,300	43,821	52,085	+8,264

### PRIORITY AREAS

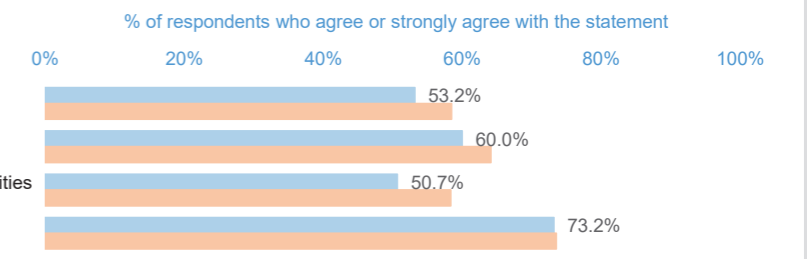
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

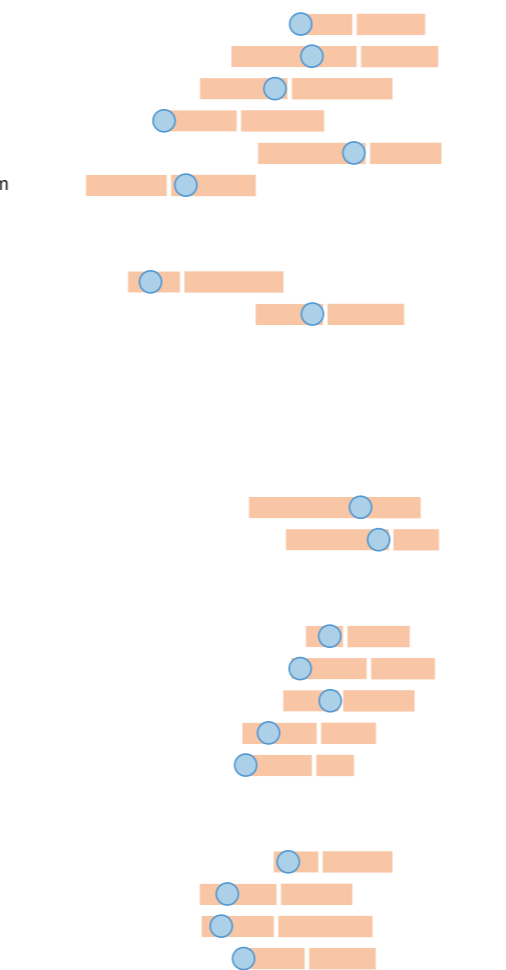
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### 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

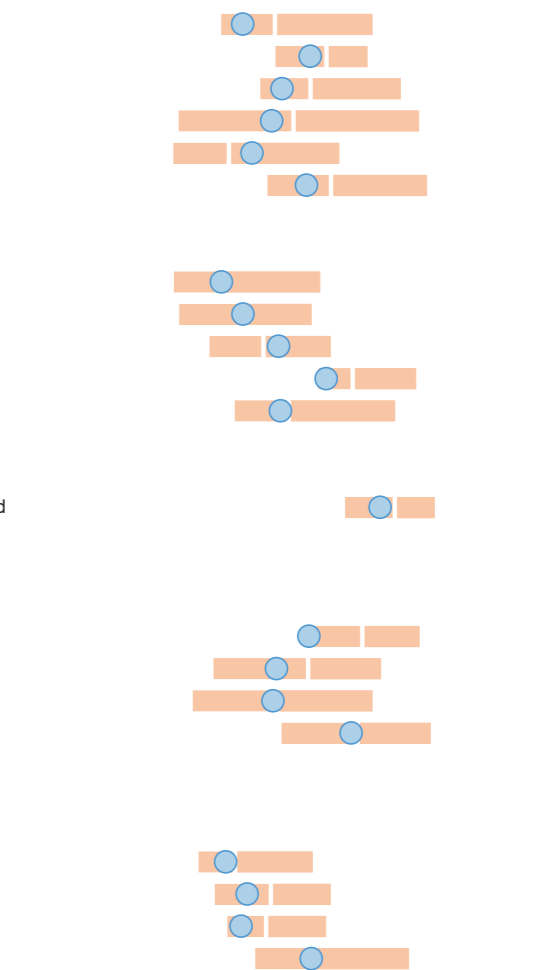
#### Opportunities (Work & School)

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



# Bucharest

## SMART CITY RANKING

106

Out of 118



87 in 2020

## SMART CITY RATING

C

CC in 2020

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

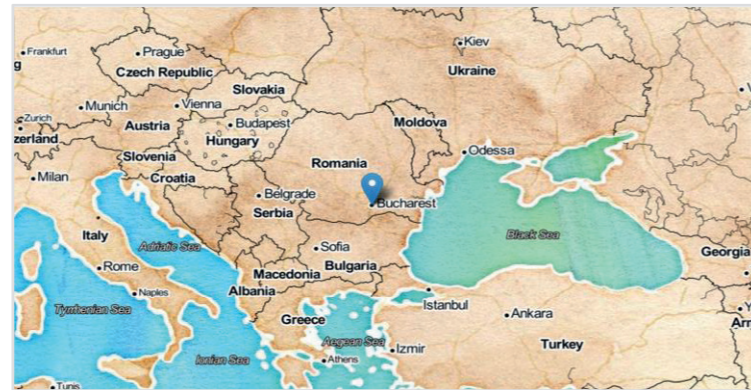
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,130,000

(Eurostat)



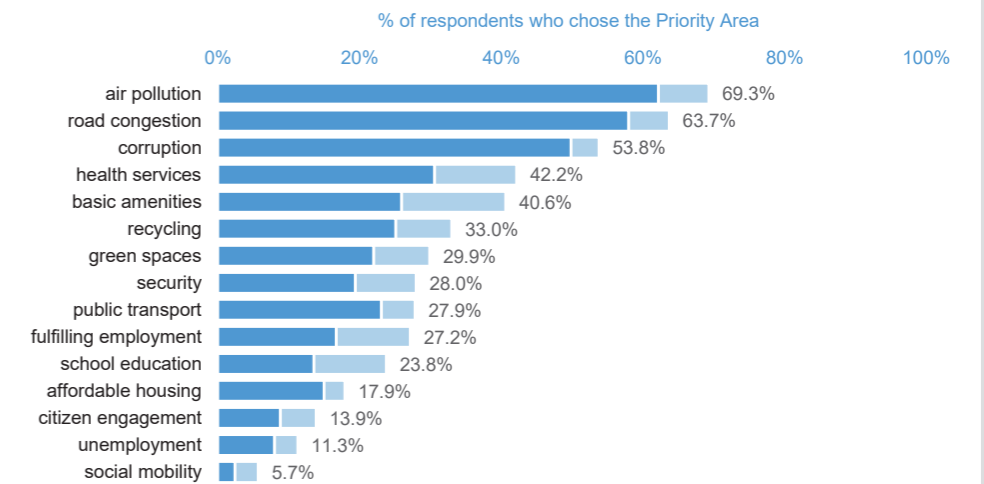
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.808	0.813	0.816	0.828	+0.012
Life expectancy at Birth	75.6	75.8	75.9	76.1	+0.2
Expected years of schooling	14.3	14.3	14.3	14.3	+0.0
Mean years of schooling	11.0	11.0	11.0	11.1	+0.1
GNI per capita (PPP \$)	21,173	22,828	23,906	29,497	+5,591

### 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.



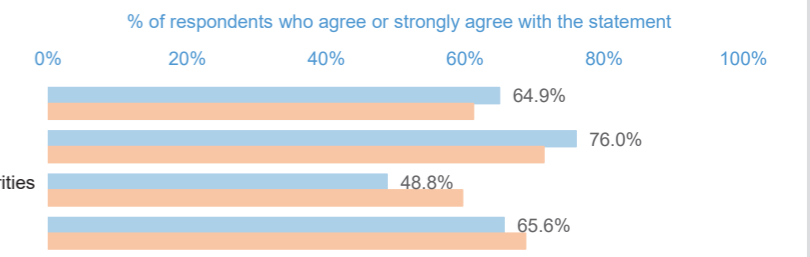
### ATTITUDES

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

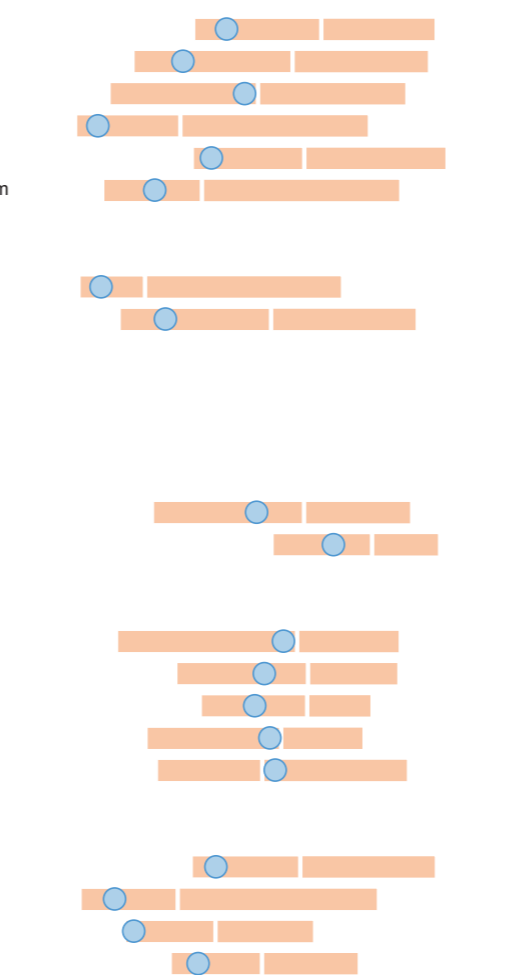
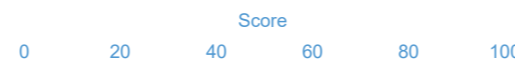
#### Governance

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

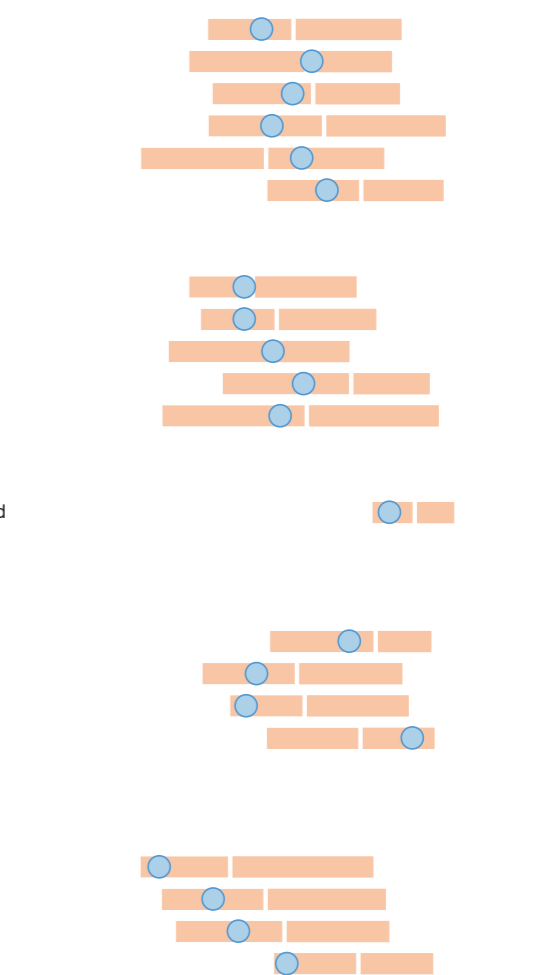
#### Governance

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



# Budapest

## SMART CITY RANKING

97

Out of 118



77 in 2020

## SMART CITY RATING

CC

CCC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,750,000

(Eurostat)

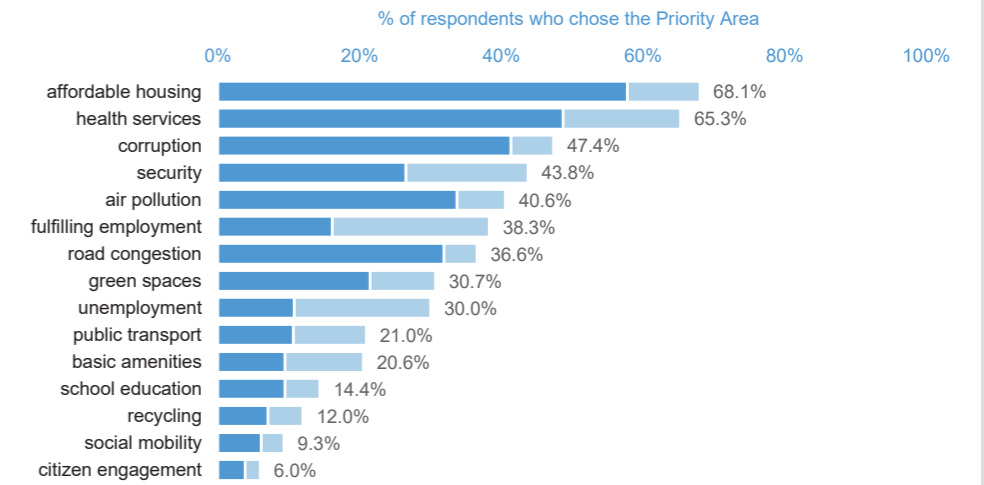


Country	2016	2017	2018	2019	1 yr change
HDI	0.838	0.841	0.845	0.854	+0.009
Life expectancy at Birth	76.3	76.5	76.7	76.9	+0.2
Expected years of schooling	15.1	15.1	15.1	15.2	+0.1
Mean years of schooling	11.8	11.9	11.9	12.0	+0.1
GNI per capita (PPP \$)	25,081	25,774	27,144	31,329	+4,185

### PRIORITY AREAS

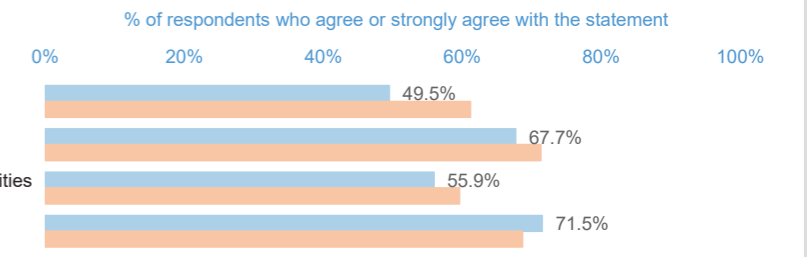
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

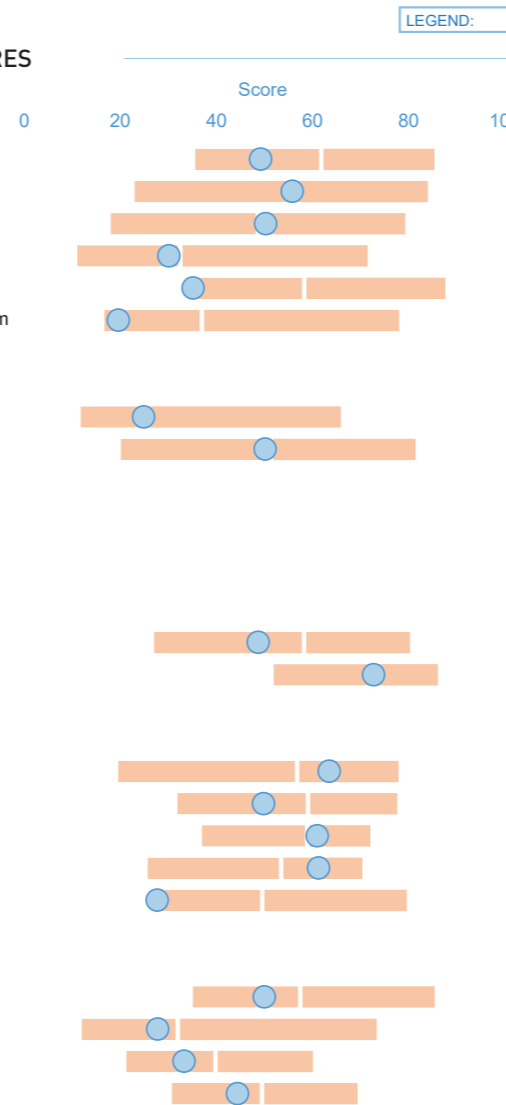
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

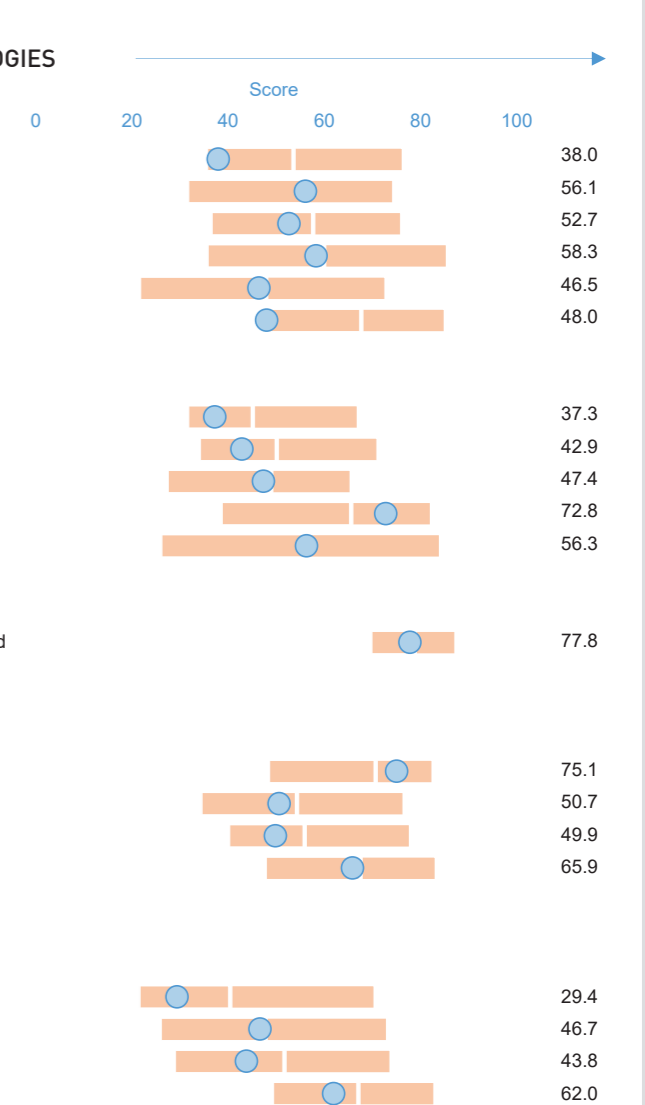
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Buenos Aires

## SMART CITY RANKING

98

Out of 118



88 in 2020

## SMART CITY RATING

CC

CC in 2020

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
15,150,000

(UN World Urbanization Prospects)



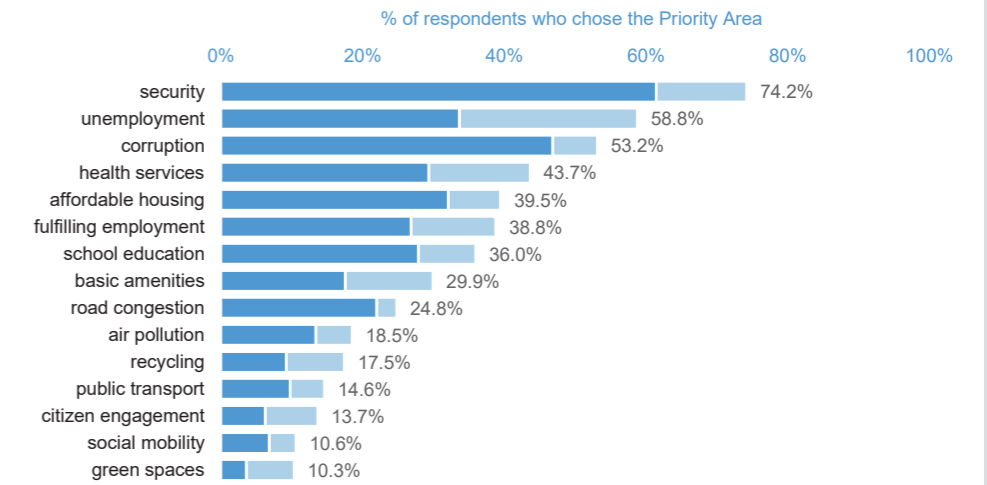
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.828	0.832	0.830	0.845	+0.015
Life expectancy at Birth	76.2	76.4	76.5	76.7	+0.2
Expected years of schooling	17.4	17.6	17.6	17.7	+0.1
Mean years of schooling	10.5	10.6	10.6	10.9	+0.3
GNI per capita (PPP \$)	18,249	18,462	17,611	21,190	+3,579

### PRIORITY AREAS

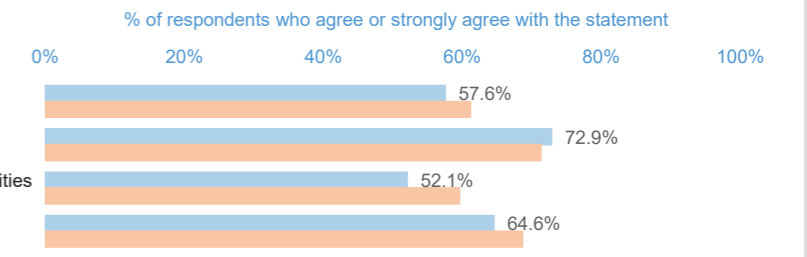
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

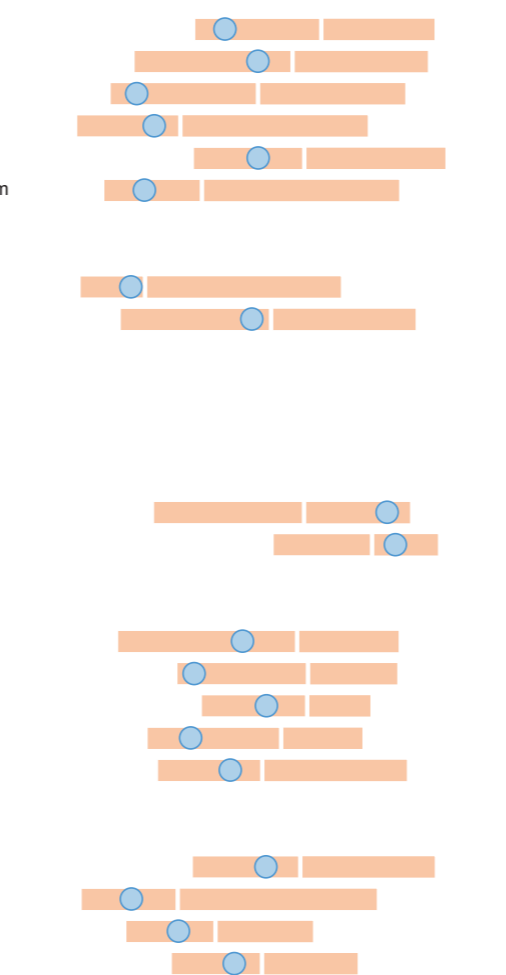
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

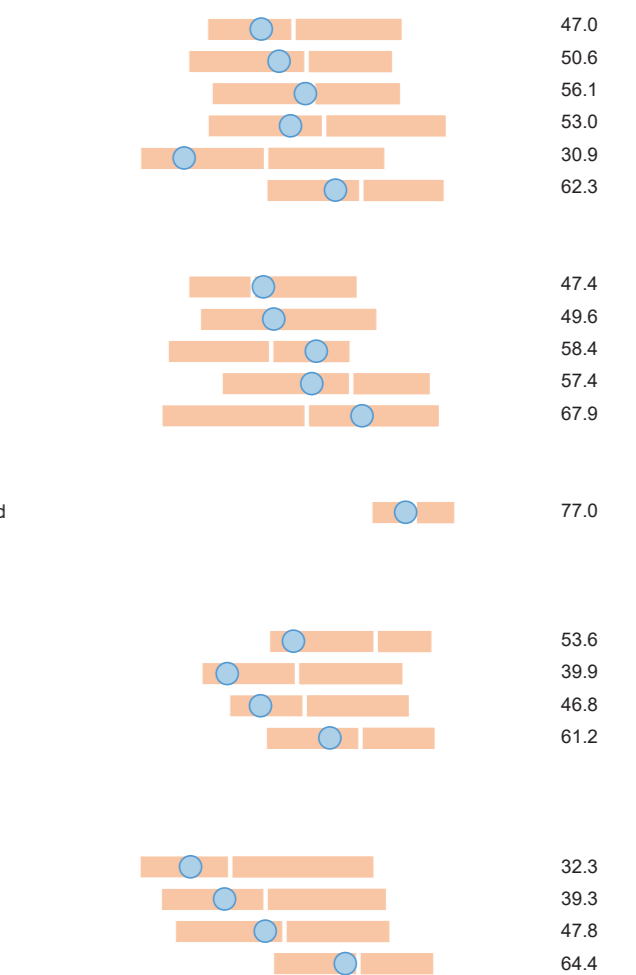
#### Opportunities (Work & School)

- 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



# Busan

## SMART CITY RANKING

37

Out of 118



46 in 2020

## SMART CITY RATING

BB

BB in 2020

## FACTOR RATINGS

B

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,470,000

(UN World Urbanization Prospects)



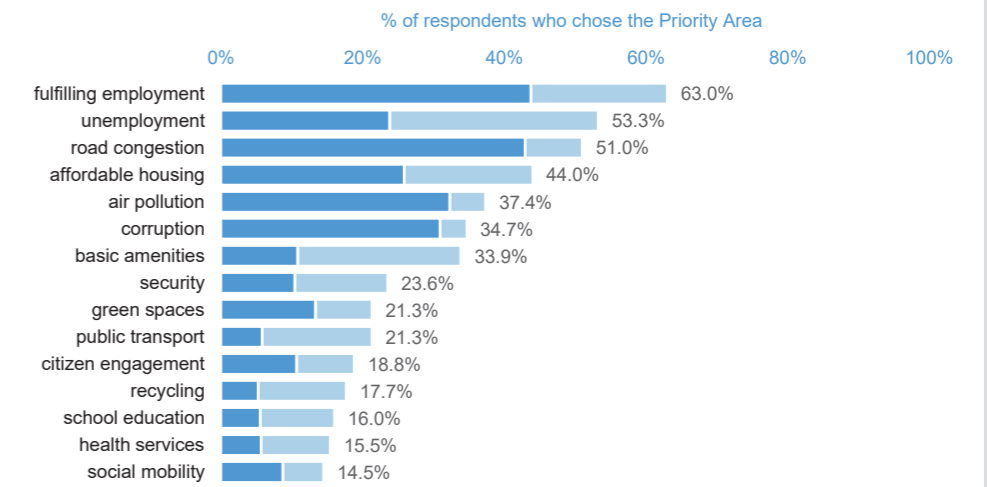
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.901	0.904	0.906	0.916	+0.010
Life expectancy at Birth	82.4	82.6	82.8	83.0	+0.2
Expected years of schooling	16.4	16.4	16.4	16.5	+0.1
Mean years of schooling	12.2	12.2	12.2	12.2	+0.0
GNI per capita (PPP \$)	35,122	35,945	36,757	43,044	+6,287

### 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.



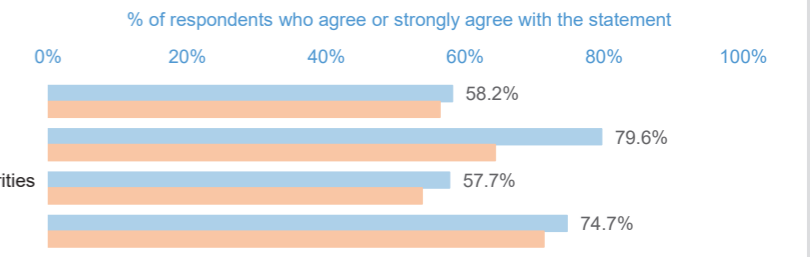
### ATTITUDES

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

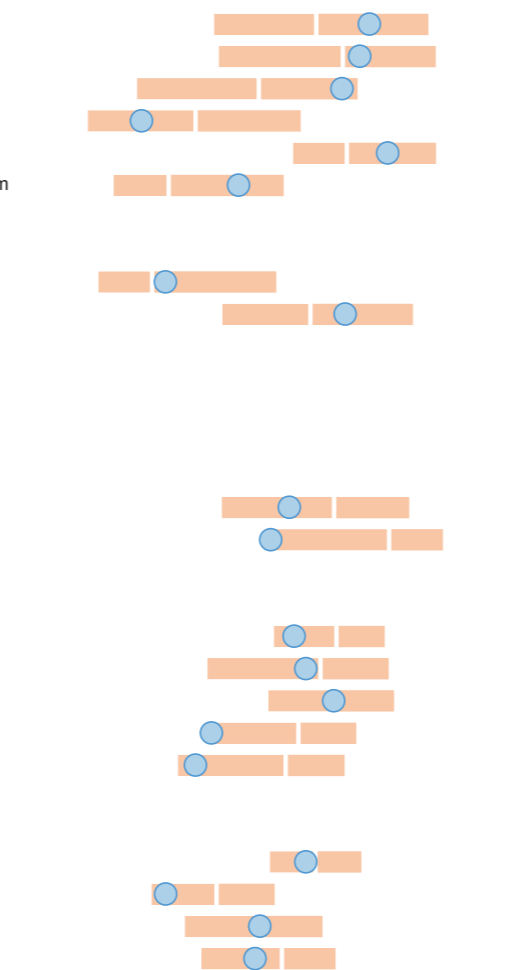
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

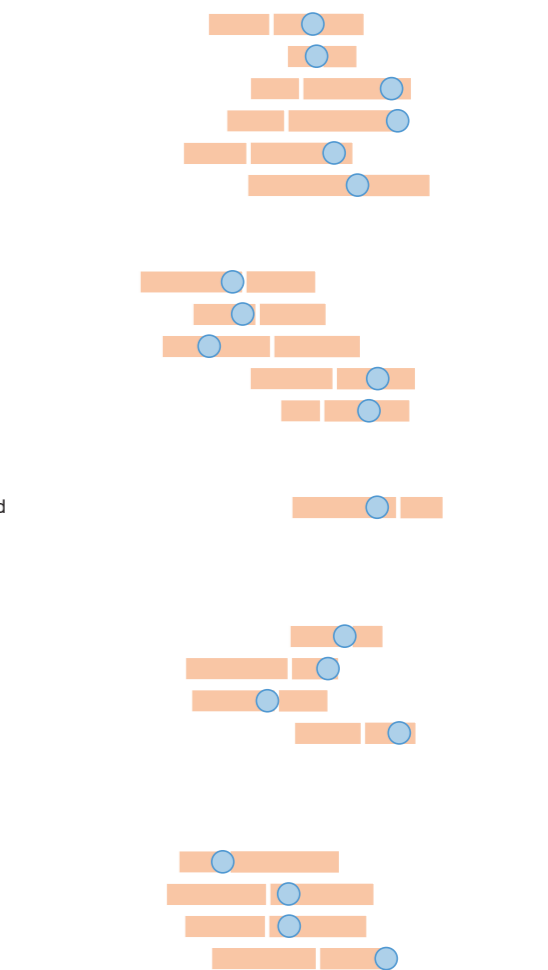
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Cairo

## SMART CITY RANKING

104

Out of 118



106 in 2020

## SMART CITY RATING

C

D in 2020

## FACTOR RATINGS

D

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
20,900,000

(UN World Urbanization Prospects)



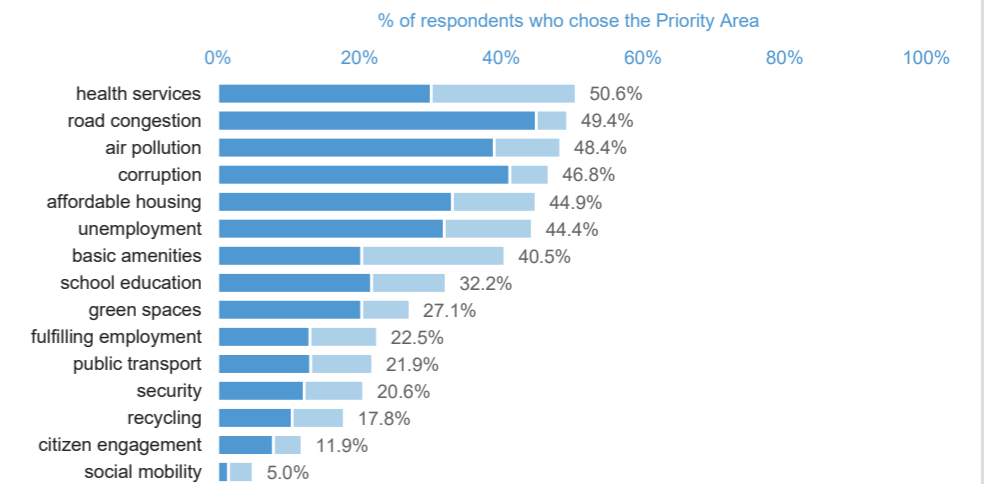
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.695	0.696	0.700	0.707	+0.007
Life expectancy at Birth	71.5	71.7	71.8	72.0	+0.2
Expected years of schooling	13.1	13.1	13.1	13.3	+0.2
Mean years of schooling	7.2	7.2	7.3	7.4	+0.1
GNI per capita (PPP \$)	10,323	10,473	10,744	11,466	+722

### 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.



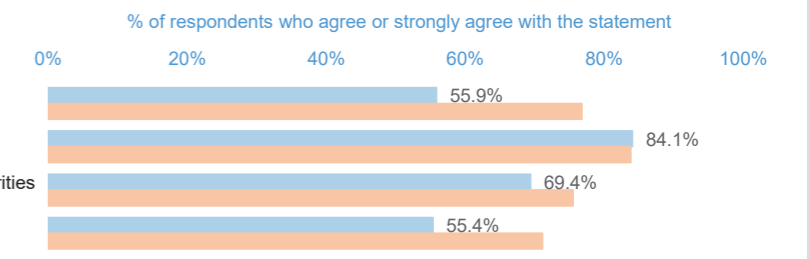
### ATTITUDES

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

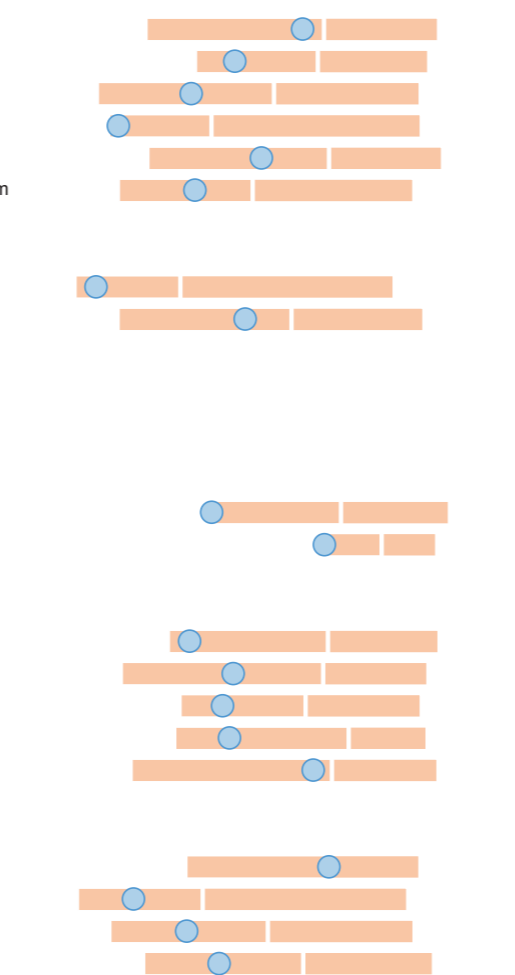
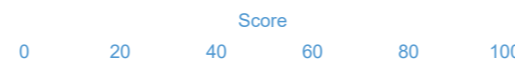
#### Governance

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

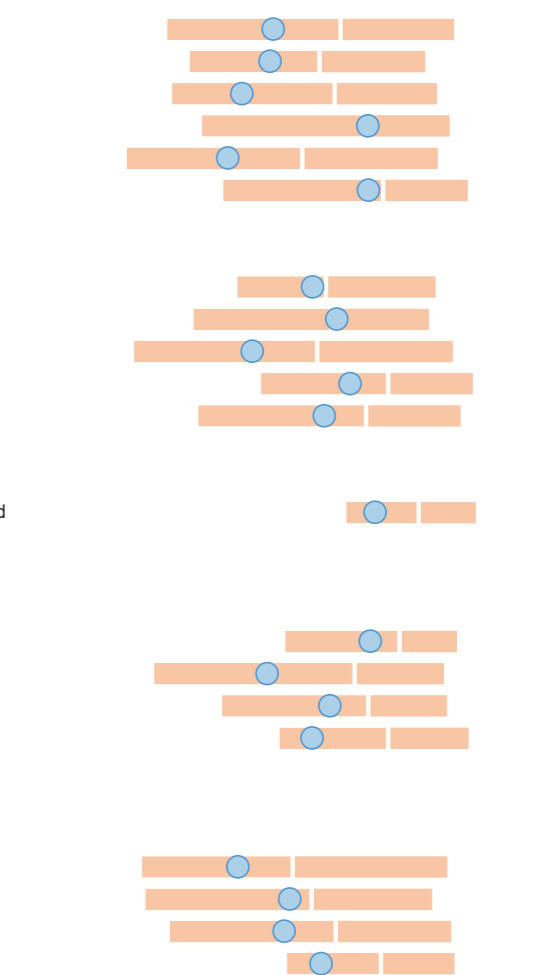
#### Governance

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



# Cape Town

## SMART CITY RANKING

105

Out of 118



103 in 2020

## SMART CITY RATING

C

D in 2020

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

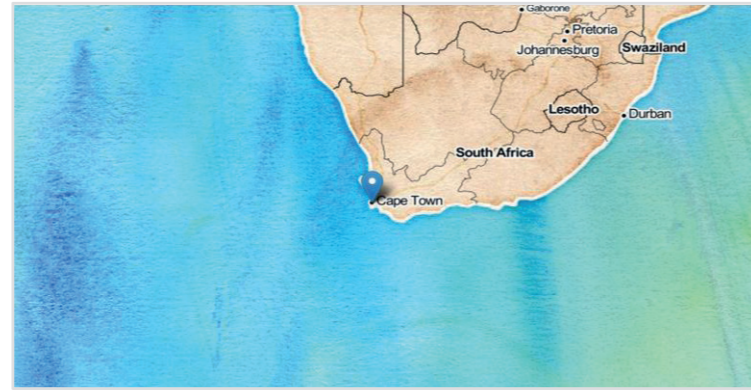
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,620,000

(UN World Urbanization Prospects)



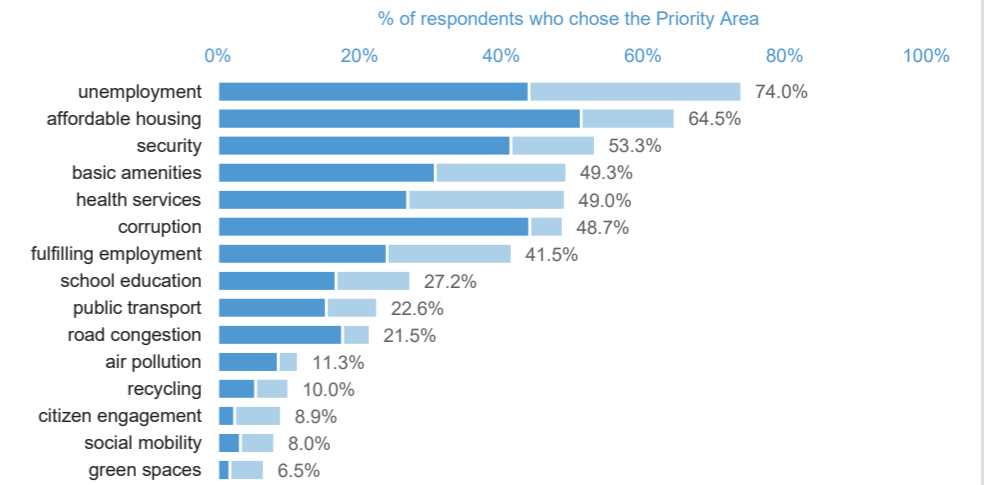
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.702	0.704	0.705	0.709	+0.004
Life expectancy at Birth	63.2	63.5	63.9	64.1	+0.2
Expected years of schooling	13.7	13.7	13.7	13.8	+0.1
Mean years of schooling	10.2	10.2	10.2	10.2	+0.0
GNI per capita (PPP \$)	11,908	11,864	11,756	12,129	+373

### PRIORITY AREAS

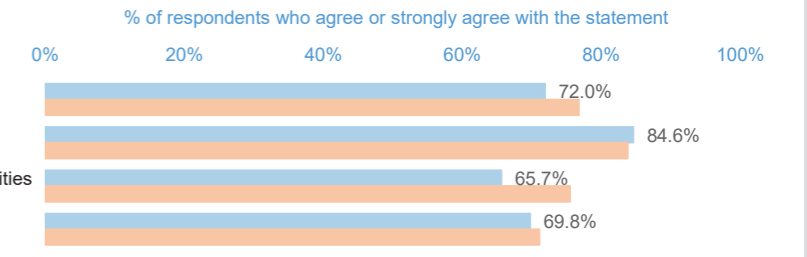
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

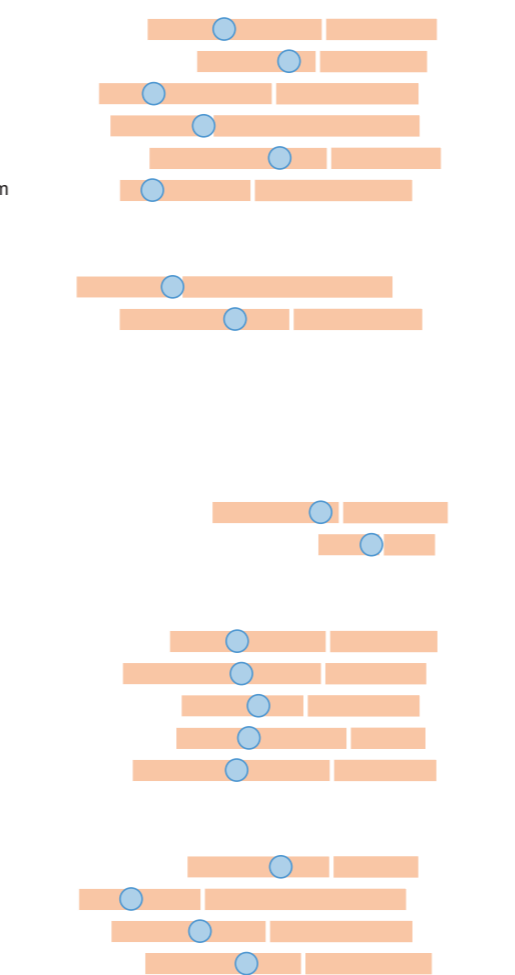
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

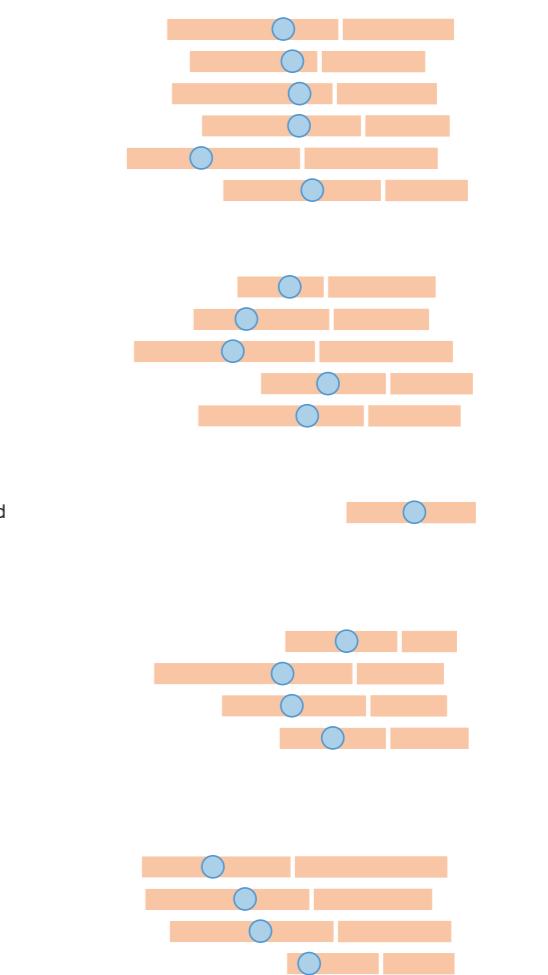
#### Opportunities (Work & School)

- 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





# Chengdu

## SMART CITY RANKING

72

Out of 118



69 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

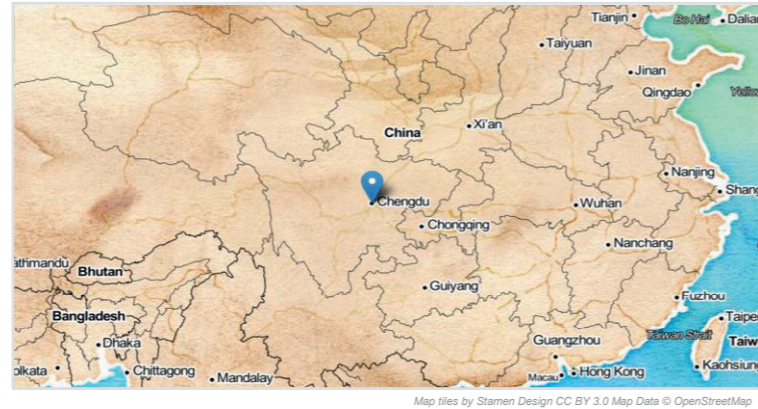
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
9,140,000

(UN World Urbanization Prospects)

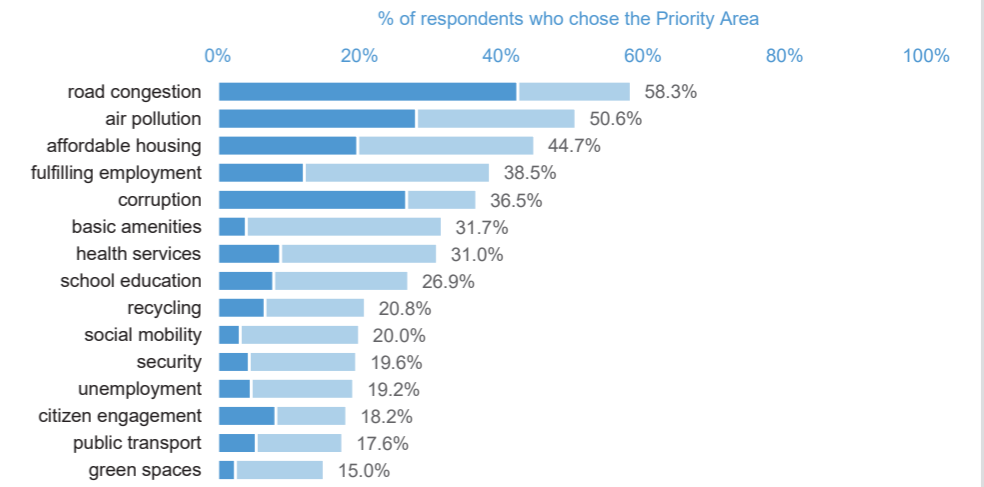


Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

### PRIORITY AREAS

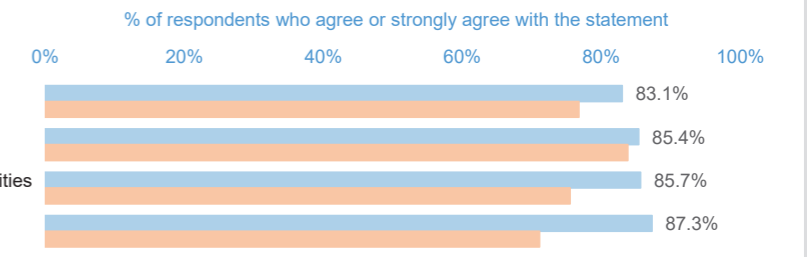
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

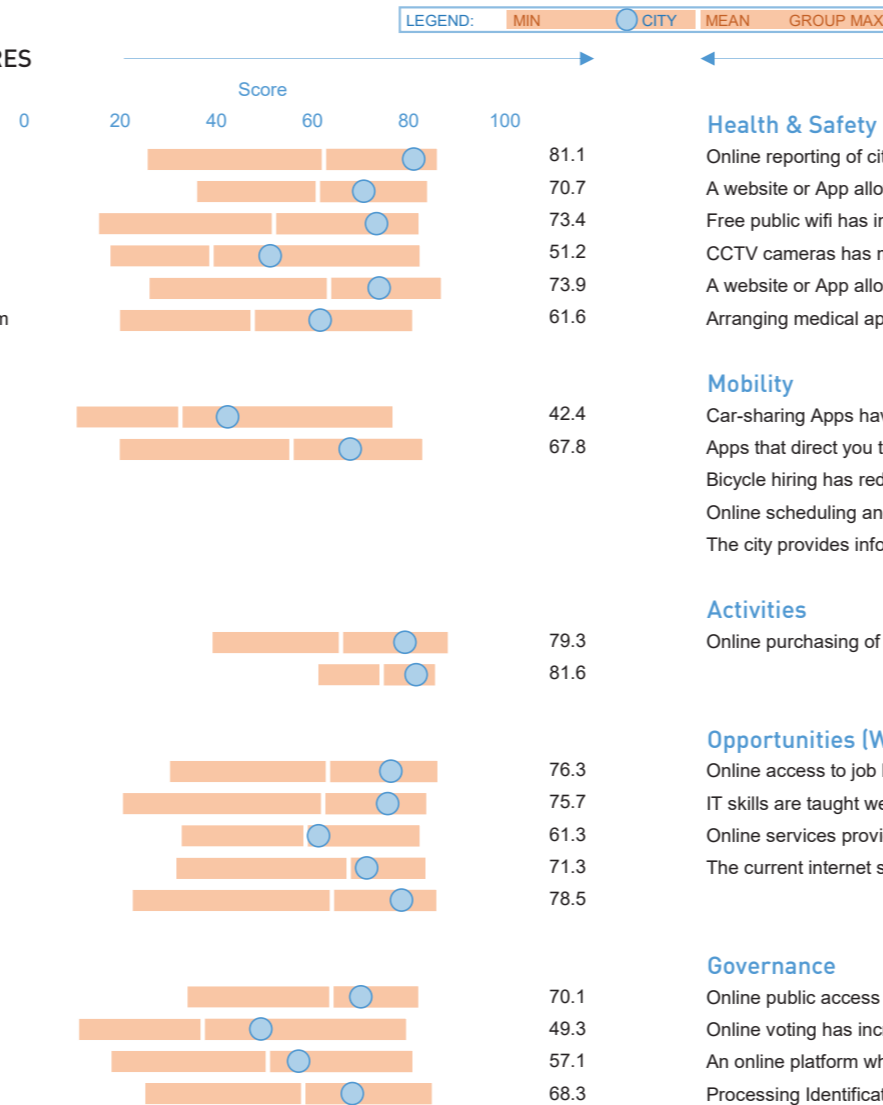
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

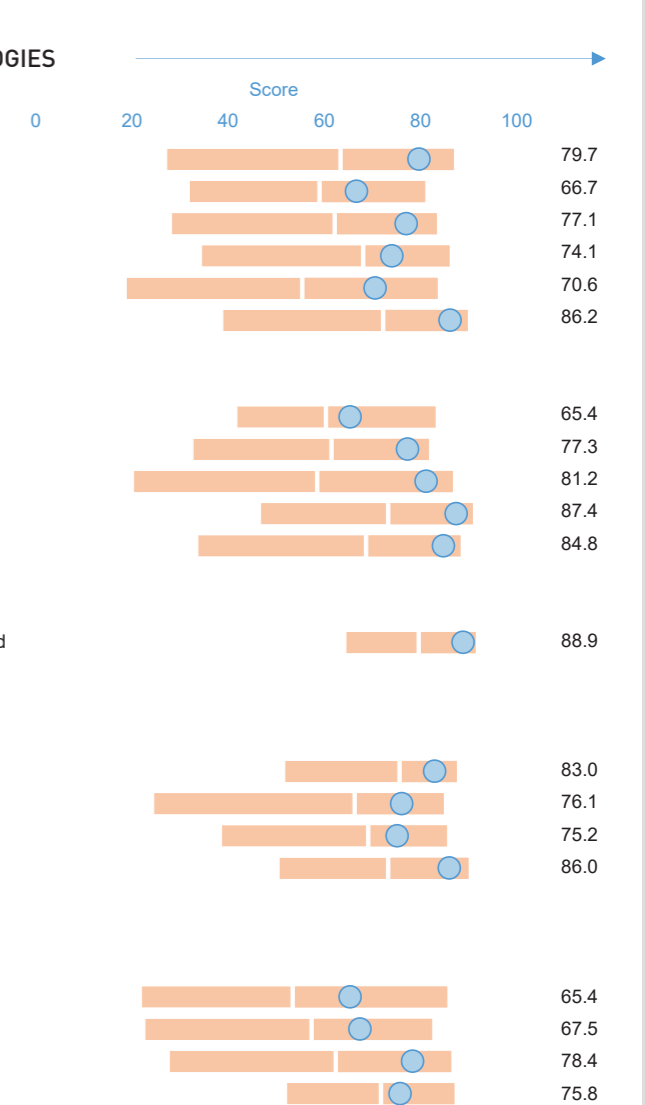
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Chicago

## SMART CITY RANKING

59

Out of 118



41 in 2020

## SMART CITY RATING

B

BBB in 2020

## FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
8,870,000

(UN World Urbanization Prospects)

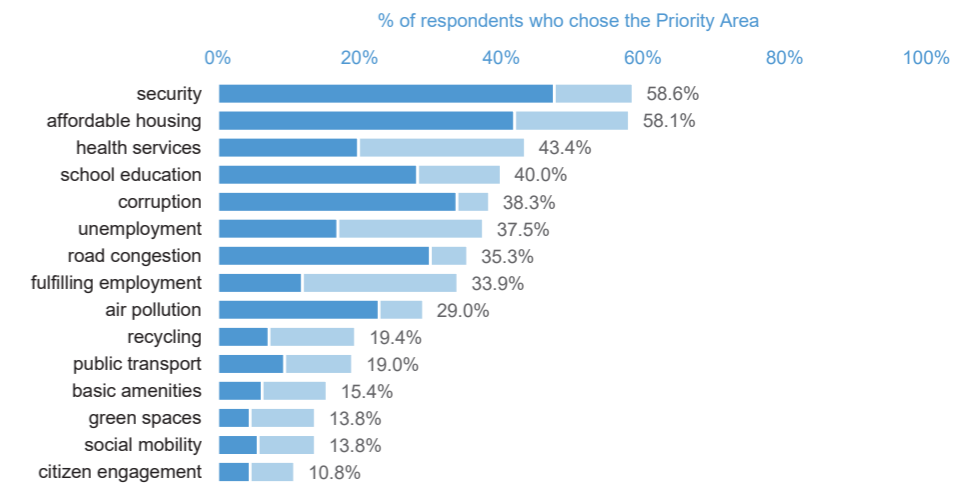


Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

## PRIORITY AREAS

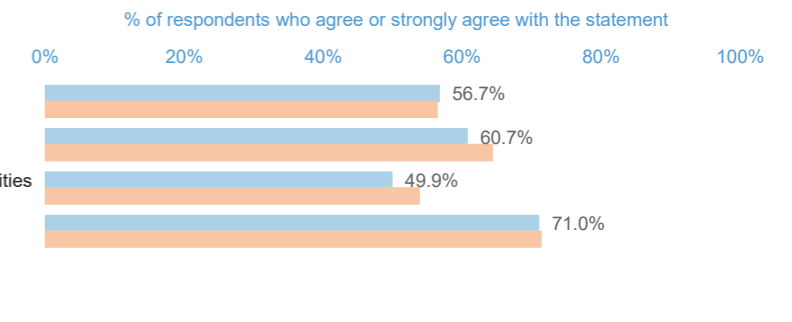
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

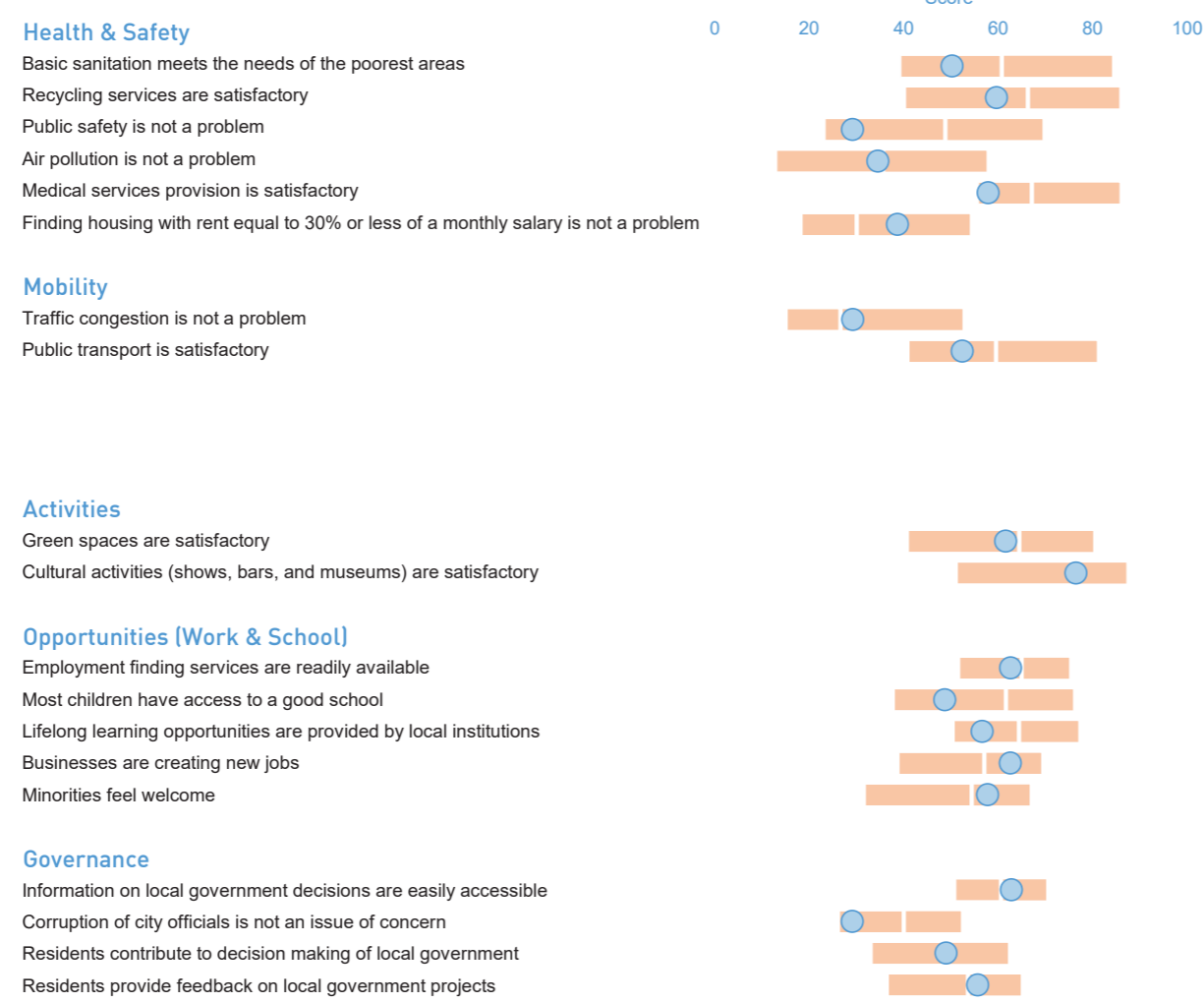


## ATTITUDES

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



## TECHNOLOGIES



# Chongqing

SMART CITY RANKING

67

Out of 118



64 in 2020

SMART CITY RATING

CCC

CCC in 2020

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

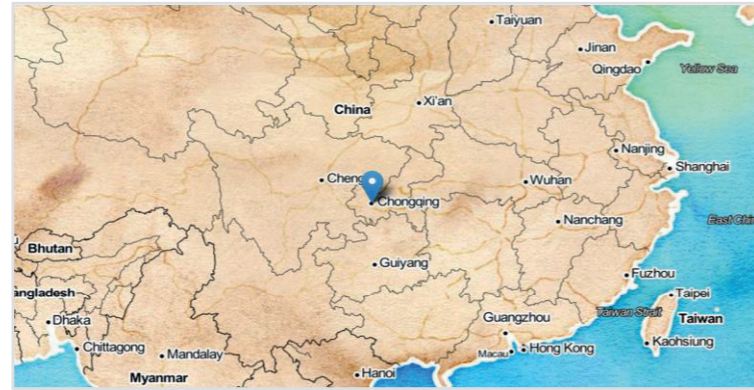
All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
15,870,000

(UN World Urbanization Prospects)



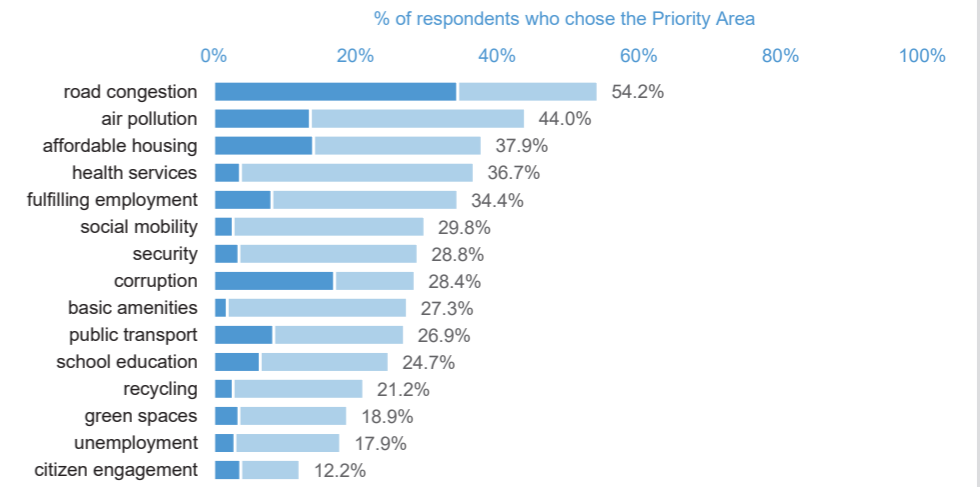
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

## 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.



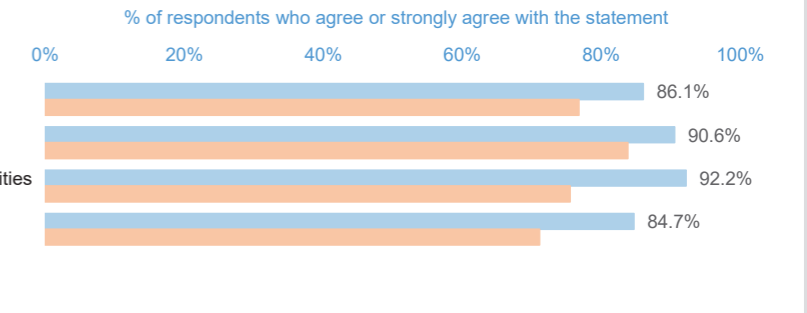
## ATTITUDES

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

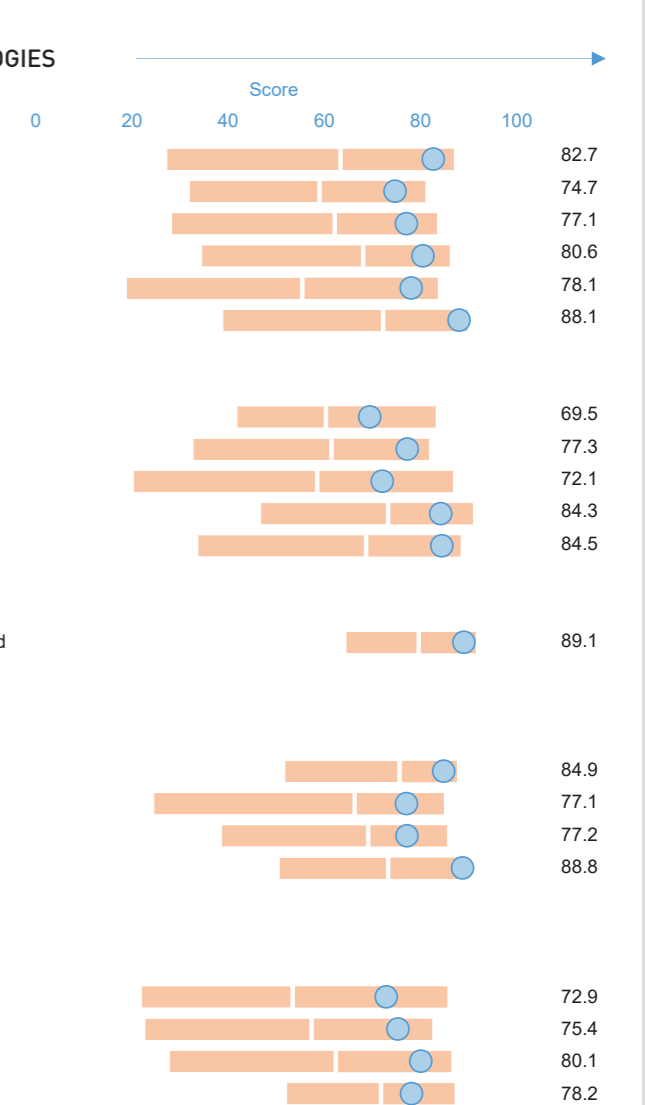
- Online purchasing of tickets to shows and museums has made it easier to attend

### 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



# Copenhagen

## SMART CITY RANKING

7

Out of 118



6 in 2020

## SMART CITY RATING

A

AA in 2020

## FACTOR RATINGS

AA

### STRUCTURES

A

### TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,350,000

(UN World Urbanization Prospects)

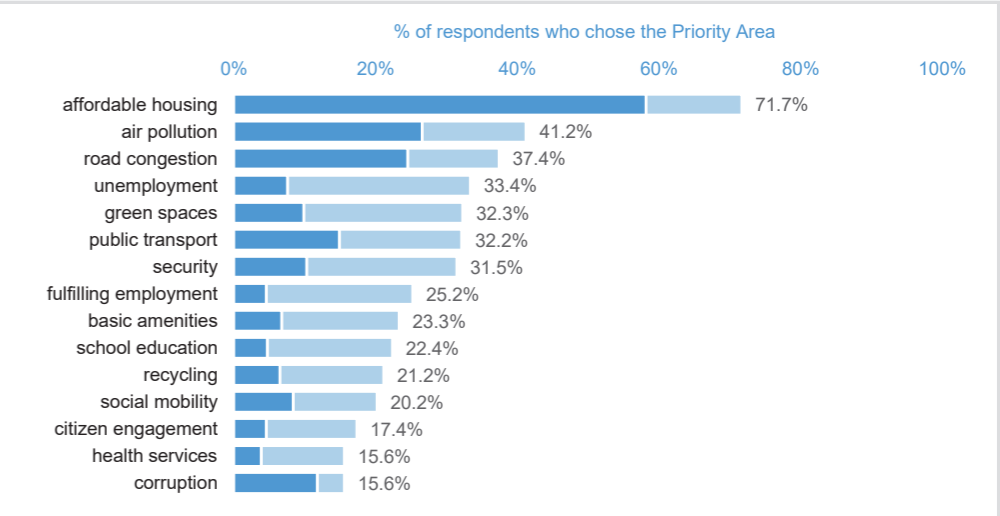


Country	2016	2017	2018	2019	1 yr change
HDI	0.928	0.929	0.930	0.940	+0.010
Life expectancy at Birth	80.6	80.7	80.8	80.9	+0.1
Expected years of schooling	19.1	19.1	19.1	18.9	-0.2
Mean years of schooling	12.6	12.6	12.6	12.6	+0.0
GNI per capita (PPP \$)	47,729	48,338	48,836	58,662	+9,826

## PRIORITY AREAS

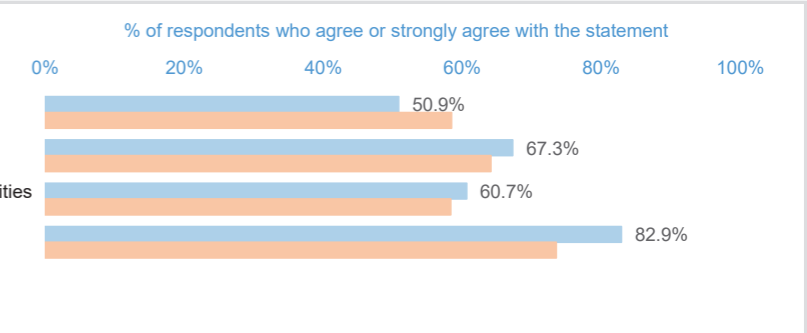
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

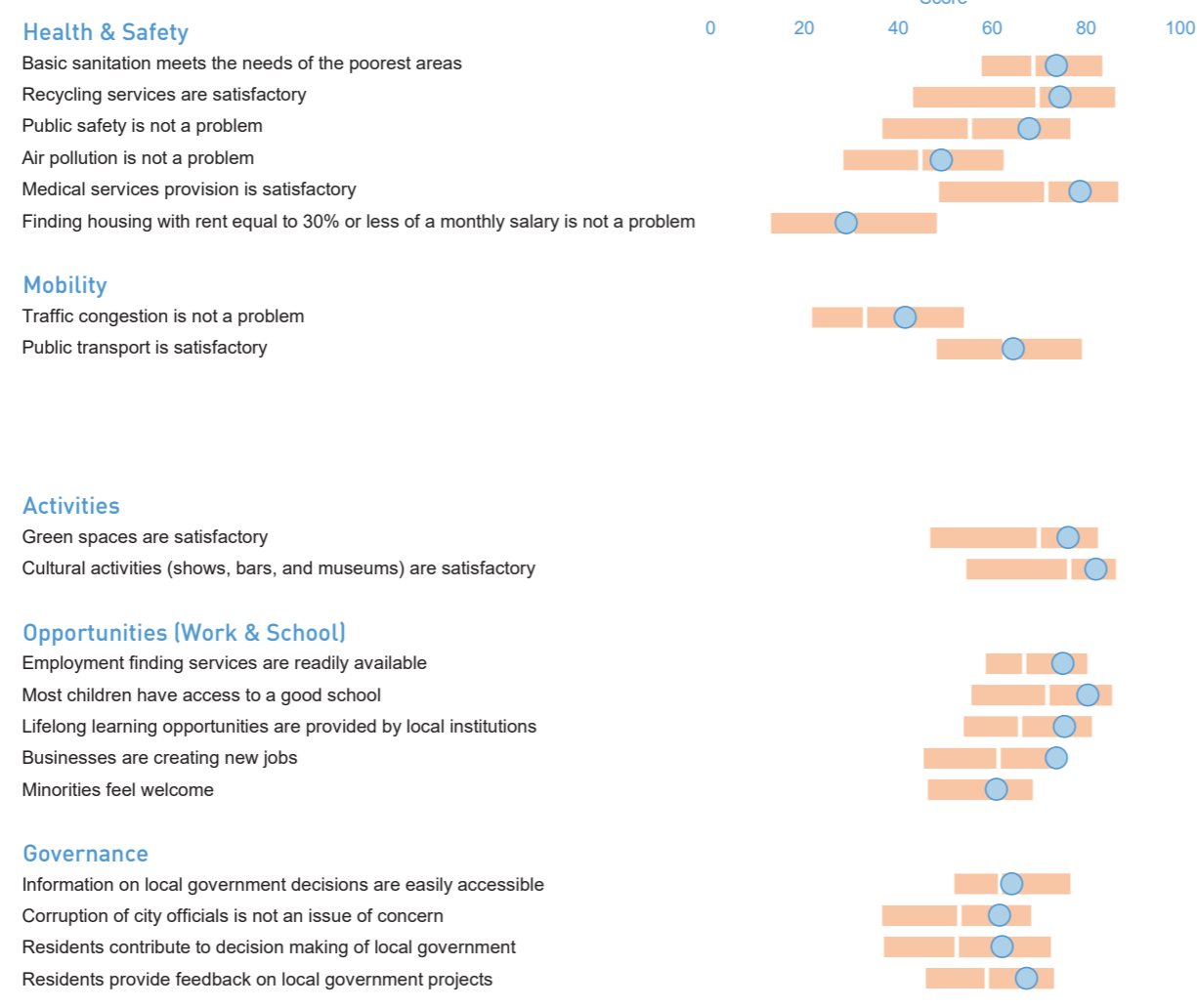


## ATTITUDES

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



## TECHNOLOGIES



# Denver

## SMART CITY RANKING

45

Out of 118



35 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BB

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,830,000

(UN World Urbanization Prospects)

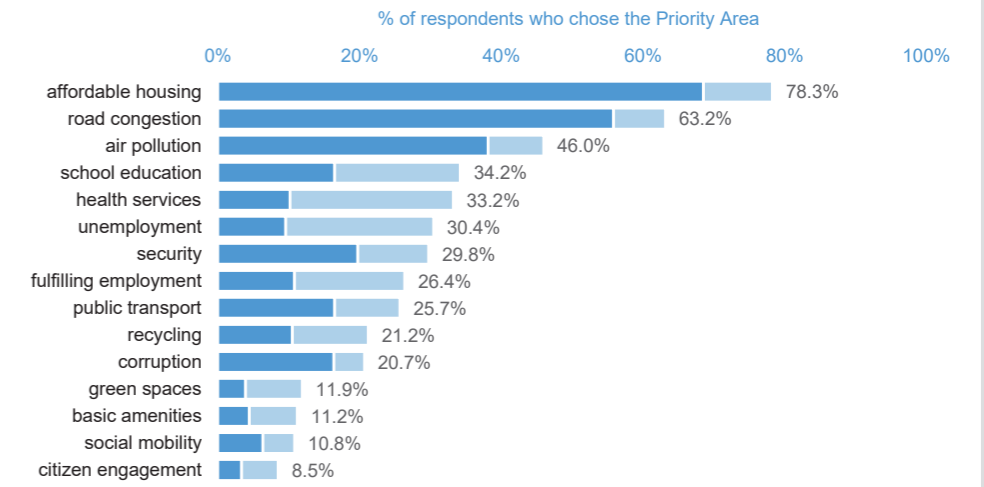


Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

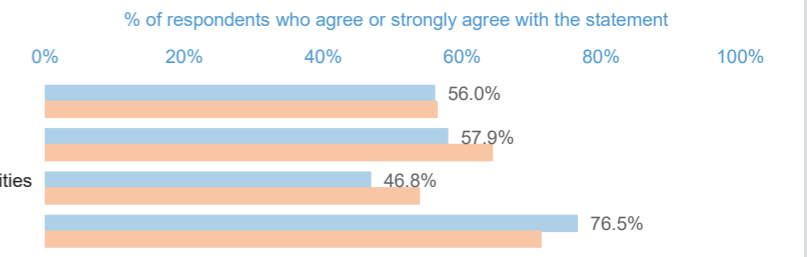
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

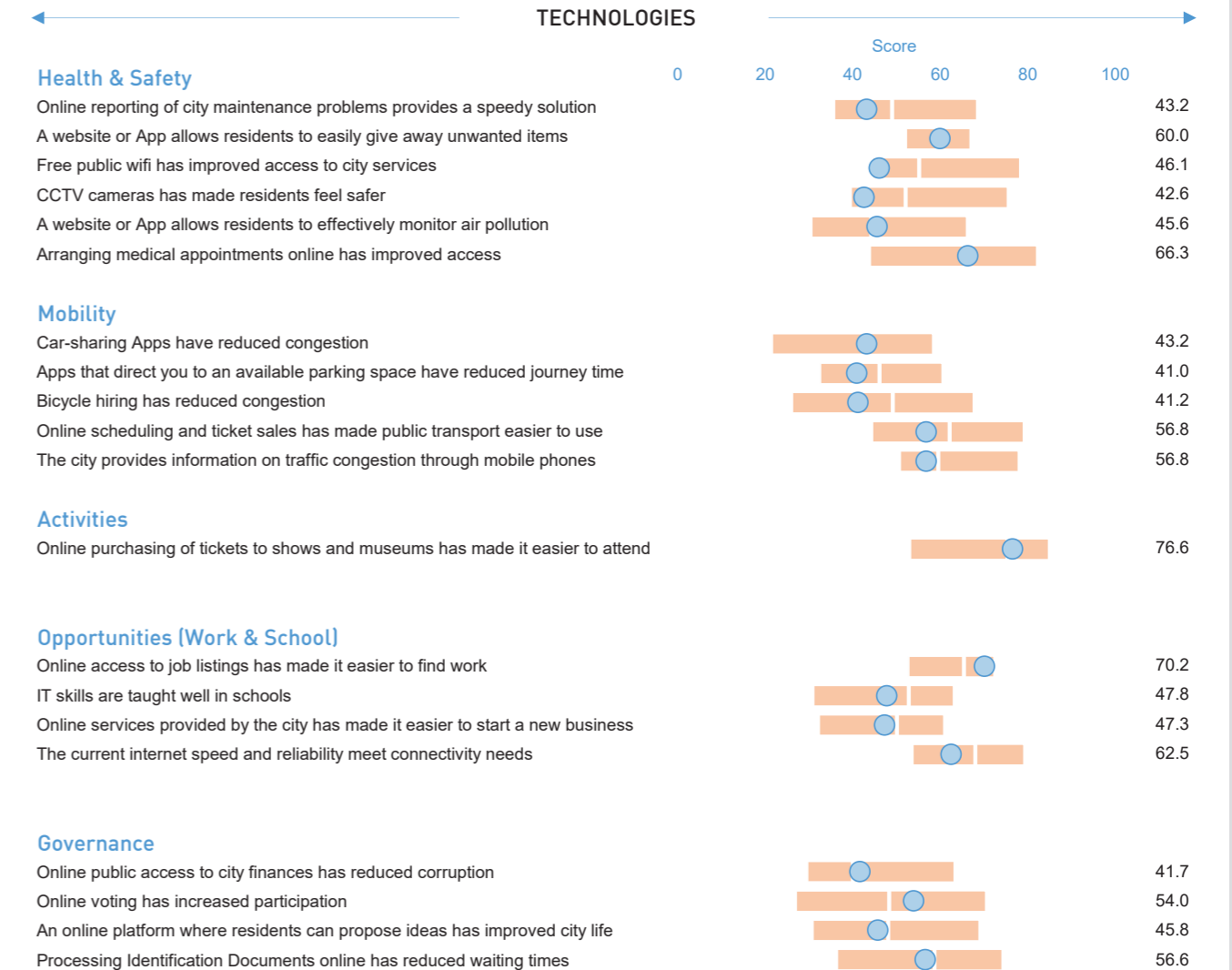
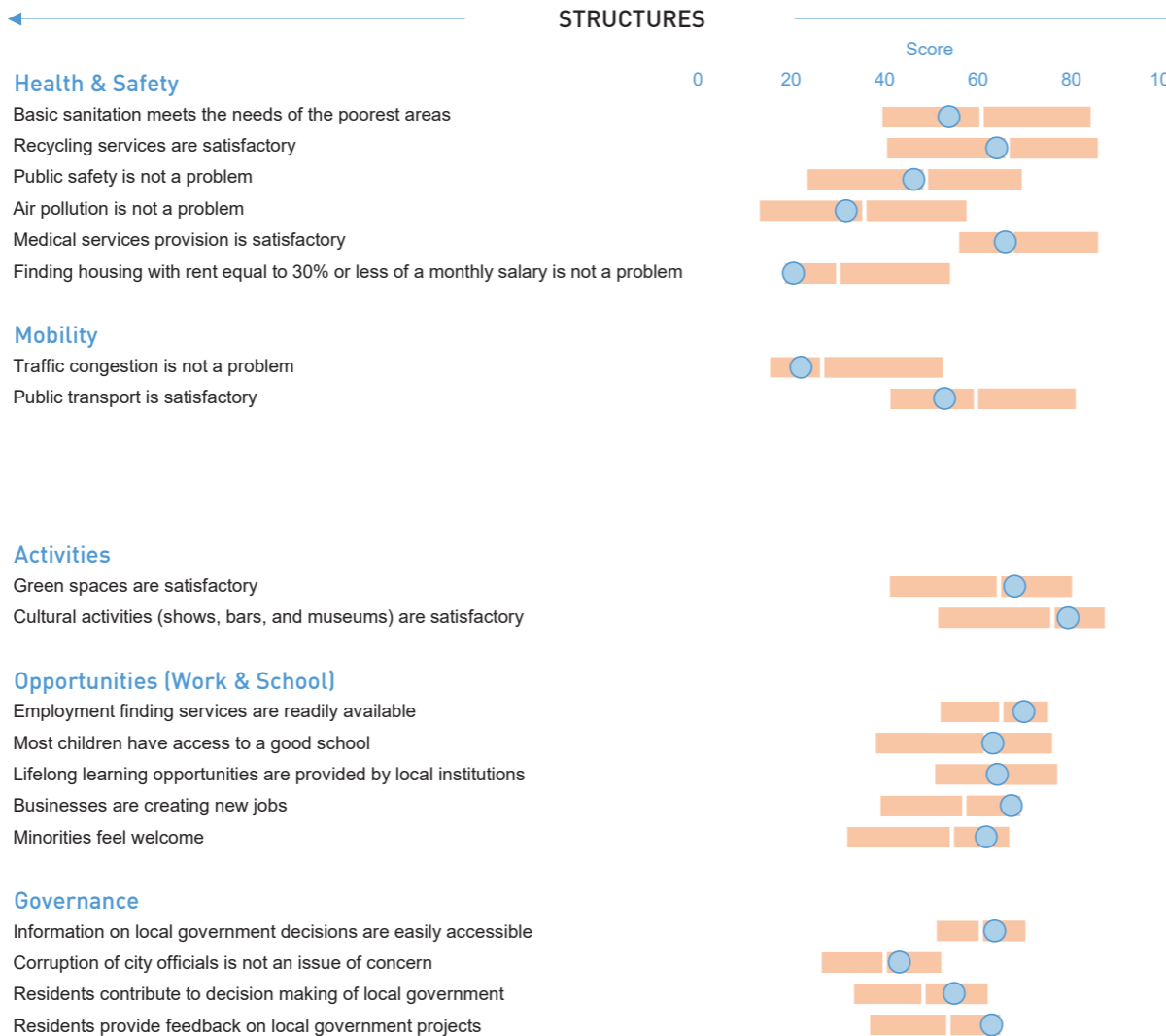


