IMD Smart City

Index Report 2023

IMD / World Competitiveness Center

In partnership with

WeGO
World Smart Sustainable Cities Organization

“I have never felt salvation in nature. I love cities above all.”

— **Michelangelo**

“The mark of a great city isn’t how it treats its special places – everybody does that right – but how it treats its ordinary ones.”

— **Aaron M. Renn**
(The Urban State of Mind: Meditations on the City)

IMD Smart City Index 2023

Introduction

A New Beginning: A More Precise, Relevant and Impactful Smart City Index

IMD Smart City Index 2023

Introduction: A More Precise, Relevant and Impactful Smart City Index

Welcome to the 2023 edition of the IMD Smart City Index Report (SCI Report).

This edition marks a significant step in the history of this report, which has now acquired global recognition and respect. After a break in 2022, three major changes have been brought to the Index and accompanying report.

1. The World Smart Sustainable Cities Organization (WeGO) has joined us as a knowledge partner;
2. The number of cities in the SCI has significantly increased; and
3. The SCI's methodology has been improved thanks to the acquisition of new data.

Each of these changes has significant consequences. They make us even more enthusiastic about the impact and relevance of the Index, and about its future. Here's why:

A New Knowledge Partner

The World Smart Sustainable Cities Organization (WeGO), is a membership-based international association of local governments, smart tech solution providers, and institutions committed to the transformation of cities into smart, sustainable cities through facilitating public-private partnerships (PPP). It was founded by 50 member cities in 2010 as the World e-Governments Organization, hence the acronym. However, as the concept of "smart cities" continued evolving, during the 4th General Assembly (2017) WeGO expanded its mandate and changed its name to the World Smart Sustainable Cities Organization.

For its members, WeGO serves as an international platform to improve the quality of life, innovate in the delivery of public services, and strengthen regional competitiveness. The WeGO network currently includes over 200 cities, 26 are covered by this edition of the SCI index and report. Organization, hence the acronym. However, as the concept of "smart cities" continued evolving, during the 4th General Assembly (2017) WeGO expanded its mandate and changed its name to the World Smart Sustainable Cities Organization.

From 118 to 141 Cities

The coverage of the SCI and SCI Report has increased by 20 per cent to include 141 cities (previously 118 were measured), distributed across the world. This reflects the SCI's ongoing efforts to be a global index, and to facilitate the benchmarking of all kinds of cities, whatever their size or level of development. This year, we have made a concerted effort to include more capital cities from all continents, while keeping an eye on 'second-tier cities' showing signs of dynamism, and an appetite for designing and implementing innovative solutions to their key problems.

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New Data at City Level

The SCI's methodology has been improved thanks to the acquisition of new data at the city level.

The SCI was designed as a tool for action. Since it is based on people's perceptions (surveys), it is critically important that the answers collected are calibrated to the specific context of the cities studied.

For the 2021 Index and all prior editions, we relied on country-level Human Development Index (HDI) data provided by the United Nations Development Programme (UNDP). Throughout the course of 2022, we explored the possibility of using city-level HDI data that could provide a more granular (and realistic) vision of the socio-economic environment of specific cities. The new SCI methodology is described in detail below. We believe that time invested in furthering our methodological approach was incredibly well spent and are excited by the applicability of the results obtained.

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The SCI's value rests greatly on its ability to generate time series, and this is where citizens and decision makers can track the evolution of their city's performance over time, and compare it with that of other cities around the world. It follows that deciding to change an index's methodology isn't easy and often comes at the cost of breaking the continuity necessary to build such a series. We are proud to announce that in the case of the SCI, we have been able to not only improve the methodology but also to preserve our users' ability to work on time series. We did so by 'building back' the data and rankings that would have been those of the cities covered if the new methodology had been applied at the time. This means that the rankings of the SCI 2023 should not be compared to those published in previous SCI reports as they are the result of different approaches. However, comparisons across time can be made and used with recourse to the tables included in this report that reflect the 2019-2023 rankings of the cities covered using the most recent methodology. See pages 39-40 of this report.

Against the background of these three significant changes, what key messages emerge from this revamped 2023 Index and Report? They can be summarized as follows:

1. The global landscape of smart cities is changing, and lessons can be learned from the experience of "SCI champions"–the top 20.

2. Globally, a new world is shaping up, and **changes at the city level are a precious indicator** of what the future may hold.

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Lessons from the champions: who is in the top 20, and how did they do it?

In 2023, the upper echelons of the SCI comprise the 20 cities in the table below. Rankings prior to 2023 have been adjusted according to the new methodology for the purposes of homogeneity and to allow comparison.

City	Rank 2023	Rank 2021	Rank 2020	Rank 2019
Zurich	1	1	1	1
Oslo	2	2	2	2
Canberra	3	–	–	–
Copenhagen	4	5	3	4
Lausanne	5	4	–	–
London	6	3	10	3
Singapore	7	7	7	10
Helsinki	8	9	5	6
Geneva	9	6	8	7
Stockholm	10	11	9	9
Hamburg	11	8	6	–
Beijing	12	17	22	30
Abu Dhabi	13	12	14	16
Prague	14	10	4	8
Amsterdam	15	13	11	11
Seoul	16	18	20	23
Dubai	17	14	19	13
Sydney	18	29	32	22
Hong Kong	19	33	34	38

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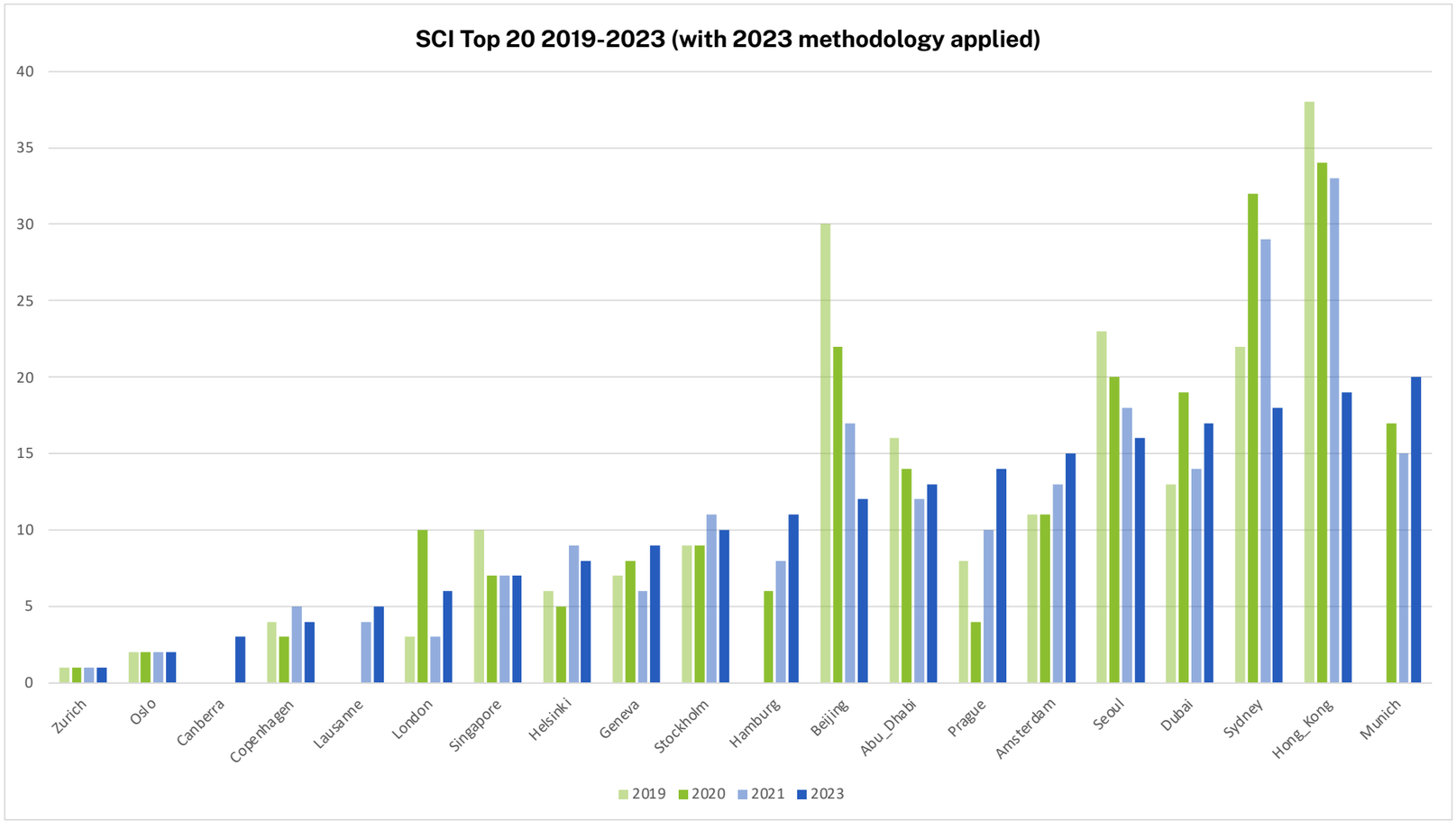
Several observations can be made by analyzing this list. Most strikingly, out of the top 20, 17 cities have been part of the SCI since its creation. Among those 17, six cities show either a continuous improvement or stability, year-upon-year. These ‘super-champions’ are: Zurich, Oslo, Singapore, Beijing, Seoul, and Hong Kong.)



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Introduction: A More Precise, Relevant and Impactful Smart City Index

A New World is Shaping Up. Cities Tell Us Where to Look

1. **Asia and Europe ahead of the pack?** Apart from Abu Dhabi and Dubai, all of the cities occupying the top 20 are either in Europe or in Asia-Pacific. The absence of American or African cities is notable. New York ranks 22nd while Cairo (108th) is the leading African city. Medellin (118th) is the leading South American one. The 2023 rankings reflect a growing interest and higher levels of concern about the quality of life that residents are expecting to enjoy in their respective cities. Size is often a handicap rather than an advantage in this regard. This explains why most large metropolises such as Boston (34th) or Paris (46th) rank relatively low in the index, in spite of remarkable progress in a number of key areas such as sustainability and mobility.
2. **'Second tier' cities continue to do better than the rest.** Although the SCI's top 20 include 12 capital cities (such as Oslo and Canberra), and several 'economic capitals' (like Zurich and Dubai), the picture is different when one looks at the top half of the rankings (1 to 70); a significant number of medium-sized cities show both solid positions and a continuous ability to move up. In Europe, this is the case for Lausanne, Munich and Bilbao, for example, and elsewhere in the world it rings true for Montreal, Mecca and Denver.
3. **Smart city strategies are undergoing deep changes.** The basic principle that led to the creation of the Smart City Index in 2019 was that if cities wanted to be smarter, they needed to be less technology-centric, and more human-focused. Since then, this way of conceiving the nature and purpose of smart cities has moved closer to being mainstream. Many city officials are now routinely using a variety of different expressions in lieu of 'smart cities': 'open and innovative cities',' inclusive and diverse cities', 'sustainable cities' and 'citizen-centric cities' are becoming part of the new labelling of 'smart cities' that were. But this is not merely a semantic change; it reflects deep changes in the way smart cities (and cities in general) will be designed and managed. Thanks to its initial design and philosophy, the Smart City Index is emerging as a critical tool to benchmark progress along those new lines. The SCI's updated methodology will further enhance its relevance as these changes gather momentum.
4. **Inclusion and diversity are emerging as key benchmarks for success.** An increasing number of cities are deploying new efforts to encourage diversity and inclusion as part of their smart strategies, variously linked to strategies to attract or retain talent, or to pre-existing conditions. Higher levels of tolerance for immigrants and minorities are becoming a marker in the 'quality of life' category, and in 'leaving no one behind' – a key phrase in defining the future of smart cities. Moreover, cities continue to accept (and, sometimes, seek) new roles, as central governments strive to become more agile through decentralization. Even at the international level, at a time in which many multilateral efforts seem to be losing momentum at the nation-states level, cities and their leaders are becoming more visible. Openness and inter-city collaboration may very well become key components of the next wave of globalization.

Continuing to Improve the SCI

There are different ways to improve the quality of the SCI. Expanding the number of cities studied will always extend the scope of the index. Employing more focused data will improve the accuracy of the index and allow for a meaningful comparison among different qualities of cities. Finally, fine tuning the construction of the ranking improves its relevance as an action tool, and allows for better comparisons between cities. The 2023 SCI makes advances in all three dimensions.

As flagged earlier, the city coverage of the SCI index and report has increased by almost 20 per cent, bringing the total number of smart cities to 141. Using city-specific data for the construction of the Index was the focus of our research in 2022. In its new design, the SCI employs a city-specific measure of the HDI initially produced by the United Nations Development Program (UNDP). HDI is a composite index that combines information about life expectancy, expected years of schooling and the mean years of education completed, as well as the per capita income of a country's citizens. Until this year, the SCI used country-level HDI information as a proxy to evaluate the dimensions of health, knowledge and standard of living in each city. The 2023 SCI features city-level HDI, provided by the Global Data Lab. This allows for a more accurate ranking of each city, whilst also allowing readers to compare the performance of any given city to that of the country in which it is found.

Finally, city-level HDI facilitates a more academically rigorous comparison among cities. The 2023 SCI standardizes the performance of a city with the average of the city-HDI and the average of the surveys. This allows for a meaningful classification of a city relative to all other cities covered by the Index.

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The IMD World Competitiveness Center

For over 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.

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A Series of Tables Showcasing the Results in Different Ways

IMD Smart City Index 2023: Results

In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Switzerland	0.962	Zurich	0.989	1	1	1	1
Norway	0.961	Oslo	0.98	2	2	2	2
Australia	0.951	Canberra	0.98				3
Denmark	0.948	Copenhagen	0.967	4	3	5	4
Switzerland	0.962	Lausanne	0.966			4	5
United Kingdom	0.929	London	0.973	3	10	3	6
Singapore	0.939	Singapore	0.939	10	7	7	7
Finland	0.94	Helsinki	0.96	6	5	9	8
Switzerland	0.962	Geneva	0.966	7	8	6	9
Sweden	0.947	Stockholm	0.972	9	9	11	10
Germany	0.942	Hamburg	0.972		6	8	11
China	0.768	Beijing	0.907	30	22	17	12
United Arab Emirates	0.911	Abu Dhabi	0.911	16	14	12	13
Czech Rep.	0.889	Prague	0.96	8	4	10	14
Netherlands	0.941	Amsterdam	0.962	11	11	13	15
Korea South	0.925	Seoul	0.952	23	20	18	16
United Arab Emirates	0.911	Dubai	0.911	13	19	14	17
Australia	0.951	Sydney	0.952	22	32	29	18
Hong Kong	0.949	Hong Kong	0.946	38	34	33	19
Germany	0.942	Munich	0.95		17	15	20
USA	0.921	New York	0.938	34	12	19	21
New Zealand	0.937	Auckland	0.951	5	15	16	22

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
New Zealand	0.937	Wellington	0.958				23
Australia	0.951	Brisbane	0.944	42	27	40	24
China	0.768	Shanghai	0.88	37	42	32	25
Iceland	0.959	Reykjavik	0.959				26
Spain	0.905	Bilbao	0.932	18	25	23	27
Austria	0.916	Vienna	0.942	12	18	20	28
Taiwan	0.916	Taipei City	0.916	24	23	25	29
Saudi Arabia	0.875	Riyadh	0.9	55	44	39	30
Australia	0.951	Melbourne	0.948	35	33	36	31
Estonia	0.89	Tallinn	0.932		39	24	32
Germany	0.942	Berlin	0.959	19	21	21	33
USA	0.921	Boston	0.949	15	24	22	34
Belgium	0.937	Brussels	0.953	51	16	45	35
Sweden	0.947	Gothenburg	0.944	33	43	46	36
Spain	0.905	Madrid	0.94	25	30	37	37
Germany	0.942	Dusseldorf	0.939	17	37	27	38
USA	0.921	Washington D.C.	0.94	26	13	26	39
Canada	0.936	Ottawa	0.943				40
Netherlands	0.941	Rotterdam	0.941	40	35	43	41
Canada	0.936	Vancouver	0.944	20	40	28	42
Netherlands	0.941	The Hague	0.941	36	38	35	43
Poland	0.876	Warsaw	0.926	14	48	41	44

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In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Luxembourg	0.93	Luxembourg	0.93				45
France	0.903	Paris	0.949	39	47	49	46
Slovenia	0.918	Ljubljana	0.953				47
Canada	0.936	Toronto	0.943	29	46	31	48
Korea South	0.925	Busan	0.936	45	29	47	49
USA	0.921	Los Angeles	0.931	44	36	30	50
Italy	0.895	Bologna	0.924	41	50	48	51
Saudi Arabia	0.875	Mecca	0.871				52
USA	0.921	Denver	0.942	27	31	34	53
Spain	0.905	Zaragoza	0.912	58	53	51	54
USA	0.921	Seattle	0.94	31	41	38	55
Saudi Arabia	0.875	Jeddah	0.871				56
Germany	0.942	Hanover	0.93	43	51	53	57
China	0.768	Nanjing	0.81	65	59	57	58
Qatar	0.855	Doha	0.855				59
China	0.768	Zhuhai	0.799	53	56	52	60
USA	0.921	Chicago	0.929	57	54	56	61
Slovakia	0.848	Bratislava	0.944	32	26	42	62
Ireland	0.945	Dublin	0.95	21	28	44	63
France	0.903	Lyon	0.914	54	61	62	64
Lithuania	0.875	Vilnius	0.913				65
China	0.768	Shenzhen	0.799	61	66	60	66

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
China	0.768	Tianjin	0.844	48	45	50	67
USA	0.921	San Francisco	0.931	28	49	54	68
Canada	0.936	Montreal	0.923	50	52	55	69
China	0.768	Hangzhou	0.801	66	60	63	70
China	0.768	Guangzhou	0.799	67	64	66	71
Japan	0.925	Tokyo	0.951	46	73	67	72
United Kingdom	0.929	Manchester	0.915		57	58	73
United Kingdom	0.929	Birmingham	0.913	63	68	73	74
Spain	0.905	Barcelona	0.916	56	58	70	75
United Kingdom	0.929	Leeds	0.908			64	76
United Kingdom	0.929	Newcastle	0.901		62	61	77
France	0.903	Bordeaux	0.9			68	78
Poland	0.876	Krakow	0.888	47	69	76	79
United Kingdom	0.929	Glasgow	0.921			65	80
Germany	0.942	Kiel	0.921			72	81
Italy	0.895	Milan	0.915	52	70	69	82
Latvia	0.863	Riga	0.929				83
France	0.903	Lille	0.88			82	84
Saudi Arabia	0.875	Medina	0.871			79	85
China	0.768	Chongqing	0.774	69	65	74	86
Hungary	0.846	Budapest	0.922	64	63	78	87
Thailand	0.8	Bangkok	0.839	75	78	86	88

IMD Smart City Index 2023: Results

In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Malaysia	0.803	Kuala Lumpur	0.858	59	71	80	89
Turkey	0.838	Ankara	0.854	73	74	75	90
Israel	0.919	Tel Aviv	0.919	49	55	59	91
USA	0.921	Philadelphia	0.923	71	79	85	92
USA	0.921	Phoenix	0.908		72	77	93
Wales	0.929	Cardiff	0.898				94
Northern Ireland	0.929	Belfast	0.896				95
Oman	0.816	Muscat	0.816				96
China	0.768	Chengdu	0.74	74	77	84	97
Japan	0.925	Osaka	0.928	68	84	90	98
Portugal	0.866	Lisbon	0.9	62	75	81	99
Vietnam	0.703	Hanoi	0.744	77	82	89	100
France	0.903	Marseille	0.899		83	91	101
Indonesia	0.705	Jakarta	0.759	80	81	92	102
Vietnam	0.703	Ho Chi Minh City	0.714	76	86	93	103
Romania	0.821	Bucharest	0.926	60	76	87	104
India	0.633	Delhi	0.73	78	85	94	105
Croatia	0.858	Zagreb	0.916				106
Turkey	0.838	Istanbul	0.867			88	107
Egypt	0.731	Cairo	0.779	96	100	105	108
India	0.633	Mumbai	0.688	83	89	95	109
India	0.633	Bengaluru	0.667	85	96	97	110

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Bulgaria	0.795	Sofia	0.856	87	87	103	111
Indonesia	0.705	Medan	0.711	89	94	96	112
Greece	0.887	Athens	0.909	94	98	108	113
Indonesia	0.705	Makassar	0.699	86	90	102	114
Philippines	0.699	Manila	0.76	93	95	100	115
India	0.633	Hyderabad	0.647	81	91	101	116
Cyprus	0.896	Nicosia	0.896				117
Colombia	0.752	Medellin	0.757	82	88	99	118
Chile	0.855	Santiago	0.886	79	102	107	119
Pakistan	0.544	Islamabad	0.659				120
Mexico	0.758	Mexico City	0.815	90	103	110	121
Italy	0.895	Rome	0.917	97	97	111	122
Algeria	0.745	Algiers	0.767				123
Argentina	0.842	Buenos Aires	0.812	88	93	104	124
South Africa	0.713	Cape Town	0.751	92	99	106	125
Morocco	0.683	Rabat	0.702	99	101	109	126
Costa Rica	0.809	San José	0.826			112	127
Brazil	0.754	Brasilia	0.816				128
Colombia	0.752	Bogota	0.797	91	104	113	129
Brazil	0.754	Sao Paulo	0.78	95	108	117	130
Kenya	0.575	Nairobi	0.636	100	107	115	131
Nigeria	0.535	Lagos	0.681	101	105	116	132

IMD Smart City Index 2023: Results

In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Nigeria	0.535	Abuja	0.646	98	106	114	133
Peru	0.762	Lima	0.82				134
Jordan	0.72	Amman	0.737				135
Brazil	0.754	Rio de Janeiro	0.783	102	109	118	136
Tunisia	0.731	Tunis	0.775				137
Ghana	0.632	Accra	0.707				138
Lebanon	0.706	Beirut	0.677				139
Yemen	0.455	Sana'a	0.521				140
Guatemala	0.627	Guatemala City	0.722				141

IMD Smart City Index 2023: Results

In Alphabetical Order By City with 2023 Deep Dive and 2021 Comparison (2023 Methodology Applied)

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Abu Dhabi	13	BB	BB	BB	12	▼ -1
Abuja	133	D	C	D	114	▼ -19
Accra	138	D	D	D	NEW	—
Algiers	123	C	C	C	NEW	—
Amman	135	D	D	D	NEW	—
Amsterdam	15	A	BBB	A	13	▼ -2
Ankara	90	CCC	B	CCC	75	▼ -15
Athens	113	C	C	C	108	▼ -5
Auckland	22	A	A	A	16	▼ -6
Bangkok	88	B	CCC	B	86	▼ -2
Barcelona	75	BB	BB	BB	70	▼ -5
Beijing	12	BB	BB	BB	17	▲ 5
Beirut	139	D	D	D	NEW	—
Belfast	95	CC	CCC	CC	NEW	—
Bengaluru	110	CC	CC	CC	97	▼ -13
Berlin	33	BBB	BBB	BBB	21	▼ -12
Bilbao	27	BBB	BBB	BBB	23	▼ -4
Birmingham	74	BB	BB	BB	73	▼ -1
Bogota	129	D	D	C	113	▼ -16
Bologna	51	BB	BBB	BB	48	▼ -3
Bordeaux	78	CCC	CCC	CC	68	▼ -10
Boston	34	A	A	A	22	▼ -12

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Brasilia	128	C	C	C	NEW	—
Bratislava	62	BB	BB	BBB	42	▼ -20
Brisbane	24	AA	A	A	40	▲ 16
Brussels	35	BBB	BB	A	45	▲ 10
Bucharest	104	CCC	CCC	B	87	▼ -17
Budapest	87	B	B	BB	78	▼ -9
Buenos Aires	124	C	C	C	104	▼ -20
Busan	49	BB	BB	BBB	47	▼ -2
Cairo	108	CC	C	CC	105	▼ -3
Canberra	3	AA	AA	A	NEW	—
Cape Town	125	C	C	C	106	▼ -19
Cardiff	94	CC	CCC	CC	NEW	—
Chengdu	97	CCC	CCC	CCC	84	▼ -13
Chicago	61	BB	BB	BB	56	▼ -5
Chongqing	86	CCC	CCC	CCC	74	▼ -12
Copenhagen	4	AA	AAA	A	5	▲ 1
Delhi	105	CC	CC	CC	94	▼ -11
Denver	53	BBB	BBB	BBB	34	▼ -19
Doha	59	BB	BB	B	NEW	—
Dubai	17	BB	BB	B	14	▼ -3
Dublin	63	BB	BB	BBB	44	▼ -19
Dusseldorf	38	BB	BBB	BB	27	▼ -11

IMD Smart City Index 2023: Results

In Alphabetical Order By City with 2023 Deep Dive and 2021 Comparison (2023 Methodology Applied)

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Geneva	9	AA	AA	A	6	▼ -3
Glasgow	80	BB	BB	B	65	▼ -15
Gothenburg	36	A	A	A	46	▲ 10
Guangzhou	71	CCC	CCC	CCC	66	▼ -5
Guatemala City	141	D	D	D	NEW	—
Hamburg	11	A	A	BBB	8	▼ -3
Hangzhou	70	CCC	CCC	CCC	63	▼ -7
Hanoi	100	CCC	CCC	CCC	89	▼ -11
Hanover	57	BB	BBB	B	53	▼ -4
Helsinki	8	AAA	AA	A	9	▲ 1
Ho Chi Minh City	103	CCC	CCC	CCC	93	▼ -10
Hong Kong	19	AA	BBB	AAA	33	▲ 14
Hyderabad	116	CC	CC	CC	101	▼ -15
Islamabad	120	CC	CC	CC	NEW	—
Istanbul	107	CC	CC	CC	88	▼ -19
Jakarta	102	CC	CC	CC	92	▼ -10
Jeddah	56	B	B	B	NEW	—
Kiel	81	BB	BBB	CCC	72	▼ -9
Krakow	79	CCC	B	CCC	76	▼ -3
Kuala Lumpur	89	CCC	B	CCC	80	▼ -9
Lagos	132	D	D	C	116	▼ -16
Lausanne	5	AA	AA	A	4	▼ -1

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Leeds	76	CCC	CCC	CC	64	▼ -12
Lille	84	CCC	CCC	CCC	82	▼ -2
Lima	134	C	C	C	NEW	—
Lisbon	99	CC	CC	CC	81	▼ -18
Ljubljana	47	BBB	BB	BBB	NEW	—
London	6	A	BBB	AA	3	▼ -3
Los Angeles	50	BB	BB	BBB	30	▼ -20
Luxembourg	45	BB	BBB	B	NEW	—
Lyon	64	BB	BB	BB	62	▼ -2
Madrid	37	BB	BB	BBB	37	—
Makassar	114	CC	CC	CC	102	▼ -12
Manchester	73	BB	BB	BB	58	▼ -15
Manila	115	C	C	CC	100	▼ -15
Marseille	101	CC	CC	CC	91	▼ -10
Mecca	52	B	B	B	NEW	—
Medan	112	CC	CC	CC	96	▼ -16
Medellin	118	C	C	C	99	▼ -19
Medina	85	CCC	CCC	CCC	79	▼ -6
Melbourne	31	A	BBB	A	36	▲ 5
Mexico City	121	C	C	CC	110	▼ -11
Milan	82	BB	BB	BB	69	▼ -13
Montreal	69	BB	BBB	B	55	▼ -14

IMD Smart City Index 2023: Results

In Alphabetical Order By City with 2023 Deep Dive and 2021 Comparison (2023 Methodology Applied)

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Mumbai	109	CC	CC	CCC	95	▼ -14
Munich	20	AA	AA	A	15	▼ -5
Muscat	96	B	B	CCC	NEW	—
Nairobi	131	C	C	C	115	▼ -16
Nanjing	58	CCC	CCC	CCC	57	▼ -1
New York	21	BBB	BBB	A	19	▼ -2
Newcastle	77	CCC	B	CC	61	▼ -16
Nicosia	117	C	CC	C	NEW	—
Osaka	98	B	BB	CCC	90	▼ -8
Oslo	2	AAA	AAA	A	2	—
Ottawa	40	A	AA	BBB	NEW	—
Paris	46	BBB	BB	A	49	▲ 3
Philadelphia	92	B	B	B	85	▼ -7
Phoenix	93	CC	CCC	CC	77	▼ -16
Prague	14	AA	A	A	10	▼ -4
Rabat	126	C	C	C	109	▼ -17
Reykjavik	26	BBB	A	BBB	NEW	—
Riga	83	B	B	B	NEW	—
Rio de Janeiro	136	D	D	D	118	▼ -18
Riyadh	30	BB	B	BB	39	▲ 9
Rome	122	CCC	CCC	CCC	111	▼ -11
Rotterdam	41	A	BBB	A	43	▲ 2

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
San Francisco	68	BB	BB	BB	54	▼ -14
San José	127	C	CC	C	112	▼ -15
Sana'a	140	D	D	D	NEW	—
Santiago	119	C	C	C	107	▼ -12
Sao Paulo	130	D	D	C	117	▼ -13
Seattle	55	BB	BB	B	38	▼ -17
Seoul	16	AA	BBB	AAA	18	▲ 2
Shanghai	25	BB	BB	BB	32	▲ 7
Shenzhen	66	CCC	CCC	CCC	60	▼ -6
Singapore	7	A	A	A	7	—
Sofia	111	CC	CC	CC	103	▼ -8
Stockholm	10	A	A	A	11	▲ 1
Sydney	18	AA	A	AA	29	▲ 11
Taipei City	29	A	BBB	A	25	▼ -4
Tallinn	32	BBB	BBB	BB	24	▼ -8
Tel Aviv	91	B	B	BB	59	▼ -32
The Hague	43	A	A	A	35	▼ -8
Tianjin	67	BB	B	BB	50	▼ -17
Tokyo	72	BB	BB	BB	67	▼ -5
Toronto	48	BBB	BBB	BBB	31	▼ -17
Tunis	137	D	D	D	NEW	—
Vancouver	42	A	A	BBB	28	▼ -14

IMD Smart City Index 2023: Results

In Alphabetical Order By City with 2023 Deep Dive and 2021 Comparison (2023 Methodology Applied)

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Vienna	28	AA	AA	A	20	▼ -8
Vilnius	65	BB	BB	BBB	NEW	—
Warsaw	44	BBB	BBB	BBB	41	▼ -3
Washington D.C.	39	BB	BB	BB	26	▼ -13
Wellington	23	A	A	BBB	NEW	—
Zagreb	106	CCC	B	CCC	NEW	—
Zaragoza	54	CCC	B	CC	51	▼ -3
Zhuhai	60	CCC	CCC	CCC	52	▼ -8
Zurich	1	AAA	AAA	A	1	—

IMD Smart City Index 2023: Results

In Alphabetical Order by City with HDI Context and 2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	Country HDI	City	City HDI	2019	2020	2021	2023
United Arab Emirates	0.911	Abu Dhabi	0.911	16	14	12	13
Nigeria	0.535	Abuja	0.646	98	106	114	133
Ghana	0.632	Accra	0.707				138
Algeria	0.745	Algiers	0.767				123
Jordan	0.72	Amman	0.737				135
Netherlands	0.941	Amsterdam	0.962	11	11	13	15
Turkey	0.838	Ankara	0.854	73	74	75	90
Greece	0.887	Athens	0.909	94	98	108	113
New Zealand	0.937	Auckland	0.951	5	15	16	22
Thailand	0.8	Bangkok	0.839	75	78	86	88
Spain	0.905	Barcelona	0.916	56	58	70	75
China	0.768	Beijing	0.907	30	22	17	12
Lebanon	0.706	Beirut	0.677				139
Northern Ireland	0.929	Belfast	0.896				95
India	0.633	Bengaluru	0.667	85	96	97	110
Germany	0.942	Berlin	0.959	19	21	21	33
Spain	0.905	Bilbao	0.932	18	25	23	27
United Kingdom	0.929	Birmingham	0.913	63	68	73	74
Colombia	0.752	Bogota	0.797	91	104	113	129
Italy	0.895	Bologna	0.924	41	50	48	51
France	0.903	Bordeaux	0.9			68	78
Usa	0.921	Boston	0.949	15	24	22	34

				Rankings			
Country	Country HDI	City	City HDI	2019	2020	2021	2023
Brazil	0.754	Brasilia	0.816				128
Slovakia	0.848	Bratislava	0.944	32	26	42	62
Australia	0.951	Brisbane	0.944	42	27	40	24
Belgium	0.937	Brussels	0.953	51	16	45	35
Romania	0.821	Bucharest	0.926	60	76	87	104
Hungary	0.846	Budapest	0.922	64	63	78	87
Argentina	0.842	Buenos Aires	0.812	88	93	104	124
Korea South	0.925	Busan	0.936	45	29	47	49
Egypt	0.731	Cairo	0.779	96	100	105	108
Australia	0.951	Canberra	0.98				3
South Africa	0.713	Cape Town	0.751	92	99	106	125
Wales	0.929	Cardiff	0.898				94
China	0.768	Chengdu	0.74	74	77	84	97
Usa	0.921	Chicago	0.929	57	54	56	61
China	0.768	Chongqing	0.774	69	65	74	86
Denmark	0.948	Copenhagen	0.967	4	3	5	4
India	0.633	Delhi	0.73	78	85	94	105
Usa	0.921	Denver	0.942	27	31	34	53
Qatar	0.855	Doha	0.855				59
United Arab Emirates	0.911	Dubai	0.911	13	19	14	17
Ireland	0.945	Dublin	0.95	21	28	44	63
Germany	0.942	Dusseldorf	0.939	17	37	27	38

IMD Smart City Index 2023: Results

In Alphabetical Order by City with HDI Context and 2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Switzerland	0.962	Geneva	0.966	7	8	6	9
United Kingdom	0.929	Glasgow	0.921			65	80
Sweden	0.947	Gothenburg	0.944	33	43	46	36
China	0.768	Guangzhou	0.799	67	64	66	71
Guatemala	0.627	Guatemala City	0.722				141
Germany	0.942	Hamburg	0.972		6	8	11
China	0.768	Hangzhou	0.801	66	60	63	70
Vietnam	0.703	Hanoi	0.744	77	82	89	100
Germany	0.942	Hanover	0.93	43	51	53	57
Finland	0.94	Helsinki	0.96	6	5	9	8
Vietnam	0.703	Ho Chi Minh City	0.714	76	86	93	103
Hong Kong	0.949	Hong Kong	0.946	38	34	33	19
India	0.633	Hyderabad	0.647	81	91	101	116
Pakistan	0.544	Islamabad	0.659				120
Turkey	0.838	Istanbul	0.867			88	107
Indonesia	0.705	Jakarta	0.759	80	81	92	102
Saudi Arabia	0.875	Jeddah	0.871				56
Germany	0.942	Kiel	0.921			72	81
Poland	0.876	Krakow	0.888	47	69	76	79
Malaysia	0.803	Kuala Lumpur	0.858	59	71	80	89
Nigeria	0.535	Lagos	0.681	101	105	116	132
Switzerland	0.962	Lausanne	0.966			4	5

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
United Kingdom	0.929	Leeds	0.908			64	76
France	0.903	Lille	0.88			82	84
Peru	0.762	Lima	0.82				134
Portugal	0.866	Lisbon	0.9	62	75	81	99
Slovenia	0.918	Ljubljana	0.953				47
United Kingdom	0.929	London	0.973	3	10	3	6
Usa	0.921	Los Angeles	0.931	44	36	30	50
Luxembourg	0.93	Luxembourg	0.93				45
France	0.903	Lyon	0.914	54	61	62	64
Spain	0.905	Madrid	0.94	25	30	37	37
Indonesia	0.705	Makassar	0.699	86	90	102	114
United Kingdom	0.929	Manchester	0.915		57	58	73
Philippines	0.699	Manila	0.76	93	95	100	115
France	0.903	Marseille	0.899		83	91	101
Saudi Arabia	0.875	Mecca	0.871				52
Indonesia	0.705	Medan	0.711	89	94	96	112
Colombia	0.752	Medellin	0.757	82	88	99	118
Saudi Arabia	0.875	Medina	0.871			79	85
Australia	0.951	Melbourne	0.948	35	33	36	31
Mexico	0.758	Mexico City	0.815	90	103	110	121
Italy	0.895	Milan	0.915	52	70	69	82
Canada	0.936	Montreal	0.923	50	52	55	69

IMD Smart City Index 2023: Results

In Alphabetical Order by City with HDI Context and 2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
India	0.633	Mumbai	0.688	83	89	95	109
Germany	0.942	Munich	0.95		17	15	20
Oman	0.816	Muscat	0.816				96
Kenya	0.575	Nairobi	0.636	100	107	115	131
China	0.768	Nanjing	0.81	65	59	57	58
Usa	0.921	New York	0.938	34	12	19	21
United Kingdom	0.929	Newcastle	0.901		62	61	77
Cyprus	0.896	Nicosia	0.896				117
Japan	0.925	Osaka	0.928	68	84	90	98
Norway	0.961	Oslo	0.98	2	2	2	2
Canada	0.936	Ottawa	0.943				40
France	0.903	Paris	0.949	39	47	49	46
Usa	0.921	Philadelphia	0.923	71	79	85	92
Usa	0.921	Phoenix	0.908		72	77	93
Czech Rep.	0.889	Prague	0.96	8	4	10	14
Morocco	0.683	Rabat	0.702	99	101	109	126
Iceland	0.959	Reykjavik	0.959				26
Latvia	0.863	Riga	0.929				83
Brazil	0.754	Rio De Janeiro	0.783	102	109	118	136
Saudi Arabia	0.875	Riyadh	0.9	55	44	39	30
Italy	0.895	Rome	0.917	97	97	111	122
Netherlands	0.941	Rotterdam	0.941	40	35	43	41
Usa	0.921	San Francisco	0.931	28	49	54	68
Costa Rica	0.809	San José	0.826			112	127
Yemen	0.455	Sana'a	0.521				140
Chile	0.855	Santiago	0.886	79	102	107	119
Brazil	0.754	Sao Paulo	0.78	95	108	117	130
Usa	0.921	Seattle	0.94	31	41	38	55
Korea South	0.925	Seoul	0.952	23	20	18	16
China	0.768	Shanghai	0.88	37	42	32	25
China	0.768	Shenzhen	0.799	61	66	60	66
Singapore	0.939	Singapore	0.939	10	7	7	7
Bulgaria	0.795	Sofia	0.856	87	87	103	111
Sweden	0.947	Stockholm	0.972	9	9	11	10
Australia	0.951	Sydney	0.952	22	32	29	18
Taiwan	0.916	Taipei City	0.916	24	23	25	29
Estonia	0.89	Tallinn	0.932		39	24	32
Israel	0.919	Tel Aviv	0.919	49	55	59	91
Netherlands	0.941	The Hague	0.941	36	38	35	43
China	0.768	Tianjin	0.844	48	45	50	67
Japan	0.925	Tokyo	0.951	46	73	67	72
Canada	0.936	Toronto	0.943	29	46	31	48
Tunisia	0.731	Tunis	0.775				137
Canada	0.936	Vancouver	0.944	20	40	28	42

IMD Smart City Index 2023: Results

In Alphabetical Order by City with HDI Context and 2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Austria	0.916	Vienna	0.942	12	18	20	28
Lithuania	0.875	Vilnius	0.913				65
Poland	0.876	Warsaw	0.926	14	48	41	44
Usa	0.921	Washington D.c.	0.94	26	13	26	39
New Zealand	0.937	Wellington	0.958				23
Croatia	0.858	Zagreb	0.916				106
Spain	0.905	Zaragoza	0.912	58	53	51	54
China	0.768	Zhuhai	0.799	53	56	52	60
Switzerland	0.962	Zurich	0.989	1	1	1	1

IMD Smart City Index 2023: Results

In Alphabetical Order by Country with HDI Context and 2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Algeria	0.745	Algiers	0.767				123
Argentina	0.842	Buenos Aires	0.812	88	93	104	124
Australia	0.951	Brisbane	0.944	42	27	40	24
Australia	0.951	Canberra	0.98				3
Australia	0.951	Melbourne	0.948	35	33	36	31
Australia	0.951	Sydney	0.952	22	32	29	18
Austria	0.916	Vienna	0.942	12	18	20	28
Belgium	0.937	Brussels	0.953	51	16	45	35
Brazil	0.754	Brasilia	0.816				128
Brazil	0.754	Rio de Janeiro	0.783	102	109	118	136
Brazil	0.754	Sao Paulo	0.78	95	108	117	130
Bulgaria	0.795	Sofia	0.856	87	87	103	111
Canada	0.936	Montreal	0.923	50	52	55	69
Canada	0.936	Ottawa	0.943				40
Canada	0.936	Toronto	0.943	29	46	31	48
Canada	0.936	Vancouver	0.944	20	40	28	42
Chile	0.855	Santiago	0.886	79	102	107	119
China	0.768	Beijing	0.907	30	22	17	12
China	0.768	Chengdu	0.74	74	77	84	97
China	0.768	Chongqing	0.774	69	65	74	86
China	0.768	Guangzhou	0.799	67	64	66	71
China	0.768	Hangzhou	0.801	66	60	63	70

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
China	0.768	Nanjing	0.81	65	59	57	58
China	0.768	Shanghai	0.88	37	42	32	25
China	0.768	Shenzhen	0.799	61	66	60	66
China	0.768	Tianjin	0.844	48	45	50	67
China	0.768	Zhuhai	0.799	53	56	52	60
Colombia	0.752	Bogota	0.797	91	104	113	129
Colombia	0.752	Medellin	0.757	82	88	99	118
Costa Rica	0.809	San José	0.826			112	127
Croatia	0.858	Zagreb	0.916				106
Cyprus	0.896	Nicosia	0.896				117
Czech Rep.	0.889	Prague	0.96	8	4	10	14
Denmark	0.948	Copenhagen	0.967	4	3	5	4
Egypt	0.731	Cairo	0.779	96	100	105	108
Estonia	0.89	Tallinn	0.932		39	24	32
Finland	0.94	Helsinki	0.96	6	5	9	8
France	0.903	Bordeaux	0.9			68	78
France	0.903	Lille	0.88			82	84
France	0.903	Lyon	0.914	54	61	62	64
France	0.903	Marseille	0.899		83	91	101
France	0.903	Paris	0.949	39	47	49	46
Germany	0.942	Berlin	0.959	19	21	21	33
Germany	0.942	Dusseldorf	0.939	17	37	27	38

IMD Smart City Index 2023: Results

In Alphabetical Order by Country with HDI Context and 2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Germany	0.942	Hamburg	0.972		6	8	11
Germany	0.942	Hanover	0.93	43	51	53	57
Germany	0.942	Kiel	0.921			72	81
Germany	0.942	Munich	0.95		17	15	20
Ghana	0.632	Accra	0.707				138
Greece	0.887	Athens	0.909	94	98	108	113
Guatemala	0.627	Guatemala City	0.722				141
Hong Kong	0.949	Hong Kong	0.946	38	34	33	19
Hungary	0.846	Budapest	0.922	64	63	78	87
Iceland	0.959	Reykjavik	0.959				26
India	0.633	Bengaluru	0.667	85	96	97	110
India	0.633	Delhi	0.73	78	85	94	105
India	0.633	Hyderabad	0.647	81	91	101	116
India	0.633	Mumbai	0.688	83	89	95	109
Indonesia	0.705	Jakarta	0.759	80	81	92	102
Indonesia	0.705	Makassar	0.699	86	90	102	114
Indonesia	0.705	Medan	0.711	89	94	96	112
Ireland	0.945	Dublin	0.95	21	28	44	63
Israel	0.919	Tel Aviv	0.919	49	55	59	91
Italy	0.895	Bologna	0.924	41	50	48	51
Italy	0.895	Milan	0.915	52	70	69	82
Italy	0.895	Rome	0.917	97	97	111	122

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Japan	0.925	Osaka	0.928	68	84	90	98
Japan	0.925	Tokyo	0.951	46	73	67	72
Jordan	0.72	Amman	0.737				135
Kenya	0.575	Nairobi	0.636	100	107	115	131
Korea South	0.925	Busan	0.936	45	29	47	49
Korea South	0.925	Seoul	0.952	23	20	18	16
Latvia	0.863	Riga	0.929				83
Lebanon	0.706	Beirut	0.677				139
Lithuania	0.875	Vilnius	0.913				65
Luxembourg	0.93	Luxembourg	0.93				45
Malaysia	0.803	Kuala Lumpur	0.858	59	71	80	89
Mexico	0.758	Mexico City	0.815	90	103	110	121
Morocco	0.683	Rabat	0.702	99	101	109	126
Netherlands	0.941	Amsterdam	0.962	11	11	13	15
Netherlands	0.941	Rotterdam	0.941	40	35	43	41
Netherlands	0.941	The Hague	0.941	36	38	35	43
New Zealand	0.937	Auckland	0.951	5	15	16	22
New Zealand	0.937	Wellington	0.958				23
Nigeria	0.535	Abuja	0.646	98	106	114	133
Nigeria	0.535	Lagos	0.681	101	105	116	132
Northern Ireland	0.929	Belfast	0.896				95
Norway	0.961	Oslo	0.98	2	2	2	2

IMD Smart City Index 2023: Results

In Alphabetical Order by Country with HDI Context and 2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
Oman	0.816	Muscat	0.816				96
Pakistan	0.544	Islamabad	0.659				120
Peru	0.762	Lima	0.82				134
Philippines	0.699	Manila	0.76	93	95	100	115
Poland	0.876	Krakow	0.888	47	69	76	79
Poland	0.876	Warsaw	0.926	14	48	41	44
Portugal	0.866	Lisbon	0.9	62	75	81	99
Qatar	0.855	Doha	0.855				59
Romania	0.821	Bucharest	0.926	60	76	87	104
Saudi Arabia	0.875	Jeddah	0.871				56
Saudi Arabia	0.875	Mecca	0.871				52
Saudi Arabia	0.875	Medina	0.871			79	85
Saudi Arabia	0.875	Riyadh	0.9	55	44	39	30
Singapore	0.939	Singapore	0.939	10	7	7	7
Slovakia	0.848	Bratislava	0.944	32	26	42	62
Slovenia	0.918	Ljubljana	0.953				47
South Africa	0.713	Cape Town	0.751	92	99	106	125
Spain	0.905	Barcelona	0.916	56	58	70	75
Spain	0.905	Bilbao	0.932	18	25	23	27
Spain	0.905	Madrid	0.94	25	30	37	37
Spain	0.905	Zaragoza	0.912	58	53	51	54
Sweden	0.947	Gothenburg	0.944	33	43	46	36
Sweden	0.947	Stockholm	0.972	9	9	11	10
Switzerland	0.962	Geneva	0.966	7	8	6	9
Switzerland	0.962	Lausanne	0.966			4	5
Switzerland	0.962	Zurich	0.989	1	1	1	1
Taiwan	0.916	Taipei City	0.916	24	23	25	29
Thailand	0.8	Bangkok	0.839	75	78	86	88
Tunisia	0.731	Tunis	0.775				137
Turkey	0.838	Ankara	0.854	73	74	75	90
Turkey	0.838	Istanbul	0.867			88	107
United Arab Emirates	0.911	Abu Dhabi	0.911	16	14	12	13
United Arab Emirates	0.911	Dubai	0.911	13	19	14	17
United Kingdom	0.929	Birmingham	0.913	63	68	73	74
United Kingdom	0.929	Glasgow	0.921			65	80
United Kingdom	0.929	Leeds	0.908			64	76
United Kingdom	0.929	London	0.973	3	10	3	6
United Kingdom	0.929	Manchester	0.915		57	58	73
United Kingdom	0.929	Newcastle	0.901		62	61	77
USA	0.921	Boston	0.949	15	24	22	34
USA	0.921	Chicago	0.929	57	54	56	61
USA	0.921	Denver	0.942	27	31	34	53
USA	0.921	Los Angeles	0.931	44	36	30	50
USA	0.921	New York	0.938	34	12	19	21

IMD Smart City Index 2023: Results

In Alphabetical Order by Country with HDI Context and 2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	**Country HDI**	**City**	**City HDI**	**2019**	**2020**	**2021**	**2023**
USA	0.921	Philadelphia	0.923	71	79	85	92
USA	0.921	Phoenix	0.908		72	77	93
USA	0.921	San Francisco	0.931	28	49	54	68
USA	0.921	Seattle	0.94	31	41	38	55
USA	0.921	Washington D.C.	0.94	26	13	26	39
Vietnam	0.703	Hanoi	0.744	77	82	89	100
Vietnam	0.703	Ho Chi Minh City	0.714	76	86	93	103
Wales	0.929	Cardiff	0.898				94
Yemen	0.455	Sana'a	0.521				140

IMD Smart City Index 2023

A User's Guide

IMD Smart City Index 2023

A User's Guide

SMART CITY RANKING

13

Out of 141

▼

12 out of 118 in 2021

SMART CITY RATING

BB

A in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

Smart City Ranking

Smart City Ranking: The Ranking position of the city amongst the 141 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 118 cities included in in the last edition's index (2021).

BACKGROUND INFORMATION

City

Population	HDI
3,652,029	0.911

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.866	0.890	0.912	0.911	-0.001
Life expectancy at birth	77.8	78.0	79.0	78.7	-0.2
Expected years of schooling	13.6	14.3	15.7	15.7	+0.0
Mean years of schooling	11.0	12.1	12.7	12.7	+0.0
GNI per capita (PPP $)	66,912	67,462	63,016	62,574	-443

Background Information

This section presents the Human Development Index (HDI) at the city level taken from the Global Data Lab, and the population of the city as defined through the United Nations World Urbanization Prospects for the majority of cities, or Eurostat for some of European cities.

It also presents the United Nations HDI (country-level - for the parent economy of a given city) and its four components, as well as the city's position on the map. Please note: for Taipei City only, the data is calculated using the same methodology and comparable data.

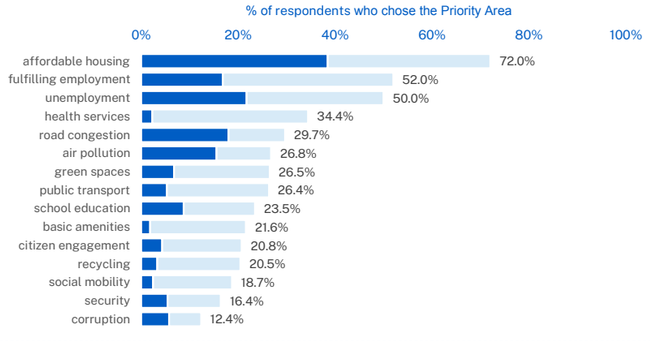
Priority Areas

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

PRIORITY AREAS

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

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

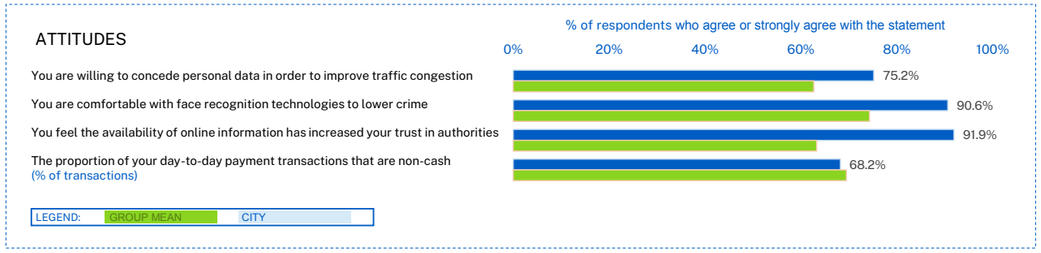


IMD Smart City Index 2023

A User's Guide

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.

IMD Smart City Index 2023

Methodology

IMD Smart City Index 2023

Methodology

1. The IMD Smart City Index 2023 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 2023:2021:2020.

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 Global Data Lab's Human Development Index (HDI) score of the city they are part of.

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

   For group 1 (highest HDI quartile), scale

   AAA–AA–A–BBB–BB

   For group 2 (second HDI quartile), scale

   A–BBB–BB–B–CCC

   For group 3 (third HDI quartile), scale

   BB–B–CCC–CC–C

   For group 4 (lowest HDI quartile), scale

   CCC–CC–C–D

7. **Rankings are then presented in two formats:**
   - an overall ranking (1 to 141)
   - a rating for each pillar and overall

IMD Smart City Index 2023

City Profiles

Abu Dhabi

SMART CITY RANKING

13

Out of 141

▼

12 out of 118 in 2021

SMART CITY RATING

BB

A in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,652,029	0.911

(UN World Urbanisation Prospects 2022 estimate)

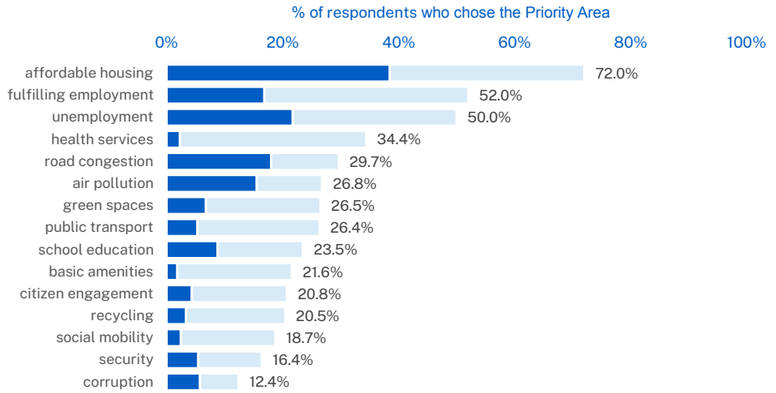
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.866	0.890	0.912	0.911	-0.001
Life expectancy at birth	77.8	78.0	79.0	78.7	-0.2
Expected years of schooling	13.6	14.3	15.7	15.7	+0.0
Mean years of schooling	11.0	12.1	12.7	12.7	+0.0
GNI per capita (PPP $)	66,912	67,462	63,016	62,574	-443

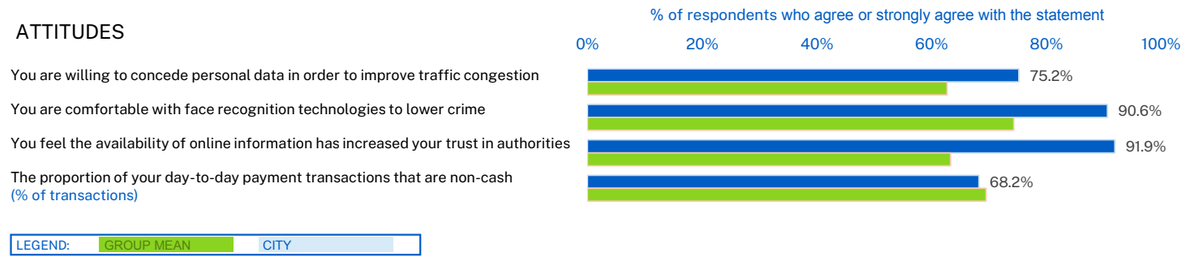
PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most 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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



ATTITUDES



Abuja

SMART CITY RANKING

133

Out of 141

▼

114 out of 118 in 2021

SMART CITY RATING

D

D in 2021

FACTOR RATINGS

C

STRUCTURES

D

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
153,983	0.646

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.534	0.539	0.535	0.535	+0.000
Life expectancy at birth	54.3	54.7	52.9	52.7	-0.2
Expected years of schooling	9.7	10.0	10.1	10.1	+0.0
Mean years of schooling	6.5	6.7	7.2	7.2	+0.0
GNI per capita (PPP $)	5,086	4,910	4,740	4,790	+51

PRIORITY AREAS

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

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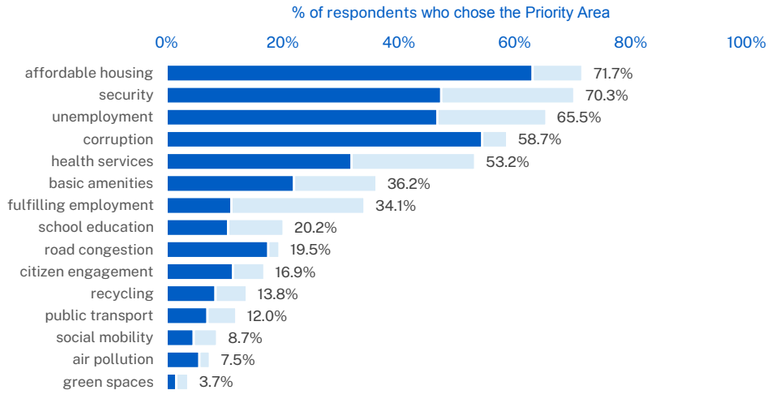
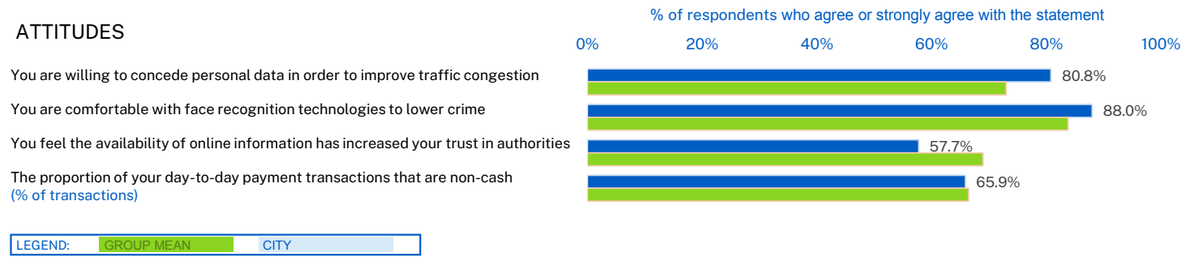


ATTITUDES



Accra

SMART CITY RANKING

138

Out of 141

not out of 118 in 2021

SMART CITY RATING

D

not in 2021

FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,605,402	0.707

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.620	0.631	0.632	0.632	+0.000
Life expectancy at birth	64.1	64.7	64.1	63.8	-0.3
Expected years of schooling	11.5	11.9	12.1	12.1	+0.0
Mean years of schooling	8.2	8.3	8.3	8.3	+0.0
GNI per capita (PPP $)	5,072	5,307	5,601	5,745	+143

PRIORITY AREAS

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

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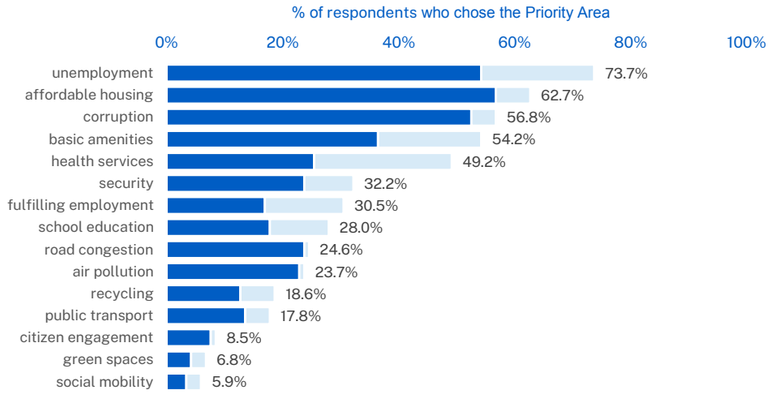

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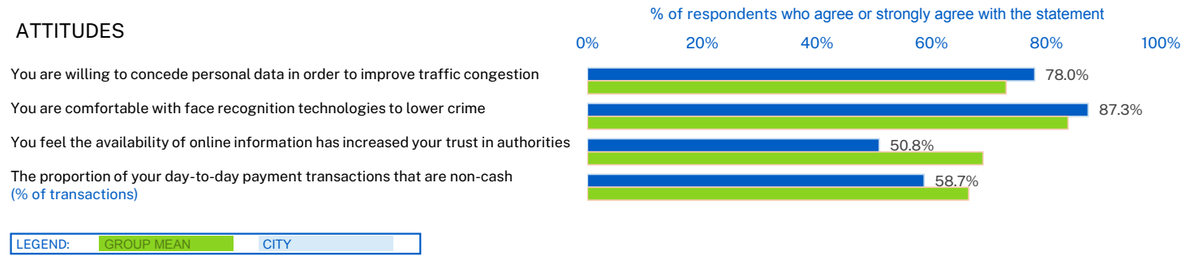


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score (0 20 40 60 80 100)

Health & Safety

Basic sanitation meets the needs of the poorest areas	37.6
Recycling services are satisfactory	40.4
Public safety is not a problem	37.3
Air pollution is not a problem	19.4
Medical services provision is satisfactory	50.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	18.2

Mobility

Traffic congestion is not a problem	12.4
Public transport is satisfactory	38.8

Activities

Green spaces are satisfactory	38.0
Cultural activities (shows, bars, and museums) are satisfactory	63.7

Opportunities (Work & School)

Employment finding services are readily available	29.2
Most children have access to a good school	46.5
Lifelong learning opportunities are provided by local institutions	34.5
Businesses are creating new jobs	44.1
Minorities feel welcome	46.6

Governance

Information on local government decisions are easily accessible	40.4
Corruption of city officials is not an issue of concern	11.9
Residents contribute to decision making of local government	26.0
Residents provide feedback on local government projects	36.7

TECHNOLOGIES

Score (0 20 40 60 80 100)

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	31.4
A website or App allows residents to easily give away unwanted items	21.5
Free public wifi has improved access to city services	17.4
CCTV cameras has made residents feel safer	43.6
A website or App allows residents to effectively monitor air pollution	15.1
Arranging medical appointments online has improved access	41.1

Mobility

Car-sharing Apps have reduced congestion	48.0
Apps that direct you to an available parking space have reduced journey time	22.2
Bicycle hiring has reduced congestion	15.8
Online scheduling and ticket sales has made public transport easier to use	42.9
The city provides information on traffic congestion through mobile phones	26.1

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	65.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	50.4
IT skills are taught well in schools	42.4
Online services provided by the city has made it easier to start a new business	43.9
The current internet speed and reliability meet connectivity needs	51.0

Governance

Online public access to city finances has reduced corruption	15.8
Online voting has increased participation	14.4
An online platform where residents can propose ideas has improved city life	20.8
Processing Identification Documents online has reduced waiting times	47.5

Algiers

SMART CITY RANKING

123

Out of 141

not out of 118 in 2021

SMART CITY RATING

C

not in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,853,959	0.767

(UN World Urbanisation Prospects 2022 estimate)

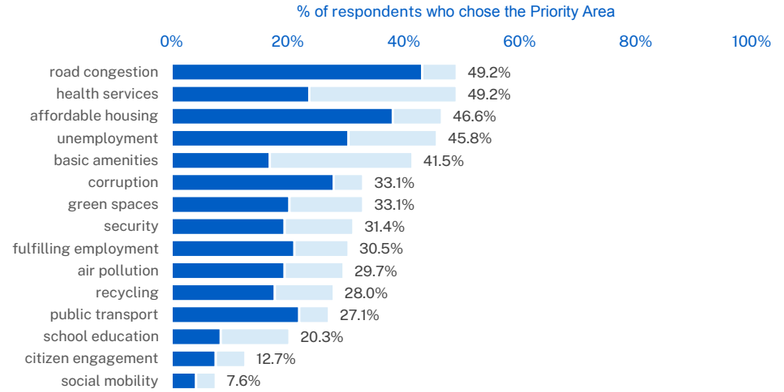
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.745	0.748	0.736	0.745	+0.009
Life expectancy at birth	76.1	76.5	74.5	76.4	+1.9
Expected years of schooling	14.6	14.6	14.6	14.6	+0.0
Mean years of schooling	8.0	8.1	8.1	8.1	+0.0
GNI per capita (PPP $)	11,344	11,242	10,530	10,800	+270

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most 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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



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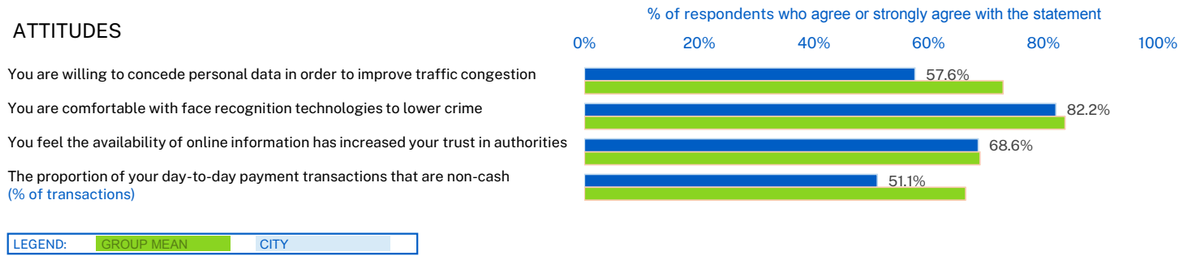

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score (0 20 40 60 80 100)

Health & Safety

Basic sanitation meets the needs of the poorest areas	53.0
Recycling services are satisfactory	41.2
Public safety is not a problem	52.8
Air pollution is not a problem	32.1
Medical services provision is satisfactory	55.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	32.3

Mobility

Traffic congestion is not a problem	17.4
Public transport is satisfactory	35.6

Activities

Green spaces are satisfactory	52.5
Cultural activities (shows, bars, and museums) are satisfactory	49.4

Opportunities (Work & School)

Employment finding services are readily available	37.9
Most children have access to a good school	64.4
Lifelong learning opportunities are provided by local institutions	64.7
Businesses are creating new jobs	39.5
Minorities feel welcome	55.4

Governance

Information on local government decisions are easily accessible	50.3
Corruption of city officials is not an issue of concern	27.1
Residents contribute to decision making of local government	35.6
Residents provide feedback on local government projects	41.9

TECHNOLOGIES

Score (0 20 40 60 80 100)

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.6
A website or App allows residents to easily give away unwanted items	41.9
Free public wifi has improved access to city services	40.8
CCTV cameras has made residents feel safer	60.9
A website or App allows residents to effectively monitor air pollution	42.9
Arranging medical appointments online has improved access	55.5

Mobility

Car-sharing Apps have reduced congestion	48.4
Apps that direct you to an available parking space have reduced journey time	46.2
Bicycle hiring has reduced congestion	37.1
Online scheduling and ticket sales has made public transport easier to use	52.5
The city provides information on traffic congestion through mobile phones	50.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	50.7

Opportunities (Work & School)

Online access to job listings has made it easier to find work	57.6
IT skills are taught well in schools	58.8
Online services provided by the city has made it easier to start a new business	50.6
The current internet speed and reliability meet connectivity needs	53.5

Governance

Online public access to city finances has reduced corruption	37.1
Online voting has increased participation	34.7
An online platform where residents can propose ideas has improved city life	50.3
Processing Identification Documents online has reduced waiting times	63.3

Amman

SMART CITY RANKING

135

Out of 141

not out of 118 in 2021

SMART CITY RATING

D

not in 2021

FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
4,007,526	0.737

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.723	0.727	0.723	0.720	-0.003
Life expectancy at birth	75.8	76.0	75.2	74.3	-0.9
Expected years of schooling	10.4	10.6	10.7	10.7	+0.0
Mean years of schooling	10.4	10.4	10.5	10.5	+0.0
GNI per capita (PPP $)	9,967	10,073	9,789	9,924	+135

PRIORITY AREAS

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

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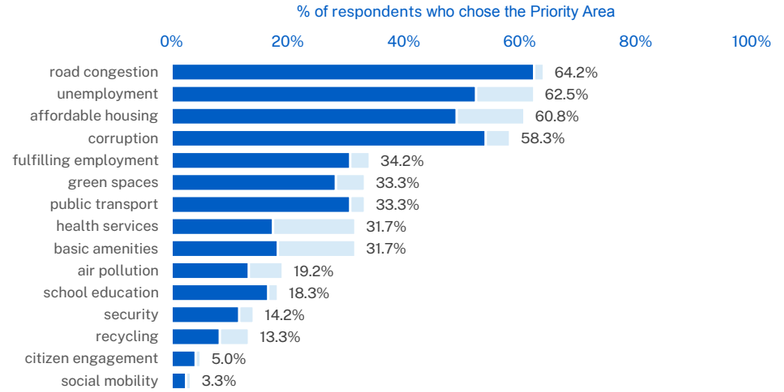

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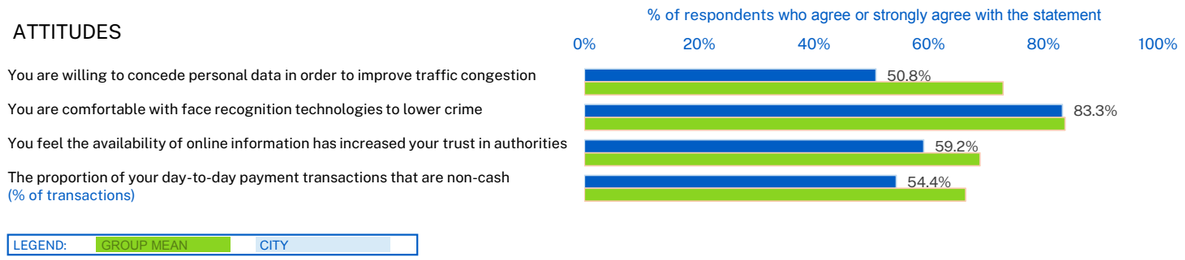

Amsterdam

SMART CITY RANKING

15

Out of 141

▼

13 out of 118 in 2021

SMART CITY RATING

A

A in 2021

FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,888,486	0.962

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.934	0.944	0.939	0.941	+0.002
Life expectancy at birth	82.1	82.3	81.6	81.7	+0.0
Expected years of schooling	18.0	18.5	18.0	18.0	+0.0
Mean years of schooling	12.2	12.4	12.6	12.6	+0.0
GNI per capita (PPP $)	50,013	57,707	53,504	55,979	+2,476

PRIORITY AREAS

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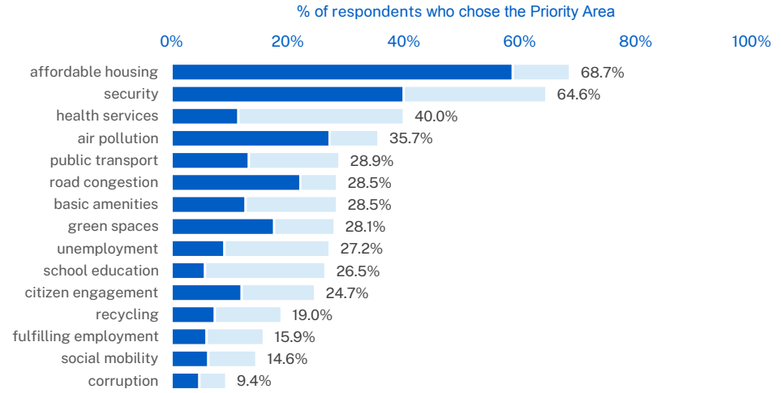

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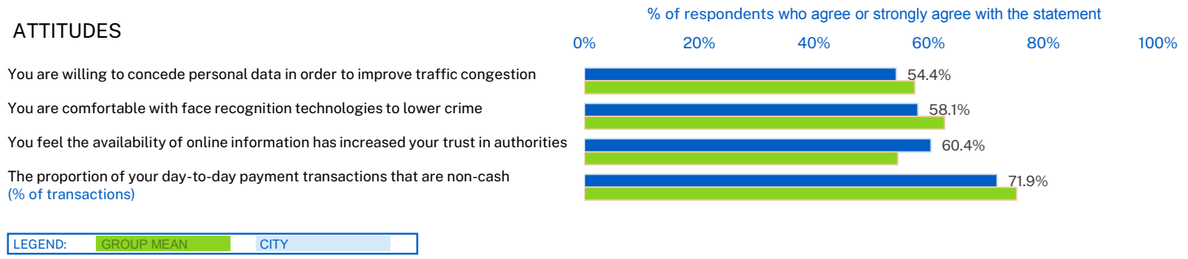

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	58.8
Recycling services are satisfactory	60.5
Public safety is not a problem	46.5
Air pollution is not a problem	32.1
Medical services provision is satisfactory	71.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	24.9

Mobility

Traffic congestion is not a problem	33.7
Public transport is satisfactory	62.9

Activities

Green spaces are satisfactory	56.0
Cultural activities (shows, bars, and museums) are satisfactory	78.7

Opportunities (Work & School)

Employment finding services are readily available	68.1
Most children have access to a good school	72.8
Lifelong learning opportunities are provided by local institutions	61.9
Businesses are creating new jobs	62.6
Minorities feel welcome	57.0

Governance

Information on local government decisions are easily accessible	61.2
Corruption of city officials is not an issue of concern	53.4
Residents contribute to decision making of local government	52.6
Residents provide feedback on local government projects	59.2

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	49.4
A website or App allows residents to easily give away unwanted items	58.7
Free public wifi has improved access to city services	53.2
CCTV cameras has made residents feel safer	56.0
A website or App allows residents to effectively monitor air pollution	41.7
Arranging medical appointments online has improved access	66.2

Mobility

Car-sharing Apps have reduced congestion	44.1
Apps that direct you to an available parking space have reduced journey time	56.4
Bicycle hiring has reduced congestion	56.0
Online scheduling and ticket sales has made public transport easier to use	64.7
The city provides information on traffic congestion through mobile phones	52.2

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	76.5

Opportunities (Work & School)

Online access to job listings has made it easier to find work	69.6
IT skills are taught well in schools	54.1
Online services provided by the city has made it easier to start a new business	52.6
The current internet speed and reliability meet connectivity needs	68.0

Governance

Online public access to city finances has reduced corruption	44.8
Online voting has increased participation	52.5
An online platform where residents can propose ideas has improved city life	55.3
Processing Identification Documents online has reduced waiting times	57.7

Ankara

SMART CITY RANKING

90

Out of 141

▼

75 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
5,663,322	0.854

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.807	0.820	0.833	0.838	+0.005
Life expectancy at birth	77.4	77.7	75.9	76.0	+0.2
Expected years of schooling	16.4	16.6	18.0	18.0	+0.0
Mean years of schooling	7.7	8.1	8.6	8.6	+0.0
GNI per capita (PPP $)	24,905	27,701	28,317	31,033	+2,715

PRIORITY AREAS

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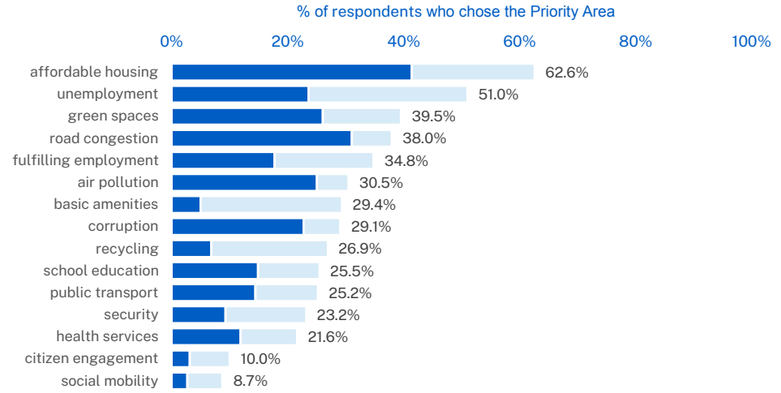
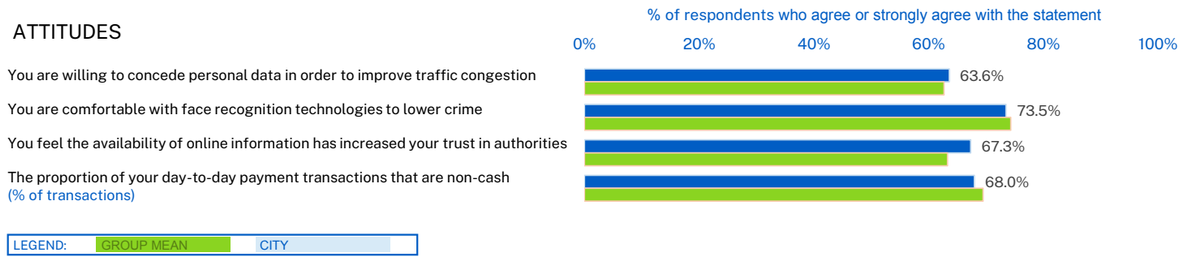


ATTITUDES



Athens

SMART CITY RANKING

113

Out of 141

▼

108 out of 118 in 2021

SMART CITY RATING

C

C in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,736,737	0.909

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.872	0.888	0.886	0.887	+0.001
Life expectancy at birth	82.1	82.2	80.9	80.1	-0.8
Expected years of schooling	17.3	17.9	18.0	18.0	+0.0
Mean years of schooling	10.5	10.6	11.4	11.4	+0.0
GNI per capita (PPP $)	24,909	30,155	26,681	29,002	+2,322

PRIORITY AREAS

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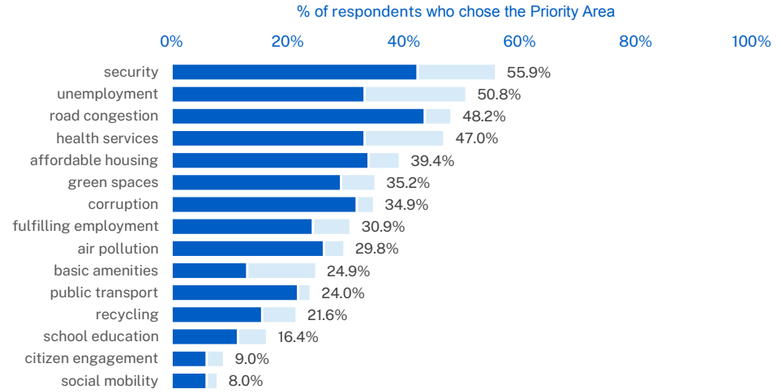

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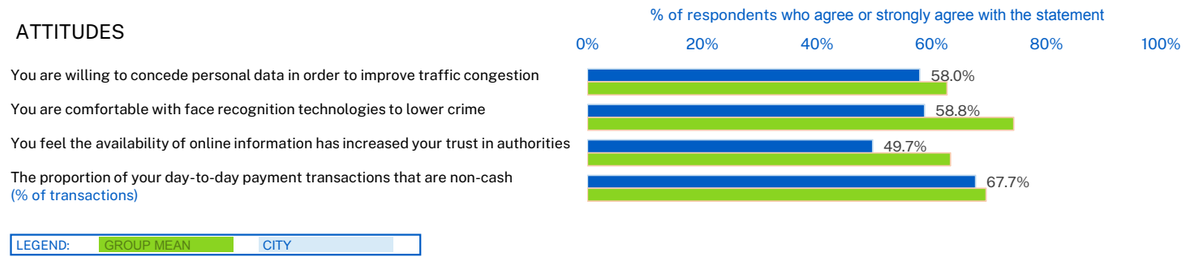

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	57.8
Recycling services are satisfactory	39.1
Public safety is not a problem	31.4
Air pollution is not a problem	22.2
Medical services provision is satisfactory	38.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	22.8

Mobility

Traffic congestion is not a problem	14.6
Public transport is satisfactory	28.1

Activities

Green spaces are satisfactory	30.8
Cultural activities (shows, bars, and museums) are satisfactory	69.2

Opportunities (Work & School)

Employment finding services are readily available	37.3
Most children have access to a good school	39.7
Lifelong learning opportunities are provided by local institutions	40.3
Businesses are creating new jobs	32.3
Minorities feel welcome	32.1

Governance

Information on local government decisions are easily accessible	39.0
Corruption of city officials is not an issue of concern	19.0
Residents contribute to decision making of local government	23.0
Residents provide feedback on local government projects	38.1

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	46.0
A website or App allows residents to easily give away unwanted items	56.9
Free public wifi has improved access to city services	40.8
CCTV cameras has made residents feel safer	38.1
A website or App allows residents to effectively monitor air pollution	36.7
Arranging medical appointments online has improved access	64.1

Mobility

Car-sharing Apps have reduced congestion	36.6
Apps that direct you to an available parking space have reduced journey time	42.1
Bicycle hiring has reduced congestion	30.0
Online scheduling and ticket sales has made public transport easier to use	59.5
The city provides information on traffic congestion through mobile phones	52.3

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	79.4

Opportunities (Work & School)

Online access to job listings has made it easier to find work	66.6
IT skills are taught well in schools	40.8
Online services provided by the city has made it easier to start a new business	49.3
The current internet speed and reliability meet connectivity needs	51.7

Governance

Online public access to city finances has reduced corruption	27.8
Online voting has increased participation	37.2
An online platform where residents can propose ideas has improved city life	33.8
Processing Identification Documents online has reduced waiting times	73.0

Auckland

SMART CITY RANKING

22

Out of 141

▼

16 out of 118 in 2021

SMART CITY RATING

A

AA in 2021

FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,346,091	0.951

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.936	0.937	0.936	0.937	+0.001
Life expectancy at birth	82.4	82.6	82.7	82.5	-0.3
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	13.1	7.9	8.7	8.7	+0.0
GNI per capita (PPP $)	16,129	17,781	16,804	17,030	+226

PRIORITY AREAS

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

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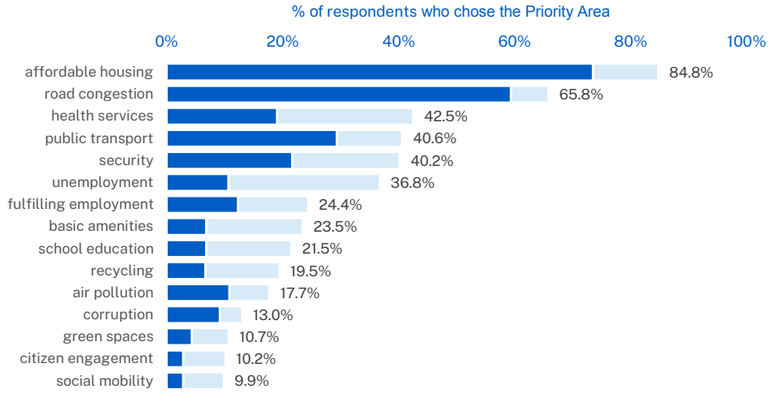

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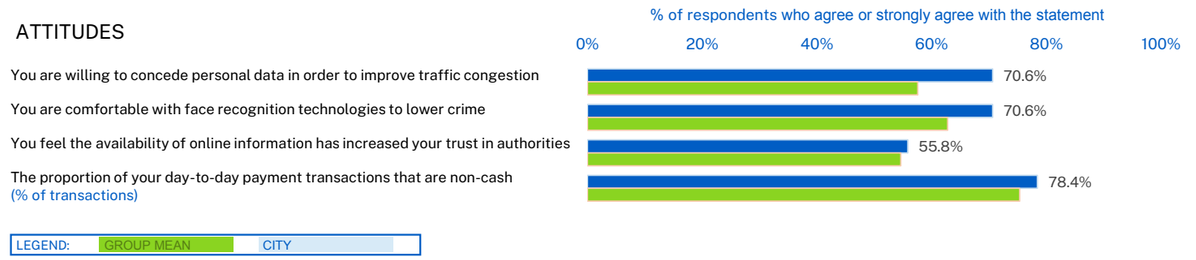