### ATTITUDES

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



# Dubai

## SMART CITY RANKING

29

Out of 118



43 in 2020

## SMART CITY RATING

BB

BB in 2020

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,880,000

(UN World Urbanization Prospects)

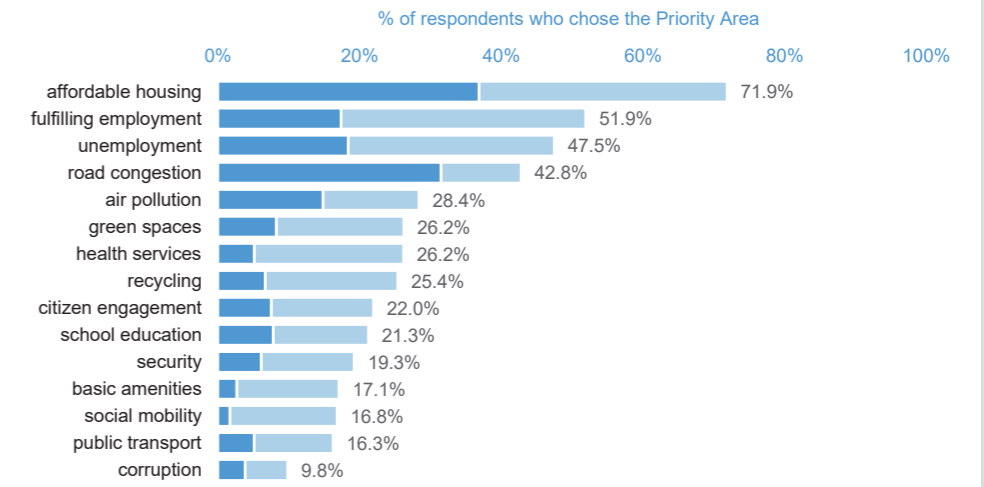


Country	2016	2017	2018	2019	1 yr change
HDI	0.863	0.864	0.866	0.890	+0.024
Life expectancy at Birth	77.5	77.6	77.8	78.0	+0.2
Expected years of schooling	13.6	13.6	13.6	14.3	+0.7
Mean years of schooling	10.8	10.9	11.0	12.1	+1.1
GNI per capita (PPP \$)	67,410	67,136	66,912	67,462	+550

### 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.



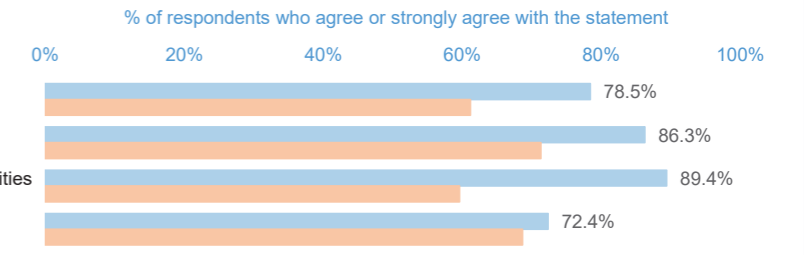
### ATTITUDES

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

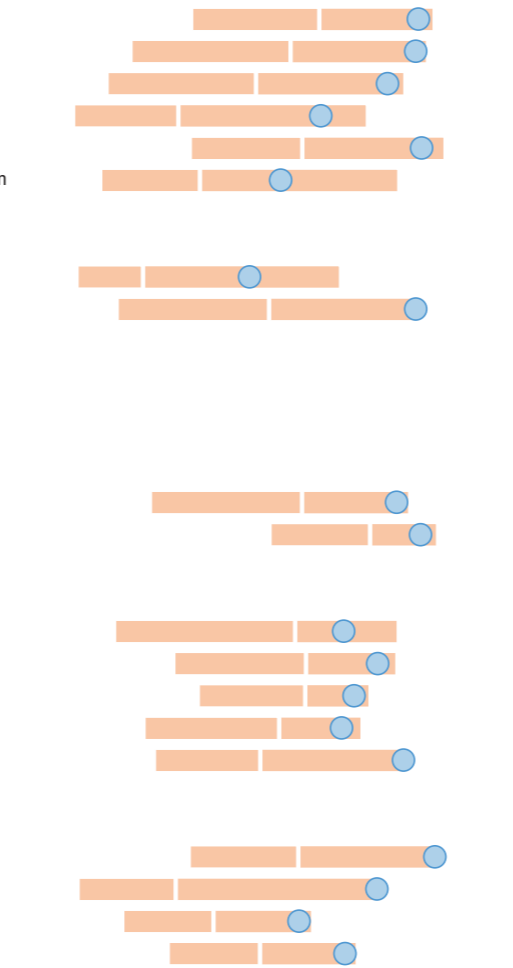
#### Governance

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

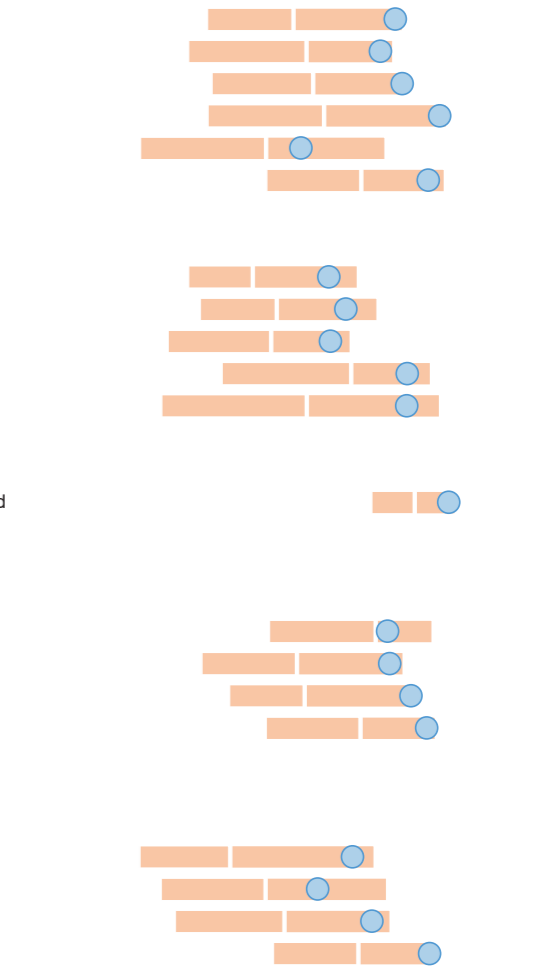
#### Governance

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



# Dublin

## SMART CITY RANKING

48

Out of 118



34 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,230,000

(UN World Urbanization Prospects)

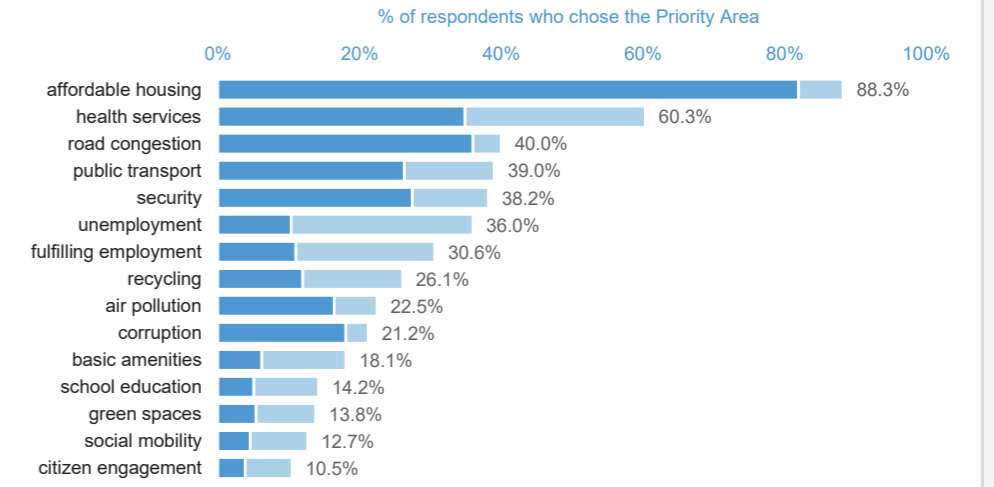


Country	2016	2017	2018	2019	1 yr change
HDI	0.936	0.939	0.942	0.955	+0.013
Life expectancy at Birth	81.6	81.9	82.1	82.3	+0.2
Expected years of schooling	18.8	18.8	18.8	18.7	-0.1
Mean years of schooling	12.5	12.5	12.5	12.7	+0.2
GNI per capita (PPP \$)	50,911	52,799	55,660	68,371	+12,711

## 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.



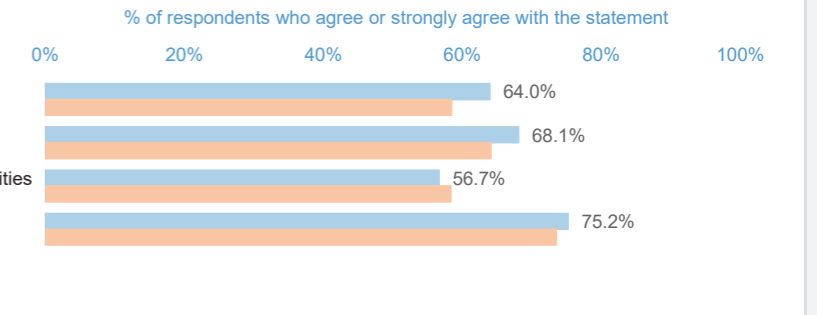
## ATTITUDES

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



61.6
63.9
40.8
46.1
48.5
12.7
22.7
49.4
64.4
75.2
68.7
67.9
65.1
65.8
62.9
59.6
42.1
47.6
55.8

## 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
- 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



40.7
58.0
50.9
50.7
29.9
50.6
33.7
36.6
61.8
62.0
51.0
77.2
74.5
53.2
54.7
65.5
35.4
39.4
43.6
59.2

# Dusseldorf

## SMART CITY RANKING

20

Out of 118



13 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
630,000

(UN World Urbanization Prospects)

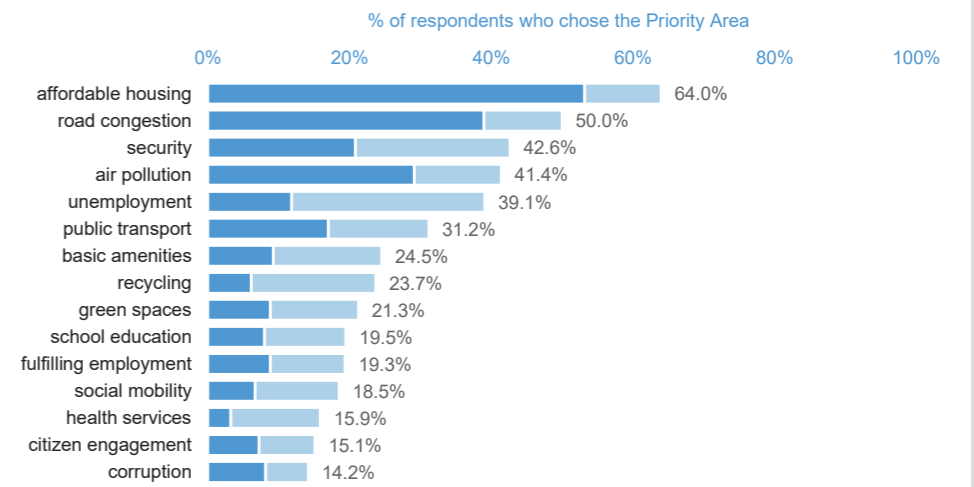


Country	2016	2017	2018	2019	1 yr change
HDI	0.936	0.938	0.939	0.947	+0.008
Life expectancy at Birth	80.9	81.0	81.2	81.3	+0.1
Expected years of schooling	17.1	17.1	17.1	17.0	-0.1
Mean years of schooling	14.1	14.1	14.1	14.2	+0.1
GNI per capita (PPP \$)	45,577	46,438	46,946	55,314	+8,368

### PRIORITY AREAS

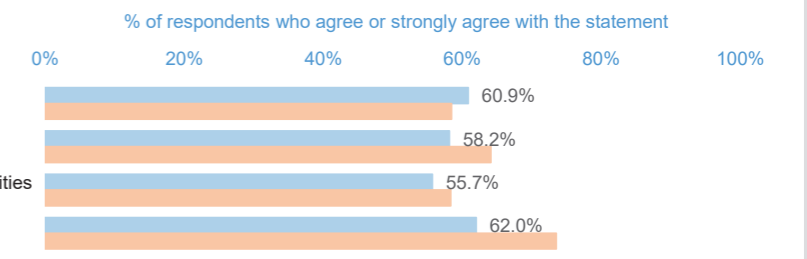
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

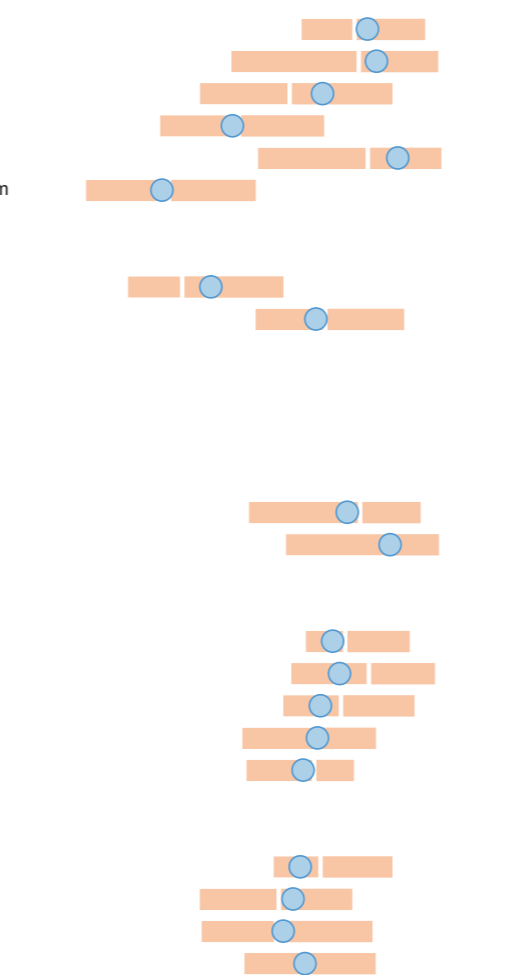
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

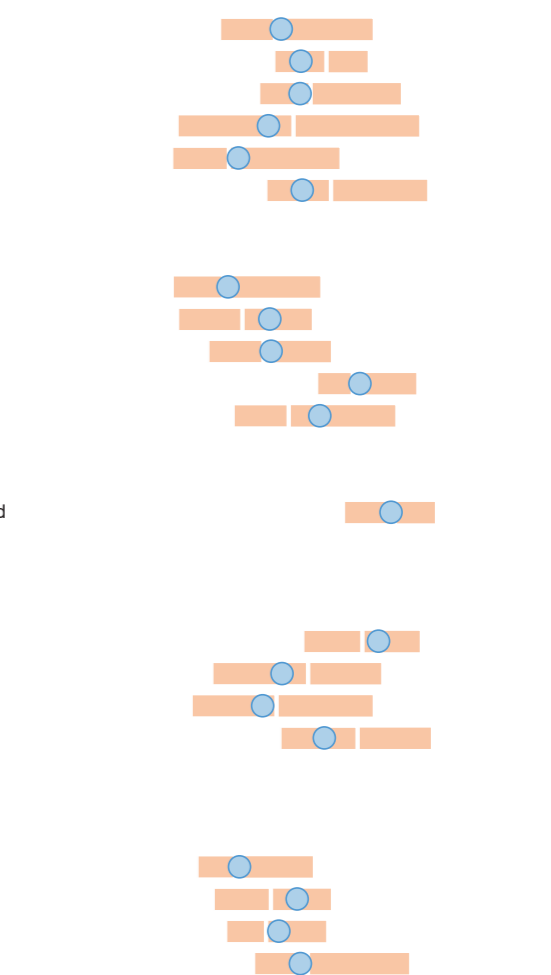
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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





# Geneva

## SMART CITY RANKING

8

Out of 118



7 in 2020

## SMART CITY RATING

A

AA in 2020

## FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
200,000

(Eurostat)

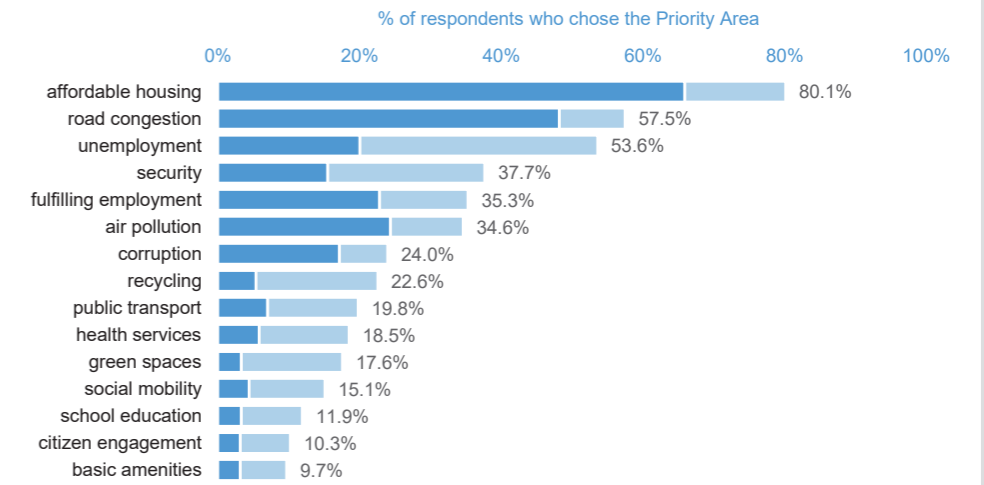


Country	2016	2017	2018	2019	1 yr change
HDI	0.943	0.943	0.946	0.955	+0.009
Life expectancy at Birth	83.3	83.5	83.6	83.8	+0.2
Expected years of schooling	16.2	16.2	16.2	16.3	+0.1
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	58,138	57,301	59,375	69,394	+10,019

## 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.



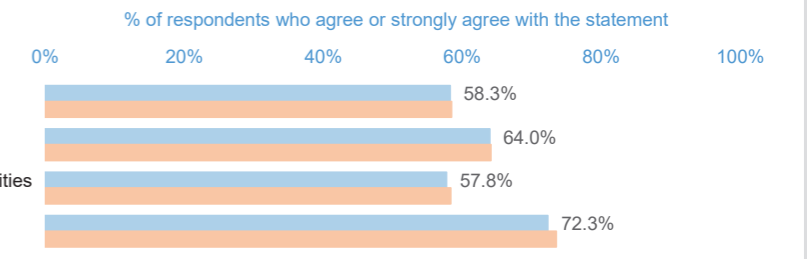
## ATTITUDES

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

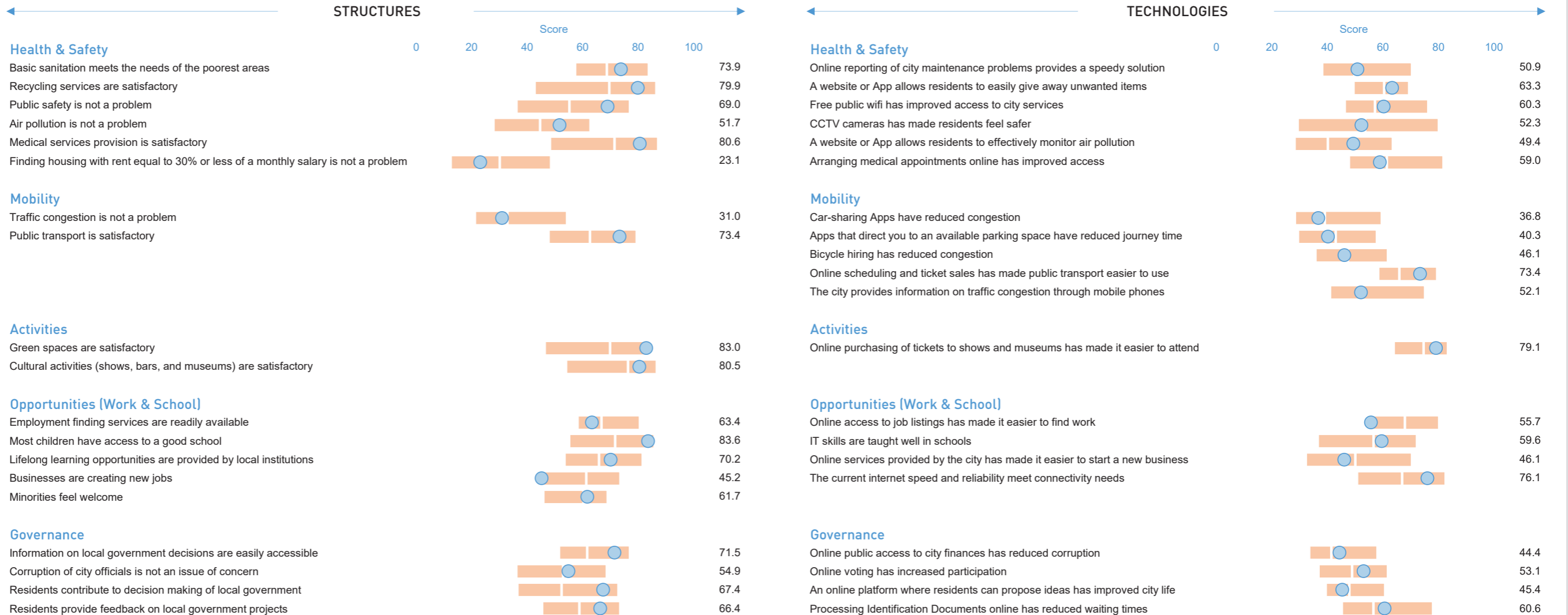
You are comfortable with face recognition technologies to lower crime

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



# Glasgow

## SMART CITY RANKING

49

Out of 118

N/A

not in 2020

## SMART CITY RATING

BB

not in 2020

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

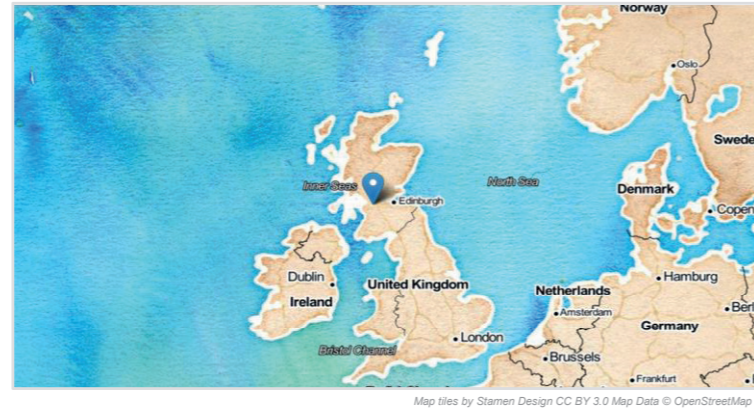
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
620,000

(Eurostat)

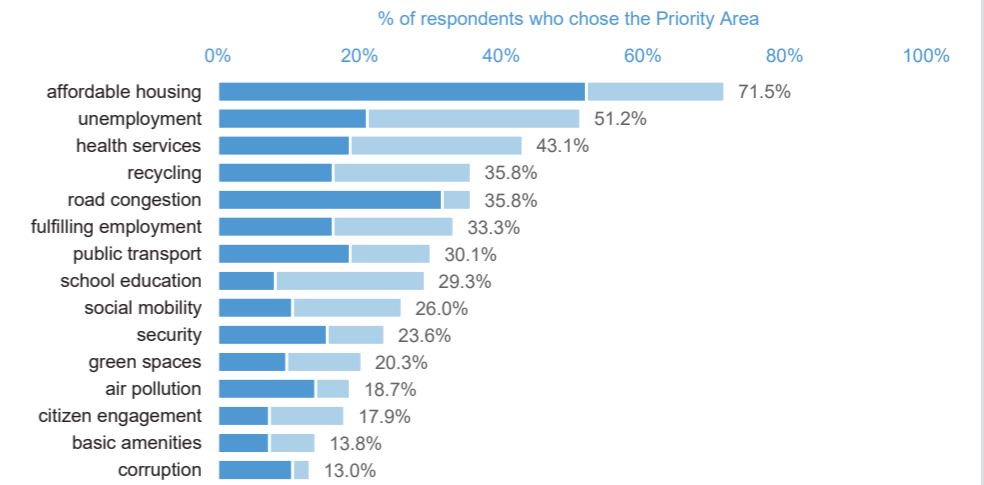


Country	2016	2017	2018	2019	1 yr change
HDI	0.918	0.919	0.920	0.932	+0.012
Life expectancy at Birth	81.1	81.2	81.2	81.3	+0.1
Expected years of schooling	17.4	17.4	17.4	17.5	+0.1
Mean years of schooling	12.9	12.9	13.0	13.2	+0.2
GNI per capita (PPP \$)	38,421	39,216	39,507	46,071	+6,564

### PRIORITY AREAS

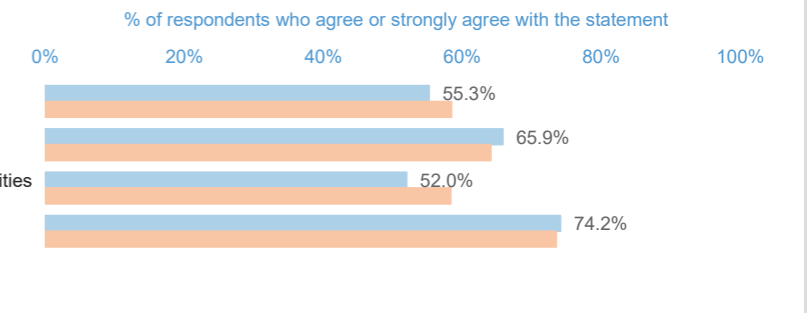
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.



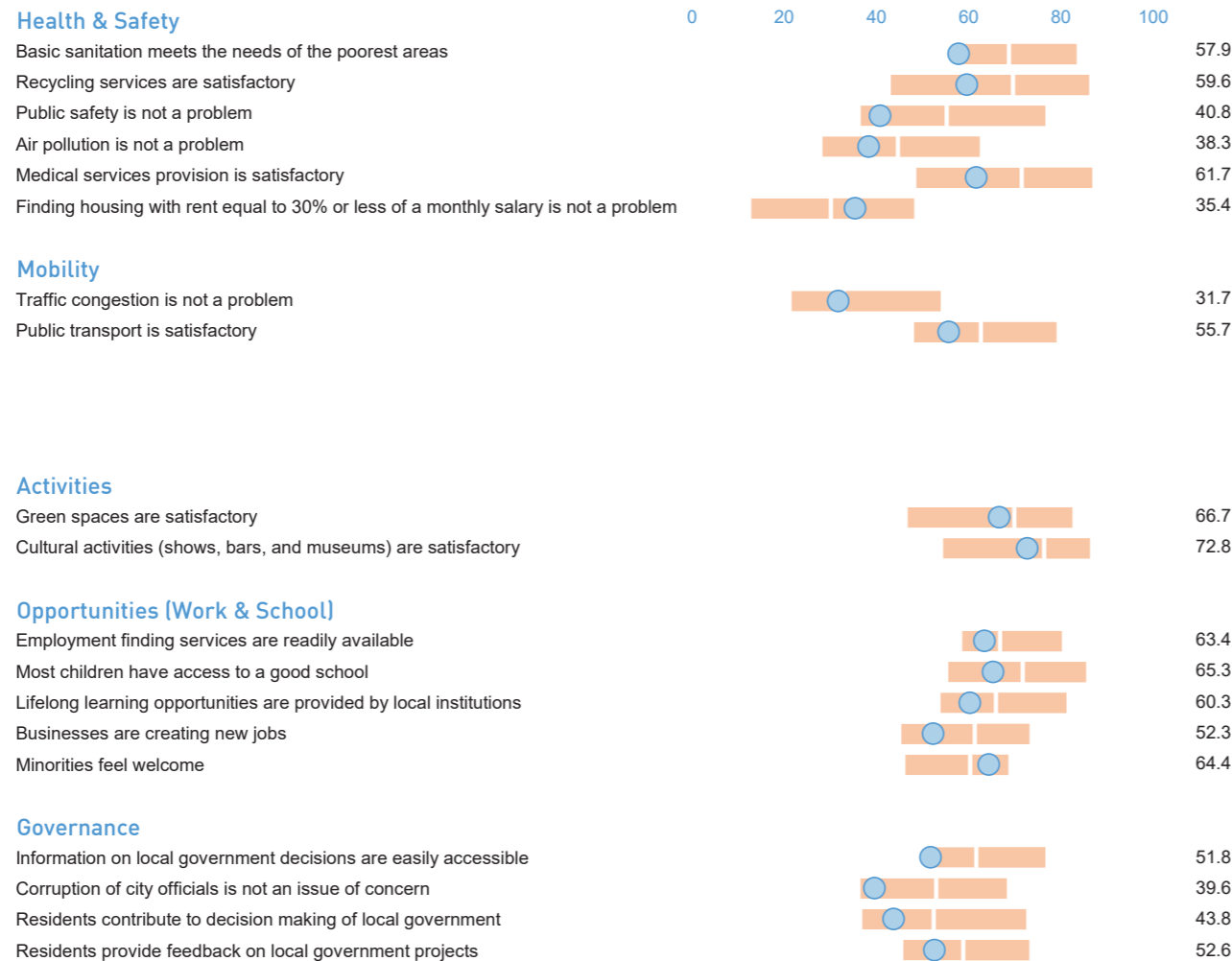
### ATTITUDES

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



### TECHNOLOGIES



# Gothenburg

## SMART CITY RANKING

46

Out of 118



31 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
560,000

(Eurostat)

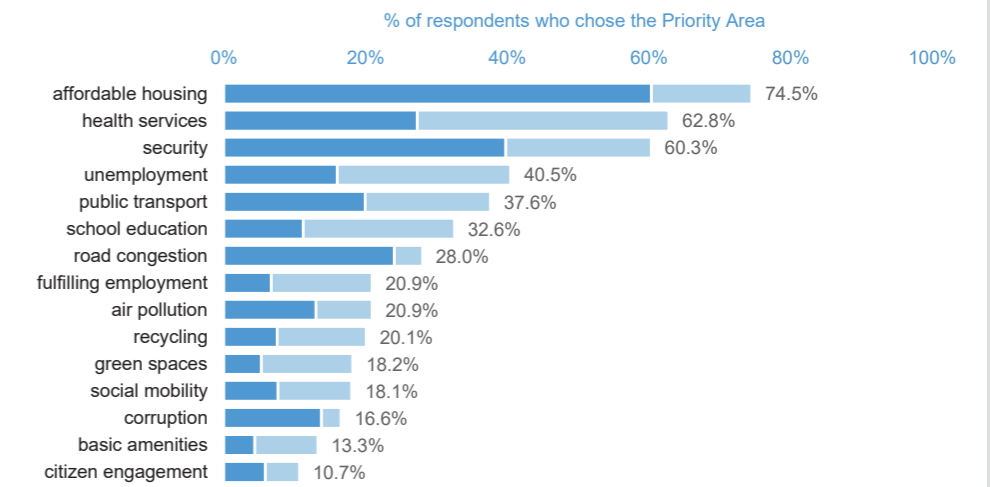


Country	2016	2017	2018	2019	1 yr change
HDI	0.934	0.935	0.937	0.945	+0.008
Life expectancy at Birth	82.4	82.5	82.7	82.8	+0.1
Expected years of schooling	18.8	18.8	18.8	19.5	+0.7
Mean years of schooling	12.4	12.4	12.4	12.5	+0.1
GNI per capita (PPP \$)	46,662	47,398	47,955	54,508	+6,553

## 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.



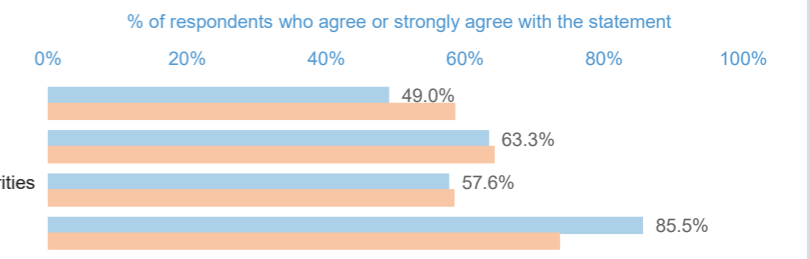
## ATTITUDES

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



# Guangzhou

## SMART CITY RANKING

68

Out of 118

68 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
13,300,000

(UN World Urbanization Prospects)

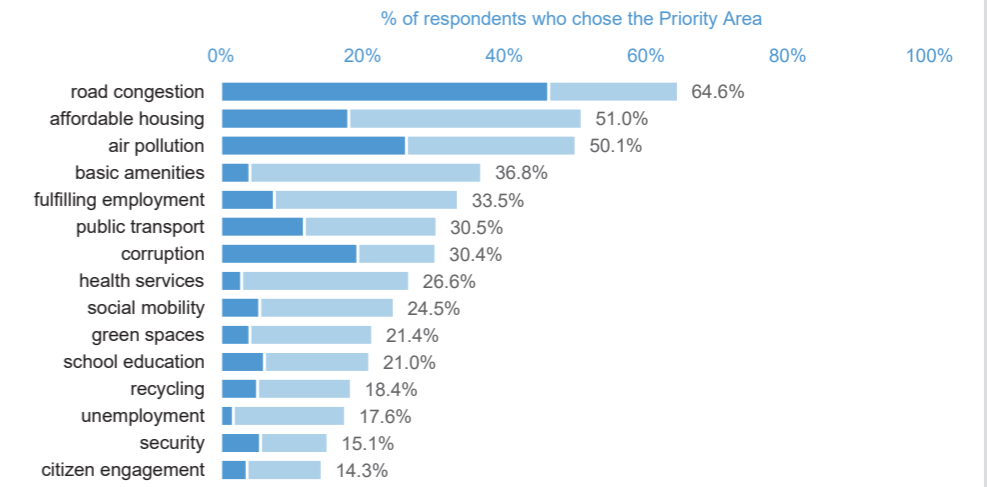


Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

### PRIORITY AREAS

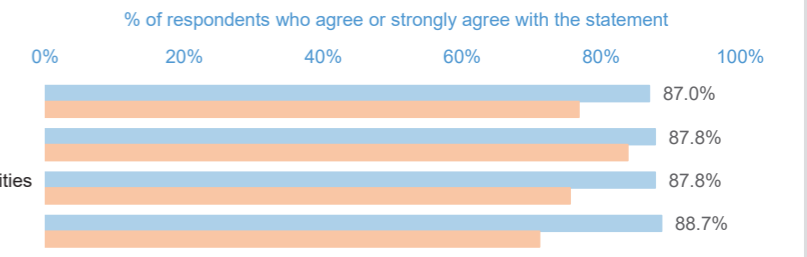
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

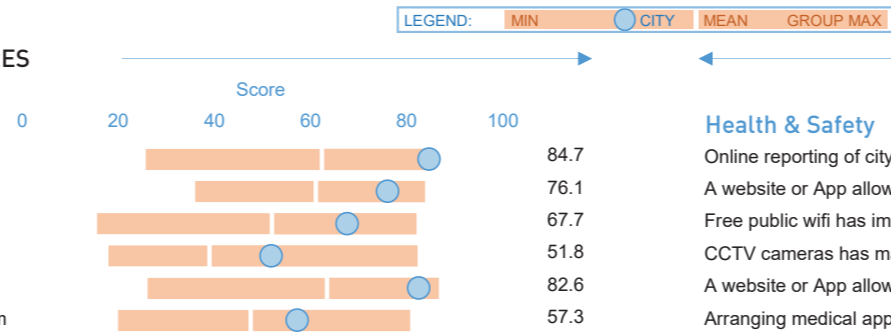
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

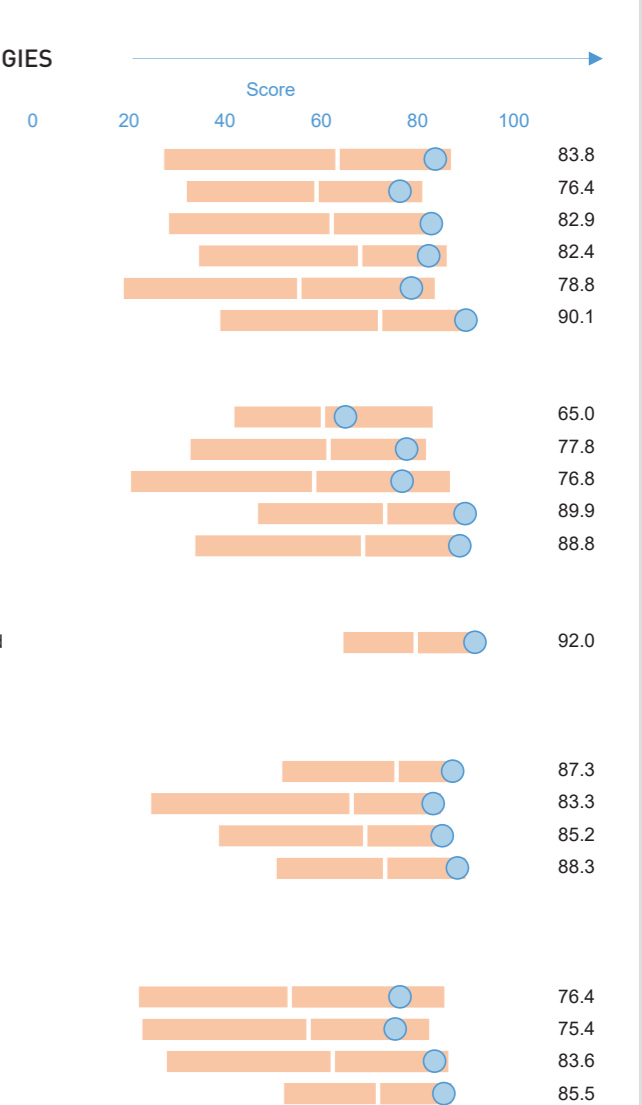
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Hamburg

## SMART CITY RANKING

40

Out of 118



22 in 2020

## SMART CITY RATING

BB

A in 2020

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,850,000  
*(Eurostat)*

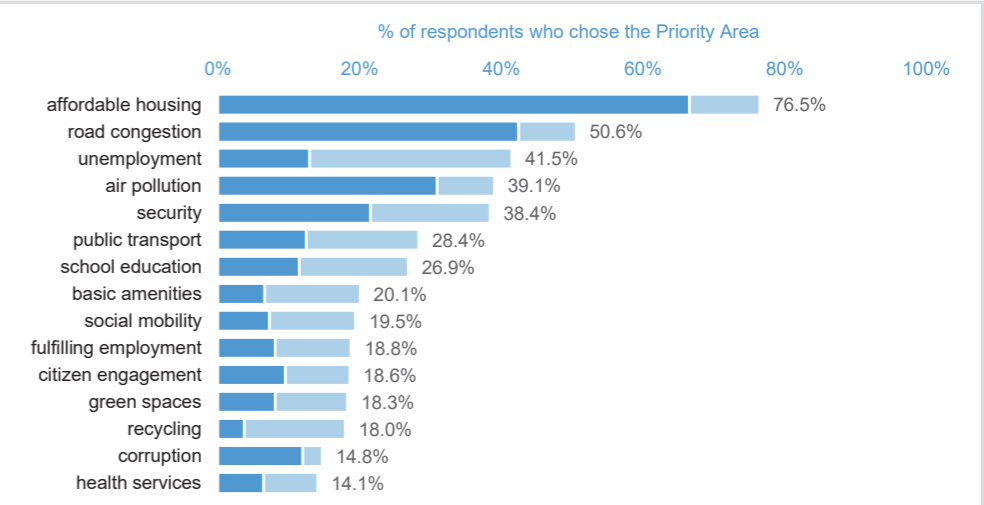


Country	2016	2017	2018	2019	1 yr change
HDI	0.936	0.938	0.939	0.947	+0.008
Life expectancy at Birth	80.9	81.0	81.2	81.3	+0.1
Expected years of schooling	17.1	17.1	17.1	17.0	-0.1
Mean years of schooling	14.1	14.1	14.1	14.2	+0.1
GNI per capita (PPP \$)	45,577	46,438	46,946	55,314	+8,368

### 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.



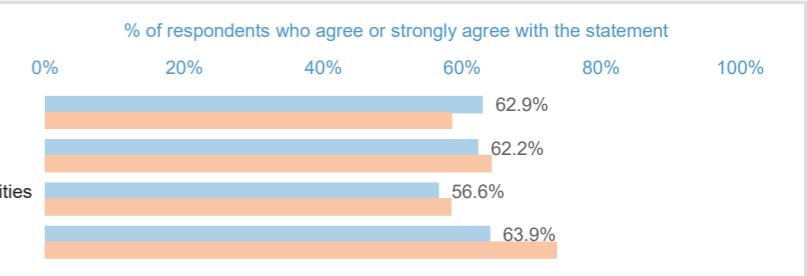
### ATTITUDES

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

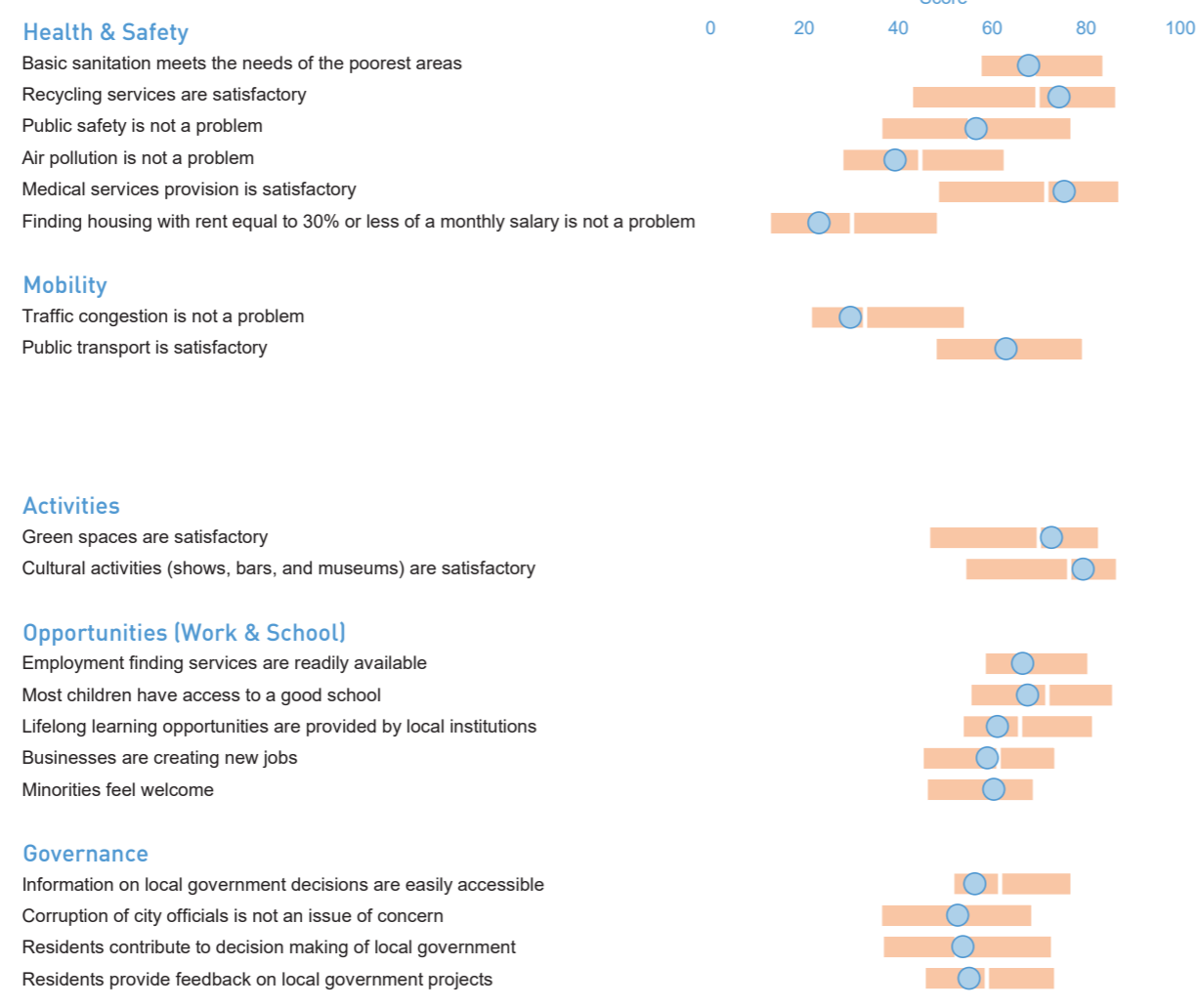
You are comfortable with face recognition technologies to lower crime

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



### TECHNOLOGIES



# Hangzhou

## SMART CITY RANKING

66

Out of 118



65 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

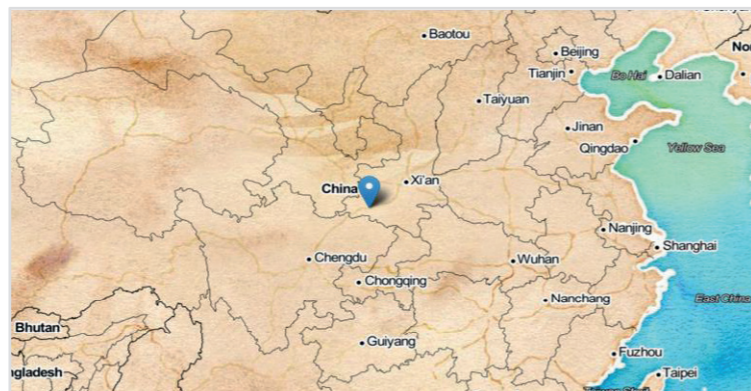
All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
7,640,000

(UN World Urbanization Prospects)



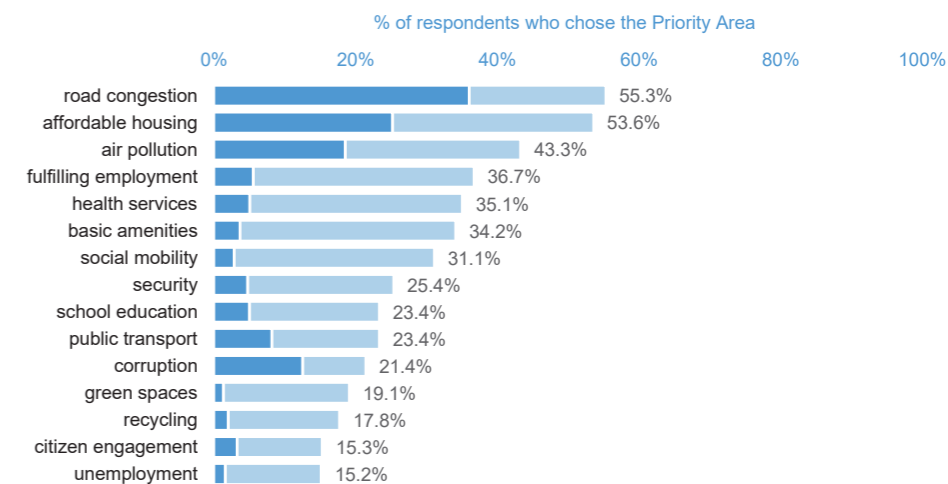
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

## PRIORITY AREAS

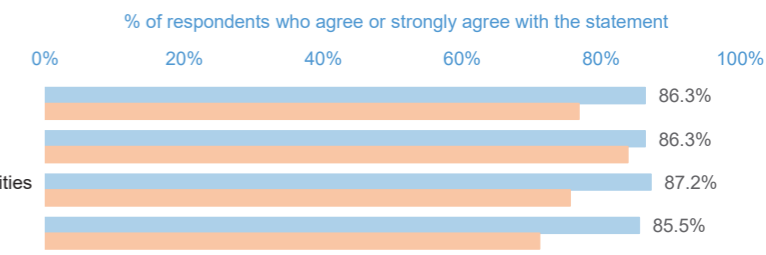
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



# Hanoi

## SMART CITY RANKING

87

Out of 118



84 in 2020

## SMART CITY RATING

CC

CC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

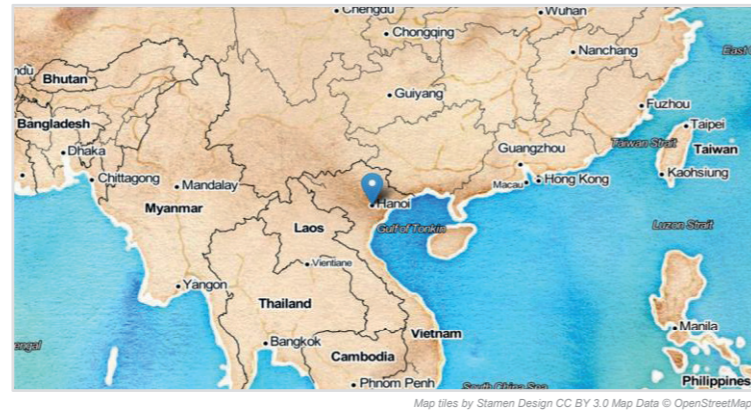
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,680,000

(UN World Urbanization Prospects)

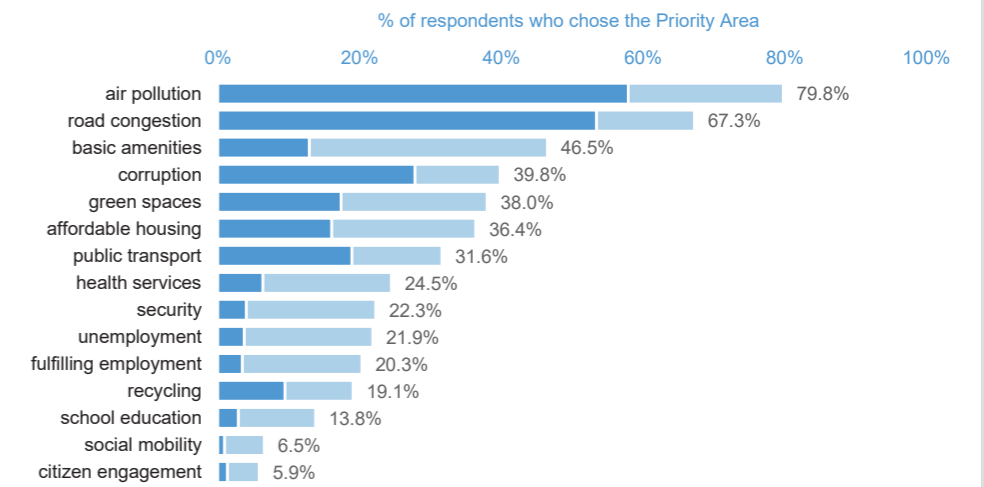


Country	2016	2017	2018	2019	1 yr change
HDI	0.685	0.690	0.693	0.704	+0.011
Life expectancy at Birth	75.2	75.2	75.3	75.4	+0.1
Expected years of schooling	12.7	12.7	12.7	12.7	+0.0
Mean years of schooling	8.1	8.2	8.2	8.3	+0.1
GNI per capita (PPP \$)	5,638	5,916	6,220	7,433	+1,213

### PRIORITY AREAS

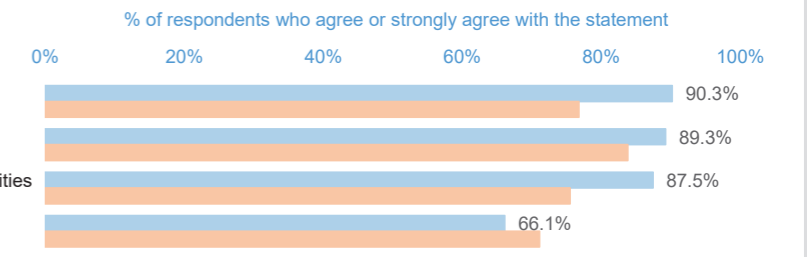
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

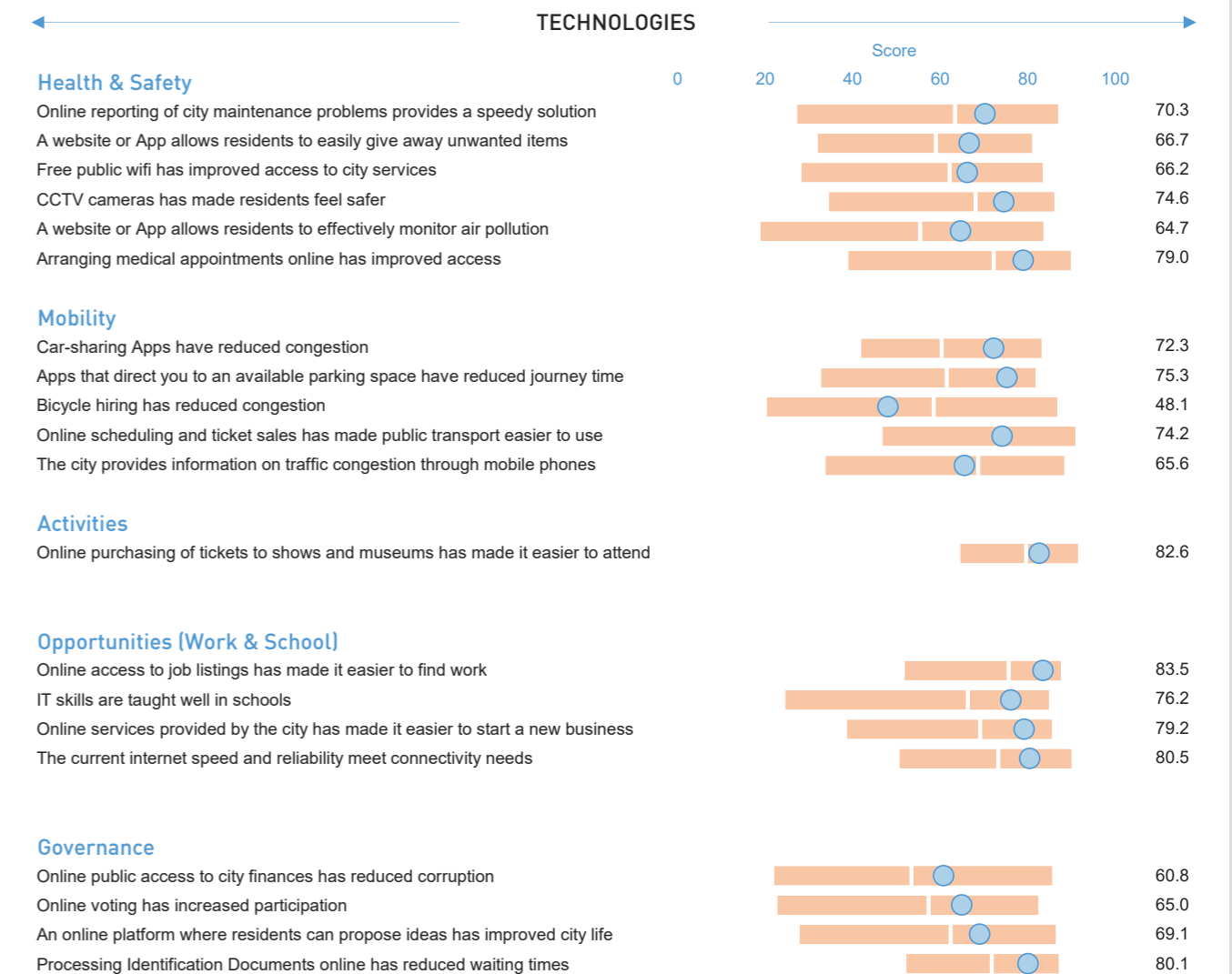
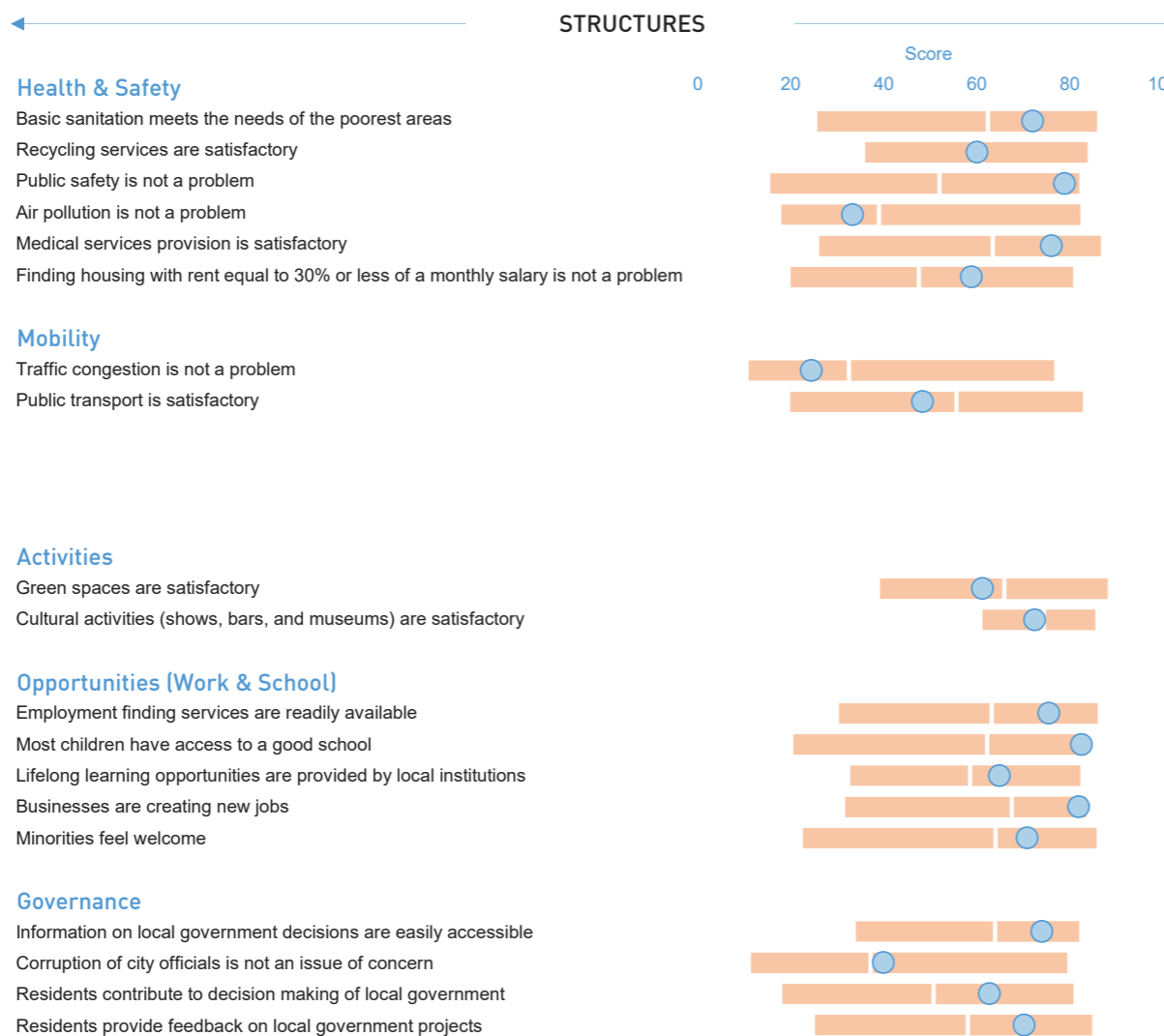


### ATTITUDES

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



LEGEND: GROUP MEAN CITY



# Hanover

## SMART CITY RANKING

47

Out of 118



33 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
540,000

(Eurostat)



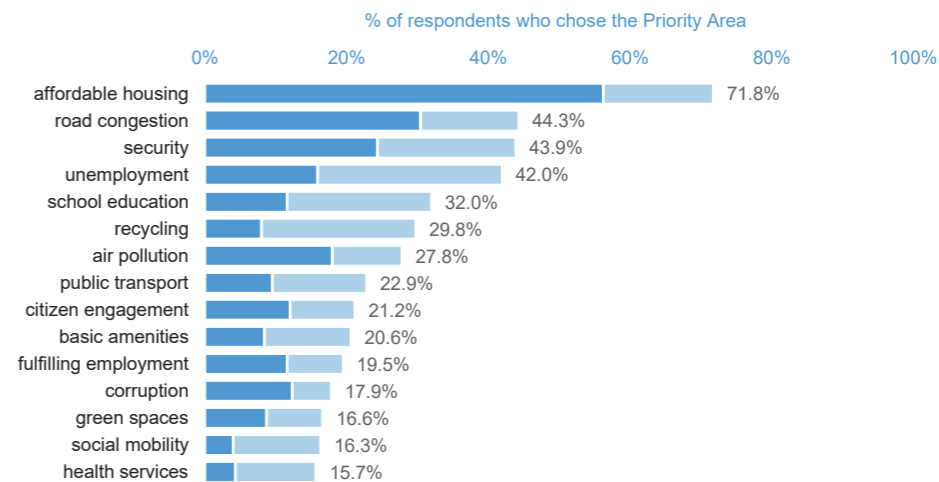
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

## PRIORITY AREAS

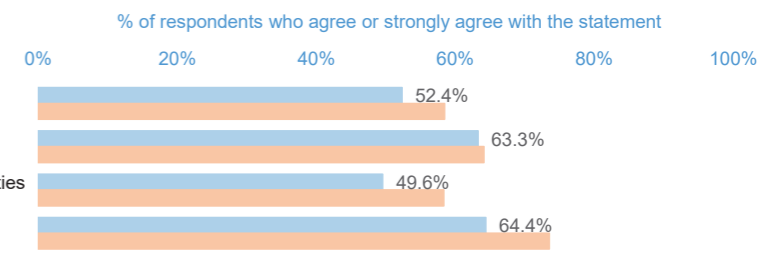
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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





# Helsinki

## SMART CITY RANKING

6

Out of 118



2 in 2020

## SMART CITY RATING

A

AA in 2020

## FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
650,000

(Eurostat)



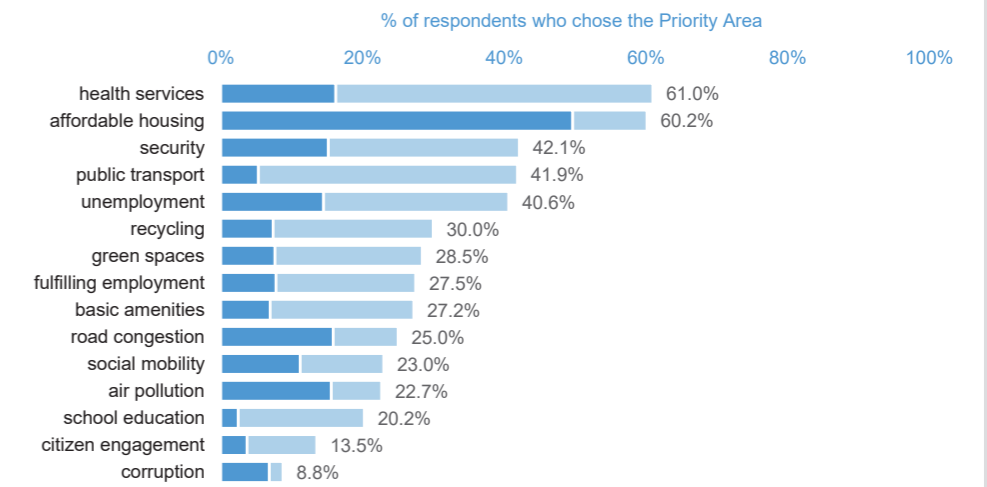
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.922	0.924	0.925	0.938	+0.013
Life expectancy at Birth	81.4	81.6	81.7	81.9	+0.2
Expected years of schooling	19.3	19.3	19.3	19.4	+0.1
Mean years of schooling	12.4	12.4	12.4	12.8	+0.4
GNI per capita (PPP \$)	40,609	41,142	41,779	48,511	+6,732

### PRIORITY AREAS

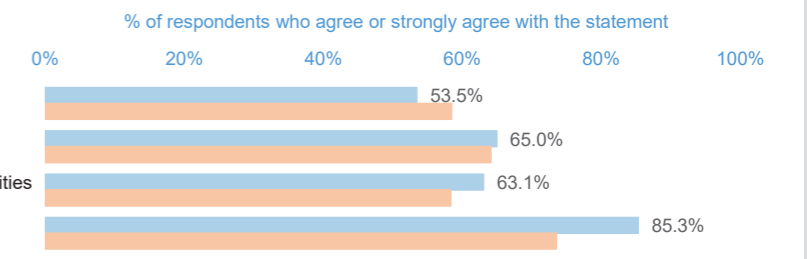
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

73.3  
76.4  
69.6  
58.8  
68.1  
28.4  
54.4  
78.8  
76.9  
77.8  
65.2  
80.6  
74.1  
69.9  
56.4  
60.6  
58.6  
54.7  
63.7

### 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

56.7  
66.9  
55.0  
49.3  
58.3  
61.2  
35.2  
43.9  
60.7  
76.4  
43.9  
74.8  
71.7  
69.3  
54.3  
72.8  
45.0  
39.5  
54.2  
60.9

# Ho Chi Minh City

## SMART CITY RANKING

88

Out of 118



83 in 2020

## SMART CITY RATING

CC

CC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
8,600,000

(UN World Urbanization Prospects)

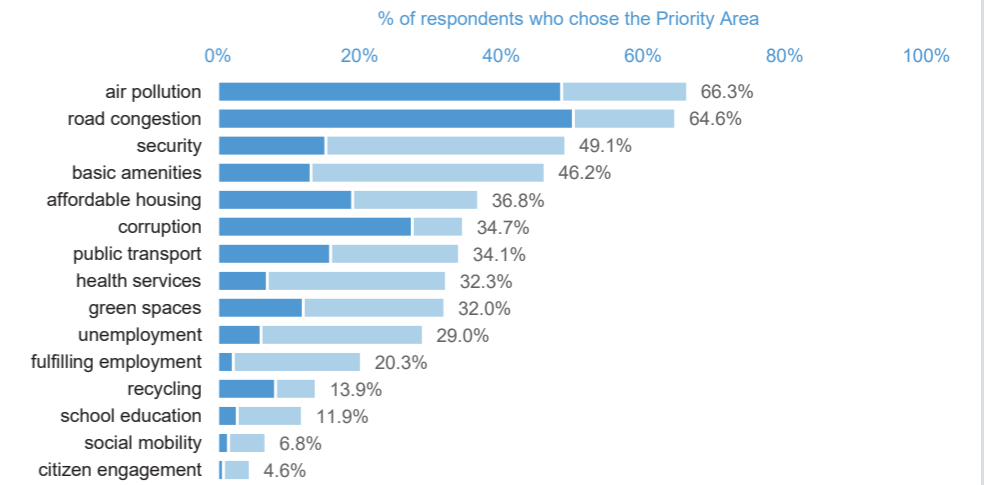


Country	2016	2017	2018	2019	1 yr change
HDI	0.685	0.690	0.693	0.704	+0.011
Life expectancy at Birth	75.2	75.2	75.3	75.4	+0.1
Expected years of schooling	12.7	12.7	12.7	12.7	+0.0
Mean years of schooling	8.1	8.2	8.2	8.3	+0.1
GNI per capita (PPP \$)	5,638	5,916	6,220	7,433	+1,213

### PRIORITY AREAS

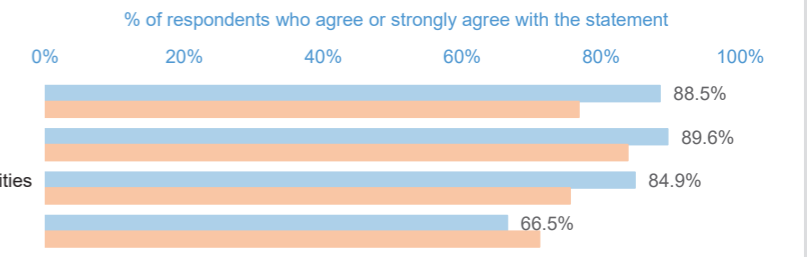
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



### ATTITUDES

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

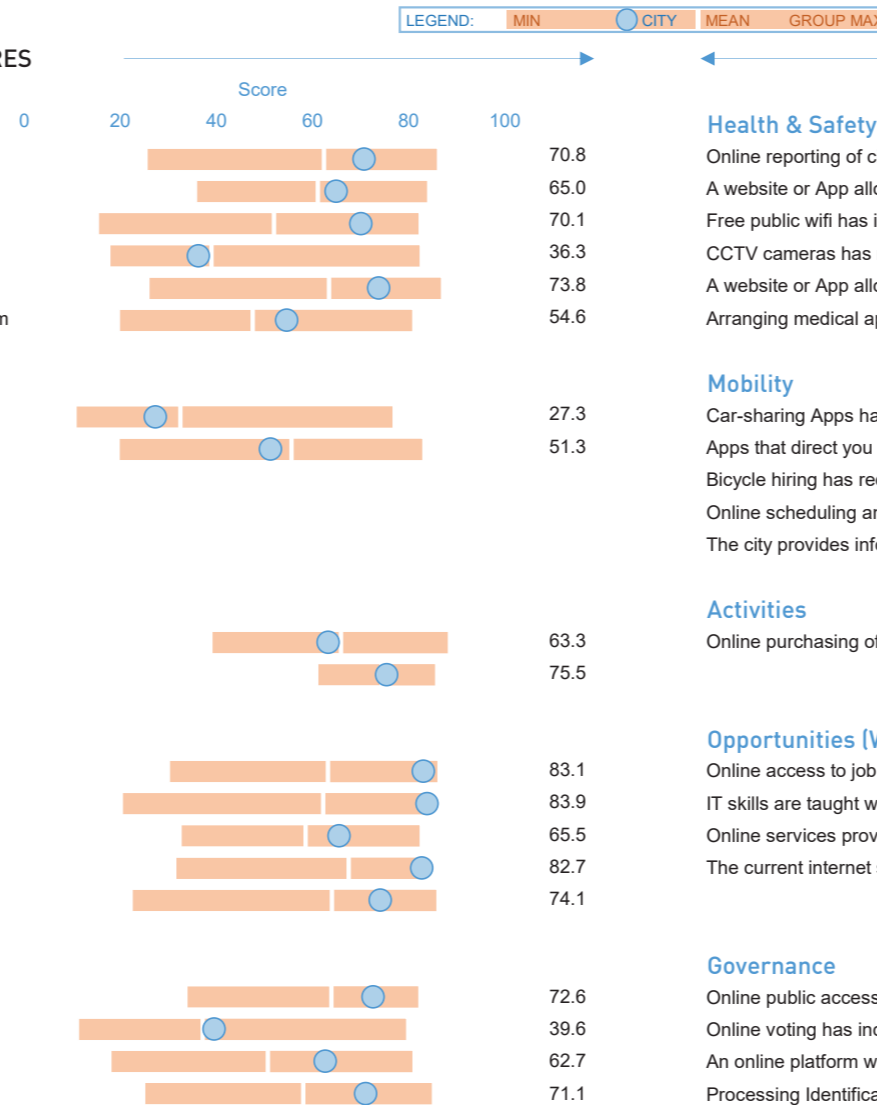
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

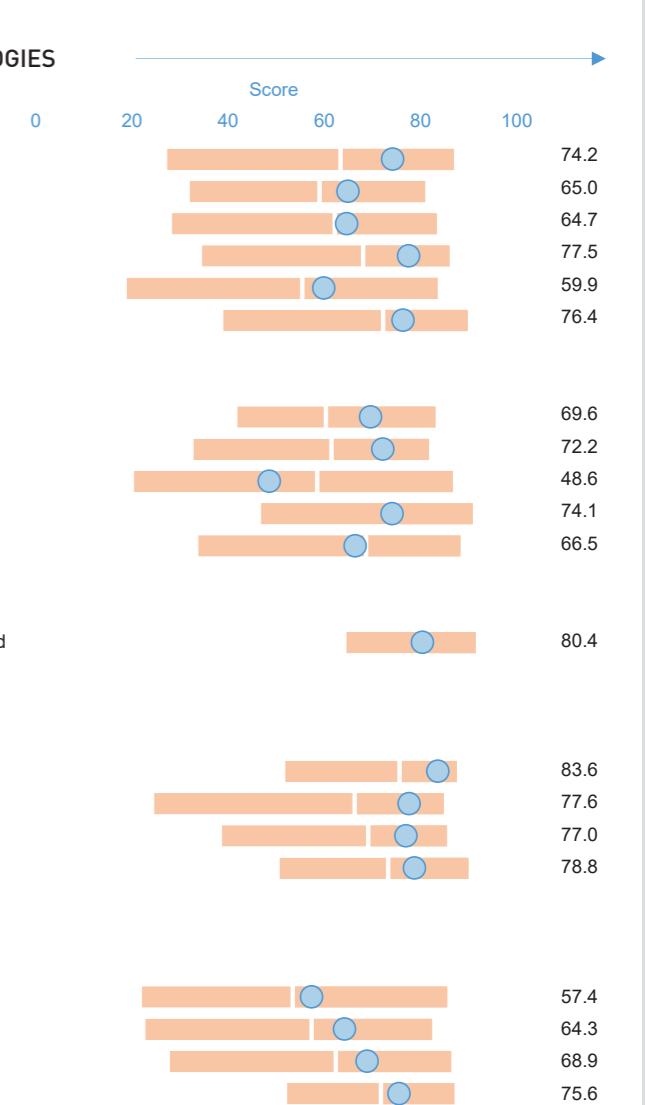
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Hong Kong

## SMART CITY RANKING

41

Out of 118



32 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BB

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
7,550,000

(UN World Urbanization Prospects)



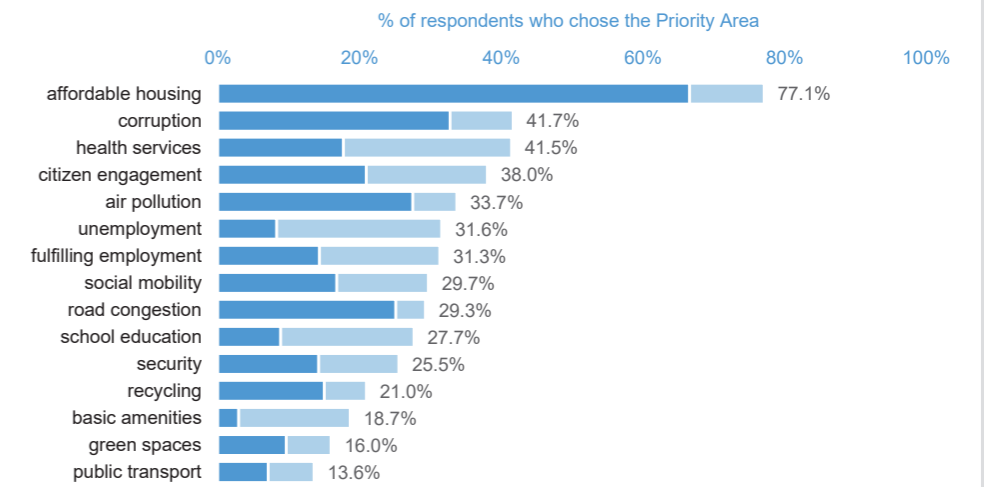
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.931	0.937	0.939	0.949	+0.010
Life expectancy at Birth	84.3	84.5	84.7	84.9	+0.2
Expected years of schooling	16.3	16.5	16.5	16.9	+0.4
Mean years of schooling	12.0	12.0	12.0	12.3	+0.3
GNI per capita (PPP \$)	55,816	58,553	60,221	62,985	+2,764

### PRIORITY AREAS

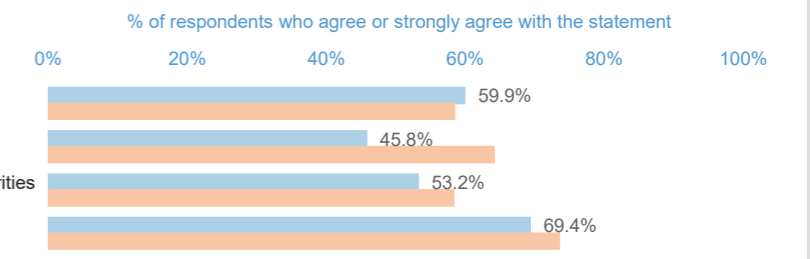
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

71.8  
42.9  
56.4  
28.7  
60.1  
21.5  
  
25.2  
58.6  
  
46.6  
54.3  
  
67.4  
63.9  
63.6  
56.1  
48.2  
  
56.5  
36.4  
36.8  
51.4

### 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

51.9  
53.5  
66.3  
53.6  
58.2  
67.5  
  
43.4  
51.3  
38.6  
61.7  
68.9  
  
74.9  
  
73.5  
62.2  
64.5  
81.4  
  
51.6  
44.6  
49.0  
66.0

# Hyderabad

## SMART CITY RANKING

92

Out of 118



85 in 2020

## SMART CITY RATING

CC

CC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

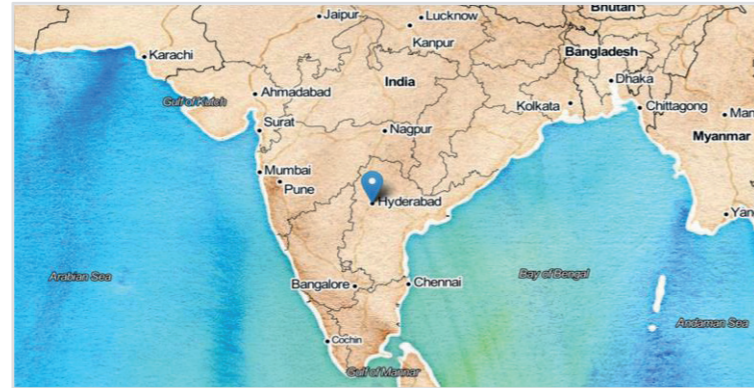
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
10,000,000