Bangkok

SMART CITY RANKING

88

Out of 141

▼

86 out of 118 in 2021

SMART CITY RATING

B

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

B

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
10 900	0.839

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.765	0.777	0.802	0.800	-0.002
Life expectancy at birth	76.9	77.2	79.3	78.7	-0.5
Expected years of schooling	14.7	15.0	15.9	15.9	+0.0
Mean years of schooling	7.7	7.9	8.7	8.7	+0.0
GNI per capita (PPP $)	16,129	17,781	16,804	17,030	+226

PRIORITY AREAS

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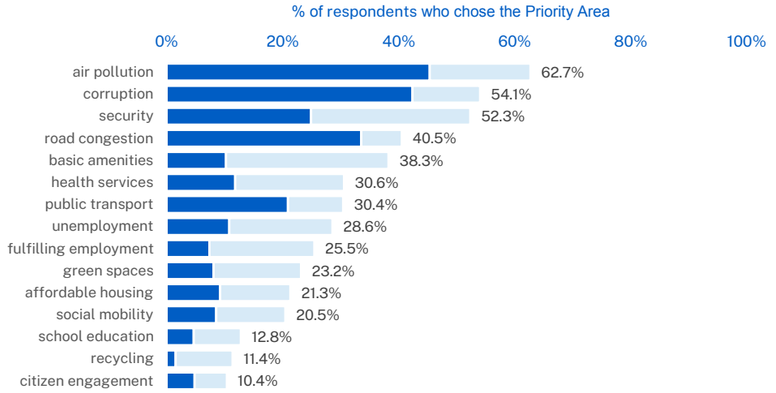

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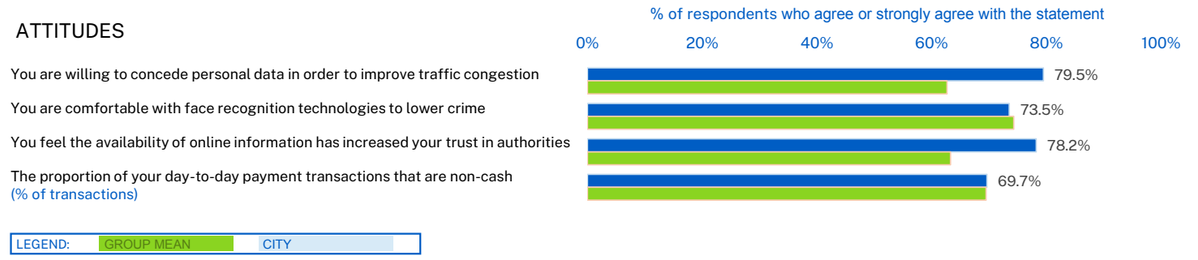

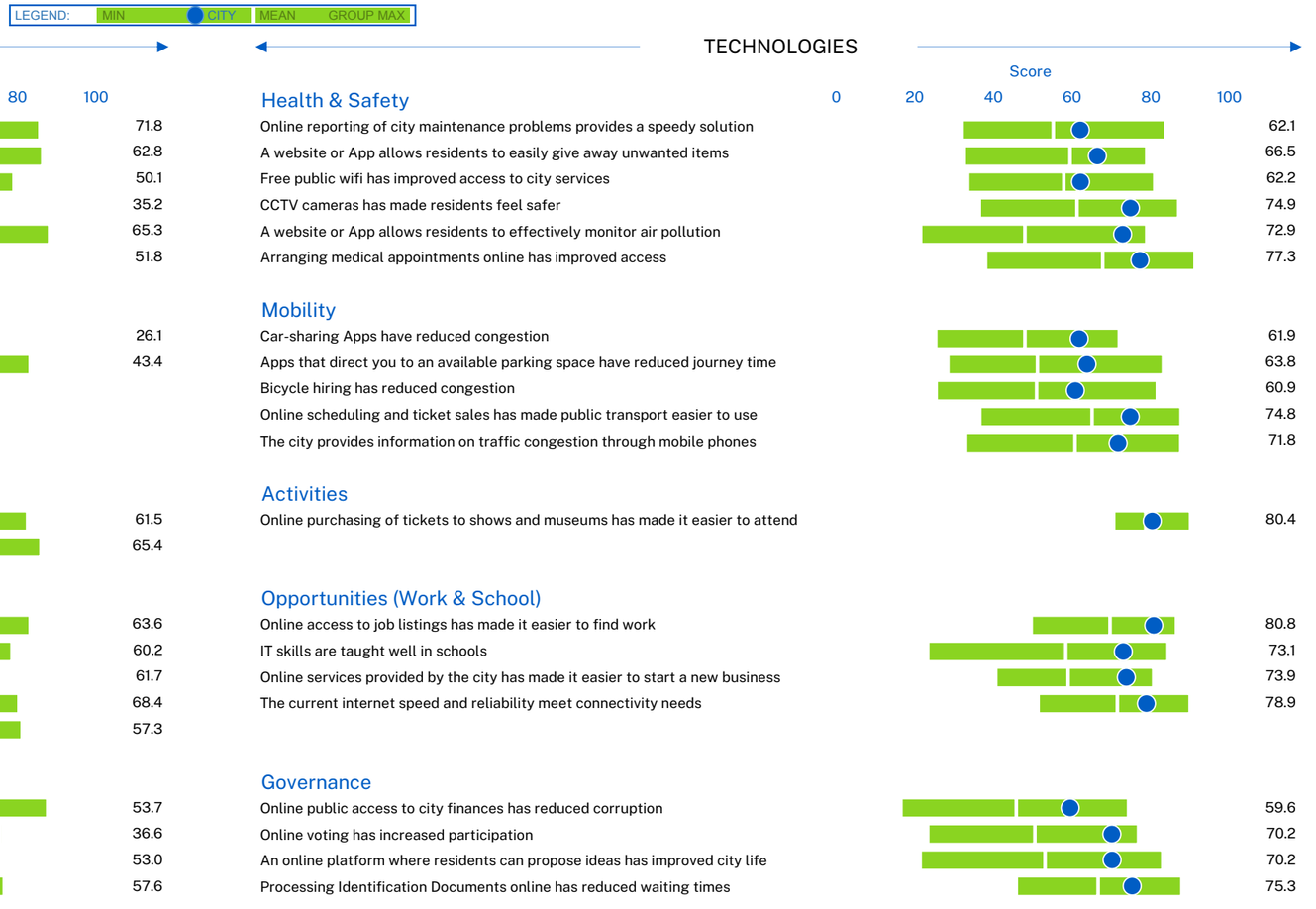

Barcelona

SMART CITY RANKING

75

Out of 141

▼

70 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
7,671,252	0.916

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.893	0.904	0.899	0.905	+0.006
Life expectancy at birth	83.4	83.6	82.3	83.0	+0.7
Expected years of schooling	17.9	17.6	17.9	17.9	+0.0
Mean years of schooling	9.8	10.3	10.6	10.6	+0.0
GNI per capita (PPP $)	35,041	40,975	36,516	38,354	+1,838

PRIORITY AREAS

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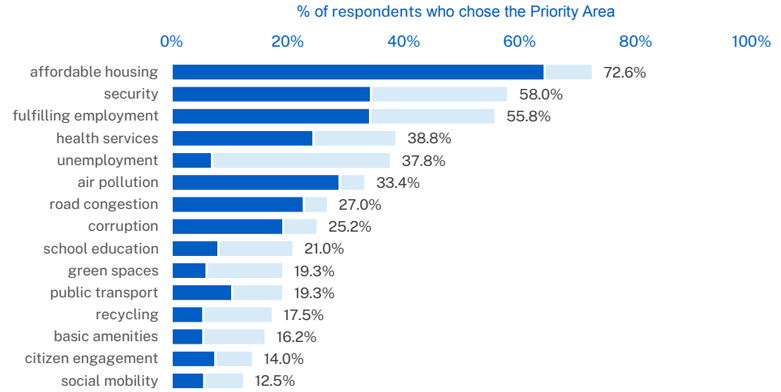

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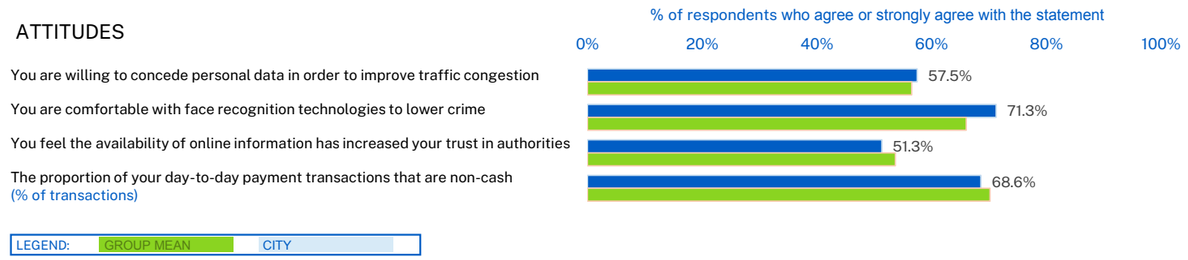

Beijing

SMART CITY RANKING

12

Out of 141

▲

17 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

3

GROUP

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
21 333	0.907

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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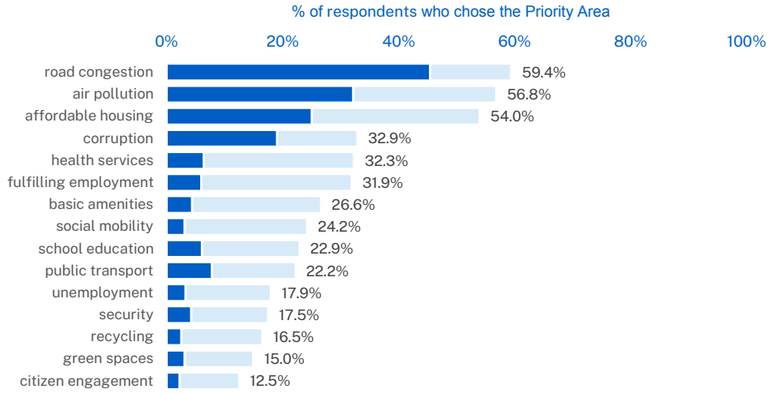
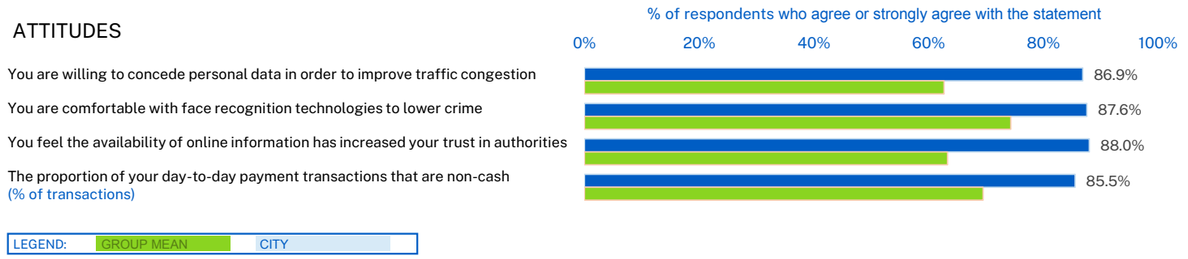


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	82.3
Recycling services are satisfactory	80.6
Public safety is not a problem	78.3
Air pollution is not a problem	52.0
Medical services provision is satisfactory	79.9
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	56.2

Mobility

Traffic congestion is not a problem	35.4
Public transport is satisfactory	67.2

Activities

Green spaces are satisfactory	79.6
Cultural activities (shows, bars, and museums) are satisfactory	86.0

Opportunities (Work & School)

Employment finding services are readily available	80.9
Most children have access to a good school	78.0
Lifelong learning opportunities are provided by local institutions	69.9
Businesses are creating new jobs	79.9
Minorities feel welcome	80.2

Governance

Information on local government decisions are easily accessible	79.0
Corruption of city officials is not an issue of concern	58.2
Residents contribute to decision making of local government	66.2
Residents provide feedback on local government projects	76.6

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	83.2
A website or App allows residents to easily give away unwanted items	77.8
Free public wifi has improved access to city services	79.3
CCTV cameras has made residents feel safer	81.7
A website or App allows residents to effectively monitor air pollution	78.0
Arranging medical appointments online has improved access	87.7

Mobility

Car-sharing Apps have reduced congestion	68.3
Apps that direct you to an available parking space have reduced journey time	79.6
Bicycle hiring has reduced congestion	81.7
Online scheduling and ticket sales has made public transport easier to use	87.7
The city provides information on traffic congestion through mobile phones	86.7

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	90.1

Opportunities (Work & School)

Online access to job listings has made it easier to find work	84.3
IT skills are taught well in schools	81.6
Online services provided by the city has made it easier to start a new business	79.8
The current internet speed and reliability meet connectivity needs	88.5

Governance

Online public access to city finances has reduced corruption	74.4
Online voting has increased participation	76.9
An online platform where residents can propose ideas has improved city life	82.3
Processing Identification Documents online has reduced waiting times	83.9

Beirut

SMART CITY RANKING

139

Out of 141

not out of 118 in 2021

SMART CITY RATING

D

not in 2021

FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,433,155	0.677

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.750	0.745	0.726	0.706	-0.020
Life expectancy at birth	79.7	79.2	77.8	75.1	-2.8
Expected years of schooling	11.3	11.3	11.3	11.3	+0.0
Mean years of schooling	8.7	8.7	8.7	8.7	+0.0
GNI per capita (PPP $)	15,586	14,378	11,201	9,526	-1,676

PRIORITY AREAS

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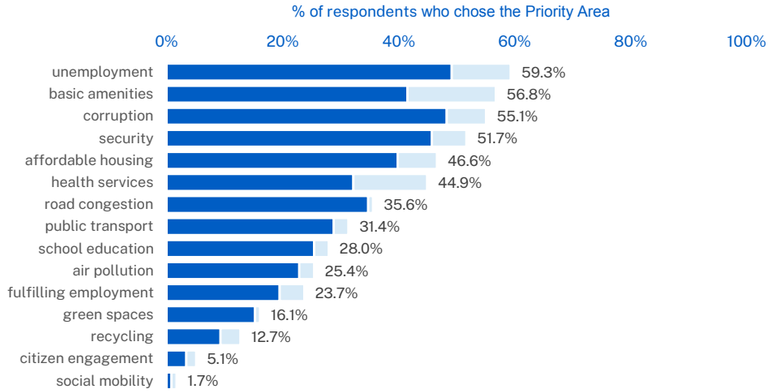

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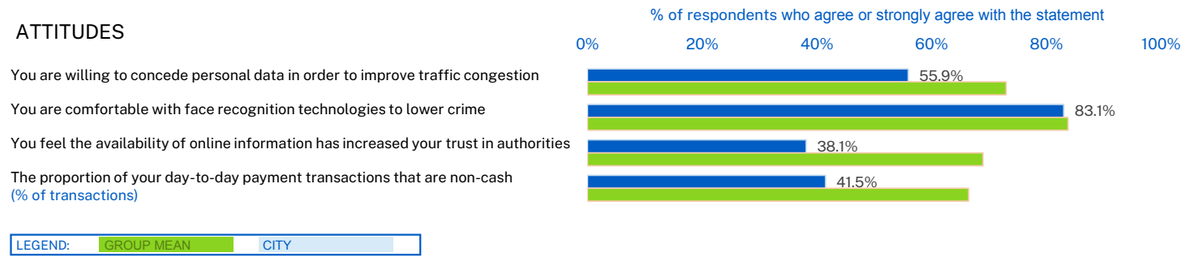

Belfast

SMART CITY RANKING

95

Out of 141

not out of 118 in 2021

SMART CITY RATING

CC

not in 2021

FACTOR RATINGS

CCC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
341,506	0.896

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.929	0.935	0.924	0.929	+0.005
Life expectancy at birth	81.1	81.7	80.4	80.7	+0.3
Expected years of schooling	17.3	17.3	17.3	17.3	+0.0
Mean years of schooling	13.2	13.3	13.4	13.4	+0.0
GNI per capita (PPP $)	46,226	47,252	42,375	45,225	+2,850

PRIORITY AREAS

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

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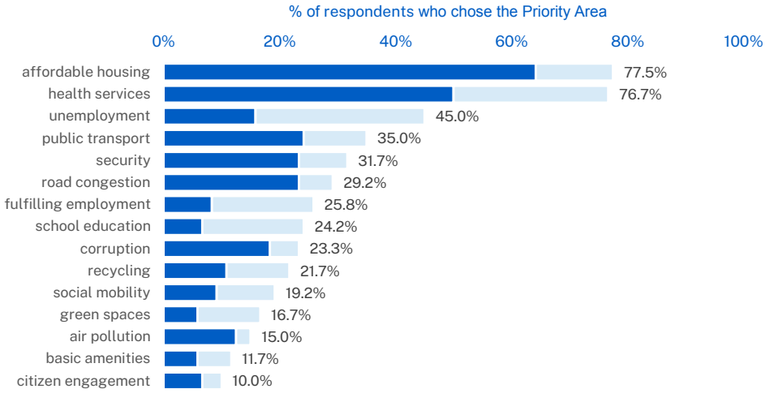

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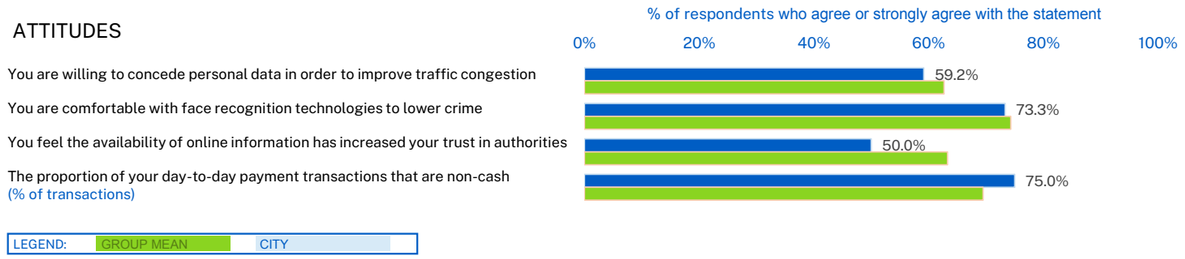

Bengaluru

SMART CITY RANKING

110

Out of 141

▼

97 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
13,193,035	0.667

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.647	0.645	0.642	0.633	-0.009
Life expectancy at birth	69.4	69.7	70.2	67.2	-2.9
Expected years of schooling	12.3	12.2	11.9	11.9	+0.0
Mean years of schooling	6.5	6.5	6.7	6.7	+0.0
GNI per capita (PPP $)	6,829	6,681	6,107	6,590	+482

PRIORITY AREAS

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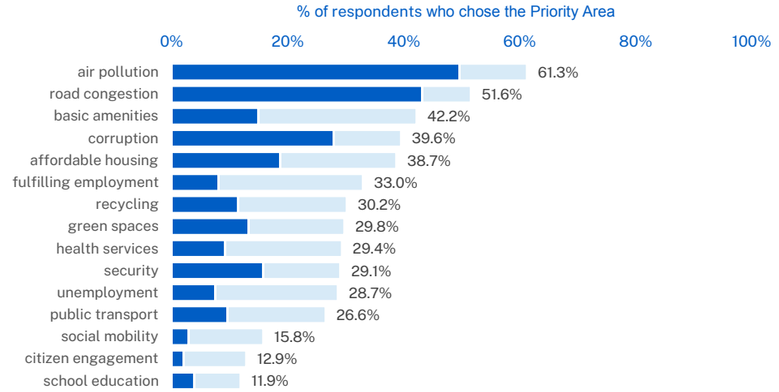

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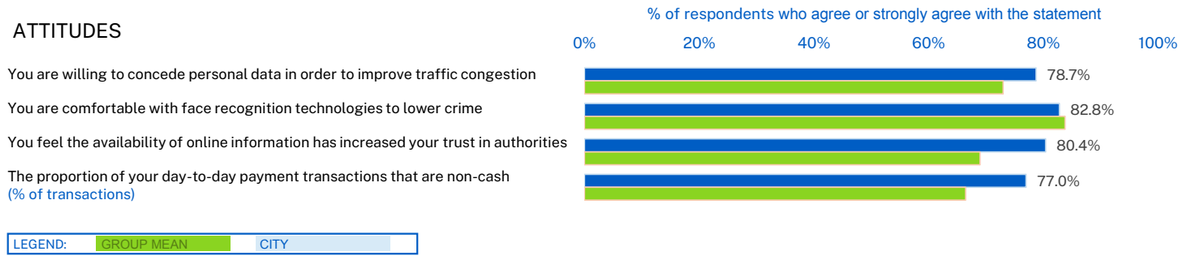

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	66.3
Recycling services are satisfactory	64.7
Public safety is not a problem	50.1
Air pollution is not a problem	31.6
Medical services provision is satisfactory	72.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	52.1

Mobility

Traffic congestion is not a problem	26.2
Public transport is satisfactory	64.9

Activities

Green spaces are satisfactory	70.5
Cultural activities (shows, bars, and museums) are satisfactory	78.3

Opportunities (Work & School)

Employment finding services are readily available	74.9
Most children have access to a good school	74.6
Lifelong learning opportunities are provided by local institutions	68.4
Businesses are creating new jobs	78.1
Minorities feel welcome	70.8

Governance

Information on local government decisions are easily accessible	71.2
Corruption of city officials is not an issue of concern	40.8
Residents contribute to decision making of local government	60.1
Residents provide feedback on local government projects	64.5

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	66.7
A website or App allows residents to easily give away unwanted items	61.7
Free public wifi has improved access to city services	60.9
CCTV cameras has made residents feel safer	74.1
A website or App allows residents to effectively monitor air pollution	56.1
Arranging medical appointments online has improved access	79.4

Mobility

Car-sharing Apps have reduced congestion	65.3
Apps that direct you to an available parking space have reduced journey time	62.8
Bicycle hiring has reduced congestion	66.0
Online scheduling and ticket sales has made public transport easier to use	77.3
The city provides information on traffic congestion through mobile phones	70.1

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	83.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	80.5
IT skills are taught well in schools	73.9
Online services provided by the city has made it easier to start a new business	76.3
The current internet speed and reliability meet connectivity needs	80.5

Governance

Online public access to city finances has reduced corruption	60.4
Online voting has increased participation	65.2
An online platform where residents can propose ideas has improved city life	69.8
Processing Identification Documents online has reduced waiting times	81.0

Berlin

SMART CITY RANKING

33

Out of 141

▼

21 out of 118 in 2021

SMART CITY RATING

BBB

BBB in 2021

FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,664,088	0.959

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP $)	46,946	55,314	53,078	54,534	+1,457

PRIORITY AREAS

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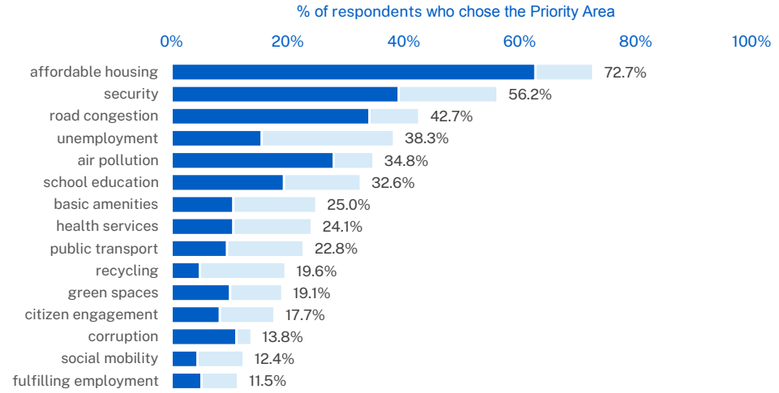

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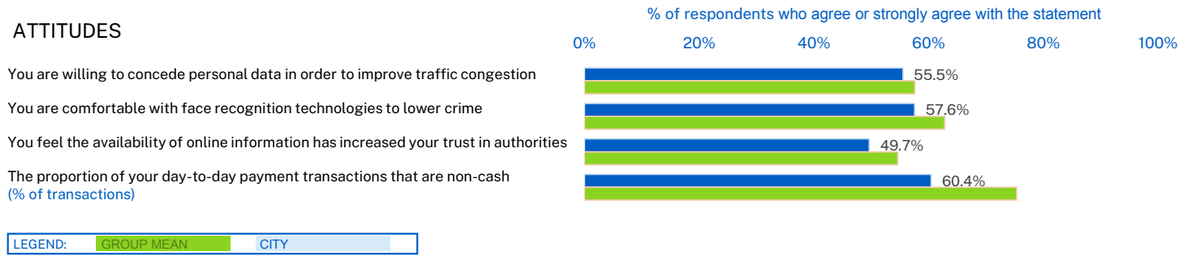

Bilbao

SMART CITY RANKING

27

Out of 141

▼

23 out of 118 in 2021

SMART CITY RATING

BBB

BBB in 2021

FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,185,908	0.932

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.893	0.904	0.899	0.905	+0.006
Life expectancy at birth	83.4	83.6	82.3	83.0	+0.7
Expected years of schooling	17.9	17.6	17.9	17.9	+0.0
Mean years of schooling	9.8	10.3	10.6	10.6	+0.0
GNI per capita (PPP $)	35,041	40,975	36,516	38,354	+1,838

PRIORITY AREAS

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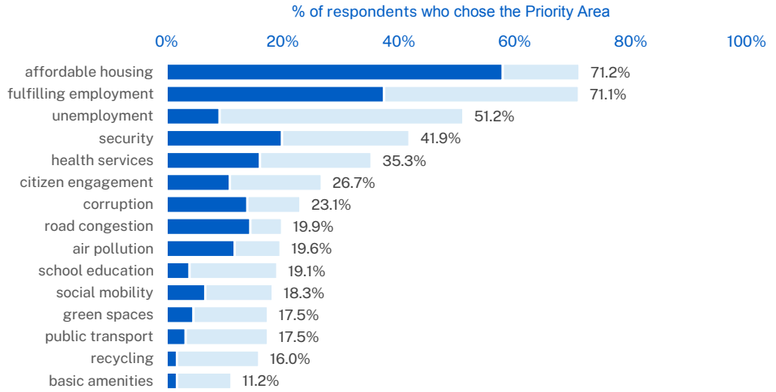

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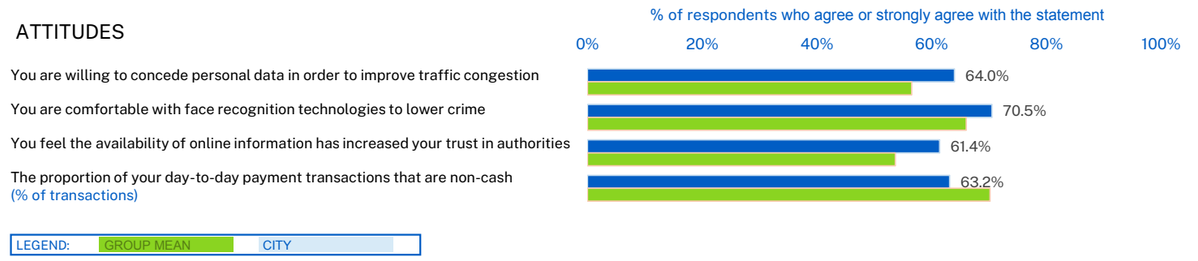

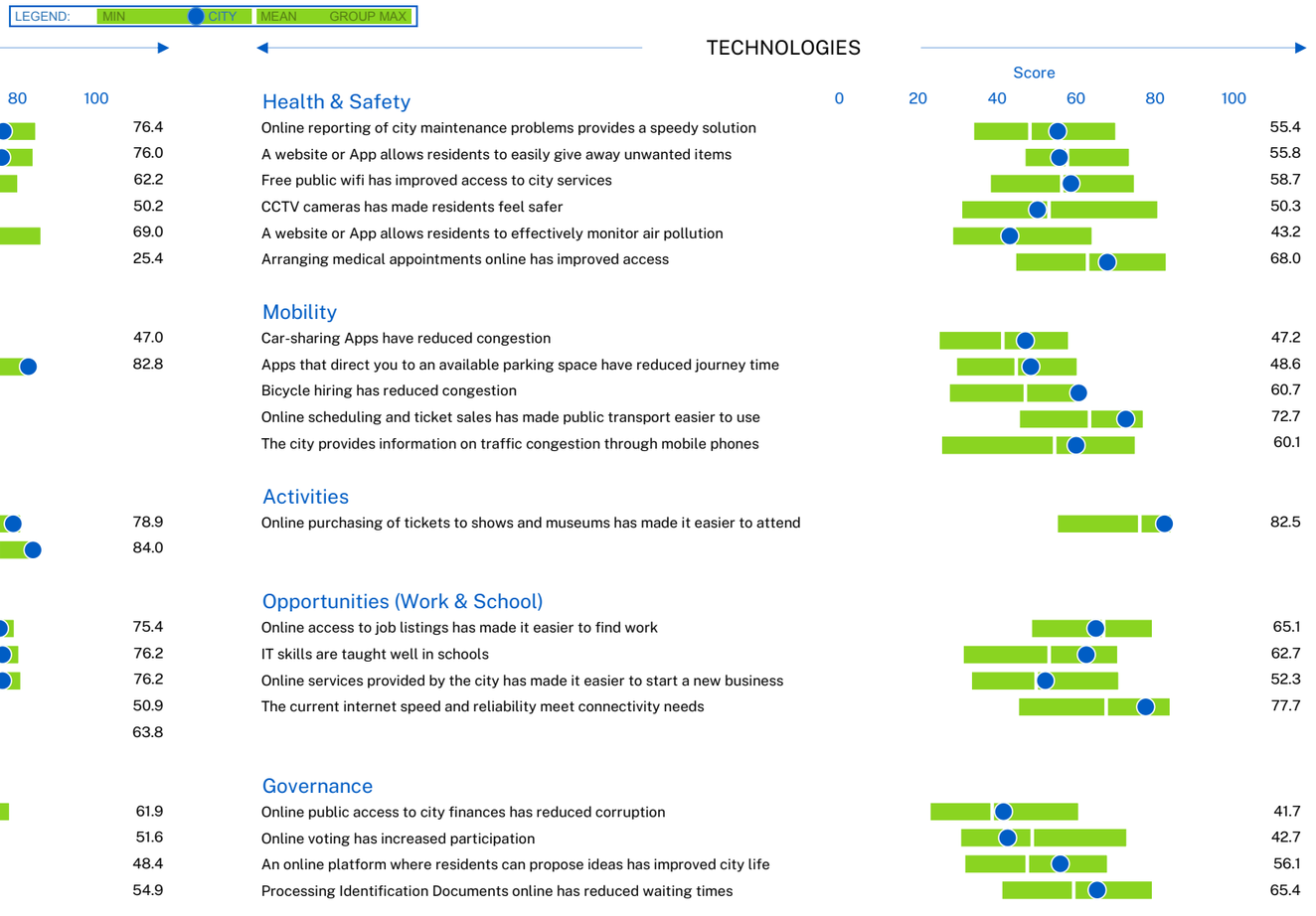

Birmingham

SMART CITY RANKING

74

Out of 141

▼

73 out of 118 in 2021

SMART CITY RATING

BB

B in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,148,862	0.913

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP $)	39,507	46,071	42,375	45,225	+2,850

PRIORITY AREAS

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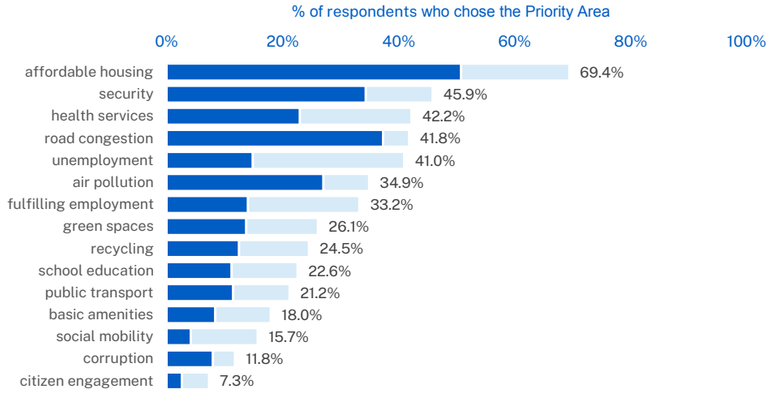

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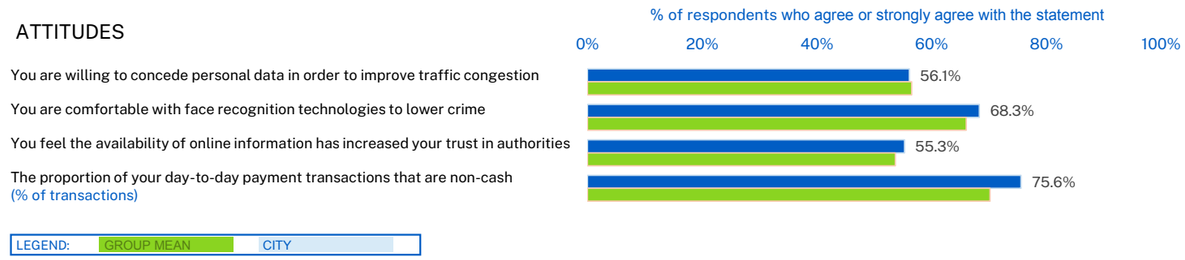

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	56.1
Recycling services are satisfactory	63.3
Public safety is not a problem	35.9
Air pollution is not a problem	32.3
Medical services provision is satisfactory	55.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	36.3

Mobility

Traffic congestion is not a problem	25.3
Public transport is satisfactory	49.9

Activities

Green spaces are satisfactory	61.3
Cultural activities (shows, bars, and museums) are satisfactory	72.4

Opportunities (Work & School)

Employment finding services are readily available	63.4
Most children have access to a good school	60.2
Lifelong learning opportunities are provided by local institutions	57.6
Businesses are creating new jobs	60.4
Minorities feel welcome	66.1

Governance

Information on local government decisions are easily accessible	58.8
Corruption of city officials is not an issue of concern	44.9
Residents contribute to decision making of local government	48.8
Residents provide feedback on local government projects	54.8

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	42.7
A website or App allows residents to easily give away unwanted items	61.7
Free public wifi has improved access to city services	58.8
CCTV cameras has made residents feel safer	60.6
A website or App allows residents to effectively monitor air pollution	40.3
Arranging medical appointments online has improved access	54.2

Mobility

Car-sharing Apps have reduced congestion	41.0
Apps that direct you to an available parking space have reduced journey time	45.3
Bicycle hiring has reduced congestion	50.1
Online scheduling and ticket sales has made public transport easier to use	59.8
The city provides information on traffic congestion through mobile phones	53.3

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	73.9

Opportunities (Work & School)

Online access to job listings has made it easier to find work	66.2
IT skills are taught well in schools	64.8
Online services provided by the city has made it easier to start a new business	50.7
The current internet speed and reliability meet connectivity needs	65.0

Governance

Online public access to city finances has reduced corruption	46.5
Online voting has increased participation	55.0
An online platform where residents can propose ideas has improved city life	46.9
Processing Identification Documents online has reduced waiting times	53.2

Bogota

SMART CITY RANKING

129

Out of 141

▼

113 out of 118 in 2021

SMART CITY RATING

D

D in 2021

FACTOR RATINGS

D

STRUCTURES

C

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
7,181,469	0.797

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.761	0.767	0.756	0.752	-0.004
Life expectancy at birth	77.1	77.3	74.8	72.8	-1.9
Expected years of schooling	14.6	14.4	14.4	14.4	+0.0
Mean years of schooling	8.3	8.5	8.9	8.9	+0.0
GNI per capita (PPP $)	12,896	14,257	13,185	14,384	+1,199

PRIORITY AREAS

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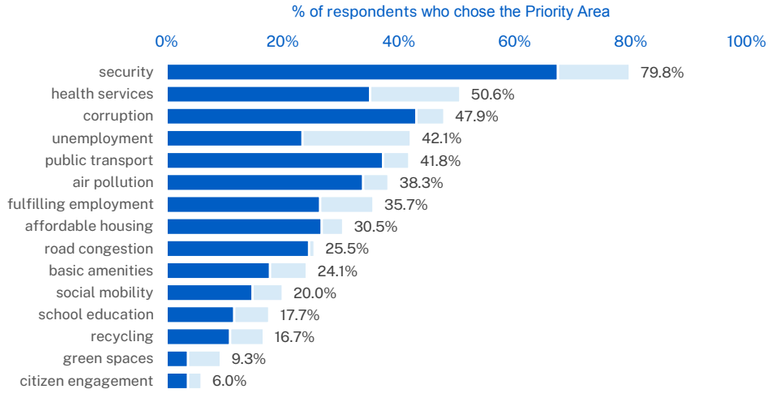

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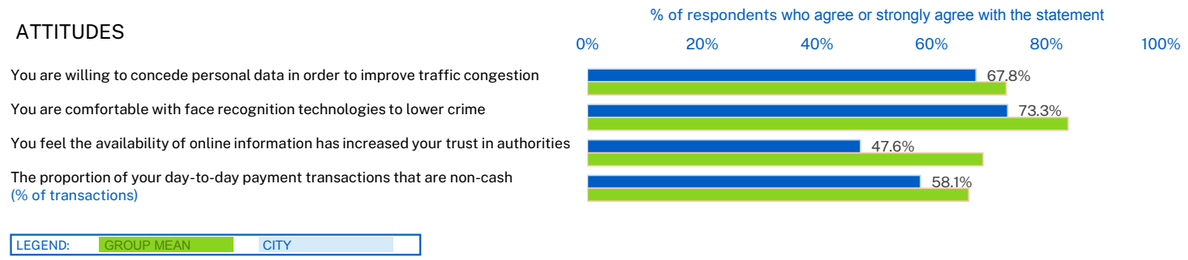

Bologna

SMART CITY RANKING

51

Out of 141

48 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
4,438,937	0.924

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.883	0.892	0.889	0.895	+0.006
Life expectancy at birth	83.4	83.5	82.4	82.9	+0.4
Expected years of schooling	16.2	16.1	16.2	16.2	+0.0
Mean years of schooling	10.2	10.4	10.7	10.7	+0.0
GNI per capita (PPP $)	36,141	42,776	39,901	42,840	+2,939

PRIORITY AREAS

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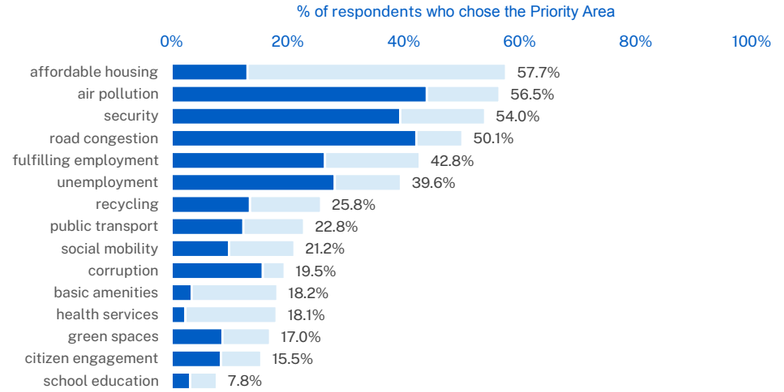
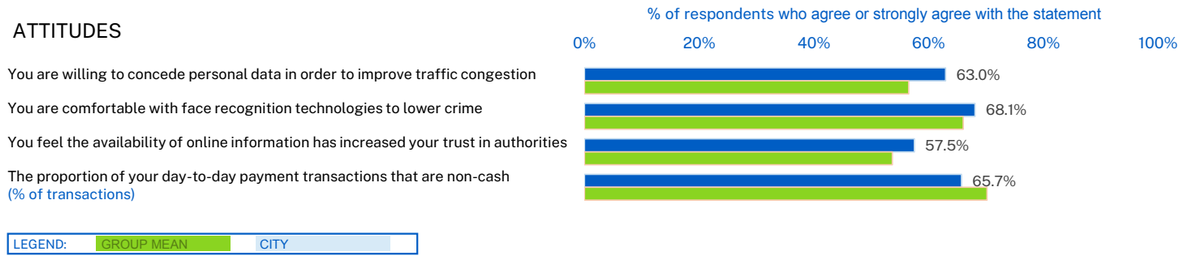


ATTITUDES



Bordeaux

SMART CITY RANKING

78

Out of 141

▼

68 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,511,921	0.900

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP $)	40,511	47,173	43,048	45,937	+2,889