(UN World Urbanization Prospects)



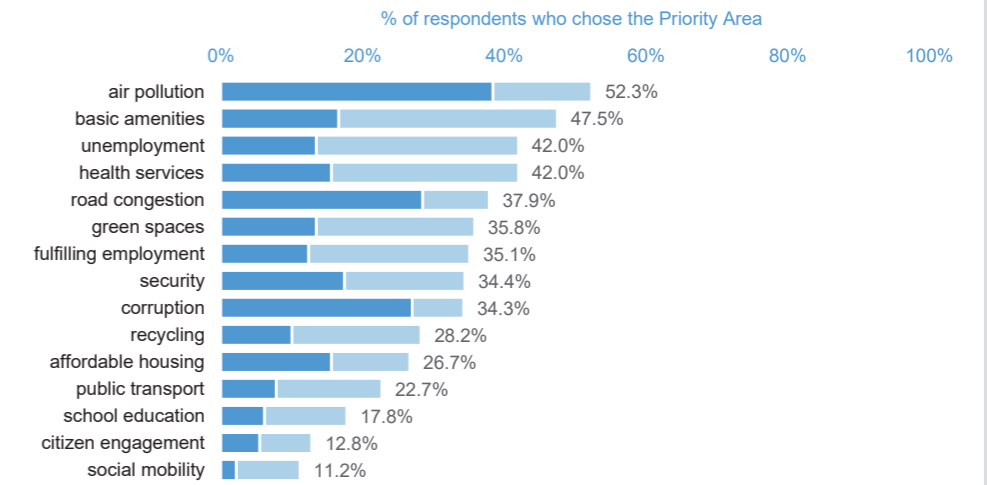
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.637	0.643	0.647	0.645	-0.002
Life expectancy at Birth	68.9	69.2	69.4	69.7	+0.3
Expected years of schooling	12.3	12.3	12.3	12.2	-0.1
Mean years of schooling	6.4	6.5	6.5	6.5	+0.0
GNI per capita (PPP \$)	6,075	6,446	6,829	6,681	-148

### PRIORITY AREAS

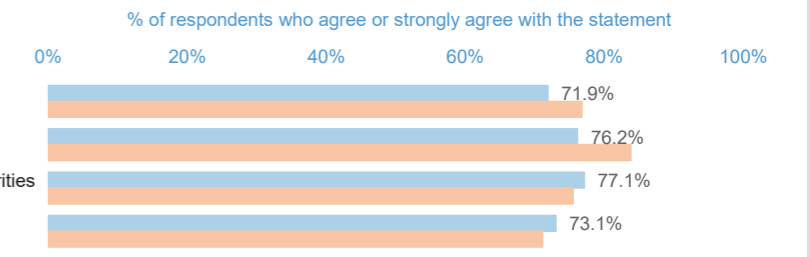
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

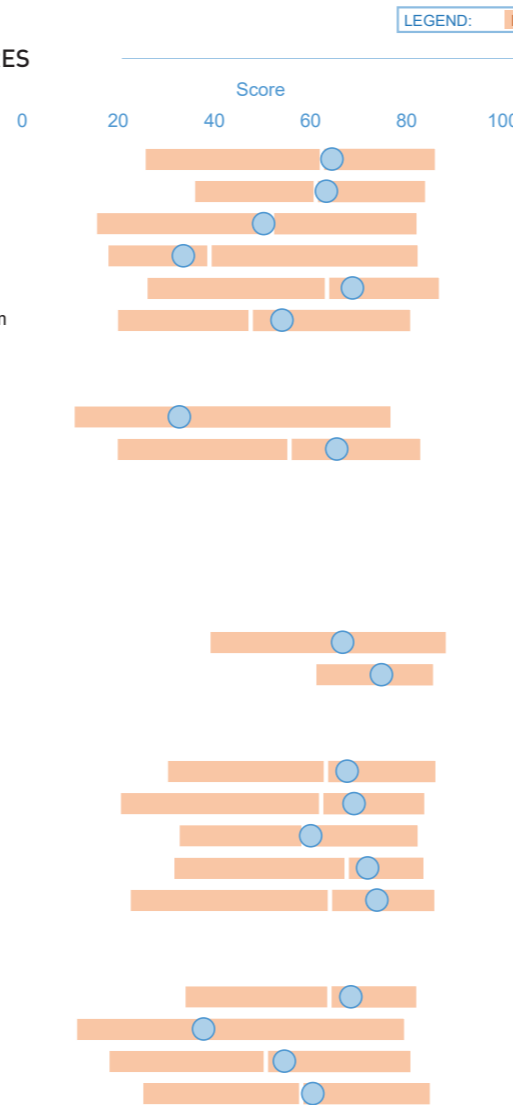
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

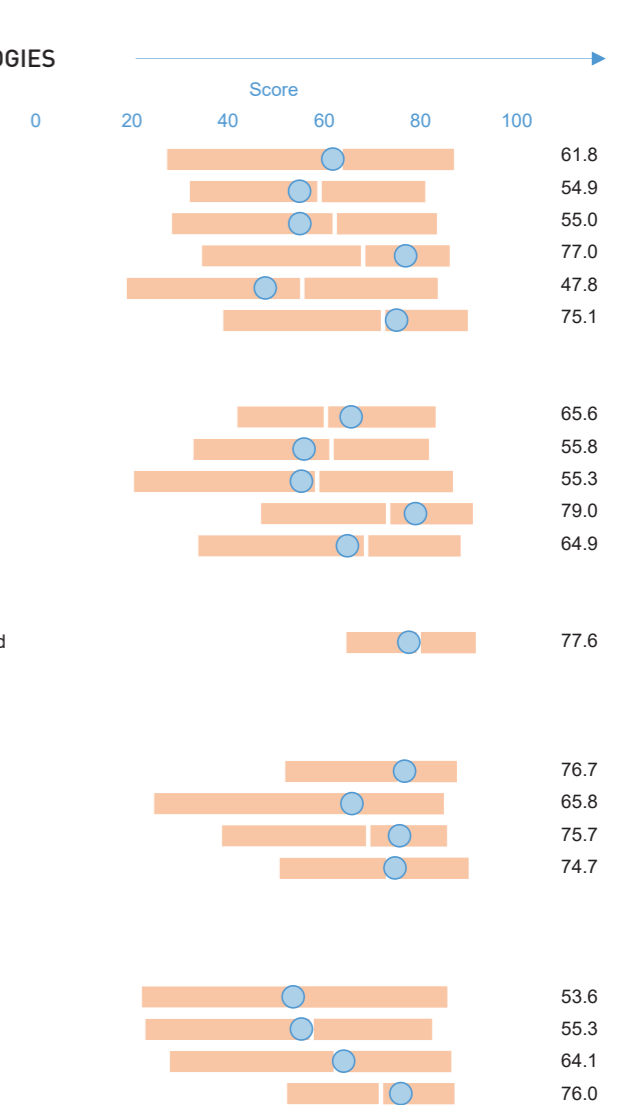
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Istanbul

## SMART CITY RANKING

94

Out of 118

N/A

not in 2020

## SMART CITY RATING

CC

not in 2020

## FACTOR RATINGS

CC

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
15,190,000

(UN World Urbanization Prospects)

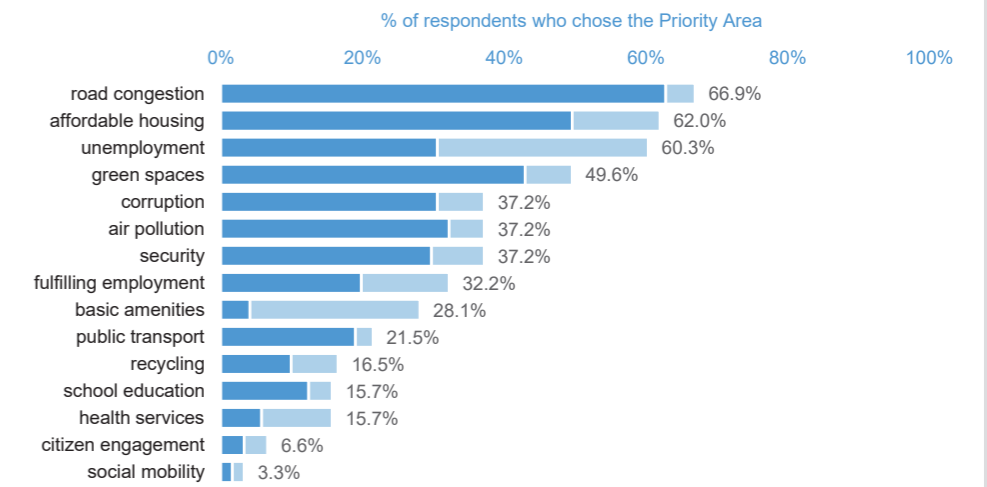


Country	2016	2017	2018	2019	1 yr change
HDI	0.800	0.805	0.807	0.820	+0.013
Life expectancy at Birth	76.9	77.2	77.4	77.7	+0.3
Expected years of schooling	16.4	16.4	16.4	16.6	+0.2
Mean years of schooling	7.6	7.7	7.7	8.1	+0.4
GNI per capita (PPP \$)	23,409	24,702	24,905	27,701	+2,796

### PRIORITY AREAS

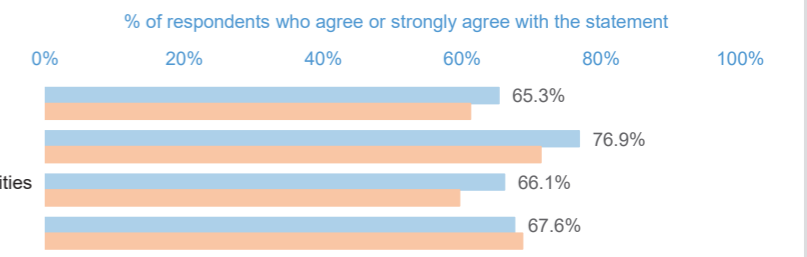
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

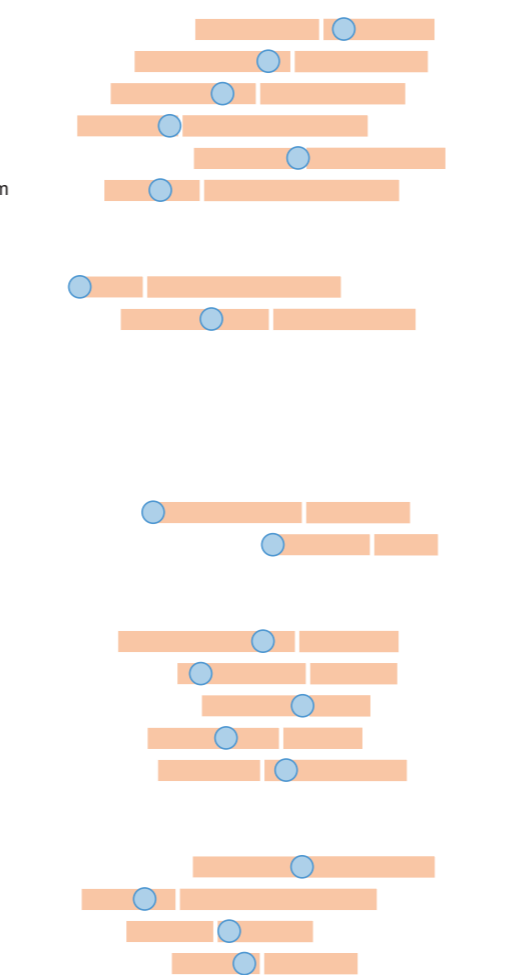
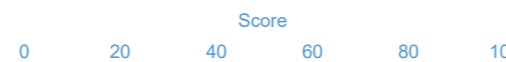
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

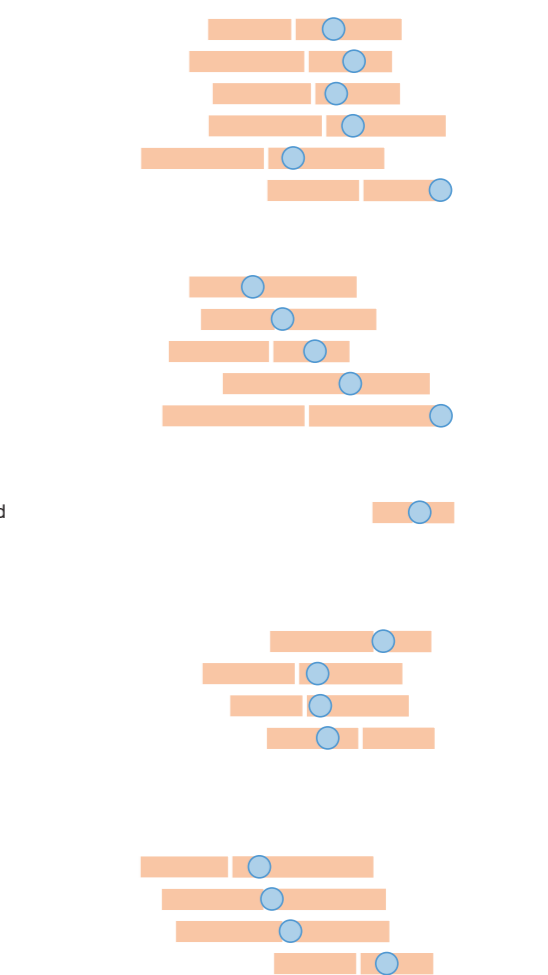
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Jakarta

## SMART CITY RANKING

91

Out of 118



94 in 2020

## SMART CITY RATING

CC

C in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
10,770,000

(UN World Urbanization Prospects)



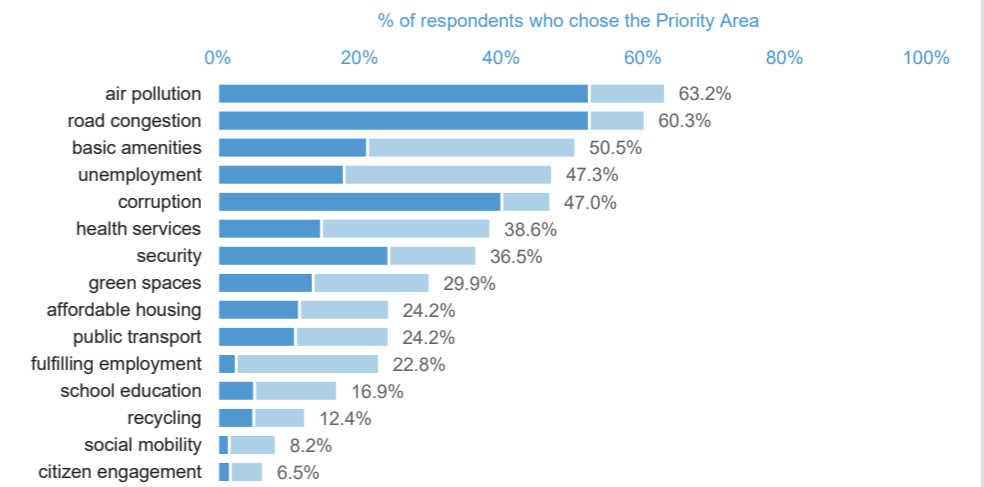
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.700	0.704	0.707	0.718	+0.011
Life expectancy at Birth	71.0	71.3	71.5	71.7	+0.2
Expected years of schooling	12.9	12.9	12.9	13.6	+0.7
Mean years of schooling	8.0	8.0	8.0	8.2	+0.2
GNI per capita (PPP \$)	10,419	10,811	11,256	11,459	+203

### PRIORITY AREAS

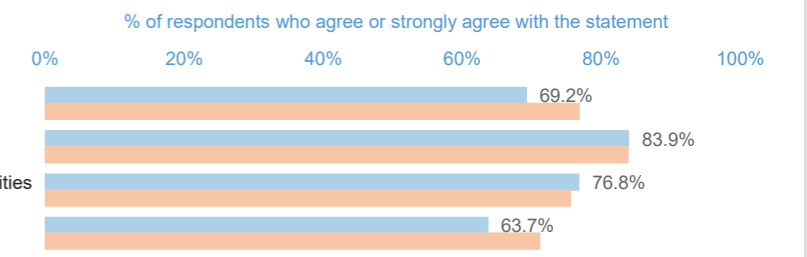
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

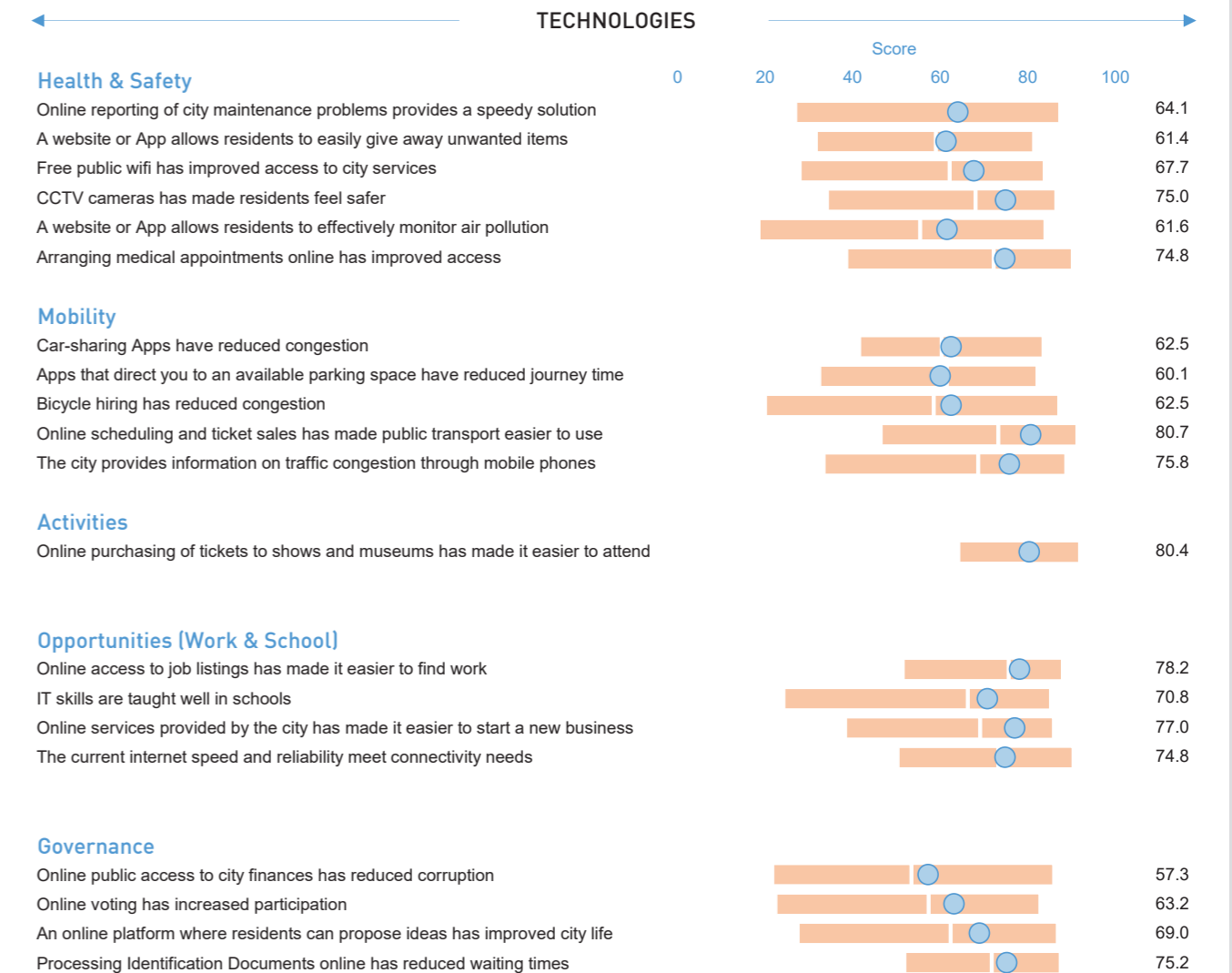
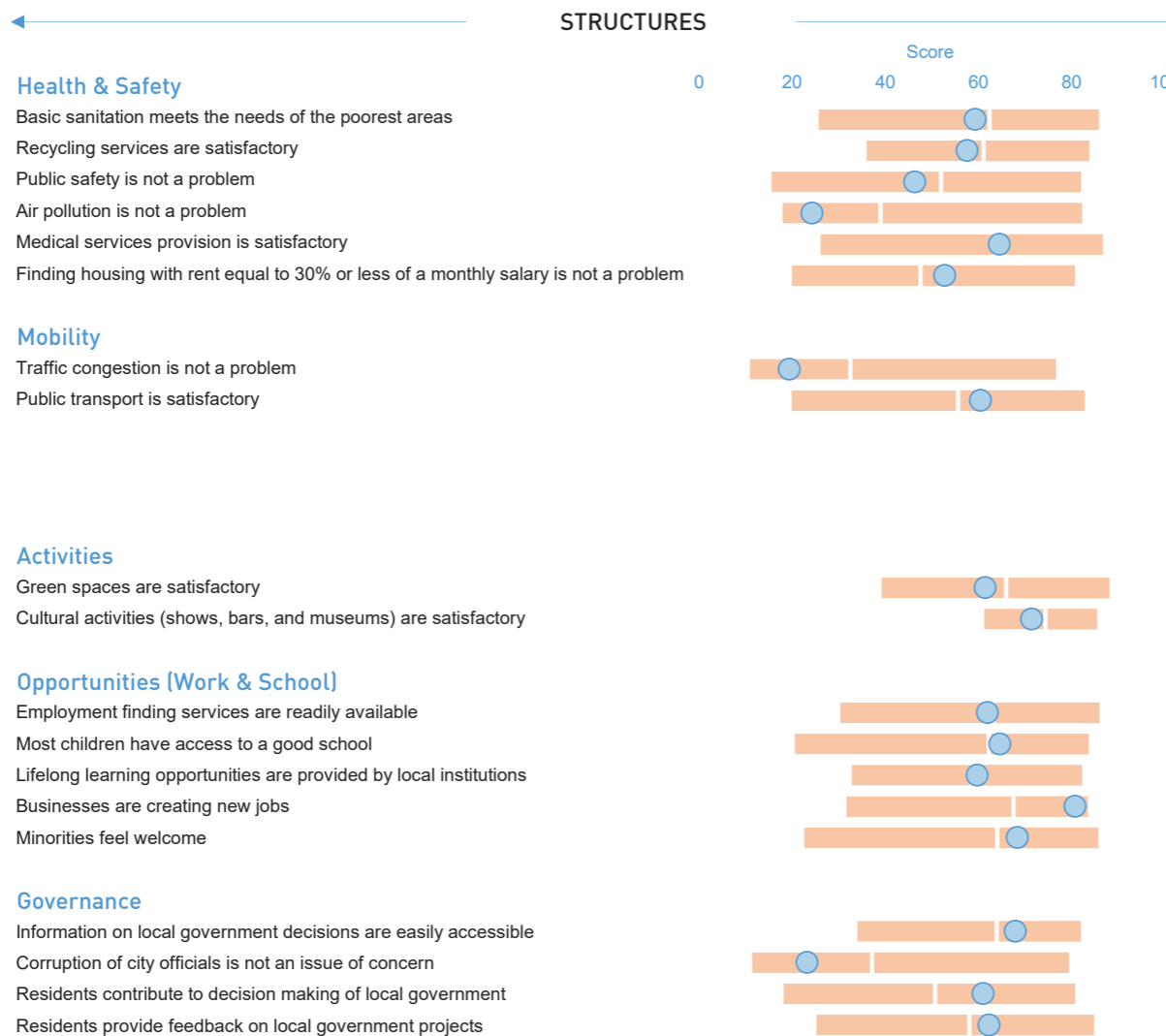


### ATTITUDES

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

53

Out of 118

N/A

not in 2020

## SMART CITY RATING

BB

not in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
250,000

(Eurostat)

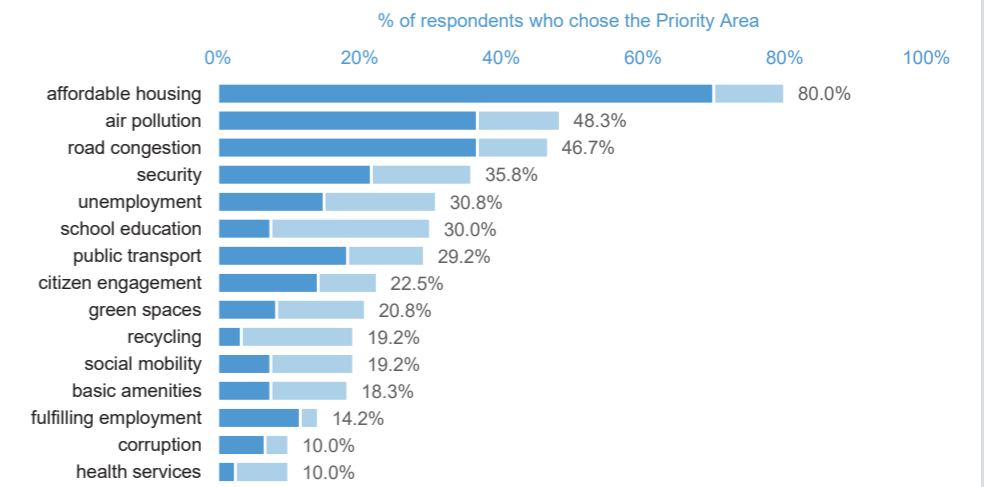


Country	2016	2017	2018	2019	1 yr change
HDI	0.936	0.938	0.939	0.947	+0.008
Life expectancy at Birth	80.9	81.0	81.2	81.3	+0.1
Expected years of schooling	17.1	17.1	17.1	17.0	-0.1
Mean years of schooling	14.1	14.1	14.1	14.2	+0.1
GNI per capita (PPP \$)	45,577	46,438	46,946	55,314	+8,368

### PRIORITY AREAS

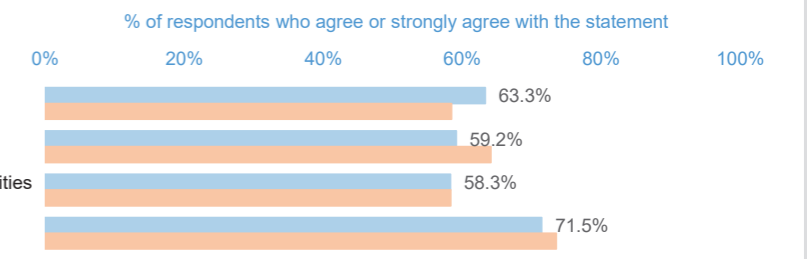
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

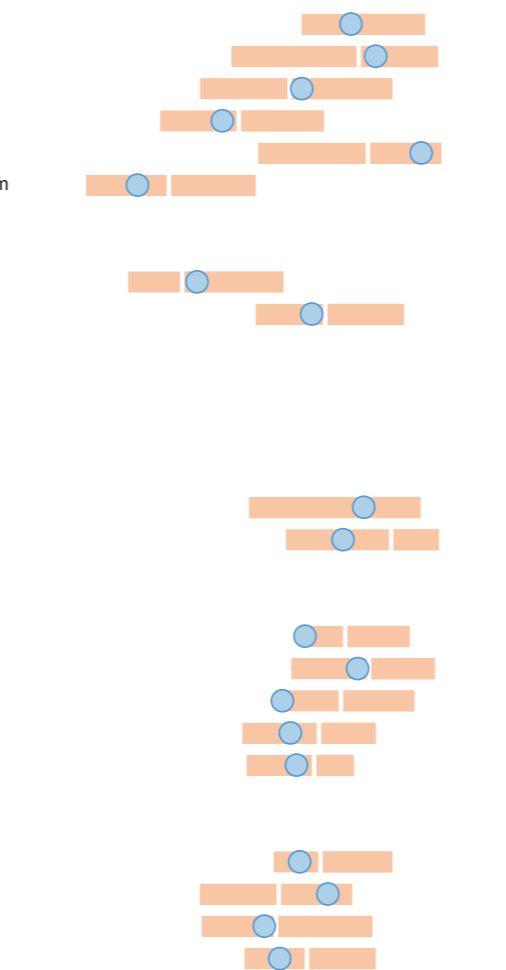
#### Opportunities (Work & School)

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

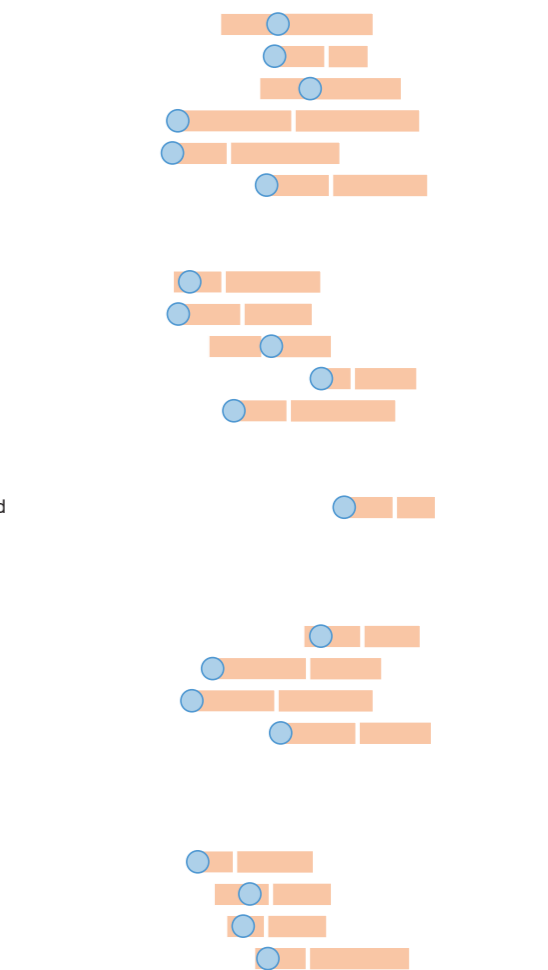
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Kiev

## SMART CITY RANKING

82

Out of 118



98 in 2020

## SMART CITY RATING

CCC

C in 2020

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

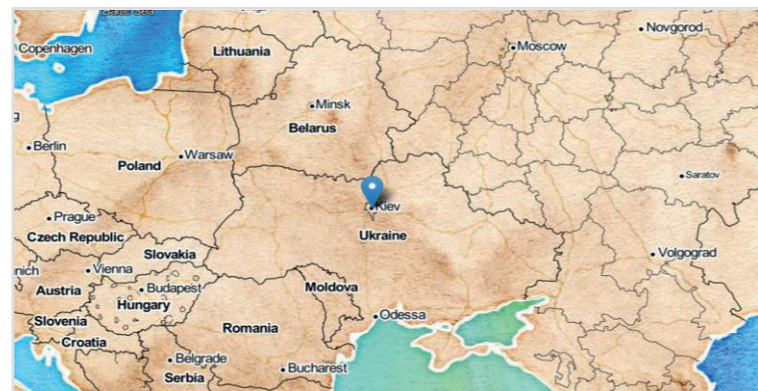
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,990,000

(UN World Urbanization Prospects)



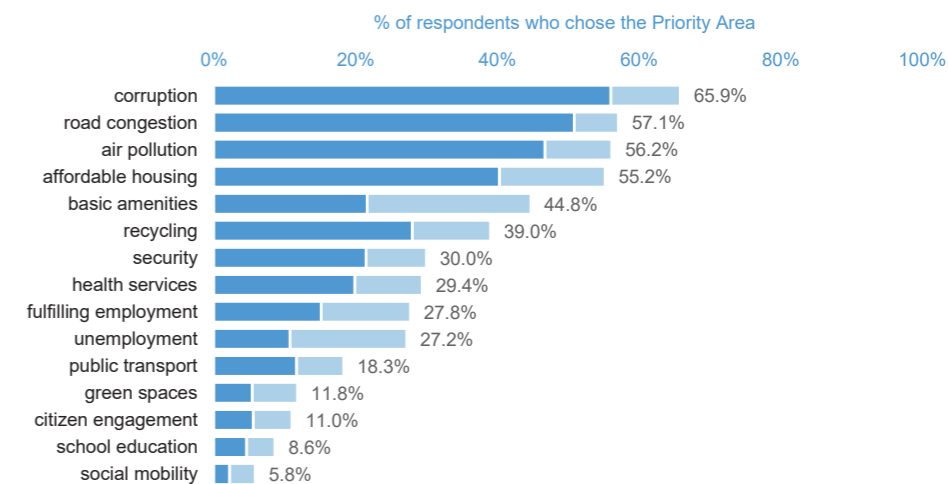
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.746	0.747	0.750	0.779	+0.029
Life expectancy at Birth	71.7	71.8	72.0	72.1	+0.1
Expected years of schooling	15.1	15.1	15.1	15.1	+0.0
Mean years of schooling	11.3	11.3	11.3	11.4	+0.1
GNI per capita (PPP \$)	7,601	7,670	7,994	13,216	+5,222

### PRIORITY AREAS

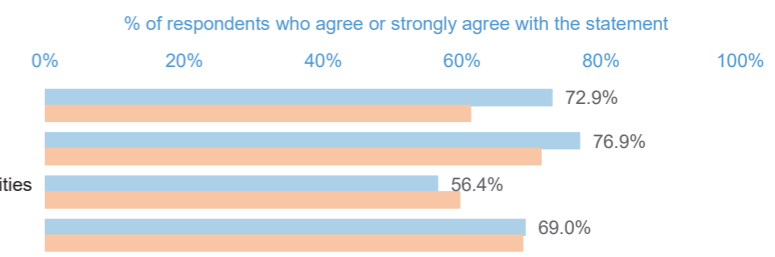
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

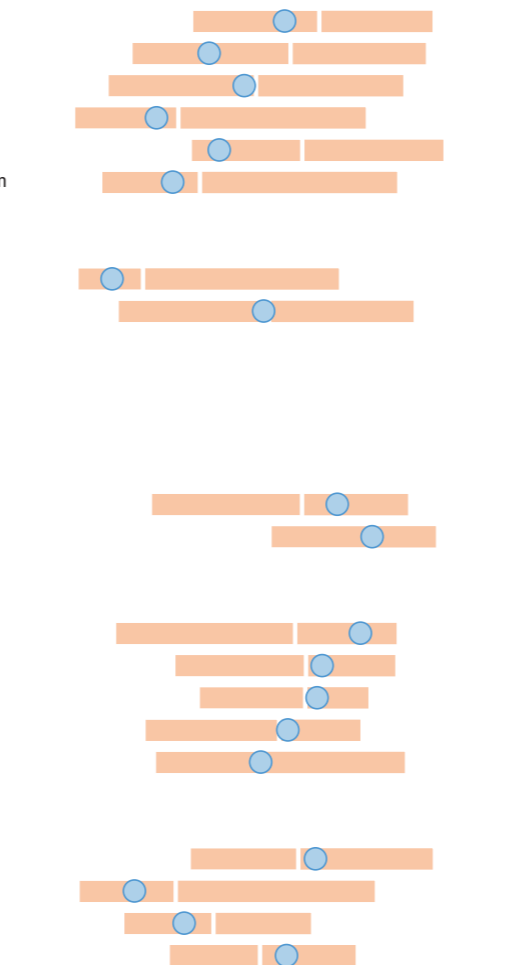
#### Opportunities (Work & School)

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

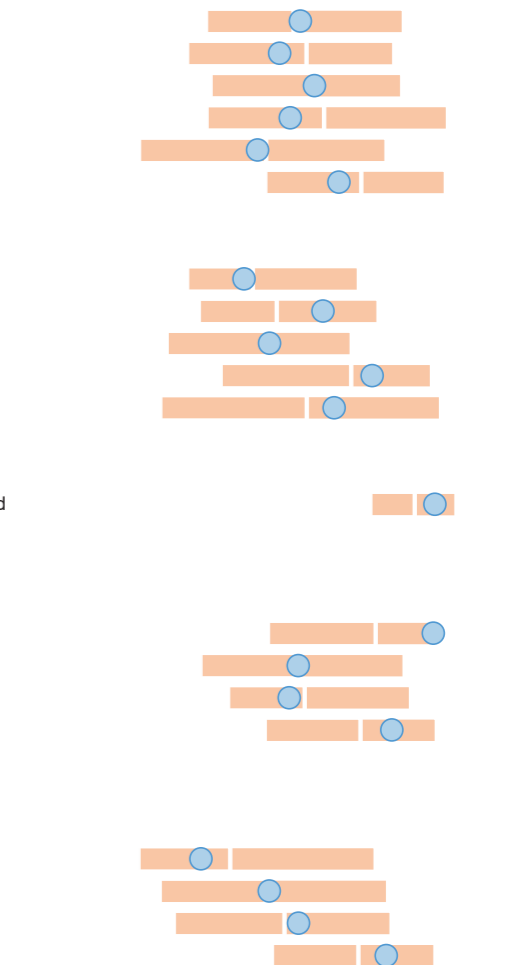
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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





# Krakow

## SMART CITY RANKING

80

Out of 118



58 in 2020

## SMART CITY RATING

CCC

B in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
770,000

(UN World Urbanization Prospects)

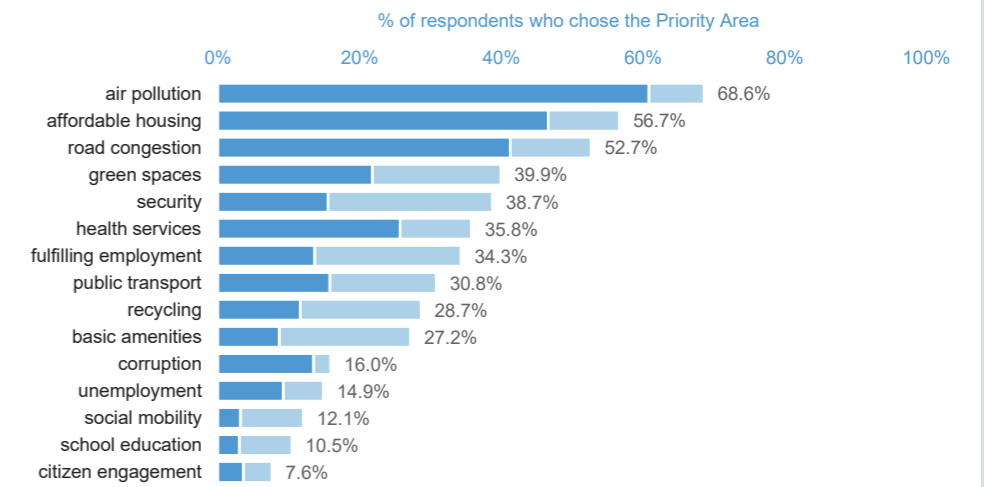


Country	2016	2017	2018	2019	1 yr change
HDI	0.864	0.868	0.872	0.880	+0.008
Life expectancy at Birth	78.1	78.3	78.5	78.7	+0.2
Expected years of schooling	16.4	16.4	16.4	16.3	-0.1
Mean years of schooling	12.3	12.3	12.3	12.5	+0.2
GNI per capita (PPP \$)	25,042	26,182	27,626	31,623	+3,997

### PRIORITY AREAS

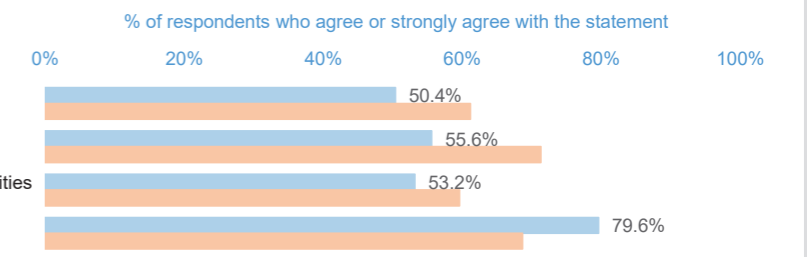
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

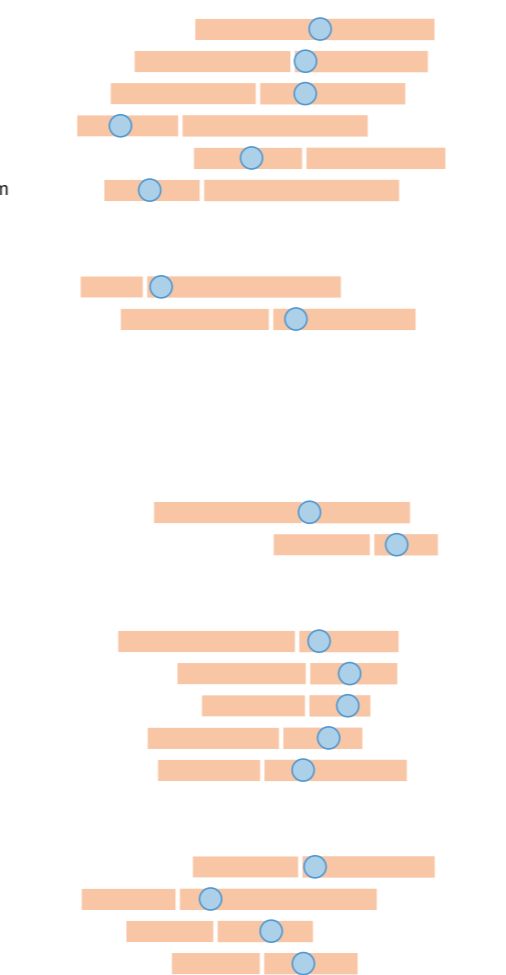
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

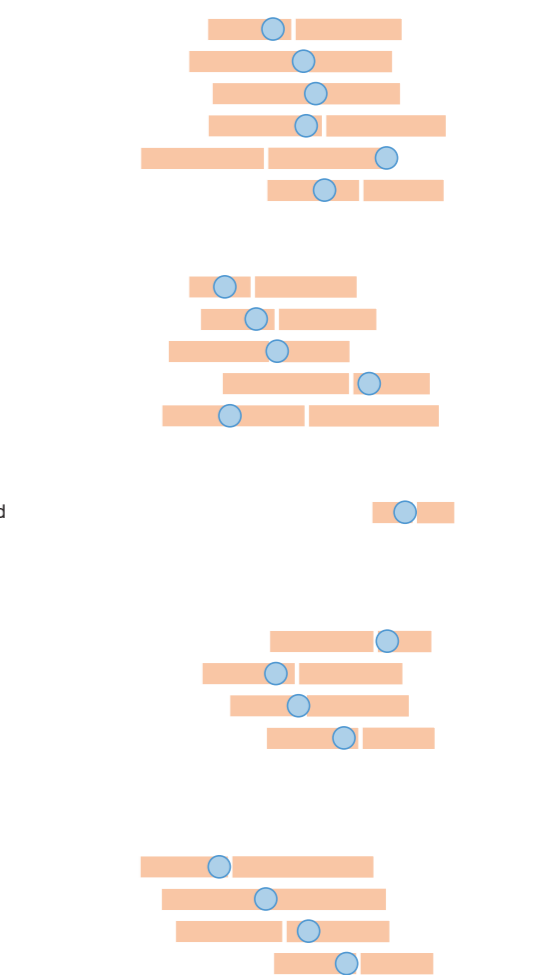
#### Opportunities (Work & School)

- 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



# Kuala Lumpur

## SMART CITY RANKING

74

Out of 118



54 in 2020

## SMART CITY RATING

CCC

B in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
8,000,000

(UN World Urbanization Prospects)



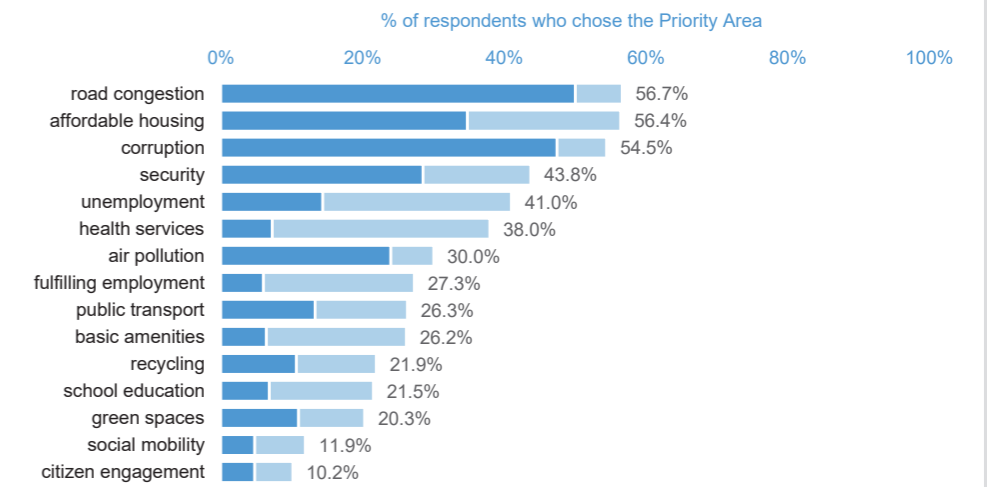
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.801	0.802	0.804	0.810	+0.006
Life expectancy at Birth	75.6	75.8	76.0	76.2	+0.2
Expected years of schooling	13.7	13.5	13.5	13.7	+0.2
Mean years of schooling	10.2	10.2	10.2	10.4	+0.2
GNI per capita (PPP \$)	25,394	26,555	27,227	27,534	+307

### 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.



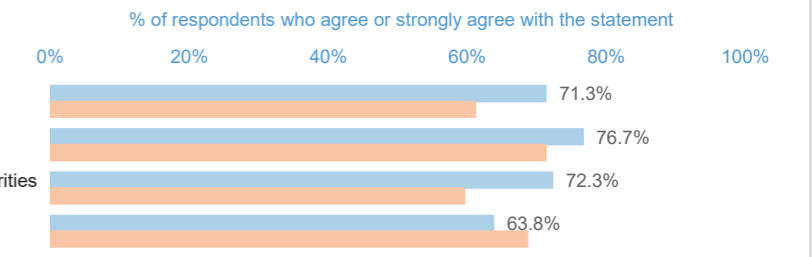
### ATTITUDES

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

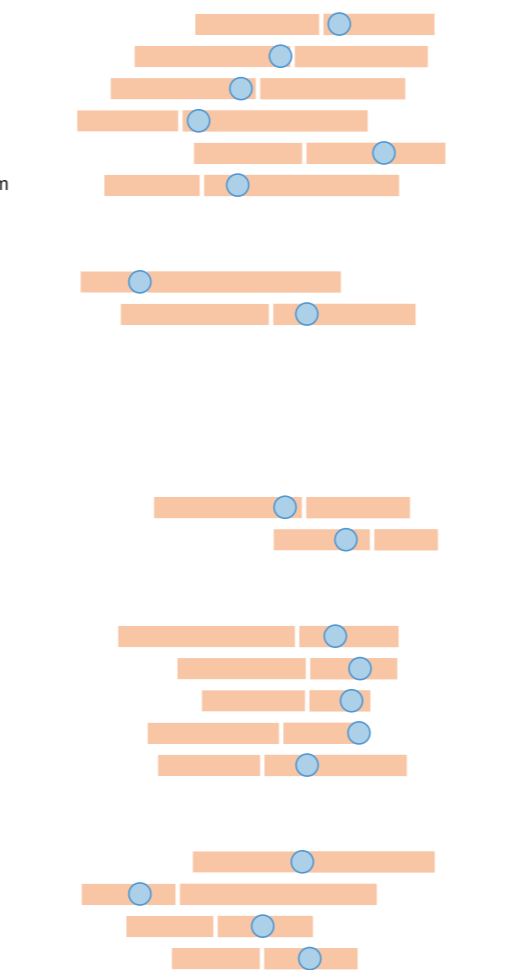
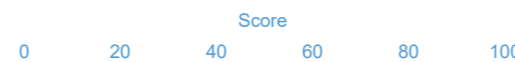
#### Governance

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

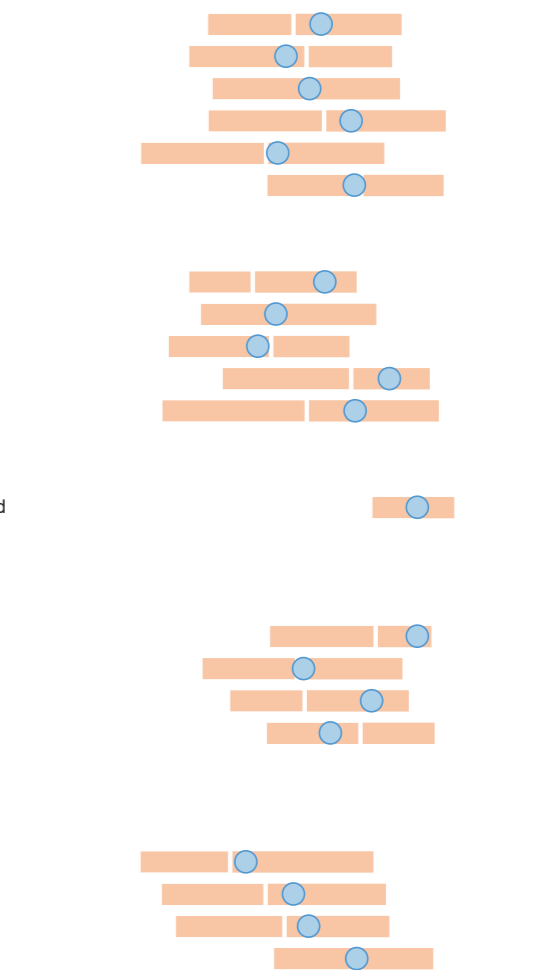
#### Governance

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



## SMART CITY RANKING

# 115

Out of 118



109 in 2020

## SMART CITY RATING

# D

D in 2020

## FACTOR RATINGS

# D

STRUCTURES

# D

TECHNOLOGIES

## GROUP

# 4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
14,370,000

(UN World Urbanization Prospects)



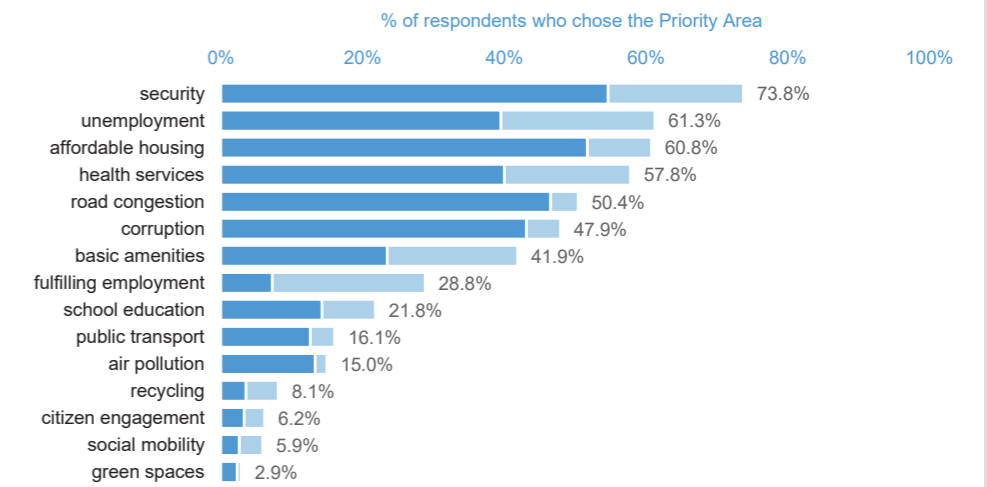
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.528	0.533	0.534	0.539	+0.005
Life expectancy at Birth	53.5	54.0	54.3	54.7	+0.4
Expected years of schooling	9.5	9.7	9.7	10.0	+0.3
Mean years of schooling	6.3	6.5	6.5	6.7	+0.2
GNI per capita (PPP \$)	5,336	5,203	5,086	4,910	-176

### PRIORITY AREAS

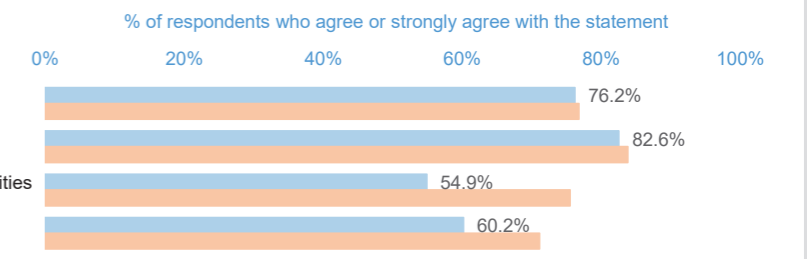
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

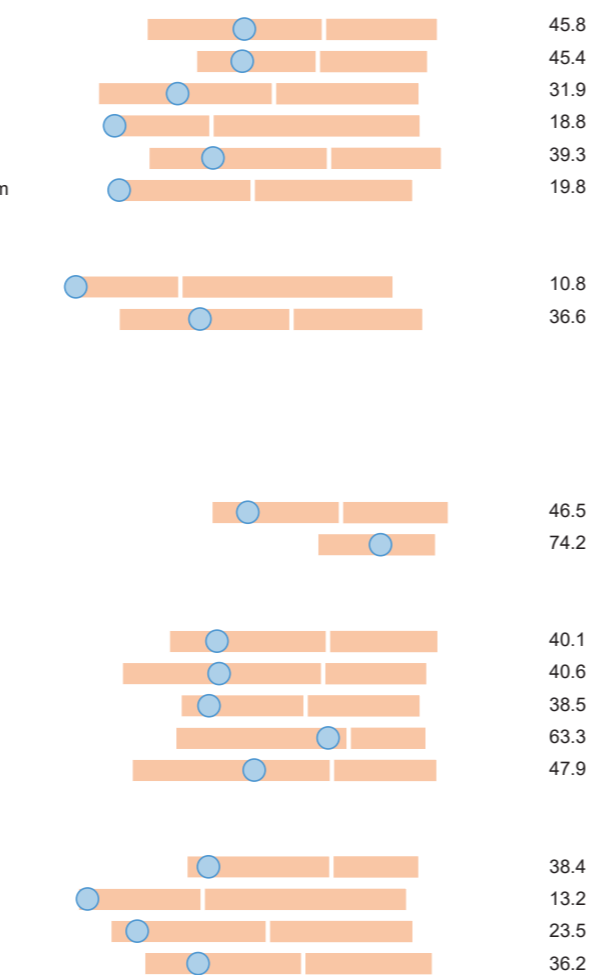
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

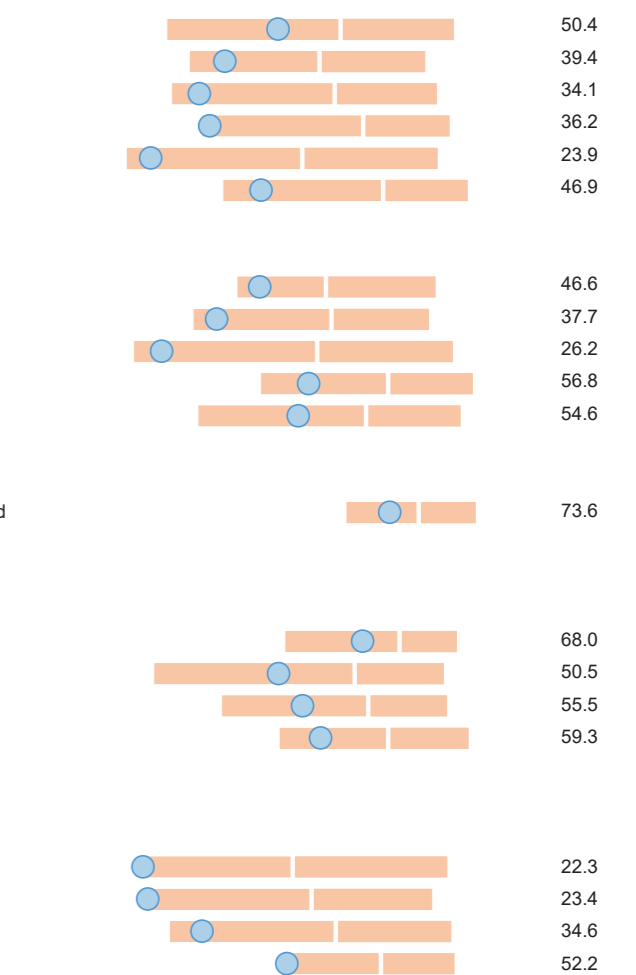
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Lausanne

## SMART CITY RANKING

5

Out of 118

N/A

not in 2020

## SMART CITY RATING

A

not in 2020

## FACTOR RATINGS

AAA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
140,000

(Eurostat)

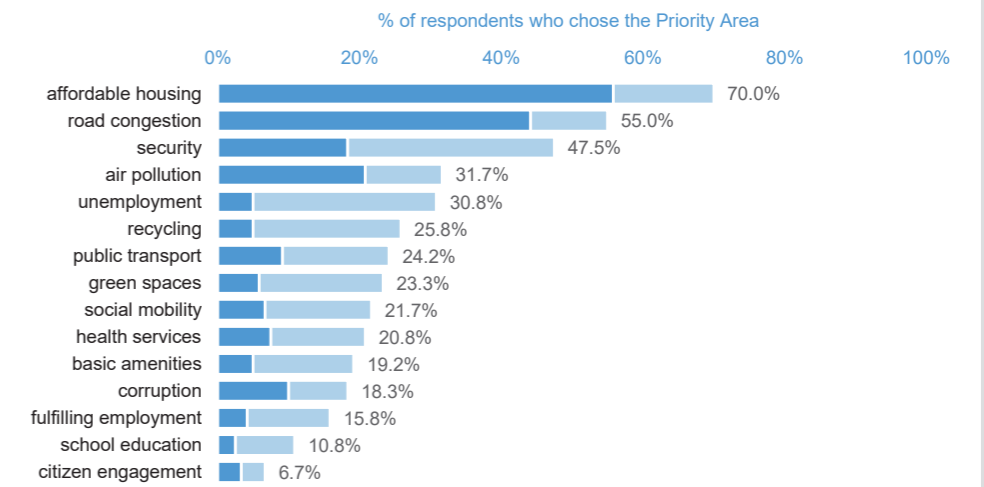


Country	2016	2017	2018	2019	1 yr change
HDI	0.943	0.943	0.946	0.955	+0.009
Life expectancy at Birth	83.3	83.5	83.6	83.8	+0.2
Expected years of schooling	16.2	16.2	16.2	16.3	+0.1
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	58,138	57,301	59,375	69,394	+10,019

### PRIORITY AREAS

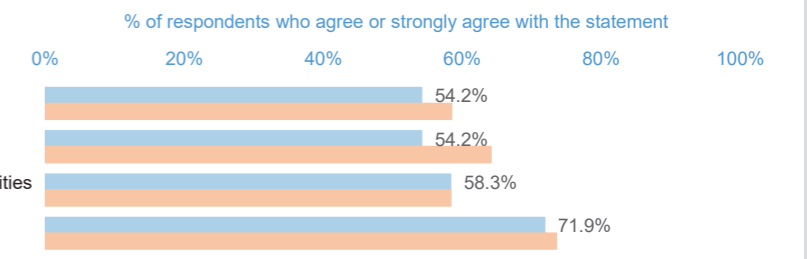
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

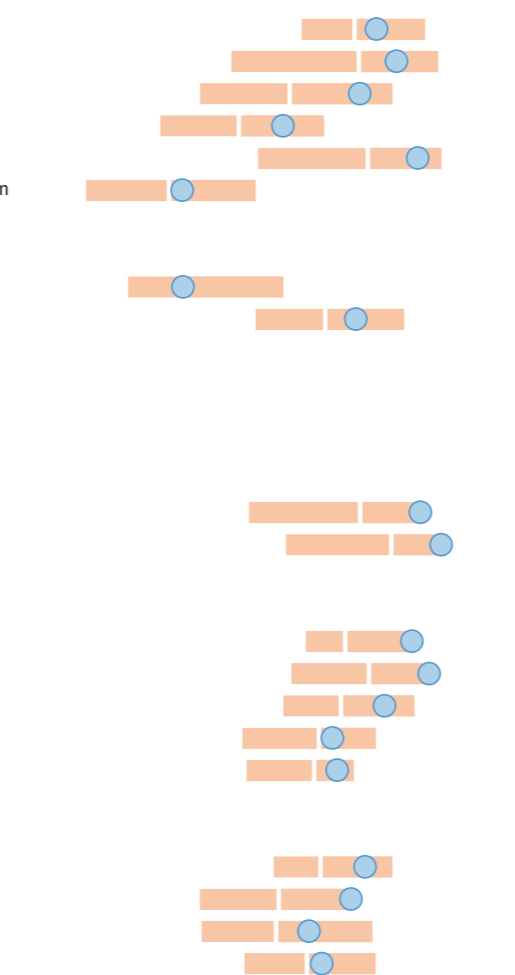
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

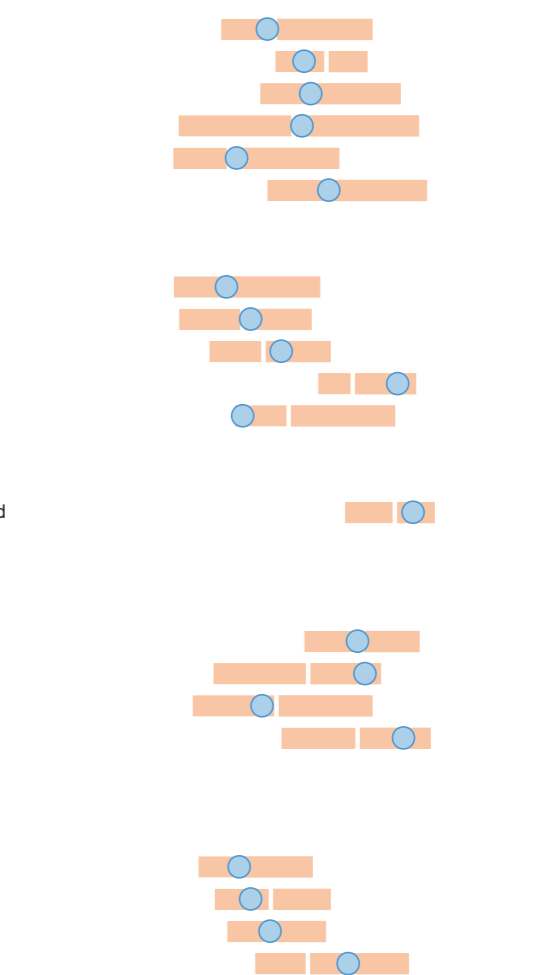
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Leeds

## SMART CITY RANKING

24

Out of 118

N/A

not in 2020

## SMART CITY RATING

BBB

not in 2020

## FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
790,000

(Eurostat)



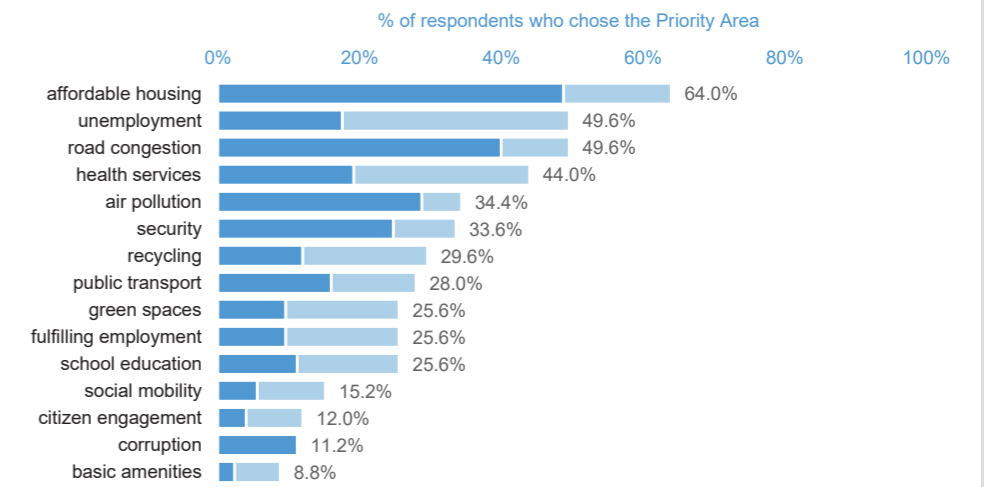
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.918	0.919	0.920	0.932	+0.012
Life expectancy at Birth	81.1	81.2	81.2	81.3	+0.1
Expected years of schooling	17.4	17.4	17.4	17.5	+0.1
Mean years of schooling	12.9	12.9	13.0	13.2	+0.2
GNI per capita (PPP \$)	38,421	39,216	39,507	46,071	+6,564

### PRIORITY AREAS

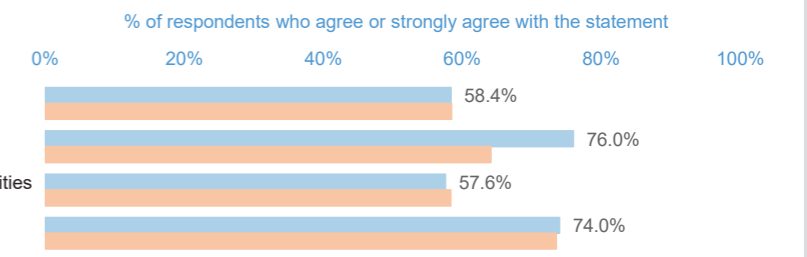
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

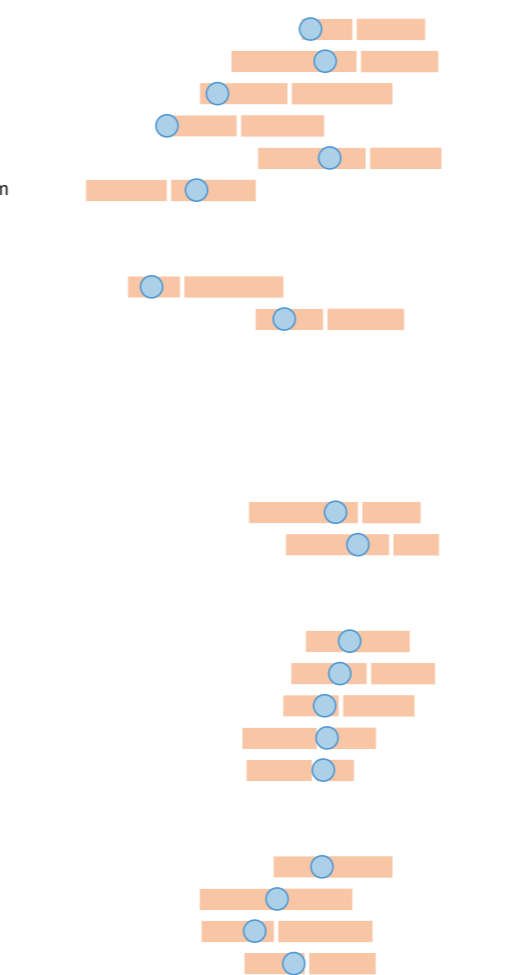
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

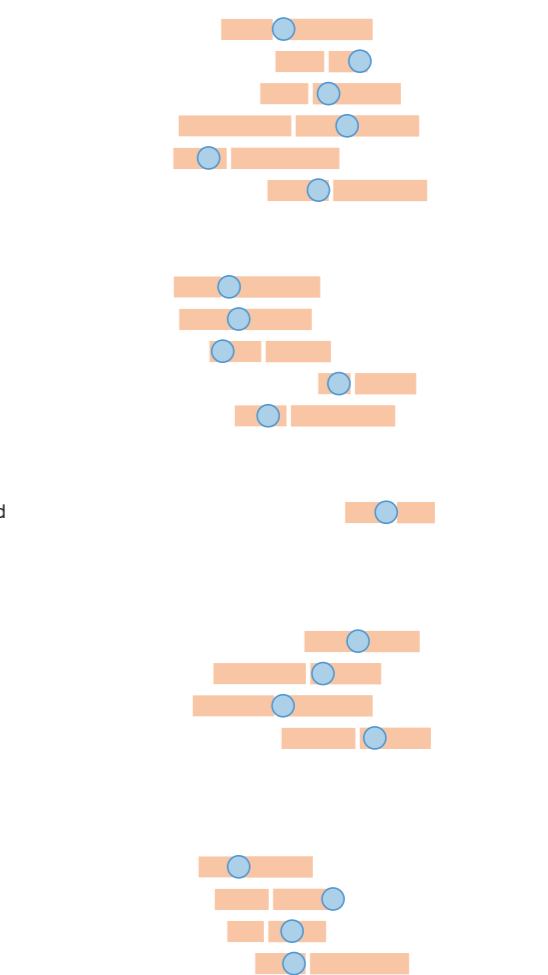
#### Opportunities (Work & School)

- 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



## SMART CITY RANKING

44

Out of 118

N/A

not in 2020

## SMART CITY RATING

BB

not in 2020

## FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
910,000

(Eurostat)

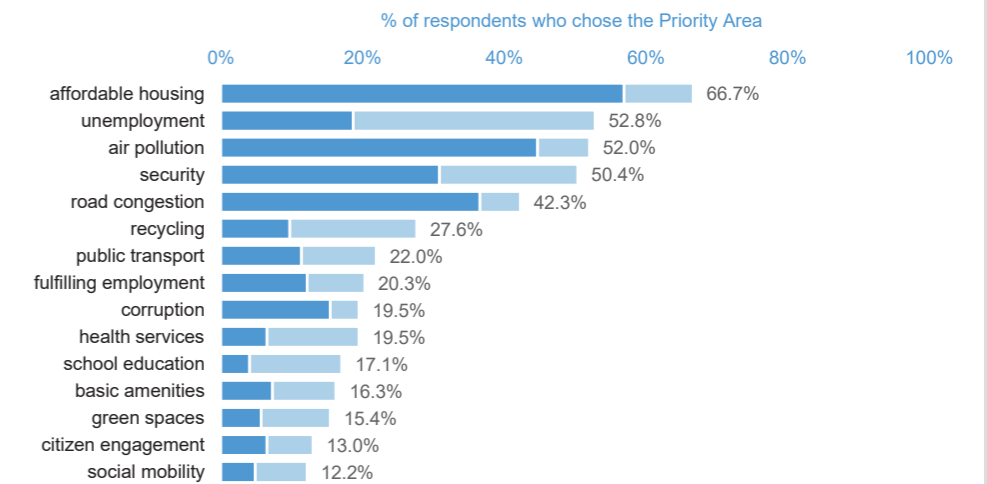


Country	2016	2017	2018	2019	1 yr change
HDI	0.887	0.890	0.891	0.901	+0.010
Life expectancy at Birth	82.3	82.4	82.5	82.7	+0.2
Expected years of schooling	15.5	15.5	15.5	15.6	+0.1
Mean years of schooling	11.4	11.4	11.4	11.5	+0.1
GNI per capita (PPP \$)	38,926	39,935	40,511	47,173	+6,662

### PRIORITY AREAS

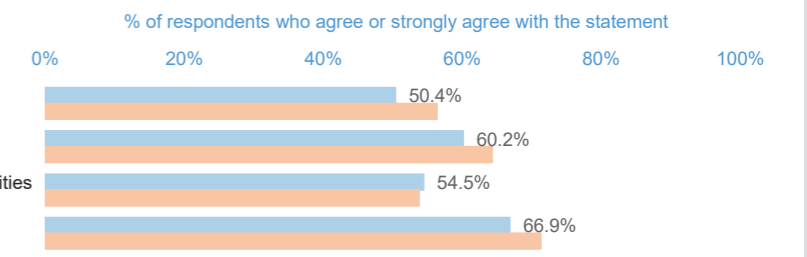
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

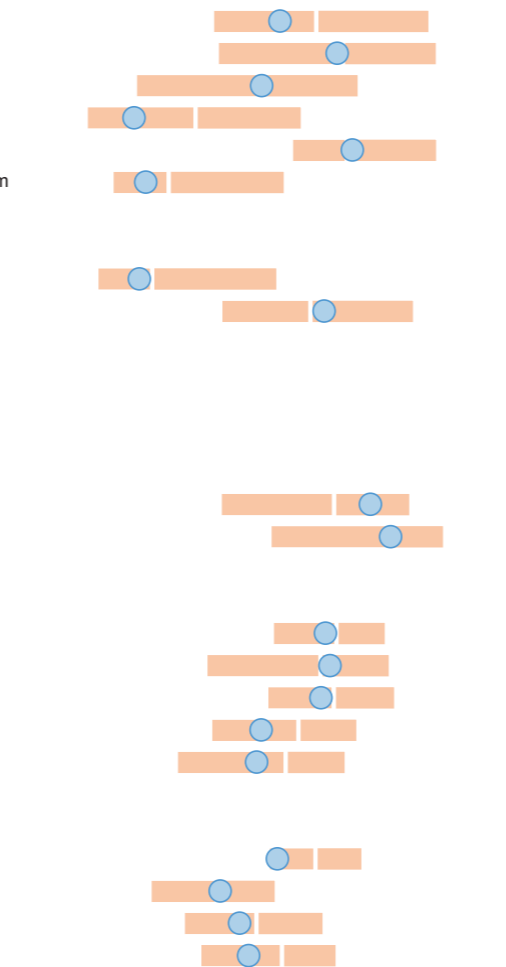
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### 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

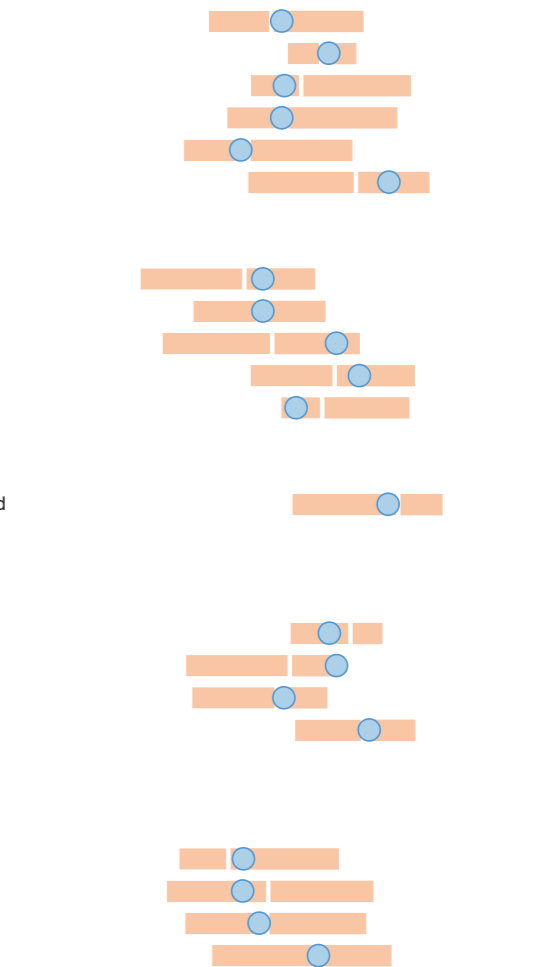
#### Opportunities (Work & School)

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



# Lisbon

## SMART CITY RANKING

95

Out of 118



75 in 2020

## SMART CITY RATING

CC

CCC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
510,000

(Eurostat)

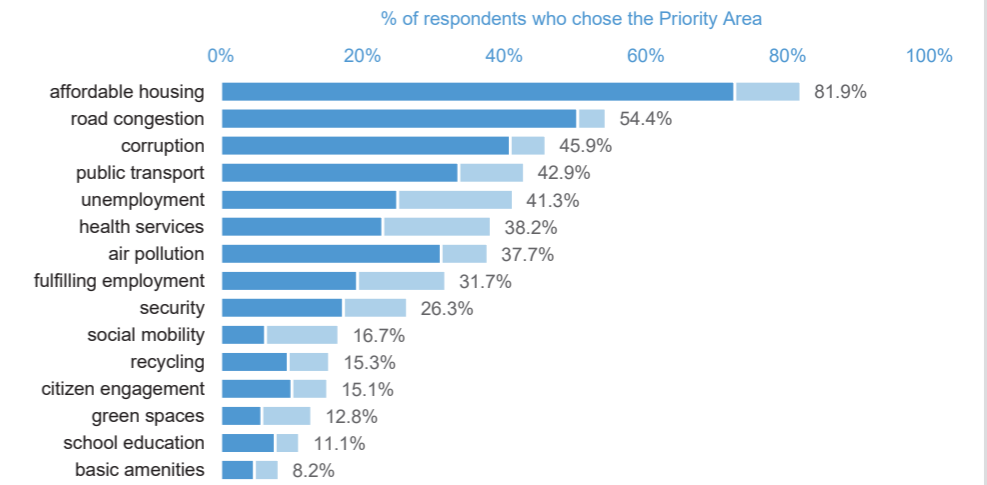


Country	2016	2017	2018	2019	1 yr change
HDI	0.846	0.848	0.850	0.864	+0.014
Life expectancy at Birth	81.4	81.7	81.9	82.1	+0.2
Expected years of schooling	16.3	16.3	16.3	16.5	+0.2
Mean years of schooling	9.2	9.2	9.2	9.3	+0.1
GNI per capita (PPP \$)	26,559	27,404	27,935	33,967	+6,032

### PRIORITY AREAS

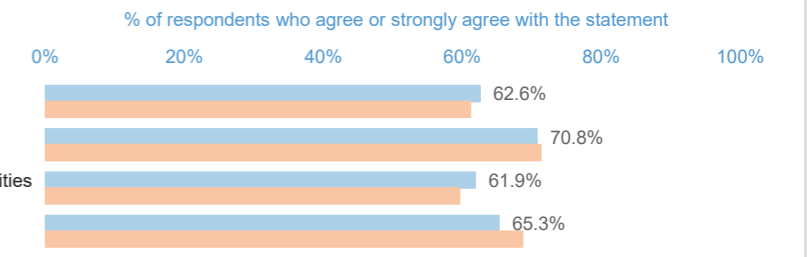
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

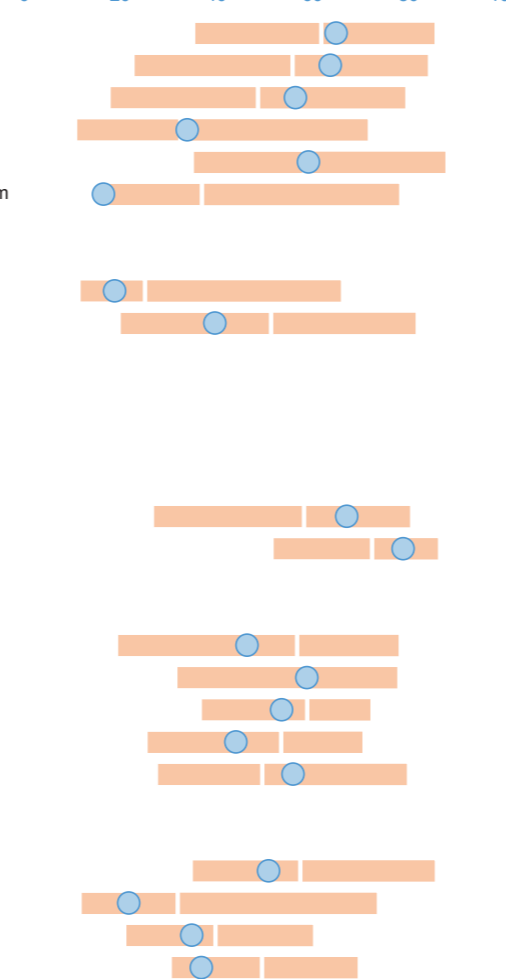
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

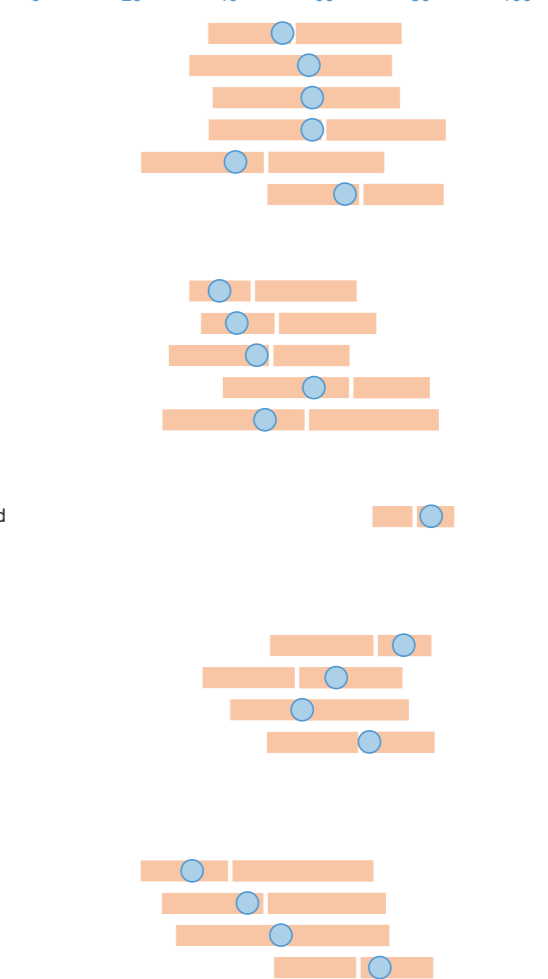
#### Opportunities (Work & School)

- 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

22

Out of 118



15 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
8,870,000

(Eurostat)

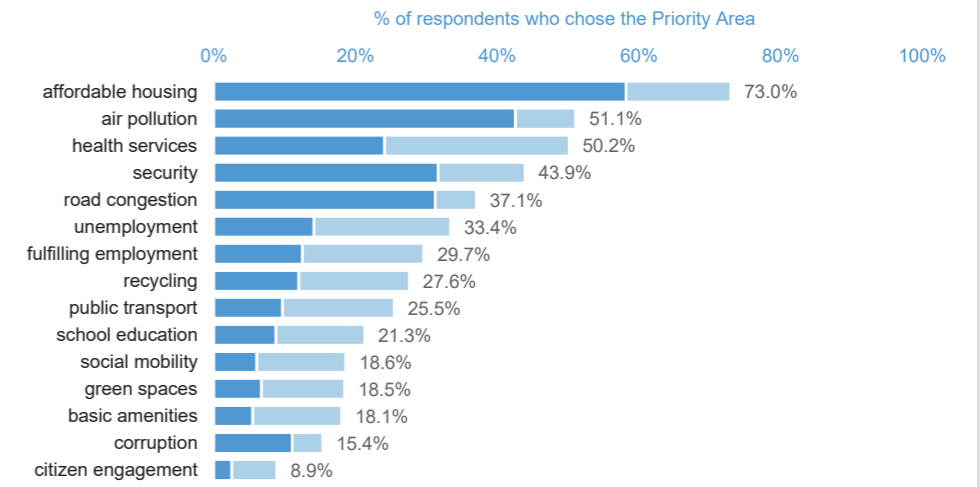


Country	2016	2017	2018	2019	1 yr change
HDI	0.918	0.919	0.920	0.932	+0.012
Life expectancy at Birth	81.1	81.2	81.2	81.3	+0.1
Expected years of schooling	17.4	17.4	17.4	17.5	+0.1
Mean years of schooling	12.9	12.9	13.0	13.2	+0.2
GNI per capita (PPP \$)	38,421	39,216	39,507	46,071	+6,564

### PRIORITY AREAS

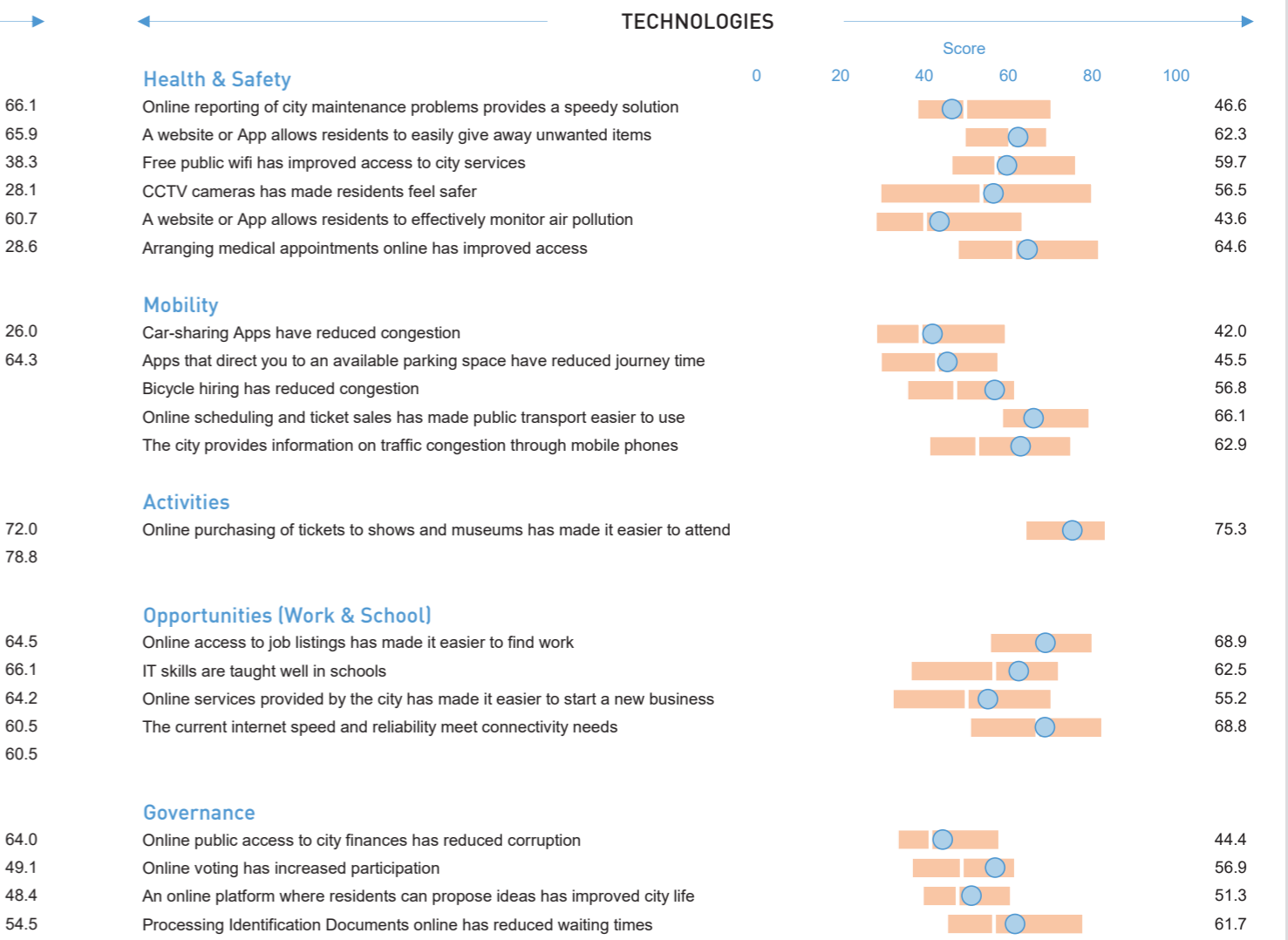
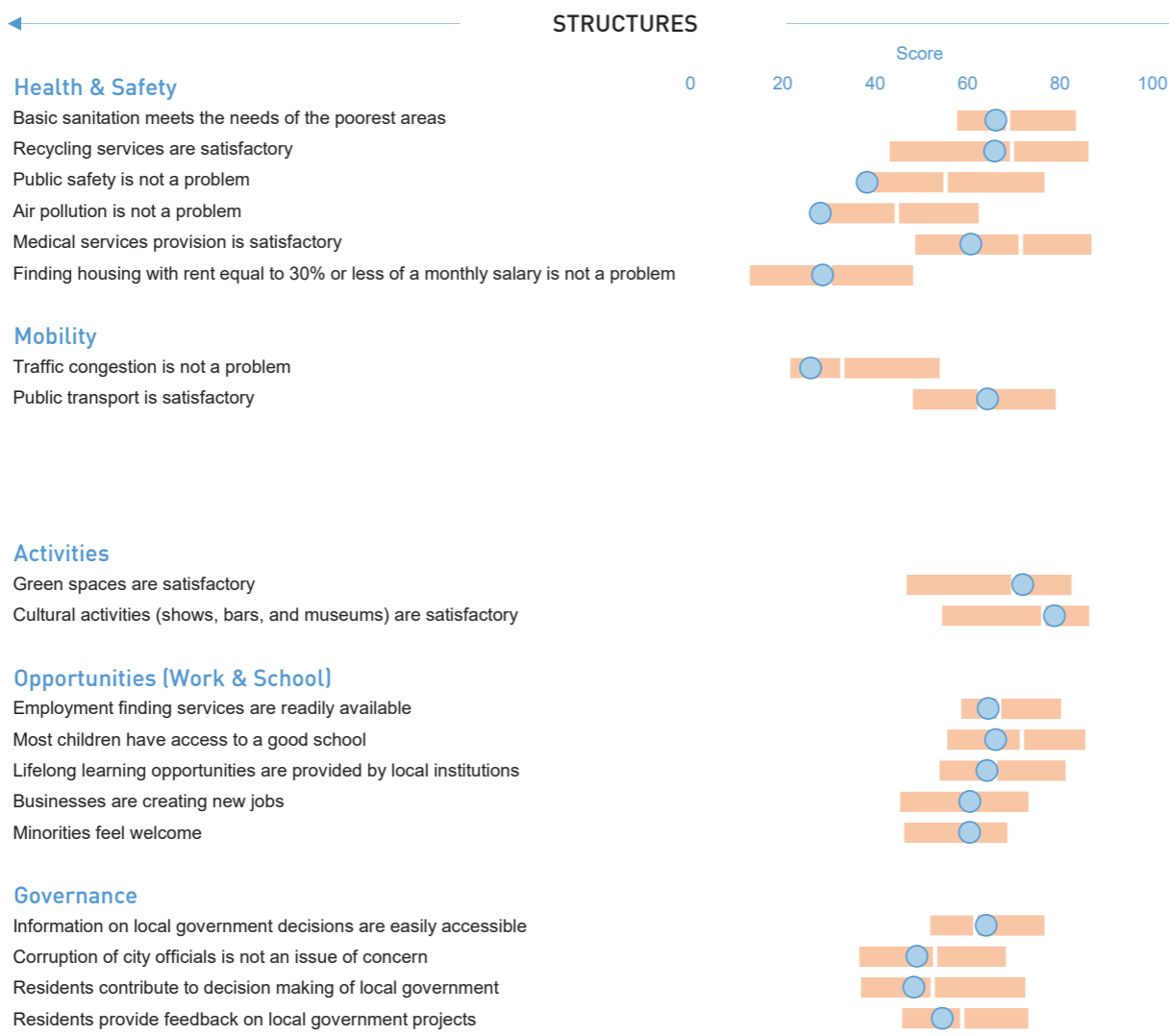
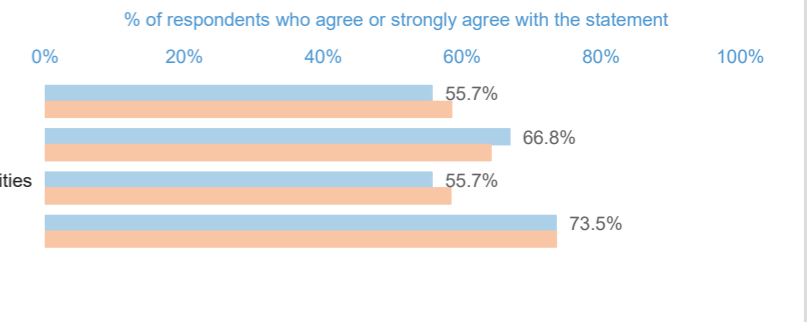
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)





# Los Angeles

## SMART CITY RANKING

31

Out of 118



26 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

2

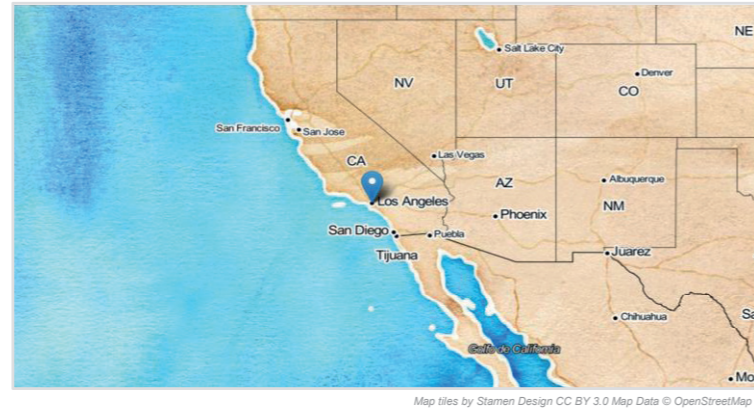
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
12,450,000

(UN World Urbanization Prospects)

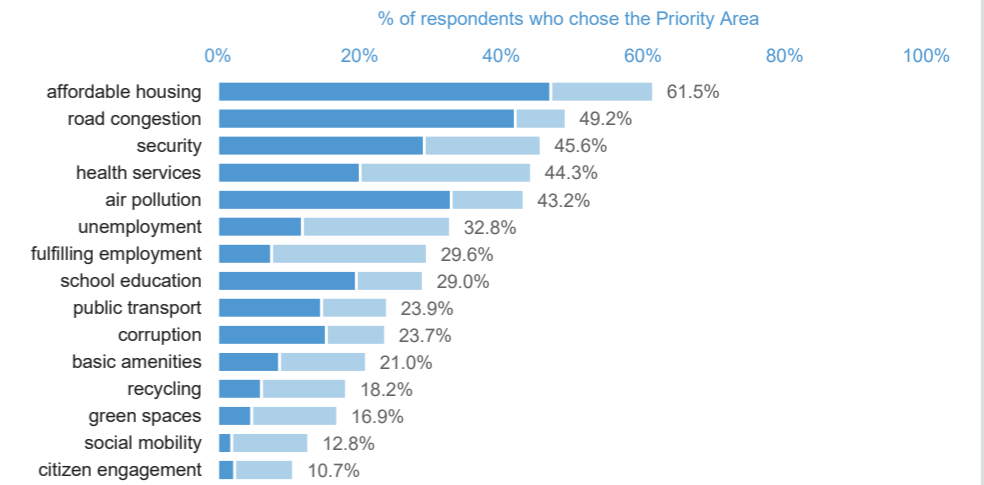


Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

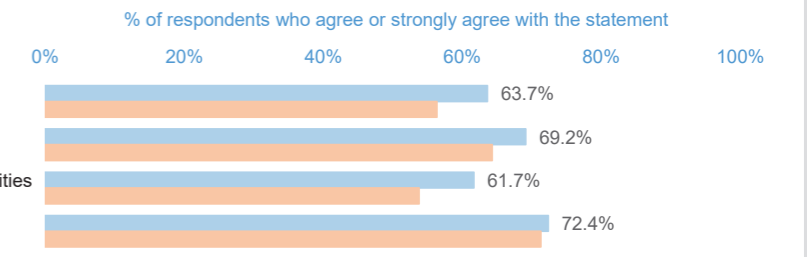
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

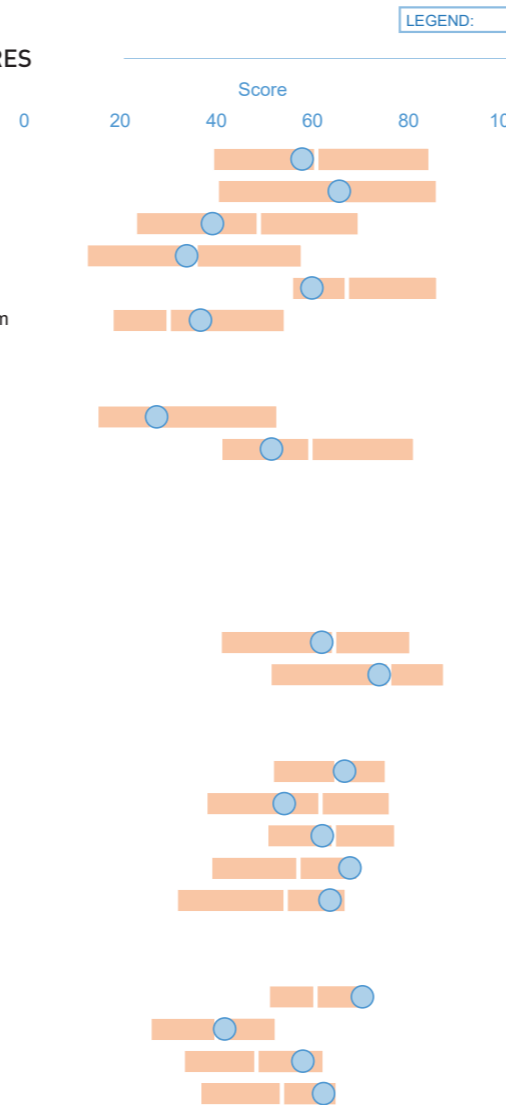
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

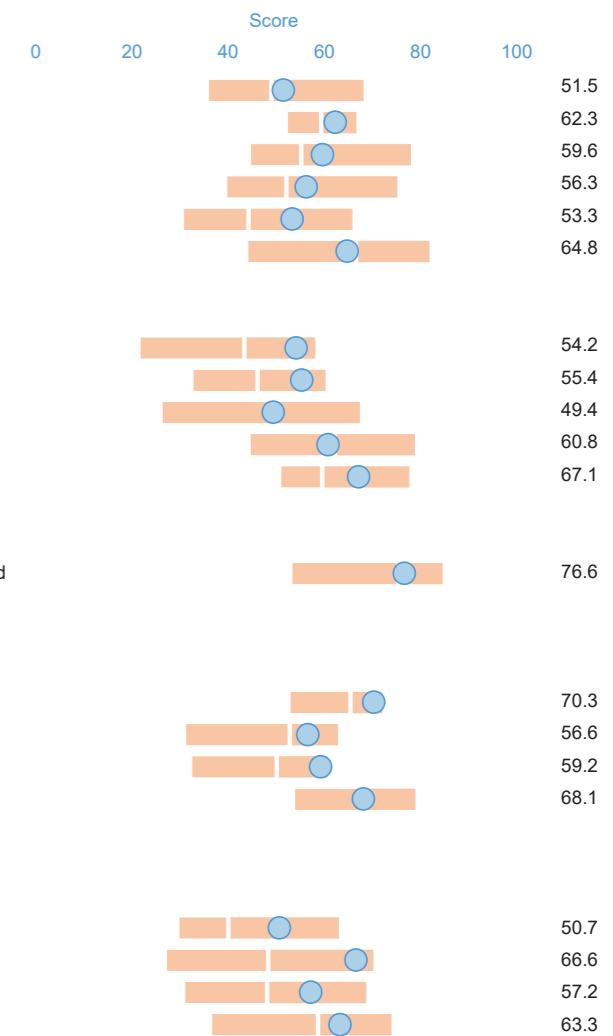
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Lyon

## SMART CITY RANKING

39

Out of 118



51 in 2020

## SMART CITY RATING

BB

BB in 2020

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,080,000

(Eurostat)



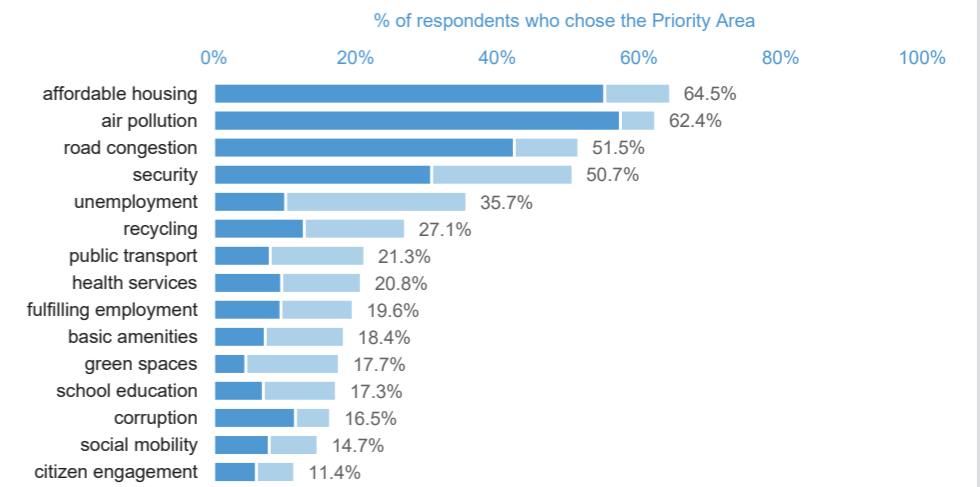
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### 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.



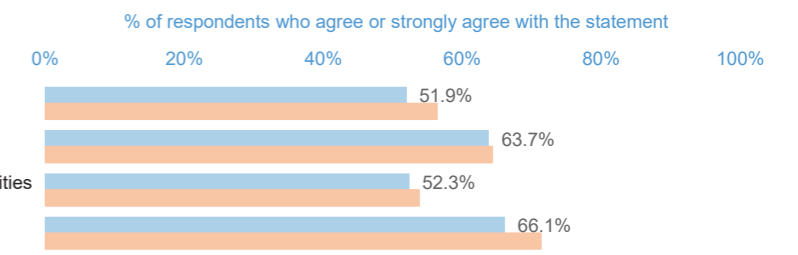
### ATTITUDES

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

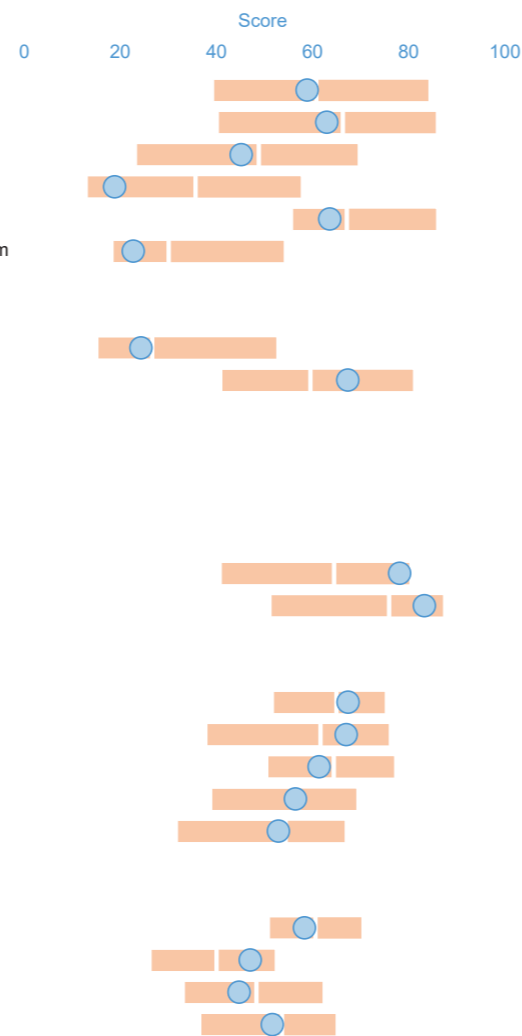
#### Governance

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

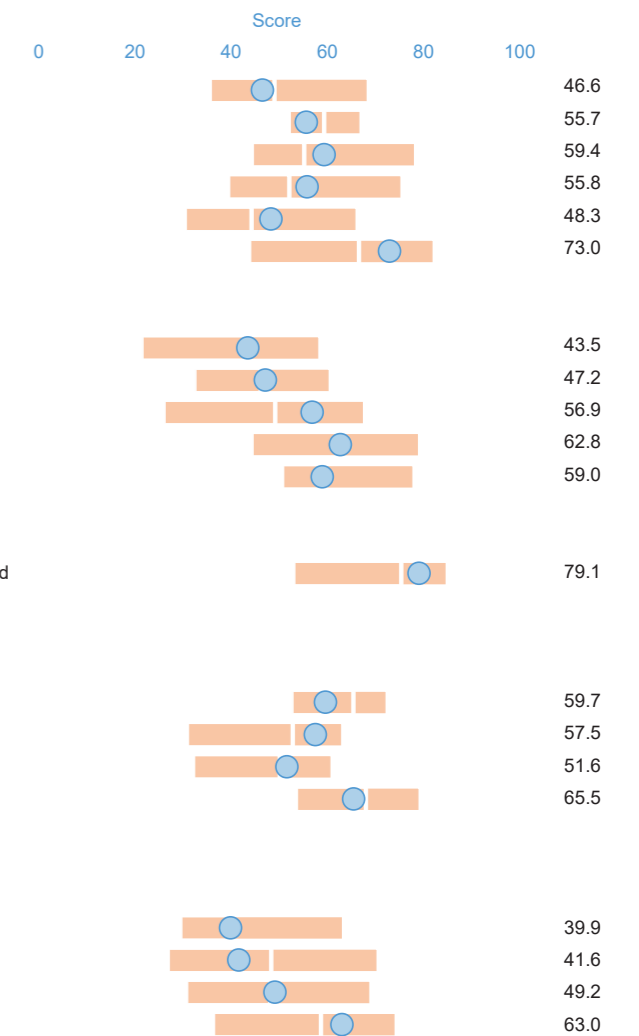
#### Governance

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



# Madrid

## SMART CITY RANKING

34

Out of 118



45 in 2020

## SMART CITY RATING

BB

BB in 2020

## FACTOR RATINGS

B

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,270,000

(Eurostat)

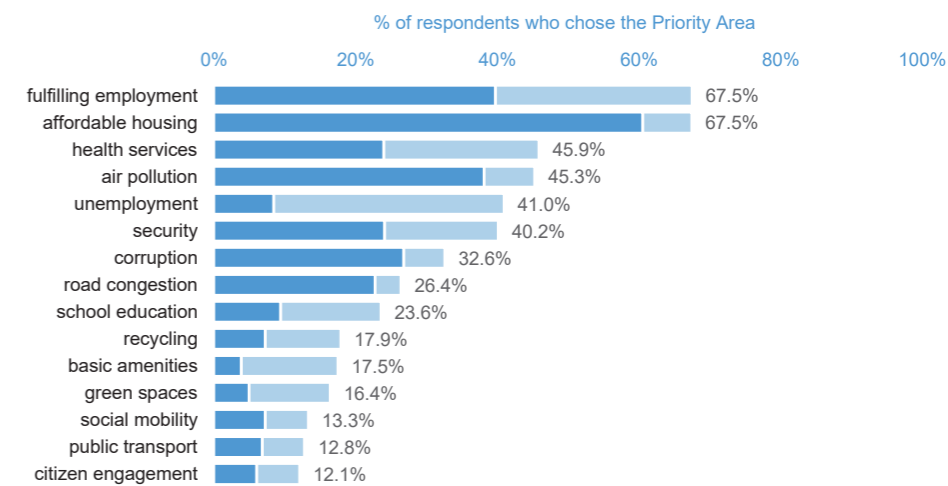


Country	2016	2017	2018	2019	1 yr change
HDI	0.888	0.891	0.893	0.904	+0.011
Life expectancy at Birth	83.1	83.3	83.4	83.6	+0.2
Expected years of schooling	17.8	17.9	17.9	17.6	-0.3
Mean years of schooling	9.8	9.8	9.8	10.3	+0.5
GNI per capita (PPP \$)	33,379	34,226	35,041	40,975	+5,934

### 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.



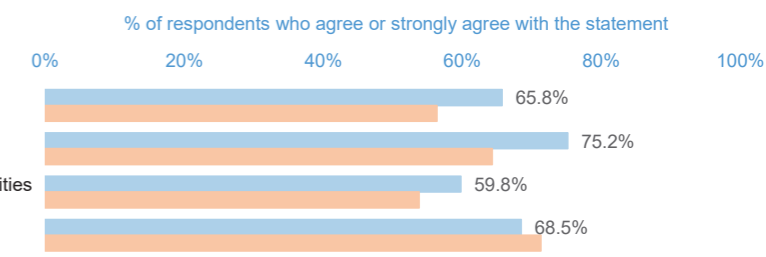
### ATTITUDES

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

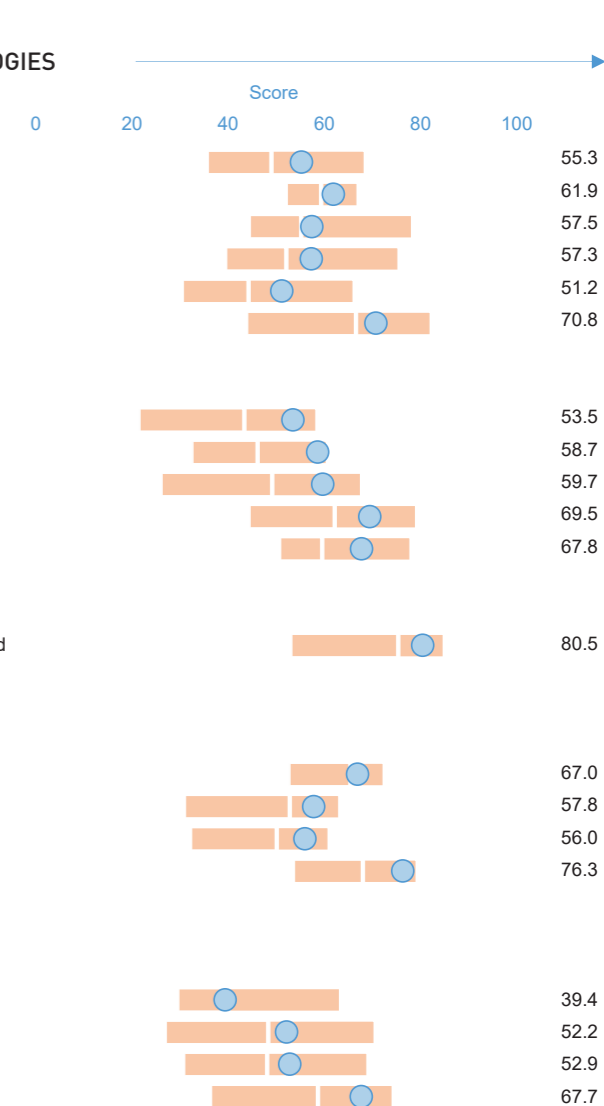
#### Governance

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



# Makassar

## SMART CITY RANKING

100

Out of 118



96 in 2020

## SMART CITY RATING

C

C in 2020

## FACTOR RATINGS

CC

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

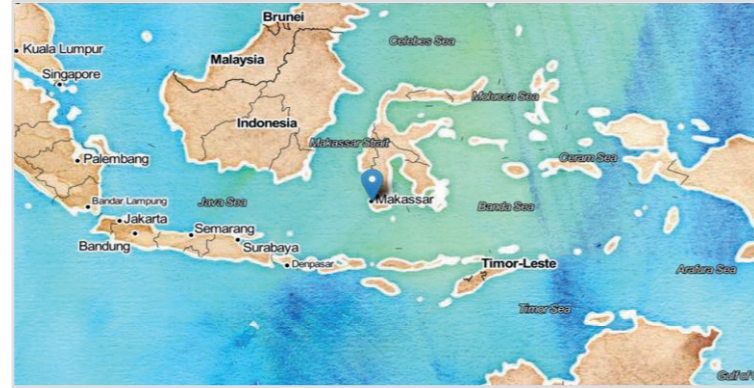
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,580,000

(UN World Urbanization Prospects)



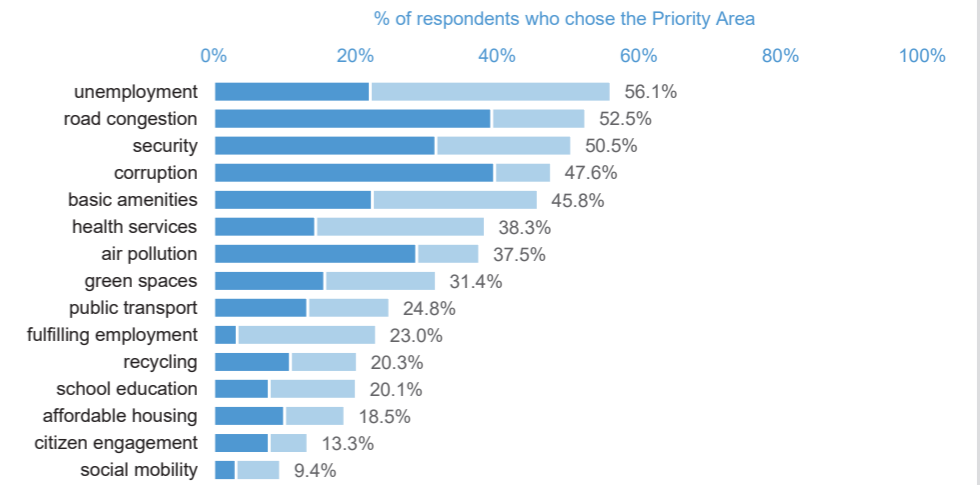
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.700	0.704	0.707	0.718	+0.011
Life expectancy at Birth	71.0	71.3	71.5	71.7	+0.2
Expected years of schooling	12.9	12.9	12.9	13.6	+0.7
Mean years of schooling	8.0	8.0	8.0	8.2	+0.2
GNI per capita (PPP \$)	10,419	10,811	11,256	11,459	+203

### PRIORITY AREAS

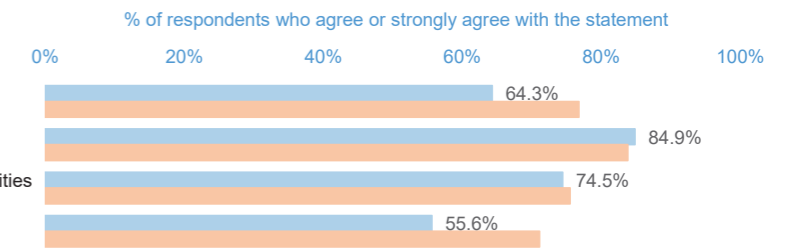
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



# Manchester

## SMART CITY RANKING

26

Out of 118



17 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
550,000

(Eurostat)

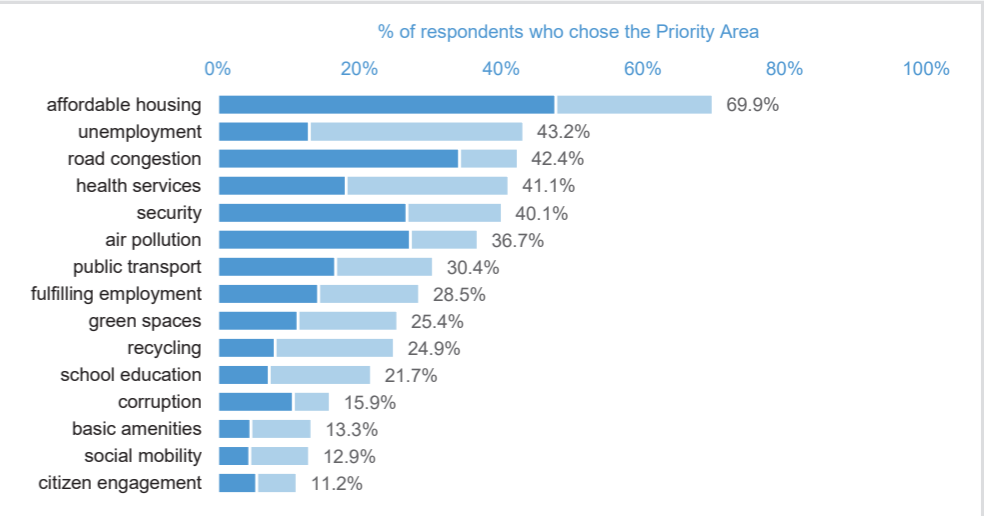


Country	2016	2017	2018	2019	1 yr change
HDI	0.918	0.919	0.920	0.932	+0.012
Life expectancy at Birth	81.1	81.2	81.2	81.3	+0.1
Expected years of schooling	17.4	17.4	17.4	17.5	+0.1
Mean years of schooling	12.9	12.9	13.0	13.2	+0.2
GNI per capita (PPP \$)	38,421	39,216	39,507	46,071	+6,564

### PRIORITY AREAS

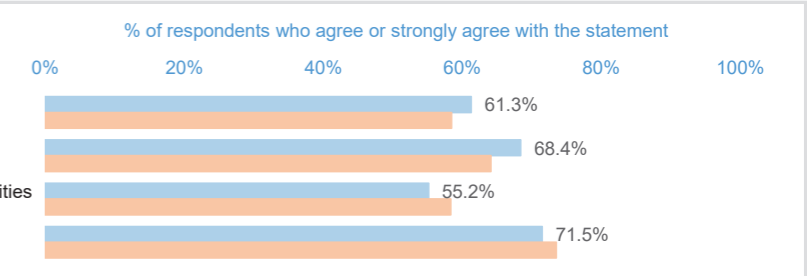
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.



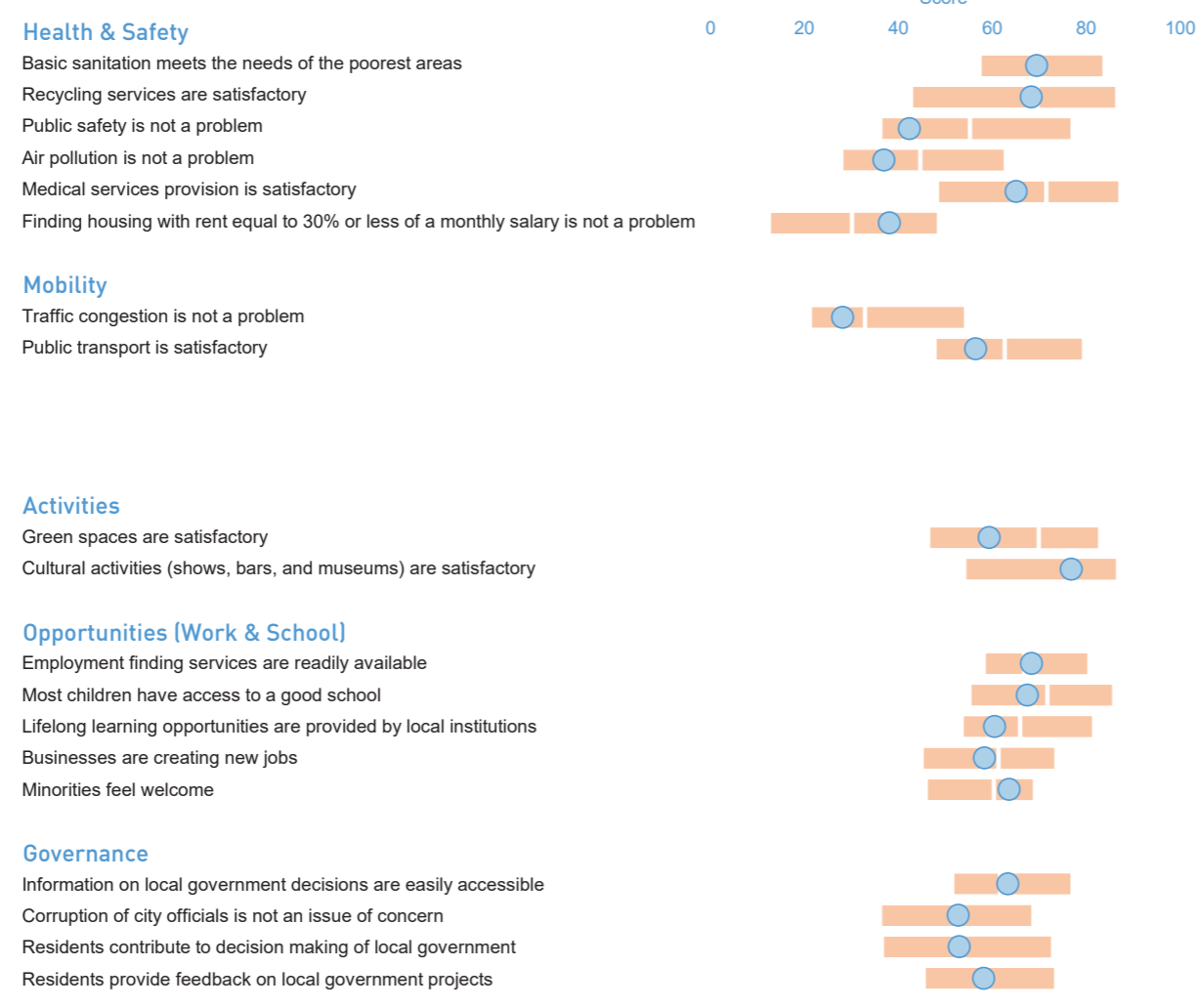
### ATTITUDES

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



### TECHNOLOGIES



# Manila

## SMART CITY RANKING

102

Out of 118



104 in 2020

## SMART CITY RATING

C

D in 2020

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
13,920,000

(UN World Urbanization Prospects)

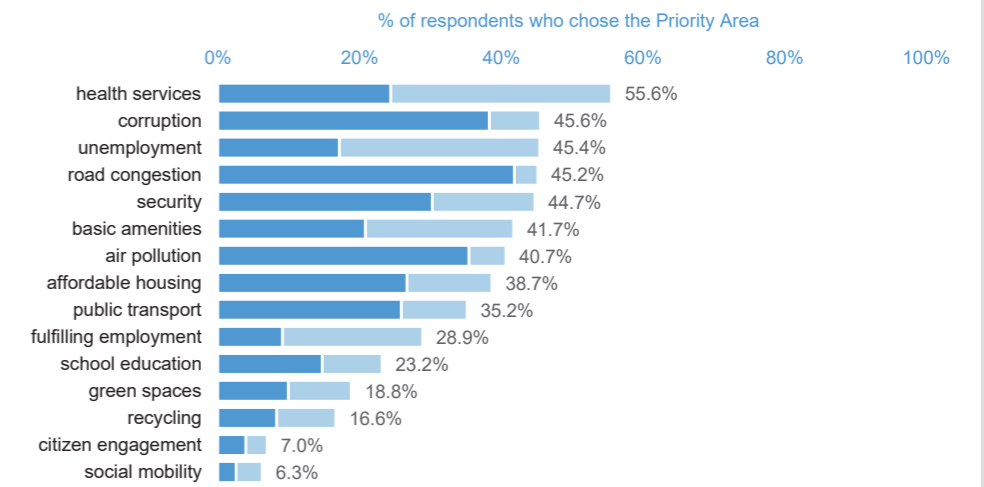


Country	2016	2017	2018	2019	1 yr change
HDI	0.704	0.709	0.712	0.718	+0.006
Life expectancy at Birth	70.8	71.0	71.1	71.2	+0.1
Expected years of schooling	12.7	12.7	12.7	13.1	+0.4
Mean years of schooling	9.3	9.4	9.4	9.4	+0.0
GNI per capita (PPP \$)	8,701	9,133	9,540	9,778	+238

### PRIORITY AREAS

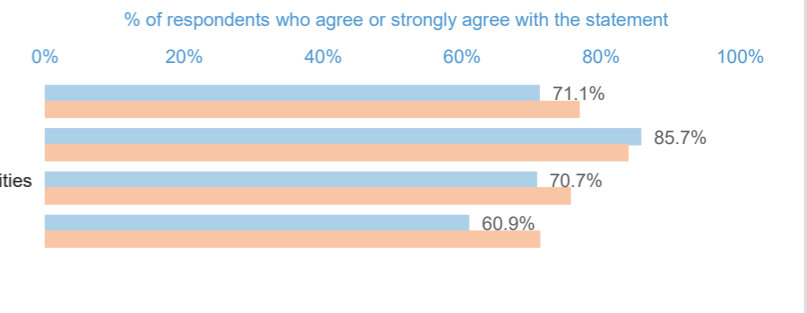
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

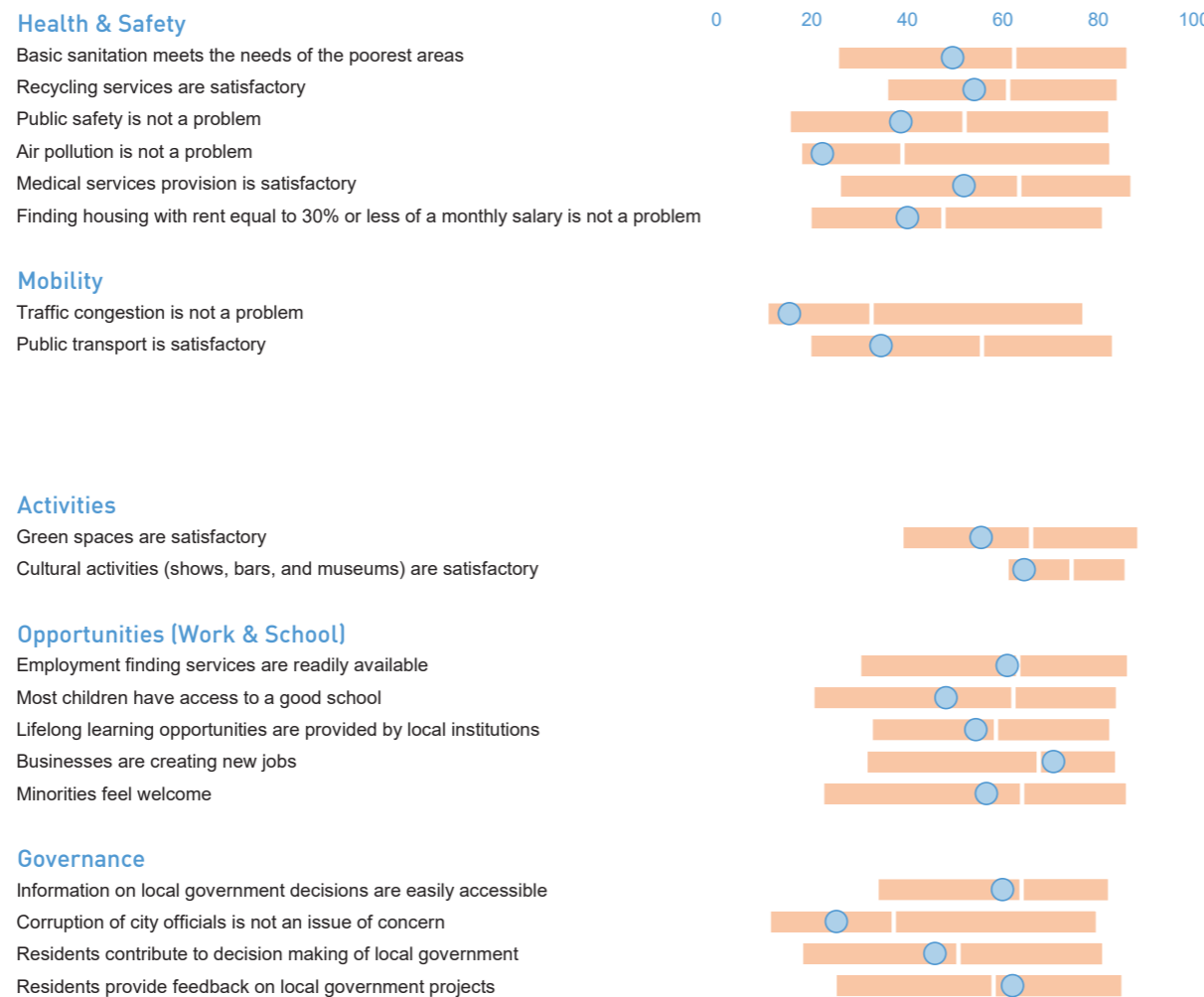


### ATTITUDES

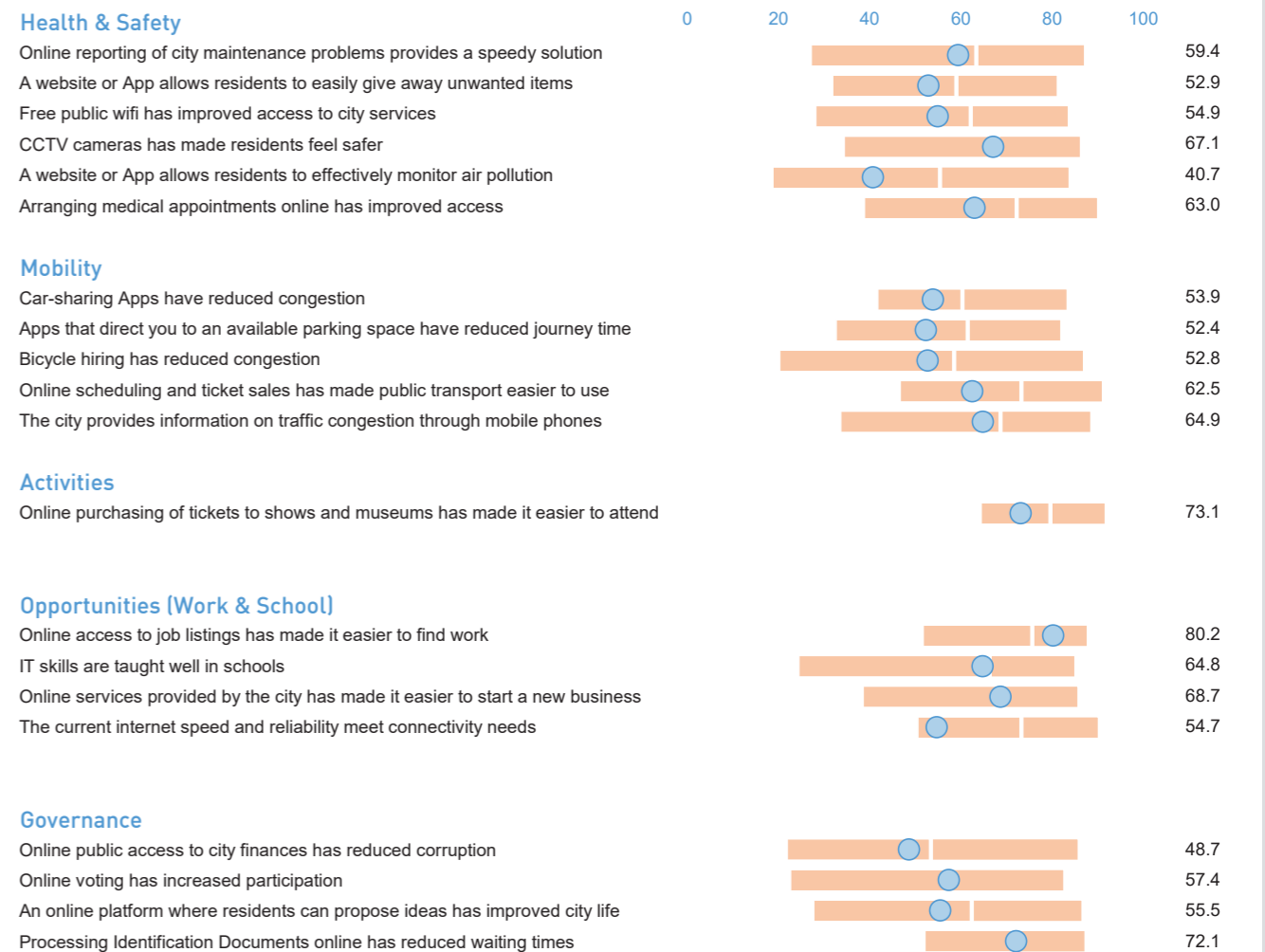
You are willing to concede personal data in order to improve traffic congestion  
 You are comfortable with face recognition technologies to lower crime  
 You feel the availability of online information has increased your trust in authorities  
 The proportion of your day-to-day payment transactions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



### STRUCTURES



### TECHNOLOGIES



# Marseille

## SMART CITY RANKING

83

Out of 118



78 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CCC

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
900,000

(Eurostat)



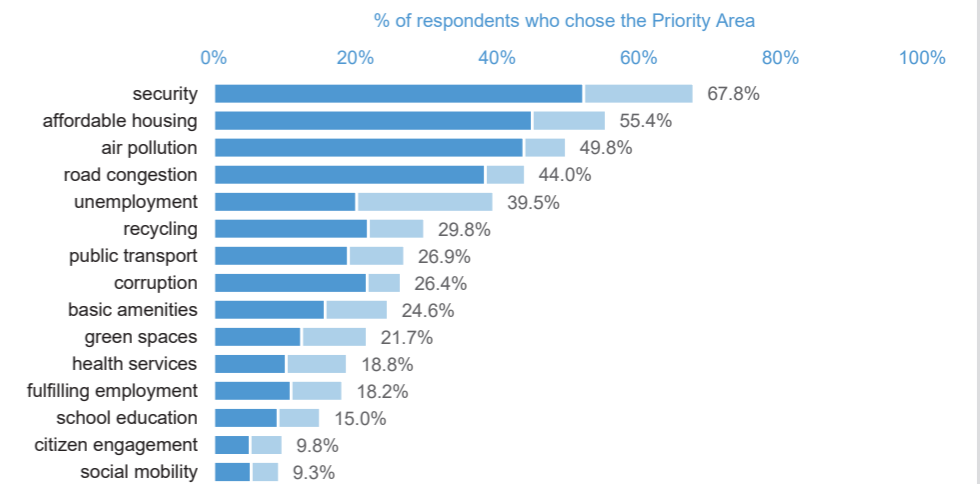
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

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

### PRIORITY AREAS

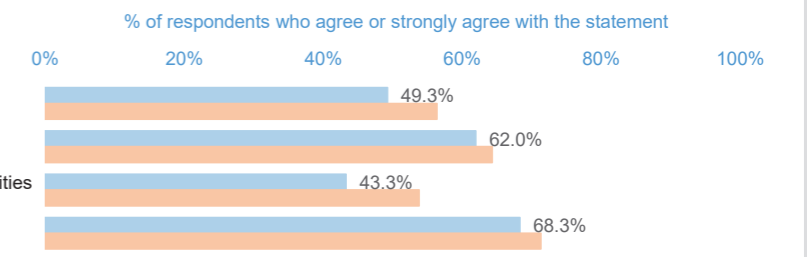
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

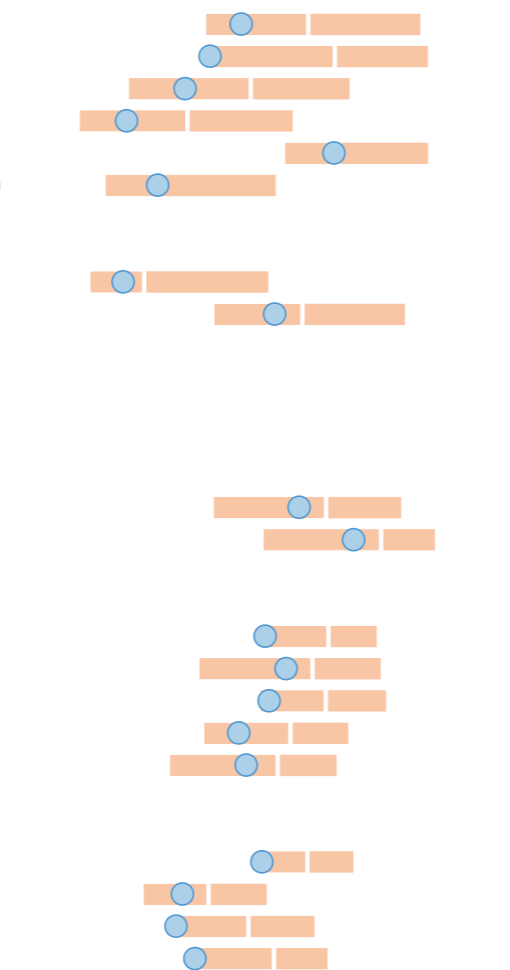
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

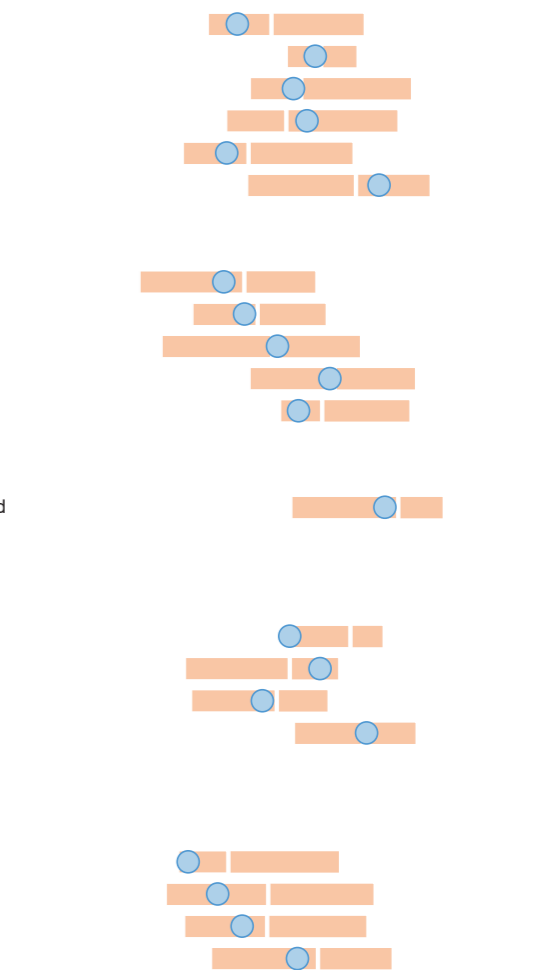
#### Opportunities (Work & School)

- 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



# Medan

## SMART CITY RANKING

99

Out of 118



97 in 2020

## SMART CITY RATING

C

C in 2020

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,340,000

(UN World Urbanization Prospects)



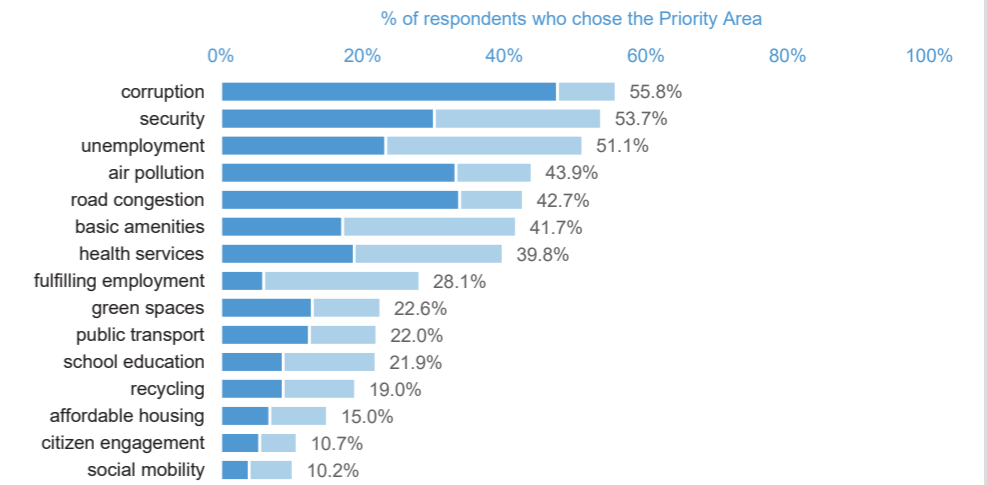
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.700	0.704	0.707	0.718	+0.011
Life expectancy at Birth	71.0	71.3	71.5	71.7	+0.2
Expected years of schooling	12.9	12.9	12.9	13.6	+0.7
Mean years of schooling	8.0	8.0	8.0	8.2	+0.2
GNI per capita (PPP \$)	10,419	10,811	11,256	11,459	+203

### PRIORITY AREAS

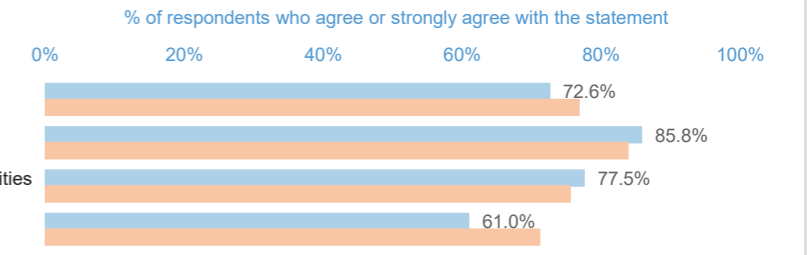
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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





# Medellin

## SMART CITY RANKING

101

Out of 118



72 in 2020

## SMART CITY RATING

C

CCC in 2020

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,000,000

(UN World Urbanization Prospects)



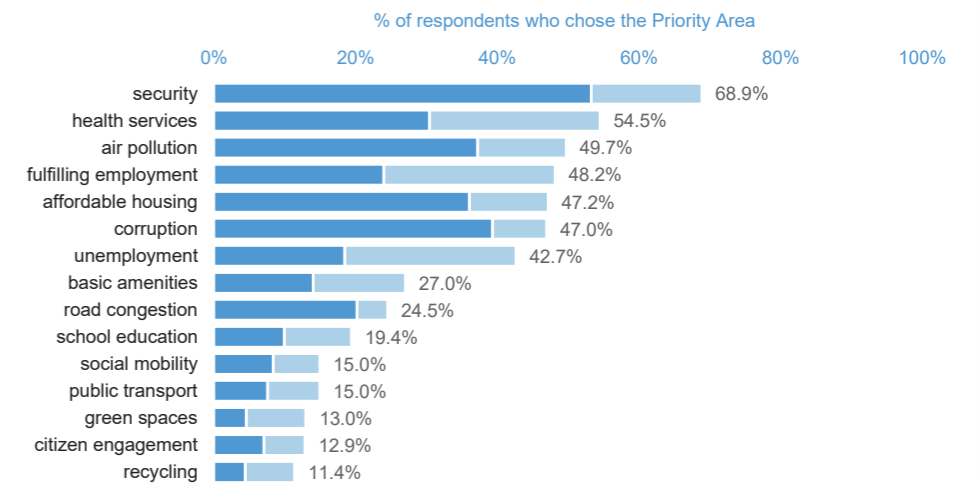
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.759	0.760	0.761	0.767	+0.006
Life expectancy at Birth	76.7	76.9	77.1	77.3	+0.2
Expected years of schooling	14.6	14.6	14.6	14.4	-0.2
Mean years of schooling	8.3	8.3	8.3	8.5	+0.2
GNI per capita (PPP \$)	13,087	12,963	12,896	14,257	+1,361

### PRIORITY AREAS

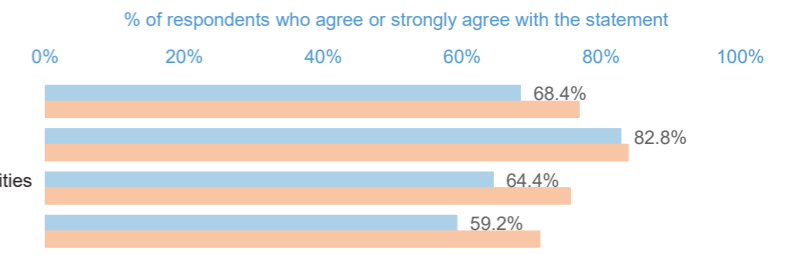
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

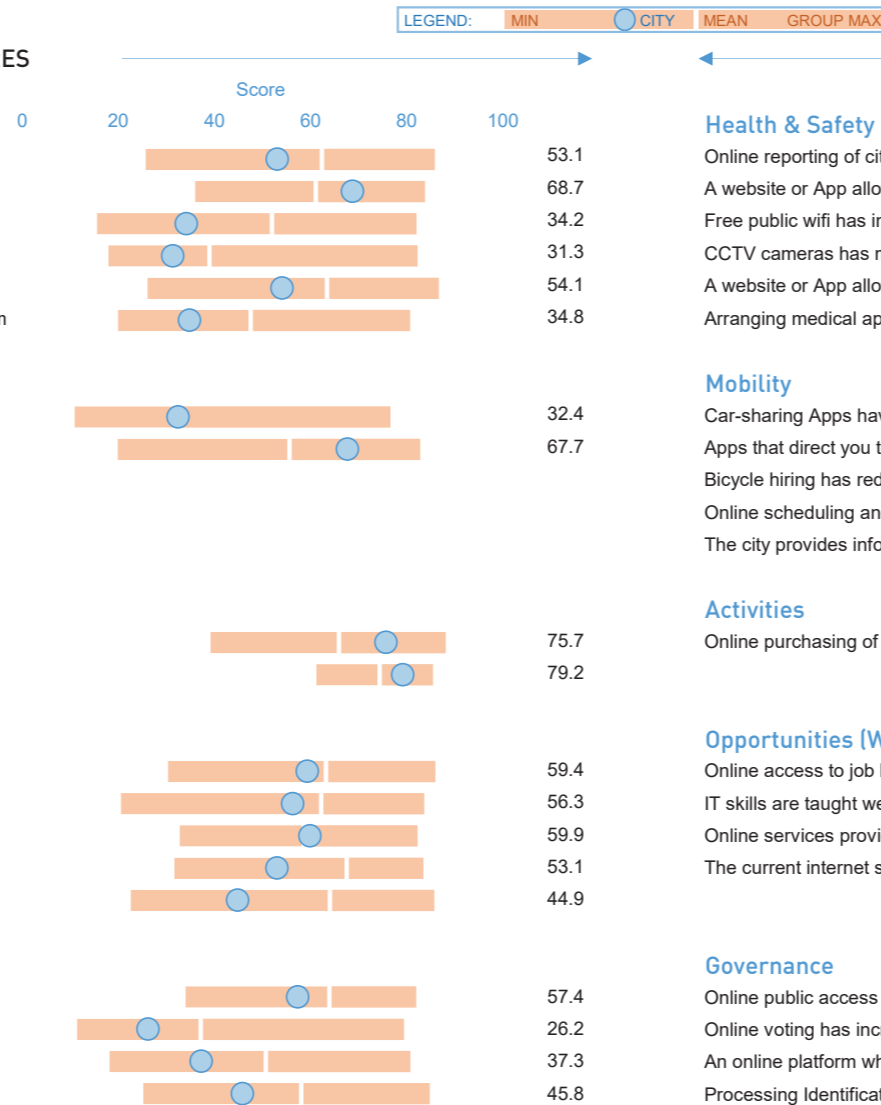
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

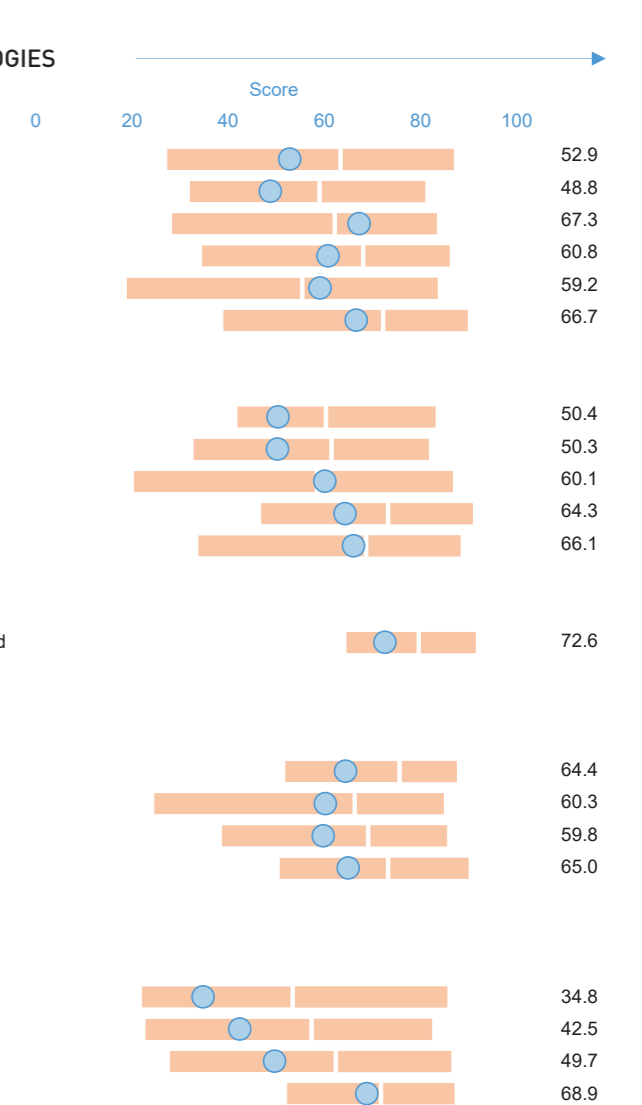
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Medina

## SMART CITY RANKING

73

Out of 118

N/A

not in 2020

## SMART CITY RATING

CCC

not in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,490,000

(UN World Urbanization Prospects)

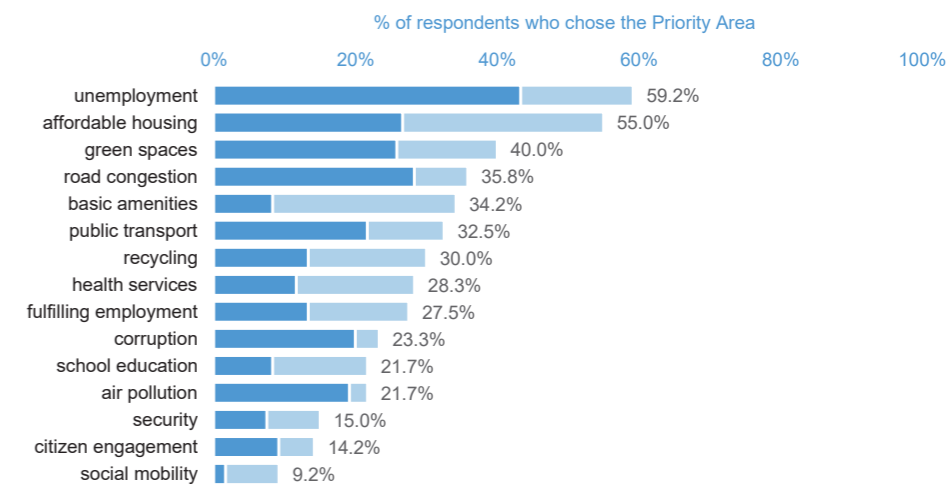


Country	2016	2017	2018	2019	1 yr change
HDI	0.857	0.856	0.857	0.854	-0.003
Life expectancy at Birth	74.8	74.9	75.0	75.1	+0.1
Expected years of schooling	17.0	17.0	17.0	16.1	-0.9
Mean years of schooling	9.7	9.7	9.7	10.2	+0.5
GNI per capita (PPP \$)	51,099	49,371	49,338	47,495	-1,843

### PRIORITY AREAS

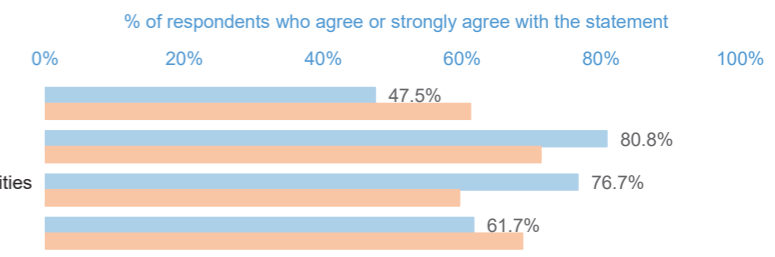
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

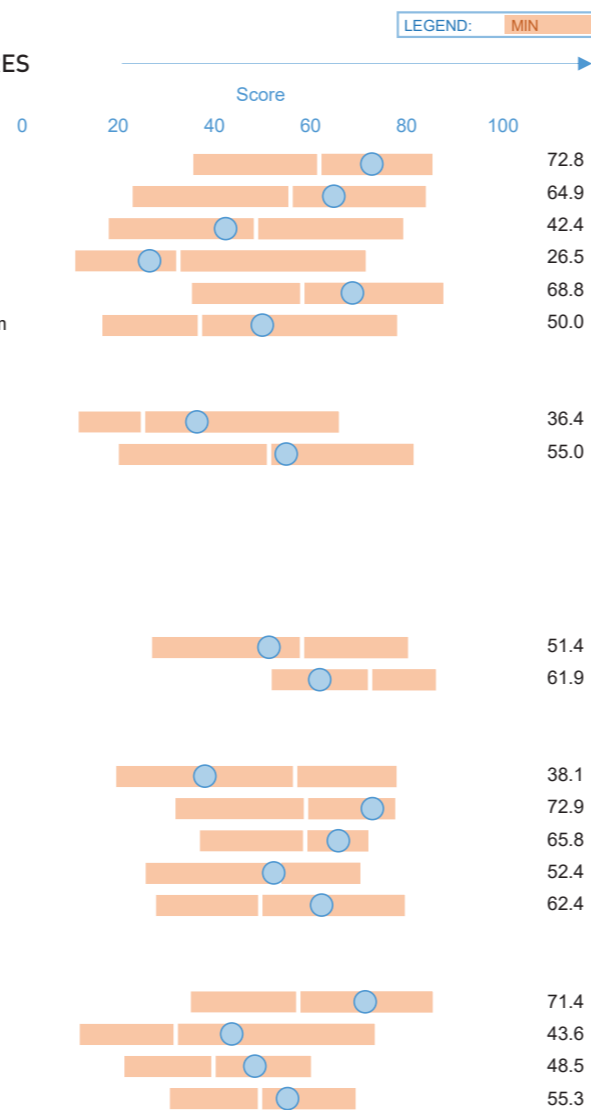
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

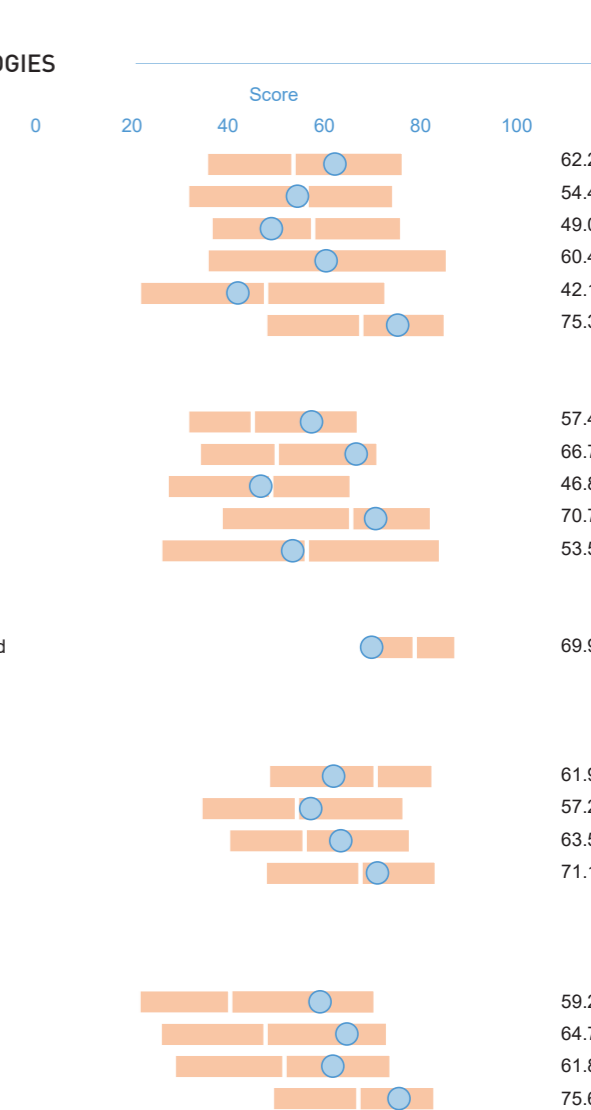
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Melbourne

## SMART CITY RANKING

19

Out of 118



20 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

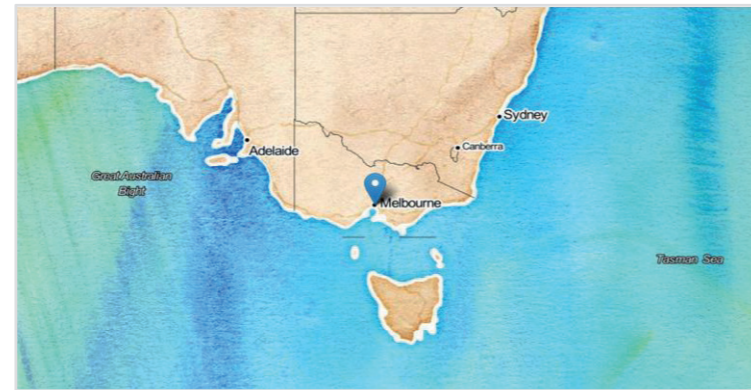
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,970,000

(UN World Urbanization Prospects)



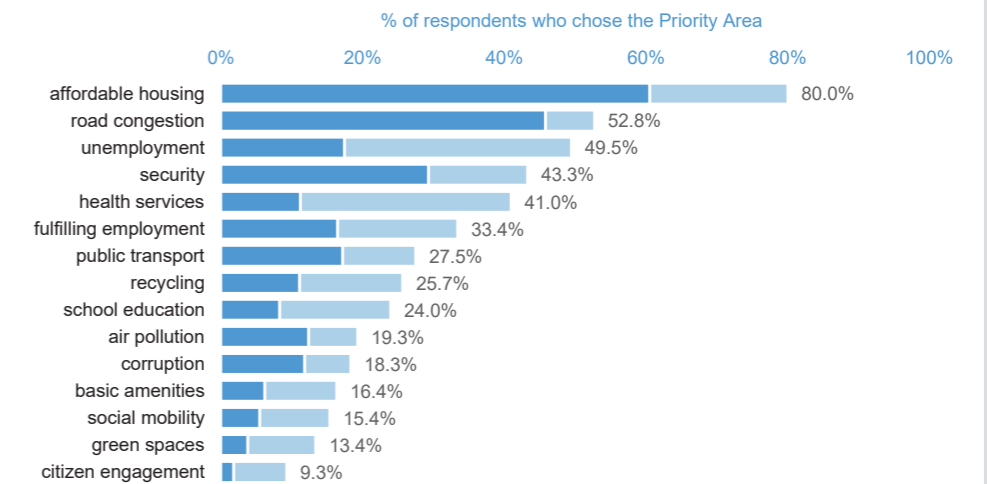
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.935	0.937	0.938	0.944	+0.006
Life expectancy at Birth	83.0	83.1	83.3	83.4	+0.1
Expected years of schooling	22.9	22.1	22.1	22.0	-0.1
Mean years of schooling	12.6	12.7	12.7	12.7	+0.0
GNI per capita (PPP \$)	43,653	43,756	44,097	48,085	+3,988

### PRIORITY AREAS

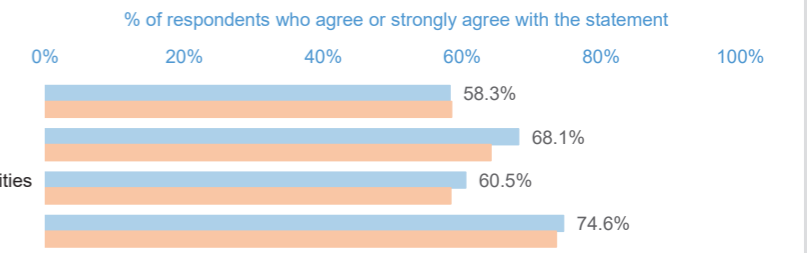
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

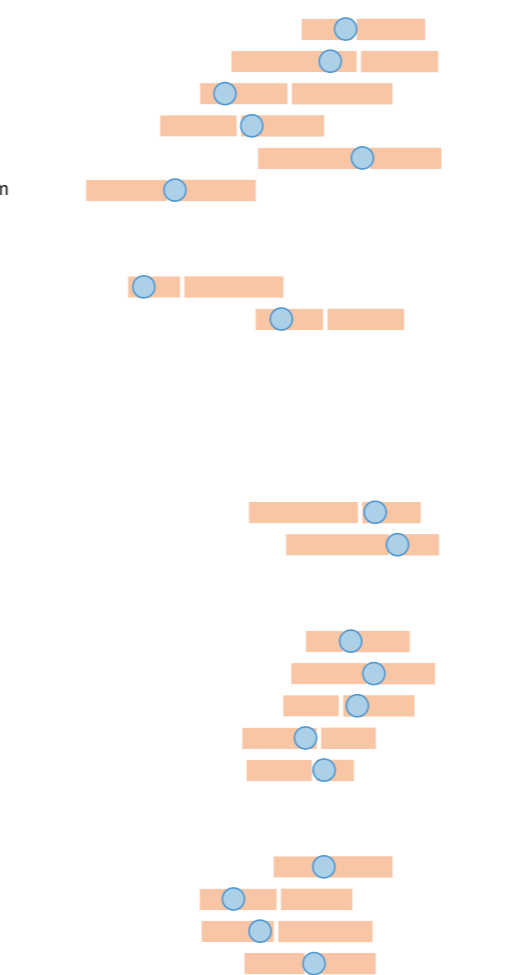
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