PRIORITY AREAS

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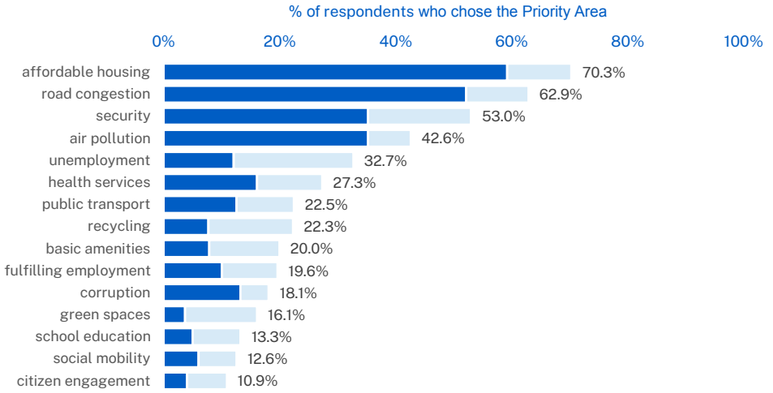
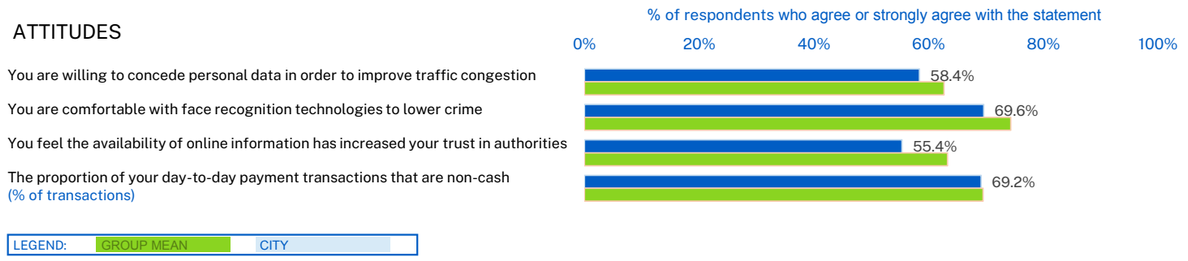


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score (0 20 40 60 80 100)

Health & Safety

Basic sanitation meets the needs of the poorest areas	57.3
Recycling services are satisfactory	64.5
Public safety is not a problem	43.8
Air pollution is not a problem	31.1
Medical services provision is satisfactory	63.0
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	22.7

Mobility

Traffic congestion is not a problem	22.6
Public transport is satisfactory	61.9

Activities

Green spaces are satisfactory	79.9
Cultural activities (shows, bars, and museums) are satisfactory	85.0

Opportunities (Work & School)

Employment finding services are readily available	64.1
Most children have access to a good school	70.8
Lifelong learning opportunities are provided by local institutions	64.0
Businesses are creating new jobs	60.5
Minorities feel welcome	59.4

Governance

Information on local government decisions are easily accessible	61.9
Corruption of city officials is not an issue of concern	47.5
Residents contribute to decision making of local government	45.6
Residents provide feedback on local government projects	51.8

TECHNOLOGIES

Score (0 20 40 60 80 100)

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	46.2
A website or App allows residents to easily give away unwanted items	57.4
Free public wifi has improved access to city services	56.5
CCTV cameras has made residents feel safer	53.2
A website or App allows residents to effectively monitor air pollution	47.9
Arranging medical appointments online has improved access	70.7

Mobility

Car-sharing Apps have reduced congestion	40.4
Apps that direct you to an available parking space have reduced journey time	46.1
Bicycle hiring has reduced congestion	55.3
Online scheduling and ticket sales has made public transport easier to use	69.4
The city provides information on traffic congestion through mobile phones	59.1

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	76.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	60.6
IT skills are taught well in schools	59.8
Online services provided by the city has made it easier to start a new business	52.7
The current internet speed and reliability meet connectivity needs	72.5

Governance

Online public access to city finances has reduced corruption	43.4
Online voting has increased participation	46.4
An online platform where residents can propose ideas has improved city life	49.6
Processing Identification Documents online has reduced waiting times	53.8

Boston

SMART CITY RANKING

34

Out of 141

▼

22 out of 118 in 2021

SMART CITY RATING

A

BBB in 2021

FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
675,647	0.949

(UN Data)

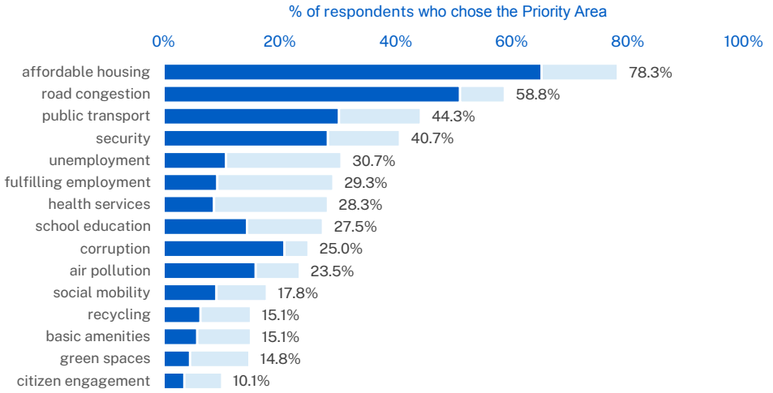
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most 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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



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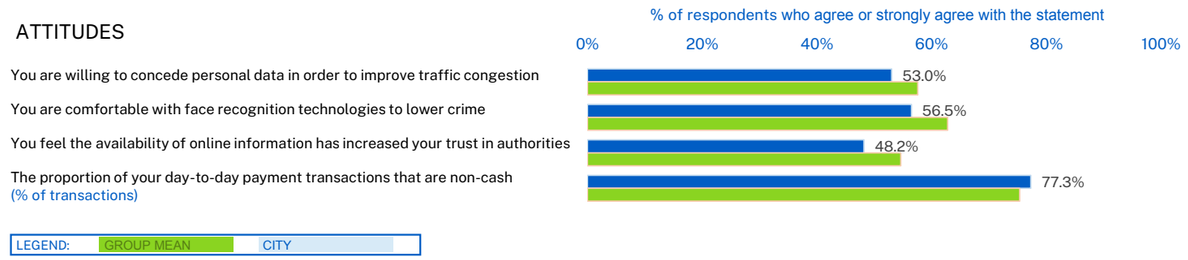

Brasilia

SMART CITY RANKING

128

Out of 141

not out of 118 in 2021

SMART CITY RATING

C

not in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
4,803,877	0.816

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.764	0.766	0.758	0.754	-0.004
Life expectancy at birth	75.1	75.3	74.0	72.8	-1.3
Expected years of schooling	15.7	15.6	15.6	15.6	+0.0
Mean years of schooling	8.0	10.6	10.9	10.9	+0.0
GNI per capita (PPP $)	21,972	23,261	22,286	24,563	+2,277

PRIORITY AREAS

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

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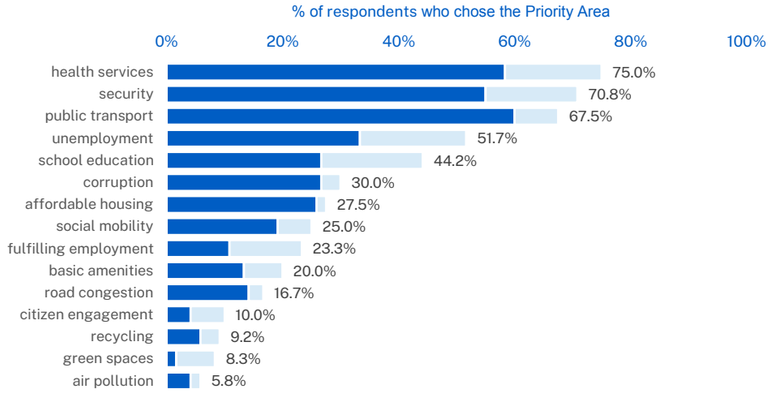

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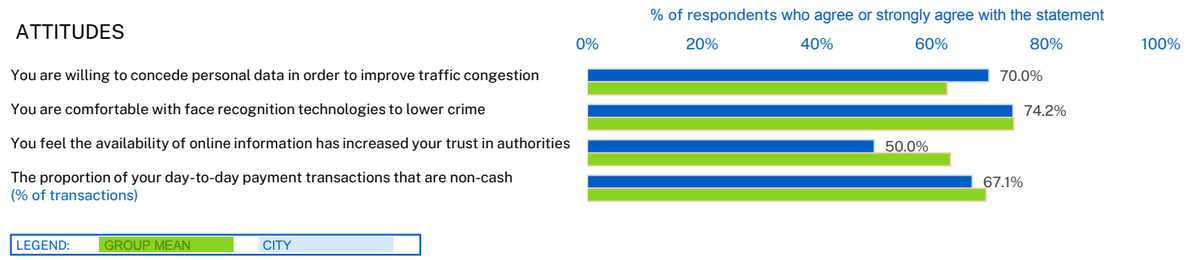

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

Basic sanitation meets the needs of the poorest areas	46.4
Recycling services are satisfactory	52.6
Public safety is not a problem	28.8
Air pollution is not a problem	41.7
Medical services provision is satisfactory	31.9
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	19.3

Mobility

Traffic congestion is not a problem	25.4
Public transport is satisfactory	19.9

Activities

Green spaces are satisfactory	73.2
Cultural activities (shows, bars, and museums) are satisfactory	66.3

Opportunities (Work & School)

Employment finding services are readily available	47.6
Most children have access to a good school	43.8
Lifelong learning opportunities are provided by local institutions	52.4
Businesses are creating new jobs	43.2
Minorities feel welcome	31.3

Governance

Information on local government decisions are easily accessible	40.0
Corruption of city officials is not an issue of concern	17.2
Residents contribute to decision making of local government	23.3
Residents provide feedback on local government projects	30.3

TECHNOLOGIES

Score

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	34.6
A website or App allows residents to easily give away unwanted items	36.5
Free public wifi has improved access to city services	33.8
CCTV cameras has made residents feel safer	45.3
A website or App allows residents to effectively monitor air pollution	22.5
Arranging medical appointments online has improved access	38.3

Mobility

Car-sharing Apps have reduced congestion	37.1
Apps that direct you to an available parking space have reduced journey time	41.1
Bicycle hiring has reduced congestion	39.6
Online scheduling and ticket sales has made public transport easier to use	46.8
The city provides information on traffic congestion through mobile phones	49.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	77.6

Opportunities (Work & School)

Online access to job listings has made it easier to find work	55.6
IT skills are taught well in schools	23.6
Online services provided by the city has made it easier to start a new business	49.6
The current internet speed and reliability meet connectivity needs	61.4

Governance

Online public access to city finances has reduced corruption	25.6
Online voting has increased participation	40.1
An online platform where residents can propose ideas has improved city life	35.8
Processing Identification Documents online has reduced waiting times	52.5

Bratislava

SMART CITY RANKING

62

Out of 141

▼

42 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
677,024	0.944

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.857	0.860	0.857	0.848	-0.009
Life expectancy at birth	77.4	77.5	77.0	74.9	-2.1
Expected years of schooling	14.5	14.5	14.5	14.5	+0.0
Mean years of schooling	12.6	12.7	12.9	12.9	+0.0
GNI per capita (PPP $)	30,672	32,113	29,801	30,690	+889

PRIORITY AREAS

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

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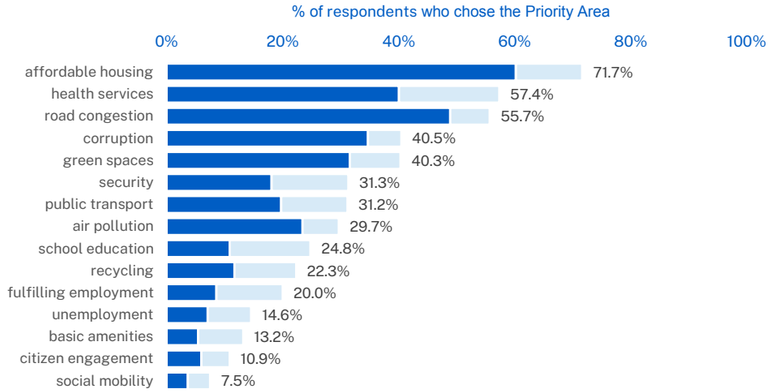

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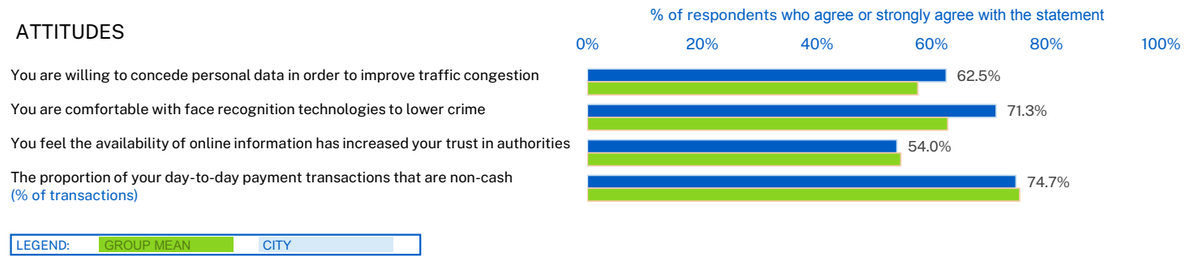

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	57.6
Recycling services are satisfactory	57.4
Public safety is not a problem	58.2
Air pollution is not a problem	37.5
Medical services provision is satisfactory	42.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	25.2

Mobility

Traffic congestion is not a problem	22.2
Public transport is satisfactory	48.0

Activities

Green spaces are satisfactory	40.5
Cultural activities (shows, bars, and museums) are satisfactory	67.8

Opportunities (Work & School)

Employment finding services are readily available	67.0
Most children have access to a good school	64.2
Lifelong learning opportunities are provided by local institutions	61.0
Businesses are creating new jobs	62.4
Minorities feel welcome	46.3

Governance

Information on local government decisions are easily accessible	61.0
Corruption of city officials is not an issue of concern	28.8
Residents contribute to decision making of local government	40.1
Residents provide feedback on local government projects	50.7

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.3
A website or App allows residents to easily give away unwanted items	51.5
Free public wifi has improved access to city services	55.0
CCTV cameras has made residents feel safer	52.9
A website or App allows residents to effectively monitor air pollution	36.8
Arranging medical appointments online has improved access	60.8

Mobility

Car-sharing Apps have reduced congestion	34.6
Apps that direct you to an available parking space have reduced journey time	36.4
Bicycle hiring has reduced congestion	49.4
Online scheduling and ticket sales has made public transport easier to use	66.7
The city provides information on traffic congestion through mobile phones	36.7

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	78.5

Opportunities (Work & School)

Online access to job listings has made it easier to find work	69.8
IT skills are taught well in schools	50.0
Online services provided by the city has made it easier to start a new business	38.1
The current internet speed and reliability meet connectivity needs	69.8

Governance

Online public access to city finances has reduced corruption	30.2
Online voting has increased participation	40.5
An online platform where residents can propose ideas has improved city life	41.6
Processing Identification Documents online has reduced waiting times	54.5

Brisbane

SMART CITY RANKING

24

Out of 141

▲

40 out of 118 in 2021

SMART CITY RATING

AA

BB in 2021

FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,054,614	0.944

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.941	0.941	0.947	0.951	+0.004
Life expectancy at birth	83.4	83.1	84.3	84.5	+0.2
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	12.6	12.1	12.4	12.4	+0.0
GNI per capita (PPP $)	43,821	52,085	49,392	52,293	+2,901

PRIORITY AREAS

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

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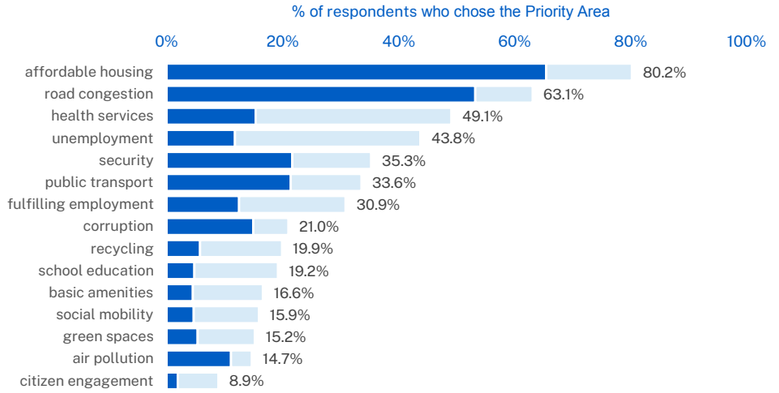

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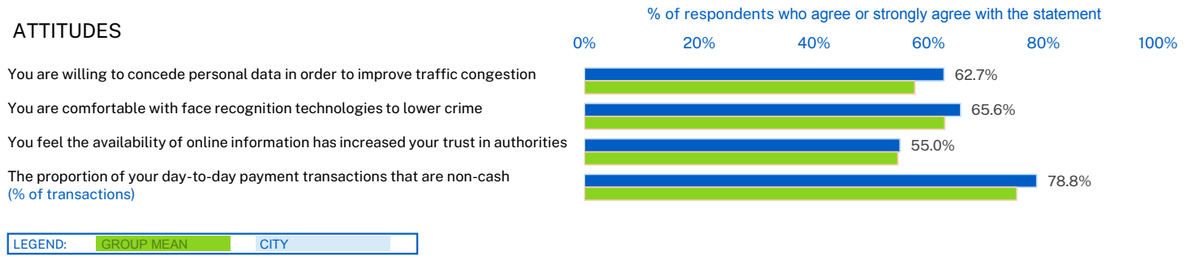

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	71.5
Recycling services are satisfactory	74.6
Public safety is not a problem	52.4
Air pollution is not a problem	52.9
Medical services provision is satisfactory	69.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	28.3

Mobility

Traffic congestion is not a problem	26.1
Public transport is satisfactory	54.5

Activities

Green spaces are satisfactory	70.2
Cultural activities (shows, bars, and museums) are satisfactory	79.3

Opportunities (Work & School)

Employment finding services are readily available	70.8
Most children have access to a good school	77.5
Lifelong learning opportunities are provided by local institutions	72.0
Businesses are creating new jobs	63.0
Minorities feel welcome	65.3

Governance

Information on local government decisions are easily accessible	59.6
Corruption of city officials is not an issue of concern	47.9
Residents contribute to decision making of local government	51.0
Residents provide feedback on local government projects	63.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.6
A website or App allows residents to easily give away unwanted items	62.8
Free public wifi has improved access to city services	64.0
CCTV cameras has made residents feel safer	60.6
A website or App allows residents to effectively monitor air pollution	33.4
Arranging medical appointments online has improved access	73.5

Mobility

Car-sharing Apps have reduced congestion	38.6
Apps that direct you to an available parking space have reduced journey time	41.3
Bicycle hiring has reduced congestion	42.9
Online scheduling and ticket sales has made public transport easier to use	59.8
The city provides information on traffic congestion through mobile phones	55.8

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	77.4

Opportunities (Work & School)

Online access to job listings has made it easier to find work	74.1
IT skills are taught well in schools	59.7
Online services provided by the city has made it easier to start a new business	53.7
The current internet speed and reliability meet connectivity needs	63.8

Governance

Online public access to city finances has reduced corruption	39.1
Online voting has increased participation	47.7
An online platform where residents can propose ideas has improved city life	45.7
Processing Identification Documents online has reduced waiting times	62.6

Brussels

SMART CITY RANKING

35

Out of 141

▲

45 out of 118 in 2021

SMART CITY RATING

BBB

BBB in 2021

FACTOR RATINGS

BB

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,226,329	0.953

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.919	0.931	0.928	0.937	+0.009
Life expectancy at birth	81.5	81.6	80.8	81.9	+1.1
Expected years of schooling	19.7	19.8	18.0	18.0	+0.0
Mean years of schooling	11.8	12.1	12.4	12.4	+0.0
GNI per capita (PPP $)	43,821	52,085	49,392	52,293	+2,901

PRIORITY AREAS

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

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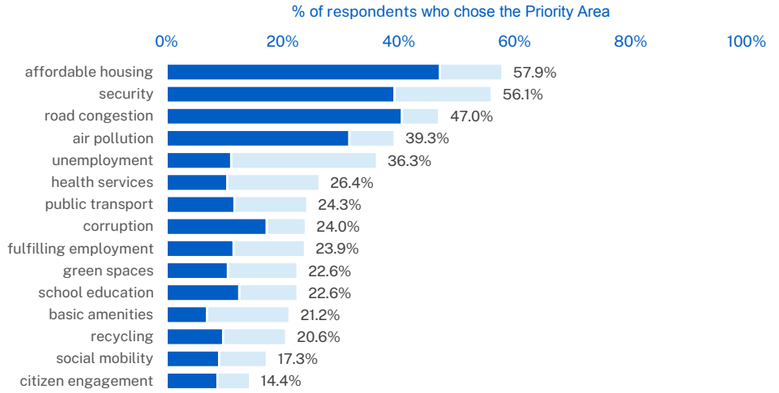

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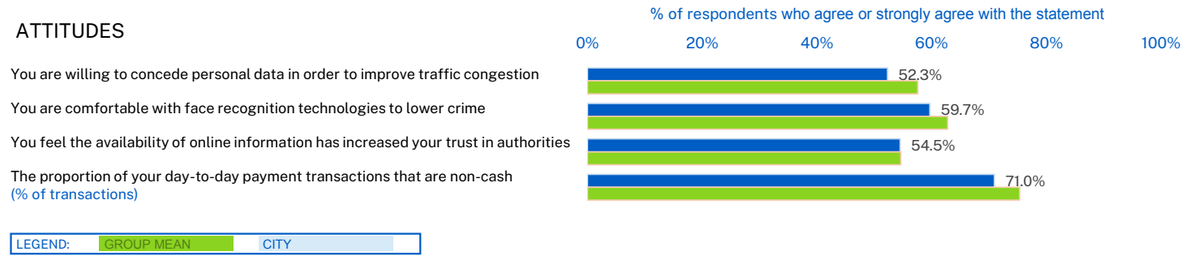


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	54.3
Recycling services are satisfactory	59.9
Public safety is not a problem	46.4
Air pollution is not a problem	28.3
Medical services provision is satisfactory	66.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	32.3

Mobility

Traffic congestion is not a problem	28.6
Public transport is satisfactory	58.2

Activities

Green spaces are satisfactory	65.6
Cultural activities (shows, bars, and museums) are satisfactory	73.8

Opportunities (Work & School)

Employment finding services are readily available	64.2
Most children have access to a good school	58.3
Lifelong learning opportunities are provided by local institutions	62.5
Businesses are creating new jobs	53.0
Minorities feel welcome	49.0

Governance

Information on local government decisions are easily accessible	55.5
Corruption of city officials is not an issue of concern	42.5
Residents contribute to decision making of local government	40.6
Residents provide feedback on local government projects	47.4

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	46.5
A website or App allows residents to easily give away unwanted items	58.8
Free public wifi has improved access to city services	54.1
CCTV cameras has made residents feel safer	53.4
A website or App allows residents to effectively monitor air pollution	45.9
Arranging medical appointments online has improved access	61.3

Mobility

Car-sharing Apps have reduced congestion	42.7
Apps that direct you to an available parking space have reduced journey time	49.2
Bicycle hiring has reduced congestion	53.7
Online scheduling and ticket sales has made public transport easier to use	61.3
The city provides information on traffic congestion through mobile phones	52.9

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	73.8

Opportunities (Work & School)

Online access to job listings has made it easier to find work	61.9
IT skills are taught well in schools	53.5
Online services provided by the city has made it easier to start a new business	54.1
The current internet speed and reliability meet connectivity needs	66.5

Governance

Online public access to city finances has reduced corruption	43.7
Online voting has increased participation	50.9
An online platform where residents can propose ideas has improved city life	48.1
Processing Identification Documents online has reduced waiting times	62.4

Bucharest

SMART CITY RANKING

104

Out of 141

87 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

B

TECHNOLOGIES

GROUP

2

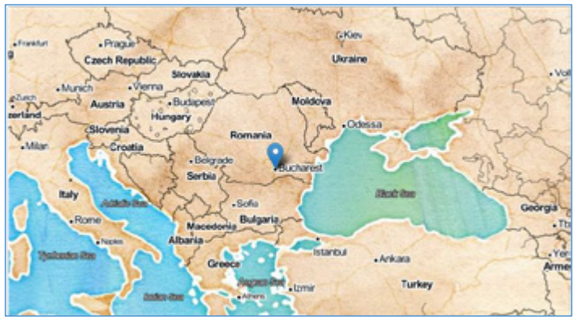
All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,823,526	0.926

(Eurostat)



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

Country	2018	2019	2020	2021	1 yr change
HDI	0.816	0.828	0.824	0.821	-0.003
Life expectancy at birth	75.9	76.1	75.4	74.2	-1.2
Expected years of schooling	14.3	14.3	14.2	14.2	+0.0
Mean years of schooling	11.0	11.1	11.3	11.3	+0.0
GNI per capita (PPP $)	23,906	29,497	28,359	30,027	+1,669

PRIORITY AREAS

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

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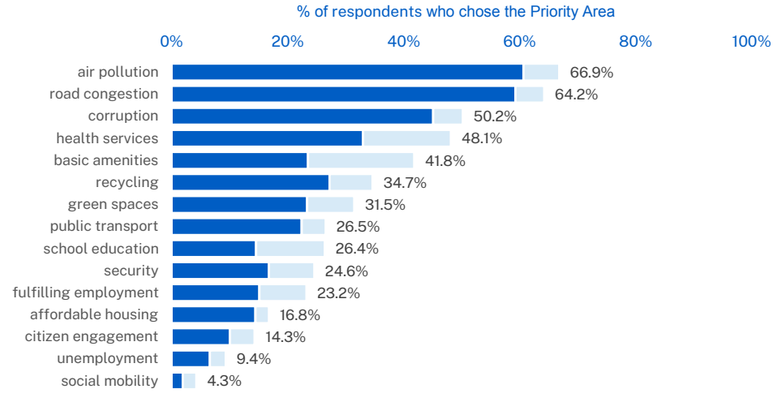

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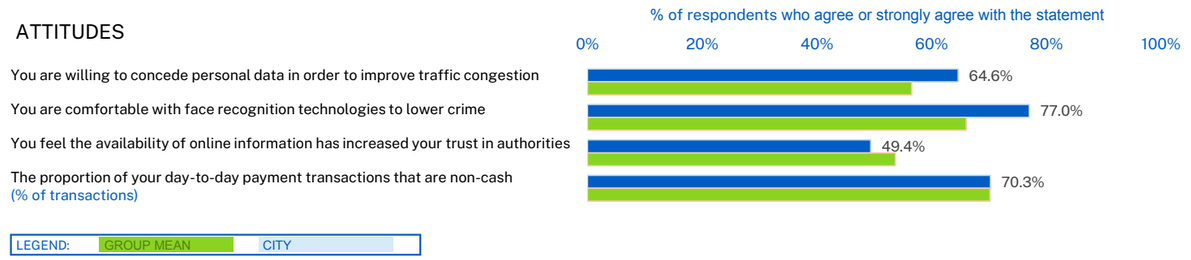

Budapest

SMART CITY RANKING

87

Out of 141

▼

78 out of 118 in 2021

SMART CITY RATING

B

B in 2021

FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,752,286	0.922

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.845	0.854	0.849	0.846	-0.003
Life expectancy at birth	76.7	76.9	75.7	74.5	-1.2
Expected years of schooling	15.1	15.2	15.0	15.0	+0.0
Mean years of schooling	11.9	12.0	12.3	12.3	+0.0
GNI per capita (PPP $)	27,144	31,329	30,487	32,789	+2,302

PRIORITY AREAS

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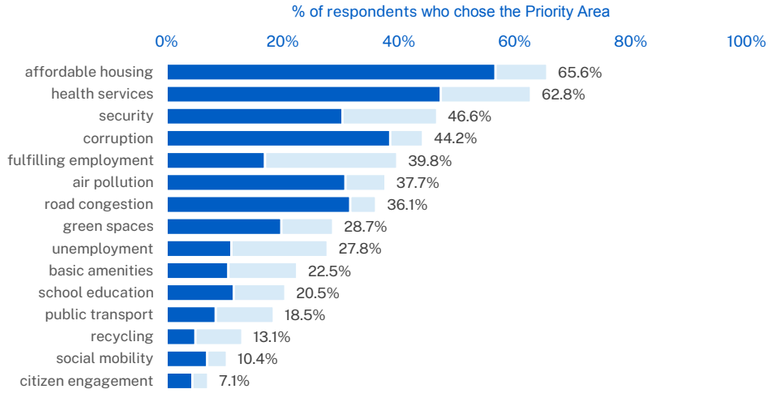

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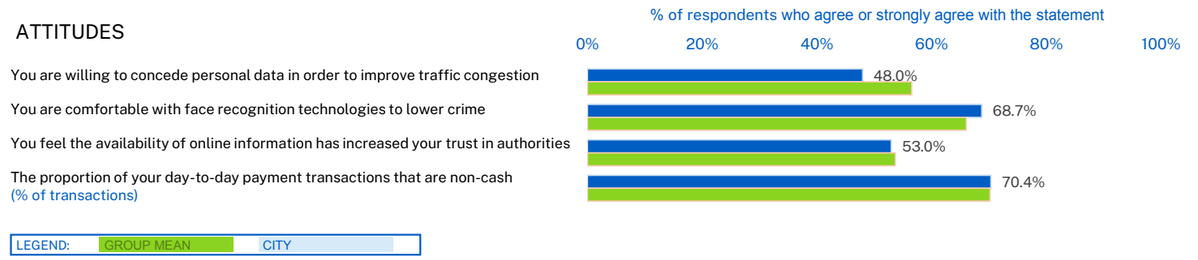

Buenos Aires

SMART CITY RANKING

124

Out of 141

104 out of 118 in 2021

SMART CITY RATING

C

D in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
15,567,820	0.812

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.830	0.845	0.840	0.842	+0.002
Life expectancy at birth	76.5	76.7	75.9	75.4	-0.5
Expected years of schooling	17.6	17.7	17.9	17.9	+0.0
Mean years of schooling	10.6	10.9	11.2	11.2	+0.0
GNI per capita (PPP $)	17,611	21,190	19,178	20,925	+1,747

PRIORITY AREAS

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

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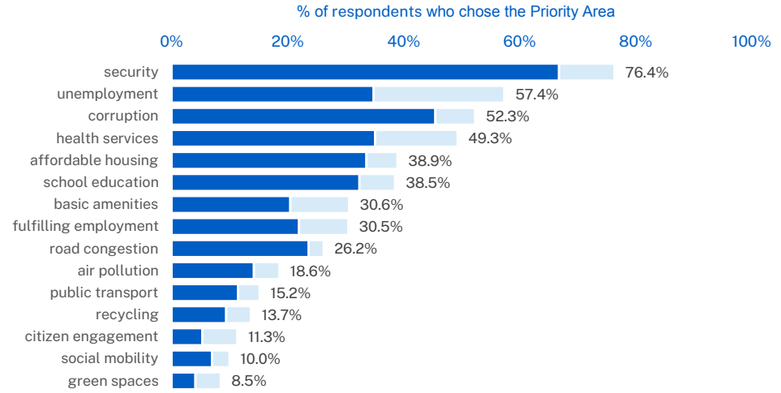

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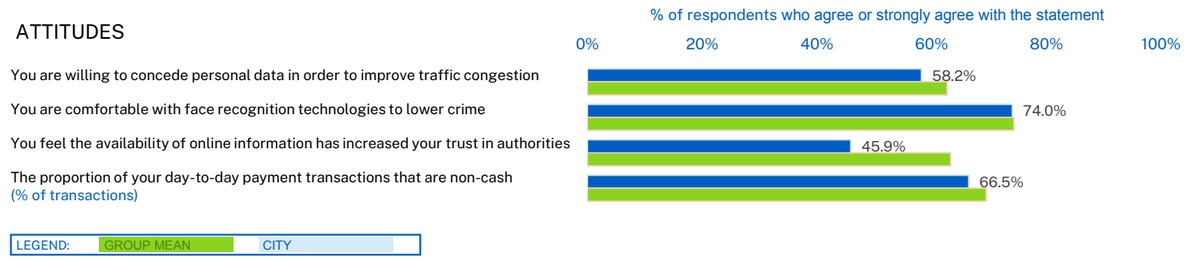

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	39.4
Recycling services are satisfactory	43.6
Public safety is not a problem	18.5
Air pollution is not a problem	24.3
Medical services provision is satisfactory	41.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	22.6

Mobility

Traffic congestion is not a problem	22.3
Public transport is satisfactory	45.2

Activities

Green spaces are satisfactory	70.7
Cultural activities (shows, bars, and museums) are satisfactory	75.9

Opportunities (Work & School)

Employment finding services are readily available	39.8
Most children have access to a good school	31.2
Lifelong learning opportunities are provided by local institutions	46.0
Businesses are creating new jobs	31.4
Minorities feel welcome	41.6

Governance

Information on local government decisions are easily accessible	46.0
Corruption of city officials is not an issue of concern	22.3
Residents contribute to decision making of local government	28.7
Residents provide feedback on local government projects	40.4

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	42.6
A website or App allows residents to easily give away unwanted items	44.0
Free public wifi has improved access to city services	48.3
CCTV cameras has made residents feel safer	48.8
A website or App allows residents to effectively monitor air pollution	23.5
Arranging medical appointments online has improved access	56.4

Mobility

Car-sharing Apps have reduced congestion	43.1
Apps that direct you to an available parking space have reduced journey time	45.4
Bicycle hiring has reduced congestion	54.0
Online scheduling and ticket sales has made public transport easier to use	56.4
The city provides information on traffic congestion through mobile phones	63.0

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	78.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	53.0
IT skills are taught well in schools	36.8
Online services provided by the city has made it easier to start a new business	45.1
The current internet speed and reliability meet connectivity needs	59.8

Governance

Online public access to city finances has reduced corruption	31.2
Online voting has increased participation	35.2
An online platform where residents can propose ideas has improved city life	44.5
Processing Identification Documents online has reduced waiting times	62.3

Busan

SMART CITY RANKING

49

Out of 141

▼

47 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,343,528	0.936

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.906	0.916	0.922	0.925	+0.003
Life expectancy at birth	82.8	83.0	83.6	83.7	+0.1
Expected years of schooling	16.4	16.5	16.5	16.5	+0.0
Mean years of schooling	12.2	12.2	12.5	12.5	+0.0
GNI per capita (PPP $)	36,757	43,044	42,698	44,501	+1,803

PRIORITY AREAS

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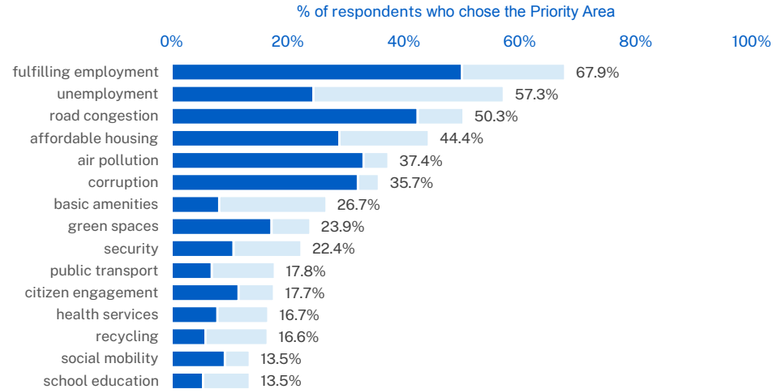

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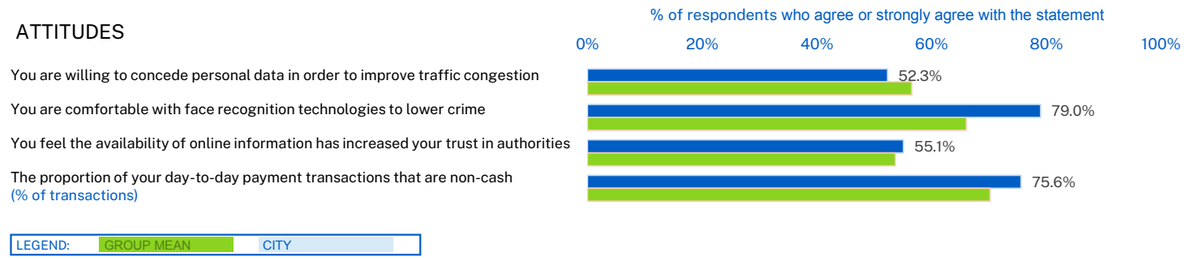

Cairo

SMART CITY RANKING

108

Out of 141

▼

105 out of 118 in 2021

SMART CITY RATING

CC

C in 2021

FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
9,539,673	0.779

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.700	0.707	0.734	0.731	-0.003
Life expectancy at birth	71.8	72.0	71.0	70.2	-0.8
Expected years of schooling	13.1	13.3	13.8	13.8	+0.0
Mean years of schooling	7.3	7.4	9.6	9.6	+0.0
GNI per capita (PPP $)	10,744	11,466	11,581	11,732	+151

PRIORITY AREAS

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

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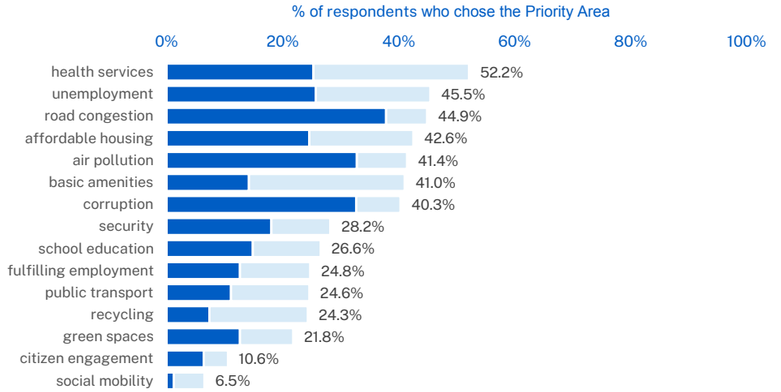
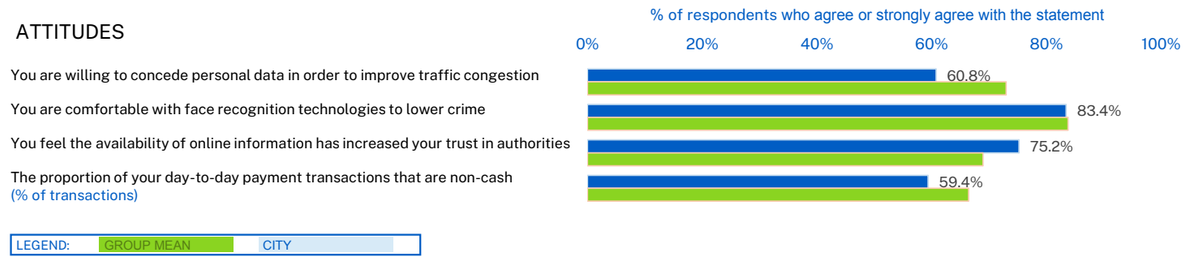


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	68.4
Recycling services are satisfactory	57.0
Public safety is not a problem	37.4
Air pollution is not a problem	20.0
Medical services provision is satisfactory	58.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	45.6

Mobility

Traffic congestion is not a problem	19.5
Public transport is satisfactory	54.3

Activities

Green spaces are satisfactory	53.2
Cultural activities (shows, bars, and museums) are satisfactory	67.4

Opportunities (Work & School)

Employment finding services are readily available	45.7
Most children have access to a good school	55.1
Lifelong learning opportunities are provided by local institutions	51.0
Businesses are creating new jobs	49.8
Minorities feel welcome	64.5

Governance

Information on local government decisions are easily accessible	69.4
Corruption of city officials is not an issue of concern	28.6
Residents contribute to decision making of local government	46.7
Residents provide feedback on local government projects	51.8

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	62.8
A website or App allows residents to easily give away unwanted items	61.0
Free public wifi has improved access to city services	56.8
CCTV cameras has made residents feel safer	76.1
A website or App allows residents to effectively monitor air pollution	49.9
Arranging medical appointments online has improved access	78.0

Mobility

Car-sharing Apps have reduced congestion	65.5
Apps that direct you to an available parking space have reduced journey time	68.3
Bicycle hiring has reduced congestion	55.6
Online scheduling and ticket sales has made public transport easier to use	73.0
The city provides information on traffic congestion through mobile phones	68.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	77.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	73.6
IT skills are taught well in schools	61.4
Online services provided by the city has made it easier to start a new business	68.2
The current internet speed and reliability meet connectivity needs	67.0

Governance

Online public access to city finances has reduced corruption	54.5
Online voting has increased participation	63.7
An online platform where residents can propose ideas has improved city life	64.4
Processing Identification Documents online has reduced waiting times	70.0

Canberra

SMART CITY RANKING

3

Out of 141

not out of 118 in 2021

SMART CITY RATING

AA

not in 2021

FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

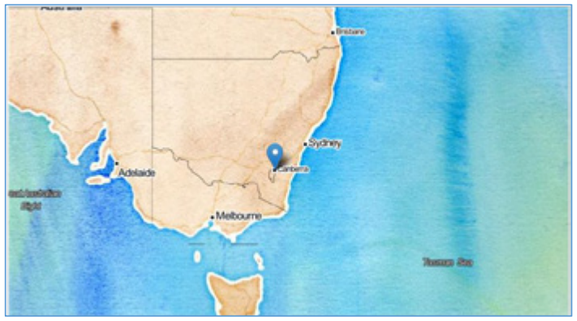
All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
395,790	0.980

(UN Data)



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

Country	2018	2019	2020	2021	1 yr change
HDI	0.941	0.941	0.947	0.951	+0.004
Life expectancy at birth	83.4	83.1	84.3	84.5	+0.2
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	12.6	12.1	12.4	12.4	+0.0
GNI per capita (PPP $)	43,821	52,085	49,392	52,293	+2,901

PRIORITY AREAS

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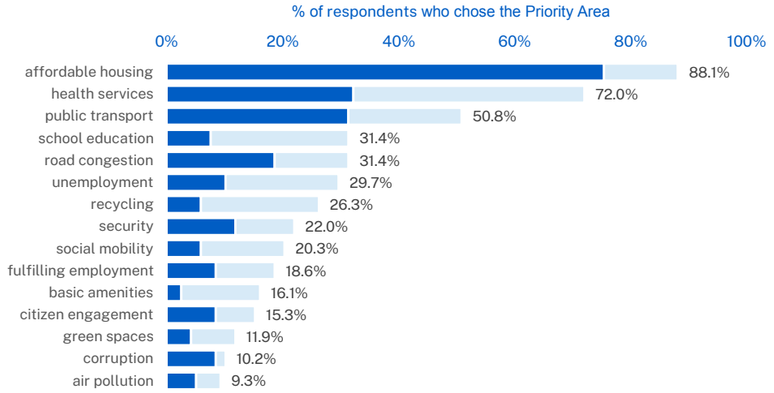

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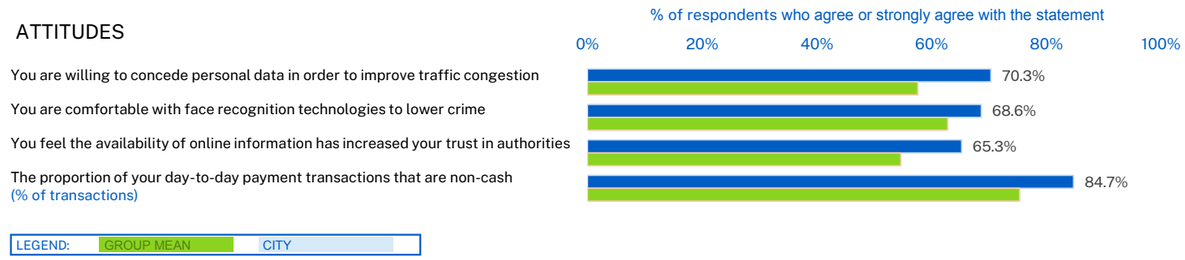

Cape Town

SMART CITY RANKING

125

Out of 141

106 out of 118 in 2021

SMART CITY RATING

C

C in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
4,800,954	0.751

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.705	0.709	0.727	0.713	-0.014
Life expectancy at birth	63.9	64.1	65.3	62.3	-2.9
Expected years of schooling	13.7	13.8	13.6	13.6	+0.0
Mean years of schooling	10.2	10.2	11.4	11.4	+0.0
GNI per capita (PPP $)	11,756	12,129	12,450	12,948	+499

PRIORITY AREAS

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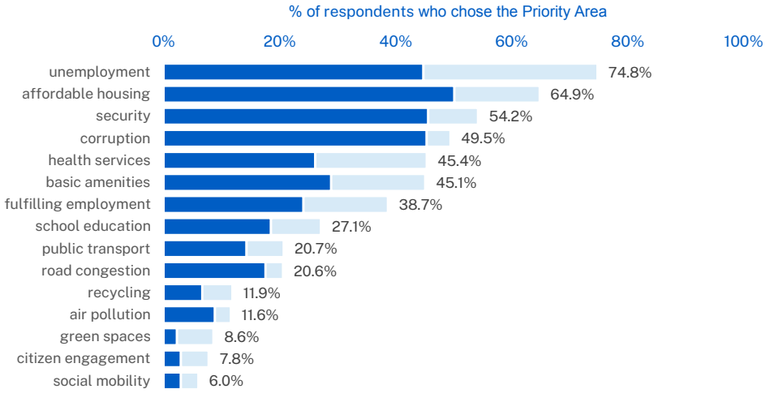

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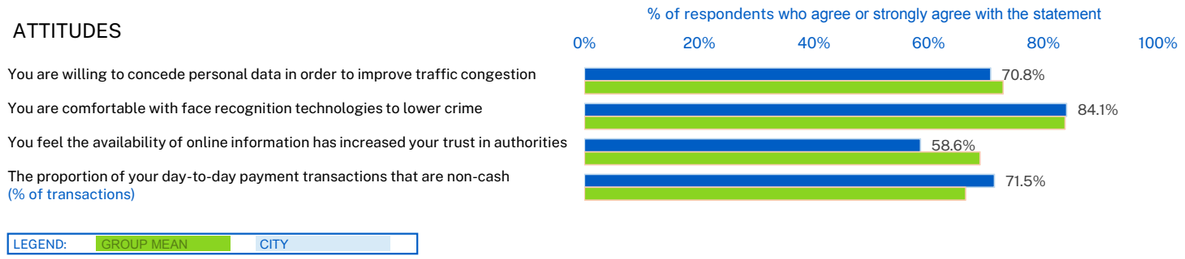

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	40.9
Recycling services are satisfactory	55.6
Public safety is not a problem	23.3
Air pollution is not a problem	35.1
Medical services provision is satisfactory	51.0
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	26.7

Mobility

Traffic congestion is not a problem	29.2
Public transport is satisfactory	43.5

Activities

Green spaces are satisfactory	58.4
Cultural activities (shows, bars, and museums) are satisfactory	72.5

Opportunities (Work & School)

Employment finding services are readily available	42.3
Most children have access to a good school	43.7
Lifelong learning opportunities are provided by local institutions	46.6
Businesses are creating new jobs	45.0
Minorities feel welcome	43.2

Governance

Information on local government decisions are easily accessible	53.3
Corruption of city officials is not an issue of concern	20.6
Residents contribute to decision making of local government	34.4
Residents provide feedback on local government projects	43.0

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	50.4
A website or App allows residents to easily give away unwanted items	50.8
Free public wifi has improved access to city services	54.5
CCTV cameras has made residents feel safer	49.2
A website or App allows residents to effectively monitor air pollution	33.0
Arranging medical appointments online has improved access	58.7

Mobility

Car-sharing Apps have reduced congestion	46.7
Apps that direct you to an available parking space have reduced journey time	41.3
Bicycle hiring has reduced congestion	36.5
Online scheduling and ticket sales has made public transport easier to use	58.0
The city provides information on traffic congestion through mobile phones	56.1

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	79.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	61.4
IT skills are taught well in schools	49.4
Online services provided by the city has made it easier to start a new business	50.8
The current internet speed and reliability meet connectivity needs	61.2

Governance

Online public access to city finances has reduced corruption	31.9
Online voting has increased participation	40.9
An online platform where residents can propose ideas has improved city life	44.0
Processing Identification Documents online has reduced waiting times	57.9

Cardiff

SMART CITY RANKING

94

Out of 141

not out of 118 in 2021

SMART CITY RATING

CC

not in 2021

FACTOR RATINGS

CCC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
497,646	0.898

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP $)	39,507	46,071	42,375	45,225	+2,850

PRIORITY AREAS

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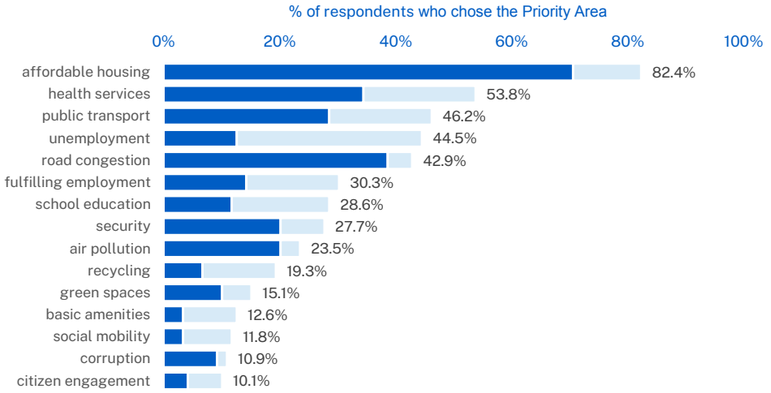
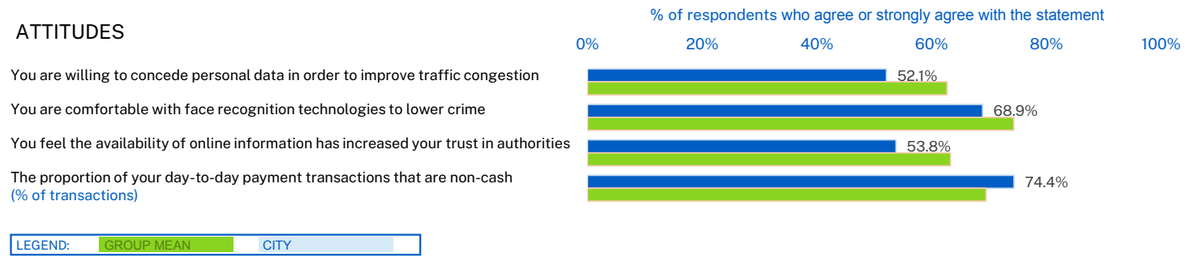


ATTITUDES



Chengdu

SMART CITY RANKING

97

Out of 141

▼

84 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
9,478,521	0.740

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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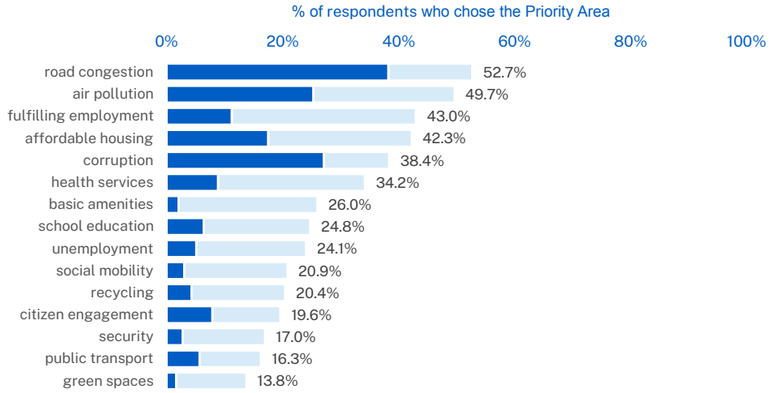
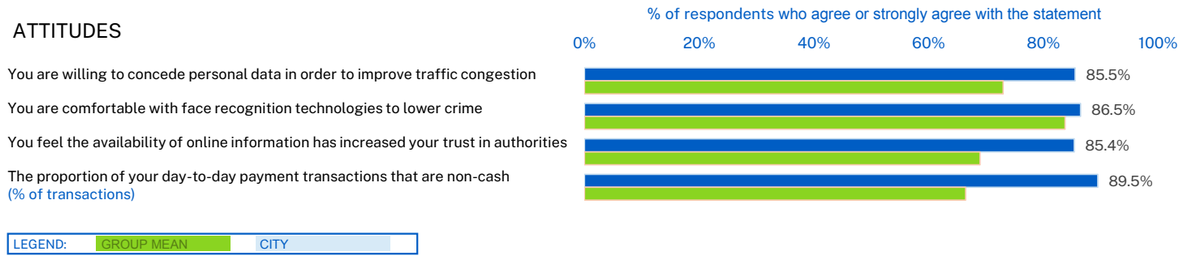


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	82.4
Recycling services are satisfactory	75.3
Public safety is not a problem	73.3
Air pollution is not a problem	54.6
Medical services provision is satisfactory	75.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	63.2

Mobility

Traffic congestion is not a problem	40.9
Public transport is satisfactory	69.4

Activities

Green spaces are satisfactory	82.0
Cultural activities (shows, bars, and museums) are satisfactory	82.0

Opportunities (Work & School)

Employment finding services are readily available	78.8
Most children have access to a good school	75.9
Lifelong learning opportunities are provided by local institutions	65.1
Businesses are creating new jobs	73.9
Minorities feel welcome	79.3

Governance

Information on local government decisions are easily accessible	73.9
Corruption of city officials is not an issue of concern	48.2
Residents contribute to decision making of local government	58.0
Residents provide feedback on local government projects	69.4

TECHNOLOGIES

Score 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	79.3
A website or App allows residents to easily give away unwanted items	68.1
Free public wifi has improved access to city services	75.9
CCTV cameras has made residents feel safer	76.5
A website or App allows residents to effectively monitor air pollution	69.7
Arranging medical appointments online has improved access	86.6

Mobility

Car-sharing Apps have reduced congestion	65.3
Apps that direct you to an available parking space have reduced journey time	76.1
Bicycle hiring has reduced congestion	79.1
Online scheduling and ticket sales has made public transport easier to use	87.7
The city provides information on traffic congestion through mobile phones	85.7

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	90.2

Opportunities (Work & School)

Online access to job listings has made it easier to find work	83.2
IT skills are taught well in schools	75.2
Online services provided by the city has made it easier to start a new business	76.7
The current internet speed and reliability meet connectivity needs	88.6

Governance

Online public access to city finances has reduced corruption	64.2
Online voting has increased participation	69.4
An online platform where residents can propose ideas has improved city life	77.8
Processing Identification Documents online has reduced waiting times	79.8

Chicago

SMART CITY RANKING

61

Out of 141

▼

56 out of 118 in 2021

SMART CITY RATING

BB

B in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,746,388	0.929

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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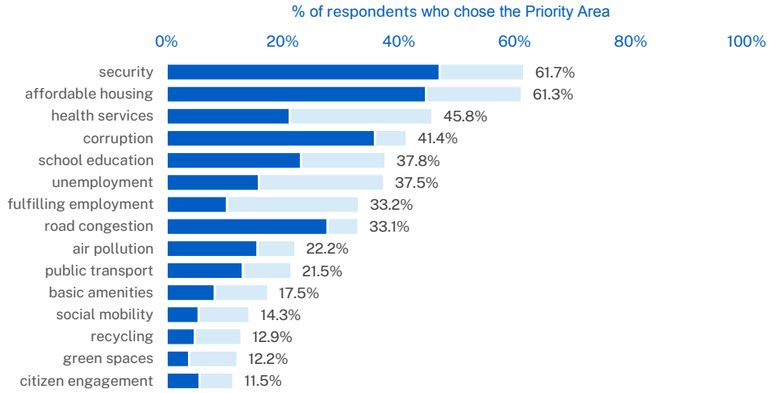
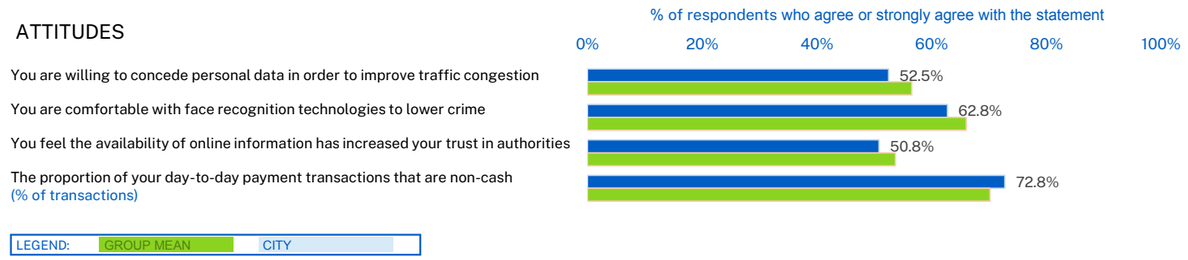


ATTITUDES



Chongqing

SMART CITY RANKING

86

Out of 141

▼

74 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
16,874,741	0.774

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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

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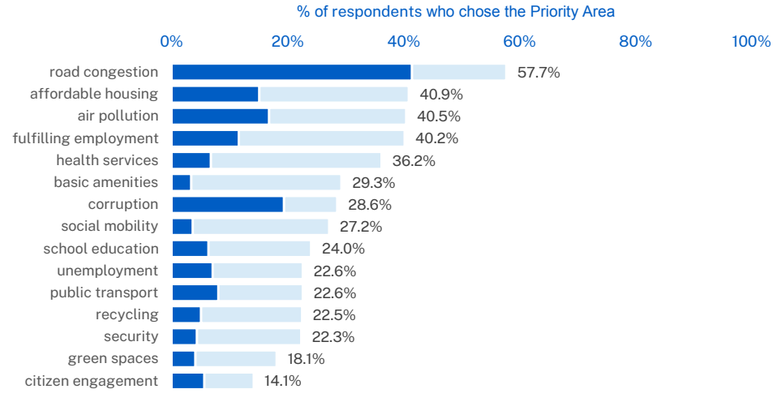

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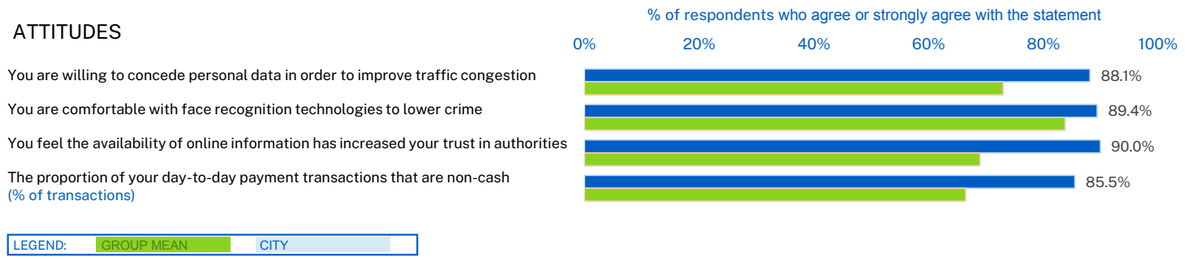

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	82.2
Recycling services are satisfactory	73.9
Public safety is not a problem	73.3
Air pollution is not a problem	63.7
Medical services provision is satisfactory	76.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	66.0

Mobility

Traffic congestion is not a problem	43.3
Public transport is satisfactory	66.9

Activities

Green spaces are satisfactory	79.1
Cultural activities (shows, bars, and museums) are satisfactory	79.3

Opportunities (Work & School)

Employment finding services are readily available	74.8
Most children have access to a good school	74.0
Lifelong learning opportunities are provided by local institutions	64.3
Businesses are creating new jobs	75.6
Minorities feel welcome	82.2

Governance

Information on local government decisions are easily accessible	73.4
Corruption of city officials is not an issue of concern	56.6
Residents contribute to decision making of local government	57.7
Residents provide feedback on local government projects	69.1

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	78.5
A website or App allows residents to easily give away unwanted items	74.2
Free public wifi has improved access to city services	76.3
CCTV cameras has made residents feel safer	79.1
A website or App allows residents to effectively monitor air pollution	74.4
Arranging medical appointments online has improved access	87.4

Mobility

Car-sharing Apps have reduced congestion	63.4
Apps that direct you to an available parking space have reduced journey time	78.5
Bicycle hiring has reduced congestion	71.7
Online scheduling and ticket sales has made public transport easier to use	85.7
The city provides information on traffic congestion through mobile phones	83.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	88.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	81.1
IT skills are taught well in schools	74.9
Online services provided by the city has made it easier to start a new business	74.3
The current internet speed and reliability meet connectivity needs	88.2

Governance

Online public access to city finances has reduced corruption	70.3
Online voting has increased participation	73.9
An online platform where residents can propose ideas has improved city life	77.8
Processing Identification Documents online has reduced waiting times	78.9

Copenhagen

SMART CITY RANKING

4

Out of 141

5 out of 118 in 2021

SMART CITY RATING

AA

AAA in 2021

FACTOR RATINGS

AAA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,855,084	0.967

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.930	0.940	0.947	0.948	+0.001
Life expectancy at birth	80.8	80.9	81.6	81.4	-0.2
Expected years of schooling	19.1	18.9	18.0	18.0	+0.0
Mean years of schooling	12.6	12.6	13.0	13.0	+0.0
GNI per capita (PPP $)	48,836	58,662	58,144	60,365	+2,221

PRIORITY AREAS

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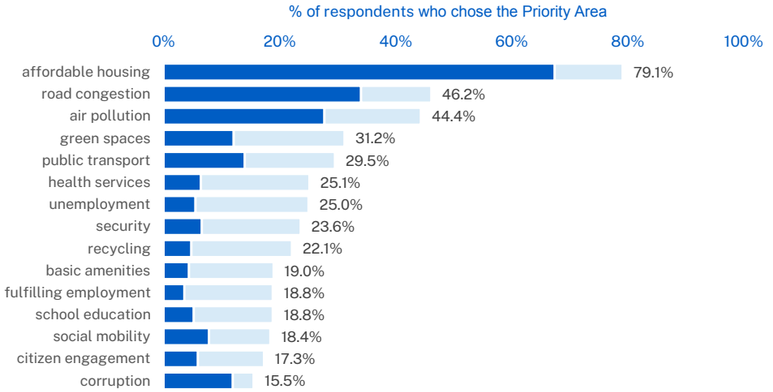

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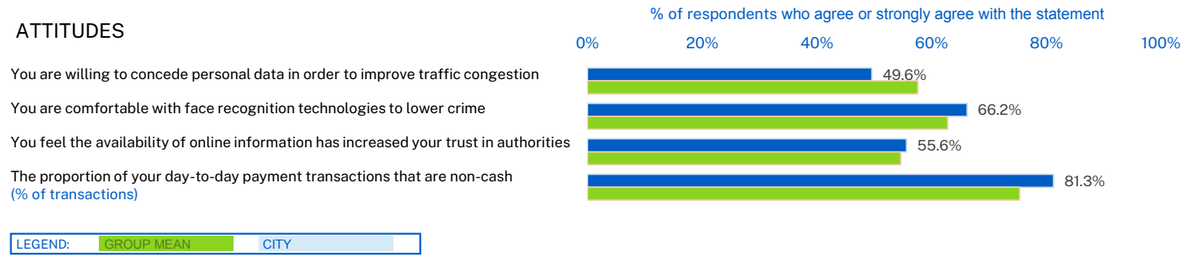

Delhi

SMART CITY RANKING

105

Out of 141

▼

94 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,206,576	0.730

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.647	0.645	0.642	0.633	-0.009
Life expectancy at birth	69.4	69.7	70.2	67.2	-2.9
Expected years of schooling	12.3	12.2	11.9	11.9	+0.0
Mean years of schooling	6.5	6.5	6.7	6.7	+0.0
GNI per capita (PPP $)	6,829	6,681	6,107	6,590	+482

PRIORITY AREAS

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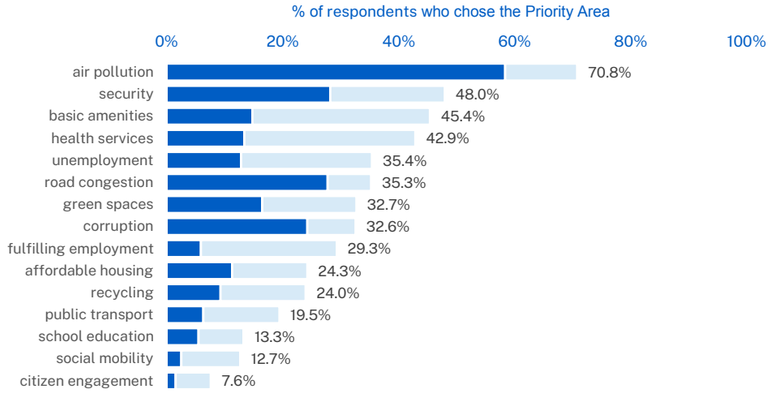

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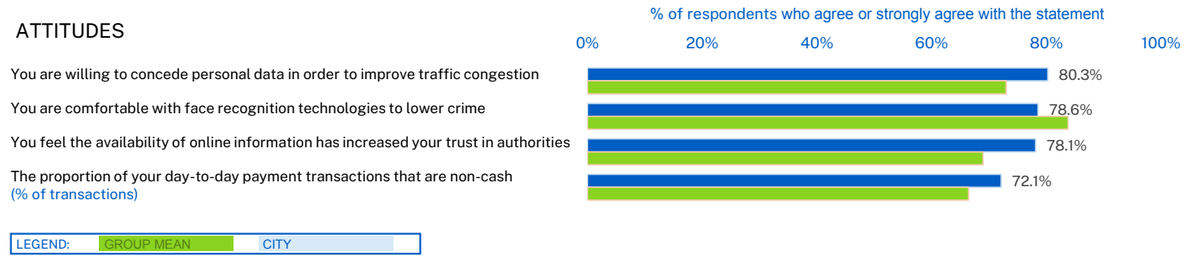

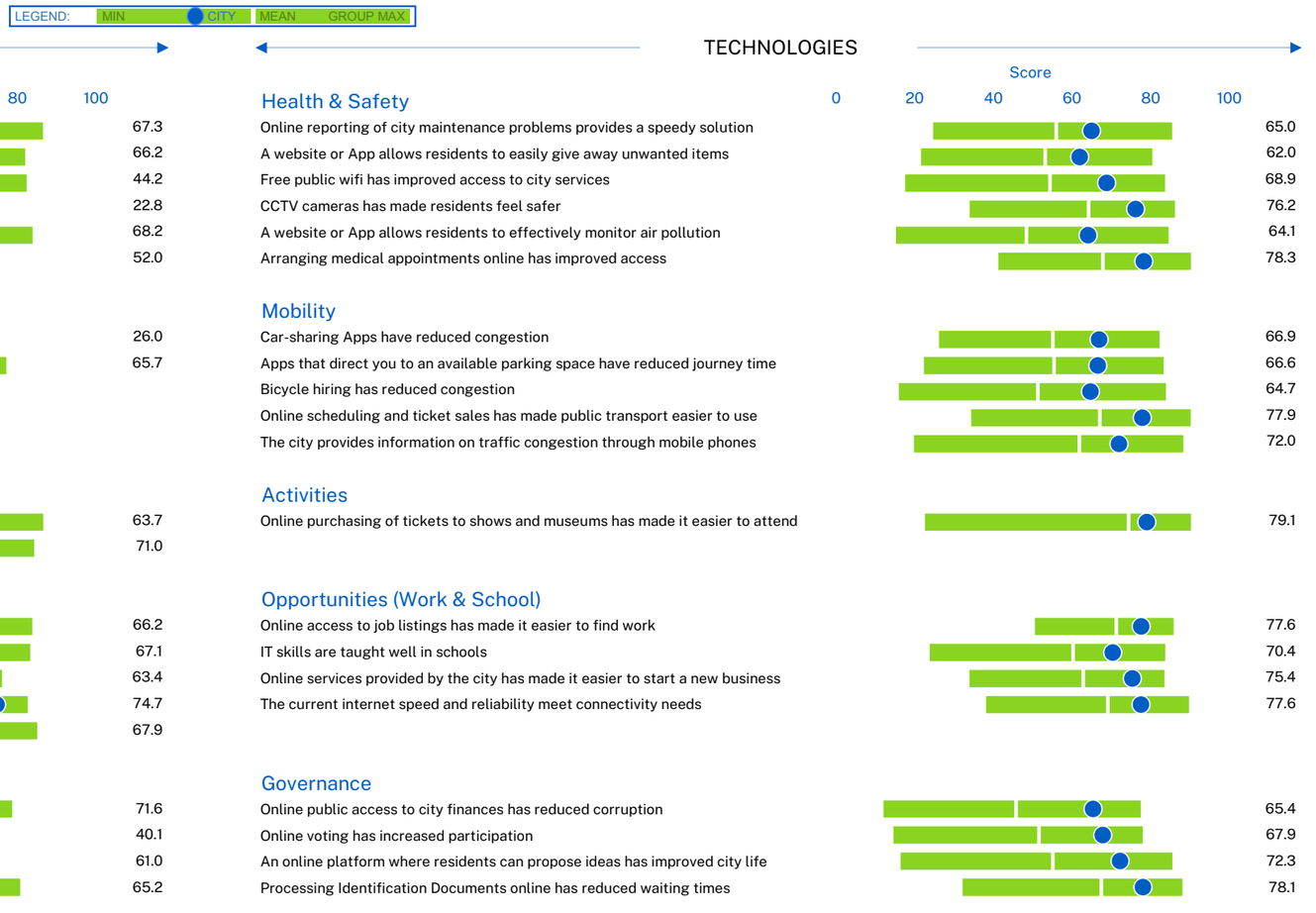

Denver

SMART CITY RANKING

53

Out of 141

34 out of 118 in 2021

SMART CITY RATING

BBB

BBB in 2021

FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
715,522	0.942

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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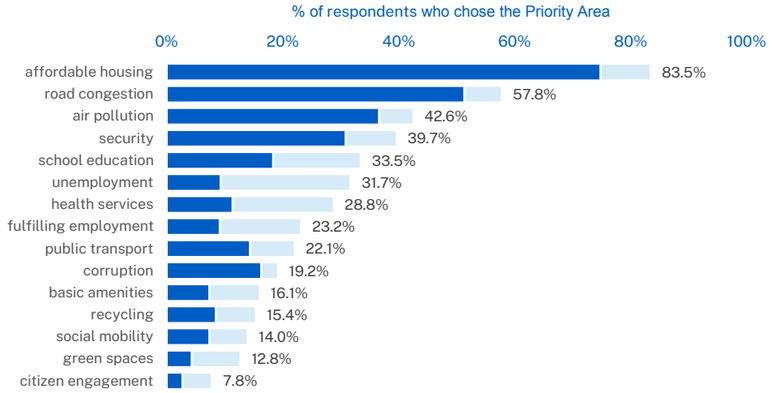

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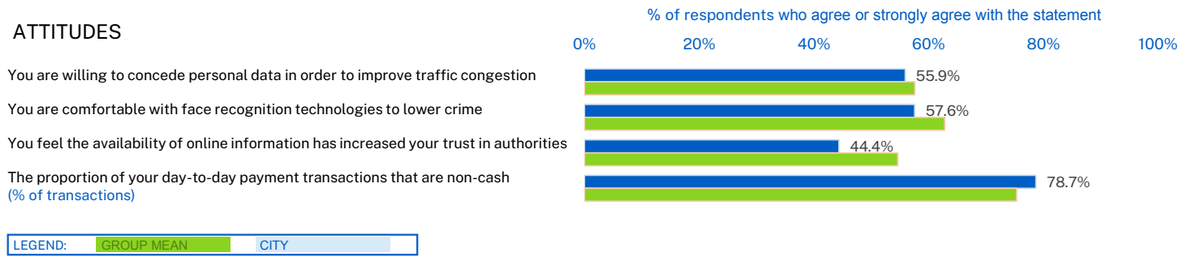

Doha

SMART CITY RANKING

59

Out of 141

not out of 118 in 2021

SMART CITY RATING

BB

not in 2021

FACTOR RATINGS

BB

STRUCTURES

B

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,186,023	0.855

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.853	0.859	0.854	0.855	+0.001
Life expectancy at birth	80.9	81.0	79.1	79.3	+0.2
Expected years of schooling	12.0	12.3	12.6	12.6	+0.0
Mean years of schooling	9.9	10.0	10.0	10.0	+0.0
GNI per capita (PPP $)	89,089	87,792	83,721	87,134	+3,413

PRIORITY AREAS

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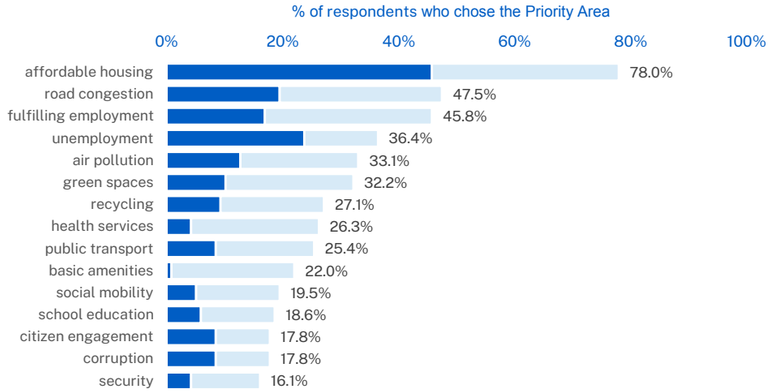
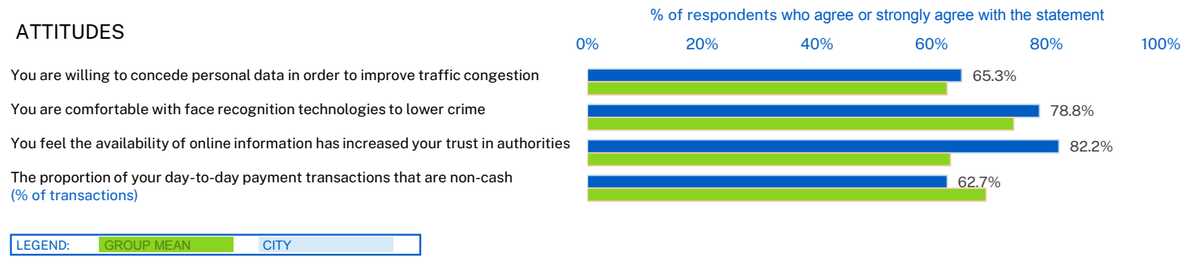


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

	0	20	40	60	80	100	
Health & Safety							
Basic sanitation meets the needs of the poorest areas					●		85.7
Recycling services are satisfactory					●		76.0
Public safety is not a problem					●		79.1
Air pollution is not a problem				●			60.6
Medical services provision is satisfactory					●		85.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem			●				47.0
Mobility							
Traffic congestion is not a problem				●			59.6
Public transport is satisfactory					●		75.8
Activities							
Green spaces are satisfactory					●		75.4
Cultural activities (shows, bars, and museums) are satisfactory					●		75.7
Opportunities (Work & School)							
Employment finding services are readily available			●				50.6
Most children have access to a good school				●			67.9
Lifelong learning opportunities are provided by local institutions				●			61.3
Businesses are creating new jobs				●			63.6
Minorities feel welcome					●		68.9
Governance							
Information on local government decisions are easily accessible					●		76.3
Corruption of city officials is not an issue of concern					●		70.2
Residents contribute to decision making of local government			●				50.3
Residents provide feedback on local government projects				●			53.5

TECHNOLOGIES

Score

	0	20	40	60	80	100	
Health & Safety							
Online reporting of city maintenance problems provides a speedy solution					●		77.5
A website or App allows residents to easily give away unwanted items					●		72.7
Free public wifi has improved access to city services					●		70.1
CCTV cameras has made residents feel safer					●		80.5
A website or App allows residents to effectively monitor air pollution				●			54.8
Arranging medical appointments online has improved access					●		75.8
Mobility							
Car-sharing Apps have reduced congestion					●		72.0
Apps that direct you to an available parking space have reduced journey time				●			63.6
Bicycle hiring has reduced congestion				●			60.9
Online scheduling and ticket sales has made public transport easier to use					●		75.1
The city provides information on traffic congestion through mobile phones					●		70.5
Activities							
Online purchasing of tickets to shows and museums has made it easier to attend						●	88.3
Opportunities (Work & School)							
Online access to job listings has made it easier to find work					●		72.3
IT skills are taught well in schools					●		71.8
Online services provided by the city has made it easier to start a new business					●		66.8
The current internet speed and reliability meet connectivity needs						●	83.5
Governance							
Online public access to city finances has reduced corruption				●			64.1
Online voting has increased participation				●			59.6
An online platform where residents can propose ideas has improved city life				●			62.9
Processing Identification Documents online has reduced waiting times						●	80.8

Dubai

SMART CITY RANKING

17

Out of 141

▼

14 out of 118 in 2021

SMART CITY RATING

BB

A in 2021

FACTOR RATINGS

BB

STRUCTURES

B

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,964,382	0.911

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.866	0.890	0.912	0.911	-0.001
Life expectancy at birth	77.8	78.0	79.0	78.7	-0.2
Expected years of schooling	13.6	14.3	15.7	15.7	+0.0
Mean years of schooling	11.0	12.1	12.7	12.7	+0.0
GNI per capita (PPP $)	66,912	67,462	63,016	62,574	-443

PRIORITY AREAS

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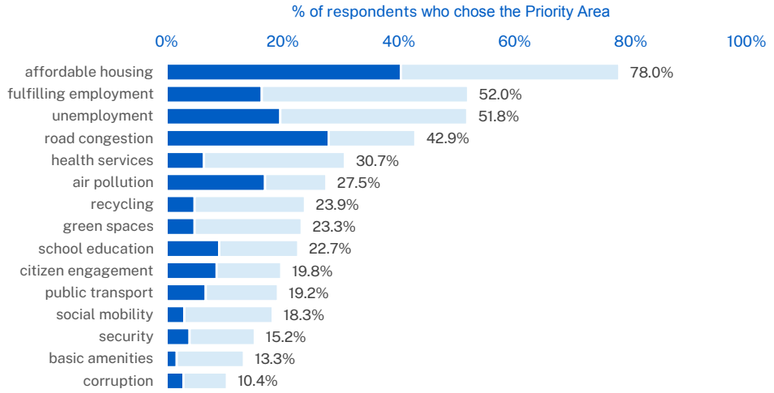
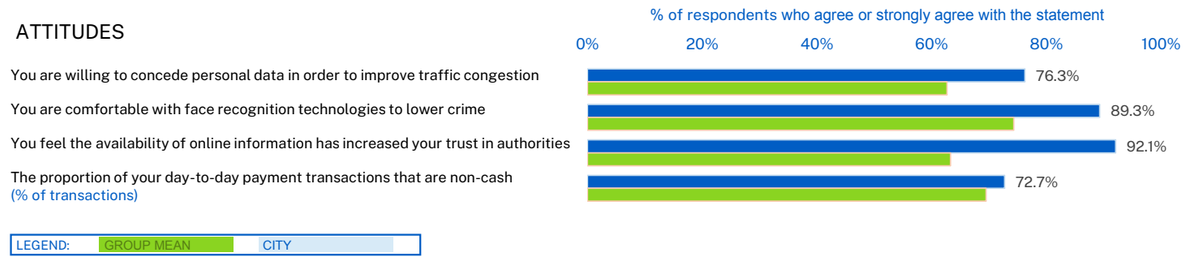


ATTITUDES



Dublin

SMART CITY RANKING

63

Out of 141

▼

44 out of 118 in 2021

SMART CITY RATING

BB

BBB in 2021

FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,423,957	0.950

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.942	0.955	0.943	0.945	+0.002
Life expectancy at birth	82.1	82.3	82.5	82.0	-0.5
Expected years of schooling	18.8	18.7	18.0	18.0	+0.0
Mean years of schooling	12.5	12.7	11.6	11.6	+0.0
GNI per capita (PPP $)	55,660	68,371	67,736	76,169	+8,433

PRIORITY AREAS

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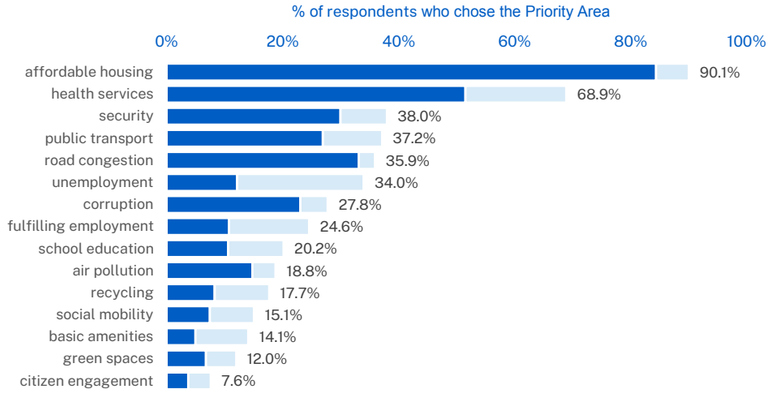

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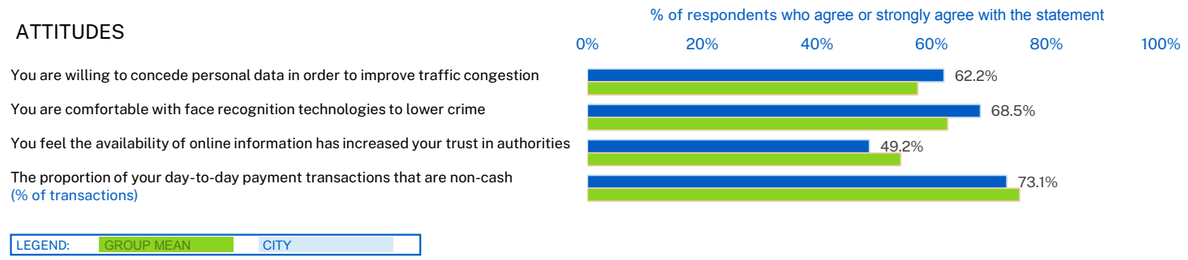

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	55.1
Recycling services are satisfactory	61.8
Public safety is not a problem	31.4
Air pollution is not a problem	39.2
Medical services provision is satisfactory	36.0
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	10.5

Mobility

Traffic congestion is not a problem	19.6
Public transport is satisfactory	42.7

Activities

Green spaces are satisfactory	55.7
Cultural activities (shows, bars, and museums) are satisfactory	68.4

Opportunities (Work & School)

Employment finding services are readily available	67.0
Most children have access to a good school	65.3
Lifelong learning opportunities are provided by local institutions	60.2
Businesses are creating new jobs	61.1
Minorities feel welcome	54.6

Governance

Information on local government decisions are easily accessible	51.3
Corruption of city officials is not an issue of concern	33.1
Residents contribute to decision making of local government	37.2
Residents provide feedback on local government projects	51.1

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	35.0
A website or App allows residents to easily give away unwanted items	63.2
Free public wifi has improved access to city services	50.8
CCTV cameras has made residents feel safer	47.0
A website or App allows residents to effectively monitor air pollution	25.7
Arranging medical appointments online has improved access	45.8