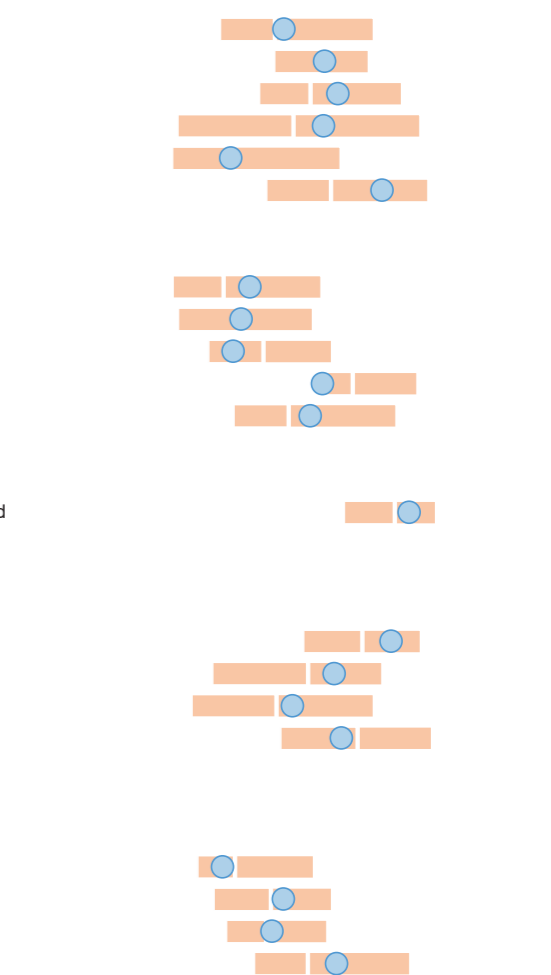
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Mexico City

## SMART CITY RANKING

108

Out of 118



90 in 2020

## SMART CITY RATING

C

CC in 2020

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

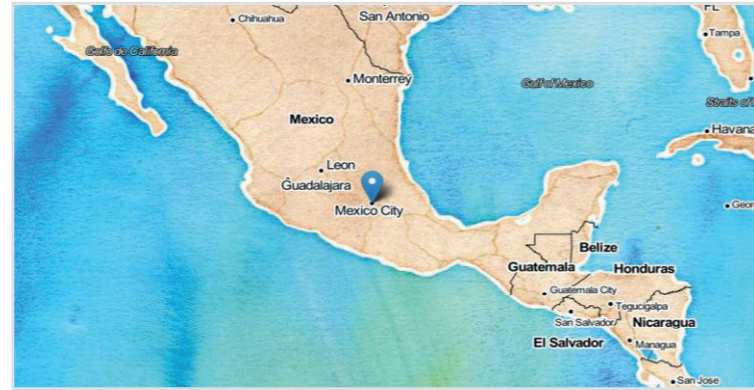
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
21,780,000

(UN World Urbanization Prospects)



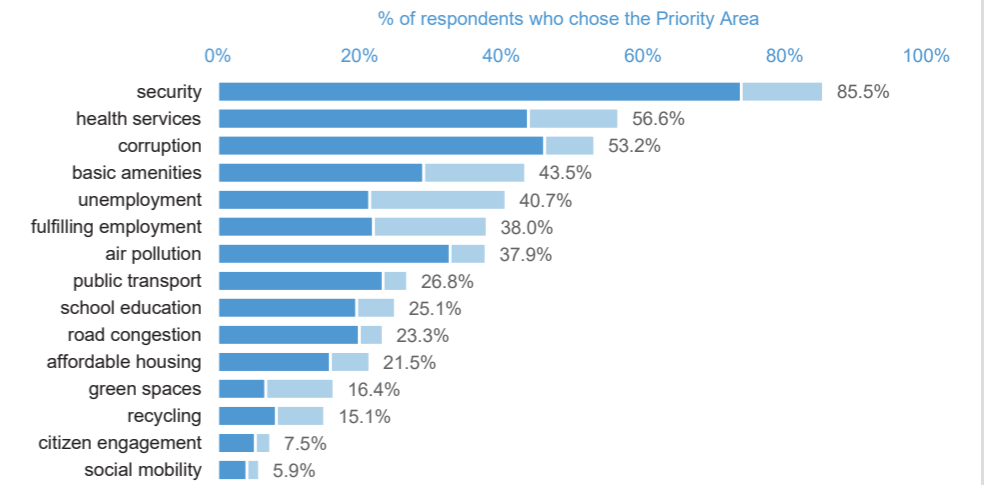
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.764	0.765	0.767	0.779	+0.012
Life expectancy at Birth	74.9	74.9	75.0	75.1	+0.1
Expected years of schooling	14.1	14.1	14.3	14.8	+0.5
Mean years of schooling	8.6	8.6	8.6	8.8	+0.2
GNI per capita (PPP \$)	17,344	17,533	17,628	19,160	+1,532

### PRIORITY AREAS

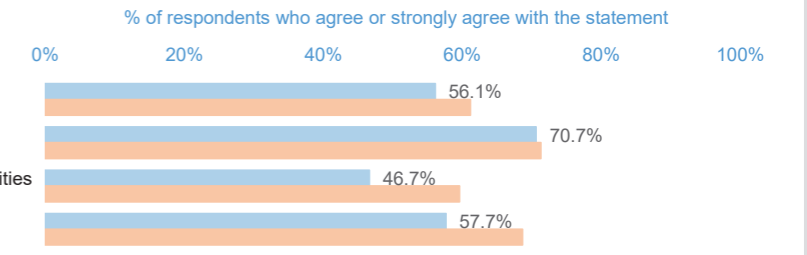
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

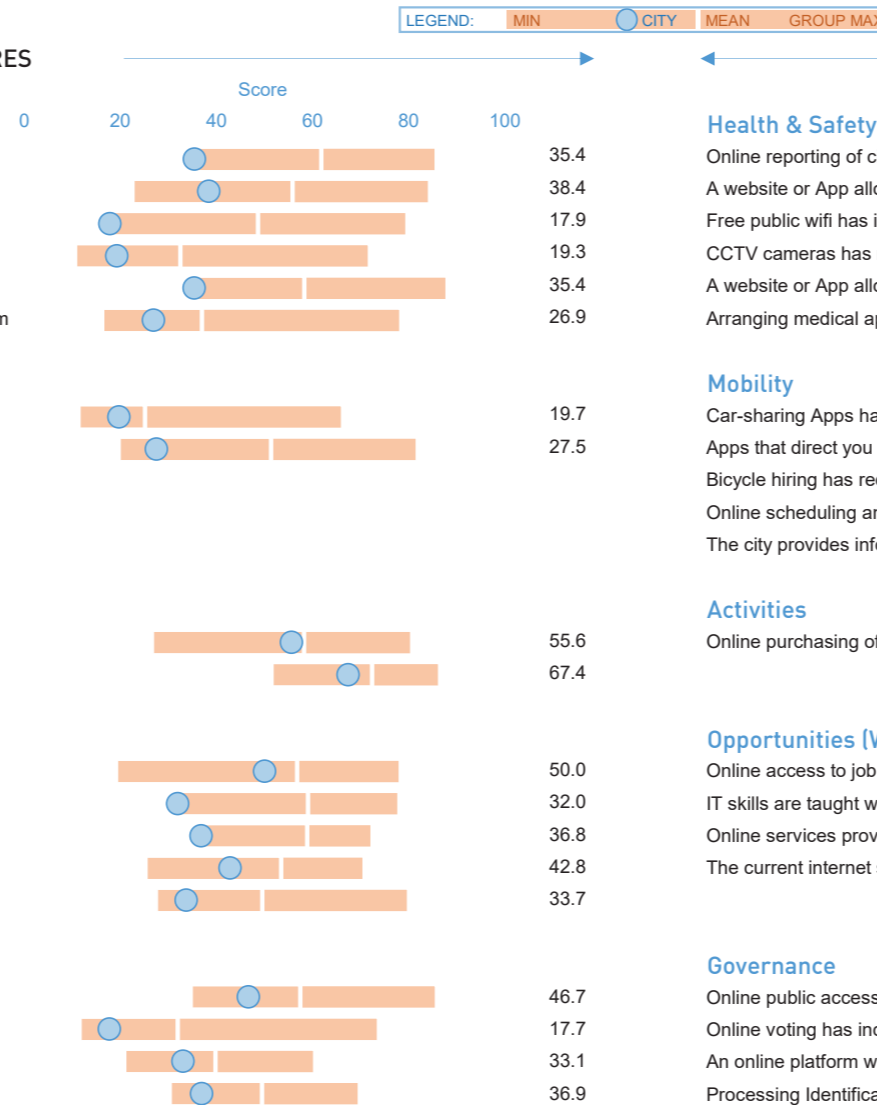
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

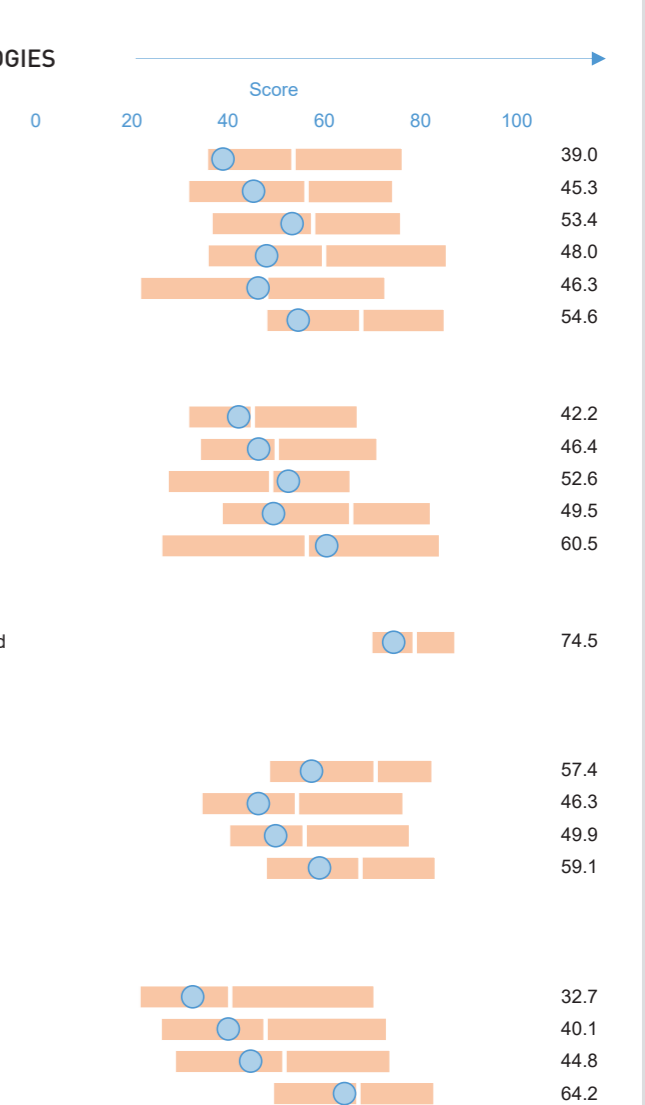
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Milan

## SMART CITY RANKING

81

Out of 118



74 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,410,000  
(Eurostat)

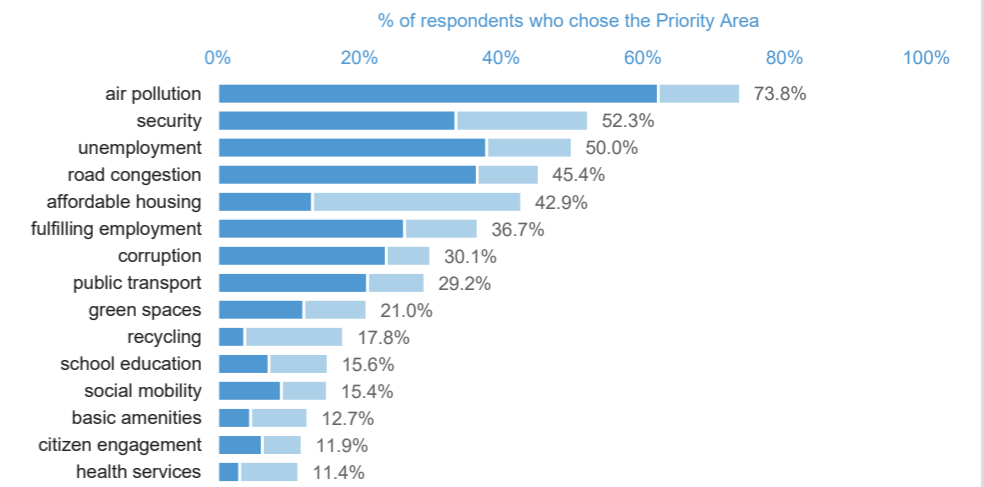


Country	2016	2017	2018	2019	1 yr change
HDI	0.878	0.881	0.883	0.892	+0.009
Life expectancy at Birth	83.0	83.2	83.4	83.5	+0.1
Expected years of schooling	16.2	16.2	16.2	16.1	-0.1
Mean years of schooling	10.2	10.2	10.2	10.4	+0.2
GNI per capita (PPP \$)	34,818	35,573	36,141	42,776	+6,635

## PRIORITY AREAS

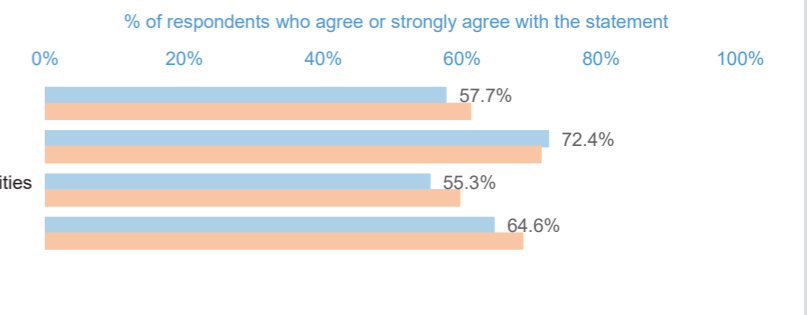
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



66.6
81.3
45.3
23.5
65.7
65.5
24.9
54.8
60.2
79.8
38.9
63.8
57.3
43.5
45.0
56.3
35.1
34.3
44.4

## 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



54.3
57.3
53.3
59.6
46.4
71.9
45.6
48.2
51.4
70.2
51.1
81.1
62.9
48.2
51.6
55.3
41.0
41.0
50.2
64.8

# Montreal

## SMART CITY RANKING

38

Out of 118



21 in 2020

## SMART CITY RATING

BB

A in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,220,000

(UN World Urbanization Prospects)

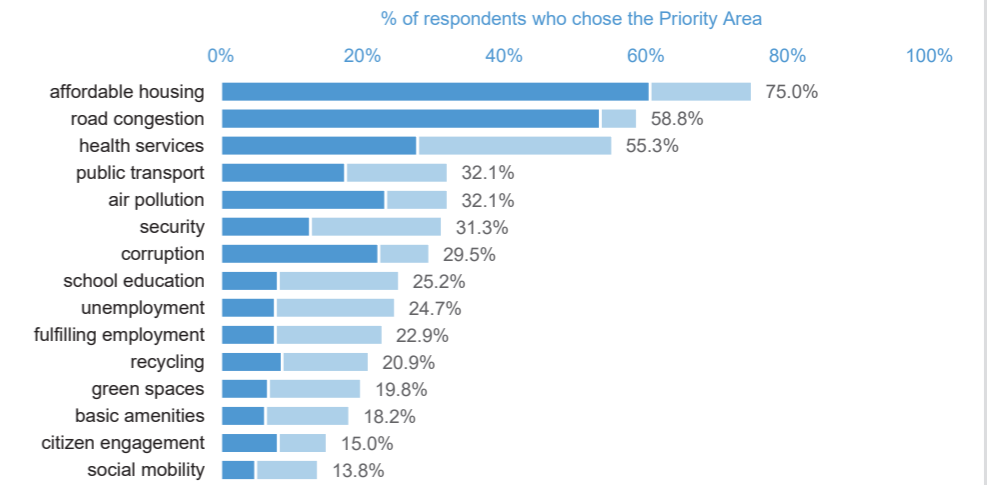


Country	2016	2017	2018	2019	1 yr change
HDI	0.920	0.921	0.922	0.929	+0.007
Life expectancy at Birth	82.1	82.2	82.3	82.4	+0.1
Expected years of schooling	16.1	16.1	16.1	16.2	+0.1
Mean years of schooling	13.3	13.3	13.3	13.4	+0.1
GNI per capita (PPP \$)	42,691	43,496	43,602	48,527	+4,925

### PRIORITY AREAS

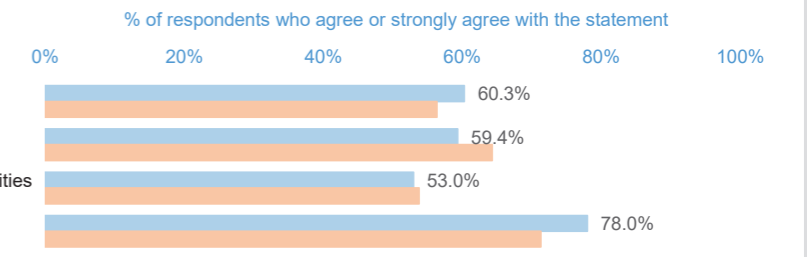
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

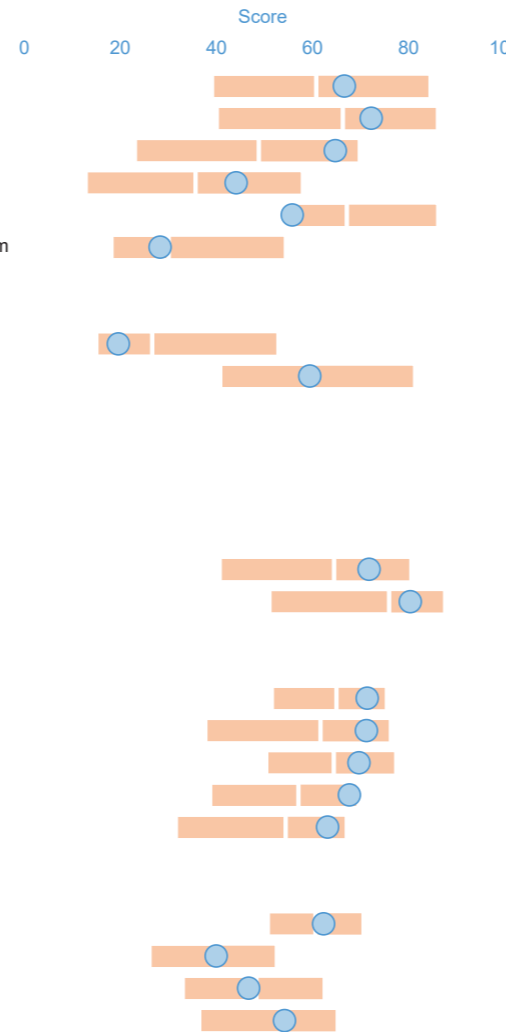
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

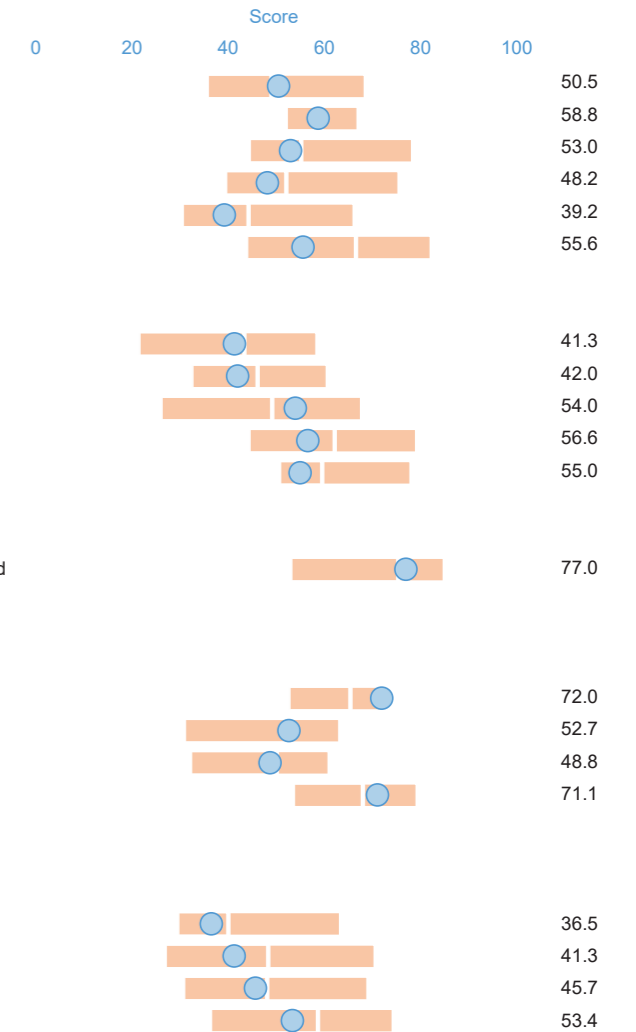
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Moscow

## SMART CITY RANKING

54

Out of 118



56 in 2020

## SMART CITY RATING

B

B in 2020

## FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
12,540,000

(UN World Urbanization Prospects)



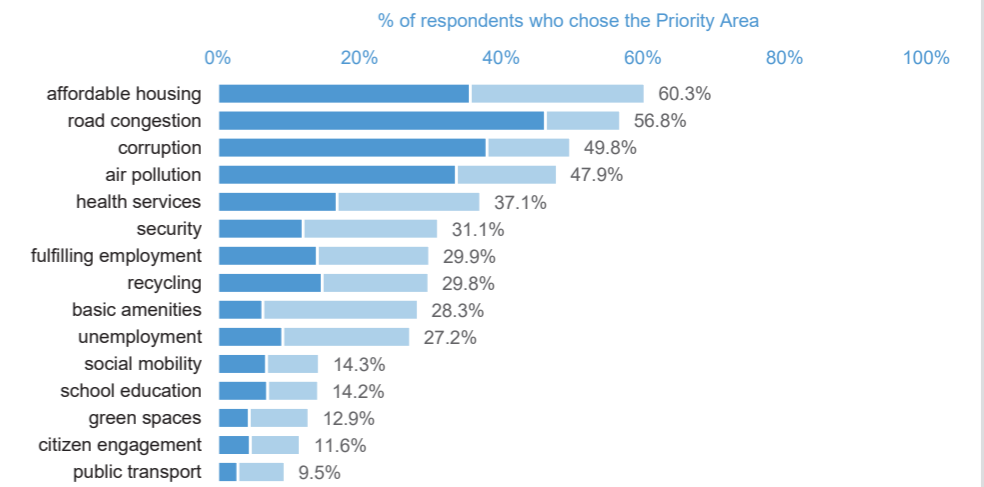
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.817	0.822	0.824	0.824	+0.000
Life expectancy at Birth	71.8	72.1	72.4	72.6	+0.2
Expected years of schooling	15.5	15.5	15.5	15.0	-0.5
Mean years of schooling	11.8	12.0	12.0	12.2	+0.2
GNI per capita (PPP \$)	24,096	24,472	25,036	26,157	+1,121

### PRIORITY AREAS

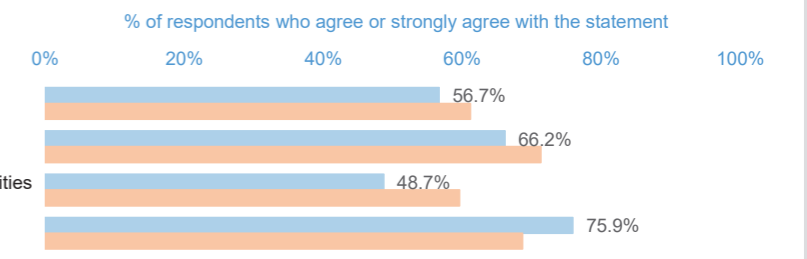
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

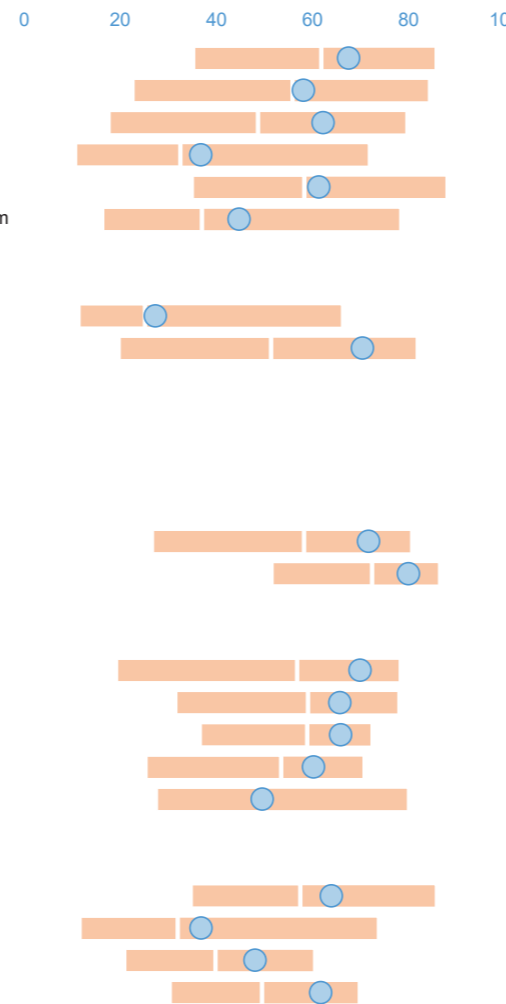
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

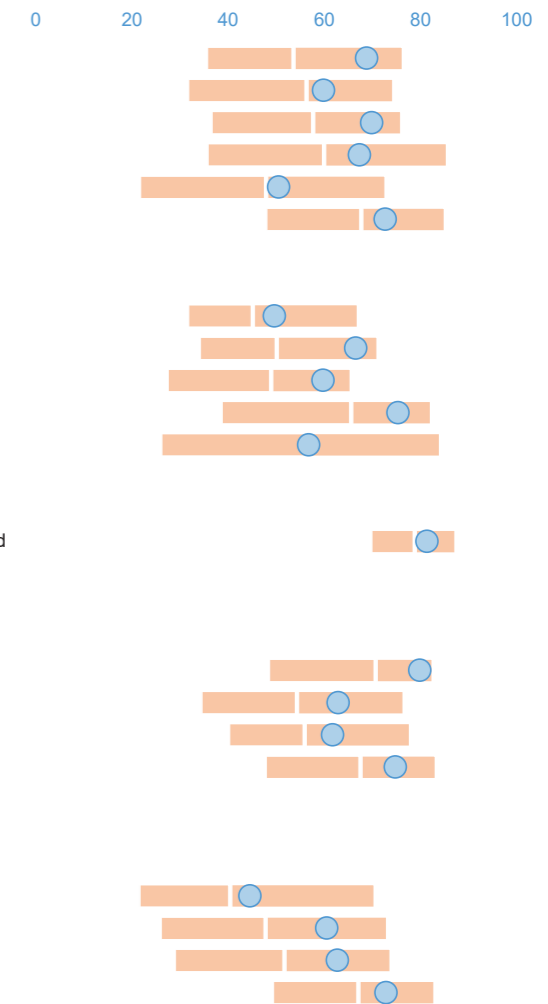
#### Opportunities (Work & School)

- 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



# Mumbai

## SMART CITY RANKING

90

Out of 118



93 in 2020

## SMART CITY RATING

CC

C in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
20,410,000

(UN World Urbanization Prospects)



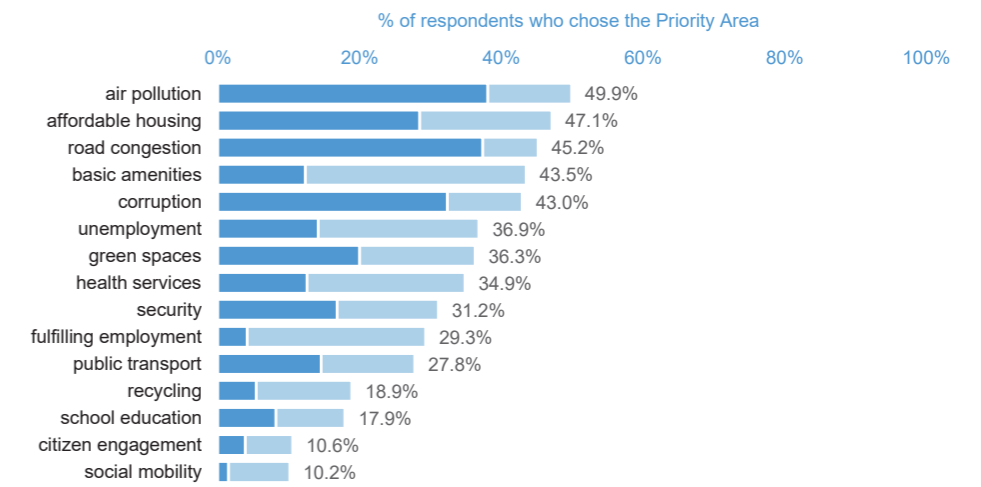
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.637	0.643	0.647	0.645	-0.002
Life expectancy at Birth	68.9	69.2	69.4	69.7	+0.3
Expected years of schooling	12.3	12.3	12.3	12.2	-0.1
Mean years of schooling	6.4	6.5	6.5	6.5	+0.0
GNI per capita (PPP \$)	6,075	6,446	6,829	6,681	-148

### PRIORITY AREAS

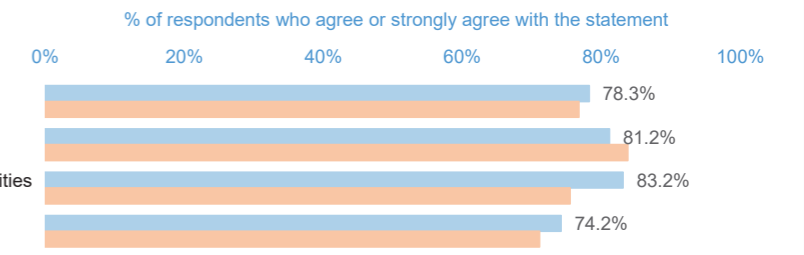
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

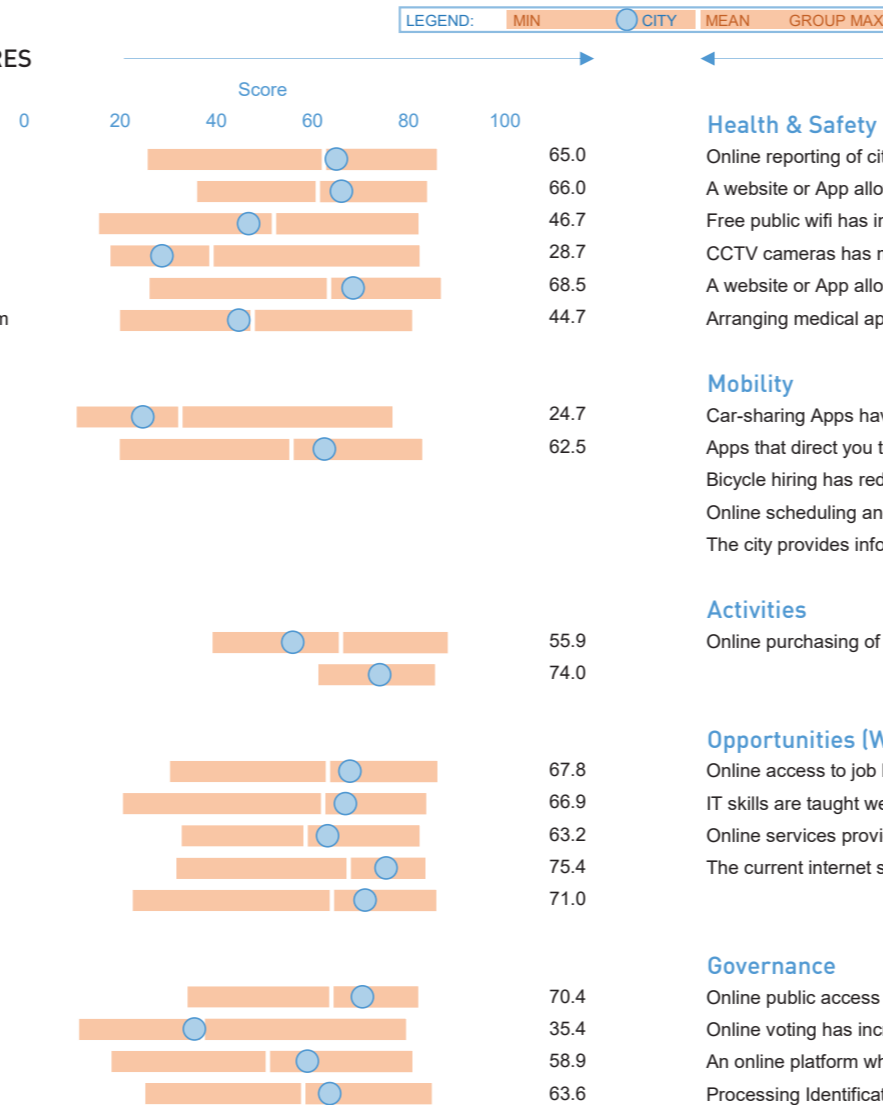
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

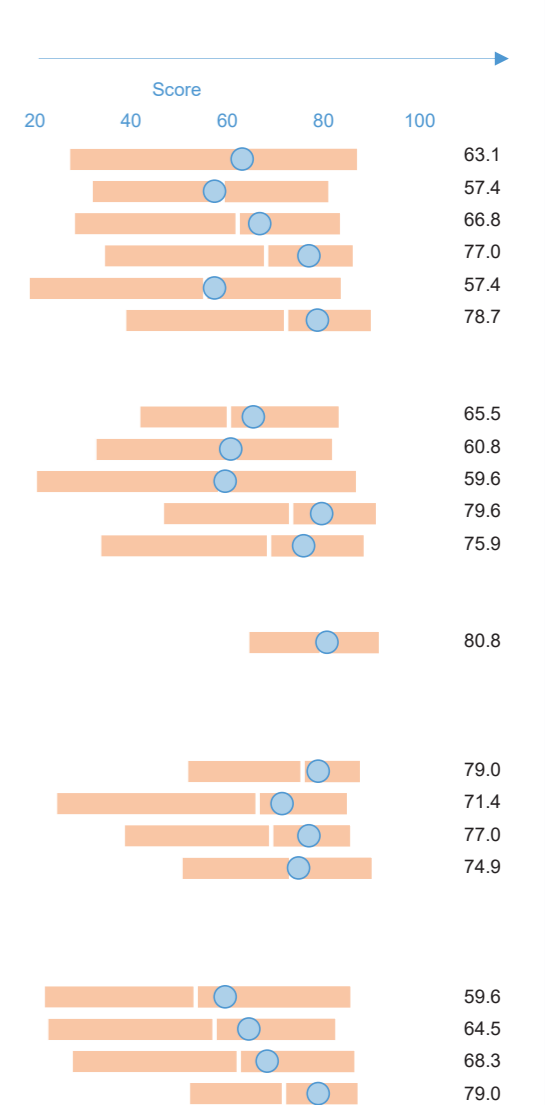
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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





# Munich

## SMART CITY RANKING

14

Out of 118



11 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

AA

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,540,000

(UN World Urbanization Prospects)

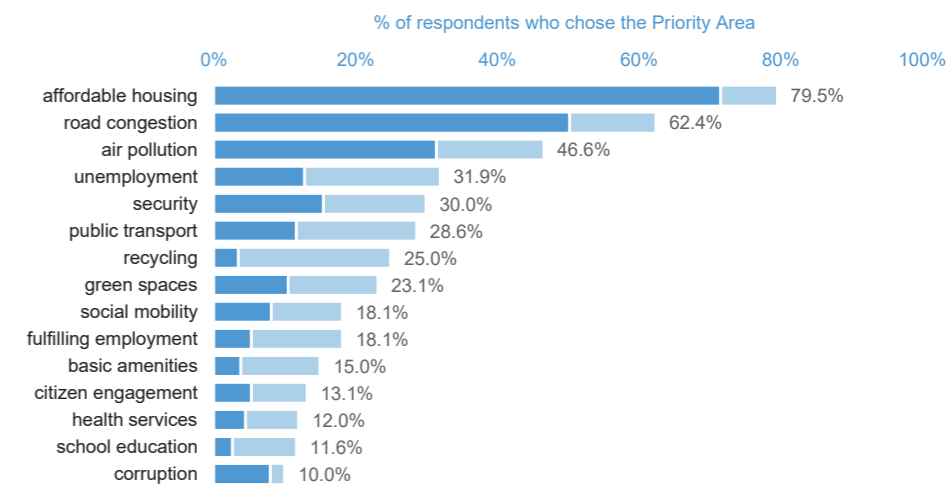


Country	2016	2017	2018	2019	1 yr change
HDI	0.936	0.938	0.939	0.947	+0.008
Life expectancy at Birth	80.9	81.0	81.2	81.3	+0.1
Expected years of schooling	17.1	17.1	17.1	17.0	-0.1
Mean years of schooling	14.1	14.1	14.1	14.2	+0.1
GNI per capita (PPP \$)	45,577	46,438	46,946	55,314	+8,368

### PRIORITY AREAS

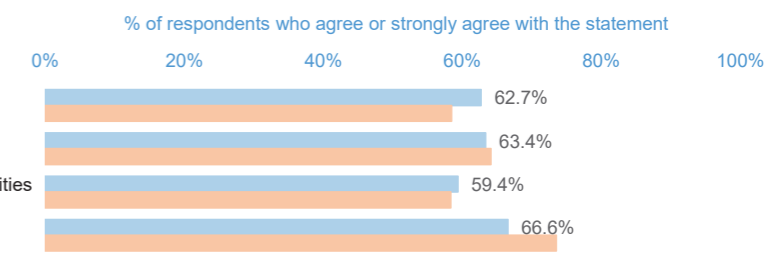
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

77.0

79.3

68.4

44.5

81.3

20.9

31.8

65.8

74.7

81.9

63.6

75.0

66.1

71.0

59.9

63.9

63.0

55.9

60.7

### 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

46.1

58.0

59.6

52.5

36.8

55.8

40.9

45.7

49.3

73.5

56.2

76.8

71.1

49.0

46.5

60.3

40.8

50.8

45.8

54.4

# Nairobi

## SMART CITY RANKING

113

Out of 118



108 in 2020

## SMART CITY RATING

D

D in 2020

## FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,730,000

(UN World Urbanization Prospects)

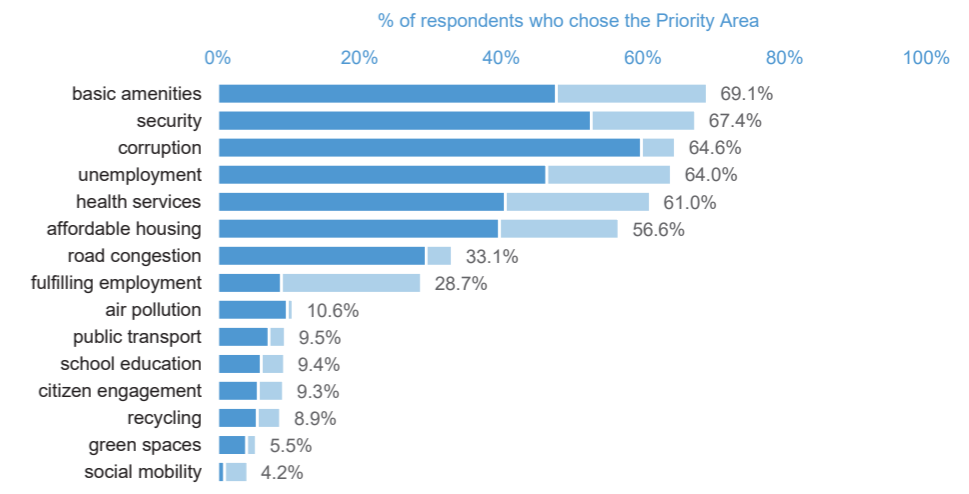


Country	2016	2017	2018	2019	1 yr change
HDI	0.568	0.574	0.579	0.601	+0.022
Life expectancy at Birth	65.4	65.9	66.3	66.7	+0.4
Expected years of schooling	11.0	11.1	11.1	11.3	+0.2
Mean years of schooling	6.4	6.5	6.6	6.6	+0.0
GNI per capita (PPP \$)	2,875	2,936	3,052	4,244	+1,192

### PRIORITY AREAS

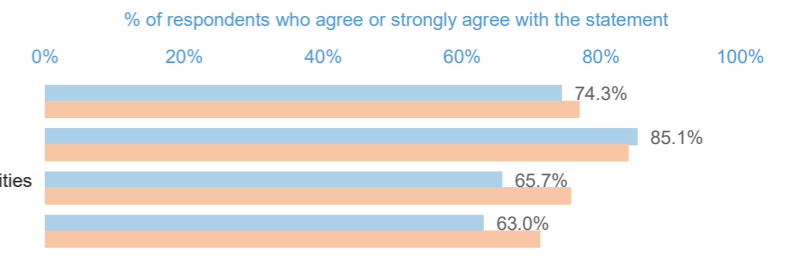
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.



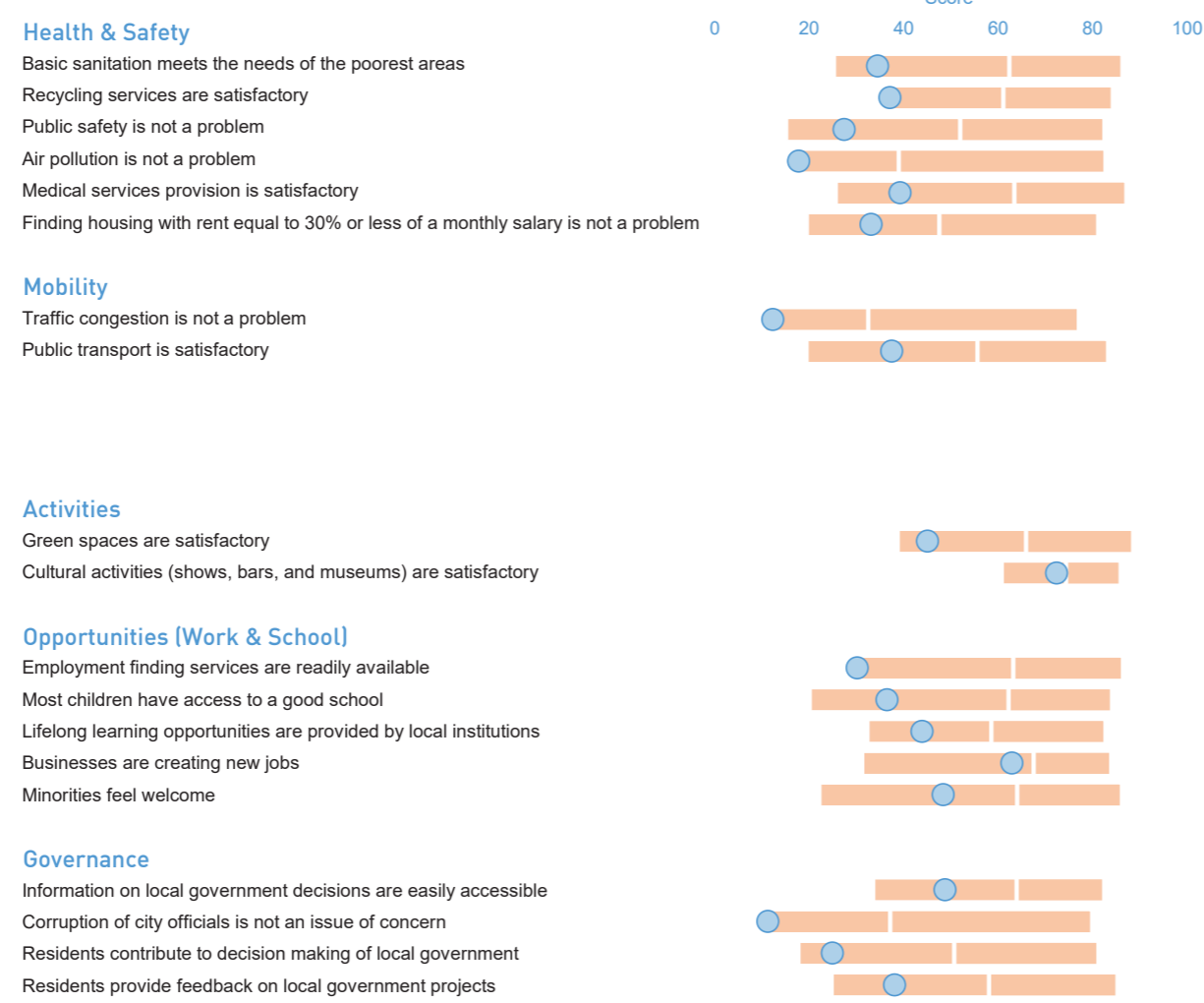
### ATTITUDES

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)

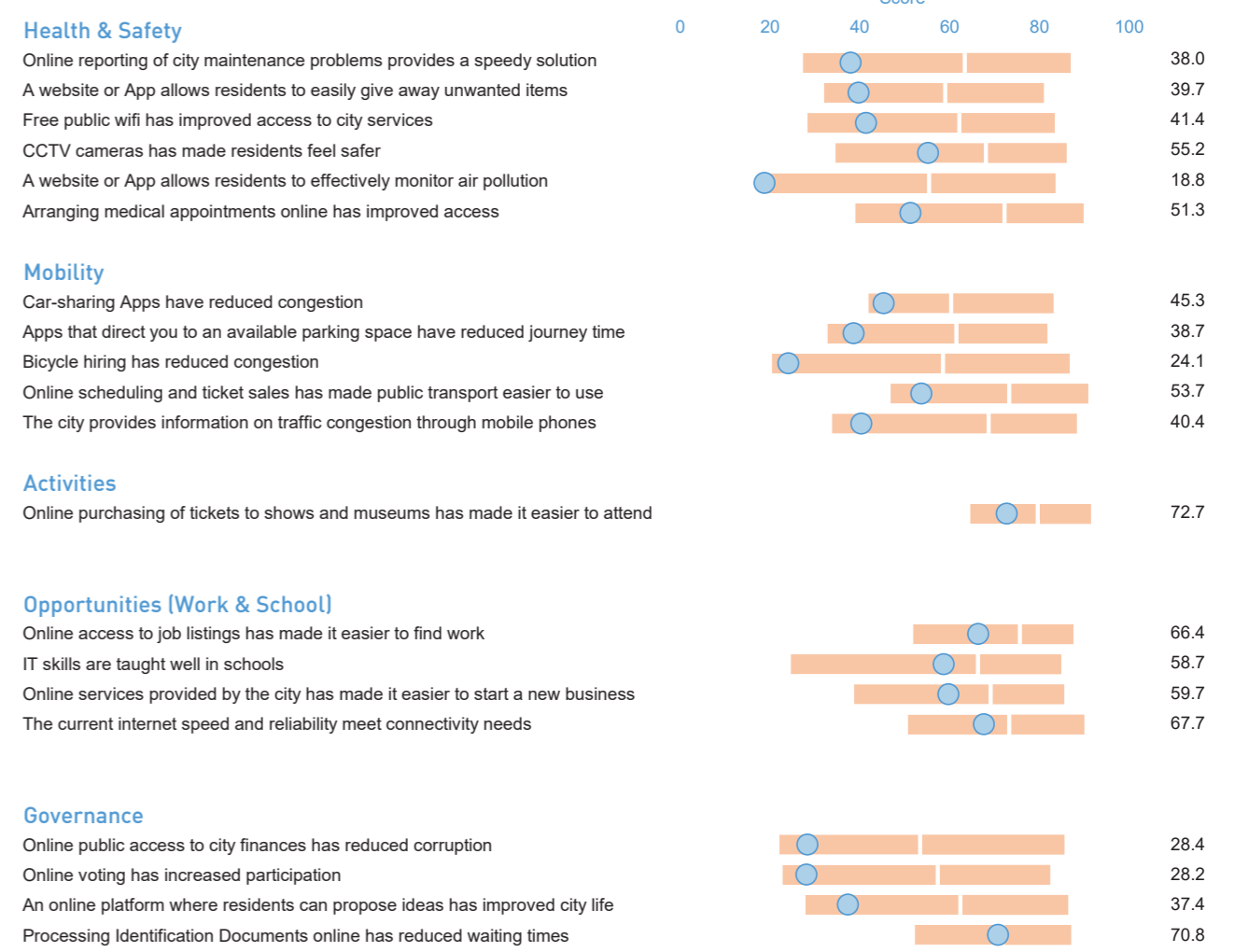


LEGEND: GROUP MEAN CITY

### STRUCTURES



### TECHNOLOGIES



# Nanjing

## SMART CITY RANKING

64

Out of 118



66 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
8,850,000

(UN World Urbanization Prospects)



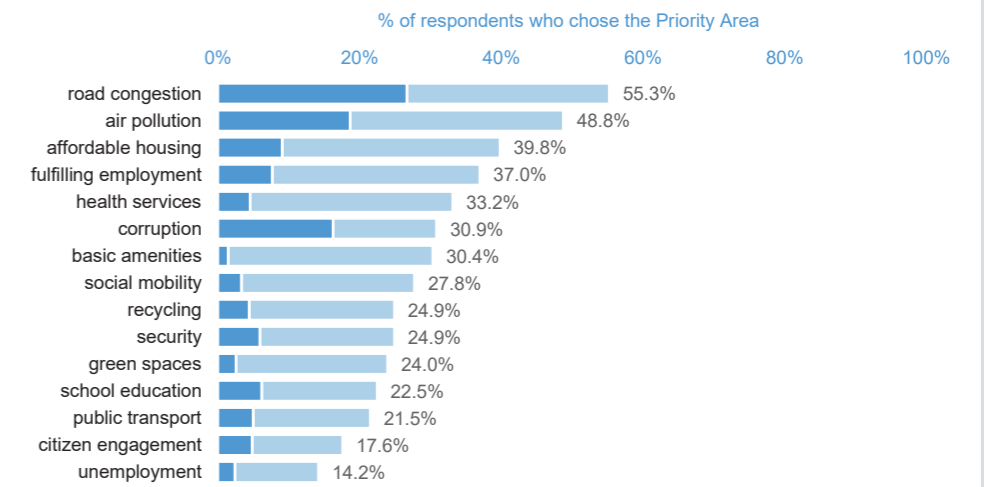
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

### PRIORITY AREAS

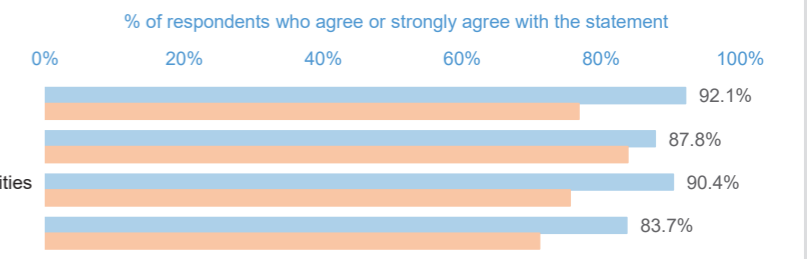
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

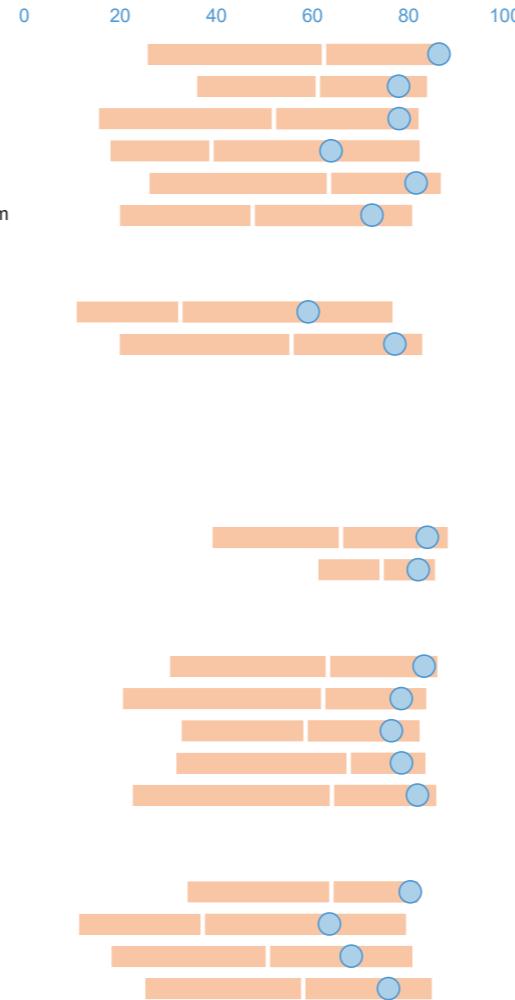
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### 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

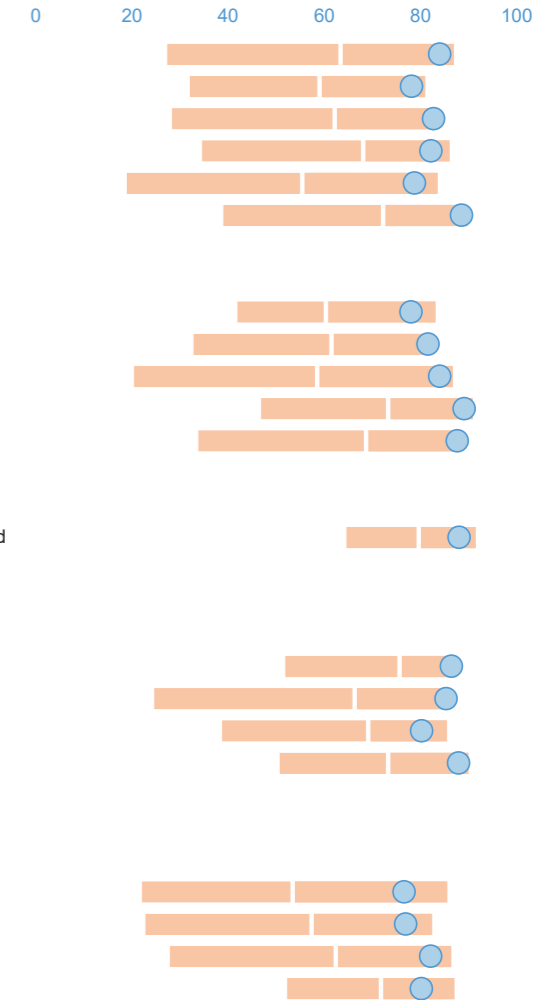
#### Opportunities (Work & School)

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 Delhi

## SMART CITY RANKING

89

Out of 118



86 in 2020

## SMART CITY RATING

CC

CC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
30,290,000

(UN World Urbanization Prospects)

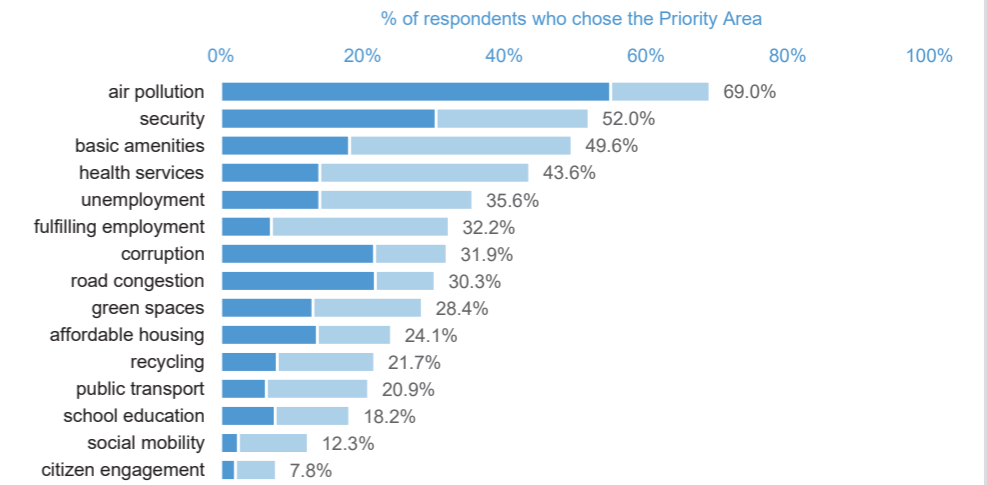


Country	2016	2017	2018	2019	1 yr change
HDI	0.637	0.643	0.647	0.645	-0.002
Life expectancy at Birth	68.9	69.2	69.4	69.7	+0.3
Expected years of schooling	12.3	12.3	12.3	12.2	-0.1
Mean years of schooling	6.4	6.5	6.5	6.5	+0.0
GNI per capita (PPP \$)	6,075	6,446	6,829	6,681	-148

### PRIORITY AREAS

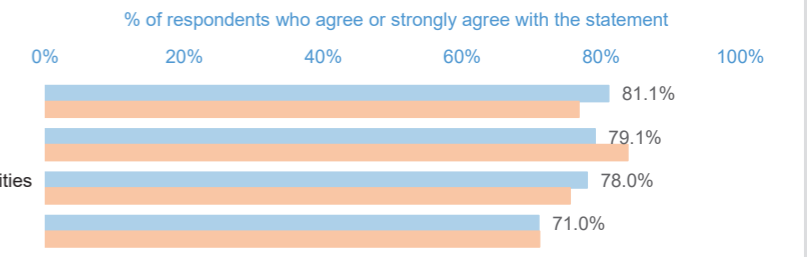
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

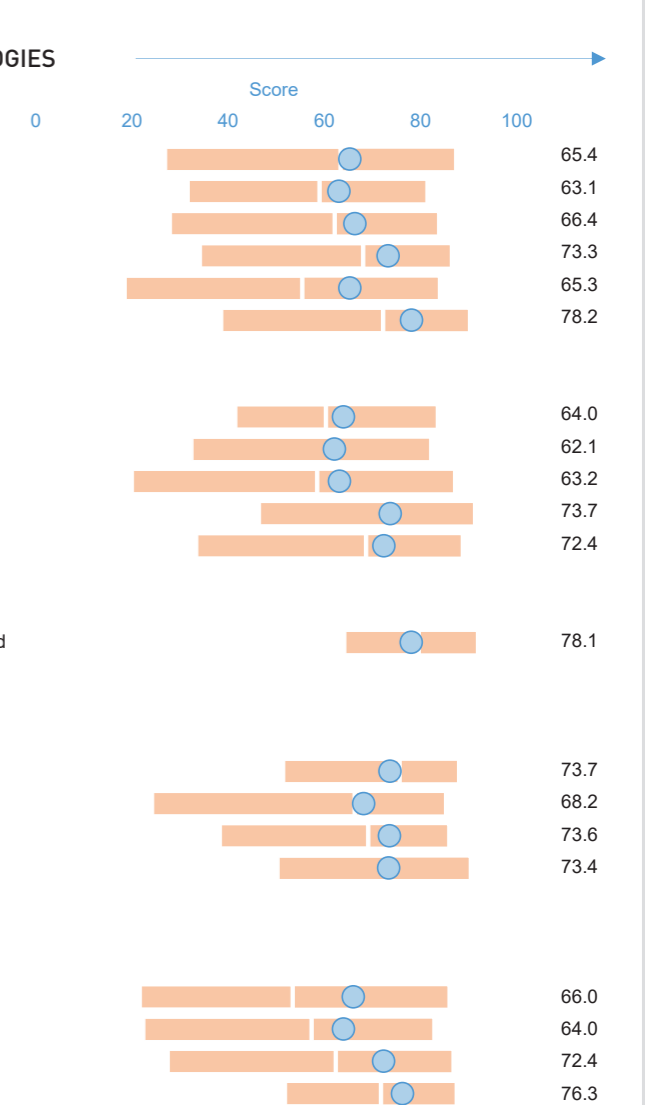
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# New York

## SMART CITY RANKING

12

Out of 118



10 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
18,800,000

(UN World Urbanization Prospects)



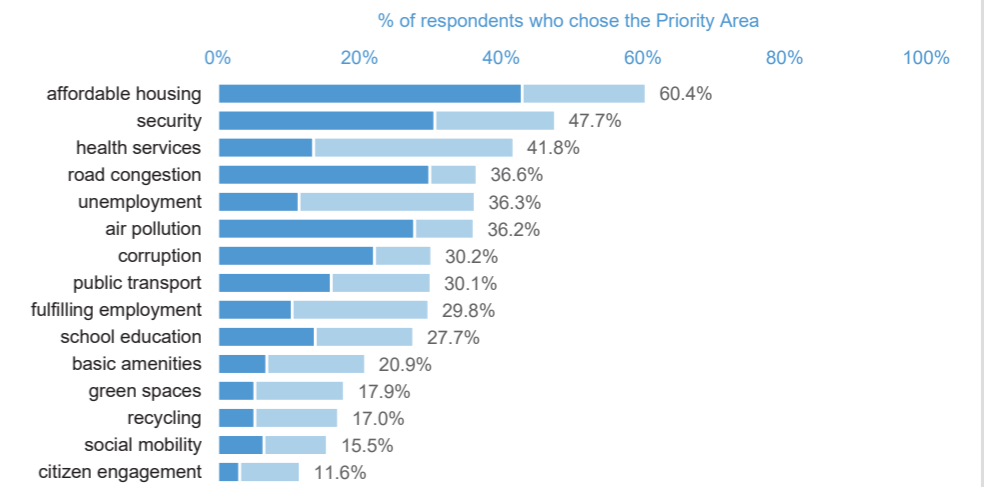
Map files by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

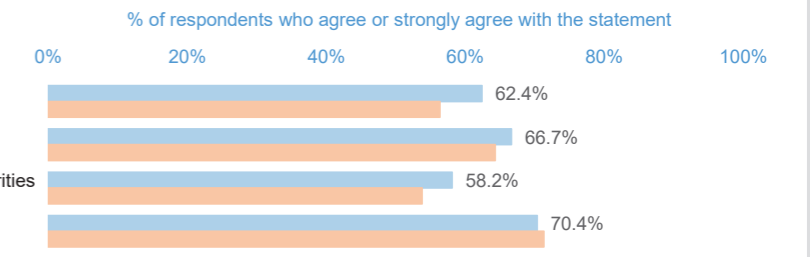
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

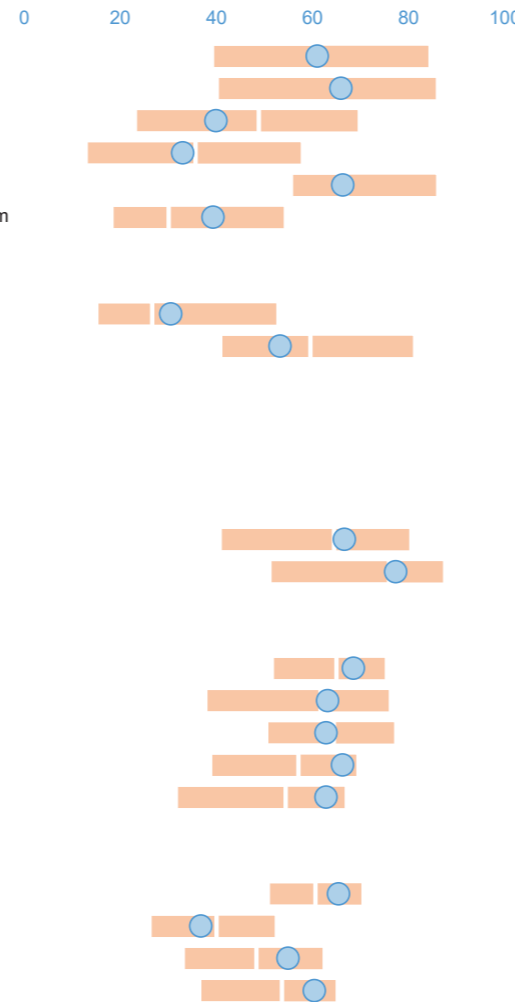
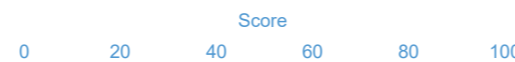
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

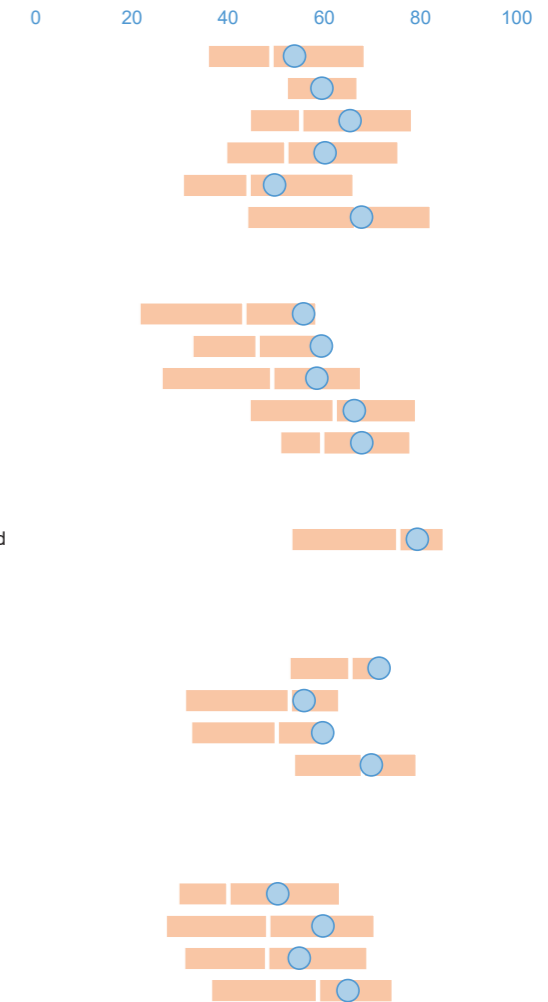
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Newcastle

## SMART CITY RANKING

21

Out of 118



23 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
300,000

(Eurostat)

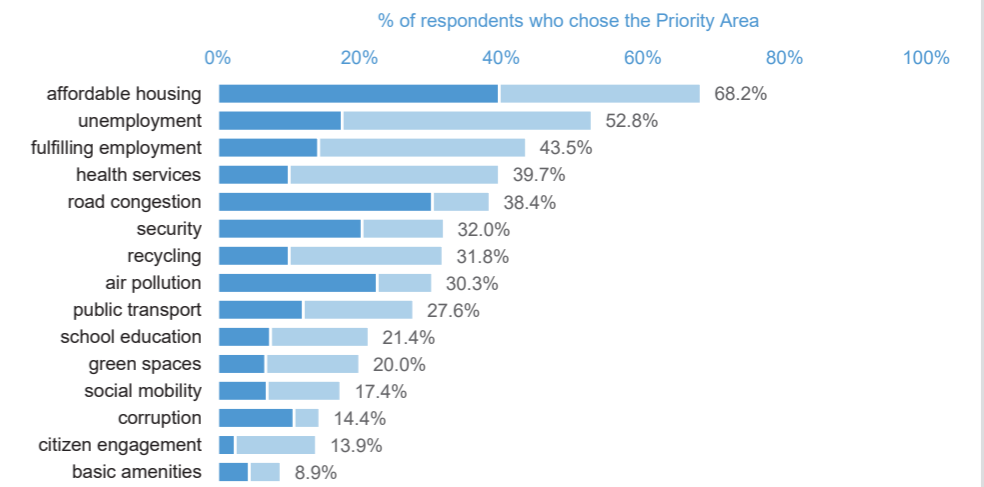


Country	2016	2017	2018	2019	1 yr change
HDI	0.918	0.919	0.920	0.932	+0.012
Life expectancy at Birth	81.1	81.2	81.2	81.3	+0.1
Expected years of schooling	17.4	17.4	17.4	17.5	+0.1
Mean years of schooling	12.9	12.9	13.0	13.2	+0.2
GNI per capita (PPP \$)	38,421	39,216	39,507	46,071	+6,564

### PRIORITY AREAS

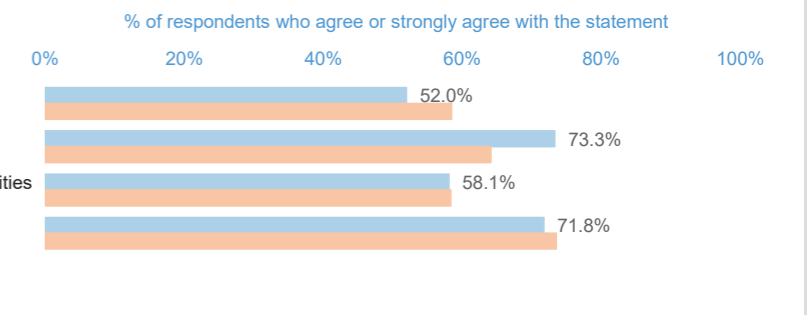
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

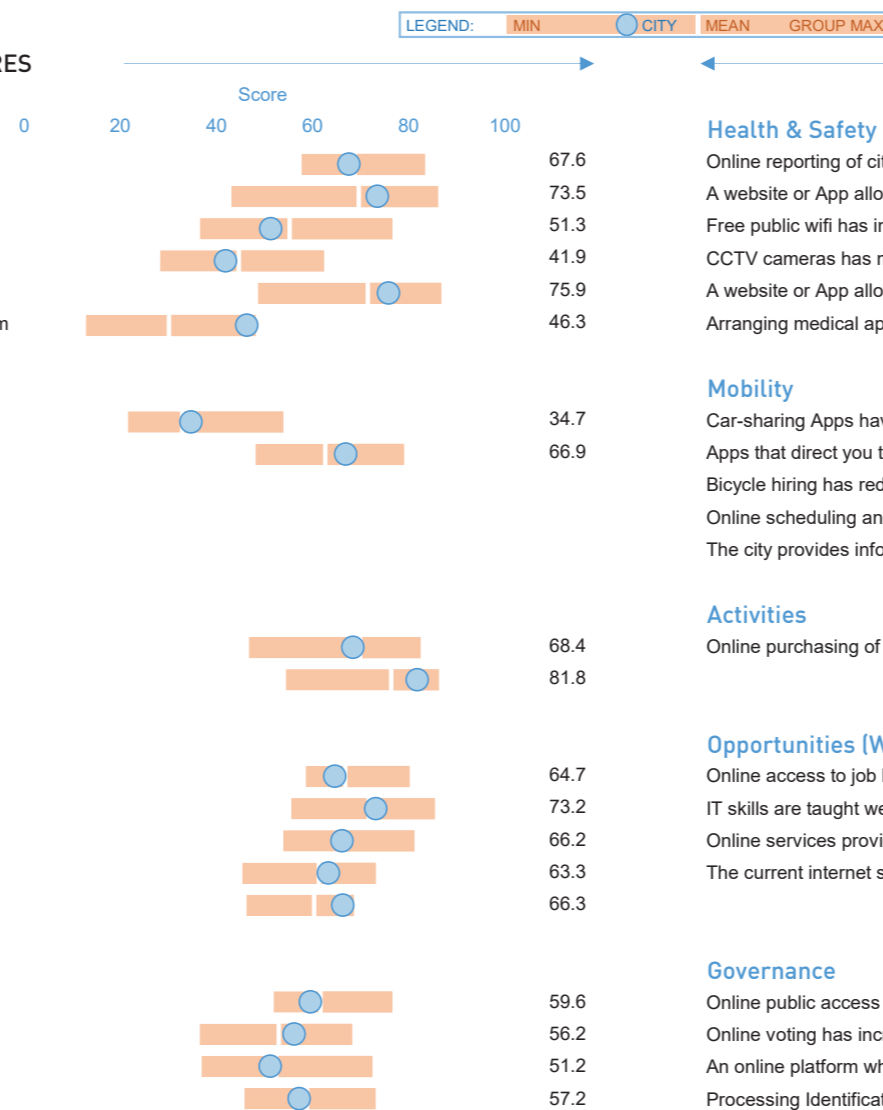
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

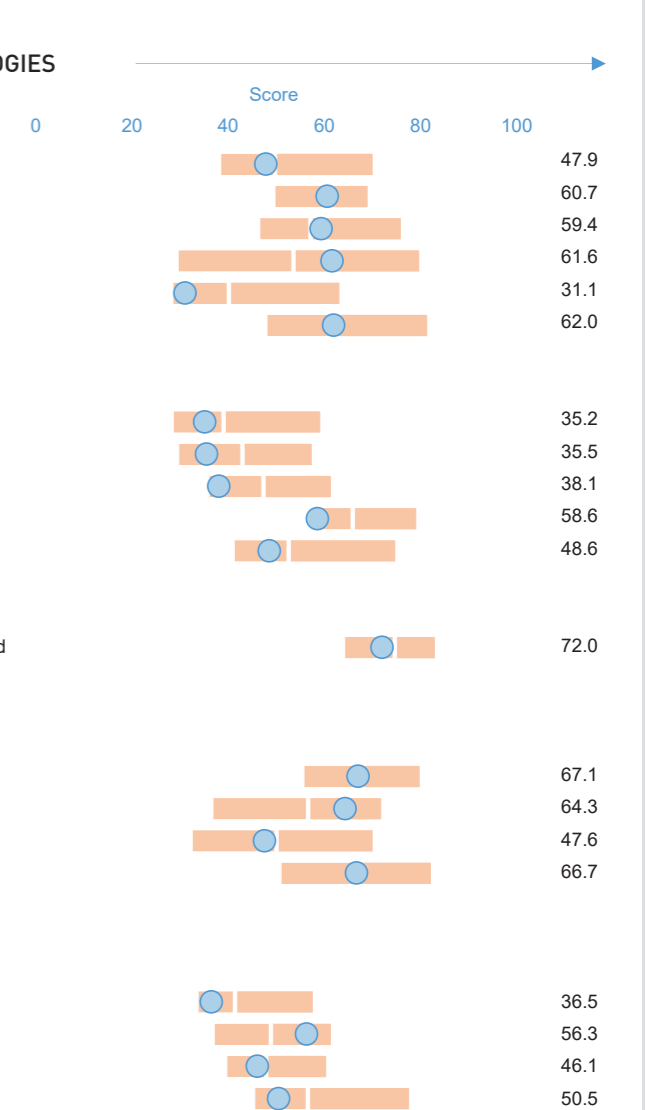
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Osaka

## SMART CITY RANKING

86

Out of 118



80 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
19,170,000

(UN World Urbanization Prospects)

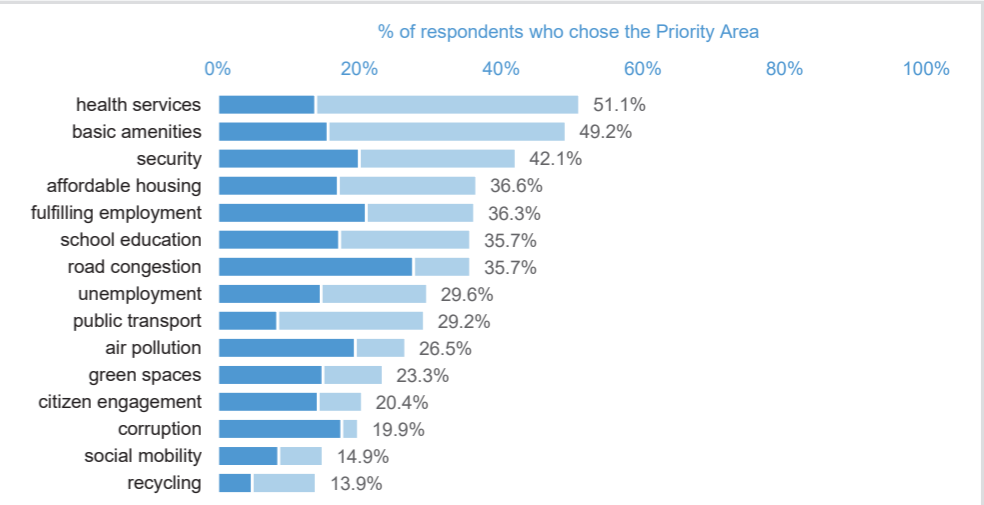


Country	2016	2017	2018	2019	1 yr change
HDI	0.910	0.913	0.915	0.919	+0.004
Life expectancy at Birth	84.1	84.3	84.5	84.6	+0.1
Expected years of schooling	15.2	15.2	15.2	15.2	+0.0
Mean years of schooling	12.7	12.8	12.8	12.9	+0.1
GNI per capita (PPP \$)	39,407	40,343	40,799	42,932	+2,133

### PRIORITY AREAS

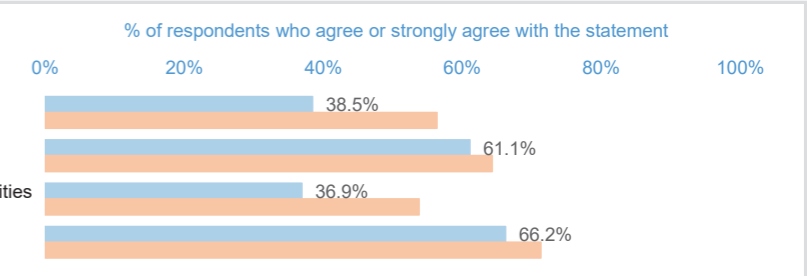
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.