Mobility

Car-sharing Apps have reduced congestion	28.0
Apps that direct you to an available parking space have reduced journey time	34.3
Bicycle hiring has reduced congestion	56.4
Online scheduling and ticket sales has made public transport easier to use	60.6
The city provides information on traffic congestion through mobile phones	51.3

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	79.1

Opportunities (Work & School)

Online access to job listings has made it easier to find work	72.3
IT skills are taught well in schools	49.0
Online services provided by the city has made it easier to start a new business	48.9
The current internet speed and reliability meet connectivity needs	65.0

Governance

Online public access to city finances has reduced corruption	31.0
Online voting has increased participation	38.0
An online platform where residents can propose ideas has improved city life	38.6
Processing Identification Documents online has reduced waiting times	61.9

Dusseldorf

SMART CITY RANKING

38

Out of 141

▼

27 out of 118
in 2021

SMART CITY RATING

BB

A in 2021

FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
17,925,570	0.939

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP $)	46,946	55,314	53,078	54,534	+1,457

PRIORITY AREAS

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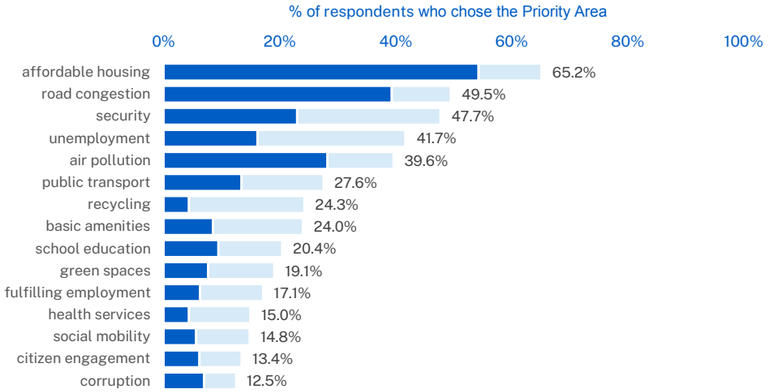

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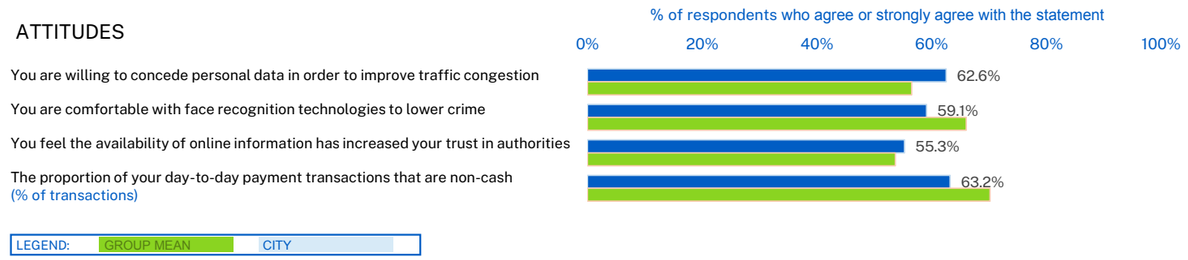

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	68.5
Recycling services are satisfactory	75.1
Public safety is not a problem	60.8
Air pollution is not a problem	43.3
Medical services provision is satisfactory	76.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	28.8

Mobility

Traffic congestion is not a problem	34.7
Public transport is satisfactory	60.5

Activities

Green spaces are satisfactory	65.3
Cultural activities (shows, bars, and museums) are satisfactory	77.4

Opportunities (Work & School)

Employment finding services are readily available	61.8
Most children have access to a good school	66.0
Lifelong learning opportunities are provided by local institutions	59.2
Businesses are creating new jobs	61.0
Minorities feel welcome	59.7

Governance

Information on local government decisions are easily accessible	56.3
Corruption of city officials is not an issue of concern	55.0
Residents contribute to decision making of local government	52.3
Residents provide feedback on local government projects	57.8

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.8
A website or App allows residents to easily give away unwanted items	55.0
Free public wifi has improved access to city services	56.4
CCTV cameras has made residents feel safer	47.4
A website or App allows residents to effectively monitor air pollution	41.8
Arranging medical appointments online has improved access	57.2

Mobility

Car-sharing Apps have reduced congestion	41.9
Apps that direct you to an available parking space have reduced journey time	49.8
Bicycle hiring has reduced congestion	50.3
Online scheduling and ticket sales has made public transport easier to use	67.5
The city provides information on traffic congestion through mobile phones	56.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	75.4

Opportunities (Work & School)

Online access to job listings has made it easier to find work	71.8
IT skills are taught well in schools	50.5
Online services provided by the city has made it easier to start a new business	46.9
The current internet speed and reliability meet connectivity needs	59.5

Governance

Online public access to city finances has reduced corruption	42.2
Online voting has increased participation	55.6
An online platform where residents can propose ideas has improved city life	49.4
Processing Identification Documents online has reduced waiting times	53.2

Geneva

SMART CITY RANKING

9

Out of 141

▼

6 out of 118 in 2021

SMART CITY RATING

AA

AA in 2021

FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
506,343	0.966

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.946	0.955	0.956	0.962	+0.006
Life expectancy at birth	83.6	83.8	83.1	84.0	+0.9
Expected years of schooling	16.2	16.3	16.5	16.5	+0.0
Mean years of schooling	13.4	13.4	13.9	13.9	+0.0
GNI per capita (PPP $)	59,375	69,394	65,011	66,933	+1,922

PRIORITY AREAS

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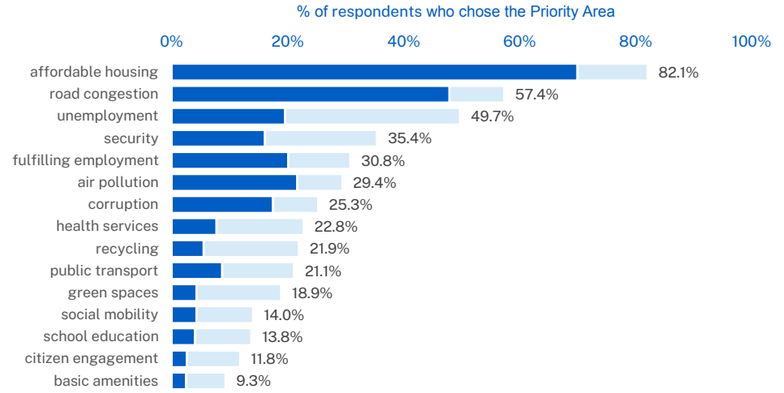

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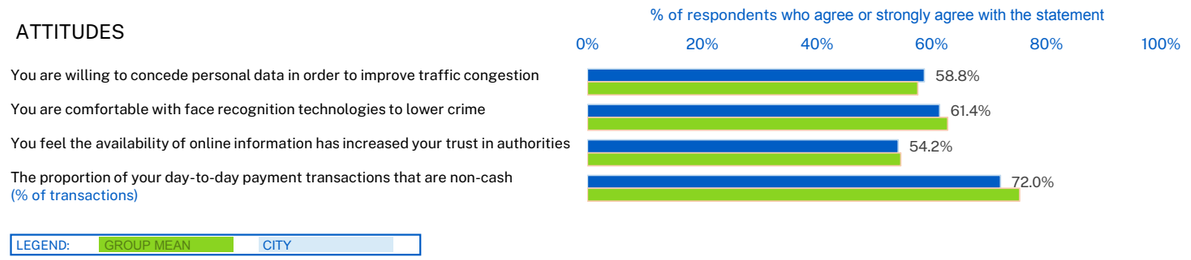

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	71.8
Recycling services are satisfactory	73.6
Public safety is not a problem	67.9
Air pollution is not a problem	51.4
Medical services provision is satisfactory	77.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	21.8

Mobility

	Score
Traffic congestion is not a problem	29.2
Public transport is satisfactory	69.6

Activities

	Score
Green spaces are satisfactory	81.5
Cultural activities (shows, bars, and museums) are satisfactory	78.3

Opportunities (Work & School)

	Score
Employment finding services are readily available	63.0
Most children have access to a good school	81.2
Lifelong learning opportunities are provided by local institutions	71.2
Businesses are creating new jobs	46.6
Minorities feel welcome	60.3

Governance

	Score
Information on local government decisions are easily accessible	67.2
Corruption of city officials is not an issue of concern	51.3
Residents contribute to decision making of local government	64.5
Residents provide feedback on local government projects	65.6

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	48.8
A website or App allows residents to easily give away unwanted items	64.1
Free public wifi has improved access to city services	57.5
CCTV cameras has made residents feel safer	46.0
A website or App allows residents to effectively monitor air pollution	46.8
Arranging medical appointments online has improved access	61.6

Mobility

	Score
Car-sharing Apps have reduced congestion	35.0
Apps that direct you to an available parking space have reduced journey time	36.6
Bicycle hiring has reduced congestion	41.6
Online scheduling and ticket sales has made public transport easier to use	71.4
The city provides information on traffic congestion through mobile phones	50.9

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	77.8

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	56.5
IT skills are taught well in schools	55.7
Online services provided by the city has made it easier to start a new business	46.4
The current internet speed and reliability meet connectivity needs	75.9

Governance

	Score
Online public access to city finances has reduced corruption	40.7
Online voting has increased participation	49.2
An online platform where residents can propose ideas has improved city life	42.6
Processing Identification Documents online has reduced waiting times	61.6

Glasgow

SMART CITY RANKING

80

Out of 141

▼

65 out of 118 in 2021

SMART CITY RATING

BB

B in 2021

FACTOR RATINGS

BB

STRUCTURES

B

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
627,479	0.921

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP $)	39,507	46,071	42,375	45,225	+2,850

PRIORITY AREAS

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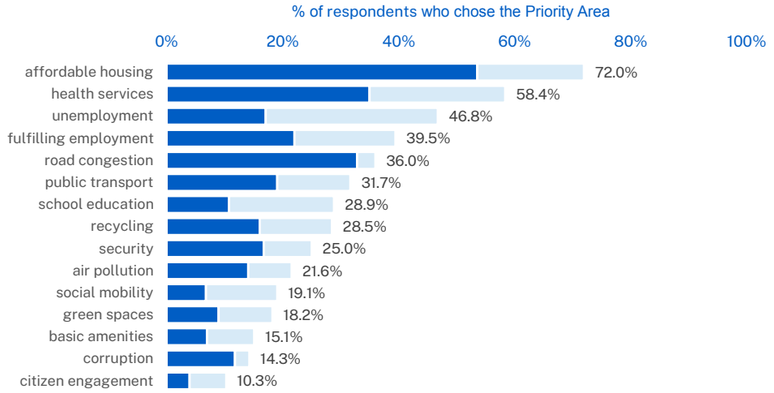

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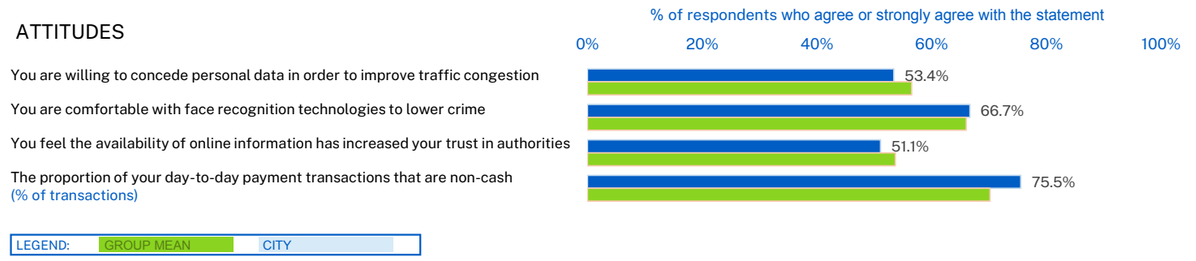

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	57.4
Recycling services are satisfactory	56.1
Public safety is not a problem	44.3
Air pollution is not a problem	37.5
Medical services provision is satisfactory	51.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	32.8

Mobility

Traffic congestion is not a problem	26.5
Public transport is satisfactory	52.5

Activities

Green spaces are satisfactory	67.7
Cultural activities (shows, bars, and museums) are satisfactory	76.2

Opportunities (Work & School)

Employment finding services are readily available	63.0
Most children have access to a good school	63.3
Lifelong learning opportunities are provided by local institutions	60.9
Businesses are creating new jobs	52.5
Minorities feel welcome	63.2

Governance

Information on local government decisions are easily accessible	55.0
Corruption of city officials is not an issue of concern	41.0
Residents contribute to decision making of local government	40.2
Residents provide feedback on local government projects	52.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	44.7
A website or App allows residents to easily give away unwanted items	65.5
Free public wifi has improved access to city services	59.0
CCTV cameras has made residents feel safer	59.3
A website or App allows residents to effectively monitor air pollution	29.0
Arranging medical appointments online has improved access	44.7

Mobility

Car-sharing Apps have reduced congestion	32.9
Apps that direct you to an available parking space have reduced journey time	34.9
Bicycle hiring has reduced congestion	43.1
Online scheduling and ticket sales has made public transport easier to use	59.3
The city provides information on traffic congestion through mobile phones	46.8

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	72.9

Opportunities (Work & School)

Online access to job listings has made it easier to find work	64.8
IT skills are taught well in schools	58.4
Online services provided by the city has made it easier to start a new business	47.7
The current internet speed and reliability meet connectivity needs	69.6

Governance

Online public access to city finances has reduced corruption	34.2
Online voting has increased participation	54.4
An online platform where residents can propose ideas has improved city life	39.6
Processing Identification Documents online has reduced waiting times	47.8

Gothenburg

SMART CITY RANKING

36

Out of 141

46 out of 118 in 2021

SMART CITY RATING

A

BBB in 2021

FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,071,191	0.944

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.937	0.945	0.942	0.947	+0.005
Life expectancy at birth	82.7	82.8	82.4	83.0	+0.5
Expected years of schooling	18.8	19.5	18.0	18.0	+0.0
Mean years of schooling	12.4	12.5	12.6	12.6	+0.0
GNI per capita (PPP $)	47,955	54,508	52,359	54,489	+2,130

PRIORITY AREAS

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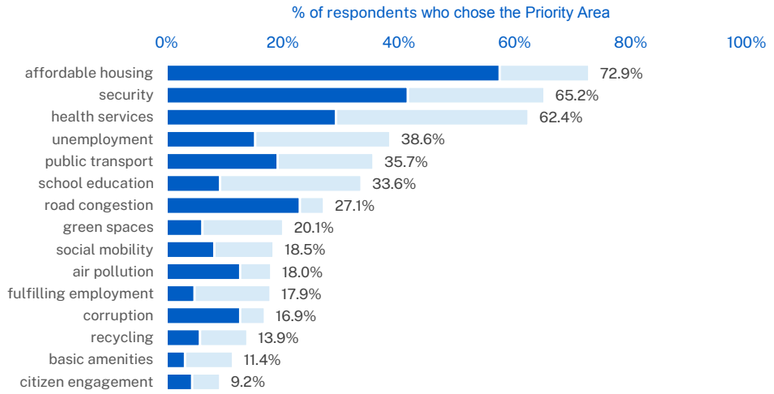

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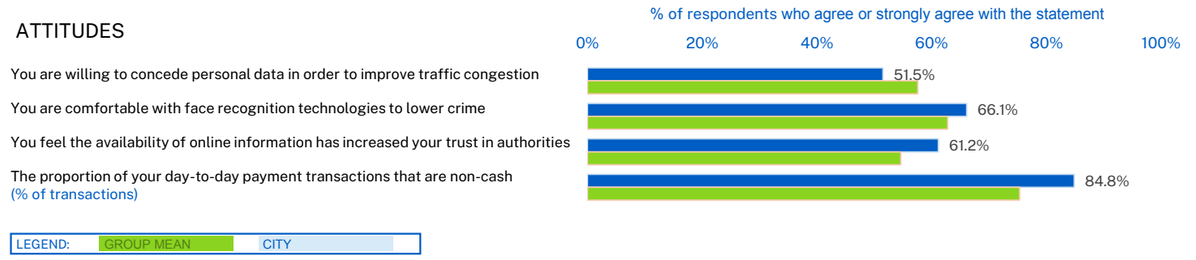

Guangzhou

SMART CITY RANKING

71

Out of 141

66 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
13,964,637	0.799

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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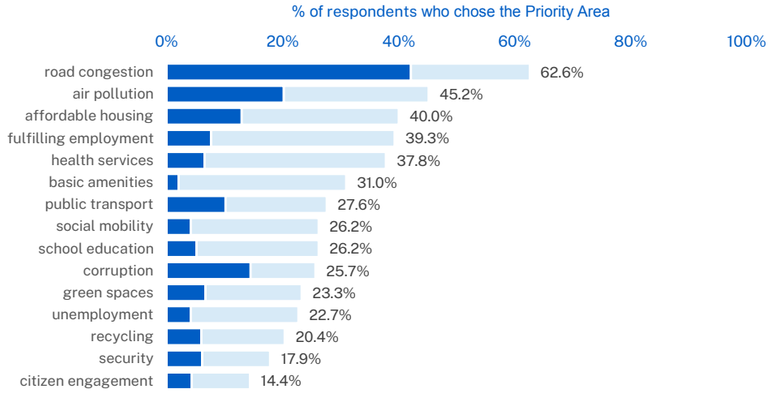

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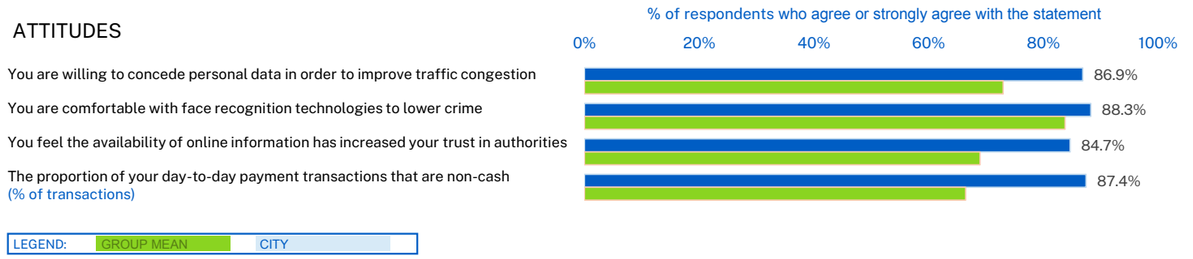

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	83.7
Recycling services are satisfactory	77.1
Public safety is not a problem	69.6
Air pollution is not a problem	60.3
Medical services provision is satisfactory	80.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	61.6

Mobility

	Score
Traffic congestion is not a problem	45.5
Public transport is satisfactory	70.0

Activities

	Score
Green spaces are satisfactory	76.6
Cultural activities (shows, bars, and museums) are satisfactory	84.6

Opportunities (Work & School)

	Score
Employment finding services are readily available	80.0
Most children have access to a good school	76.6
Lifelong learning opportunities are provided by local institutions	68.5
Businesses are creating new jobs	78.9
Minorities feel welcome	82.2

Governance

	Score
Information on local government decisions are easily accessible	78.5
Corruption of city officials is not an issue of concern	62.9
Residents contribute to decision making of local government	69.9
Residents provide feedback on local government projects	78.5

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	84.2
A website or App allows residents to easily give away unwanted items	79.7
Free public wifi has improved access to city services	81.8
CCTV cameras has made residents feel safer	85.3
A website or App allows residents to effectively monitor air pollution	80.4
Arranging medical appointments online has improved access	90.6

Mobility

	Score
Car-sharing Apps have reduced congestion	70.5
Apps that direct you to an available parking space have reduced journey time	79.9
Bicycle hiring has reduced congestion	76.8
Online scheduling and ticket sales has made public transport easier to use	86.3
The city provides information on traffic congestion through mobile phones	87.7

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	90.7

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	85.2
IT skills are taught well in schools	84.2
Online services provided by the city has made it easier to start a new business	83.4
The current internet speed and reliability meet connectivity needs	89.6

Governance

	Score
Online public access to city finances has reduced corruption	78.0
Online voting has increased participation	78.0
An online platform where residents can propose ideas has improved city life	83.4
Processing Identification Documents online has reduced waiting times	86.3

Guatemala City

SMART CITY RANKING

141

Out of 141

not out of 118 in 2021

SMART CITY RATING

D

not in 2021

FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,036,405	0.722

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.640	0.642	0.635	0.627	-0.008
Life expectancy at birth	72.7	73.1	71.8	69.2	-2.6
Expected years of schooling	10.6	10.6	10.6	10.6	+0.0
Mean years of schooling	5.7	5.7	5.7	5.7	+0.0
GNI per capita (PPP $)	8,289	8,494	8,241	8,723	+482

PRIORITY AREAS

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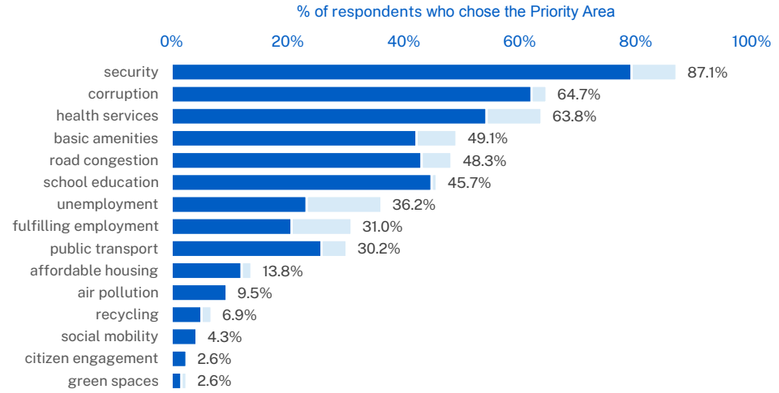

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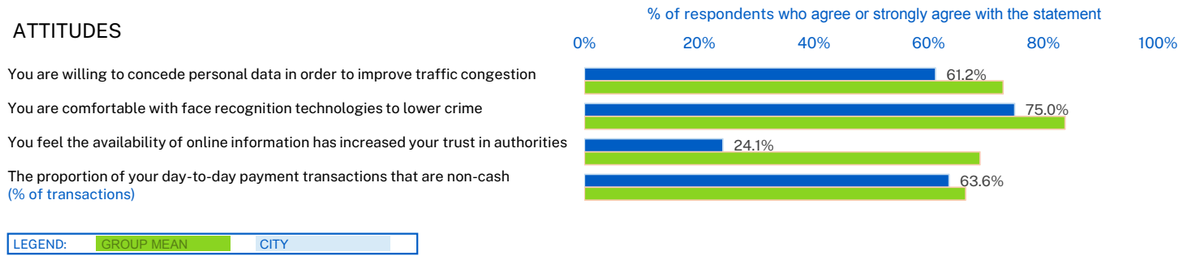

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	21.3
Recycling services are satisfactory	20.5
Public safety is not a problem	11.5
Air pollution is not a problem	30.2
Medical services provision is satisfactory	22.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	26.0

Mobility

Traffic congestion is not a problem	12.8
Public transport is satisfactory	18.0

Activities

Green spaces are satisfactory	55.0
Cultural activities (shows, bars, and museums) are satisfactory	58.2

Opportunities (Work & School)

Employment finding services are readily available	46.3
Most children have access to a good school	10.6
Lifelong learning opportunities are provided by local institutions	24.1
Businesses are creating new jobs	39.1
Minorities feel welcome	23.9

Governance

Information on local government decisions are easily accessible	23.6
Corruption of city officials is not an issue of concern	8.5
Residents contribute to decision making of local government	11.1
Residents provide feedback on local government projects	15.5

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	26.6
A website or App allows residents to easily give away unwanted items	31.8
Free public wifi has improved access to city services	25.9
CCTV cameras has made residents feel safer	39.2
A website or App allows residents to effectively monitor air pollution	17.5
Arranging medical appointments online has improved access	43.7

Mobility

Car-sharing Apps have reduced congestion	26.0
Apps that direct you to an available parking space have reduced journey time	28.4
Bicycle hiring has reduced congestion	24.1
Online scheduling and ticket sales has made public transport easier to use	34.2
The city provides information on traffic congestion through mobile phones	46.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	73.4

Opportunities (Work & School)

Online access to job listings has made it easier to find work	52.2
IT skills are taught well in schools	27.9
Online services provided by the city has made it easier to start a new business	40.8
The current internet speed and reliability meet connectivity needs	57.8

Governance

Online public access to city finances has reduced corruption	11.9
Online voting has increased participation	18.4
An online platform where residents can propose ideas has improved city life	16.2
Processing Identification Documents online has reduced waiting times	55.7

Hamburg

SMART CITY RANKING

11

Out of 141

▼

8 out of 118 in 2021

SMART CITY RATING

A

A in 2021

FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,852,478	0.972

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP $)	46,946	55,314	53,078	54,534	+1,457

PRIORITY AREAS

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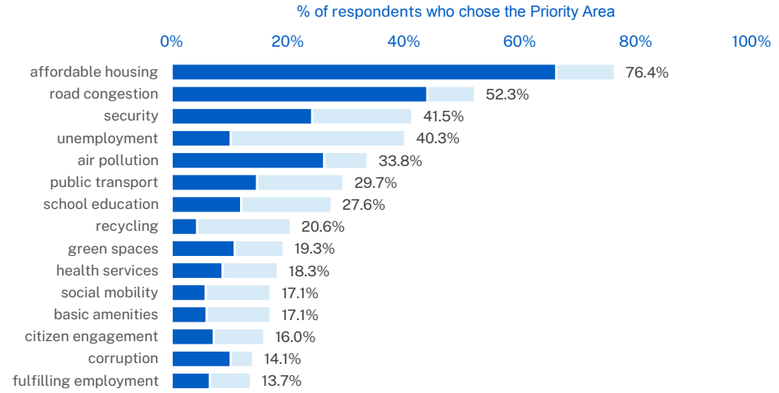

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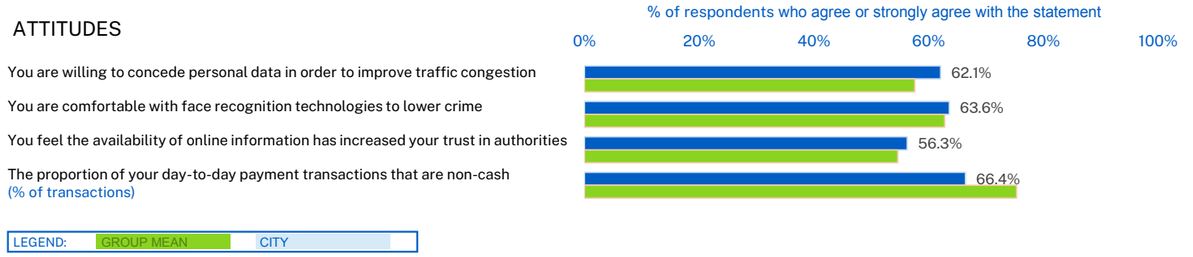

Hangzhou

SMART CITY RANKING

70

Out of 141

▼

63 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
8,044,878	0.801

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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

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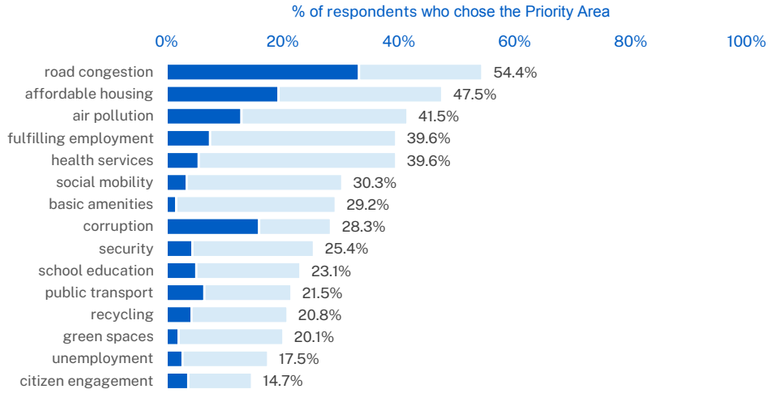

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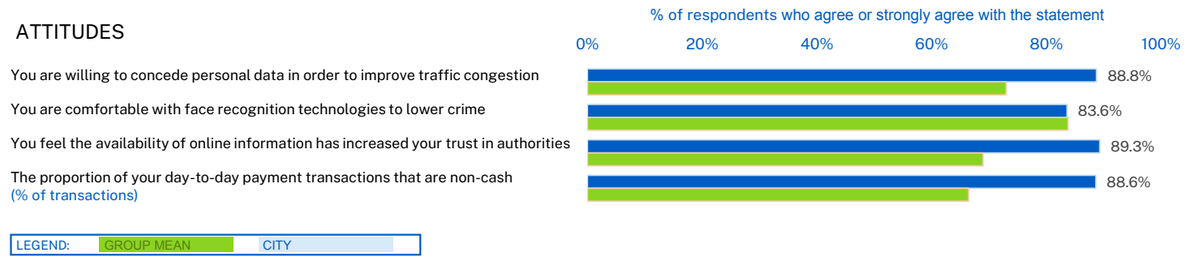

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	84.9
Recycling services are satisfactory	79.4
Public safety is not a problem	77.2
Air pollution is not a problem	67.9
Medical services provision is satisfactory	81.0
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	63.3

Mobility

Traffic congestion is not a problem	50.3
Public transport is satisfactory	72.2

Activities

Green spaces are satisfactory	82.8
Cultural activities (shows, bars, and museums) are satisfactory	80.5

Opportunities (Work & School)

Employment finding services are readily available	81.6
Most children have access to a good school	77.8
Lifelong learning opportunities are provided by local institutions	73.7
Businesses are creating new jobs	78.8
Minorities feel welcome	82.7

Governance

Information on local government decisions are easily accessible	75.6
Corruption of city officials is not an issue of concern	58.3
Residents contribute to decision making of local government	65.5
Residents provide feedback on local government projects	71.8

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	83.0
A website or App allows residents to easily give away unwanted items	78.0
Free public wifi has improved access to city services	80.0
CCTV cameras has made residents feel safer	81.6
A website or App allows residents to effectively monitor air pollution	76.2
Arranging medical appointments online has improved access	90.7

Mobility

Car-sharing Apps have reduced congestion	72.2
Apps that direct you to an available parking space have reduced journey time	79.2
Bicycle hiring has reduced congestion	83.7
Online scheduling and ticket sales has made public transport easier to use	88.1
The city provides information on traffic congestion through mobile phones	88.0

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	89.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	84.6
IT skills are taught well in schools	80.8
Online services provided by the city has made it easier to start a new business	81.1
The current internet speed and reliability meet connectivity needs	89.4

Governance

Online public access to city finances has reduced corruption	74.4
Online voting has increased participation	76.7
An online platform where residents can propose ideas has improved city life	79.9
Processing Identification Documents online has reduced waiting times	82.5

Hanoi

SMART CITY RANKING

100

Out of 141

▼

89 out of 118 in 2021

SMART CITY RATING

CCC

CC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
5,067,352	0.744

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.693	0.704	0.710	0.703	-0.007
Life expectancy at birth	75.3	75.4	75.4	73.6	-1.8
Expected years of schooling	12.7	12.7	13.0	13.0	+0.0
Mean years of schooling	8.2	8.3	8.4	8.4	+0.0
GNI per capita (PPP $)	6,220	7,433	7,742	7,867	+125

PRIORITY AREAS

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

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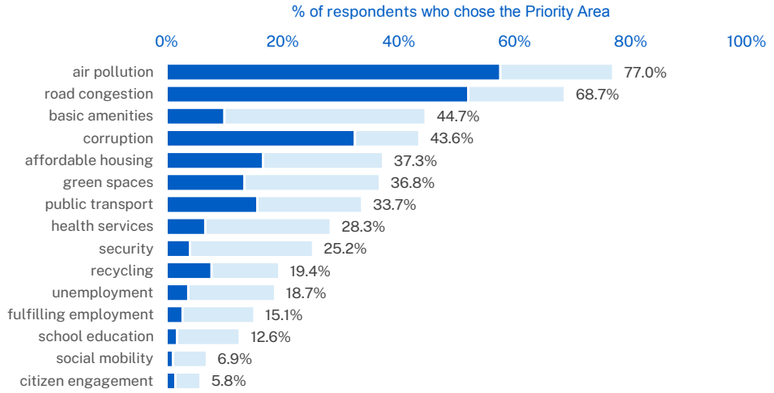

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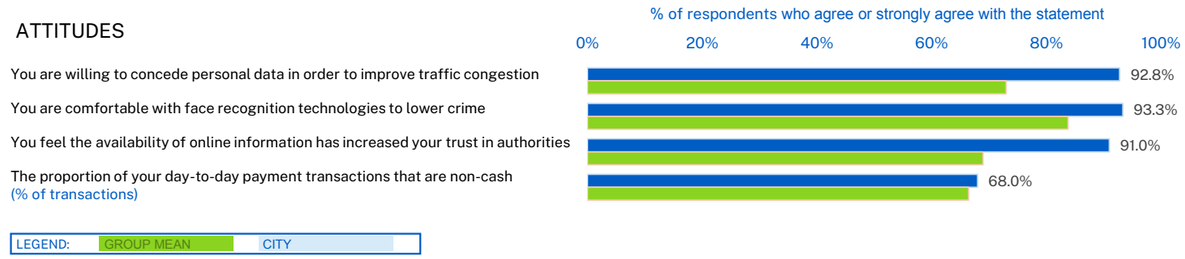

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	72.9
Recycling services are satisfactory	66.3
Public safety is not a problem	82.8
Air pollution is not a problem	31.5
Medical services provision is satisfactory	77.0
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	58.1

Mobility

Traffic congestion is not a problem	27.0
Public transport is satisfactory	54.0

Activities

Green spaces are satisfactory	66.4
Cultural activities (shows, bars, and museums) are satisfactory	77.7

Opportunities (Work & School)

Employment finding services are readily available	80.8
Most children have access to a good school	83.7
Lifelong learning opportunities are provided by local institutions	67.1
Businesses are creating new jobs	83.1
Minorities feel welcome	74.9

Governance

Information on local government decisions are easily accessible	79.1
Corruption of city officials is not an issue of concern	38.3
Residents contribute to decision making of local government	67.9
Residents provide feedback on local government projects	74.2

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	75.9
A website or App allows residents to easily give away unwanted items	70.3
Free public wifi has improved access to city services	70.2
CCTV cameras has made residents feel safer	80.2
A website or App allows residents to effectively monitor air pollution	69.0
Arranging medical appointments online has improved access	81.7

Mobility

Car-sharing Apps have reduced congestion	74.0
Apps that direct you to an available parking space have reduced journey time	78.2
Bicycle hiring has reduced congestion	57.3
Online scheduling and ticket sales has made public transport easier to use	76.7
The city provides information on traffic congestion through mobile phones	70.3

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	84.8

Opportunities (Work & School)

Online access to job listings has made it easier to find work	84.8
IT skills are taught well in schools	79.4
Online services provided by the city has made it easier to start a new business	79.7
The current internet speed and reliability meet connectivity needs	83.1

Governance

Online public access to city finances has reduced corruption	64.0
Online voting has increased participation	70.4
An online platform where residents can propose ideas has improved city life	73.0
Processing Identification Documents online has reduced waiting times	81.6

Hanover

SMART CITY RANKING

57

Out of 141

▼

53 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BBB

STRUCTURES

B

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
8,003,421	0.930

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP $)	46,946	55,314	53,078	54,534	+1,457

PRIORITY AREAS

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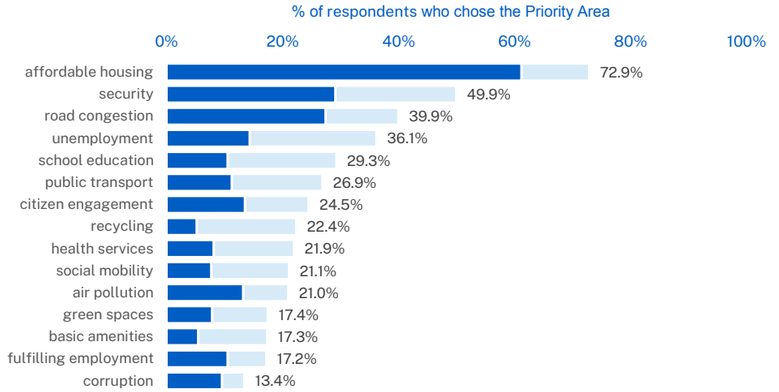

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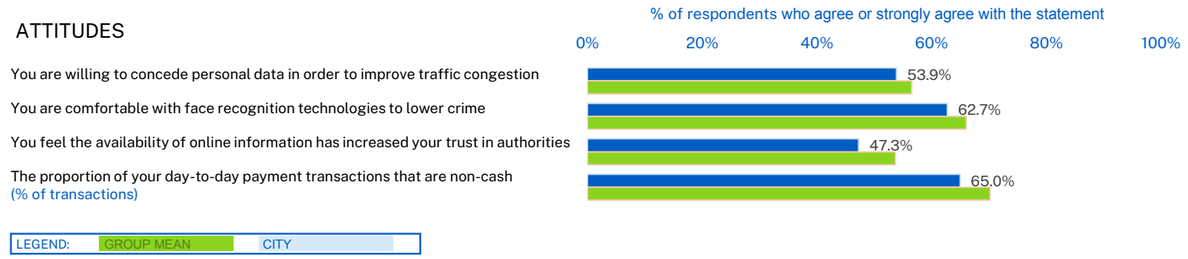

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	70.0
Recycling services are satisfactory	74.7
Public safety is not a problem	52.8
Air pollution is not a problem	51.7
Medical services provision is satisfactory	72.3
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	25.2

Mobility

Traffic congestion is not a problem	42.3
Public transport is satisfactory	67.1

Activities

Green spaces are satisfactory	70.8
Cultural activities (shows, bars, and museums) are satisfactory	77.3

Opportunities (Work & School)

Employment finding services are readily available	62.9
Most children have access to a good school	67.1
Lifelong learning opportunities are provided by local institutions	58.6
Businesses are creating new jobs	57.6
Minorities feel welcome	59.2

Governance

Information on local government decisions are easily accessible	53.6
Corruption of city officials is not an issue of concern	55.5
Residents contribute to decision making of local government	48.8
Residents provide feedback on local government projects	49.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	40.2
A website or App allows residents to easily give away unwanted items	54.3
Free public wifi has improved access to city services	48.5
CCTV cameras has made residents feel safer	41.3
A website or App allows residents to effectively monitor air pollution	33.6
Arranging medical appointments online has improved access	52.9

Mobility

Car-sharing Apps have reduced congestion	39.4
Apps that direct you to an available parking space have reduced journey time	39.2
Bicycle hiring has reduced congestion	43.1
Online scheduling and ticket sales has made public transport easier to use	67.2
The city provides information on traffic congestion through mobile phones	45.2

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	70.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	64.3
IT skills are taught well in schools	44.4
Online services provided by the city has made it easier to start a new business	42.1
The current internet speed and reliability meet connectivity needs	56.0

Governance

Online public access to city finances has reduced corruption	37.2
Online voting has increased participation	47.0
An online platform where residents can propose ideas has improved city life	40.5
Processing Identification Documents online has reduced waiting times	47.5

Helsinki

SMART CITY RANKING

8

Out of 141

▲

9 out of 118 in 2021

SMART CITY RATING

AAA

AAA in 2021

FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,702,678	0.960

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.925	0.938	0.938	0.940	+0.002
Life expectancy at birth	81.7	81.9	81.9	82.0	+0.2
Expected years of schooling	19.3	19.4	18.0	18.0	+0.0
Mean years of schooling	12.4	12.8	12.9	12.9	+0.0
GNI per capita (PPP $)	41,779	48,511	47,946	49,452	+1,506

PRIORITY AREAS

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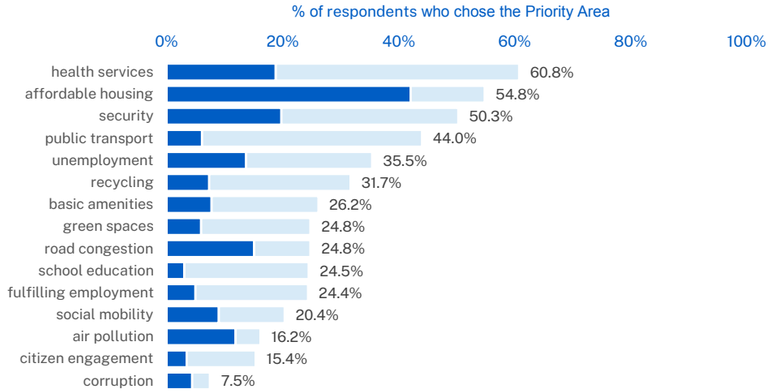

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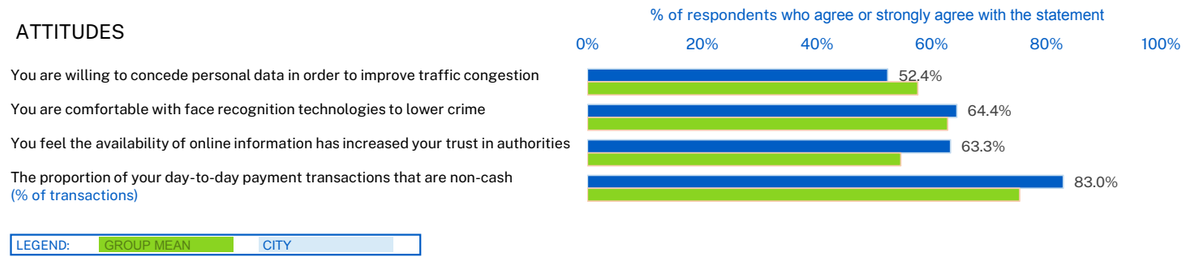

Ho Chi Minh City

SMART CITY RANKING

103

Out of 141

▼

93 out of 118 in 2021

SMART CITY RATING

CCC

CC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
9,077,158	0.714

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.693	0.704	0.710	0.703	-0.007
Life expectancy at birth	75.3	75.4	75.4	73.6	-1.8
Expected years of schooling	12.7	12.7	13.0	13.0	+0.0
Mean years of schooling	8.2	8.3	8.4	8.4	+0.0
GNI per capita (PPP $)	6,220	7,433	7,742	7,867	+125

PRIORITY AREAS

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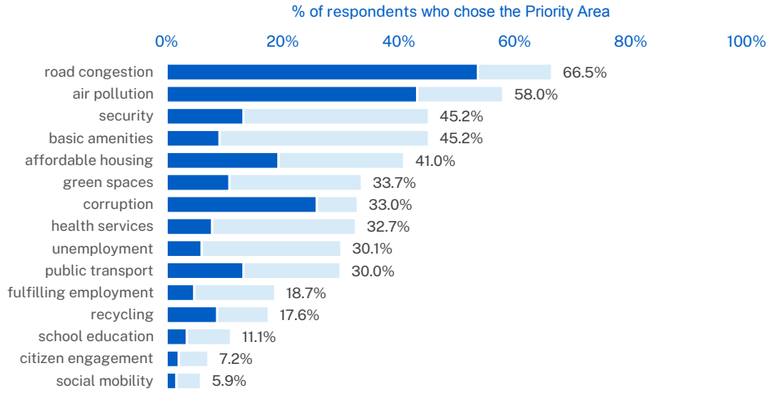

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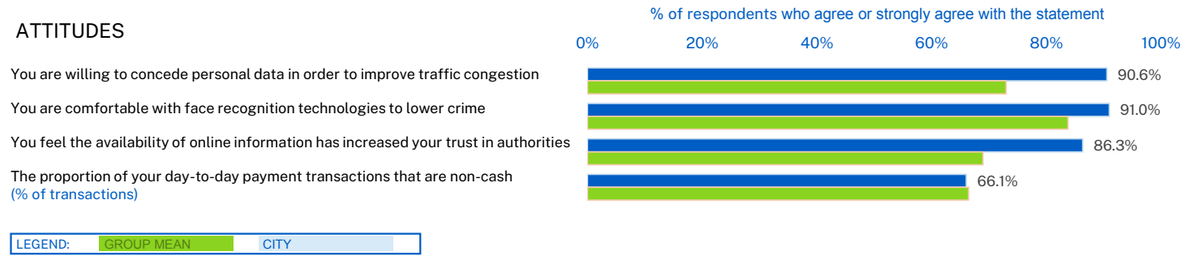

Hong Kong

SMART CITY RANKING

19

Out of 141

▲

33 out of 118 in 2021

SMART CITY RATING

AA

A in 2021

FACTOR RATINGS

BBB

STRUCTURES

AAA

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI (2019)
7,413,070	0.949

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.949	NA	NA	NA
Life expectancy at birth	84.7	84.9	NA	NA	NA
Expected years of schooling	16.5	16.9	NA	NA	NA
Mean years of schooling	12.0	12.3	NA	NA	NA
GNI per capita (PPP $)	60,221	62,985	58,644	62,607	+3,963

PRIORITY AREAS

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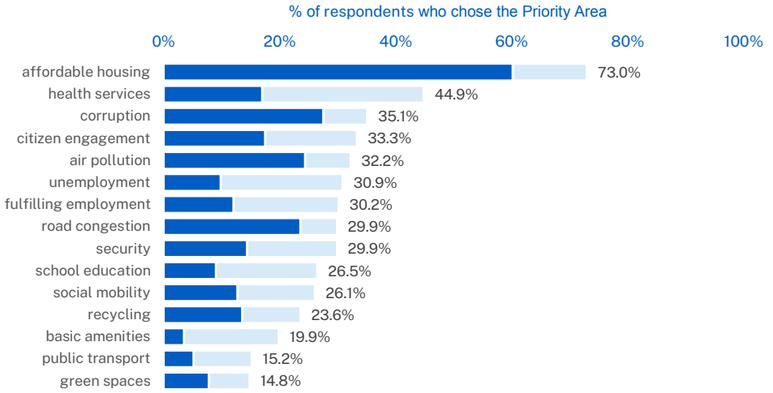

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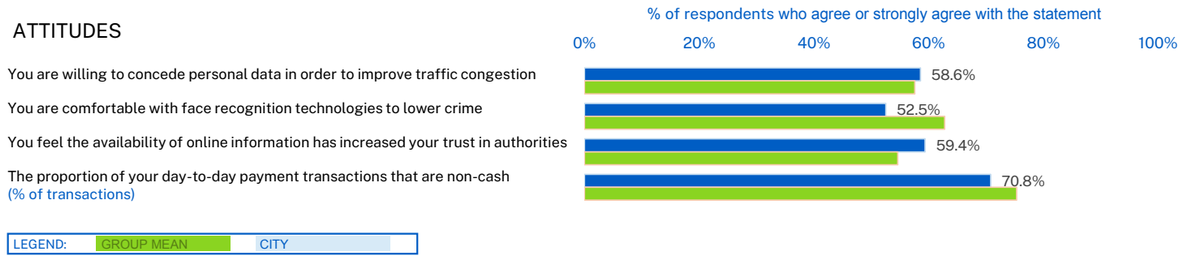

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	74.9
Recycling services are satisfactory	50.0
Public safety is not a problem	59.3
Air pollution is not a problem	30.8
Medical services provision is satisfactory	63.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	26.0

Mobility

Traffic congestion is not a problem	30.8
Public transport is satisfactory	65.7

Activities

Green spaces are satisfactory	53.8
Cultural activities (shows, bars, and museums) are satisfactory	59.7

Opportunities (Work & School)

Employment finding services are readily available	69.7
Most children have access to a good school	65.5
Lifelong learning opportunities are provided by local institutions	67.3
Businesses are creating new jobs	59.9
Minorities feel welcome	50.9

Governance

Information on local government decisions are easily accessible	60.3
Corruption of city officials is not an issue of concern	40.7
Residents contribute to decision making of local government	43.3
Residents provide feedback on local government projects	56.1

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	55.4
A website or App allows residents to easily give away unwanted items	58.2
Free public wifi has improved access to city services	69.1
CCTV cameras has made residents feel safer	58.8
A website or App allows residents to effectively monitor air pollution	56.4
Arranging medical appointments online has improved access	69.4

Mobility

Car-sharing Apps have reduced congestion	48.1
Apps that direct you to an available parking space have reduced journey time	53.9
Bicycle hiring has reduced congestion	44.5
Online scheduling and ticket sales has made public transport easier to use	67.0
The city provides information on traffic congestion through mobile phones	68.2

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	77.8

Opportunities (Work & School)

Online access to job listings has made it easier to find work	75.8
IT skills are taught well in schools	64.7
Online services provided by the city has made it easier to start a new business	66.6
The current internet speed and reliability meet connectivity needs	81.6

Governance

Online public access to city finances has reduced corruption	55.5
Online voting has increased participation	50.8
An online platform where residents can propose ideas has improved city life	52.1
Processing Identification Documents online has reduced waiting times	71.8

Hyderabad

SMART CITY RANKING

116

Out of 141

▼

101 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
10,534,418	0.647

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.647	0.645	0.642	0.633	-0.009
Life expectancy at birth	69.4	69.7	70.2	67.2	-2.9
Expected years of schooling	12.3	12.2	11.9	11.9	+0.0
Mean years of schooling	6.5	6.5	6.7	6.7	+0.0
GNI per capita (PPP $)	6,829	6,681	6,107	6,590	+482

PRIORITY AREAS

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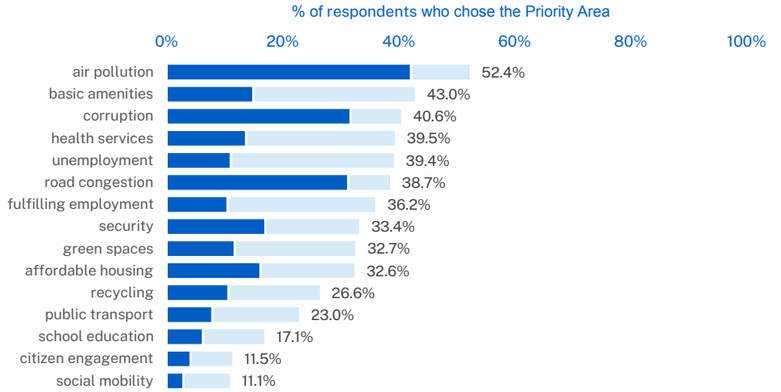

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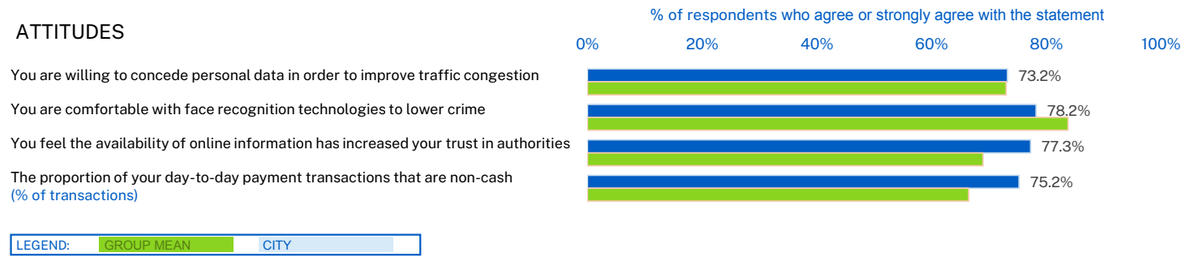

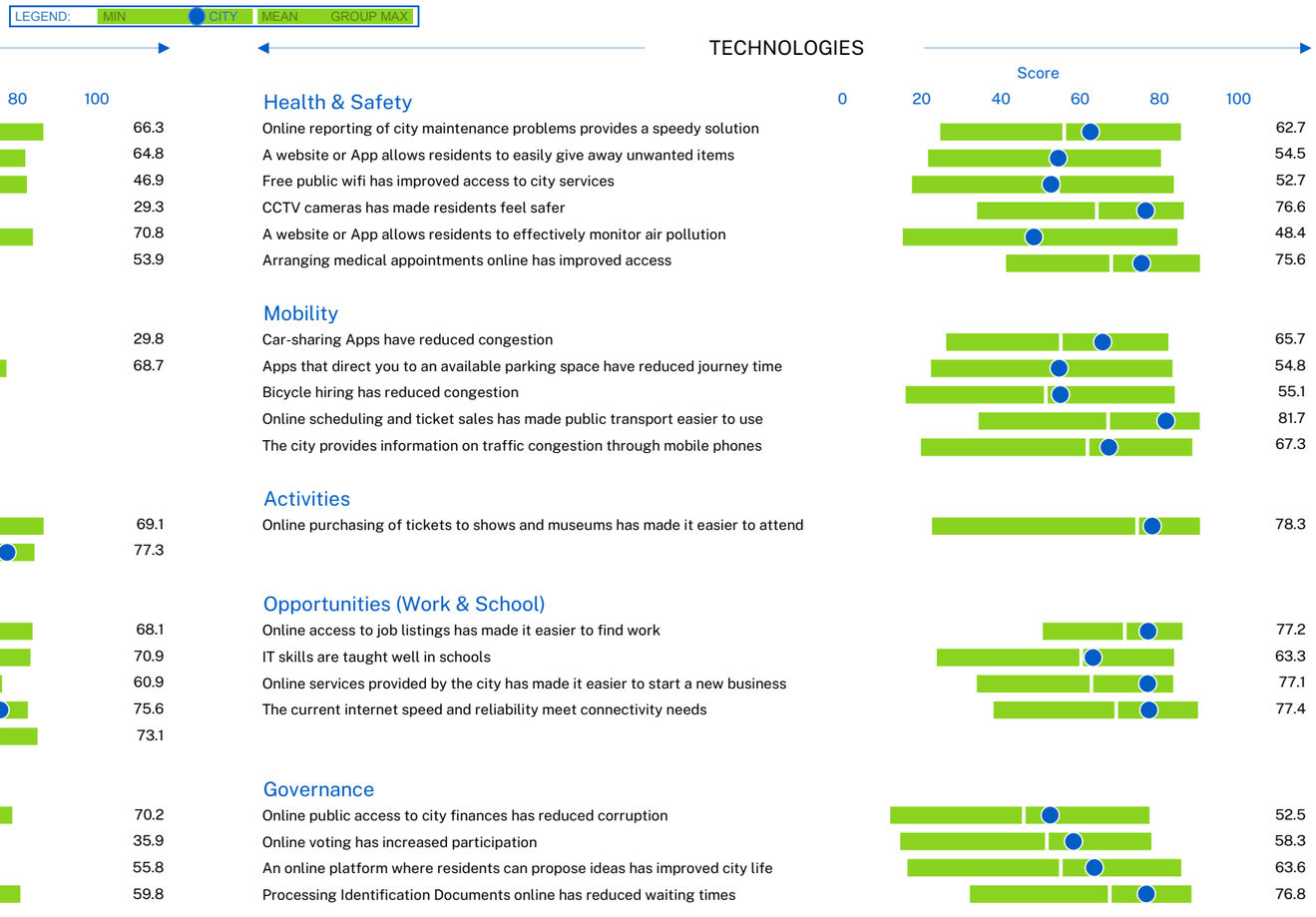

Islamabad

SMART CITY RANKING

120

Out of 141

not out of 118 in 2021

SMART CITY RATING

CC

not in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,009,003	0.659

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.545	0.546	0.543	0.544	+0.001
Life expectancy at birth	66.5	66.8	66.3	66.1	-0.2
Expected years of schooling	8.3	8.7	8.7	8.7	+0.0
Mean years of schooling	4.8	4.5	4.5	4.5	+0.0
GNI per capita (PPP $)	4,658	4,604	4,467	4,624	+156

PRIORITY AREAS

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

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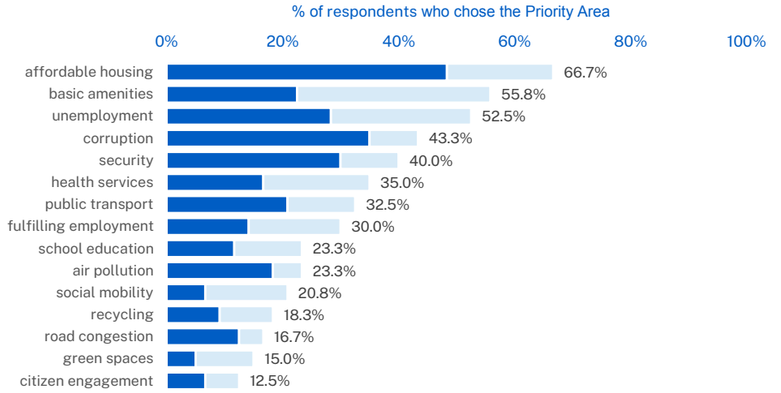

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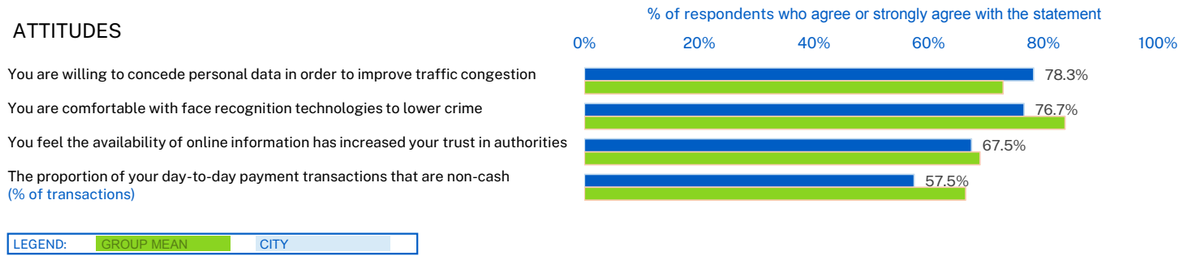

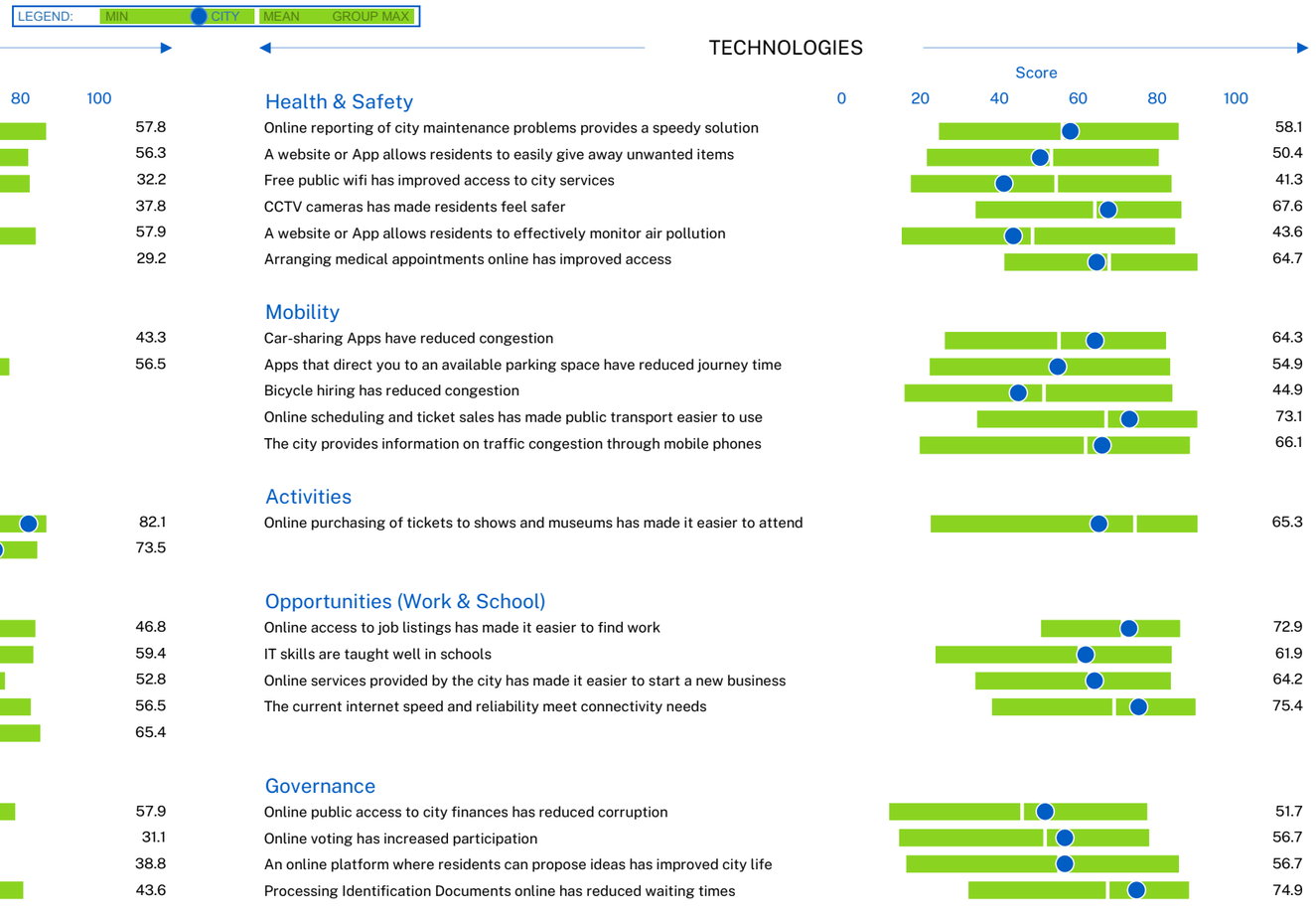

Istanbul

SMART CITY RANKING

107

Out of 141

▼

88 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
15,462,452	0.867

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.807	0.820	0.833	0.838	+0.005
Life expectancy at birth	77.4	77.7	75.9	76.0	+0.2
Expected years of schooling	16.4	16.6	18.0	18.0	+0.0
Mean years of schooling	7.7	8.1	8.6	8.6	+0.0
GNI per capita (PPP $)	24,905	27,701	28,317	31,033	+2,715

PRIORITY AREAS

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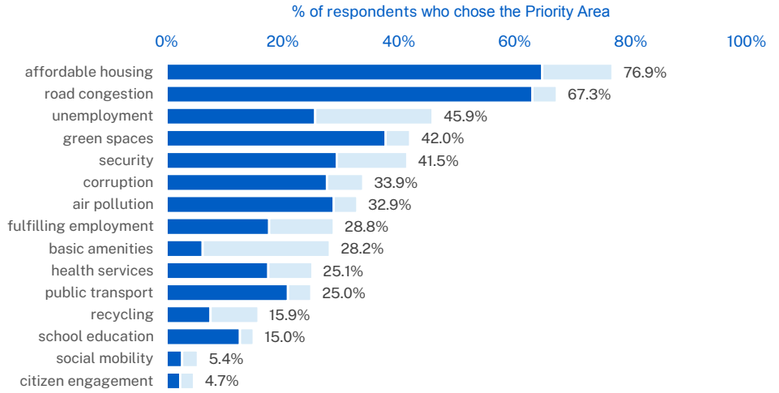

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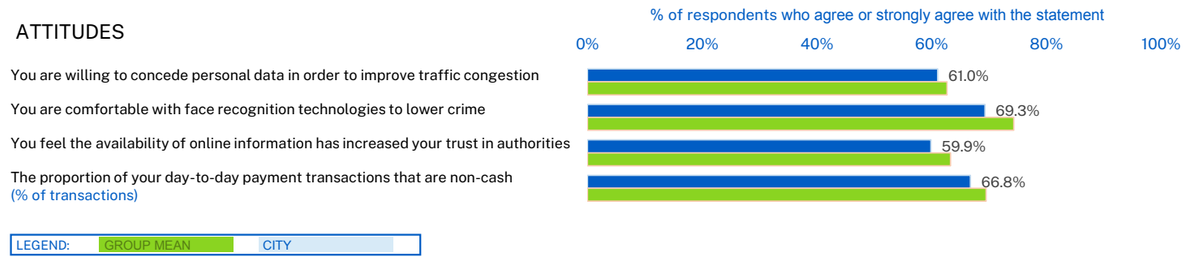

Jakarta

SMART CITY RANKING

102

Out of 141

92 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
10,562,088	0.759

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.707	0.718	0.709	0.705	-0.004
Life expectancy at birth	71.5	71.7	68.8	67.6	-1.2
Expected years of schooling	12.9	13.6	13.8	13.8	+0.0
Mean years of schooling	8.0	8.2	8.6	8.6	+0.0
GNI per capita (PPP $)	11,256	11,459	11,142	11,466	+325

PRIORITY AREAS

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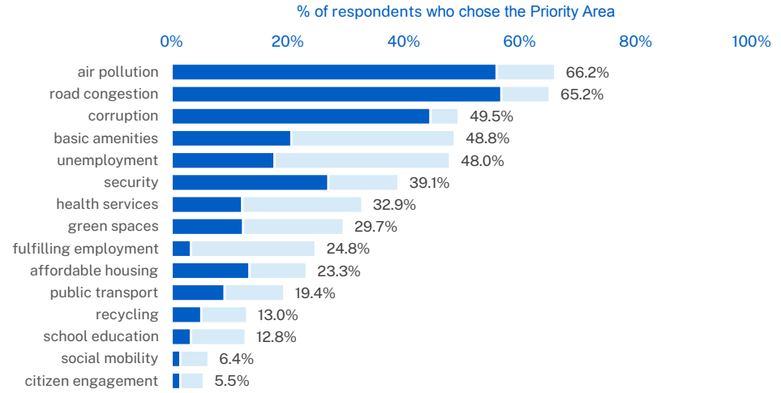

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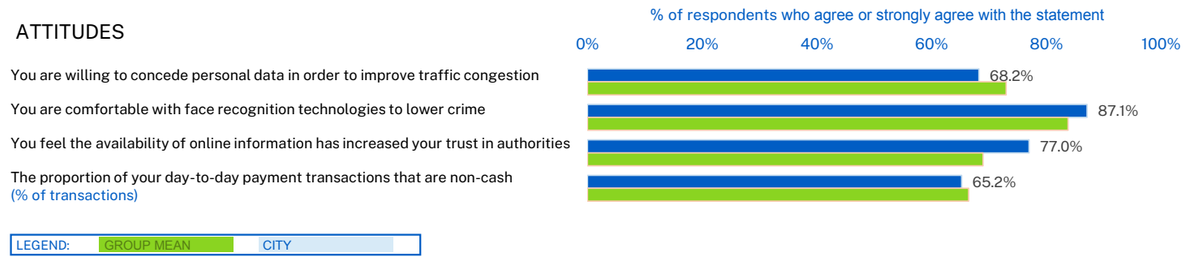

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	61.6
Recycling services are satisfactory	59.1
Public safety is not a problem	44.1
Air pollution is not a problem	23.1
Medical services provision is satisfactory	67.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	50.6

Mobility

Traffic congestion is not a problem	18.2
Public transport is satisfactory	60.9

Activities

Green spaces are satisfactory	63.8
Cultural activities (shows, bars, and museums) are satisfactory	72.6

Opportunities (Work & School)

Employment finding services are readily available	62.9
Most children have access to a good school	67.0
Lifelong learning opportunities are provided by local institutions	58.2
Businesses are creating new jobs	80.8
Minorities feel welcome	68.3

Governance

Information on local government decisions are easily accessible	70.4
Corruption of city officials is not an issue of concern	18.8
Residents contribute to decision making of local government	63.2
Residents provide feedback on local government projects	63.1

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	65.3
A website or App allows residents to easily give away unwanted items	65.5
Free public wifi has improved access to city services	70.4
CCTV cameras has made residents feel safer	76.2
A website or App allows residents to effectively monitor air pollution	62.8
Arranging medical appointments online has improved access	79.5

Mobility

Car-sharing Apps have reduced congestion	63.2
Apps that direct you to an available parking space have reduced journey time	63.0
Bicycle hiring has reduced congestion	62.8
Online scheduling and ticket sales has made public transport easier to use	81.6
The city provides information on traffic congestion through mobile phones	75.5

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	83.9

Opportunities (Work & School)

Online access to job listings has made it easier to find work	80.8
IT skills are taught well in schools	69.5
Online services provided by the city has made it easier to start a new business	77.8
The current internet speed and reliability meet connectivity needs	75.9

Governance

Online public access to city finances has reduced corruption	53.6
Online voting has increased participation	64.7
An online platform where residents can propose ideas has improved city life	69.5
Processing Identification Documents online has reduced waiting times	78.3

Jeddah

SMART CITY RANKING

56

Out of 141

not out of 118 in 2021

SMART CITY RATING

B

not in 2021

FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
478,074	0.871

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.865	0.873	0.870	0.875	+0.005
Life expectancy at birth	77.2	77.3	76.2	76.9	+0.7
Expected years of schooling	15.7	16.0	16.1	16.1	+0.0
Mean years of schooling	10.6	8.3	8.3	8.3	+0.0
GNI per capita (PPP $)	5,072	5,307	5,601	5,745	+143

PRIORITY AREAS

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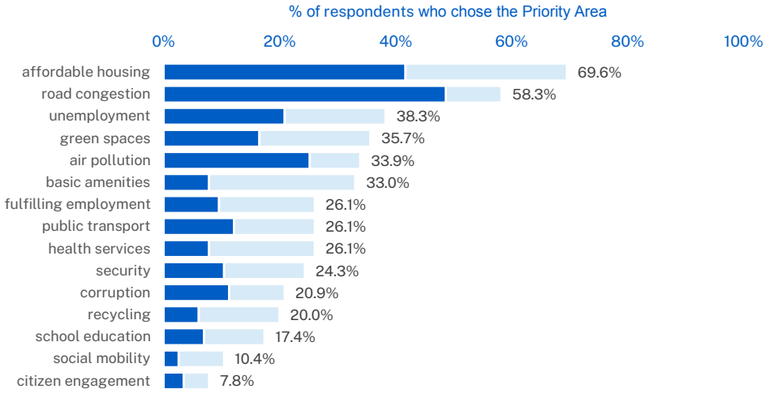

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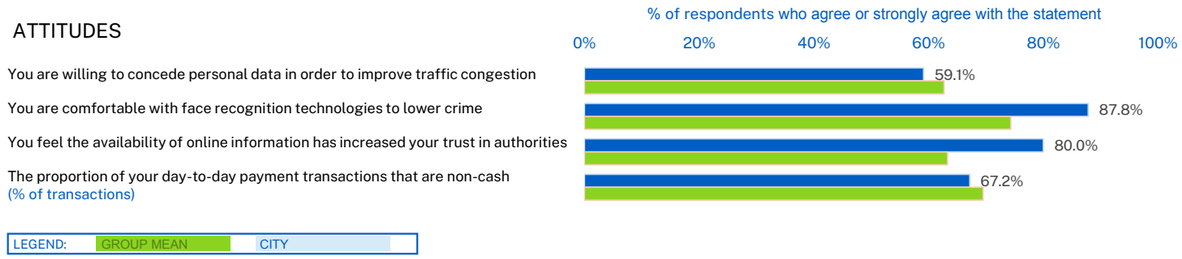

Kiel

SMART CITY RANKING

81

Out of 141

▼

72 out of 118 in 2021

SMART CITY RATING

BB

B in 2021

FACTOR RATINGS

BBB

STRUCTURES

CCC

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,910,875	0.921

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP $)	46,946	55,314	53,078	54,534	+1,457

PRIORITY AREAS

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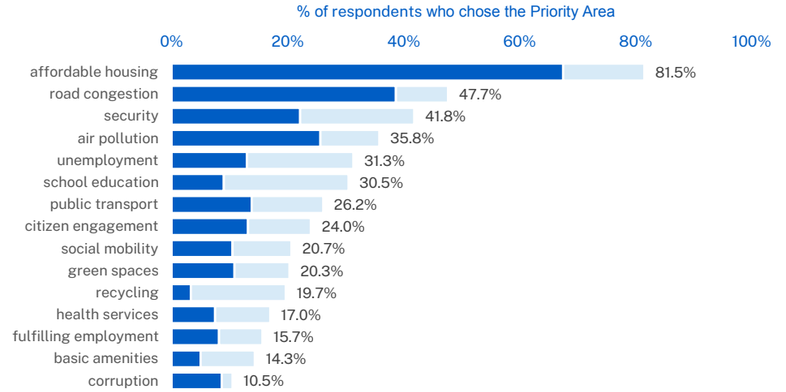

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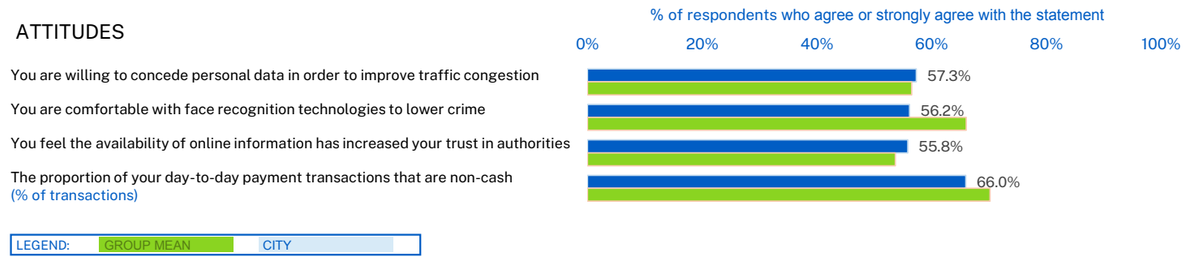

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	70.0
Recycling services are satisfactory	74.5
Public safety is not a problem	56.0
Air pollution is not a problem	47.6
Medical services provision is satisfactory	78.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	24.1

Mobility

Traffic congestion is not a problem	37.1
Public transport is satisfactory	64.4

Activities

Green spaces are satisfactory	66.1
Cultural activities (shows, bars, and museums) are satisfactory	69.6

Opportunities (Work & School)

Employment finding services are readily available	61.1
Most children have access to a good school	67.0
Lifelong learning opportunities are provided by local institutions	58.4
Businesses are creating new jobs	58.3
Minorities feel welcome	58.0

Governance

Information on local government decisions are easily accessible	57.2
Corruption of city officials is not an issue of concern	62.2
Residents contribute to decision making of local government	48.8
Residents provide feedback on local government projects	55.1

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	44.4
A website or App allows residents to easily give away unwanted items	51.9
Free public wifi has improved access to city services	53.9
CCTV cameras has made residents feel safer	31.0
A website or App allows residents to effectively monitor air pollution	28.7
Arranging medical appointments online has improved access	46.7

Mobility

Car-sharing Apps have reduced congestion	31.9
Apps that direct you to an available parking space have reduced journey time	31.2
Bicycle hiring has reduced congestion	46.1
Online scheduling and ticket sales has made public transport easier to use	60.5
The city provides information on traffic congestion through mobile phones	39.6

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	64.8

Opportunities (Work & School)

Online access to job listings has made it easier to find work	63.1
IT skills are taught well in schools	38.0
Online services provided by the city has made it easier to start a new business	33.5
The current internet speed and reliability meet connectivity needs	57.5

Governance

Online public access to city finances has reduced corruption	31.2
Online voting has increased participation	41.9
An online platform where residents can propose ideas has improved city life	38.5
Processing Identification Documents online has reduced waiting times	47.3

Krakow

SMART CITY RANKING

79

Out of 141

▼

76 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,372,763	0.888

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.872	0.880	0.876	0.876	+0.000
Life expectancy at birth	78.5	78.7	76.9	76.5	-0.5
Expected years of schooling	16.4	16.3	16.0	16.0	+0.0
Mean years of schooling	12.3	12.5	13.2	13.2	+0.0
GNI per capita (PPP $)	27,626	31,623	31,164	33,034	+1,869

PRIORITY AREAS

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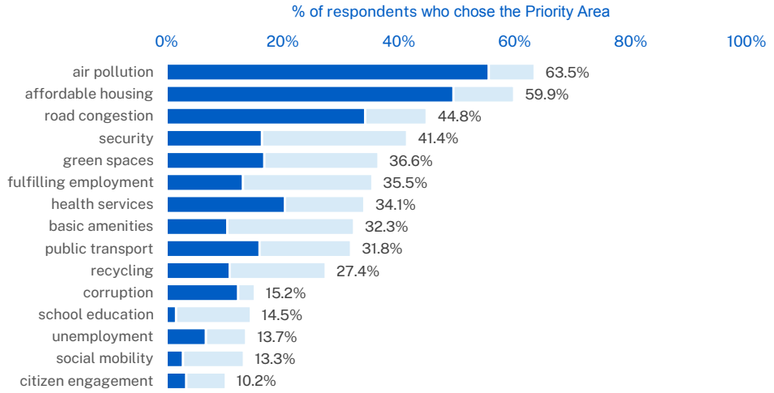

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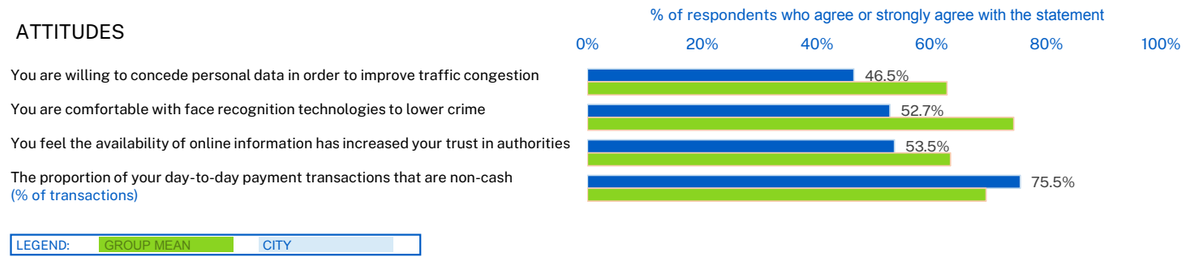

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score (0 20 40 60 80 100)

Health & Safety

Basic sanitation meets the needs of the poorest areas	63.0
Recycling services are satisfactory	63.6
Public safety is not a problem	62.5
Air pollution is not a problem	22.8
Medical services provision is satisfactory	53.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	26.9

Mobility

Traffic congestion is not a problem	29.8
Public transport is satisfactory	59.1

Activities

Green spaces are satisfactory	63.5
Cultural activities (shows, bars, and museums) are satisfactory	80.1

Opportunities (Work & School)

Employment finding services are readily available	62.7
Most children have access to a good school	70.1
Lifelong learning opportunities are provided by local institutions	70.0
Businesses are creating new jobs	64.5
Minorities feel welcome	60.6

Governance

Information on local government decisions are easily accessible	64.7
Corruption of city officials is not an issue of concern	42.1
Residents contribute to decision making of local government	53.0
Residents provide feedback on local government projects	63.6

TECHNOLOGIES

Score (0 20 40 60 80 100)

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	51.2
A website or App allows residents to easily give away unwanted items	57.3
Free public wifi has improved access to city services	60.2
CCTV cameras has made residents feel safer	57.4
A website or App allows residents to effectively monitor air pollution	70.7
Arranging medical appointments online has improved access	64.2

Mobility

Car-sharing Apps have reduced congestion	43.6
Apps that direct you to an available parking space have reduced journey time	51.0
Bicycle hiring has reduced congestion	55.6
Online scheduling and ticket sales has made public transport easier to use	72.3
The city provides information on traffic congestion through mobile phones	46.7

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	78.8

Opportunities (Work & School)

Online access to job listings has made it easier to find work	75.6
IT skills are taught well in schools	53.2
Online services provided by the city has made it easier to start a new business	58.2
The current internet speed and reliability meet connectivity needs	68.6

Governance

Online public access to city finances has reduced corruption	43.5
Online voting has increased participation	52.5
An online platform where residents can propose ideas has improved city life	60.3
Processing Identification Documents online has reduced waiting times	66.2

Kuala Lumpur

SMART CITY RANKING

89

Out of 141

▼

80 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,853,918	0.858

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.804	0.810	0.806	0.803	-0.003
Life expectancy at birth	76.0	76.2	75.9	74.9	-1.1
Expected years of schooling	13.5	13.7	13.3	13.3	+0.0
Mean years of schooling	10.2	10.4	10.7	10.7	+0.0
GNI per capita (PPP $)	27,227	27,534	25,940	26,658	+717

PRIORITY AREAS

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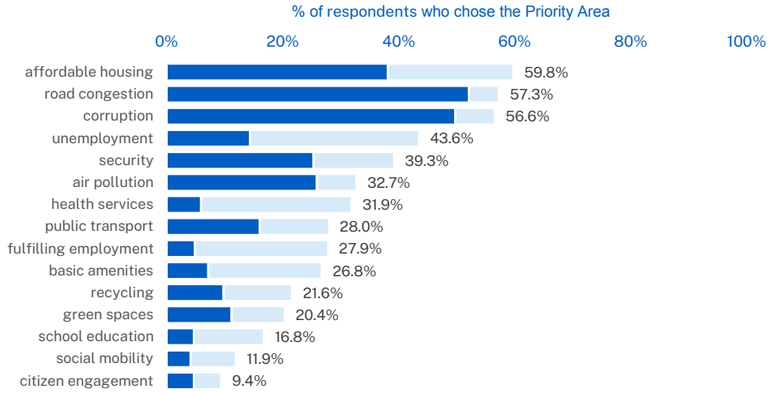

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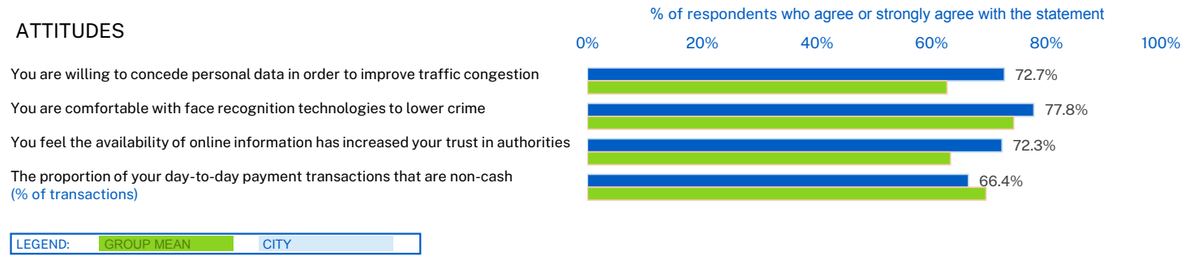

Lagos

SMART CITY RANKING

132

Out of 141

▼

116 out of 118 in 2021

SMART CITY RATING

D

D in 2021

FACTOR RATINGS

D

STRUCTURES

C

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
15,387,639	0.681

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.534	0.539	0.535	0.535	+0.000
Life expectancy at birth	54.3	54.7	52.9	52.7	-0.2
Expected years of schooling	9.7	10.0	10.1	10.1	+0.0
Mean years of schooling	6.5	6.7	7.2	7.2	+0.0
GNI per capita (PPP $)	5,086	4,910	4,740	4,790	+51