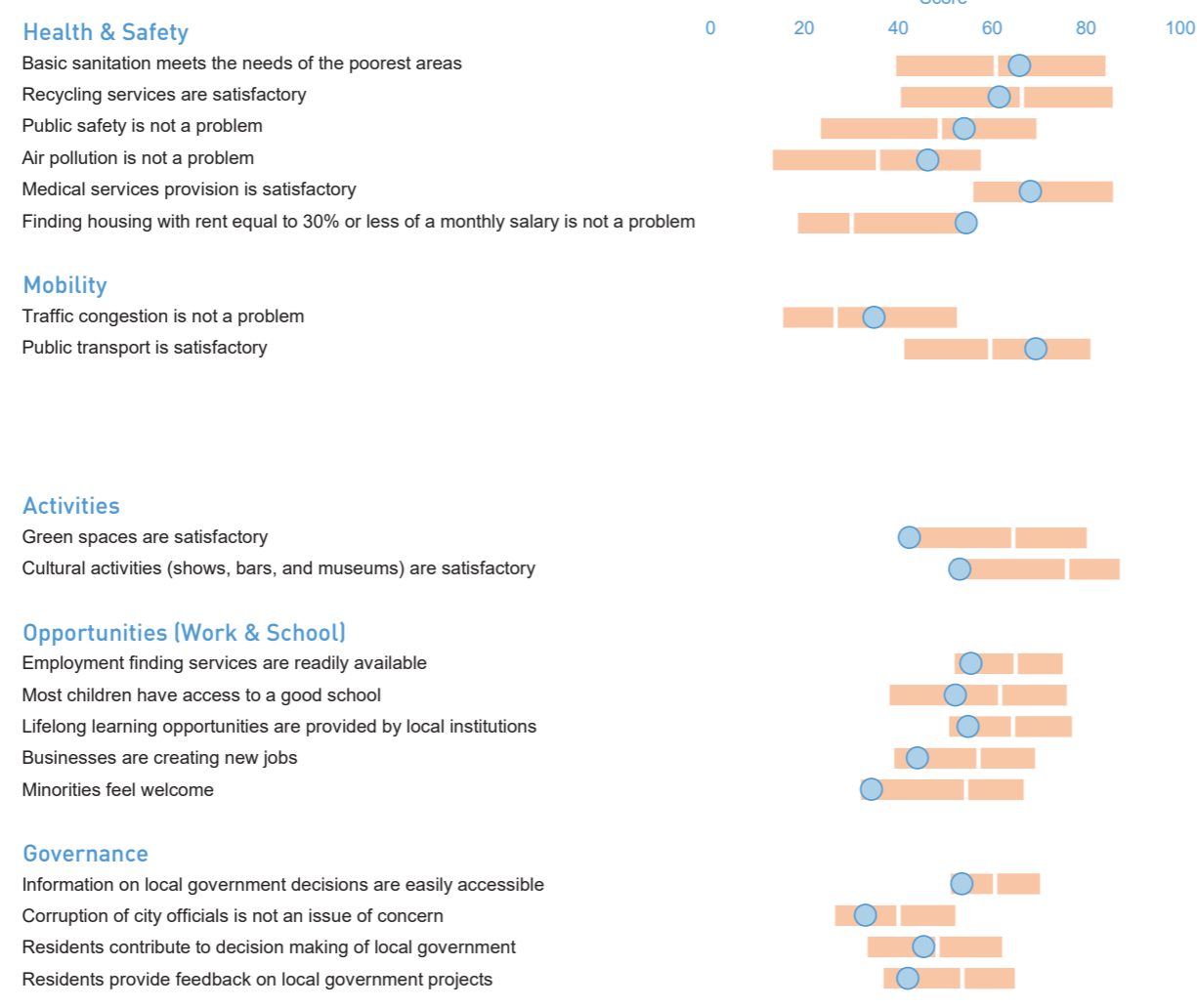
### ATTITUDES

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



### TECHNOLOGIES



## SMART CITY RANKING

3

Out of 118



5 in 2020

## SMART CITY RATING

AA

AA in 2020

## FACTOR RATINGS

AAA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,040,000

(UN World Urbanization Prospects)

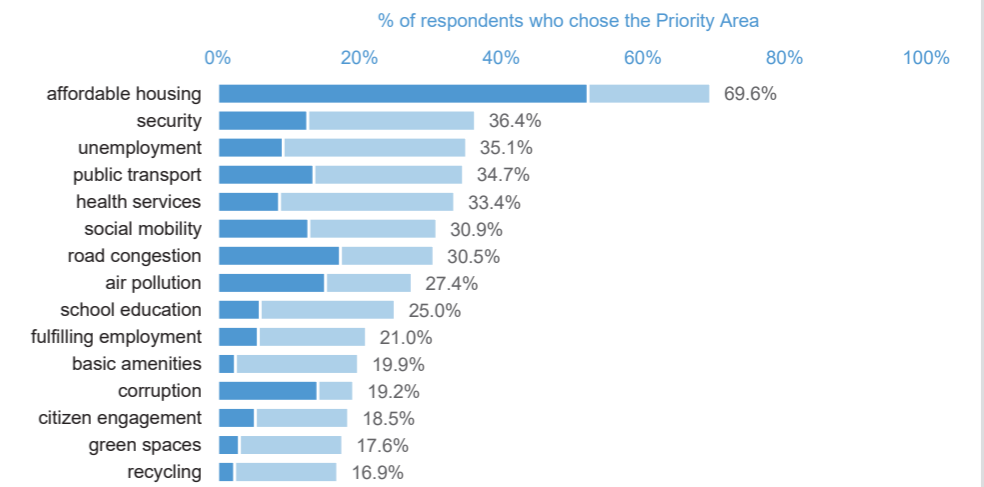


Country	2016	2017	2018	2019	1 yr change
HDI	0.951	0.953	0.954	0.957	+0.003
Life expectancy at Birth	82.0	82.1	82.3	82.4	+0.1
Expected years of schooling	18.0	18.1	18.1	18.1	+0.0
Mean years of schooling	12.6	12.6	12.6	12.9	+0.3
GNI per capita (PPP \$)	66,746	67,529	68,059	66,494	-1,565

### PRIORITY AREAS

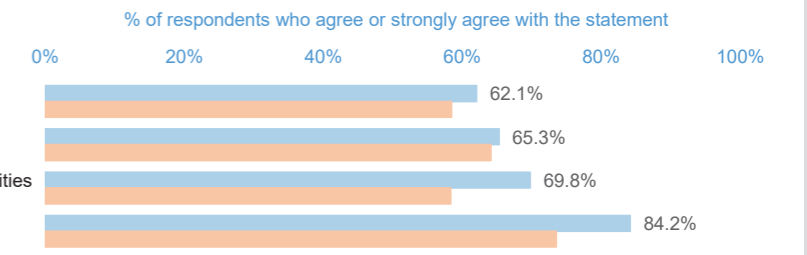
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

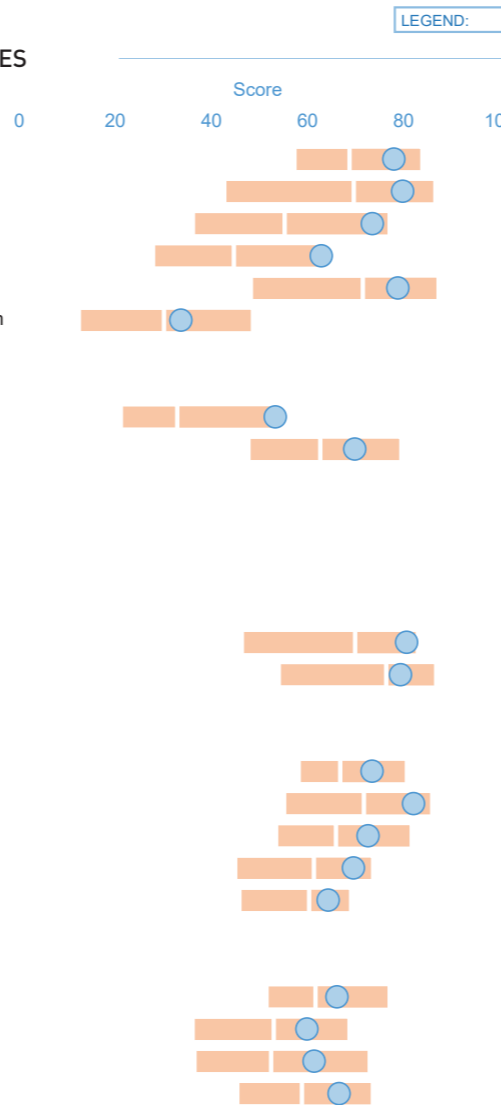
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

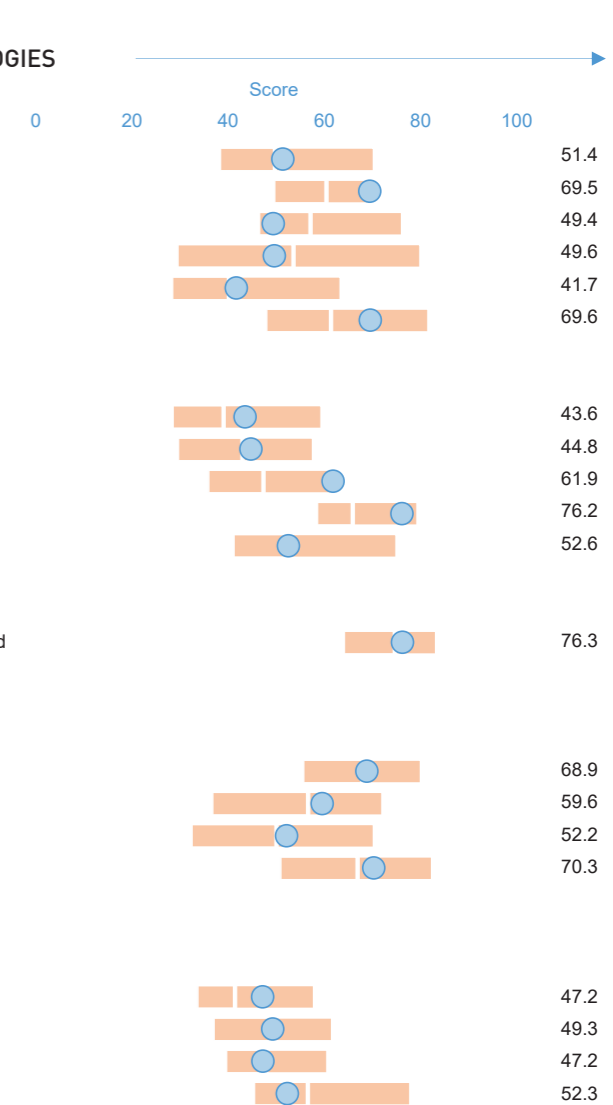
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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 118

61 in 2020

## SMART CITY RATING

B

B in 2020

## FACTOR RATINGS

CCC

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
9,850,000

(Eurostat)

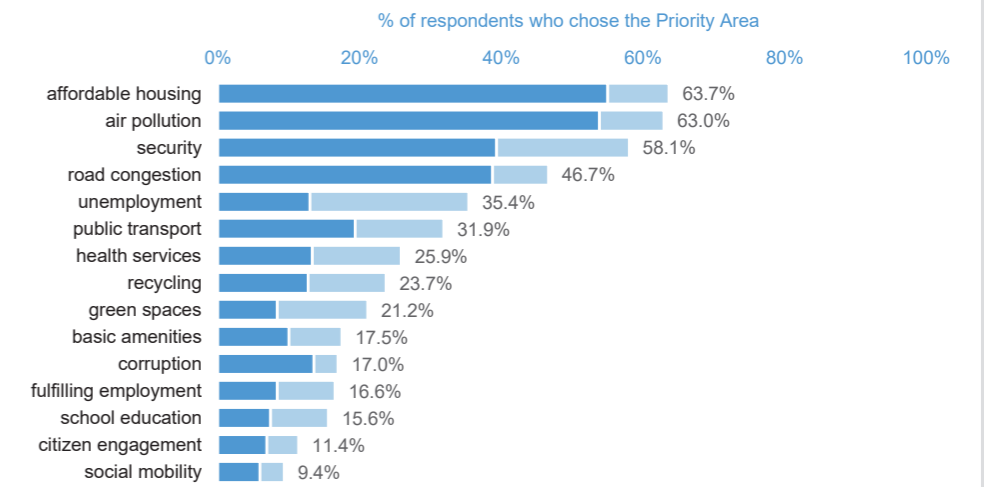


Country	2016	2017	2018	2019	1 yr change
HDI	0.887	0.890	0.891	0.901	+0.010
Life expectancy at Birth	82.3	82.4	82.5	82.7	+0.2
Expected years of schooling	15.5	15.5	15.5	15.6	+0.1
Mean years of schooling	11.4	11.4	11.4	11.5	+0.1
GNI per capita (PPP \$)	38,926	39,935	40,511	47,173	+6,662

### PRIORITY AREAS

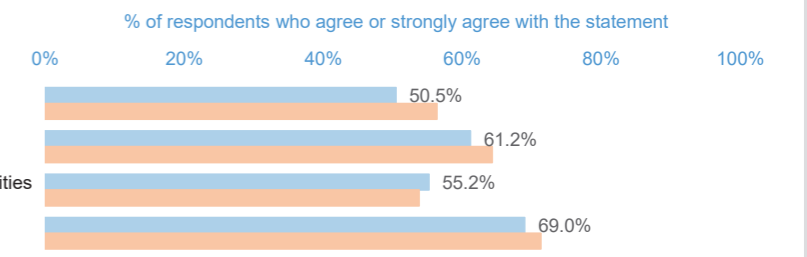
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

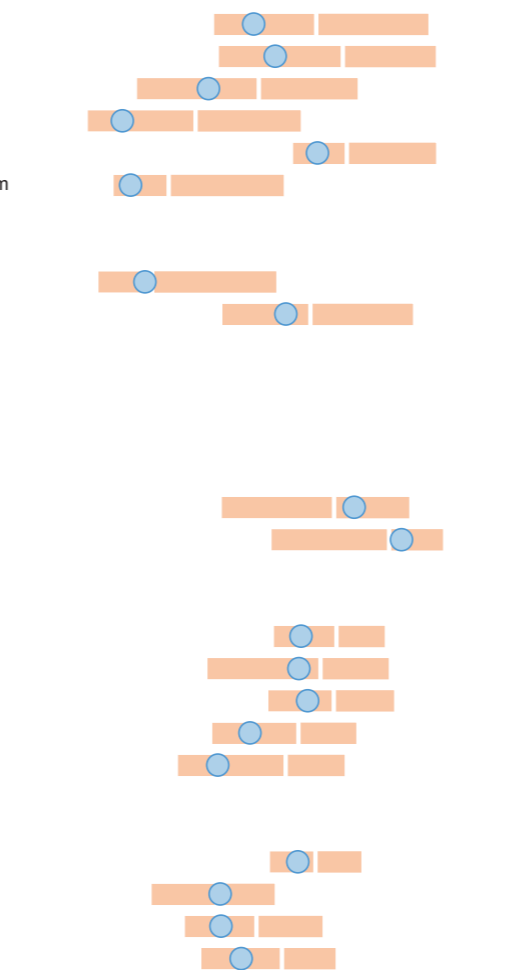
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### 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

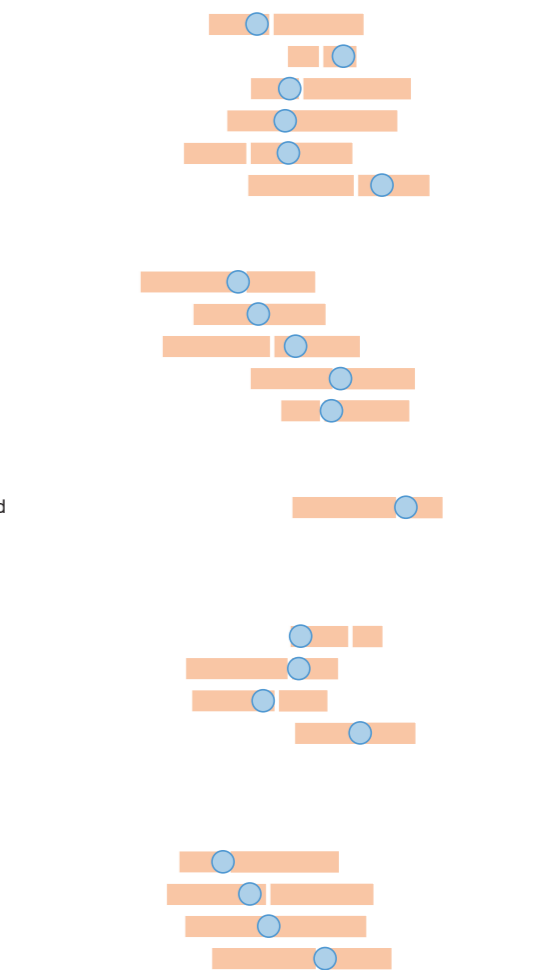
#### Opportunities (Work & School)

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



# Philadelphia

## SMART CITY RANKING

85

Out of 118



52 in 2020

## SMART CITY RATING

CCC

BB in 2020

## FACTOR RATINGS

CCC

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
5,720,000

(UN World Urbanization Prospects)



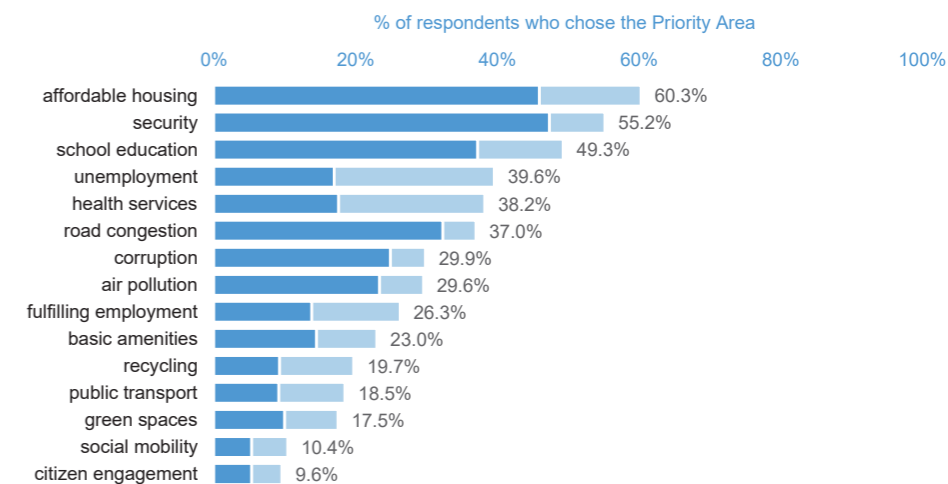
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

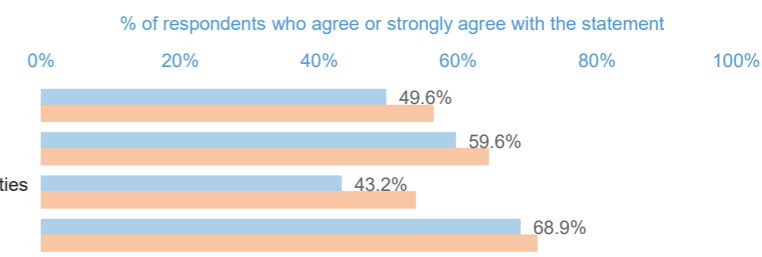
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

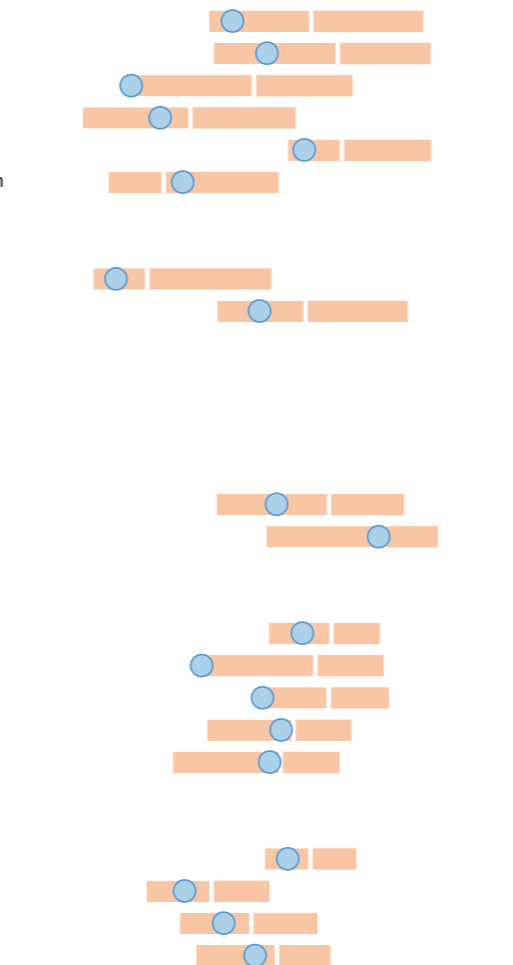
#### Opportunities (Work & School)

- 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

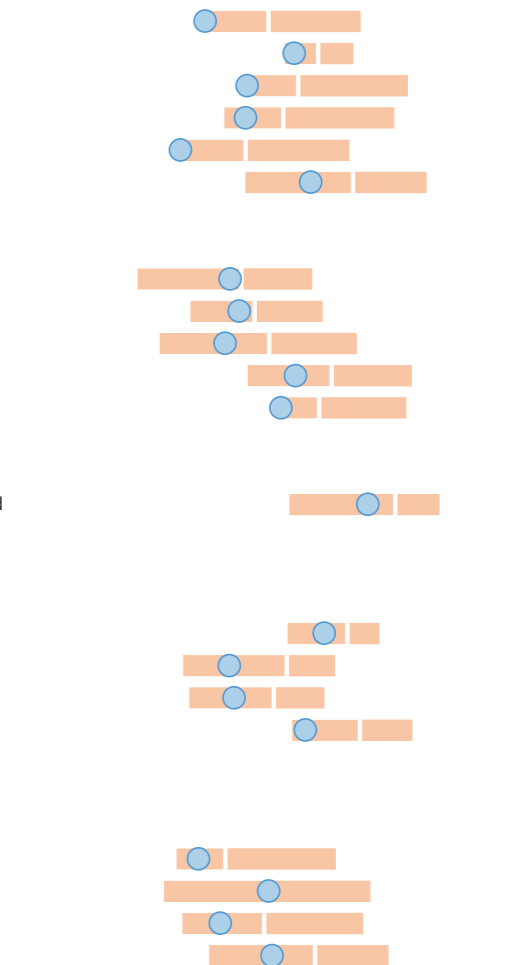
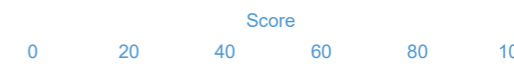
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Phoenix

## SMART CITY RANKING

62

Out of 118



39 in 2020

## SMART CITY RATING

B

BBB in 2020

## FACTOR RATINGS

BB

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,510,000

(UN World Urbanization Prospects)

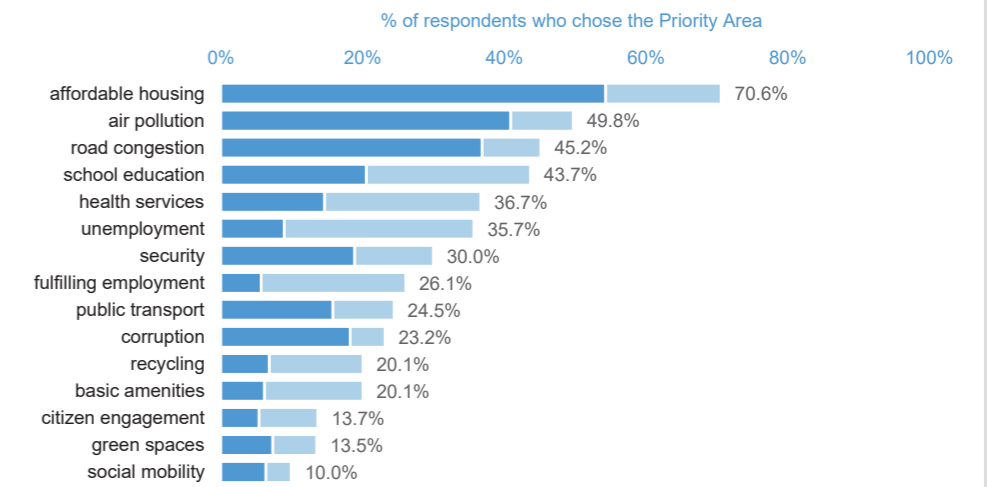


Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

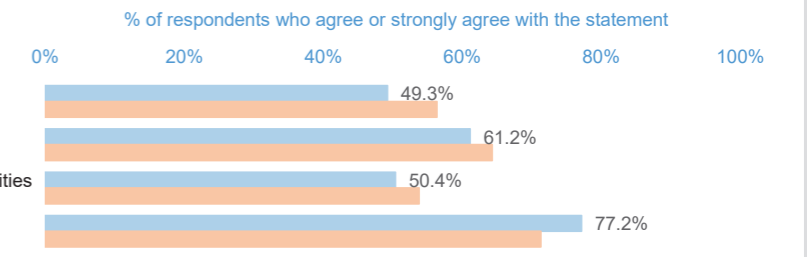
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

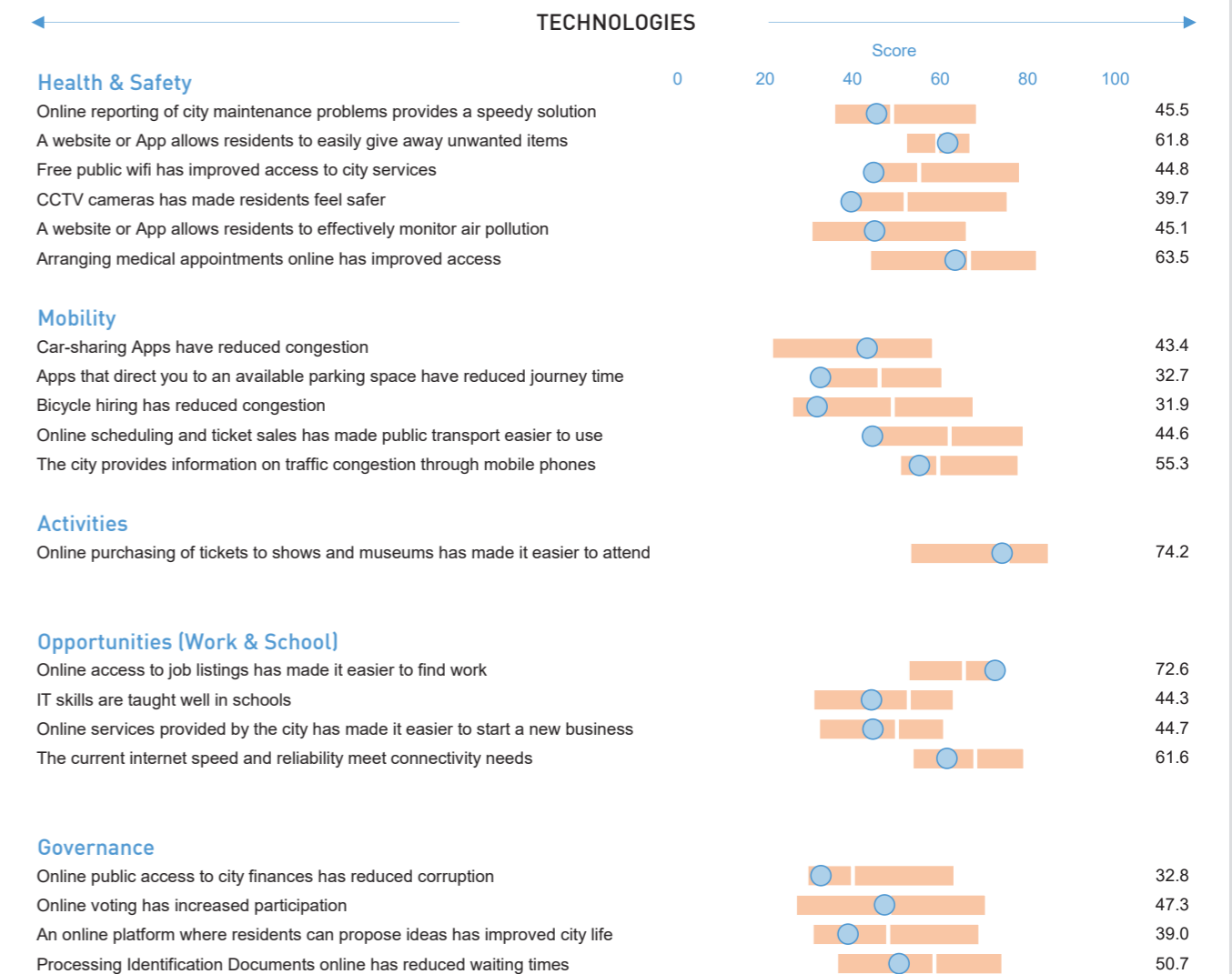
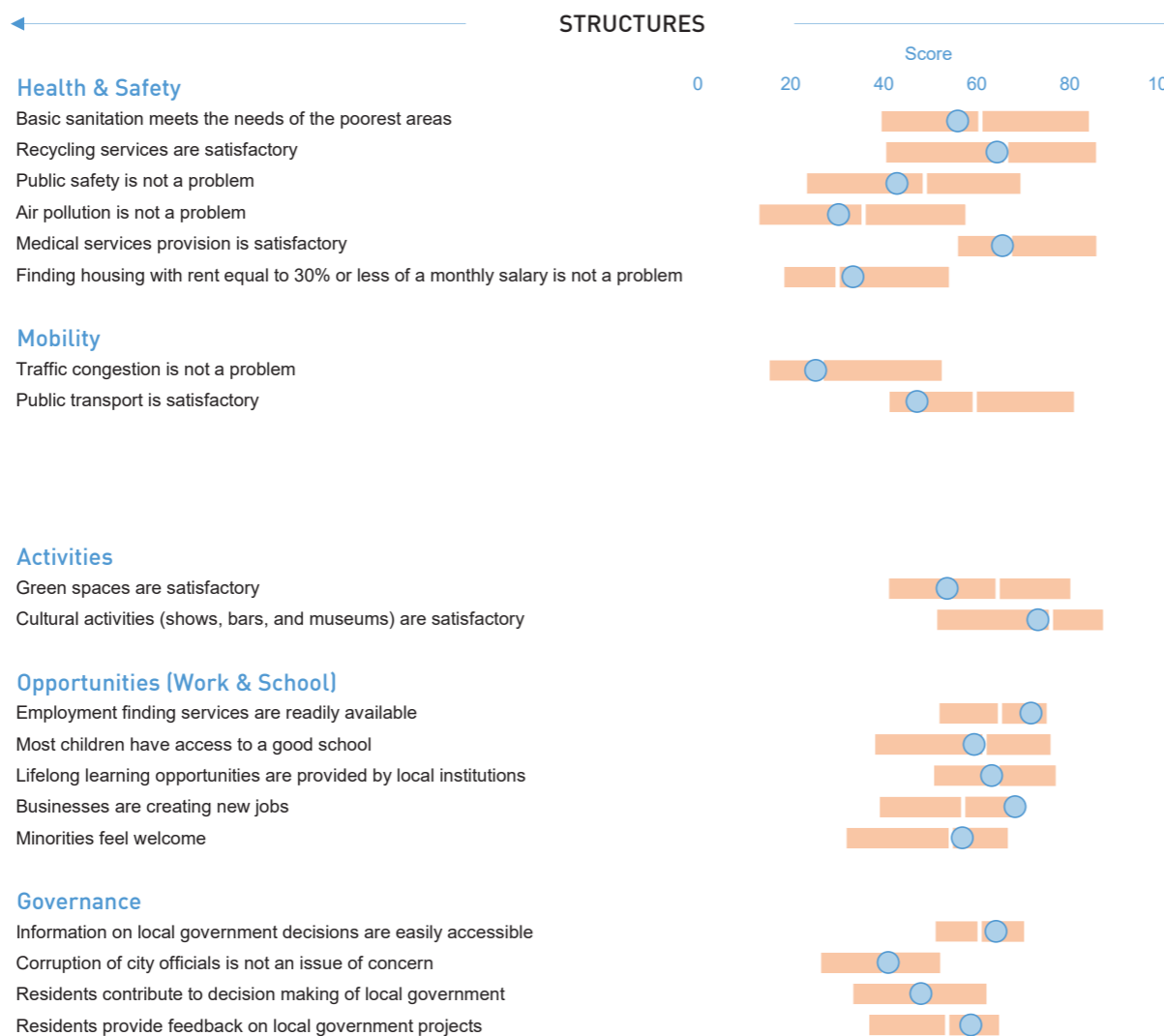


### ATTITUDES

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



# Prague

## SMART CITY RANKING

78

Out of 118



44 in 2020

## SMART CITY RATING

CCC

BB in 2020

## FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,320,000

(Eurostat)

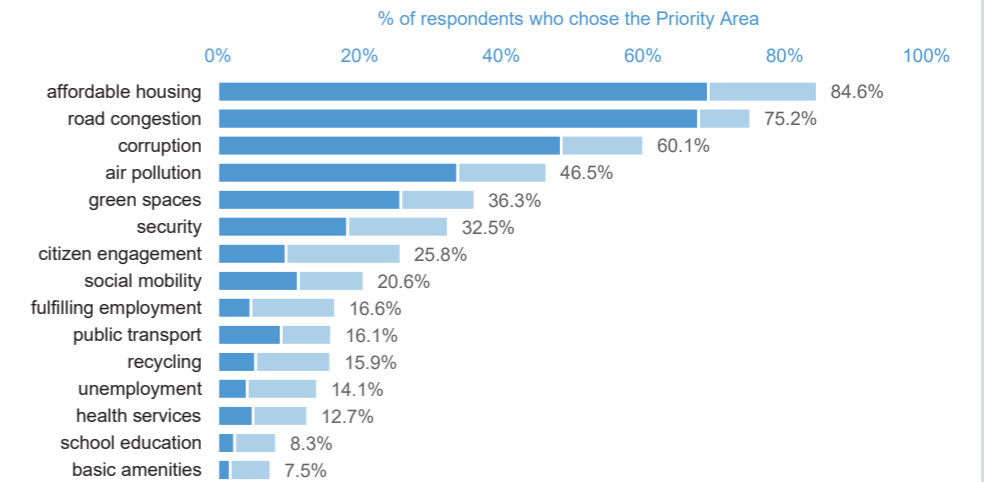


Country	2016	2017	2018	2019	1 yr change
HDI	0.885	0.888	0.891	0.900	+0.009
Life expectancy at Birth	78.9	79.1	79.2	79.4	+0.2
Expected years of schooling	16.8	16.8	16.8	16.8	+0.0
Mean years of schooling	12.7	12.7	12.7	12.7	+0.0
GNI per capita (PPP \$)	29,211	30,530	31,597	38,109	+6,512

### 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.



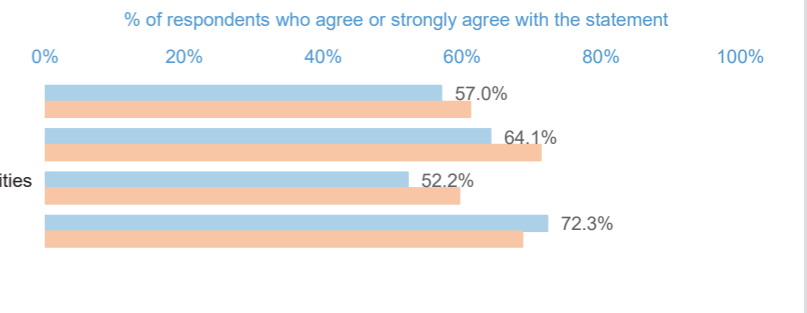
### ATTITUDES

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

You are comfortable with face recognition technologies to lower crime

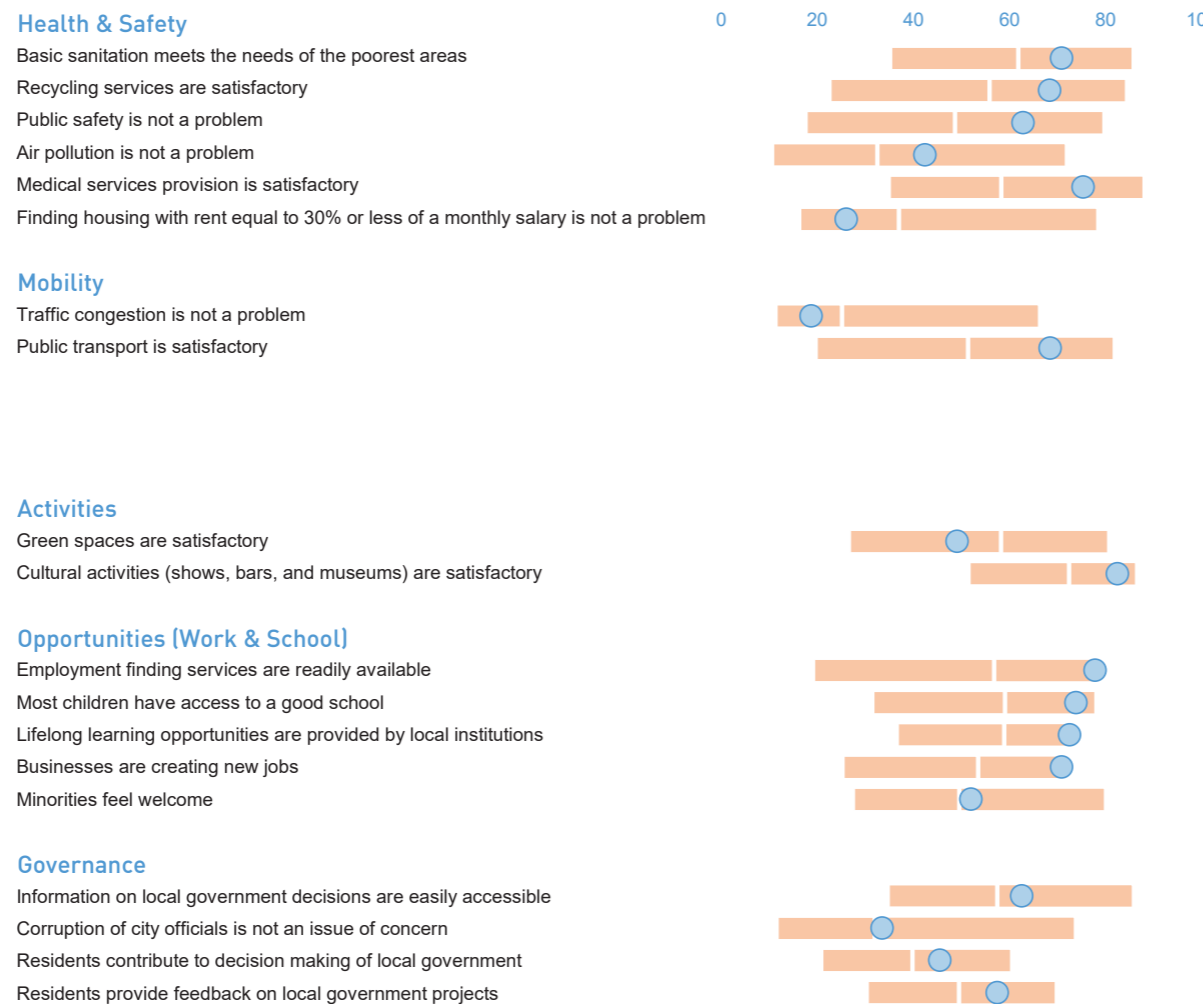
You feel the availability of online information has increased your trust in authorities

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

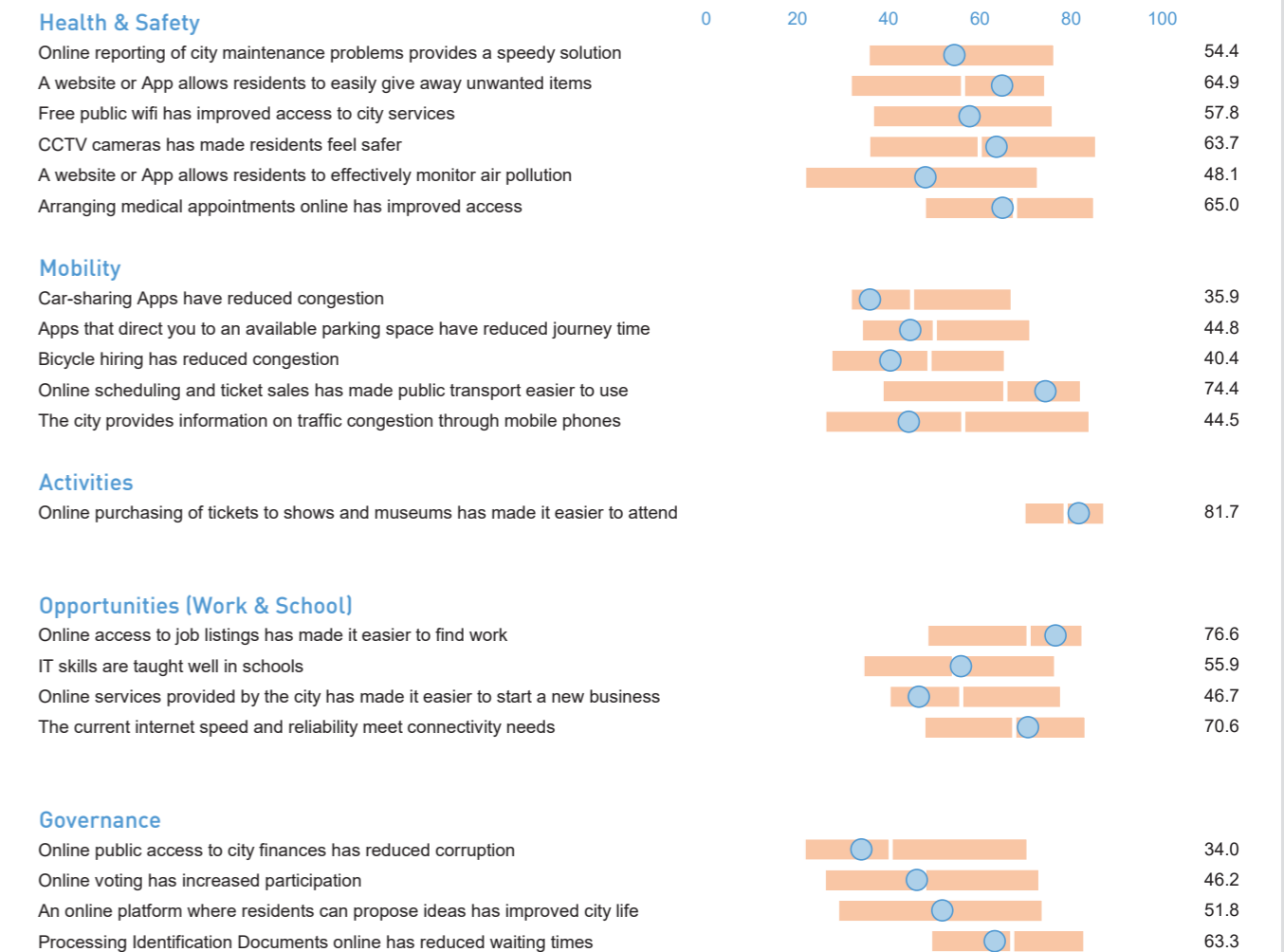


LEGEND: GROUP MEAN CITY

### STRUCTURES



### TECHNOLOGIES



# Rabat

## SMART CITY RANKING

103

Out of 118



105 in 2020

## SMART CITY RATING

C

D in 2020

## FACTOR RATINGS

C

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,880,000

(UN World Urbanization Prospects)



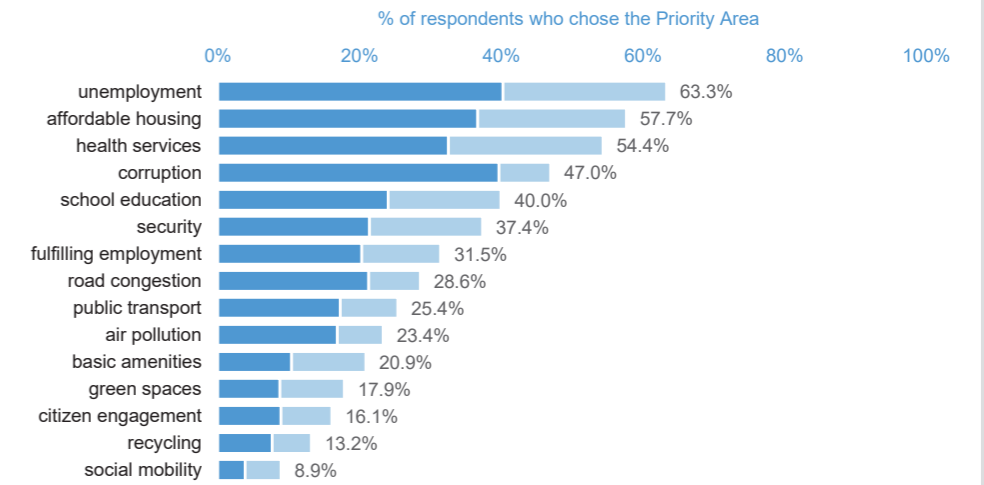
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.669	0.675	0.676	0.686	+0.010
Life expectancy at Birth	76.0	76.2	76.5	76.7	+0.2
Expected years of schooling	12.9	13.1	13.1	13.7	+0.6
Mean years of schooling	5.4	5.5	5.5	5.6	+0.1
GNI per capita (PPP \$)	7,169	7,342	7,480	7,368	-112

### PRIORITY AREAS

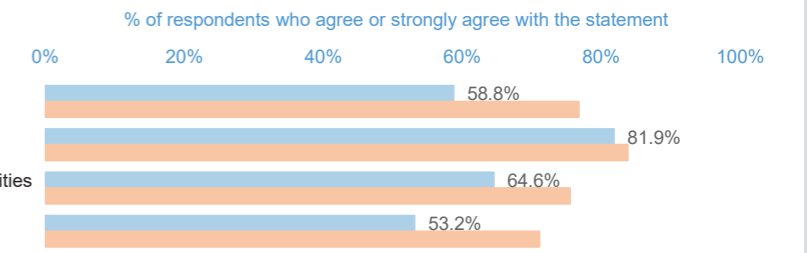
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

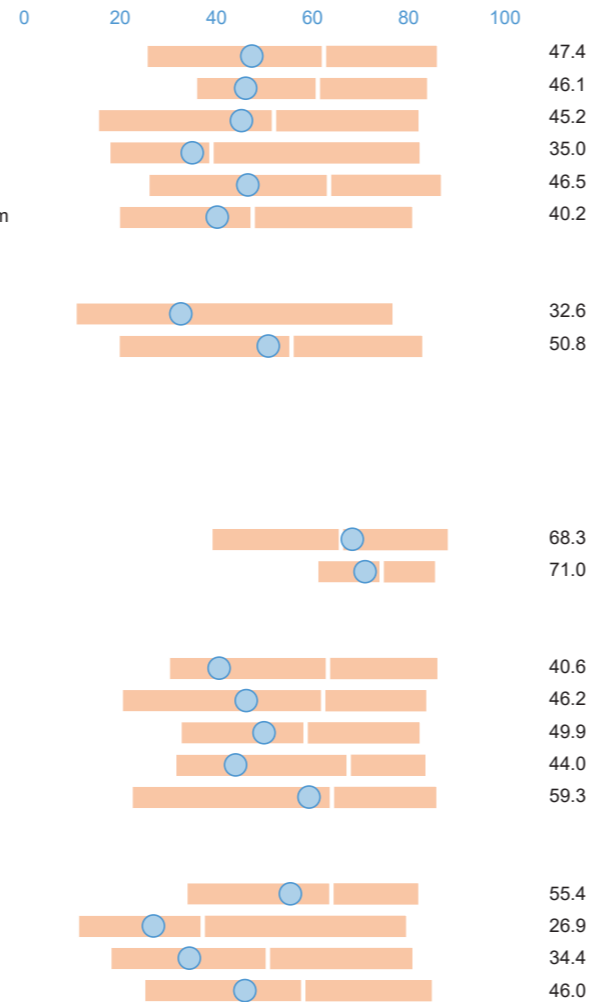
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

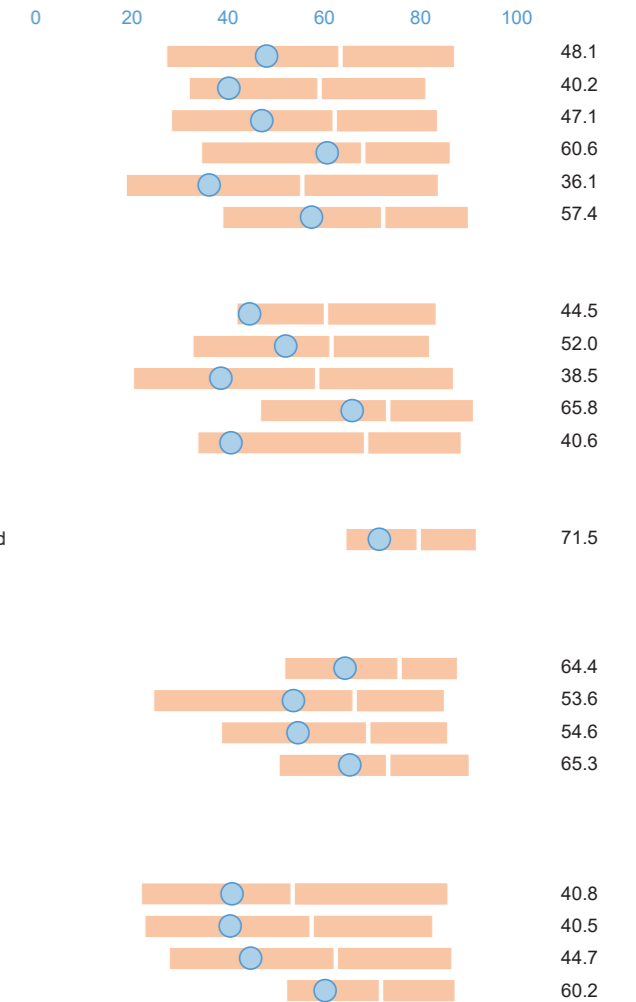
#### Opportunities (Work & School)

- 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

118

Out of 118



102 in 2020

## SMART CITY RATING

D

C in 2020

## FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
13,460,000

(UN World Urbanization Prospects)



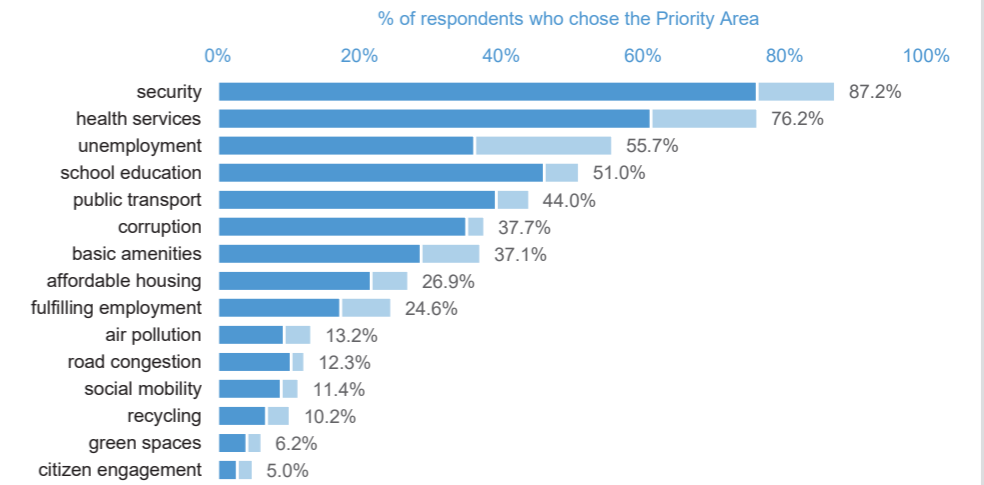
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.757	0.760	0.761	0.765	+0.004
Life expectancy at Birth	75.2	75.5	75.7	75.9	+0.2
Expected years of schooling	15.4	15.4	15.4	15.4	+0.0
Mean years of schooling	7.7	7.8	7.8	8.0	+0.2
GNI per capita (PPP \$)	13,907	13,975	14,068	14,263	+195

### PRIORITY AREAS

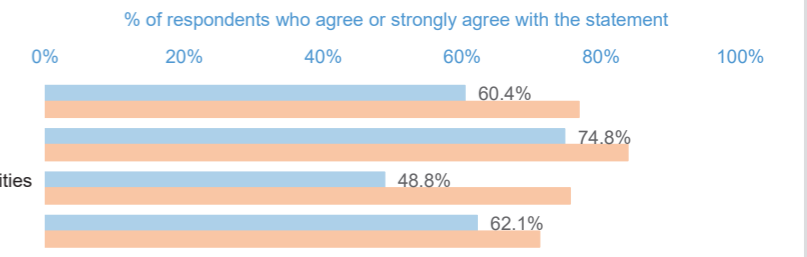
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

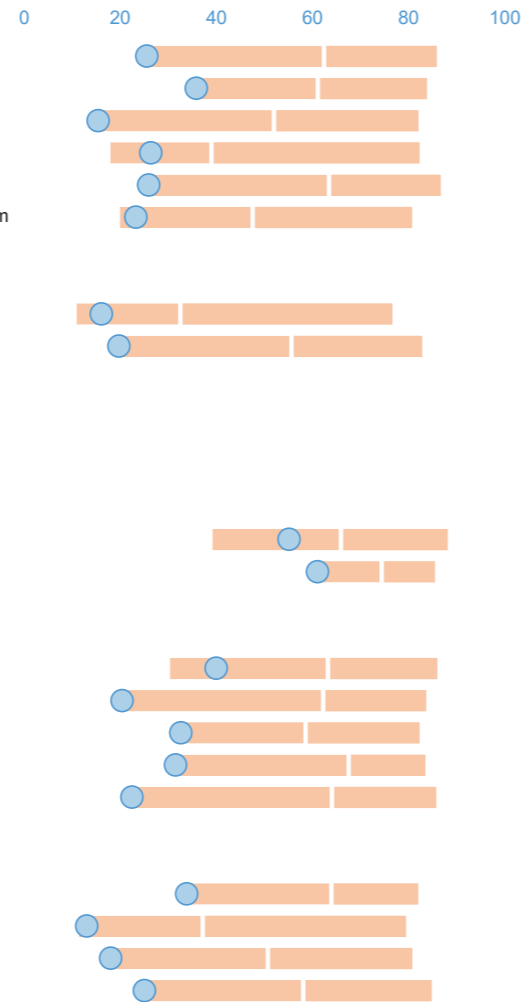
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

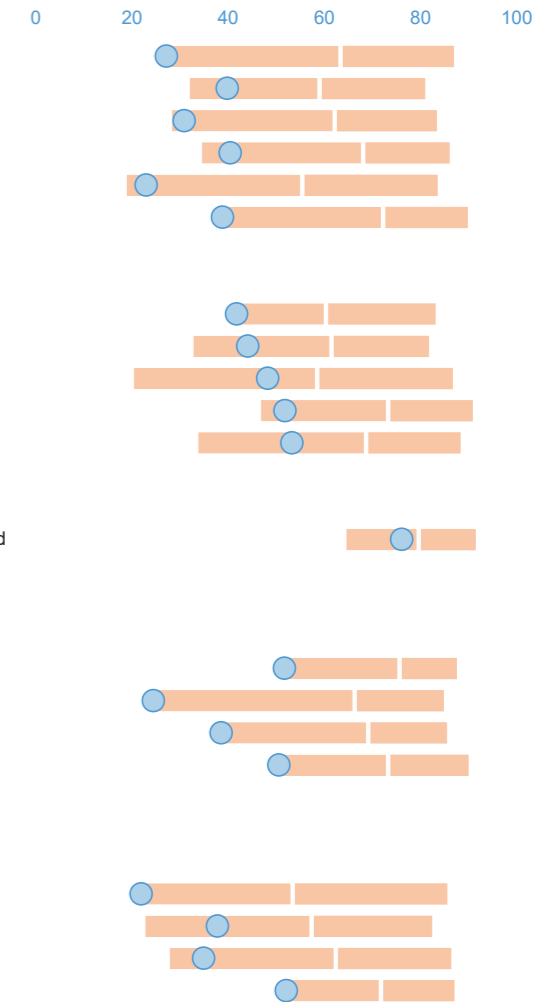
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Riyadh

## SMART CITY RANKING

30

Out of 118



53 in 2020

## SMART CITY RATING

BB

B in 2020

## FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
7,230,000

(UN World Urbanization Prospects)

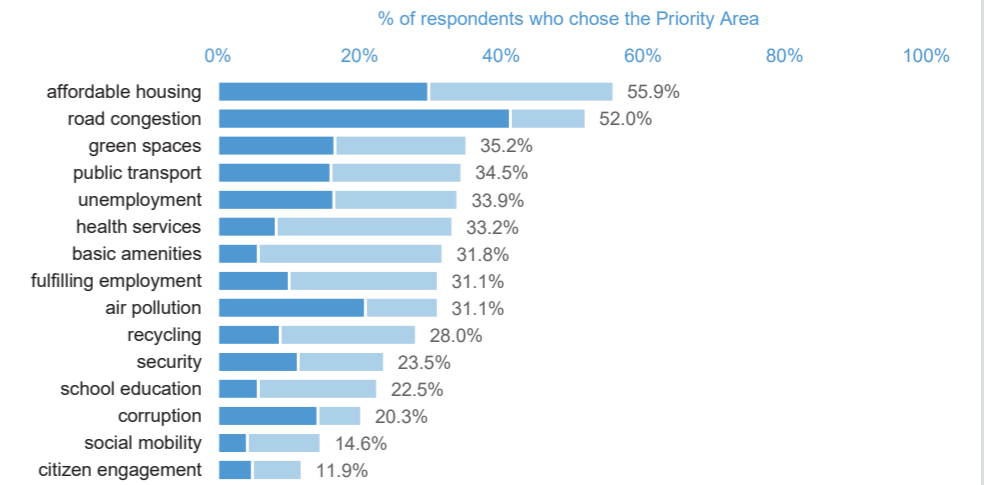


Country	2016	2017	2018	2019	1 yr change
HDI	0.857	0.856	0.857	0.854	-0.003
Life expectancy at Birth	74.8	74.9	75.0	75.1	+0.1
Expected years of schooling	17.0	17.0	17.0	16.1	-0.9
Mean years of schooling	9.7	9.7	9.7	10.2	+0.5
GNI per capita (PPP \$)	51,099	49,371	49,338	47,495	-1,843

## 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.



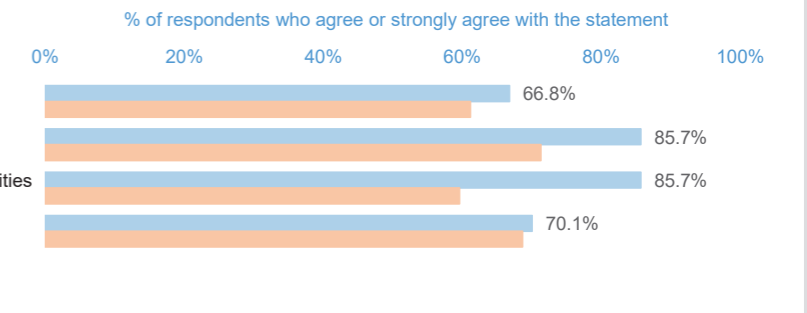
## ATTITUDES

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

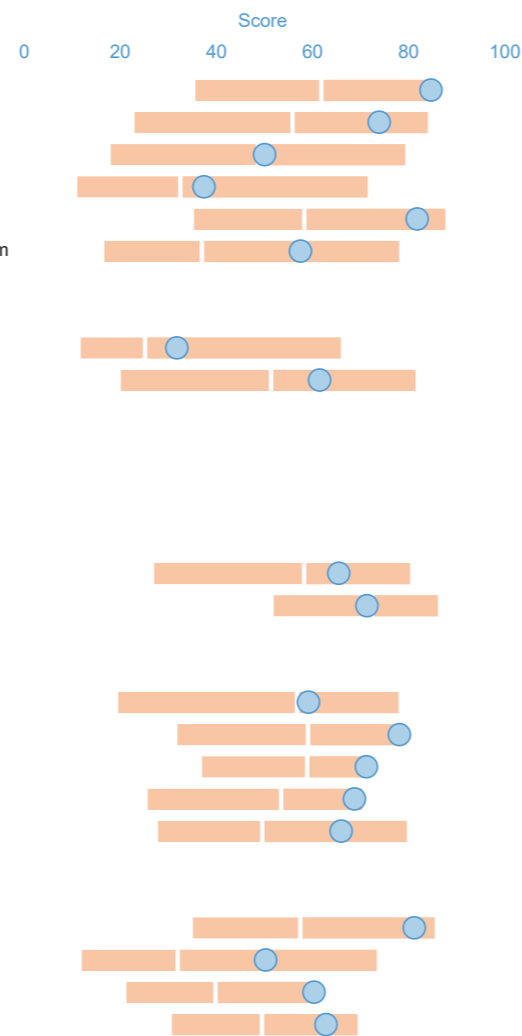
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### 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

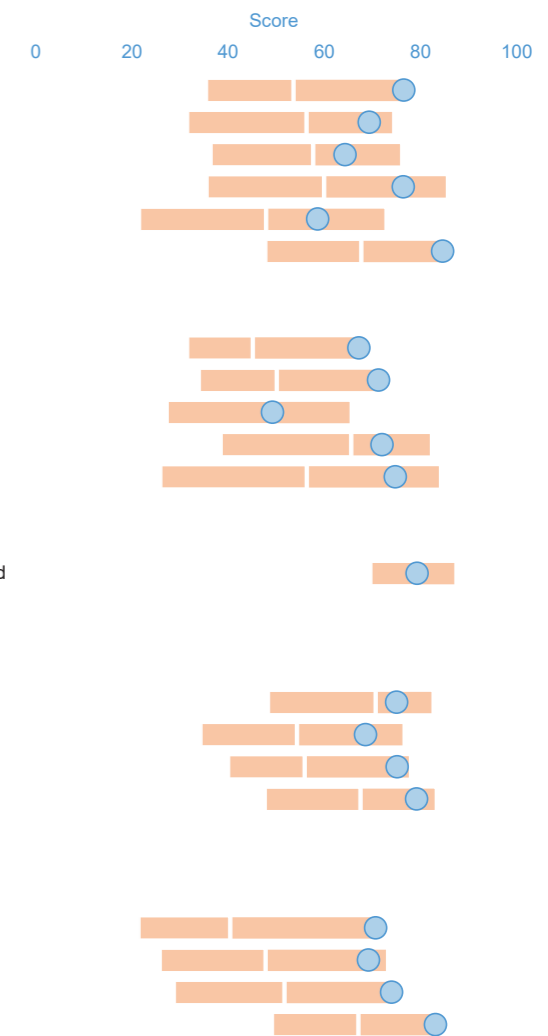
- Online purchasing of tickets to shows and museums has made it easier to attend

### 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



# Rome

## SMART CITY RANKING

112

Out of 118



101 in 2020

## SMART CITY RATING

C

C in 2020

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,810,000

(Eurostat)



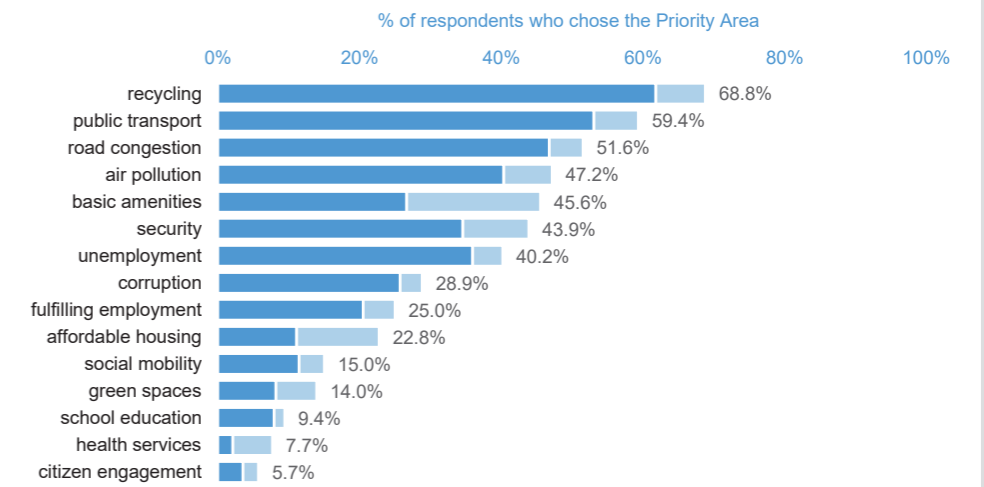
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.878	0.881	0.883	0.892	+0.009
Life expectancy at Birth	83.0	83.2	83.4	83.5	+0.1
Expected years of schooling	16.2	16.2	16.2	16.1	-0.1
Mean years of schooling	10.2	10.2	10.2	10.4	+0.2
GNI per capita (PPP \$)	34,818	35,573	36,141	42,776	+6,635

### 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.



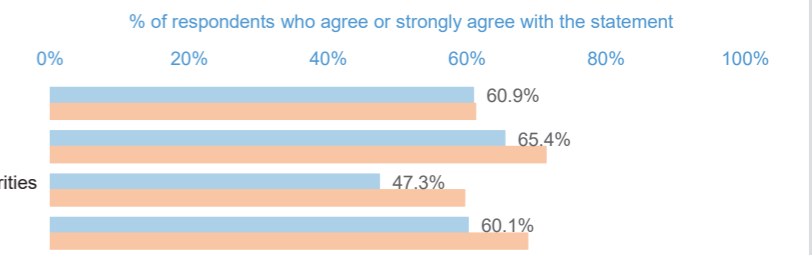
### ATTITUDES

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

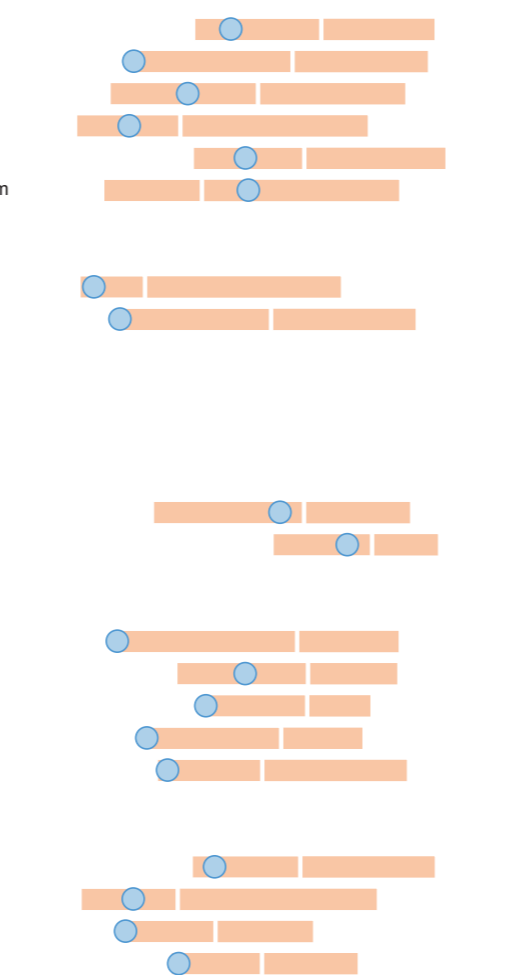
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

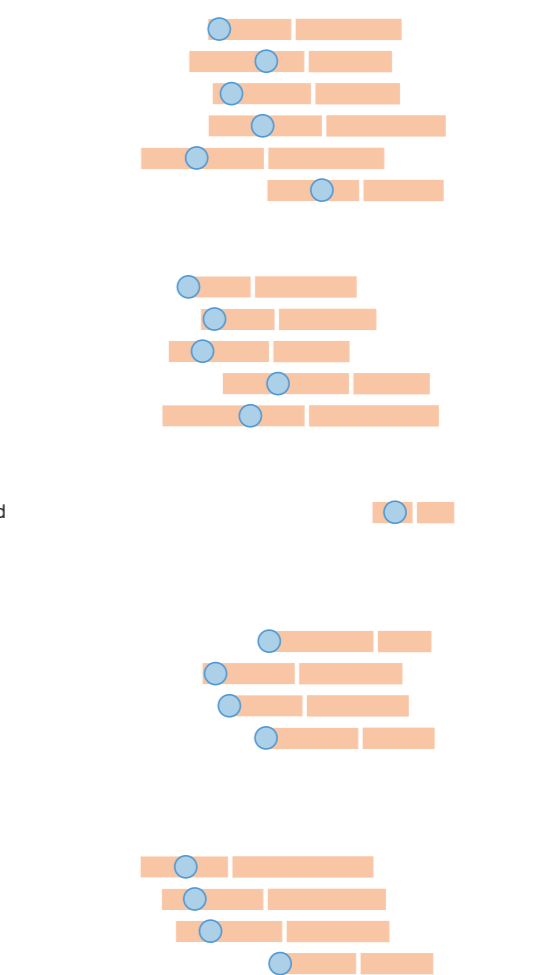
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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





# Rotterdam

## SMART CITY RANKING

27

Out of 118



29 in 2020

## SMART CITY RATING

BBB

BBB in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
620,000

(Eurostat)

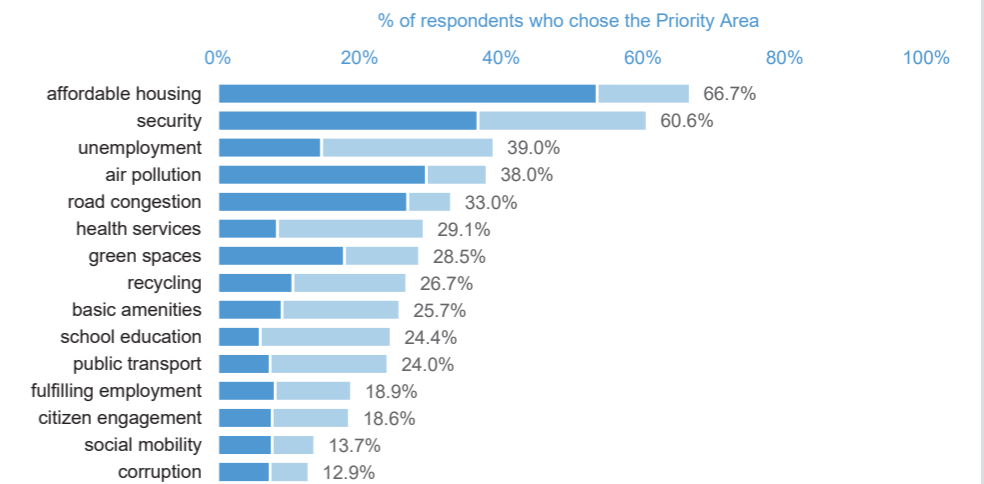


Country	2016	2017	2018	2019	1 yr change
HDI	0.929	0.932	0.934	0.944	+0.010
Life expectancy at Birth	81.9	82.0	82.1	82.3	+0.2
Expected years of schooling	18.0	18.0	18.0	18.5	+0.5
Mean years of schooling	12.2	12.2	12.2	12.4	+0.2
GNI per capita (PPP \$)	47,008	48,994	50,013	57,707	+7,694

## PRIORITY AREAS

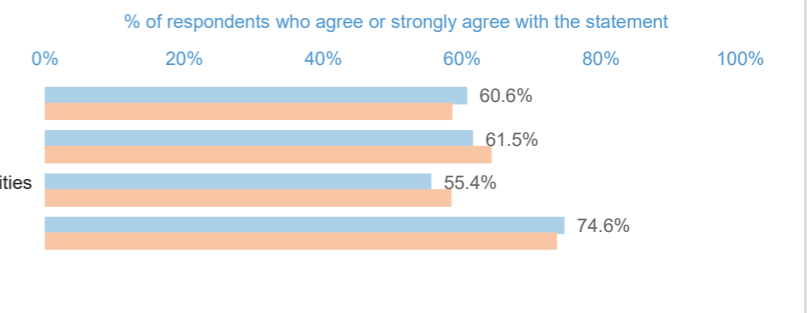
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

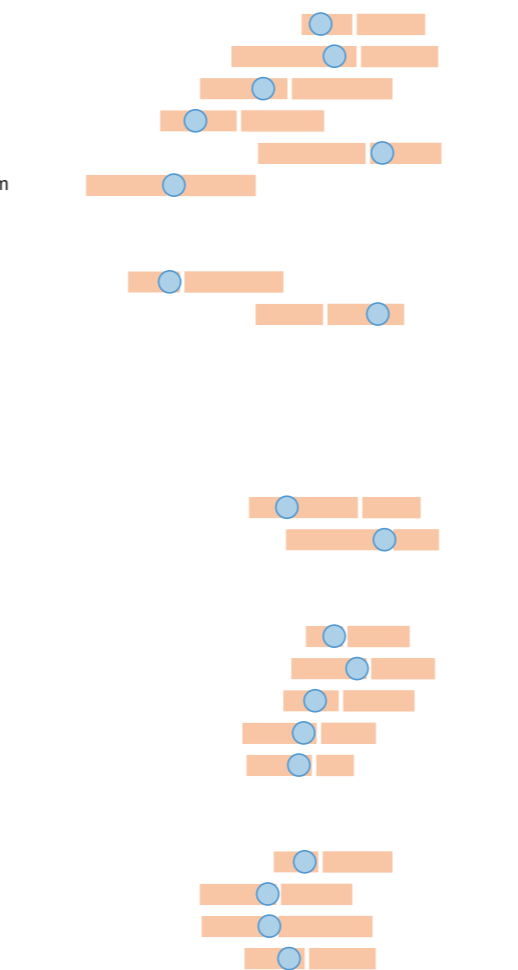
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### 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

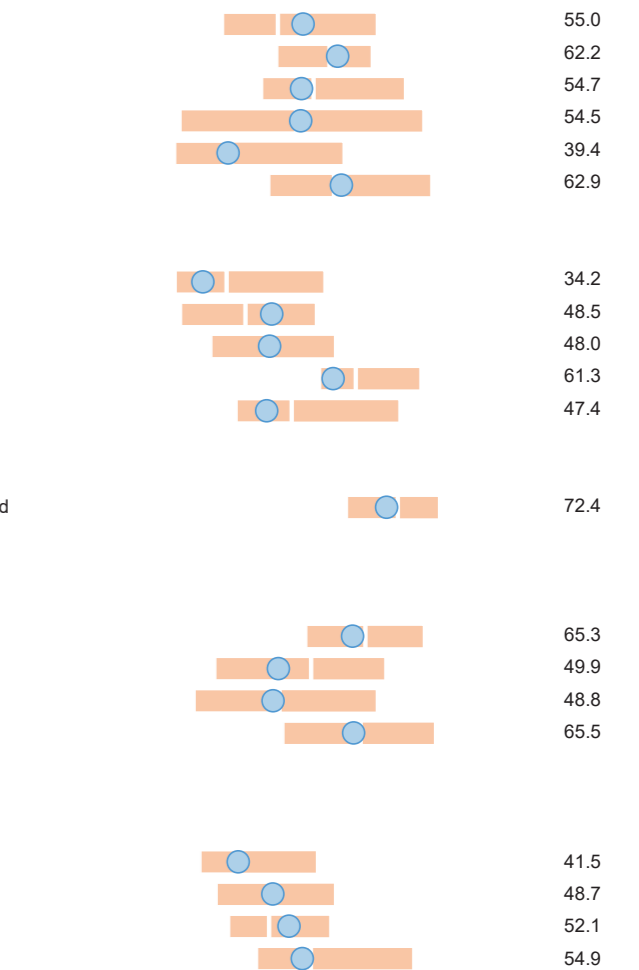
### Opportunities (Work & School)

- 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



# San Francisco

## SMART CITY RANKING

60

Out of 118



27 in 2020

## SMART CITY RATING

B

BBB in 2020

## FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

## GROUP

2

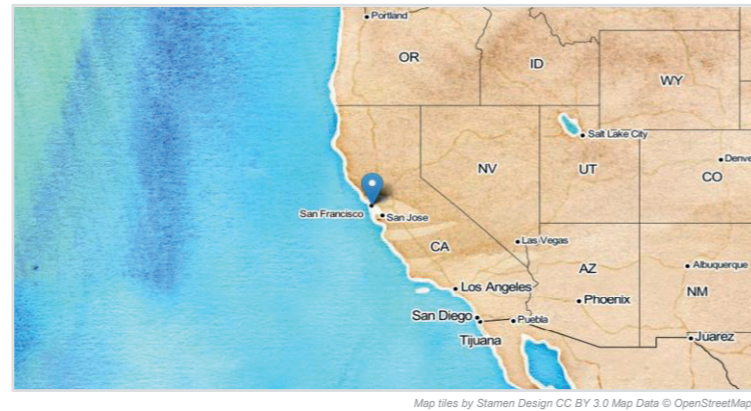
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,310,000

(UN World Urbanization Prospects)

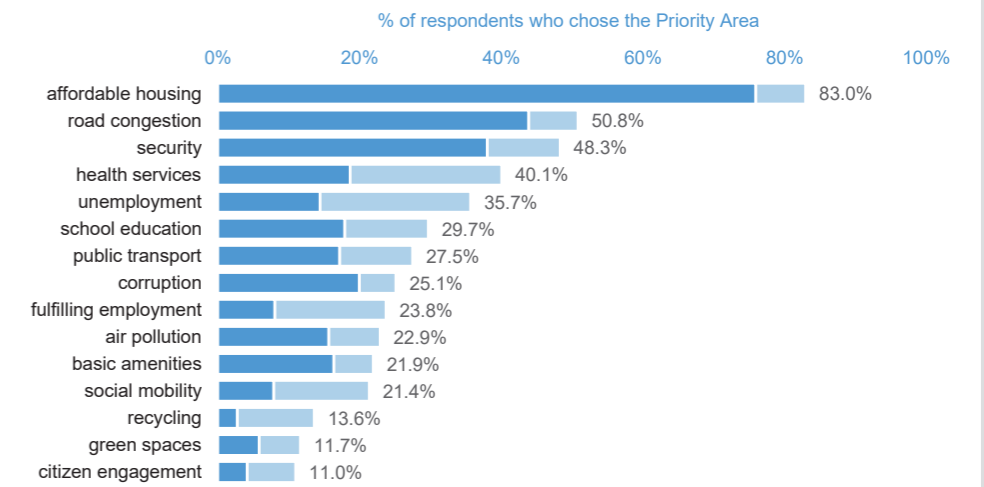


Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

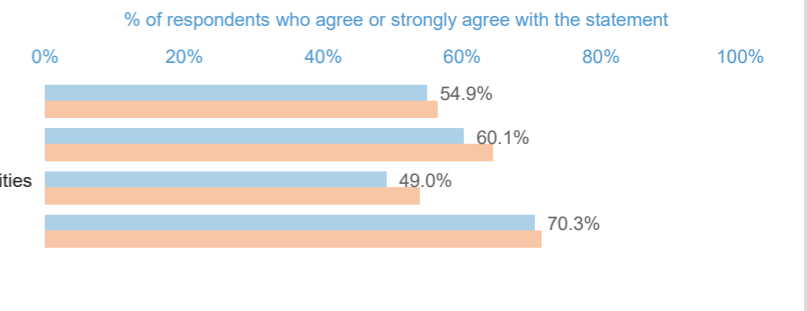
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

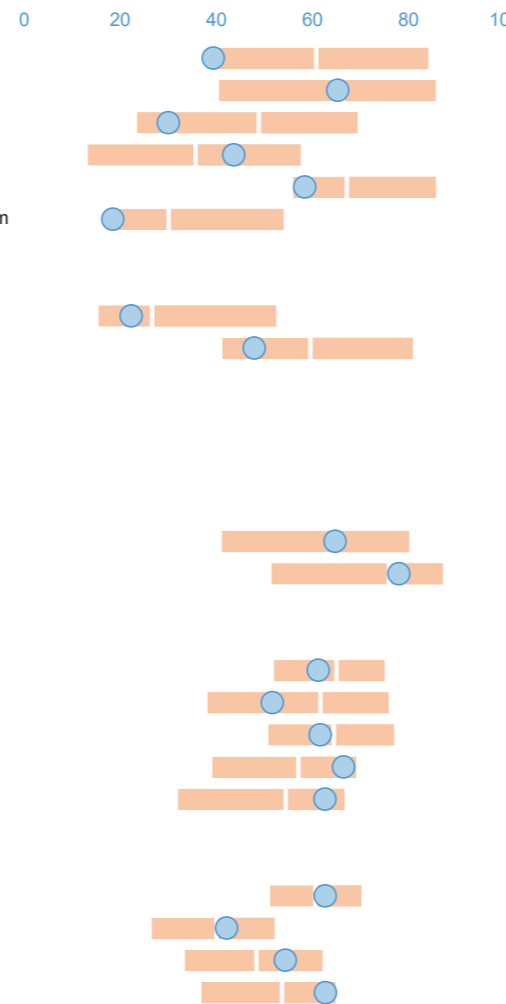
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

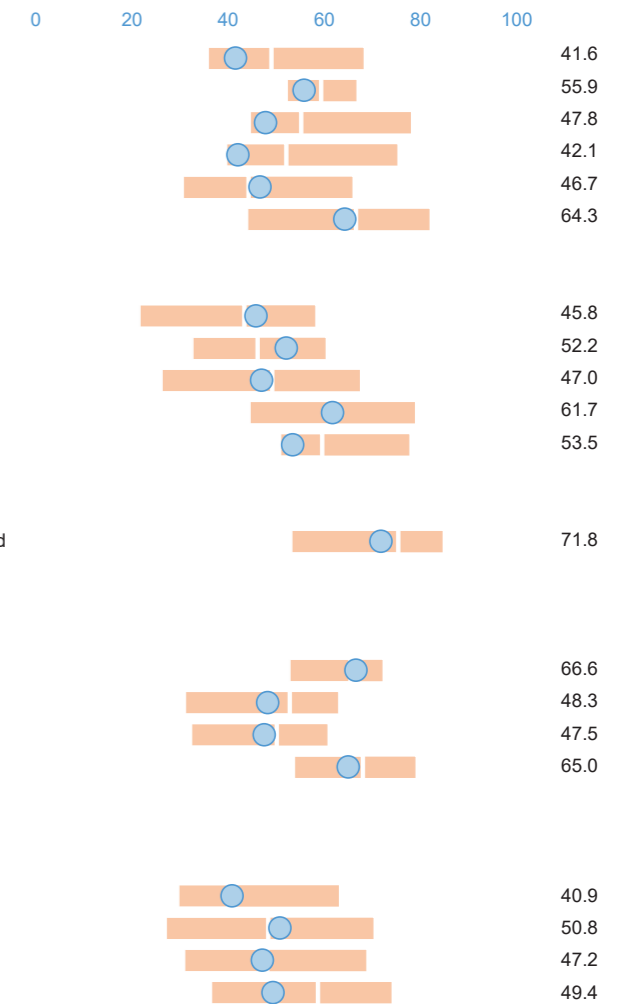
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# San José

## SMART CITY RANKING

109

Out of 118

N/A

not in 2020

## SMART CITY RATING

C

not in 2020

## FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,400,000

(UN World Urbanization Prospects)



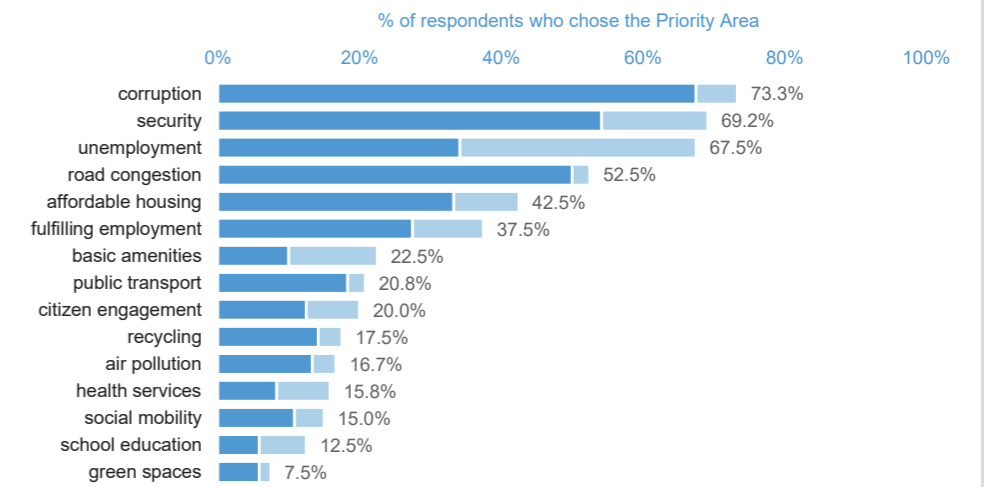
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.789	0.792	0.794	0.810	+0.016
Life expectancy at Birth	79.7	79.9	80.1	80.3	+0.2
Expected years of schooling	15.4	15.4	15.7	15.7	+0.0
Mean years of schooling	8.6	8.7	8.7	8.7	+0.0
GNI per capita (PPP \$)	17,783	18,161	18,371	18,486	+115

### PRIORITY AREAS

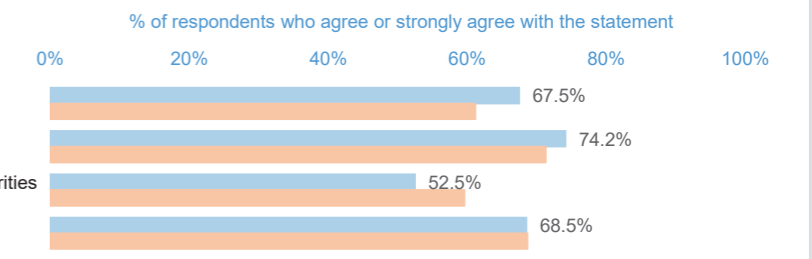
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



# Santiago

## SMART CITY RANKING

110

Out of 118



91 in 2020

## SMART CITY RATING

C

CC in 2020

## FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
6,770,000

(UN World Urbanization Prospects)



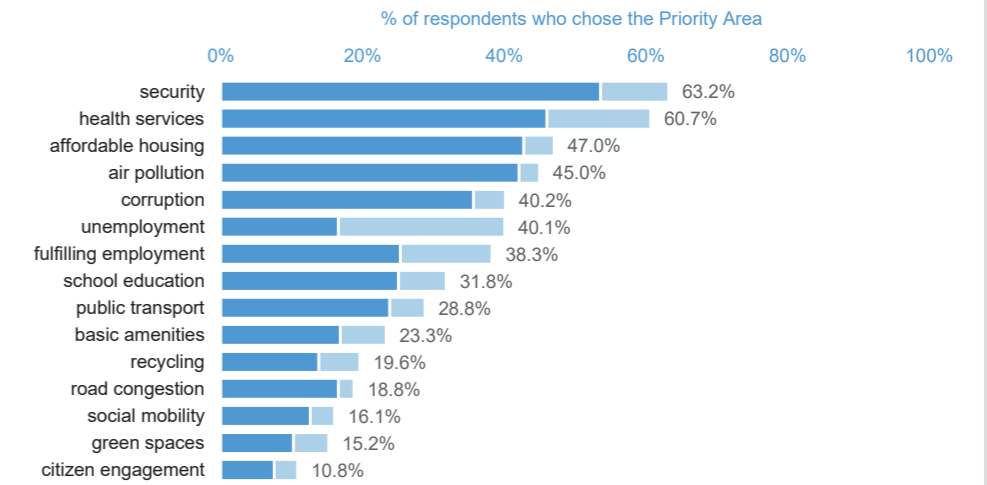
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.843	0.845	0.847	0.851	+0.004
Life expectancy at Birth	79.8	79.9	80.0	80.2	+0.2
Expected years of schooling	16.4	16.5	16.5	16.4	-0.1
Mean years of schooling	10.3	10.4	10.4	10.6	+0.2
GNI per capita (PPP \$)	21,776	21,415	21,972	23,261	+1,289

### PRIORITY AREAS

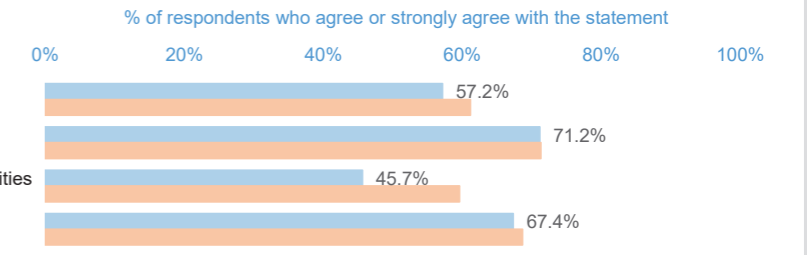
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

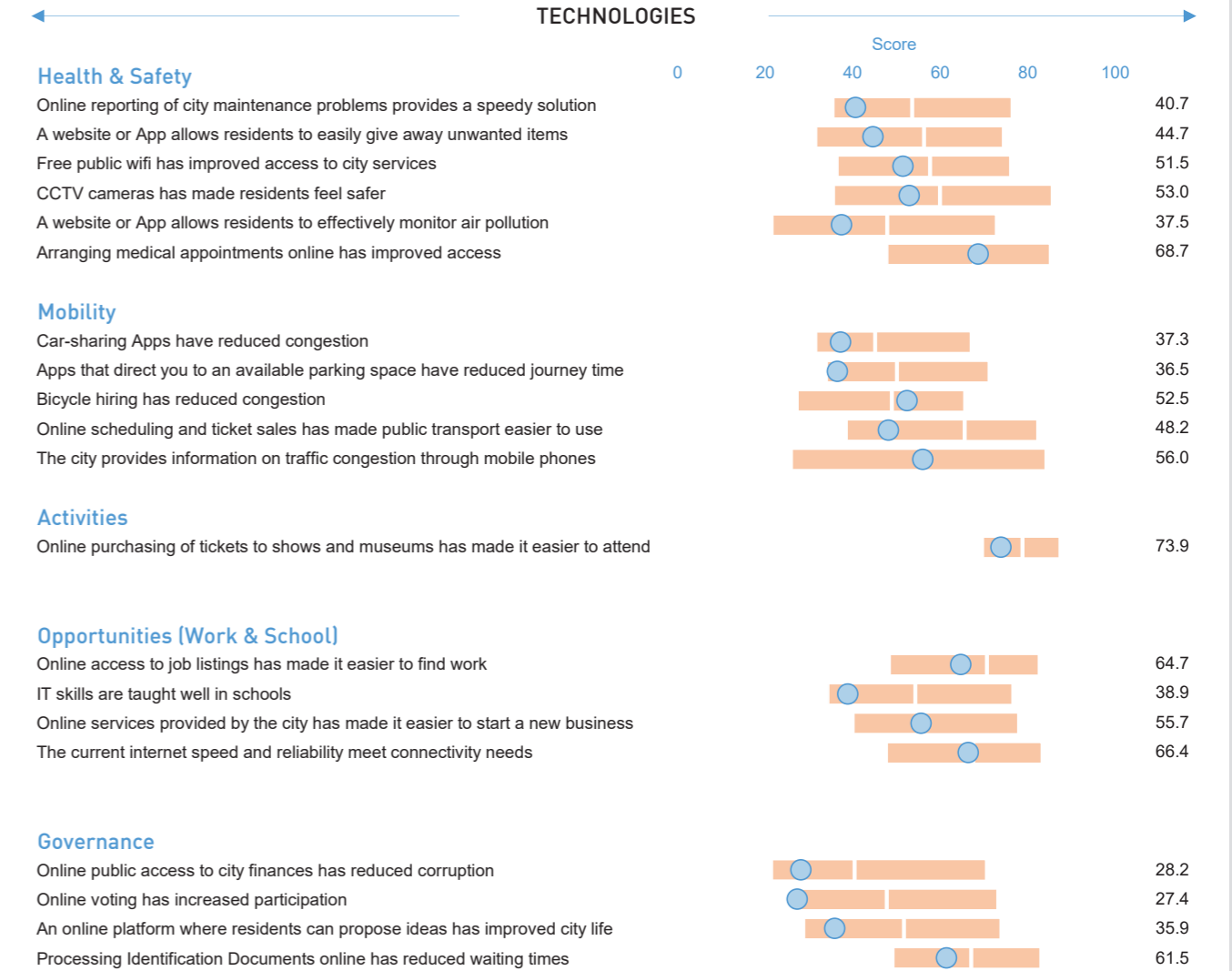
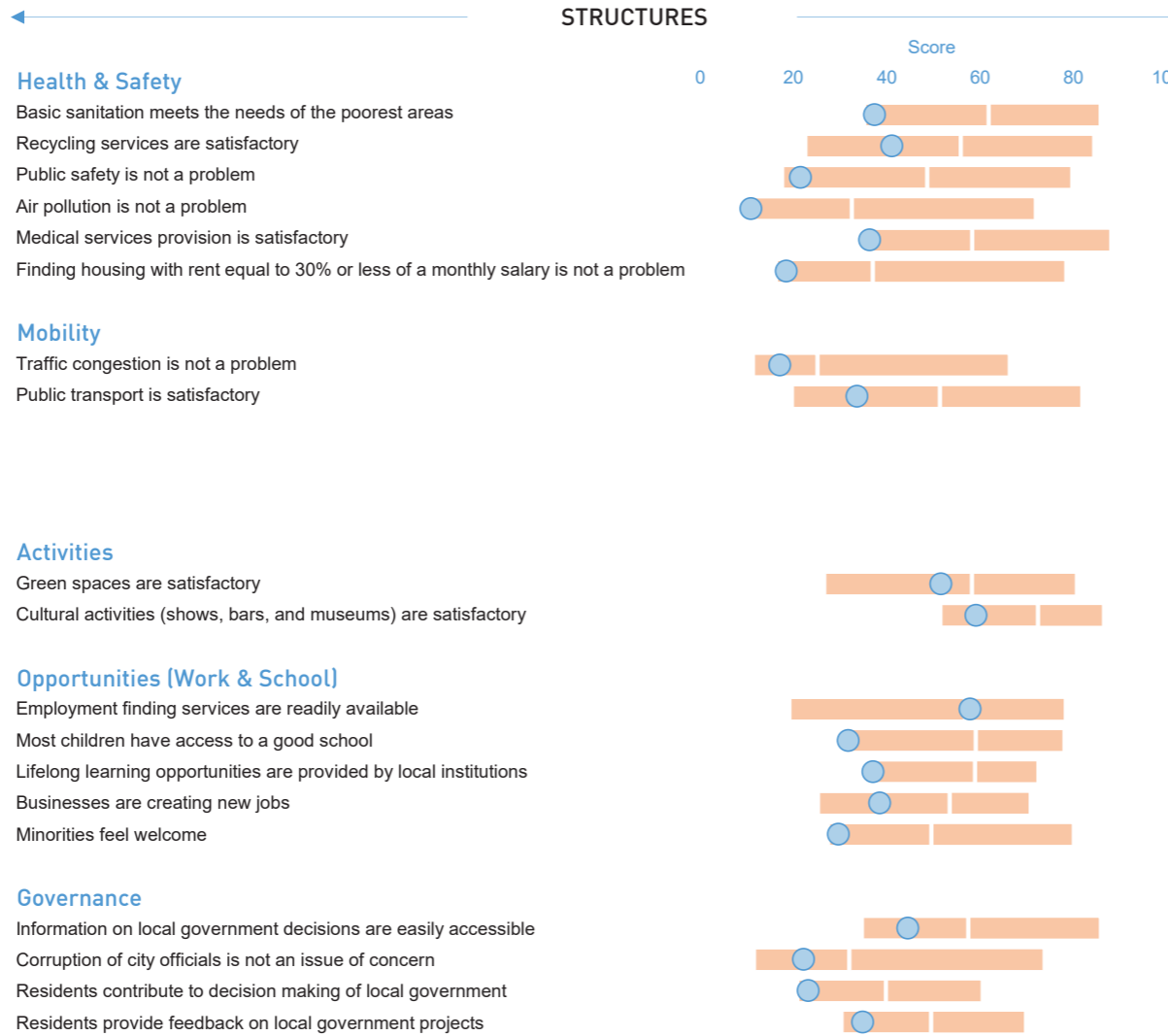


### ATTITUDES

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



# Sao Paulo

## SMART CITY RANKING

117

Out of 118



100 in 2020

## SMART CITY RATING

D

C in 2020

## FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

## GROUP

4

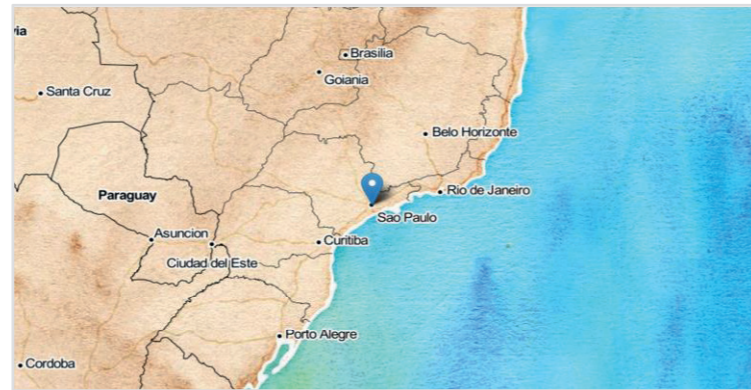
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
22,040,000

(UN World Urbanization Prospects)



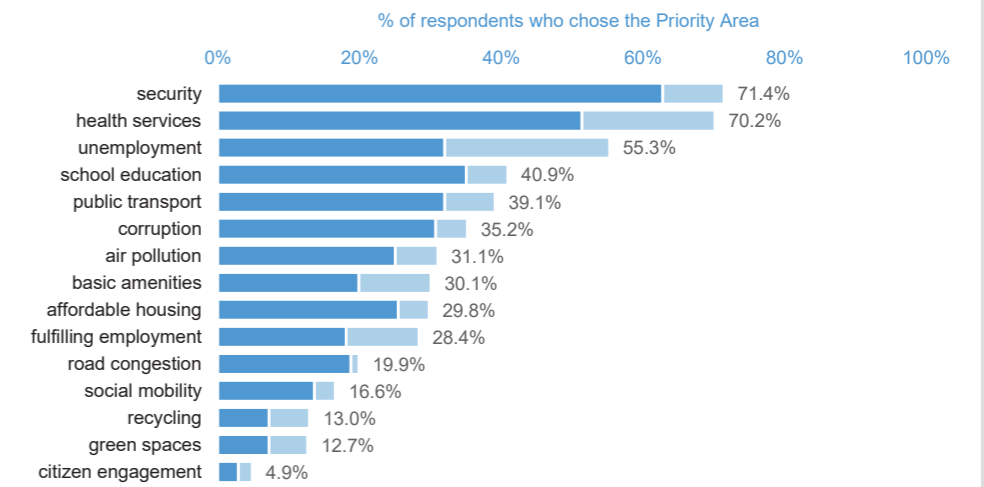
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.757	0.760	0.761	0.765	+0.004
Life expectancy at Birth	75.2	75.5	75.7	75.9	+0.2
Expected years of schooling	15.4	15.4	15.4	15.4	+0.0
Mean years of schooling	7.7	7.8	7.8	8.0	+0.2
GNI per capita (PPP \$)	13,907	13,975	14,068	14,263	+195

### PRIORITY AREAS

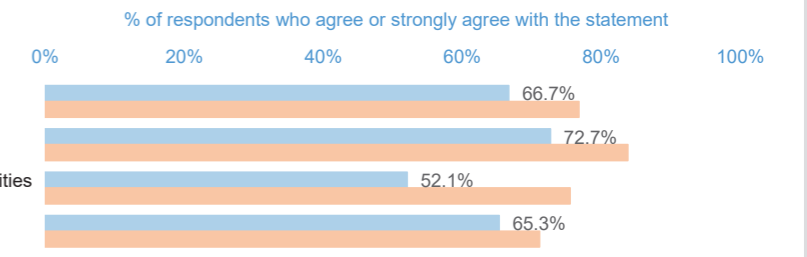
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

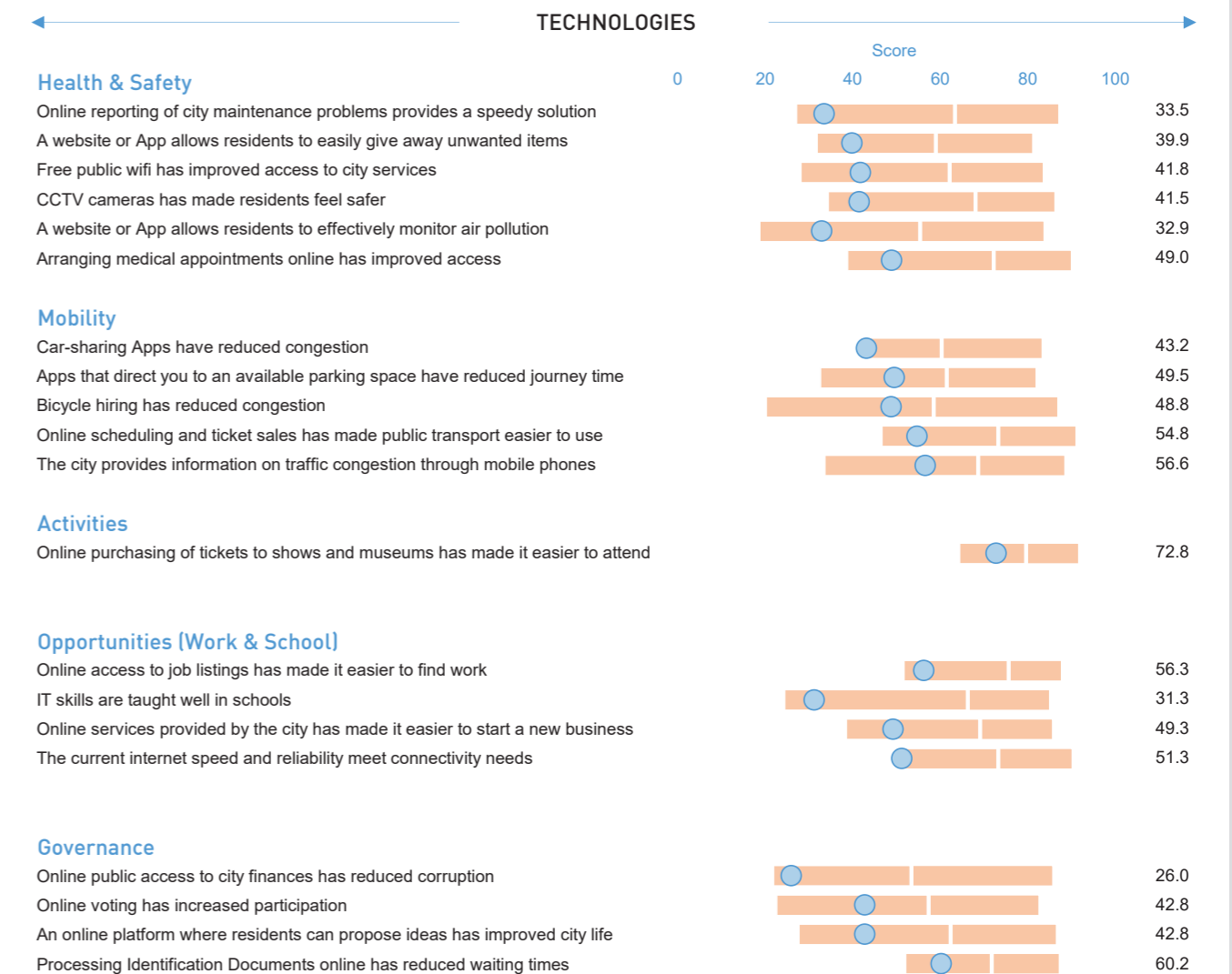
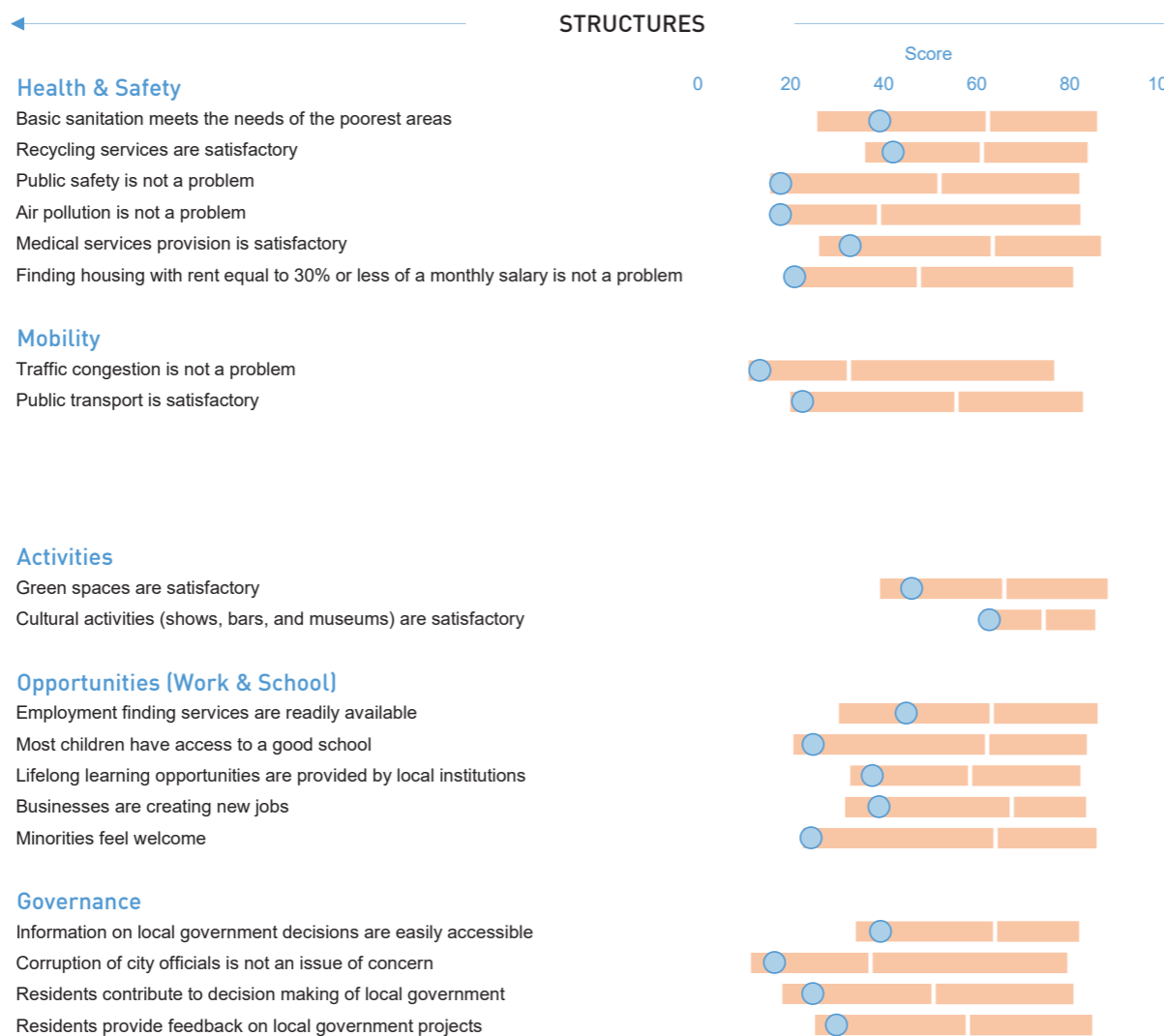


### ATTITUDES

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



# Seattle

## SMART CITY RANKING

43

Out of 118



37 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

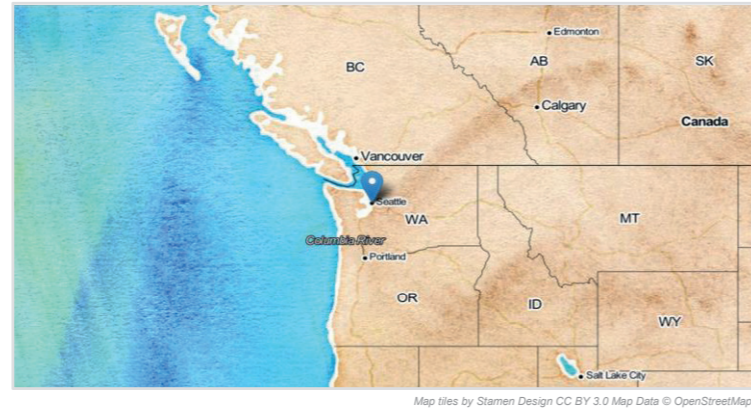
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
3,430,000

(UN World Urbanization Prospects)

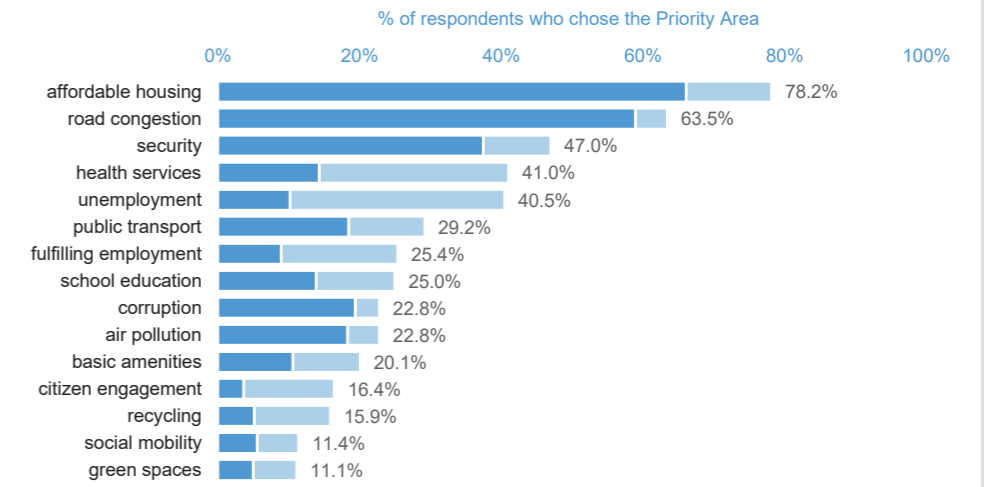


Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

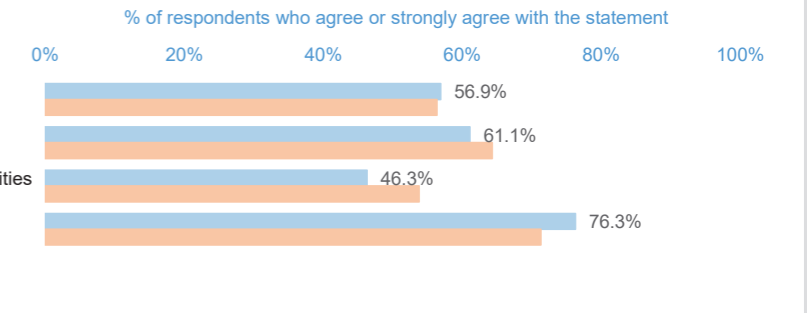
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

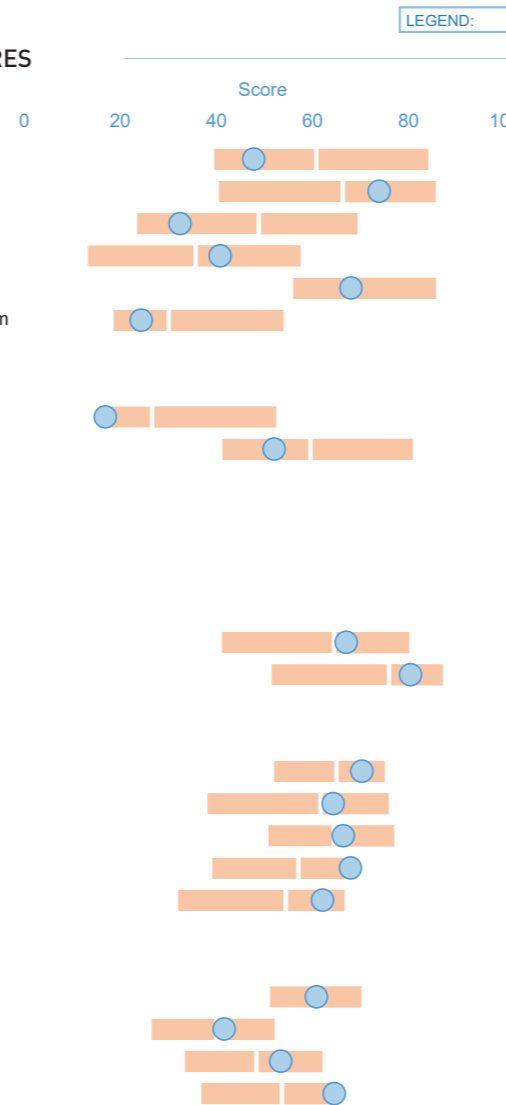
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

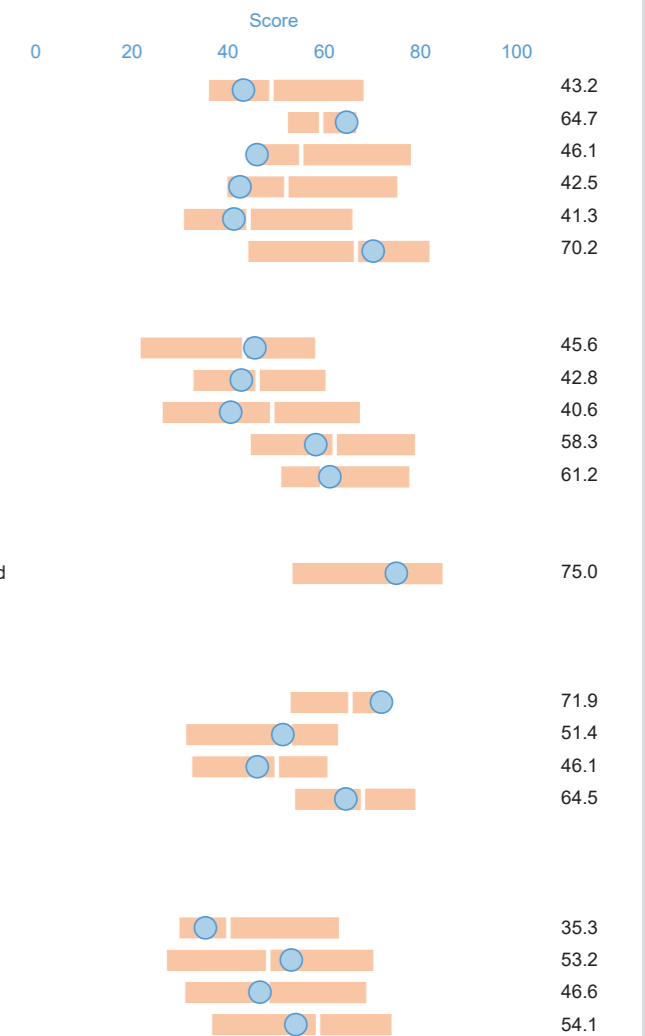
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Seoul

## SMART CITY RANKING

13

Out of 118



47 in 2020

## SMART CITY RATING

BBB

BB in 2020

## FACTOR RATINGS

B

STRUCTURES

A

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
9,960,000

(UN World Urbanization Prospects)



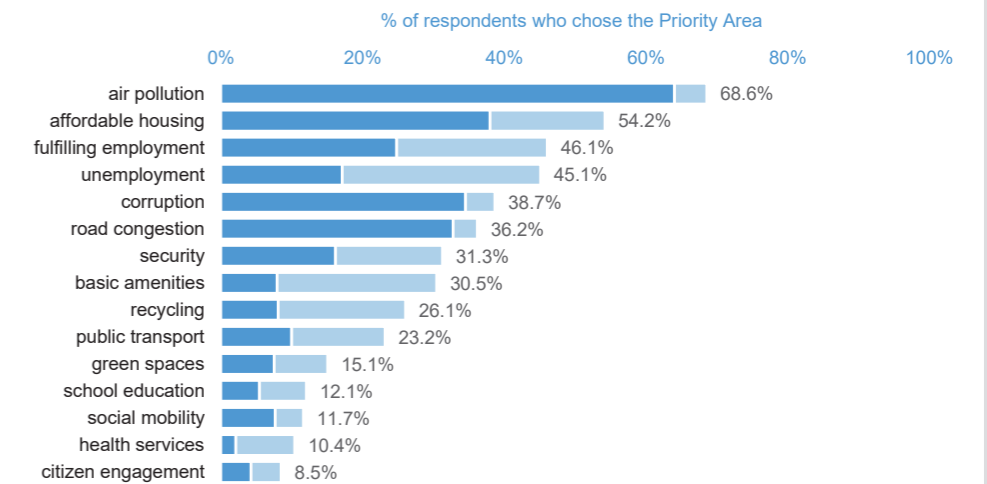
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.901	0.904	0.906	0.916	+0.010
Life expectancy at Birth	82.4	82.6	82.8	83.0	+0.2
Expected years of schooling	16.4	16.4	16.4	16.5	+0.1
Mean years of schooling	12.2	12.2	12.2	12.2	+0.0
GNI per capita (PPP \$)	35,122	35,945	36,757	43,044	+6,287

### PRIORITY AREAS

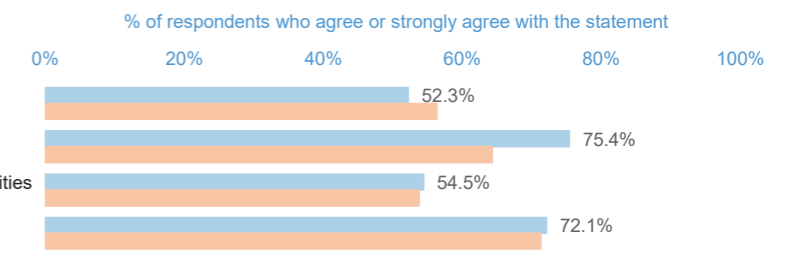
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

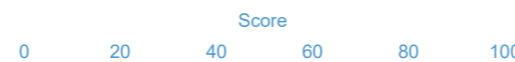
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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



72.1  
71.0  
63.3  
13.1  
77.0  
35.9  
  
23.3  
72.0  
  
55.2  
69.9  
  
58.8  
58.3  
63.3  
47.4  
31.8  
  
60.4  
26.4  
51.5  
51.3

### 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  
 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



59.1  
67.2  
74.6  
74.1  
66.3  
70.4  
  
45.6  
52.9  
49.7  
71.6  
78.2  
  
77.7  
  
64.8  
60.7  
56.1  
78.5  
  
43.9  
59.0  
60.2  
74.5

# Shanghai

## SMART CITY RANKING

71

Out of 118



81 in 2020

## SMART CITY RATING

CCC

CC in 2020

## FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
27,060,000

(UN World Urbanization Prospects)



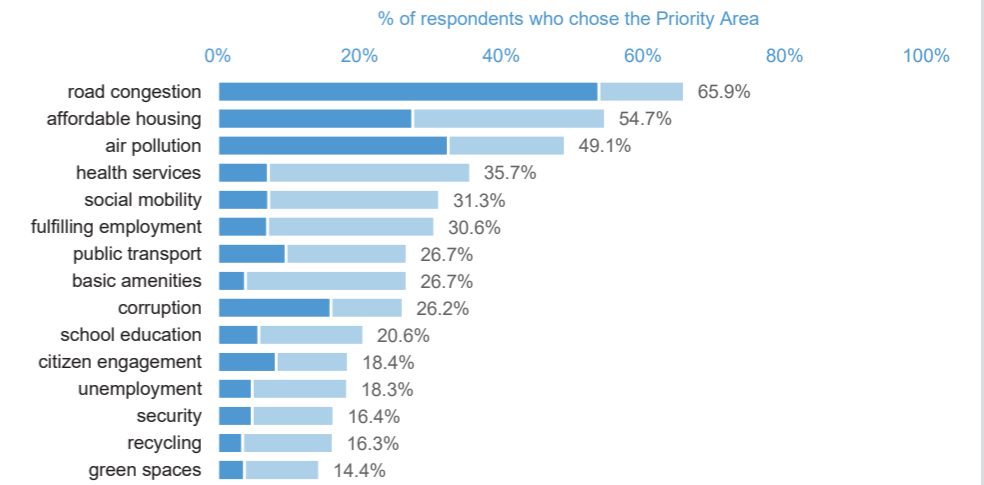
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

### PRIORITY AREAS

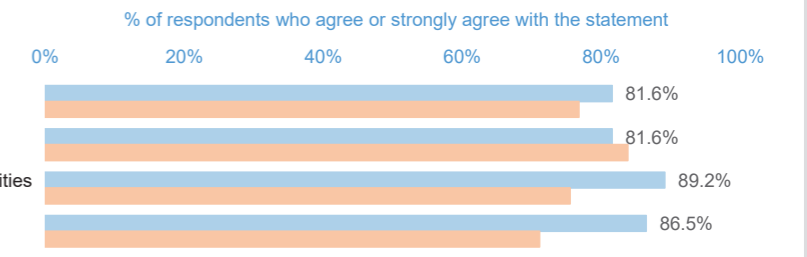
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

82.8  
78.5  
71.5  
47.5  
79.3  
50.4  
31.4  
63.8  
76.9  
84.3  
79.7  
77.0  
70.2  
78.6  
74.1  
77.4  
54.9  
62.4  
69.6

### 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

Score 0 20 40 60 80 100

83.7  
74.8  
79.8  
79.3  
78.4  
89.0  
65.1  
81.3  
75.5  
87.9  
87.2  
90.6  
86.1  
83.8  
81.0  
89.5  
70.2  
72.5  
80.8  
83.4



# Shenzhen

SMART CITY RANKING

65

Out of 118



67 in 2020

SMART CITY RATING

CCC

CCC in 2020

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population: 12,360,000

(UN World Urbanization Prospects)

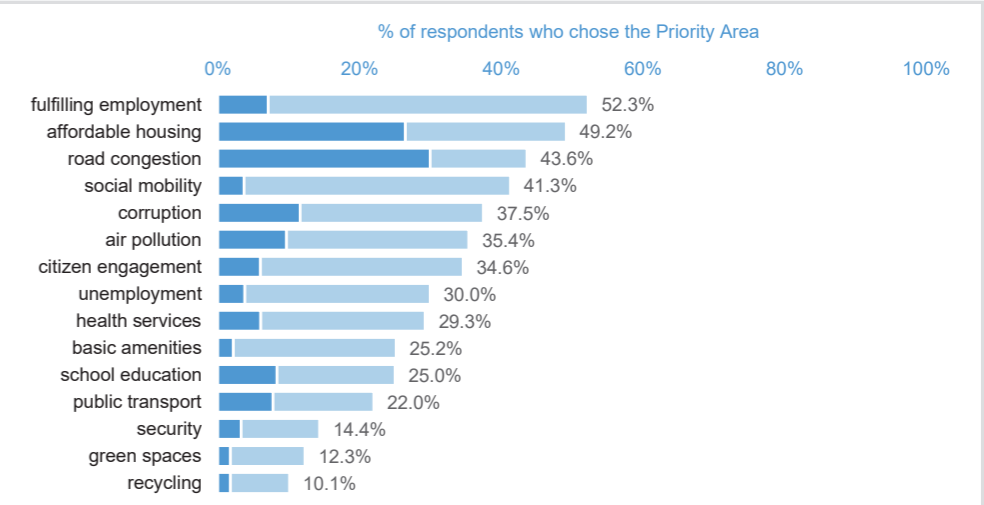


Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

## PRIORITY AREAS

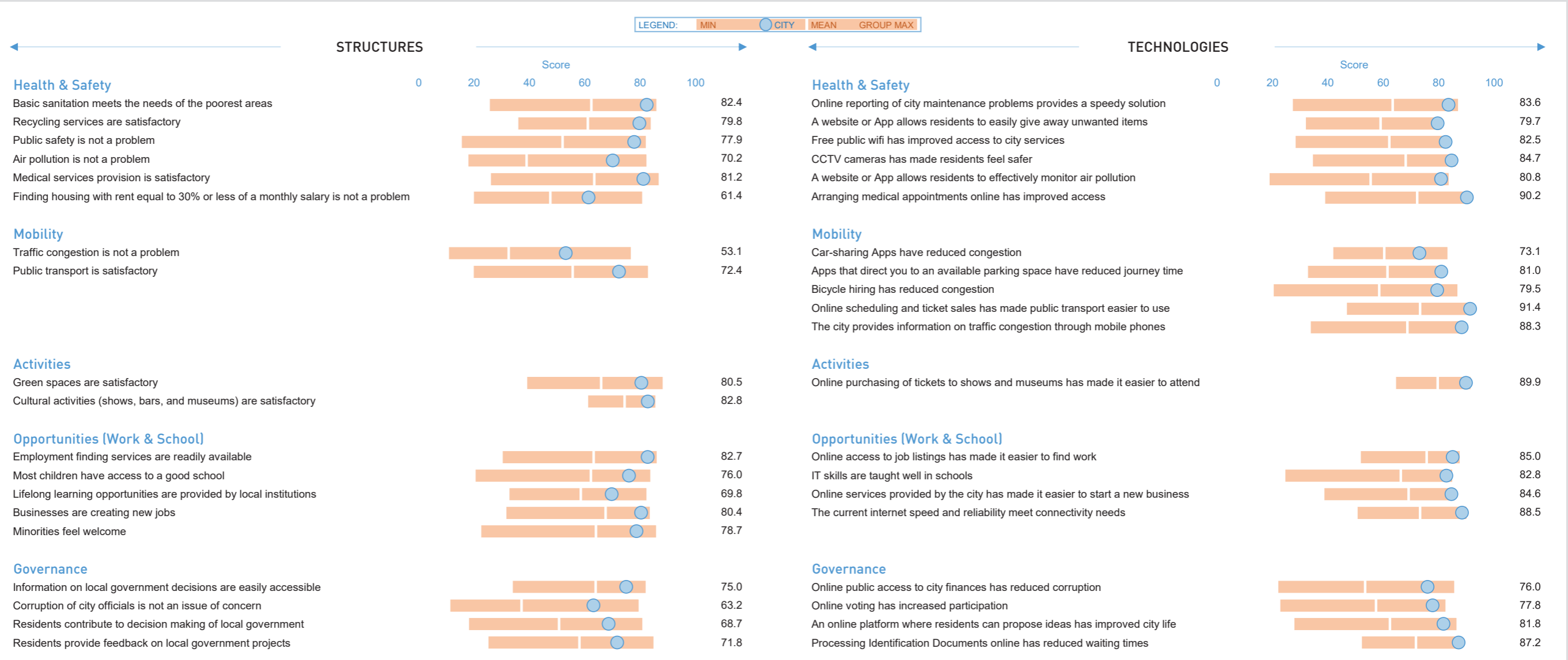
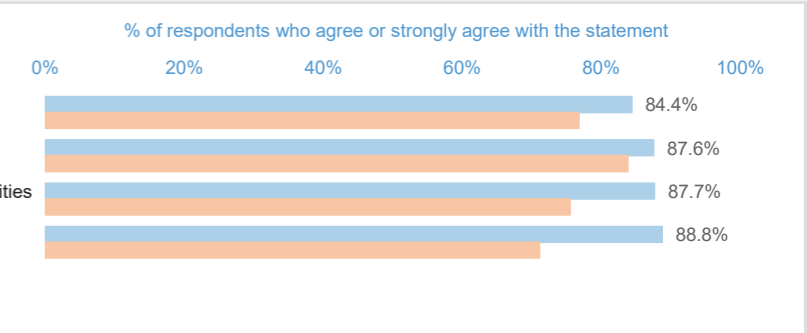
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)



# Singapore

## SMART CITY RANKING

1

Out of 118



1 in 2020

## SMART CITY RATING

AAA

AAA in 2020

## FACTOR RATINGS

AAA

STRUCTURES

AAA

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
5,940,000

(UN World Urbanization Prospects)

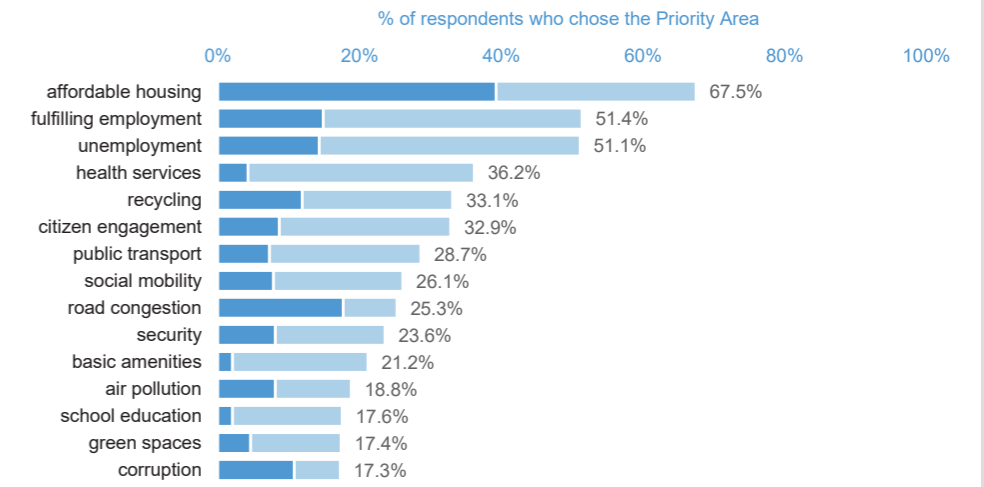


Country	2016	2017	2018	2019	1 yr change
HDI	0.933	0.934	0.935	0.938	+0.003
Life expectancy at Birth	83.1	83.3	83.5	83.6	+0.1
Expected years of schooling	16.3	16.3	16.3	16.4	+0.1
Mean years of schooling	11.5	11.5	11.5	11.6	+0.1
GNI per capita (PPP \$)	78,759	81,500	83,793	88,155	+4,362

### PRIORITY AREAS

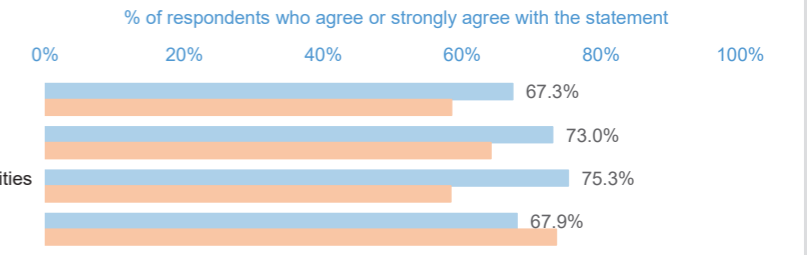
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

**107**

Out of 118



89 in 2020

## SMART CITY RATING

**C**

CC in 2020

## FACTOR RATINGS

**C**

STRUCTURES

**CC**

TECHNOLOGIES

## GROUP

**3**

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
1,240,000

(Eurostat)



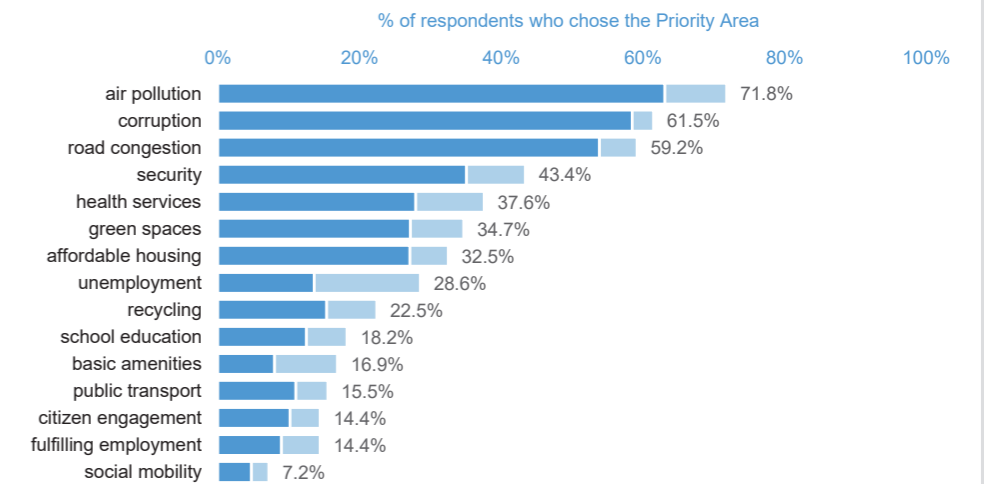
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.812	0.813	0.816	0.816	+0.000
Life expectancy at Birth	74.7	74.8	74.9	75.1	+0.2
Expected years of schooling	15.1	14.8	14.8	14.4	-0.4
Mean years of schooling	11.8	11.8	11.8	11.4	-0.4
GNI per capita (PPP \$)	17,757	18,874	19,646	23,325	+3,679

## PRIORITY AREAS

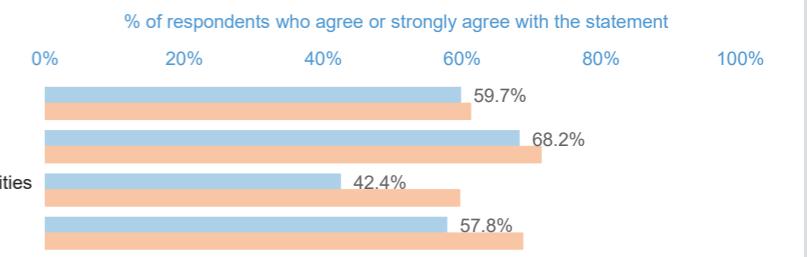
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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



# St. Petersburg

## SMART CITY RANKING

**79**

Out of 118



73 in 2020

## SMART CITY RATING

**CCC**

CCC in 2020

## FACTOR RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

## GROUP

**3**

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
5,470,000

(UN World Urbanization Prospects)

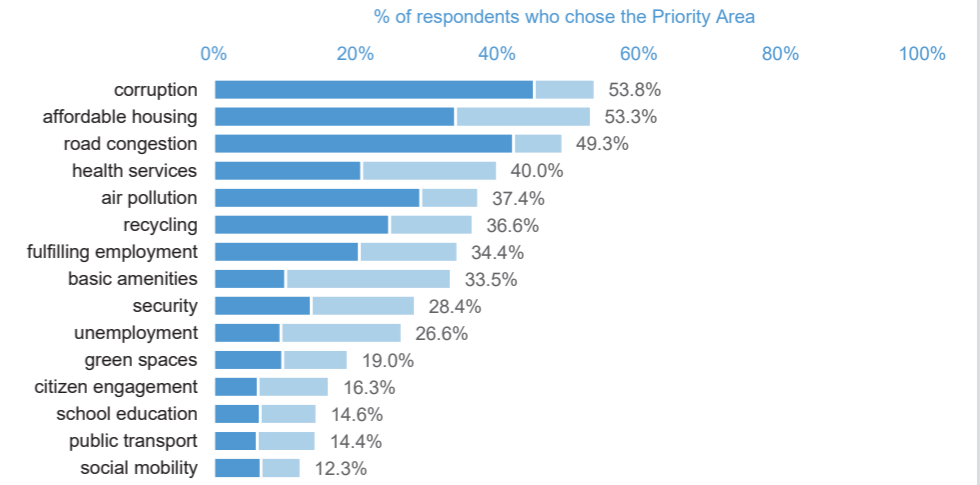


Country	2016	2017	2018	2019	1 yr change
HDI	0.817	0.822	0.824	0.824	+0.000
Life expectancy at Birth	71.8	72.1	72.4	72.6	+0.2
Expected years of schooling	15.5	15.5	15.5	15.0	-0.5
Mean years of schooling	11.8	12.0	12.0	12.2	+0.2
GNI per capita (PPP \$)	24,096	24,472	25,036	26,157	+1,121

## PRIORITY AREAS

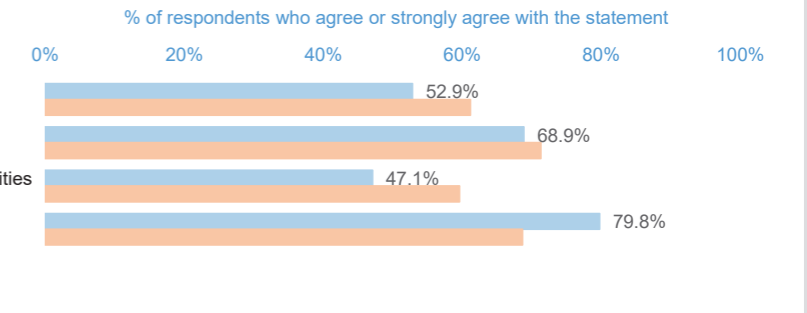
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)



# Stockholm

SMART CITY RANKING

25

Out of 118



16 in 2020

SMART CITY RATING

BBB

A in 2020

FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
950,000

(Eurostat)



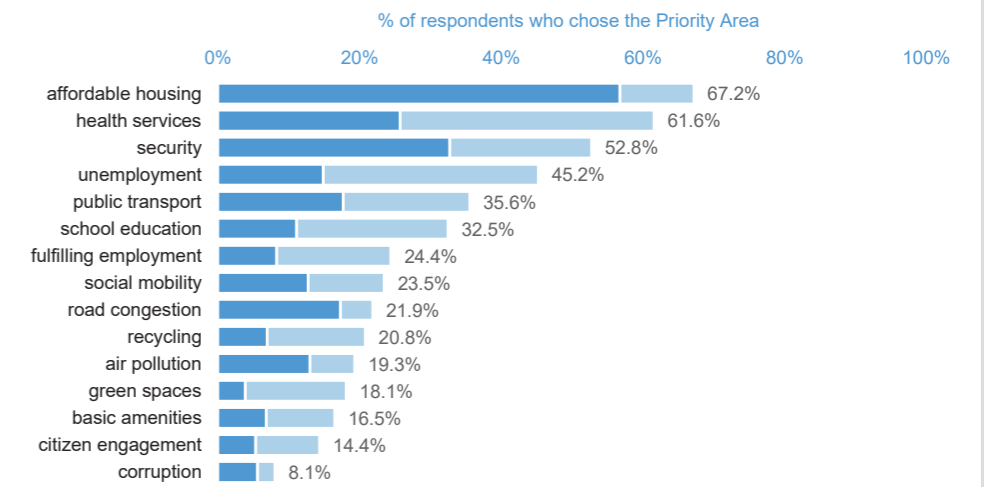
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.934	0.935	0.937	0.945	+0.008
Life expectancy at Birth	82.4	82.5	82.7	82.8	+0.1
Expected years of schooling	18.8	18.8	18.8	19.5	+0.7
Mean years of schooling	12.4	12.4	12.4	12.5	+0.1
GNI per capita (PPP \$)	46,662	47,398	47,955	54,508	+6,553

## 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

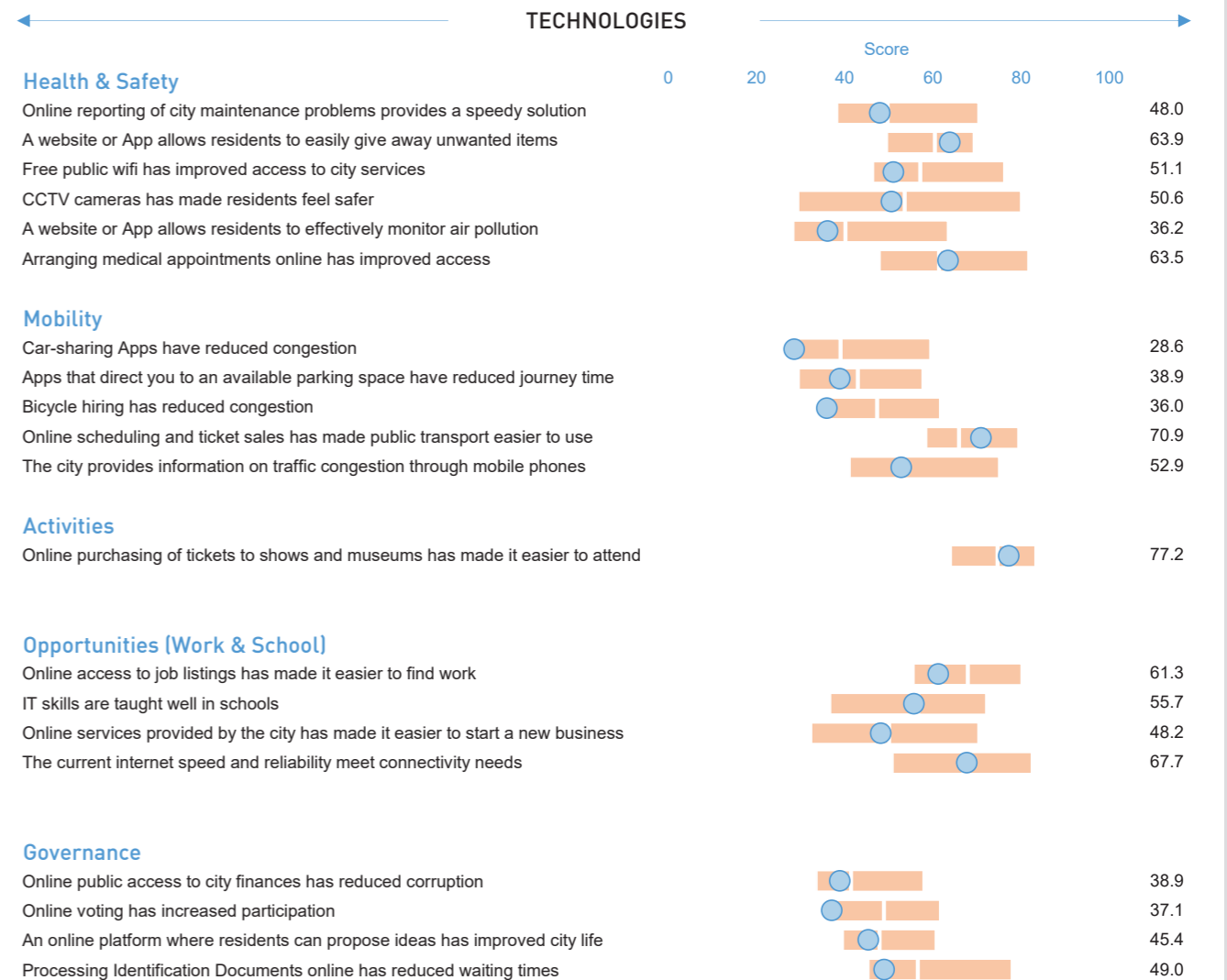
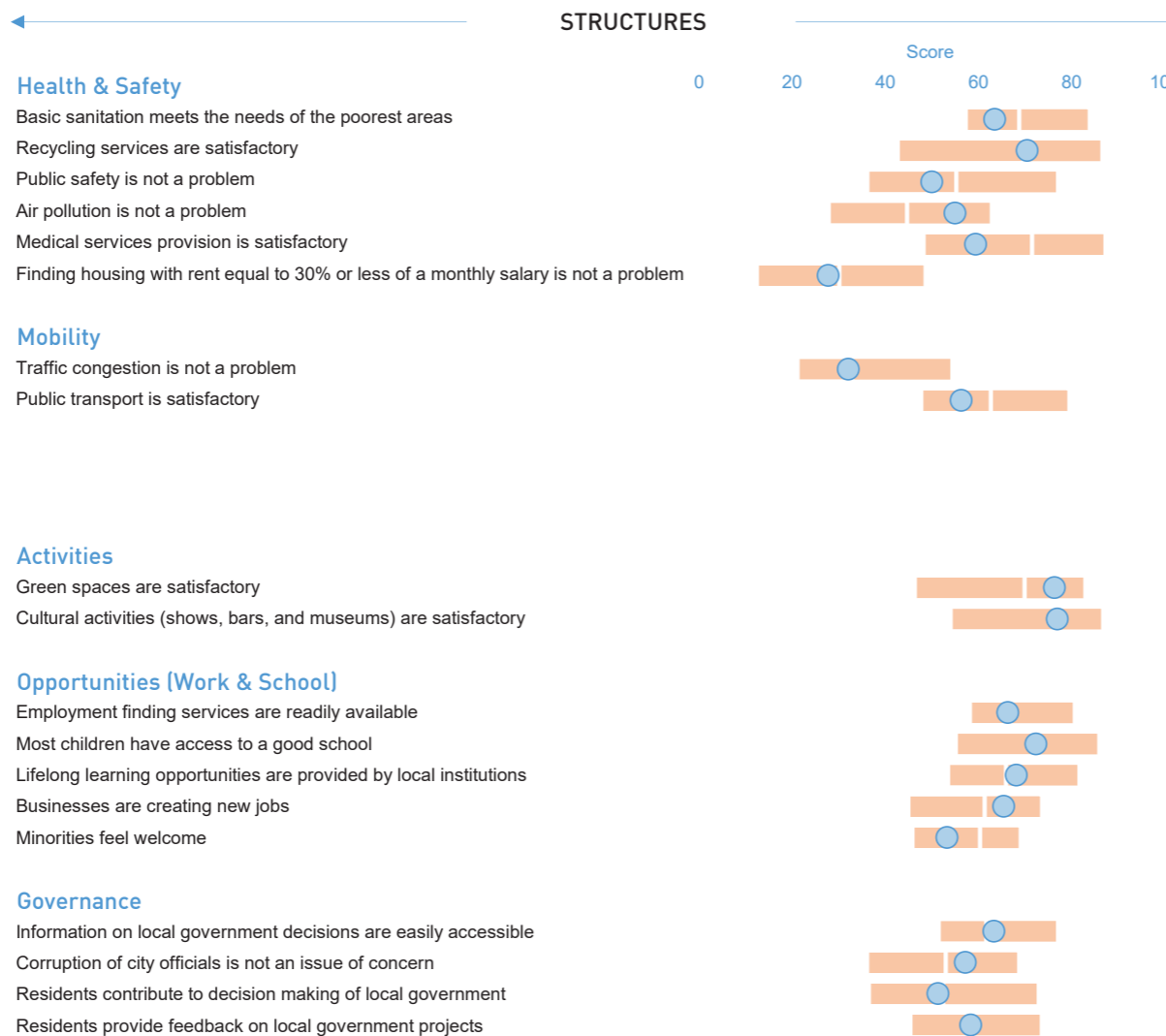
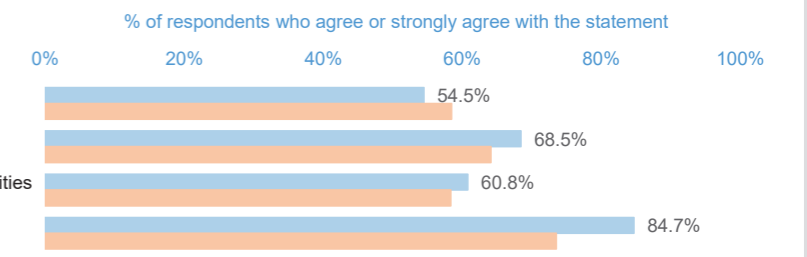
You are willing to concede personal data in order to improve traffic congestion

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



# Sydney

## SMART CITY RANKING

18

Out of 118



18 in 2020

## SMART CITY RATING

BBB

A in 2020

## FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
4,930,000

(UN World Urbanization Prospects)



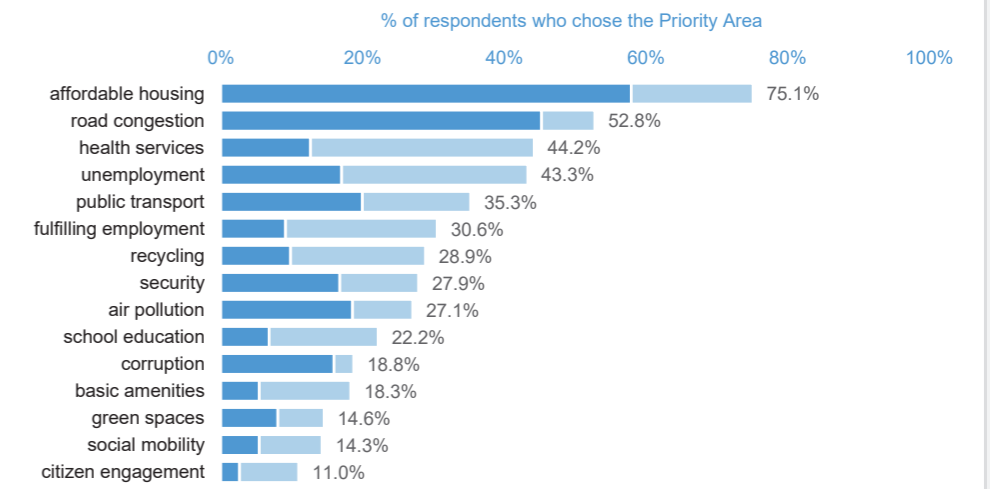
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.935	0.937	0.938	0.944	+0.006
Life expectancy at Birth	83.0	83.1	83.3	83.4	+0.1
Expected years of schooling	22.9	22.1	22.1	22.0	-0.1
Mean years of schooling	12.6	12.7	12.7	12.7	+0.0
GNI per capita (PPP \$)	43,653	43,756	44,097	48,085	+3,988

## PRIORITY AREAS

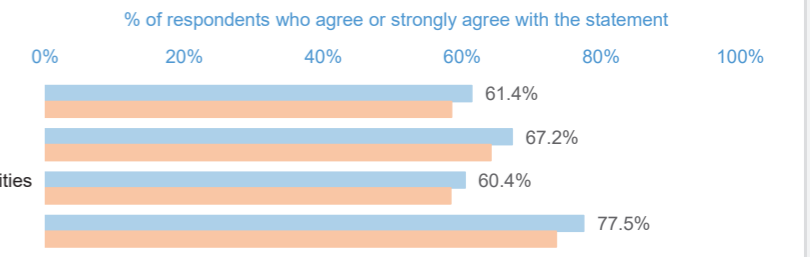
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

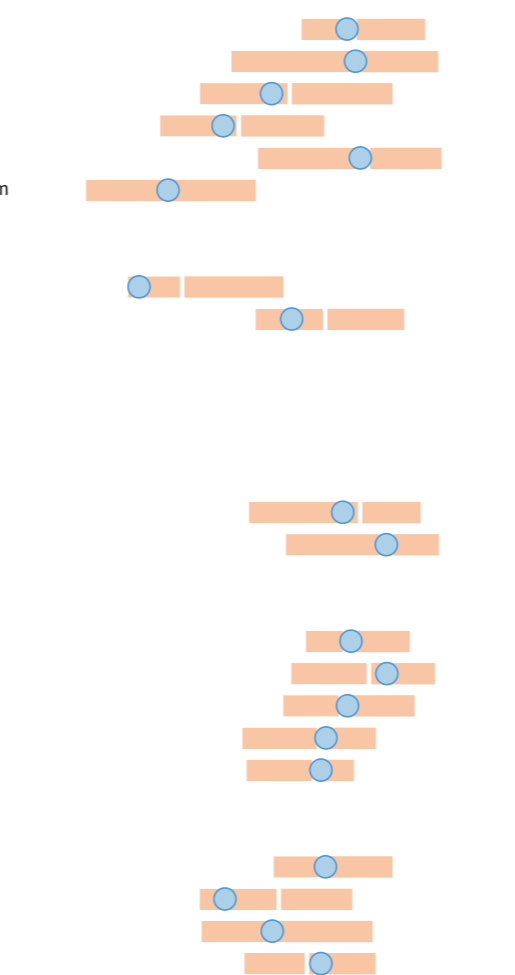
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### 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

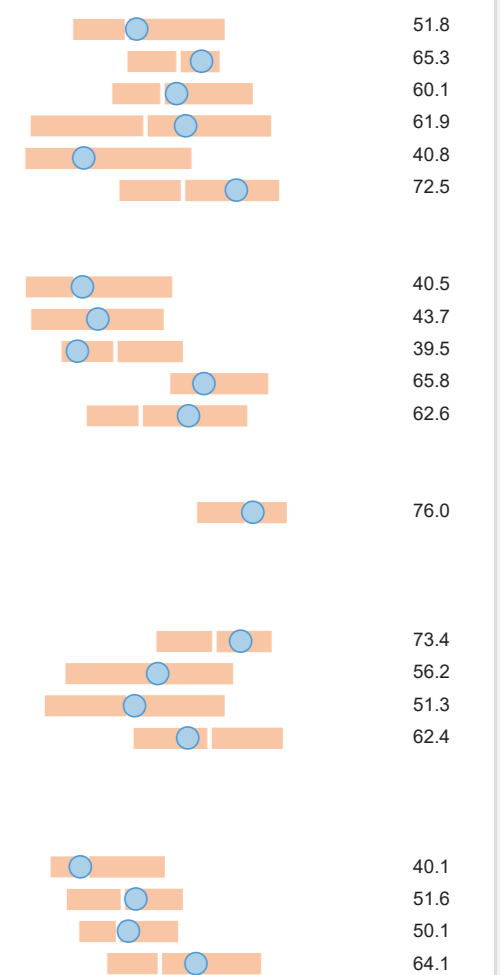
### Opportunities (Work & School)

- 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



# Taipei City

## SMART CITY RANKING

4

Out of 118



8 in 2020

## SMART CITY RATING

A

A in 2020

## FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,720,000

(UN World Urbanization Prospects)



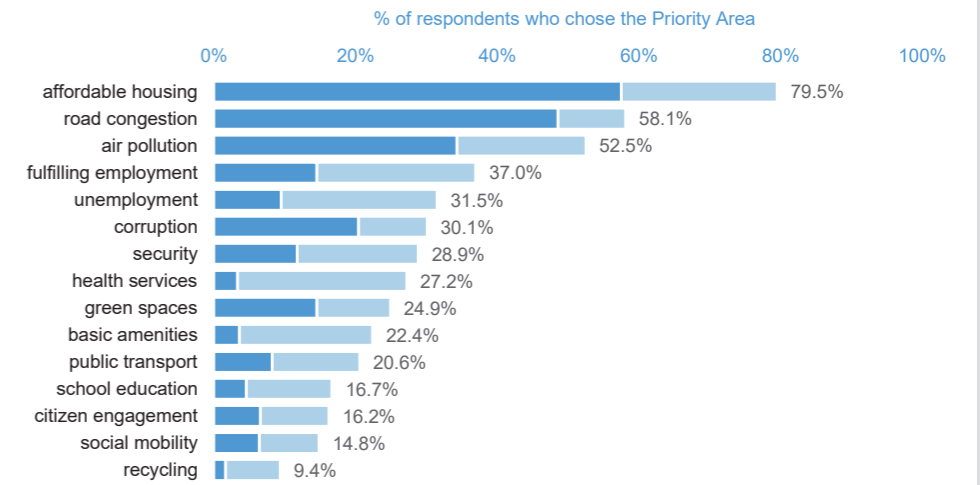
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.903	0.907	0.911	0.916	+0.005
Life expectancy at Birth	80.0	80.4	80.7	80.9	+0.2
Expected years of schooling	16.6	16.6	16.5	16.5	+0.0
Mean years of schooling	12.0	12.1	12.2	12.3	+0.1
GNI per capita (PPP \$)	46,054	47,144	49,403	52,573	+3,170

### PRIORITY AREAS

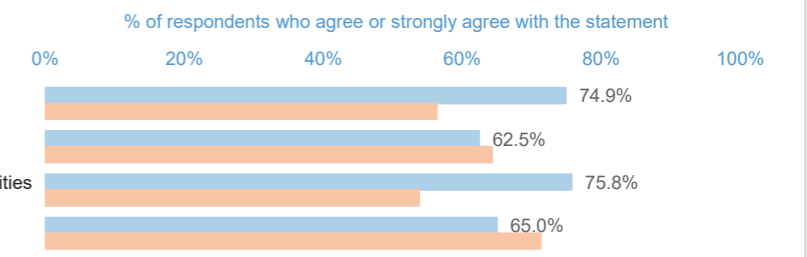
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

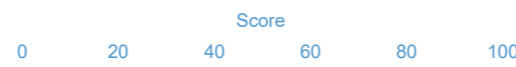
#### Opportunities (Work & School)

- 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



80.6
83.6
69.4
41.8
86.2
34.4
24.1
64.8
61.2
72.6
66.7
62.0
71.1
60.7
62.6
67.9
43.0
62.6
65.1

### 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



68.7
67.0
78.5
75.7
61.8
82.4
58.6
60.7
67.9
79.3
73.7
84.9
68.7
60.8
61.1
75.0
63.5
70.7
69.2
72.0

# Tallinn

## SMART CITY RANKING

56

Out of 118



59 in 2020

## SMART CITY RATING

B

B in 2020

## FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
440,000

(Eurostat)

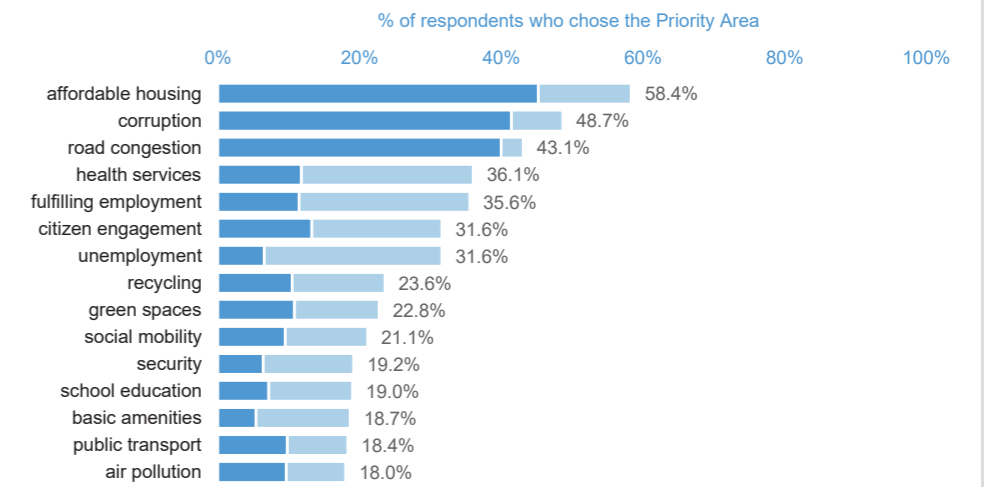


Country	2016	2017	2018	2019	1 yr change
HDI	0.875	0.879	0.882	0.892	+0.010
Life expectancy at Birth	78.1	78.4	78.6	78.8	+0.2
Expected years of schooling	16.1	16.1	16.1	16.0	-0.1
Mean years of schooling	13.1	13.0	13.0	13.1	+0.1
GNI per capita (PPP \$)	27,915	29,320	30,379	36,019	+5,640

### PRIORITY AREAS

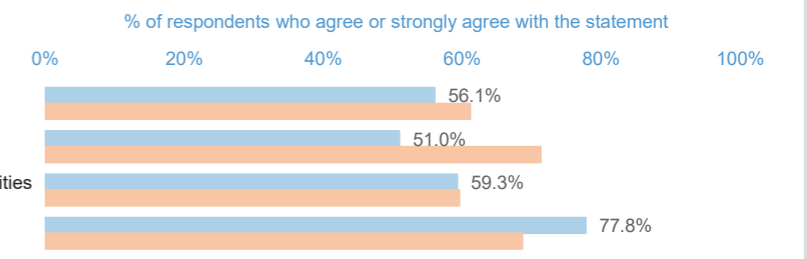
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

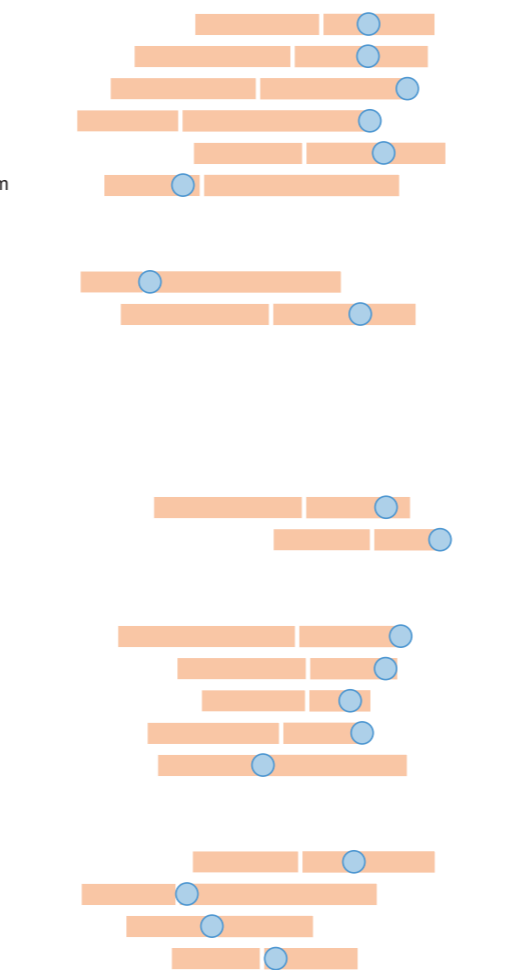
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### 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

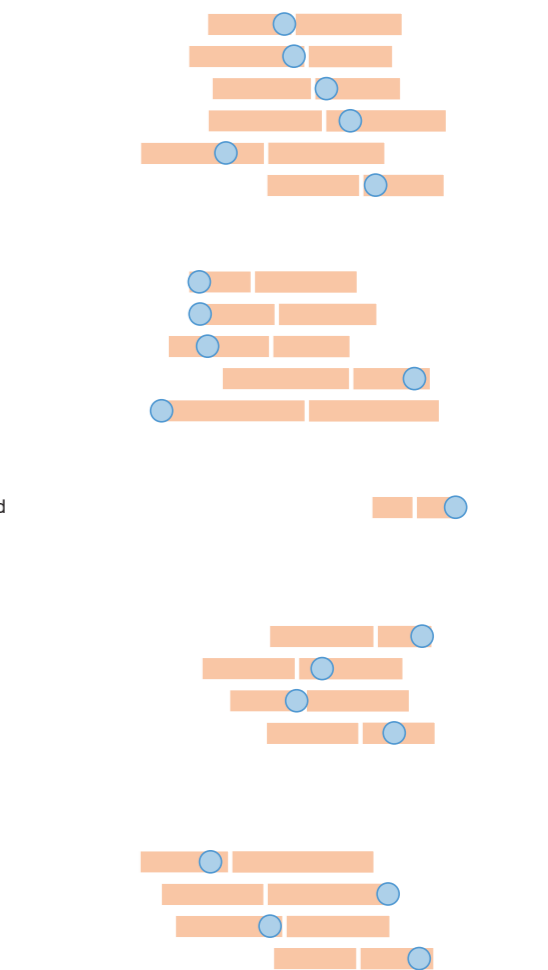
#### Opportunities (Work & School)

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





## SMART CITY RANKING

42

Out of 118



50 in 2020

## SMART CITY RATING

BB

BB in 2020

## FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

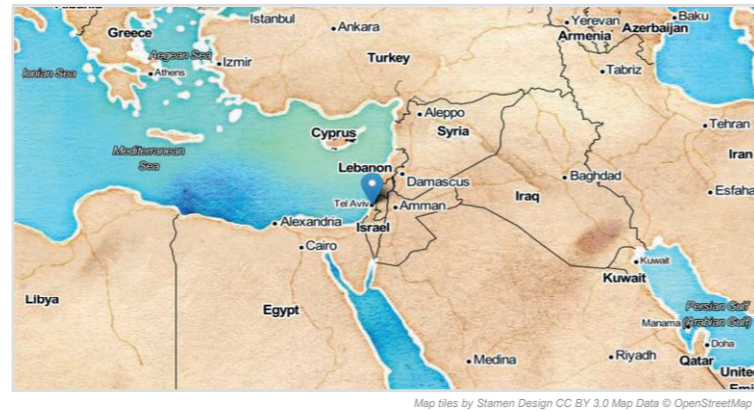
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
4,180,000

(UN World Urbanization Prospects)