PRIORITY AREAS

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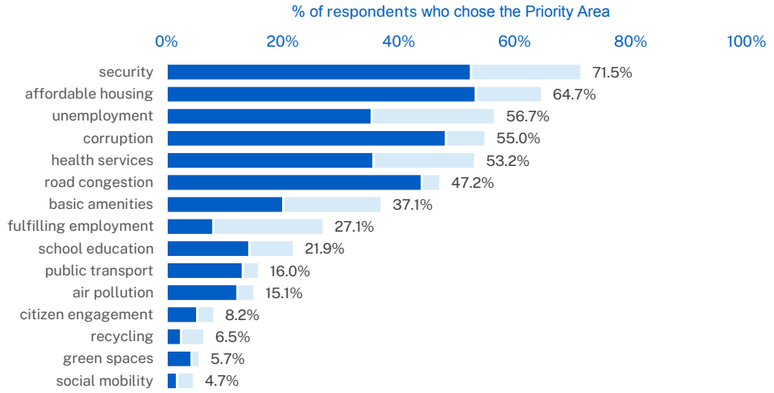

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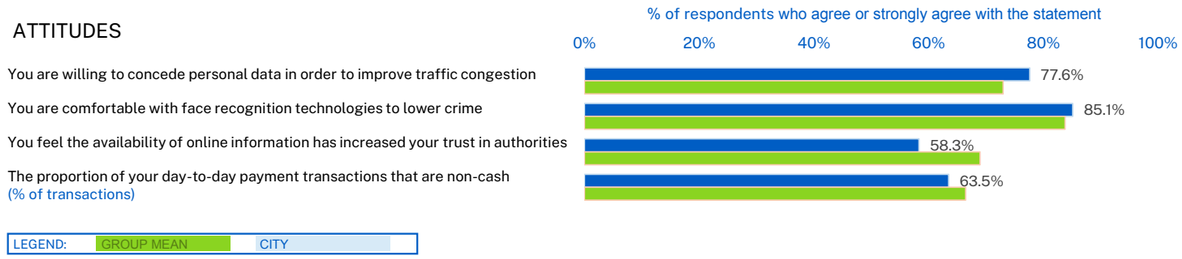


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	47.2
Recycling services are satisfactory	46.8
Public safety is not a problem	33.4
Air pollution is not a problem	21.7
Medical services provision is satisfactory	41.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	21.3

Mobility

	Score
Traffic congestion is not a problem	10.6
Public transport is satisfactory	35.5

Activities

	Score
Green spaces are satisfactory	45.4
Cultural activities (shows, bars, and museums) are satisfactory	71.7

Opportunities (Work & School)

	Score
Employment finding services are readily available	44.0
Most children have access to a good school	40.0
Lifelong learning opportunities are provided by local institutions	37.1
Businesses are creating new jobs	60.9
Minorities feel welcome	46.5

Governance

	Score
Information on local government decisions are easily accessible	40.4
Corruption of city officials is not an issue of concern	15.8
Residents contribute to decision making of local government	23.8
Residents provide feedback on local government projects	36.6

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	50.9
A website or App allows residents to easily give away unwanted items	41.9
Free public wifi has improved access to city services	35.1
CCTV cameras has made residents feel safer	41.7
A website or App allows residents to effectively monitor air pollution	25.0
Arranging medical appointments online has improved access	52.3

Mobility

	Score
Car-sharing Apps have reduced congestion	48.4
Apps that direct you to an available parking space have reduced journey time	39.0
Bicycle hiring has reduced congestion	25.0
Online scheduling and ticket sales has made public transport easier to use	59.0
The city provides information on traffic congestion through mobile phones	55.2

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	75.5

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	69.3
IT skills are taught well in schools	51.9
Online services provided by the city has made it easier to start a new business	56.0
The current internet speed and reliability meet connectivity needs	61.1

Governance

	Score
Online public access to city finances has reduced corruption	25.3
Online voting has increased participation	26.8
An online platform where residents can propose ideas has improved city life	36.5
Processing Identification Documents online has reduced waiting times	58.2

Lausanne

SMART CITY RANKING

5

Out of 141

▼

4 out of 118 in 2021

SMART CITY RATING

AA

AAA in 2021

FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,669,608	0.966

(Eurostat)

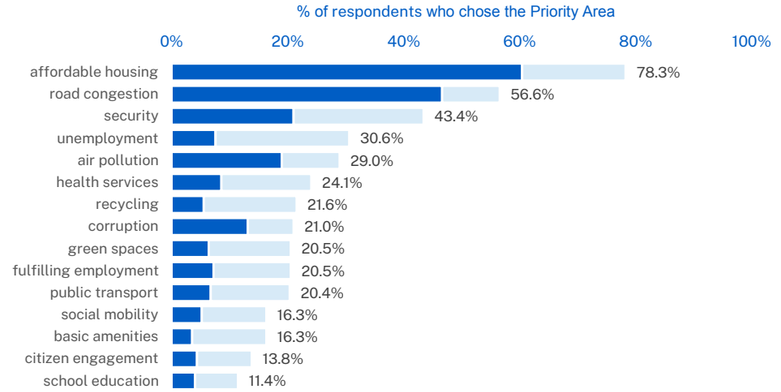
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.946	0.955	0.956	0.962	+0.006
Life expectancy at birth	83.6	83.8	83.1	84.0	+0.9
Expected years of schooling	16.2	16.3	16.5	16.5	+0.0
Mean years of schooling	13.4	13.4	13.9	13.9	+0.0
GNI per capita (PPP $)	59,375	69,394	65,011	66,933	+1,922

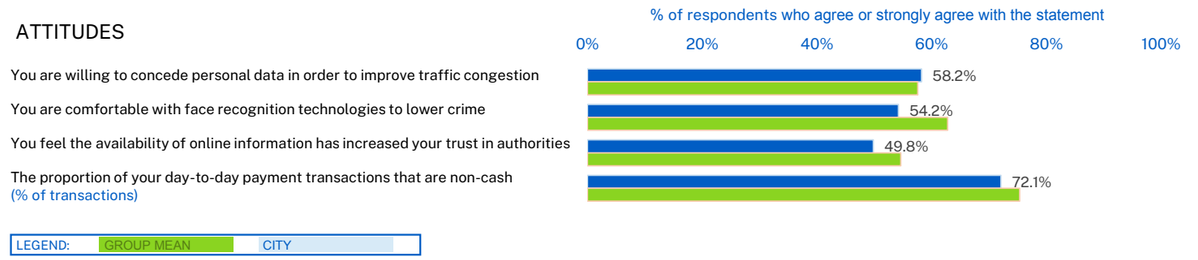
PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most 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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	71.7
Recycling services are satisfactory	75.4
Public safety is not a problem	64.0
Air pollution is not a problem	53.0
Medical services provision is satisfactory	79.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	31.6

Mobility

Traffic congestion is not a problem	31.6
Public transport is satisfactory	68.7

Activities

Green spaces are satisfactory	79.4
Cultural activities (shows, bars, and museums) are satisfactory	85.2

Opportunities (Work & School)

Employment finding services are readily available	73.1
Most children have access to a good school	81.5
Lifelong learning opportunities are provided by local institutions	72.7
Businesses are creating new jobs	61.4
Minorities feel welcome	62.3

Governance

Information on local government decisions are easily accessible	66.4
Corruption of city officials is not an issue of concern	59.4
Residents contribute to decision making of local government	60.2
Residents provide feedback on local government projects	62.7

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	46.9
A website or App allows residents to easily give away unwanted items	54.3
Free public wifi has improved access to city services	54.9
CCTV cameras has made residents feel safer	49.7
A website or App allows residents to effectively monitor air pollution	40.5
Arranging medical appointments online has improved access	62.4

Mobility

Car-sharing Apps have reduced congestion	37.3
Apps that direct you to an available parking space have reduced journey time	43.1
Bicycle hiring has reduced congestion	46.2
Online scheduling and ticket sales has made public transport easier to use	73.3
The city provides information on traffic congestion through mobile phones	43.9

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	78.1

Opportunities (Work & School)

Online access to job listings has made it easier to find work	63.5
IT skills are taught well in schools	64.5
Online services provided by the city has made it easier to start a new business	45.6
The current internet speed and reliability meet connectivity needs	71.4

Governance

Online public access to city finances has reduced corruption	40.0
Online voting has increased participation	45.8
An online platform where residents can propose ideas has improved city life	49.0
Processing Identification Documents online has reduced waiting times	63.7

Leeds

SMART CITY RANKING

76

Out of 141

▼

64 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,324,560	0.908

(Eurostat)

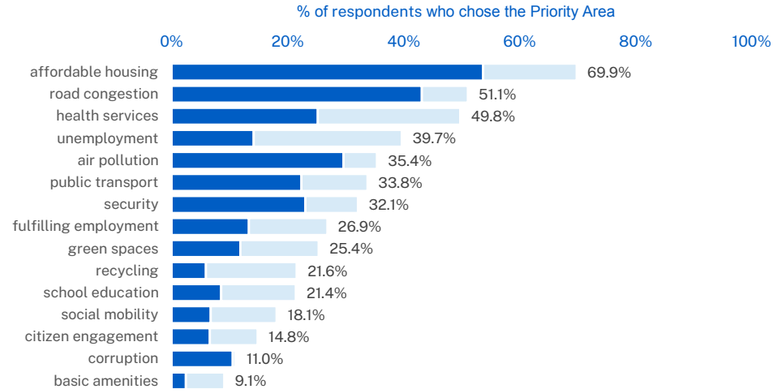
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP $)	39,507	46,071	42,375	45,225	+2,850

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most 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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



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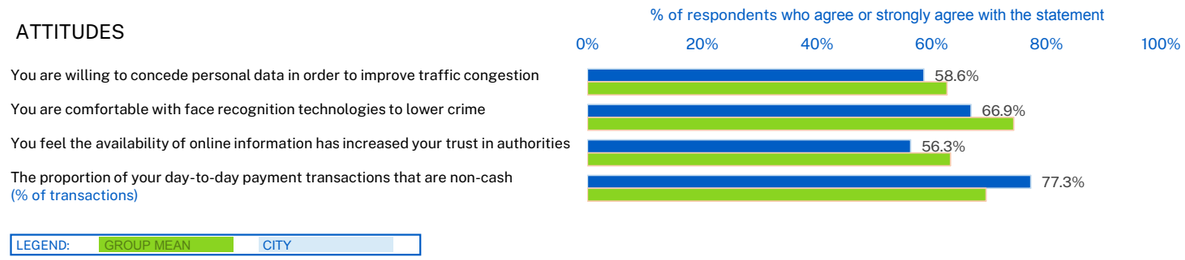

Lille

SMART CITY RANKING

84

Out of 141

▼

82 out of 118 in 2021

SMART CITY RATING

CCC

CC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,607,879	0.880

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP $)	40,511	47,173	43,048	45,937	+2,889

PRIORITY AREAS

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

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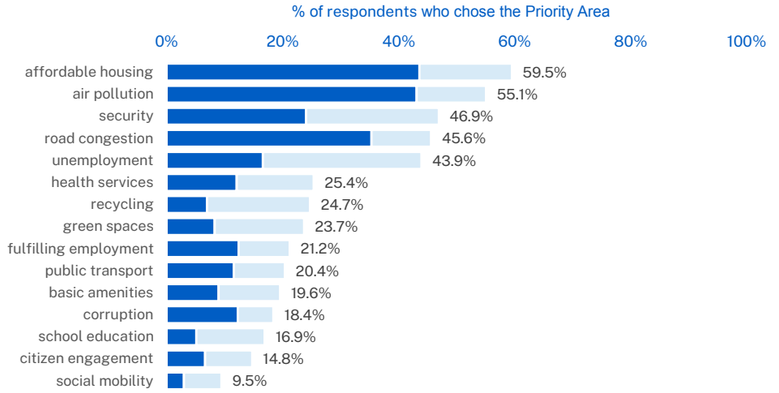

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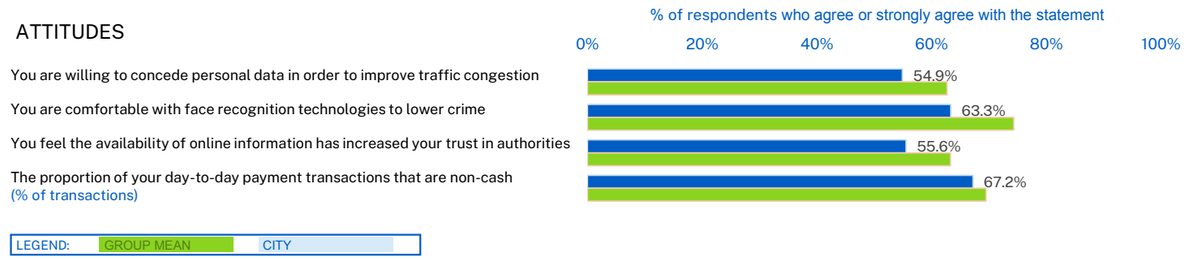

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score (0 20 40 60 80 100)

Health & Safety

Basic sanitation meets the needs of the poorest areas	59.0
Recycling services are satisfactory	68.1
Public safety is not a problem	53.4
Air pollution is not a problem	30.2
Medical services provision is satisfactory	62.9
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	34.5

Mobility

Traffic congestion is not a problem	31.6
Public transport is satisfactory	62.3

Activities

Green spaces are satisfactory	71.6
Cultural activities (shows, bars, and museums) are satisfactory	75.8

Opportunities (Work & School)

Employment finding services are readily available	63.1
Most children have access to a good school	67.7
Lifelong learning opportunities are provided by local institutions	65.6
Businesses are creating new jobs	51.7
Minorities feel welcome	52.2

Governance

Information on local government decisions are easily accessible	56.6
Corruption of city officials is not an issue of concern	45.9
Residents contribute to decision making of local government	50.1
Residents provide feedback on local government projects	51.4

TECHNOLOGIES

Score (0 20 40 60 80 100)

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	54.6
A website or App allows residents to easily give away unwanted items	59.1
Free public wifi has improved access to city services	57.8
CCTV cameras has made residents feel safer	58.7
A website or App allows residents to effectively monitor air pollution	50.0
Arranging medical appointments online has improved access	69.8

Mobility

Car-sharing Apps have reduced congestion	49.0
Apps that direct you to an available parking space have reduced journey time	49.8
Bicycle hiring has reduced congestion	62.6
Online scheduling and ticket sales has made public transport easier to use	67.2
The city provides information on traffic congestion through mobile phones	54.9

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	74.8

Opportunities (Work & School)

Online access to job listings has made it easier to find work	62.0
IT skills are taught well in schools	66.0
Online services provided by the city has made it easier to start a new business	52.7
The current internet speed and reliability meet connectivity needs	70.0

Governance

Online public access to city finances has reduced corruption	49.4
Online voting has increased participation	49.4
An online platform where residents can propose ideas has improved city life	52.9
Processing Identification Documents online has reduced waiting times	59.2

Lima

SMART CITY RANKING

134

Out of 141

not out of 118 in 2021

SMART CITY RATING

C

not in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
9,562,280	0.820

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.776	0.780	0.762	0.762	+0.000
Life expectancy at birth	76.0	76.2	73.7	72.4	-1.3
Expected years of schooling	15.2	15.4	15.4	15.4	+0.0
Mean years of schooling	9.8	9.9	9.9	9.9	+0.0
GNI per capita (PPP $)	12,143	12,304	10,917	12,246	+1,329

PRIORITY AREAS

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

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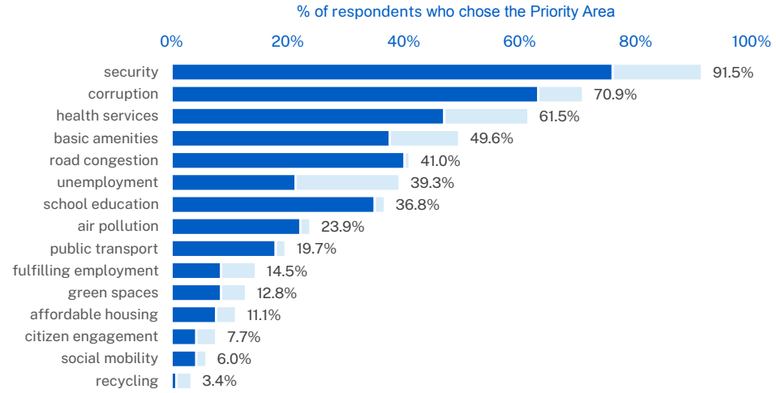

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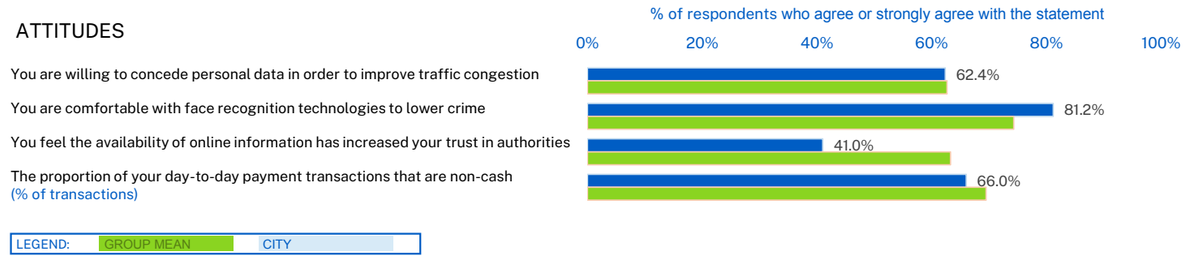

Lisbon

SMART CITY RANKING

99

Out of 141

▼

81 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,869,033	0.900

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.850	0.864	0.863	0.866	+0.003
Life expectancy at birth	81.9	82.1	81.1	81.0	-0.0
Expected years of schooling	16.3	16.5	16.9	16.9	+0.0
Mean years of schooling	9.2	9.3	9.6	9.6	+0.0
GNI per capita (PPP $)	27,935	33,967	31,637	33,155	+1,518

PRIORITY AREAS

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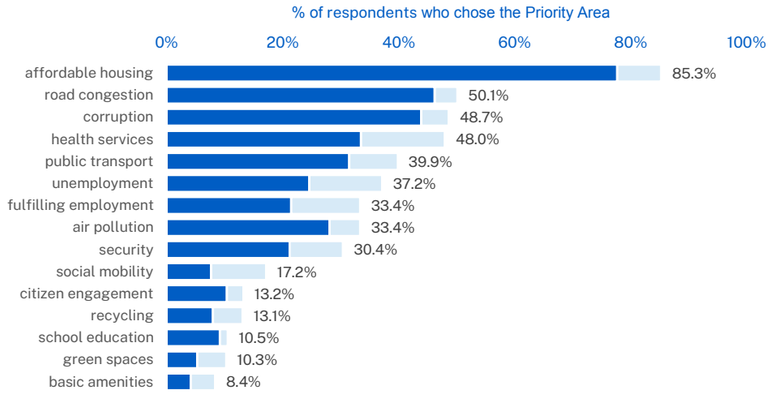

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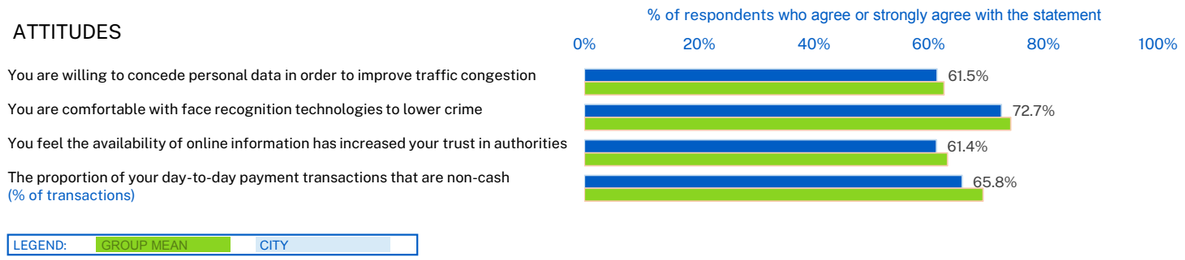

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	62.3
Recycling services are satisfactory	61.9
Public safety is not a problem	51.6
Air pollution is not a problem	32.8
Medical services provision is satisfactory	50.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	12.0

Mobility

Traffic congestion is not a problem	17.7
Public transport is satisfactory	37.8

Activities

Green spaces are satisfactory	65.1
Cultural activities (shows, bars, and museums) are satisfactory	78.5

Opportunities (Work & School)

Employment finding services are readily available	42.2
Most children have access to a good school	52.9
Lifelong learning opportunities are provided by local institutions	49.0
Businesses are creating new jobs	41.1
Minorities feel welcome	51.7

Governance

Information on local government decisions are easily accessible	49.0
Corruption of city officials is not an issue of concern	19.3
Residents contribute to decision making of local government	31.7
Residents provide feedback on local government projects	33.9

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	46.5
A website or App allows residents to easily give away unwanted items	56.6
Free public wifi has improved access to city services	55.5
CCTV cameras has made residents feel safer	54.6
A website or App allows residents to effectively monitor air pollution	42.4
Arranging medical appointments online has improved access	60.3

Mobility

Car-sharing Apps have reduced congestion	36.3
Apps that direct you to an available parking space have reduced journey time	40.6
Bicycle hiring has reduced congestion	46.9
Online scheduling and ticket sales has made public transport easier to use	57.9
The city provides information on traffic congestion through mobile phones	47.5

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	83.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	75.6
IT skills are taught well in schools	57.7
Online services provided by the city has made it easier to start a new business	54.8
The current internet speed and reliability meet connectivity needs	71.1

Governance

Online public access to city finances has reduced corruption	30.2
Online voting has increased participation	43.0
An online platform where residents can propose ideas has improved city life	48.6
Processing Identification Documents online has reduced waiting times	70.7

Ljubljana

SMART CITY RANKING

47

Out of 141

not out of 118 in 2021

SMART CITY RATING

BBB

not in 2021

FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
555,948	0.953

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.917	0.921	0.913	0.918	+0.005
Life expectancy at birth	81.4	81.6	80.4	80.7	+0.3
Expected years of schooling	17.6	17.7	17.7	17.7	+0.0
Mean years of schooling	12.8	12.8	12.8	12.8	+0.0
GNI per capita (PPP $)	37,411	38,440	36,993	39,746	+2,753

PRIORITY AREAS

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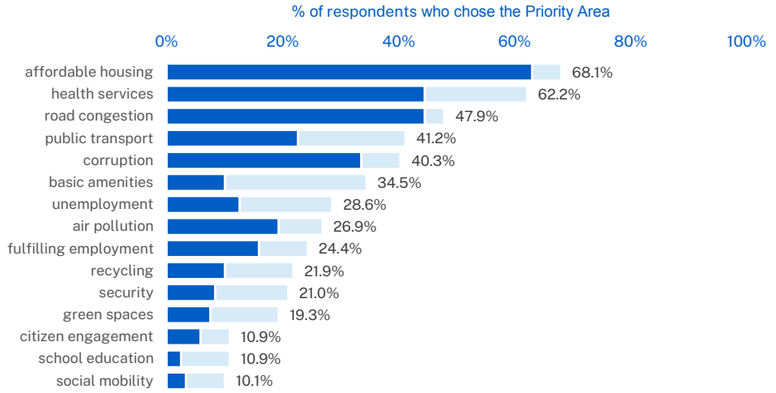

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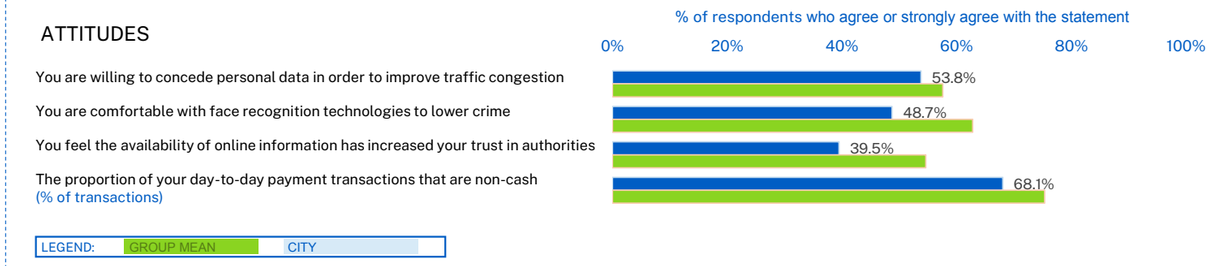

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	71.3
Recycling services are satisfactory	68.5
Public safety is not a problem	66.8
Air pollution is not a problem	40.2
Medical services provision is satisfactory	38.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	15.5

Mobility

	Score
Traffic congestion is not a problem	19.7
Public transport is satisfactory	49.4

Activities

	Score
Green spaces are satisfactory	71.7
Cultural activities (shows, bars, and museums) are satisfactory	71.7

Opportunities (Work & School)

	Score
Employment finding services are readily available	53.4
Most children have access to a good school	69.7
Lifelong learning opportunities are provided by local institutions	59.7
Businesses are creating new jobs	49.7
Minorities feel welcome	56.6

Governance

	Score
Information on local government decisions are easily accessible	51.0
Corruption of city officials is not an issue of concern	31.2
Residents contribute to decision making of local government	35.4
Residents provide feedback on local government projects	40.6

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	47.1
A website or App allows residents to easily give away unwanted items	46.9
Free public wifi has improved access to city services	59.8
CCTV cameras has made residents feel safer	40.3
A website or App allows residents to effectively monitor air pollution	52.7
Arranging medical appointments online has improved access	49.6

Mobility

	Score
Car-sharing Apps have reduced congestion	37.5
Apps that direct you to an available parking space have reduced journey time	45.5
Bicycle hiring has reduced congestion	65.8
Online scheduling and ticket sales has made public transport easier to use	67.4
The city provides information on traffic congestion through mobile phones	44.5

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	75.8

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	67.6
IT skills are taught well in schools	49.6
Online services provided by the city has made it easier to start a new business	50.8
The current internet speed and reliability meet connectivity needs	70.2

Governance

	Score
Online public access to city finances has reduced corruption	29.8
Online voting has increased participation	36.3
An online platform where residents can propose ideas has improved city life	43.0
Processing Identification Documents online has reduced waiting times	47.5

London

SMART CITY RANKING

6

Out of 141

▼

3 out of 118 in 2021

SMART CITY RATING

A

A in 2021

FACTOR RATINGS

BBB

STRUCTURES

AA

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
8,982,256	0.973

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP $)	39,507	46,071	42,375	45,225	+2,850

PRIORITY AREAS

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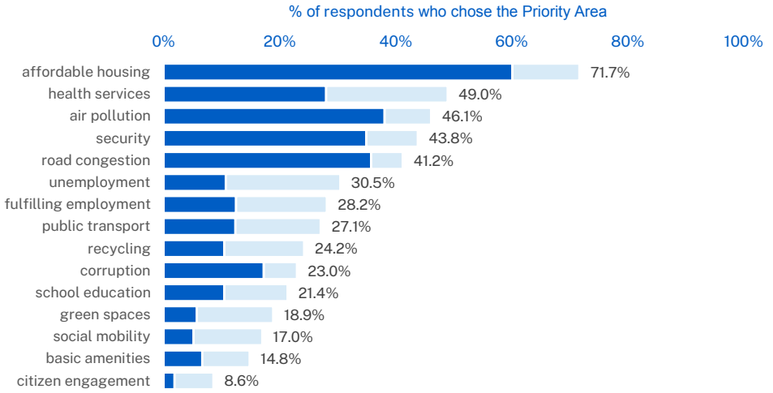
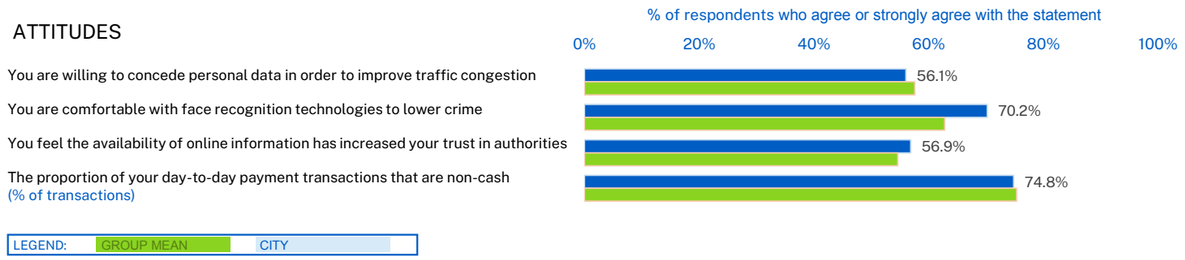


ATTITUDES



Los Angeles

SMART CITY RANKING

50

Out of 141

▼

30 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,898,747	0.931

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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

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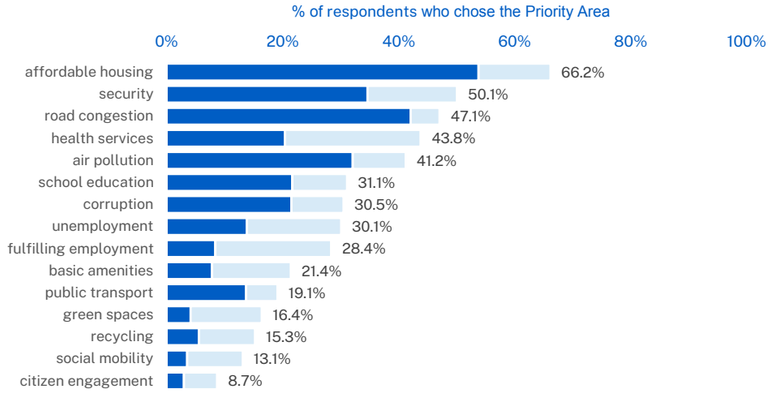

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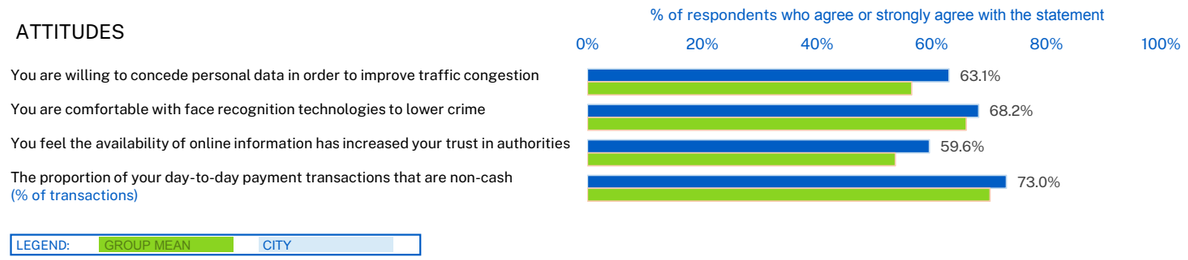

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	54.2
Recycling services are satisfactory	64.3
Public safety is not a problem	36.5
Air pollution is not a problem	32.7
Medical services provision is satisfactory	56.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	32.8

Mobility

Traffic congestion is not a problem	25.1
Public transport is satisfactory	47.7

Activities

Green spaces are satisfactory	60.7
Cultural activities (shows, bars, and museums) are satisfactory	75.4

Opportunities (Work & School)

Employment finding services are readily available	63.0
Most children have access to a good school	52.9
Lifelong learning opportunities are provided by local institutions	58.2
Businesses are creating new jobs	64.7
Minorities feel welcome	58.3

Governance

Information on local government decisions are easily accessible	65.8
Corruption of city officials is not an issue of concern	35.5
Residents contribute to decision making of local government	56.5
Residents provide feedback on local government projects	59.7

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	50.3
A website or App allows residents to easily give away unwanted items	61.7
Free public wifi has improved access to city services	60.0
CCTV cameras has made residents feel safer	54.0
A website or App allows residents to effectively monitor air pollution	53.8
Arranging medical appointments online has improved access	64.9

Mobility

Car-sharing Apps have reduced congestion	53.1
Apps that direct you to an available parking space have reduced journey time	53.6
Bicycle hiring has reduced congestion	49.1
Online scheduling and ticket sales has made public transport easier to use	60.7
The city provides information on traffic congestion through mobile phones	65.5

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	76.2

Opportunities (Work & School)

Online access to job listings has made it easier to find work	68.0
IT skills are taught well in schools	54.1
Online services provided by the city has made it easier to start a new business	55.8
The current internet speed and reliability meet connectivity needs	67.7

Governance

Online public access to city finances has reduced corruption	49.0
Online voting has increased participation	65.3
An online platform where residents can propose ideas has improved city life	54.6
Processing Identification Documents online has reduced waiting times	65.2

Luxembourg

SMART CITY RANKING

45

Out of 141

not out of 118 in 2021

SMART CITY RATING

BB

not in 2021

FACTOR RATINGS

BBB

STRUCTURES

B

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
634,730	0.930

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.922	0.927	0.924	0.930	+0.006
Life expectancy at birth	81.8	82.1	81.4	82.6	+1.2
Expected years of schooling	14.3	14.4	14.4	14.4	+0.0
Mean years of schooling	12.8	13.0	13.0	13.0	+0.0
GNI per capita (PPP $)	81,399	76,019	80,286	84,649	+4,364

PRIORITY AREAS

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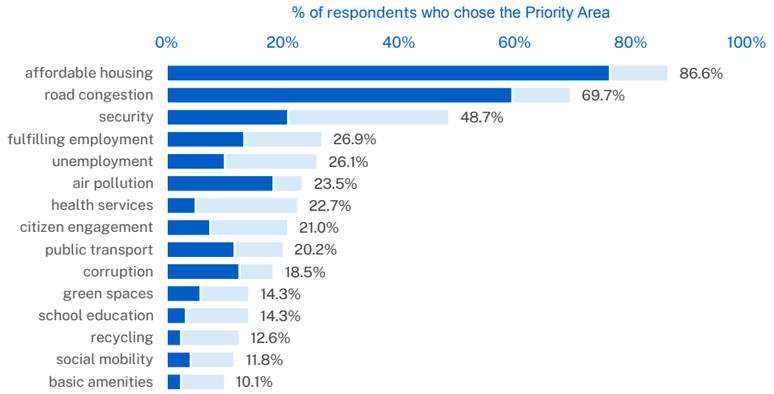

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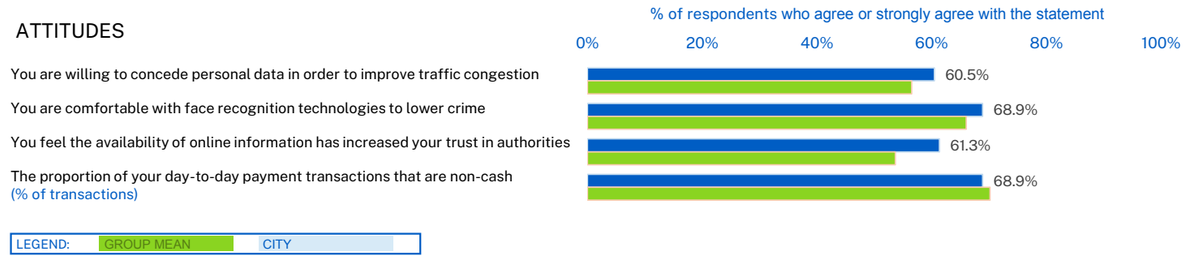

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	78.4
Recycling services are satisfactory	84.3
Public safety is not a problem	64.1
Air pollution is not a problem	51.8
Medical services provision is satisfactory	78.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	16.2

Mobility

Traffic congestion is not a problem	26.5
Public transport is satisfactory	70.3

Activities

Green spaces are satisfactory	81.1
Cultural activities (shows, bars, and museums) are satisfactory	77.9

Opportunities (Work & School)

Employment finding services are readily available	67.9
Most children have access to a good school	80.7
Lifelong learning opportunities are provided by local institutions	71.6
Businesses are creating new jobs	60.1
Minorities feel welcome	64.7

Governance

Information on local government decisions are easily accessible	70.4
Corruption of city officials is not an issue of concern	54.3
Residents contribute to decision making of local government	44.8
Residents provide feedback on local government projects	48.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	51.3
A website or App allows residents to easily give away unwanted items	54.8
Free public wifi has improved access to city services	56.4
CCTV cameras has made residents feel safer	43.4
A website or App allows residents to effectively monitor air pollution	32.2
Arranging medical appointments online has improved access	73.0

Mobility

Car-sharing Apps have reduced congestion	32.2
Apps that direct you to an available parking space have reduced journey time	35.9
Bicycle hiring has reduced congestion	41.6
Online scheduling and ticket sales has made public transport easier to use	54.5
The city provides information on traffic congestion through mobile phones	47.8

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	79.6

Opportunities (Work & School)

Online access to job listings has made it easier to find work	63.4
IT skills are taught well in schools	56.3
Online services provided by the city has made it easier to start a new business	48.7
The current internet speed and reliability meet connectivity needs	75.2

Governance

Online public access to city finances has reduced corruption	34.9
Online voting has increased participation	38.1
An online platform where residents can propose ideas has improved city life	45.8
Processing Identification Documents online has reduced waiting times	65.1

Lyon

SMART CITY RANKING

64

Out of 141

▼

62 out of 118 in 2021

SMART CITY RATING

BB

CCC in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
6,740,730	0.914

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP $)	40,511	47,173	43,048	45,937	+2,889

PRIORITY AREAS

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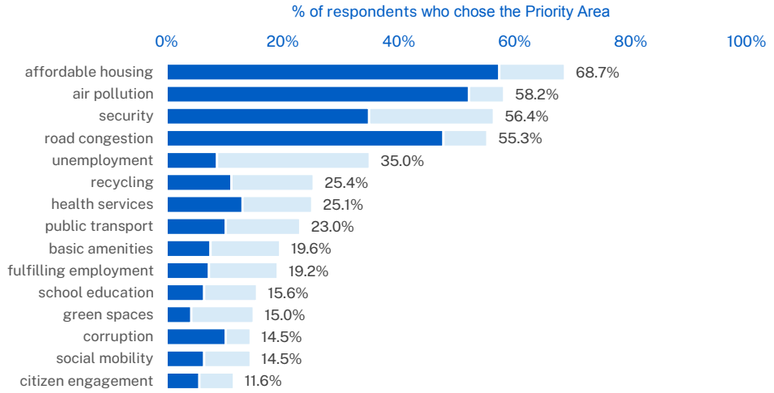

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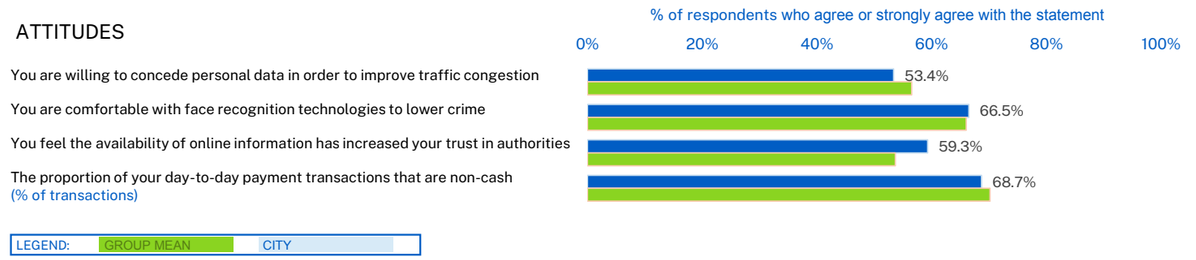

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	58.9
Recycling services are satisfactory	63.7
Public safety is not a problem	45.0
Air pollution is not a problem	19.5
Medical services provision is satisfactory	60.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	26.2

Mobility

Traffic congestion is not a problem	23.3
Public transport is satisfactory	65.4

Activities

Green spaces are satisfactory	78.6
Cultural activities (shows, bars, and museums) are satisfactory	82.1

Opportunities (Work & School)

Employment finding services are readily available	69.2
Most children have access to a good school	67.9
Lifelong learning opportunities are provided by local institutions	61.6
Businesses are creating new jobs	61.4
Minorities feel welcome	53.0

Governance

Information on local government decisions are easily accessible	56.1
Corruption of city officials is not an issue of concern	46.0
Residents contribute to decision making of local government	45.8
Residents provide feedback on local government projects	50.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.0
A website or App allows residents to easily give away unwanted items	56.1
Free public wifi has improved access to city services	60.5
CCTV cameras has made residents feel safer	58.3
A website or App allows residents to effectively monitor air pollution	50.4
Arranging medical appointments online has improved access	68.0

Mobility

Car-sharing Apps have reduced congestion	46.4
Apps that direct you to an available parking space have reduced journey time	49.9
Bicycle hiring has reduced congestion	57.4
Online scheduling and ticket sales has made public transport easier to use	63.8
The city provides information on traffic congestion through mobile phones	59.7

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	79.6

Opportunities (Work & School)

Online access to job listings has made it easier to find work	60.7
IT skills are taught well in schools	61.6
Online services provided by the city has made it easier to start a new business	52.9
The current internet speed and reliability meet connectivity needs	70.2

Governance

Online public access to city finances has reduced corruption	42.0
Online voting has increased participation	46.9
An online platform where residents can propose ideas has improved city life	50.4
Processing Identification Documents online has reduced waiting times	63.6

Madrid

SMART CITY RANKING

37

Out of 141

37 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
6,755,828	0.940

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.893	0.904	0.899	0.905	+0.006
Life expectancy at birth	83.4	83.6	82.3	83.0	+0.7
Expected years of schooling	17.9	17.6	17.9	17.9	+0.0
Mean years of schooling	9.8	10.3	10.6	10.6	+0.0
GNI per capita (PPP $)	35,041	40,975	36,516	38,354	+1,838

PRIORITY AREAS

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