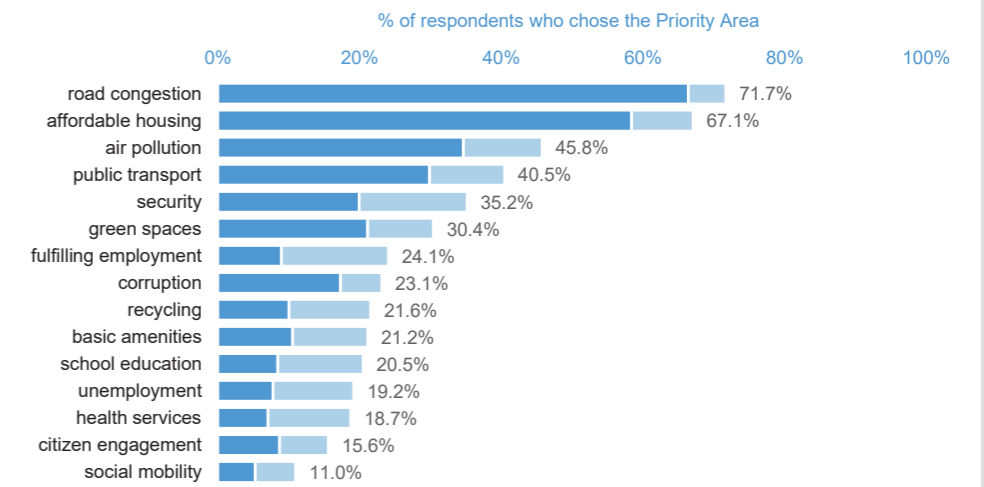


Country	2016	2017	2018	2019	1 yr change
HDI	0.902	0.904	0.906	0.919	+0.013
Life expectancy at Birth	82.5	82.7	82.8	83.0	+0.2
Expected years of schooling	15.9	16.0	16.0	16.2	+0.2
Mean years of schooling	13.0	13.0	13.0	13.0	+0.0
GNI per capita (PPP \$)	32,428	32,860	33,650	40,187	+6,537

### PRIORITY AREAS

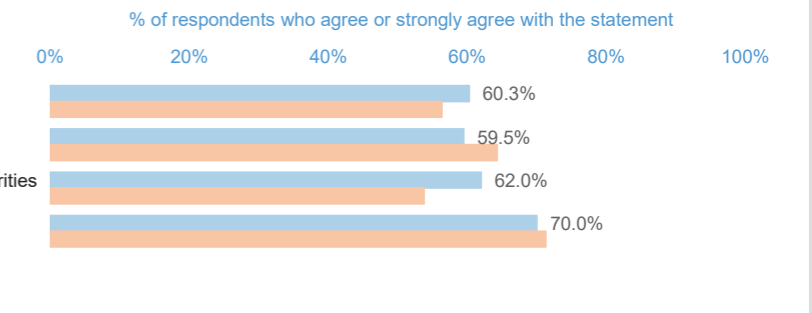
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

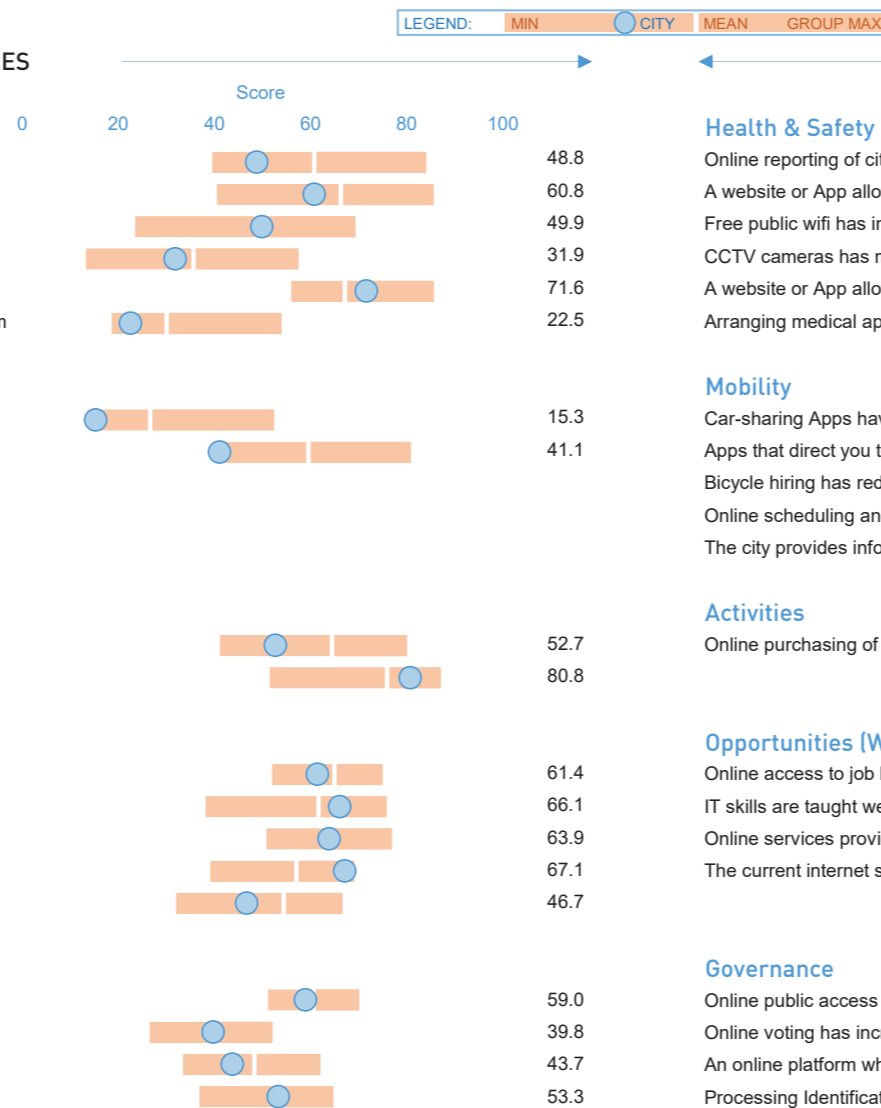
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

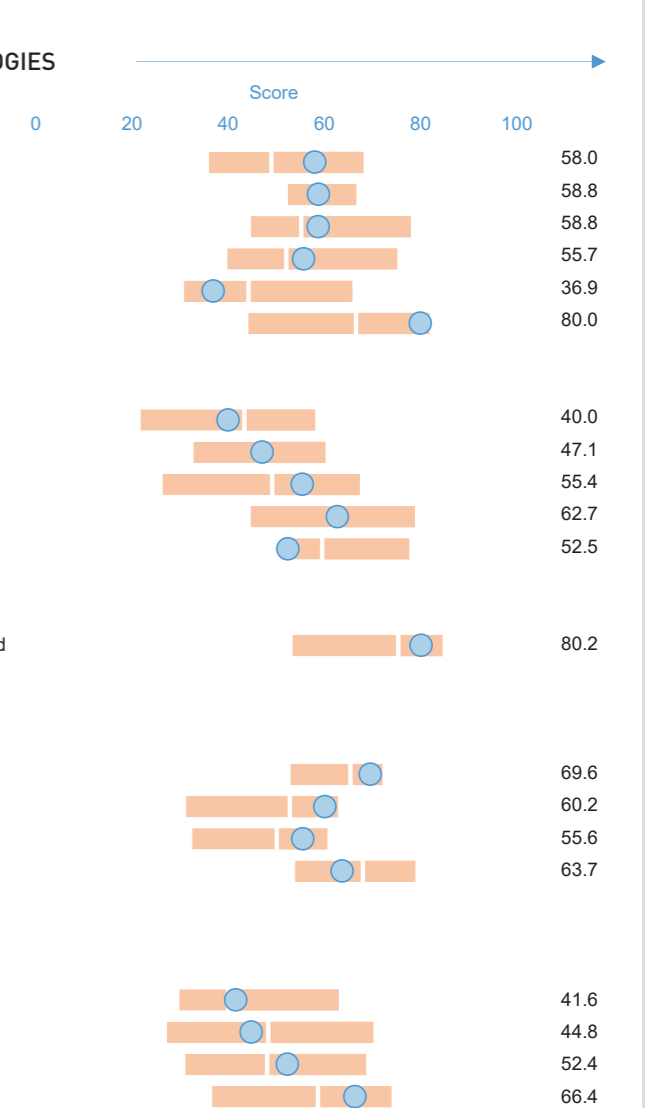
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# The Hague

## SMART CITY RANKING

23

Out of 118



28 in 2020

## SMART CITY RATING

BBB

BBB in 2020

## FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
770,000

(Eurostat)

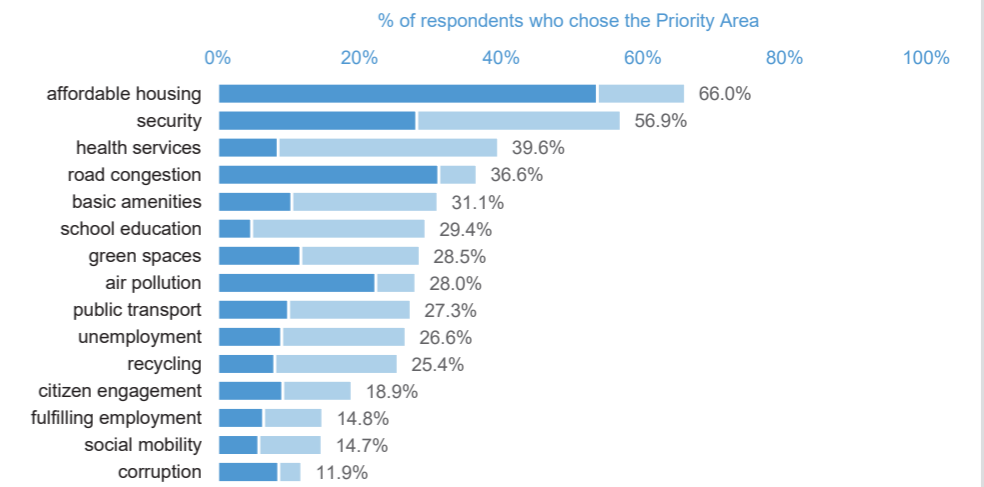


Country	2016	2017	2018	2019	1 yr change
HDI	0.929	0.932	0.934	0.944	+0.010
Life expectancy at Birth	81.9	82.0	82.1	82.3	+0.2
Expected years of schooling	18.0	18.0	18.0	18.5	+0.5
Mean years of schooling	12.2	12.2	12.2	12.4	+0.2
GNI per capita (PPP \$)	47,008	48,994	50,013	57,707	+7,694

### PRIORITY AREAS

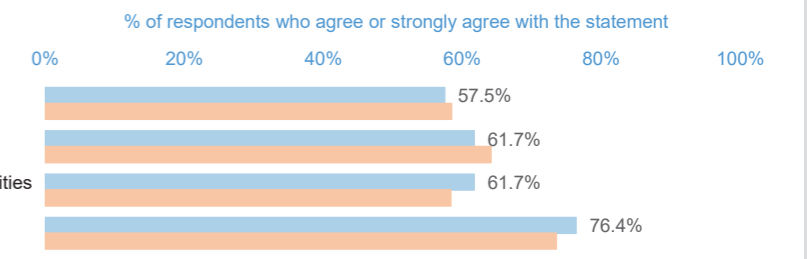
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

67.4

67.8

54.8

40.4

76.1

30.3

34.8

70.4

65.4

76.9

68.4

76.6

62.4

63.8

59.8

60.4

53.2

52.3

59.9

### 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

51.9

55.8

53.2

56.3

37.3

64.8

35.9

40.8

46.9

59.7

46.8

70.7

66.2

53.8

49.2

65.1

41.2

48.7

50.4

55.8

# Tianjin

## SMART CITY RANKING

70

Out of 118



63 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
13,590,000

(UN World Urbanization Prospects)

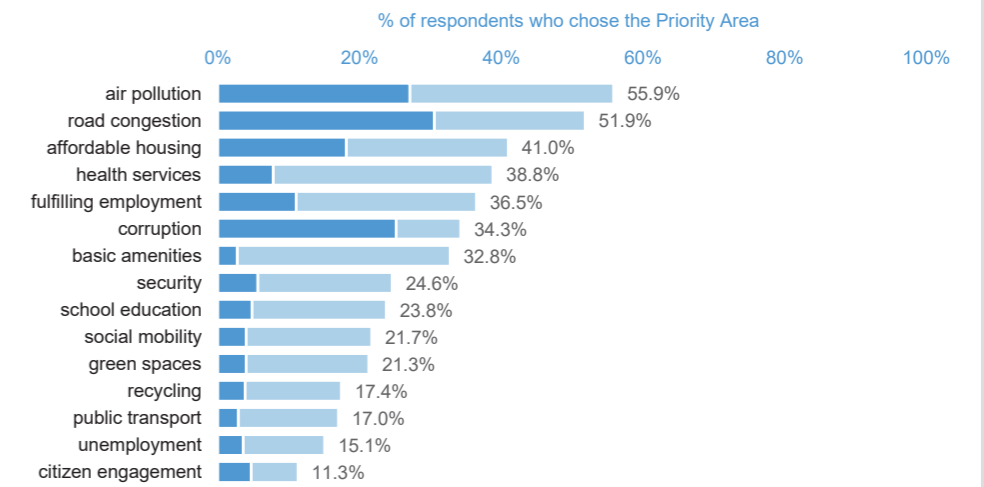


Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

### PRIORITY AREAS

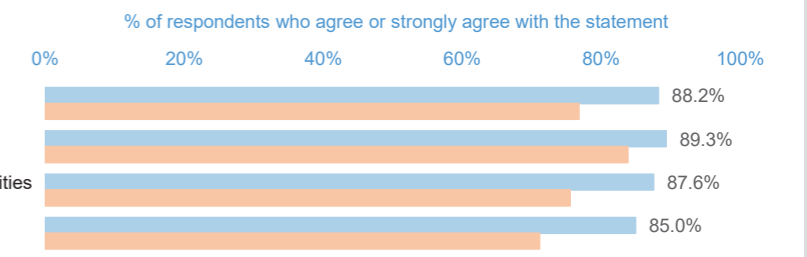
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

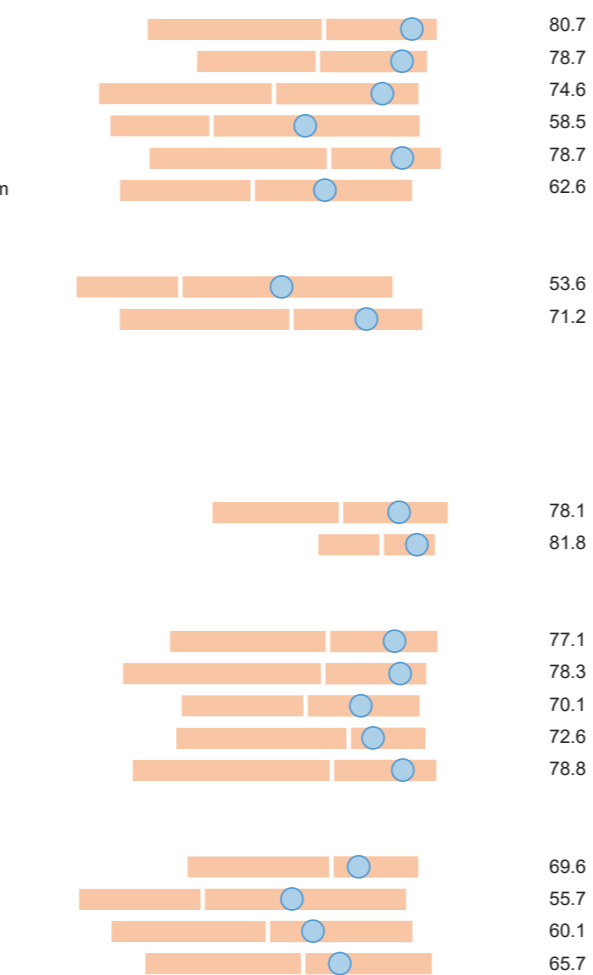
Employment finding services are readily available  
 Most children have access to a good school  
 Lifelong learning opportunities are provided by local institutions  
 Businesses are creating new jobs  
 Minorities feel welcome

#### 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

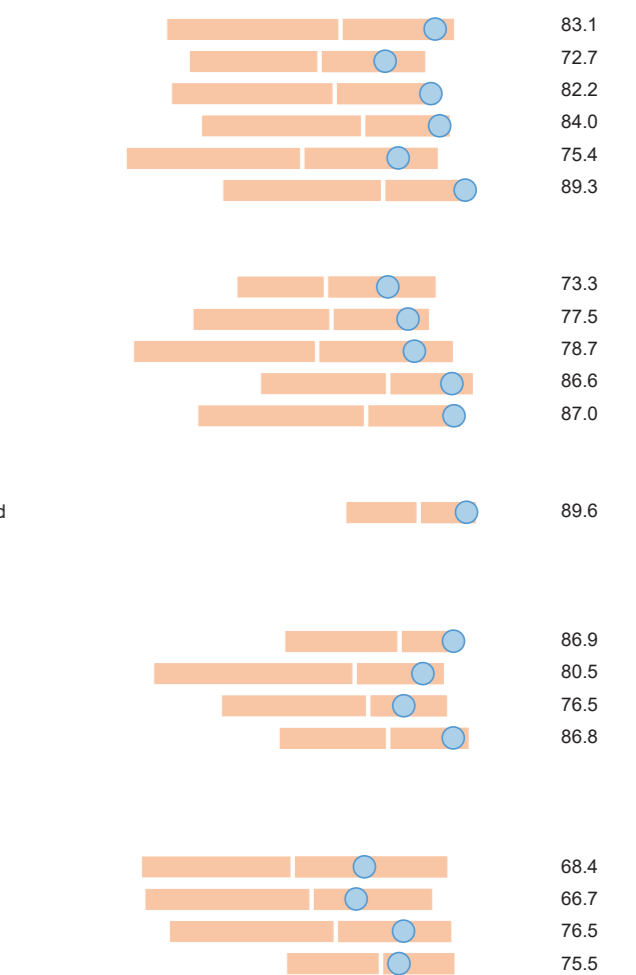
#### Opportunities (Work & School)

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



# Tokyo

## SMART CITY RANKING

84

Out of 118



79 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
37,390,000

(UN World Urbanization Prospects)



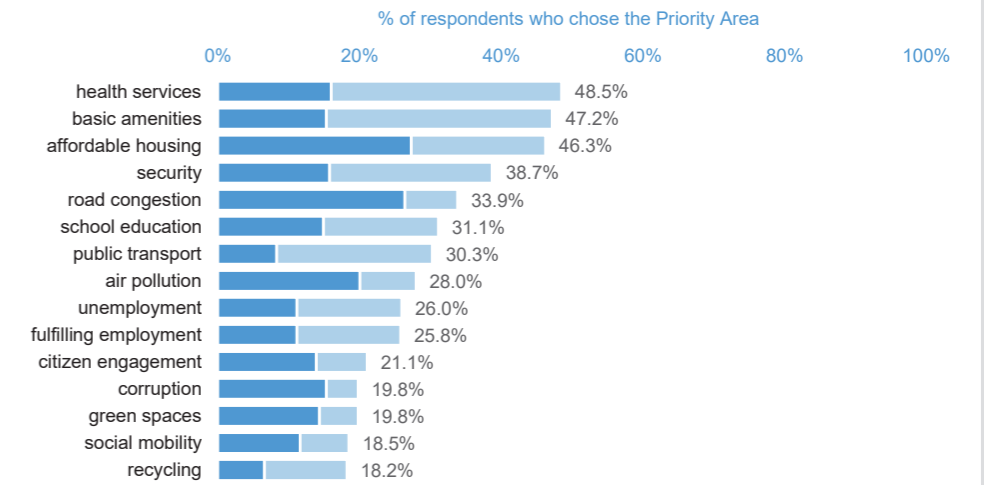
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.910	0.913	0.915	0.919	+0.004
Life expectancy at Birth	84.1	84.3	84.5	84.6	+0.1
Expected years of schooling	15.2	15.2	15.2	15.2	+0.0
Mean years of schooling	12.7	12.8	12.8	12.9	+0.1
GNI per capita (PPP \$)	39,407	40,343	40,799	42,932	+2,133

### PRIORITY AREAS

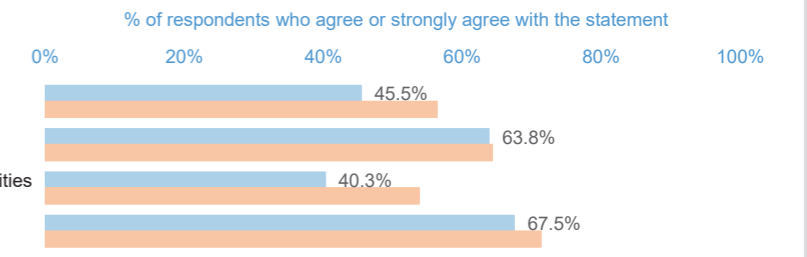
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

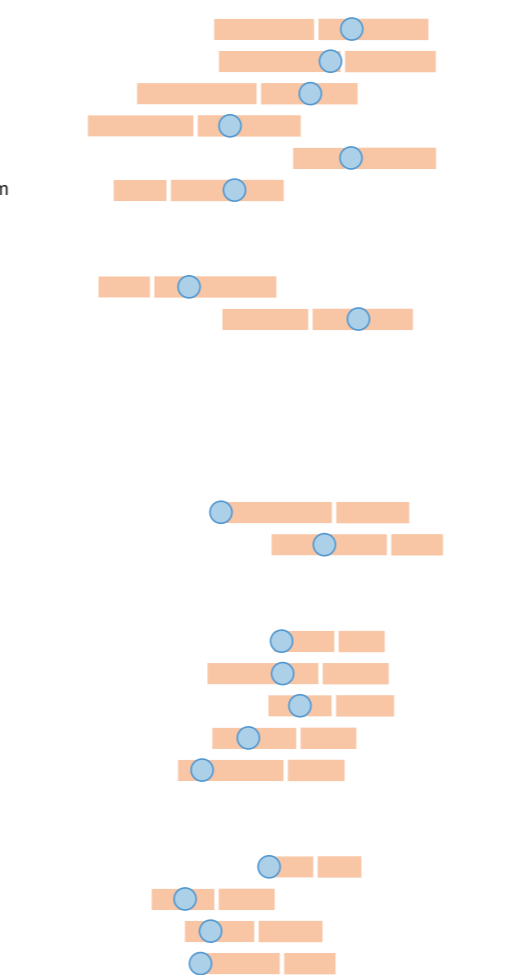
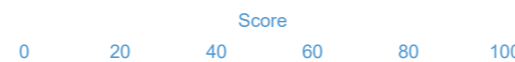
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

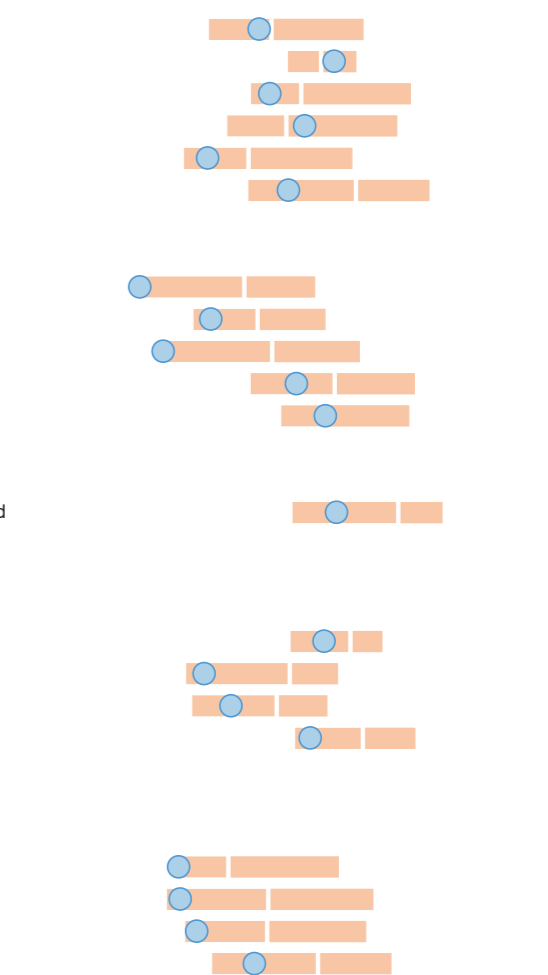
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Toronto

## SMART CITY RANKING

36

Out of 118



30 in 2020

## SMART CITY RATING

BB

BBB in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
6,200,000

(UN World Urbanization Prospects)

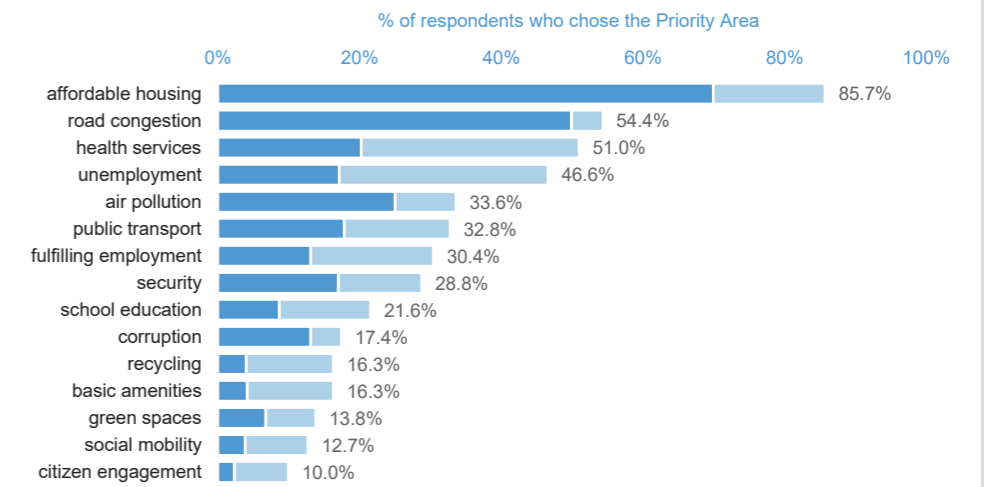


Country	2016	2017	2018	2019	1 yr change
HDI	0.920	0.921	0.922	0.929	+0.007
Life expectancy at Birth	82.1	82.2	82.3	82.4	+0.1
Expected years of schooling	16.1	16.1	16.1	16.2	+0.1
Mean years of schooling	13.3	13.3	13.3	13.4	+0.1
GNI per capita (PPP \$)	42,691	43,496	43,602	48,527	+4,925

### 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.



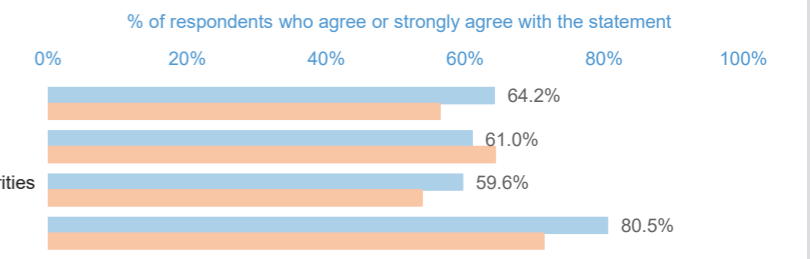
### ATTITUDES

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

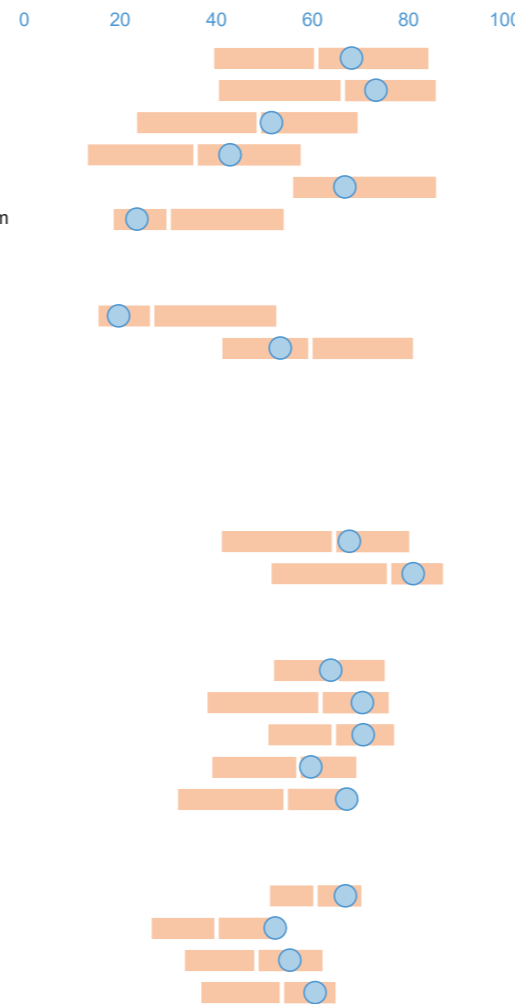
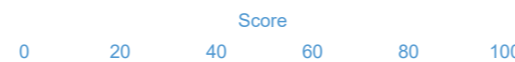
#### Governance

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

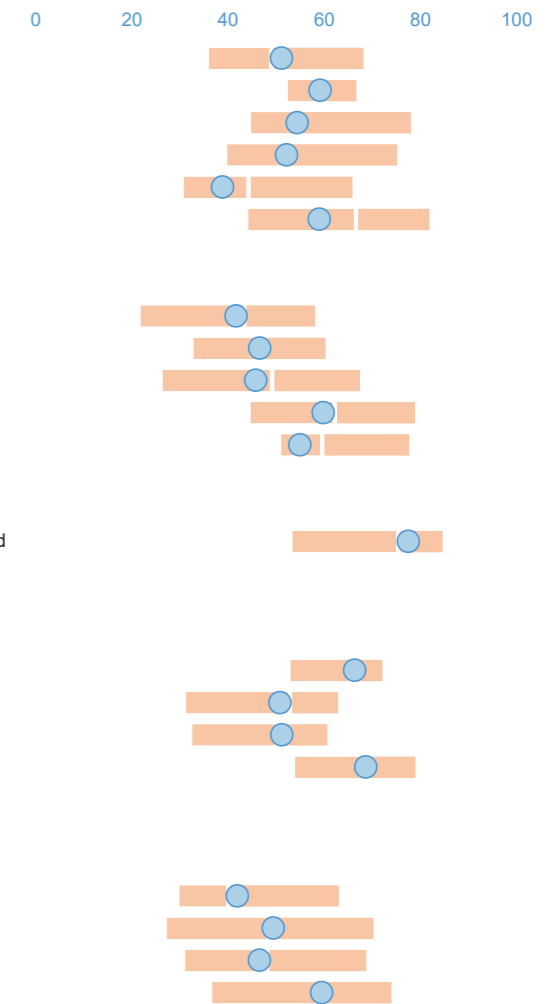
#### Governance

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



# Vancouver

## SMART CITY RANKING

33

Out of 118



19 in 2020

## SMART CITY RATING

BB

A in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

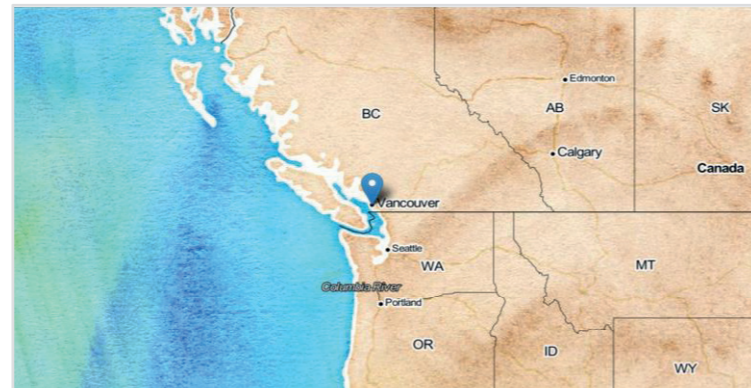
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
2,580,000

(UN World Urbanization Prospects)



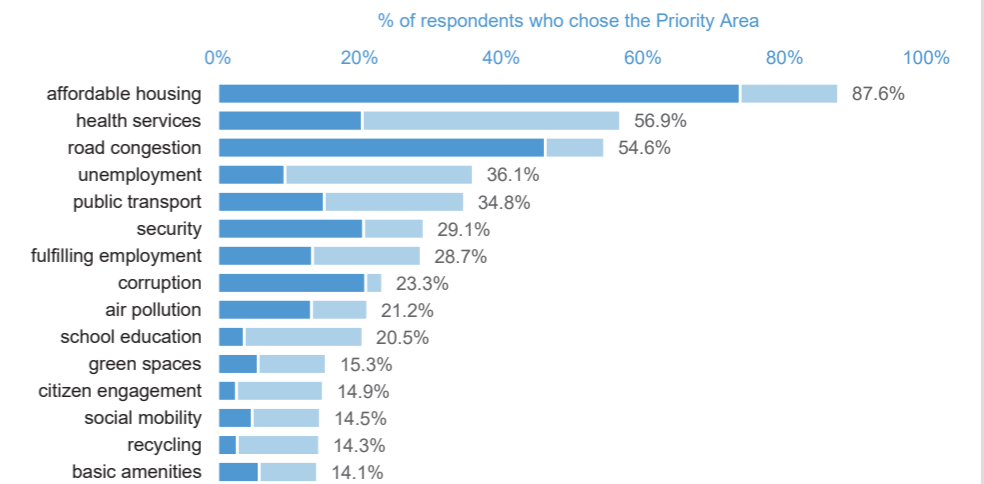
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.920	0.921	0.922	0.929	+0.007
Life expectancy at Birth	82.1	82.2	82.3	82.4	+0.1
Expected years of schooling	16.1	16.1	16.1	16.2	+0.1
Mean years of schooling	13.3	13.3	13.3	13.4	+0.1
GNI per capita (PPP \$)	42,691	43,496	43,602	48,527	+4,925

### PRIORITY AREAS

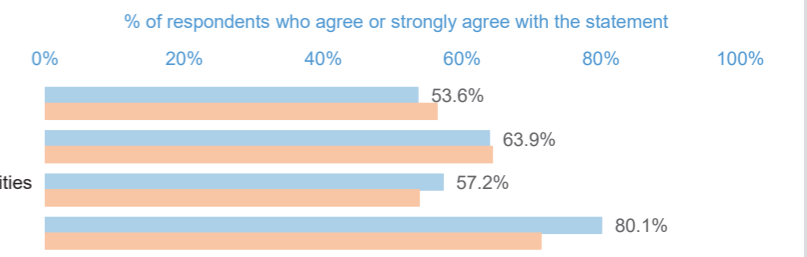
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

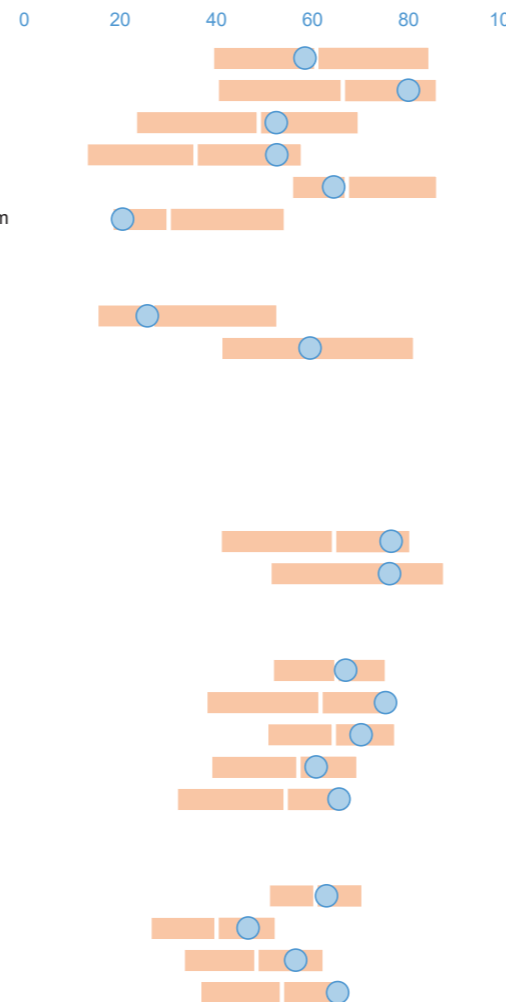
#### Opportunities (Work & School)

- 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

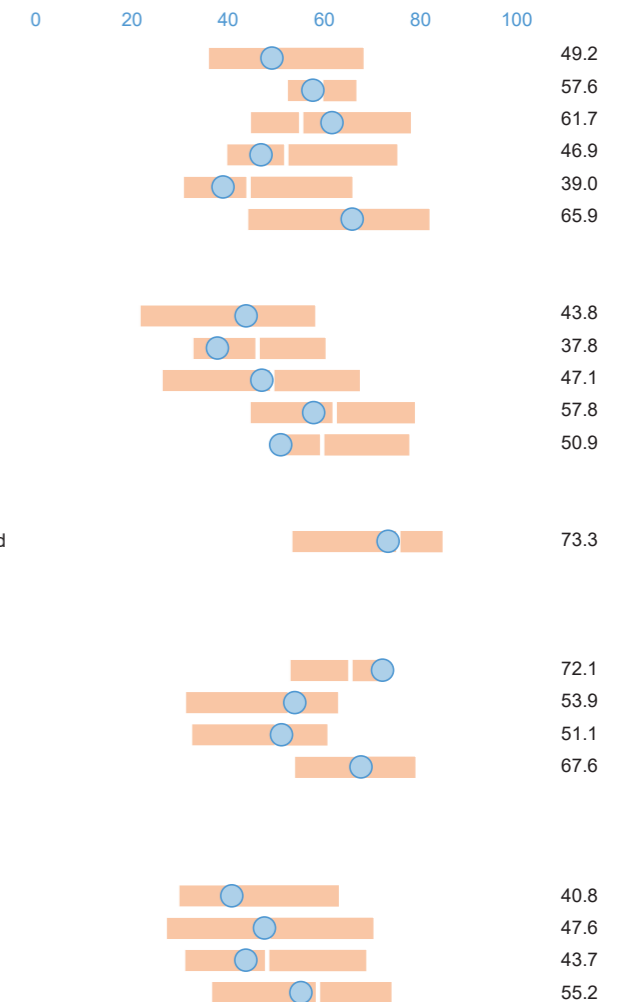
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



# Vienna

## SMART CITY RANKING

11

Out of 118



25 in 2020

## SMART CITY RATING

BBB

BBB in 2020

## FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,930,000

(UN World Urbanization Prospects)

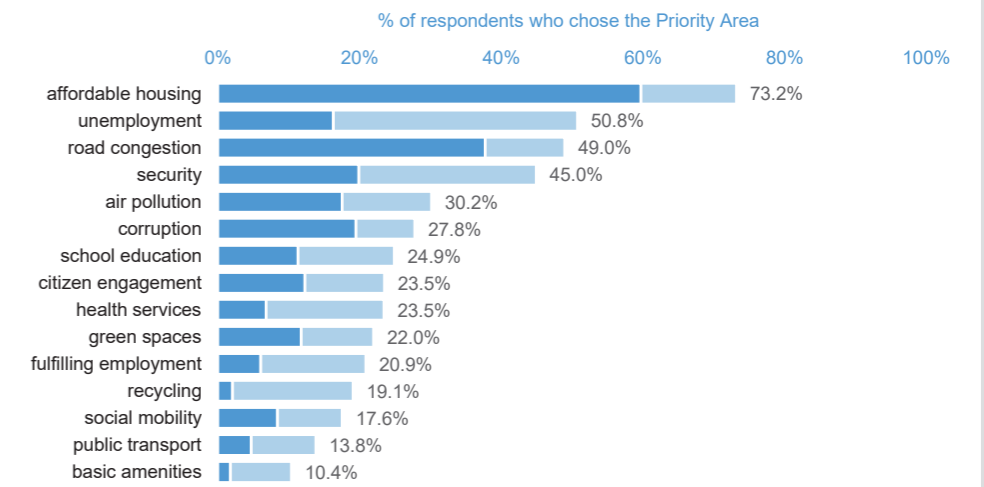


Country	2016	2017	2018	2019	1 yr change
HDI	0.909	0.912	0.914	0.922	+0.008
Life expectancy at Birth	81.3	81.3	81.4	81.5	+0.1
Expected years of schooling	16.1	16.3	16.3	16.1	-0.2
Mean years of schooling	12.6	12.6	12.6	12.5	-0.1
GNI per capita (PPP \$)	44,621	45,375	46,231	56,197	+9,966

### PRIORITY AREAS

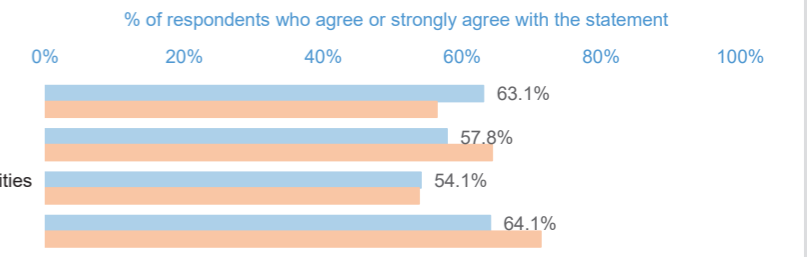
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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)

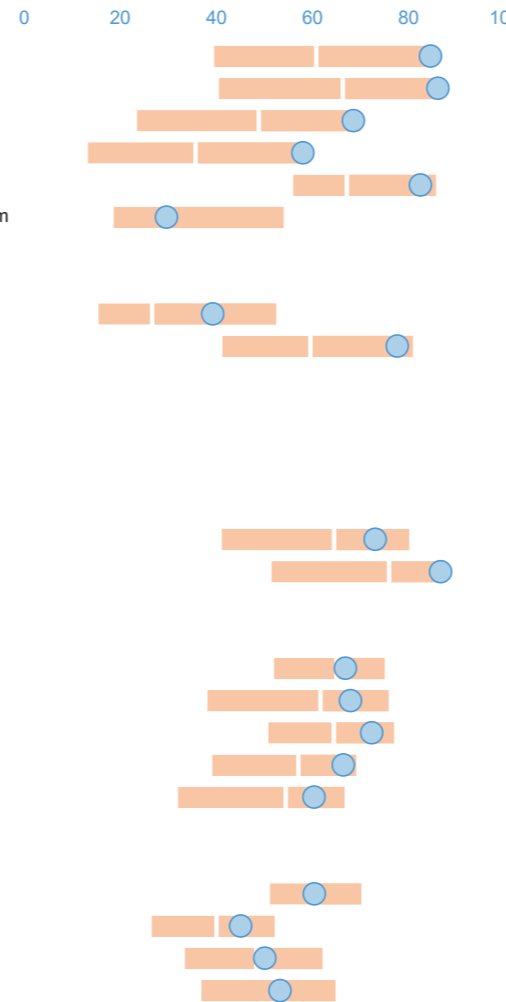
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### 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

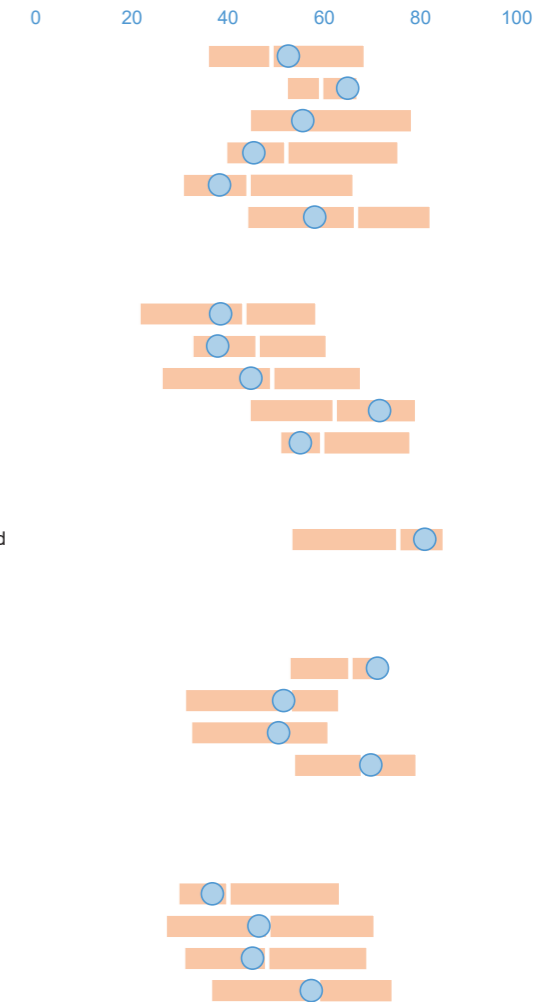
#### Opportunities (Work & School)

- 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



# Warsaw

## SMART CITY RANKING

75

Out of 118



55 in 2020

## SMART CITY RATING

CCC

B in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

3

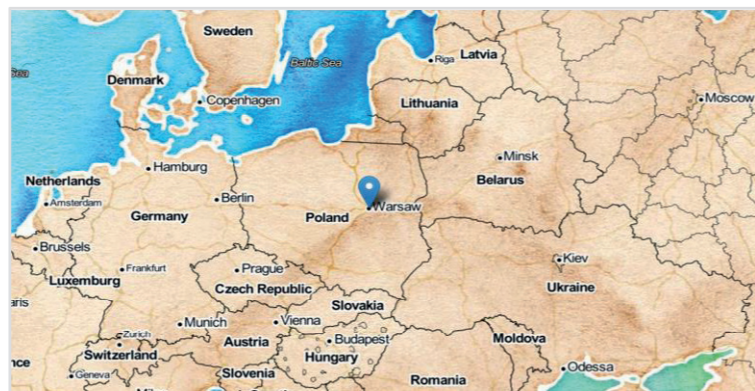
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,780,000

(UN World Urbanization Prospects)



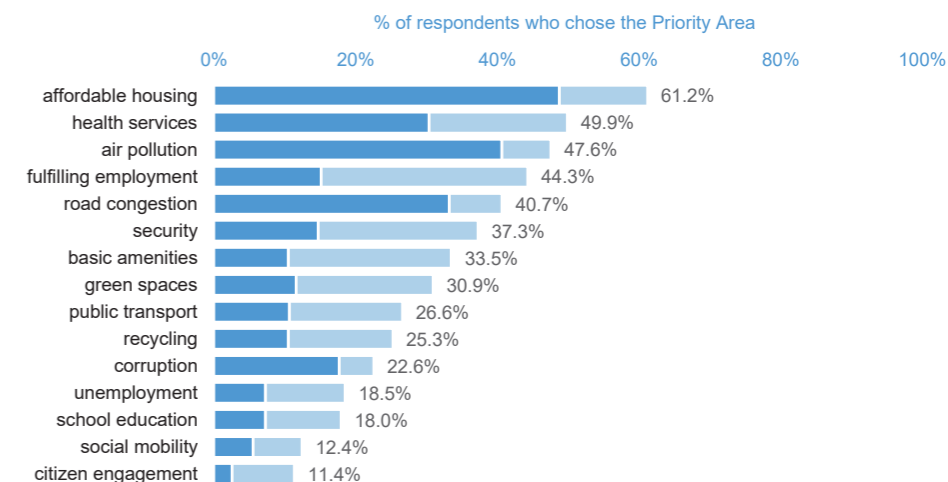
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.864	0.868	0.872	0.880	+0.008
Life expectancy at Birth	78.1	78.3	78.5	78.7	+0.2
Expected years of schooling	16.4	16.4	16.4	16.3	-0.1
Mean years of schooling	12.3	12.3	12.3	12.5	+0.2
GNI per capita (PPP \$)	25,042	26,182	27,626	31,623	+3,997

### PRIORITY AREAS

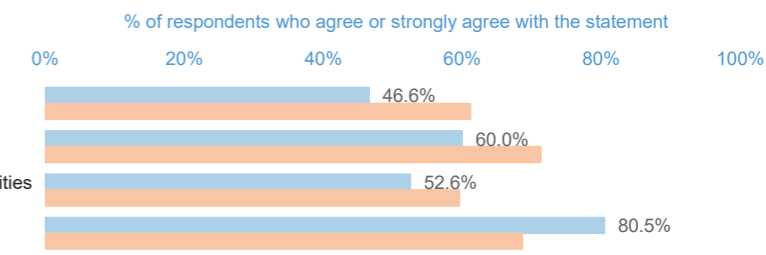
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

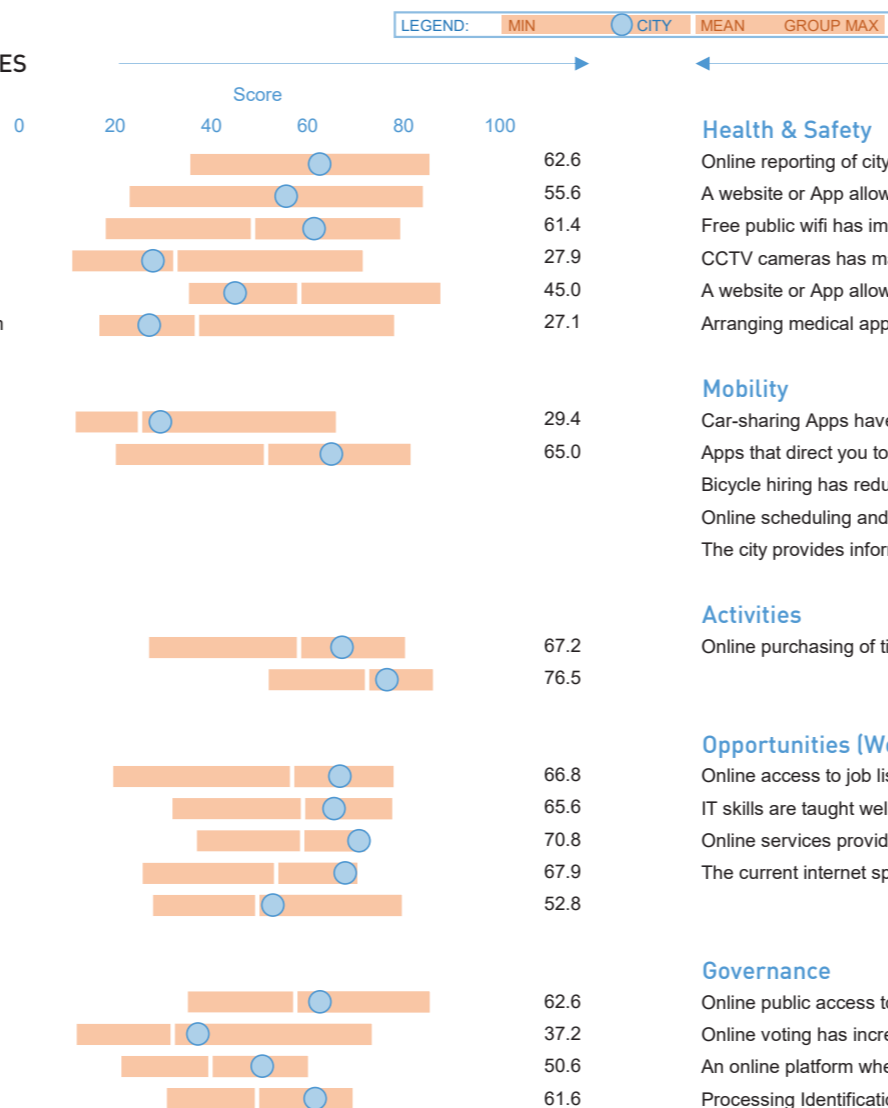
Green spaces are satisfactory  
 Cultural activities (shows, bars, and museums) are satisfactory

#### 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

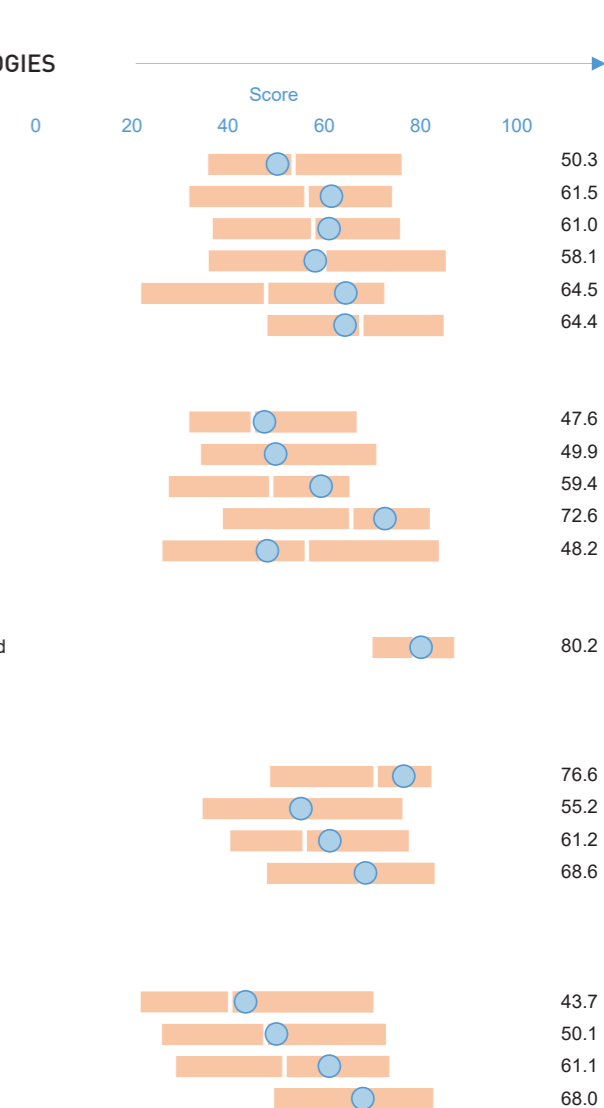
Online purchasing of tickets to shows and museums has made it easier to attend

#### 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





# Washington D.C.

## SMART CITY RANKING

35

Out of 118



12 in 2020

## SMART CITY RATING

BB

A in 2020

## FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

## GROUP

2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
5,320,000

(UN World Urbanization Prospects)



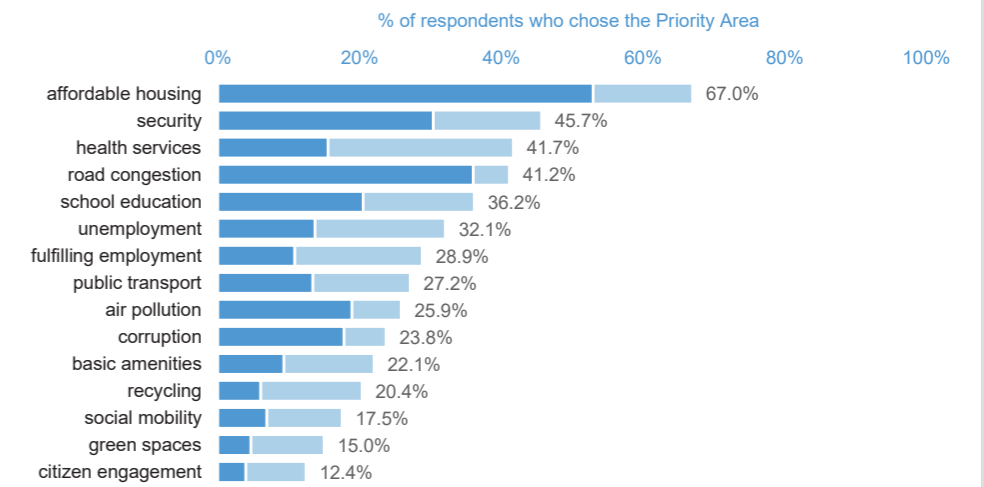
Map files by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.919	0.919	0.920	0.926	+0.006
Life expectancy at Birth	78.9	78.9	78.9	78.9	+0.0
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	54,443	55,351	56,140	63,826	+7,686

### PRIORITY AREAS

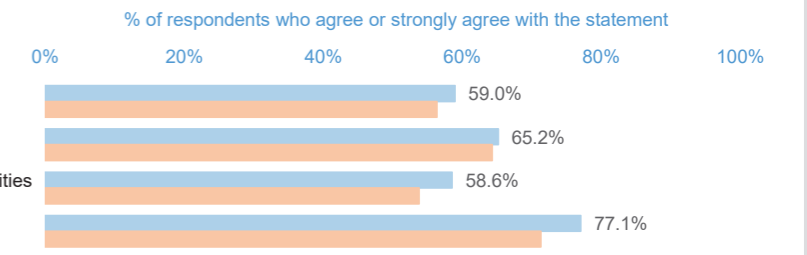
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

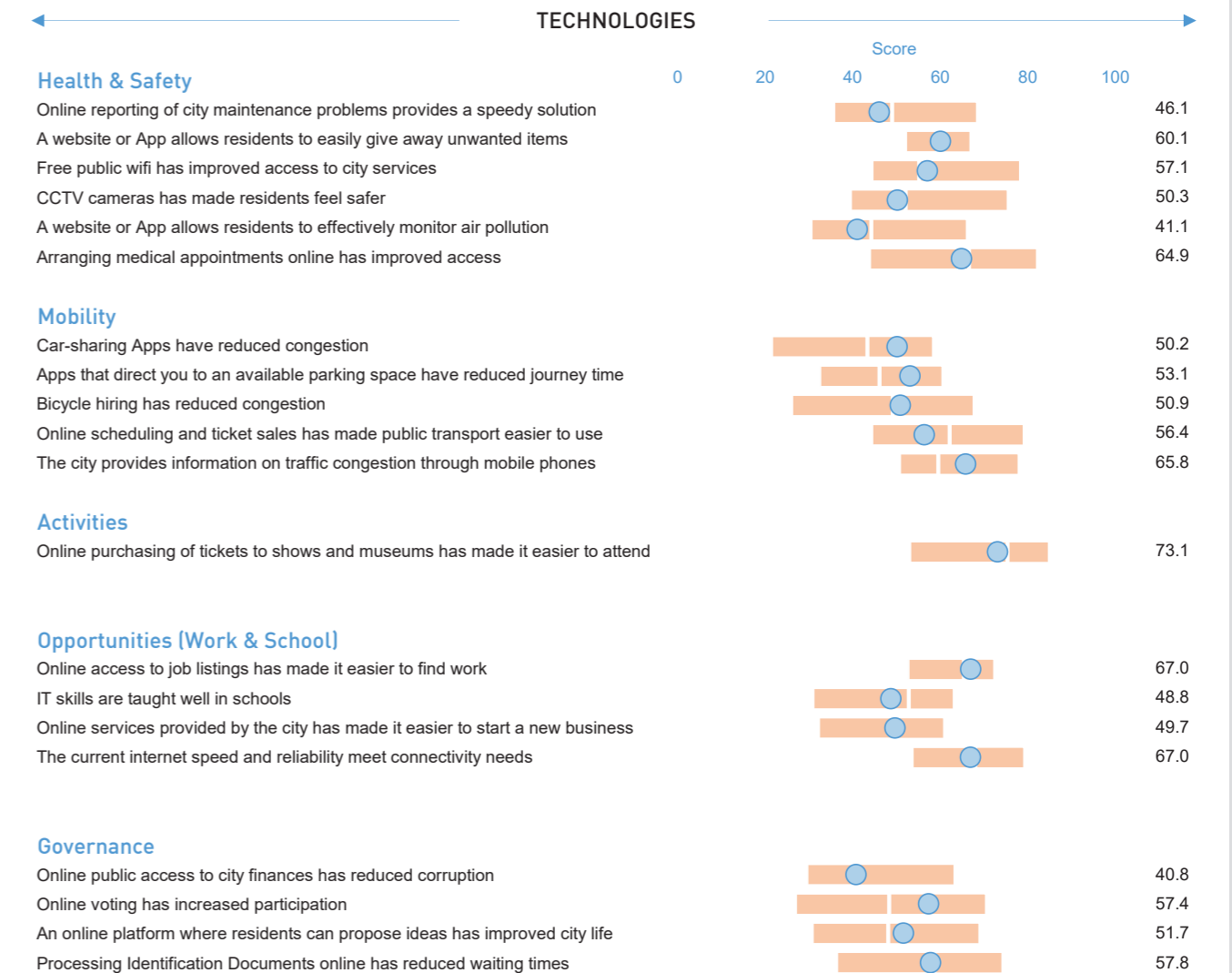
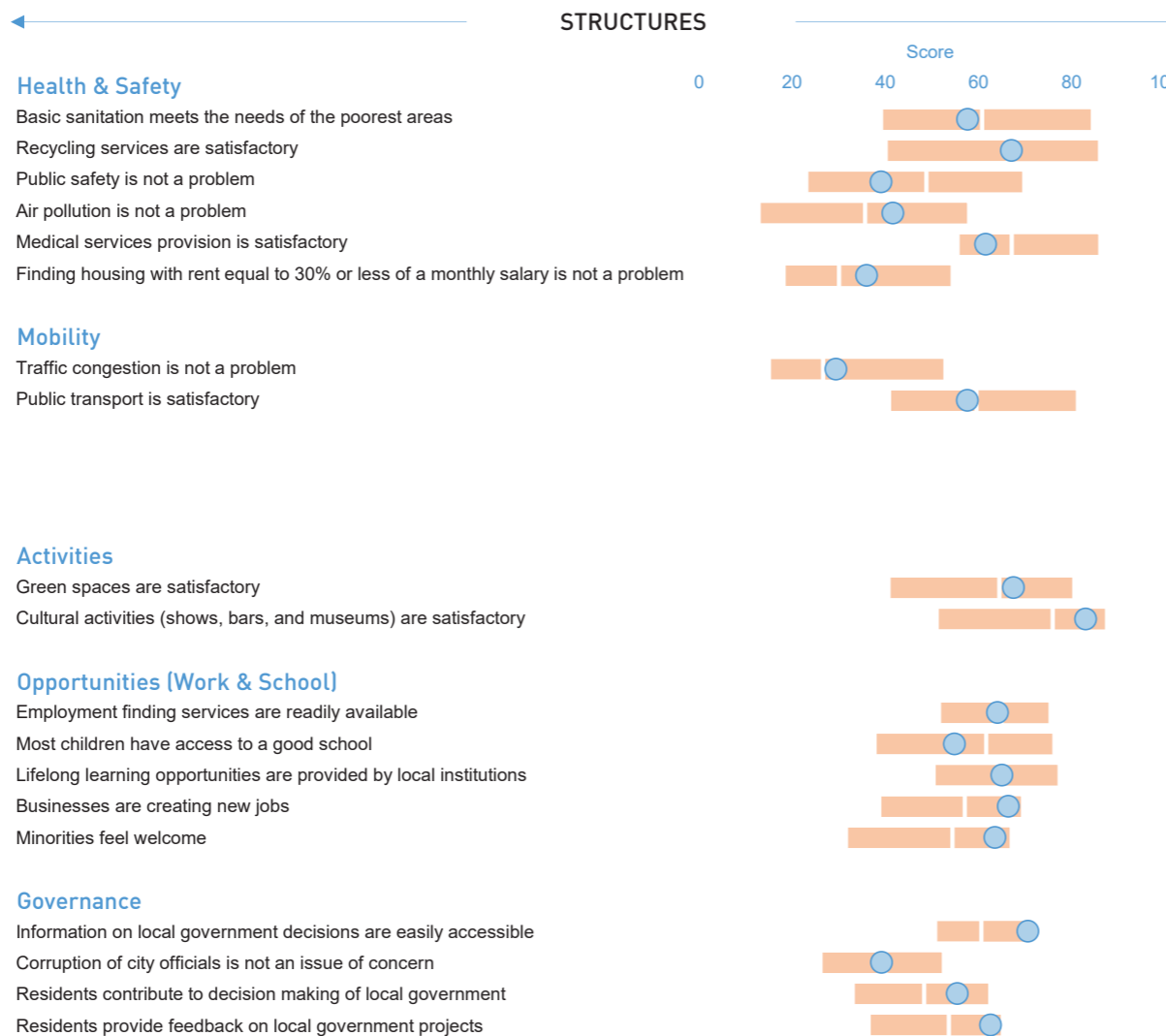


### ATTITUDES

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



# Zaragoza

SMART CITY RANKING

15

Out of 118



48 in 2020

SMART CITY RATING

BBB

BB in 2020

FACTOR RATINGS

A

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population  
670,000

(Eurostat)

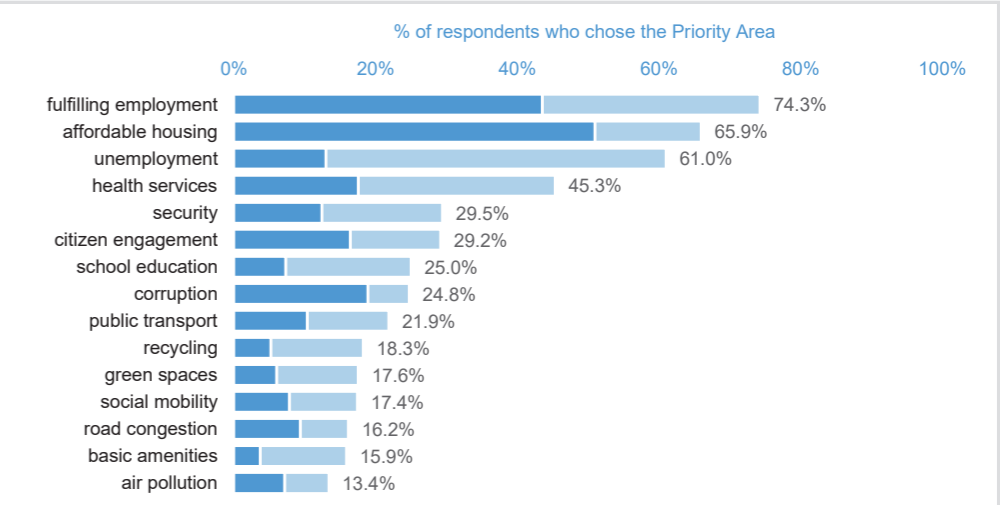


Country	2016	2017	2018	2019	1 yr change
HDI	0.888	0.891	0.893	0.904	+0.011
Life expectancy at Birth	83.1	83.3	83.4	83.6	+0.2
Expected years of schooling	17.8	17.9	17.9	17.6	-0.3
Mean years of schooling	9.8	9.8	9.8	10.3	+0.5
GNI per capita (PPP \$)	33,379	34,226	35,041	40,975	+5,934

## PRIORITY AREAS

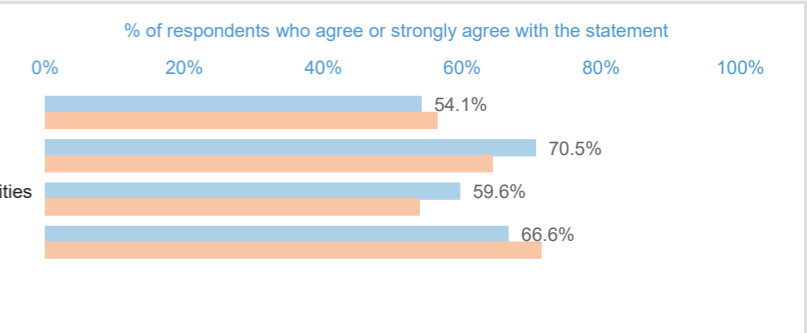
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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.

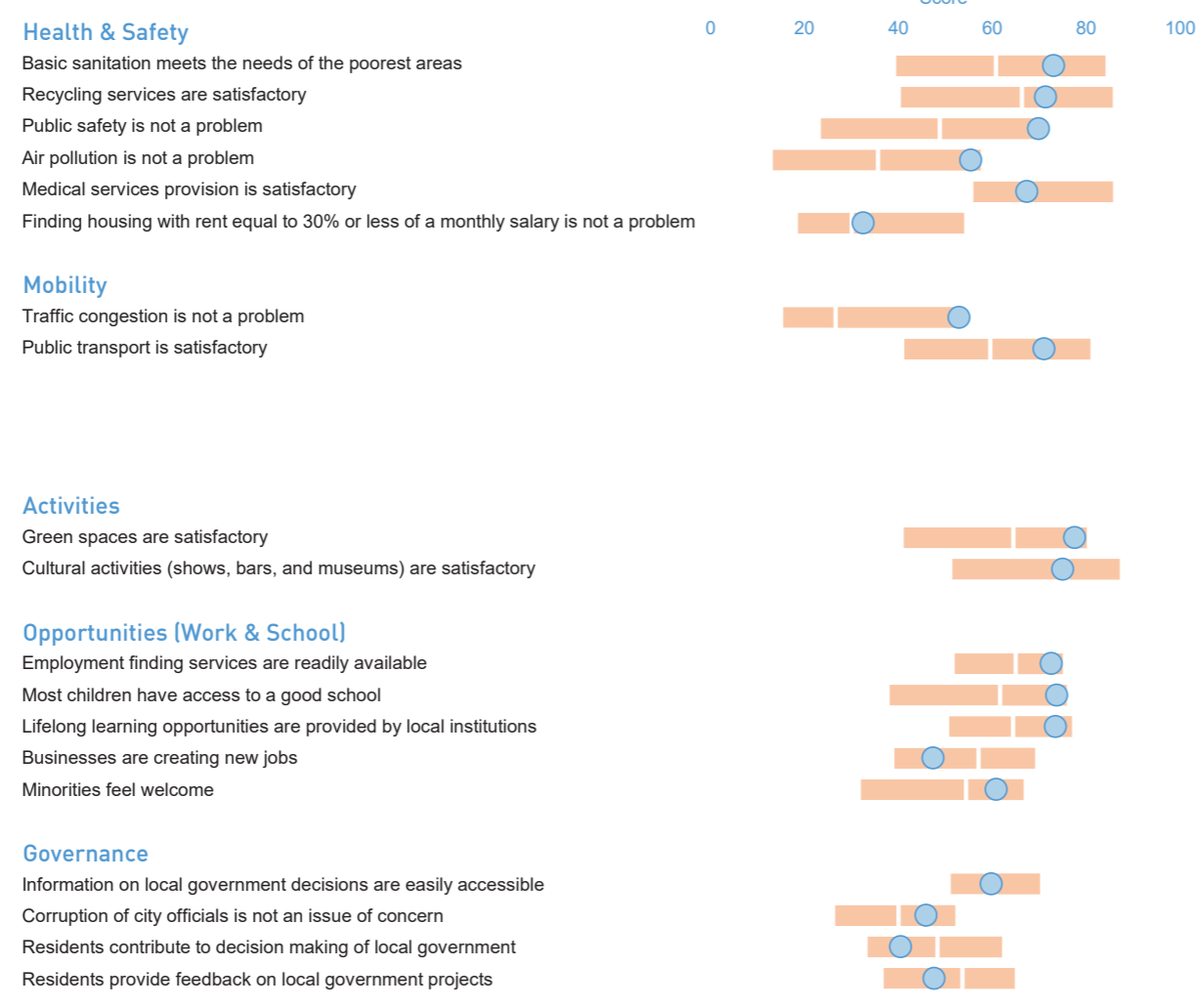


## ATTITUDES

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



## TECHNOLOGIES



# Zhuhai

## SMART CITY RANKING

63

Out of 118



62 in 2020

## SMART CITY RATING

CCC

CCC in 2020

## FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

## GROUP

4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
1,760,000

(UN World Urbanization Prospects)



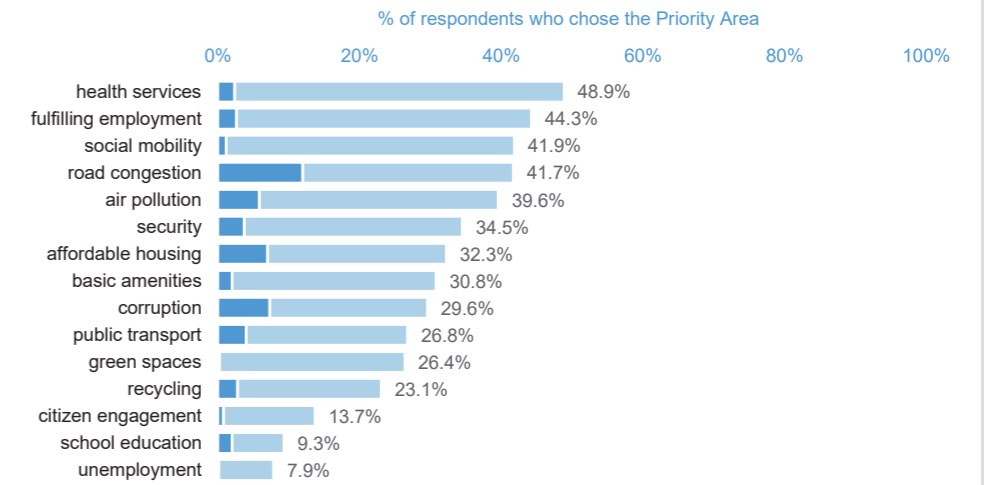
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2016	2017	2018	2019	1 yr change
HDI	0.749	0.753	0.758	0.761	+0.003
Life expectancy at Birth	76.2	76.5	76.7	76.9	+0.2
Expected years of schooling	13.9	13.9	13.9	14.0	+0.1
Mean years of schooling	7.8	7.8	7.9	8.1	+0.2
GNI per capita (PPP \$)	14,311	15,212	16,127	16,057	-70

### PRIORITY AREAS

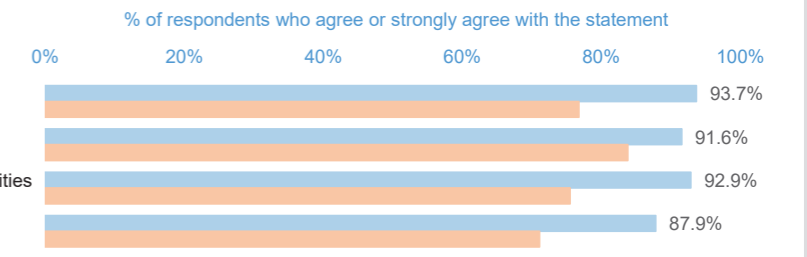
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

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

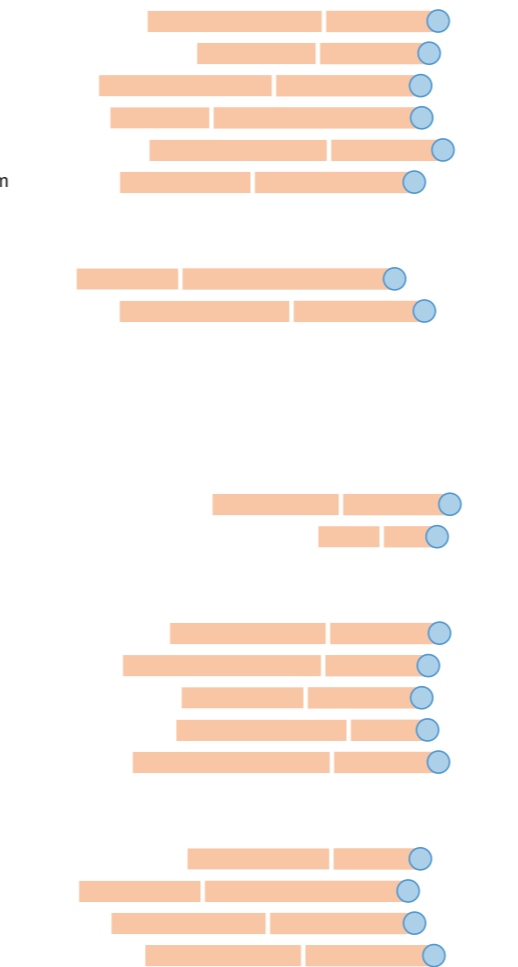
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### 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

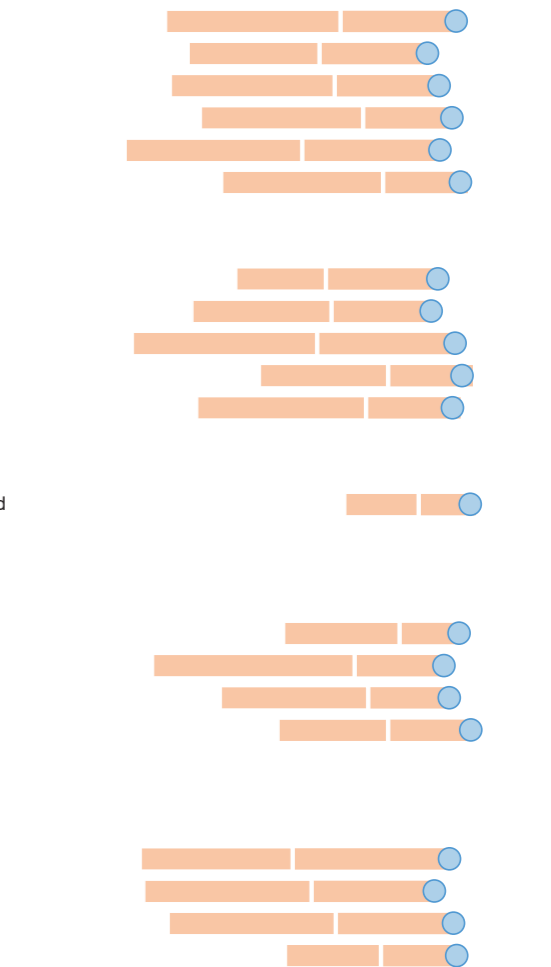
- Online purchasing of tickets to shows and museums has made it easier to attend

#### 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



## SMART CITY RANKING

2

Out of 118



3 in 2020

## SMART CITY RATING

AA

AA in 2020

## FACTOR RATINGS

AAA

STRUCTURES

A

TECHNOLOGIES

## GROUP

1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population  
410,000

(Eurostat)

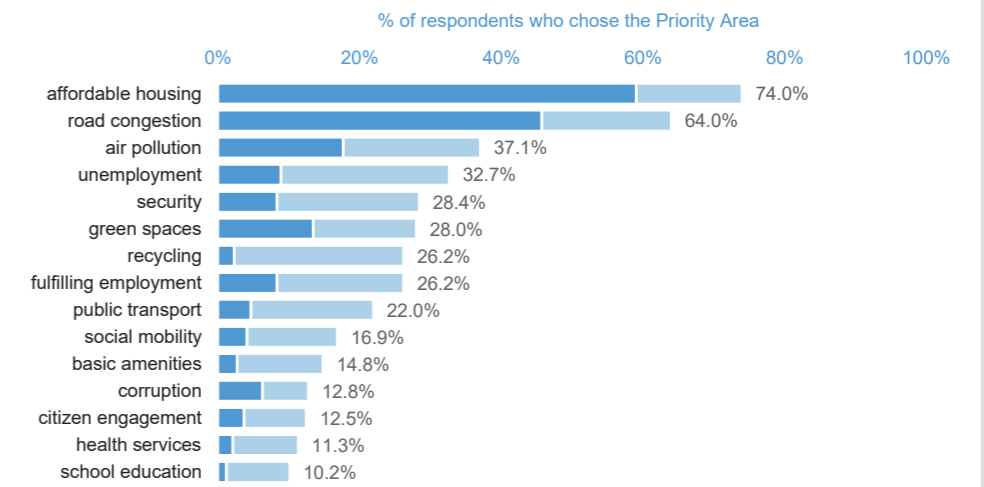


Country	2016	2017	2018	2019	1 yr change
HDI	0.943	0.943	0.946	0.955	+0.009
Life expectancy at Birth	83.3	83.5	83.6	83.8	+0.2
Expected years of schooling	16.2	16.2	16.2	16.3	+0.1
Mean years of schooling	13.4	13.4	13.4	13.4	+0.0
GNI per capita (PPP \$)	58,138	57,301	59,375	69,394	+10,019

### 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.



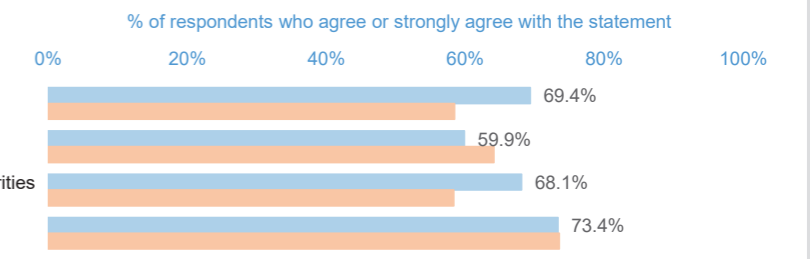
### ATTITUDES

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



A collaboration between:

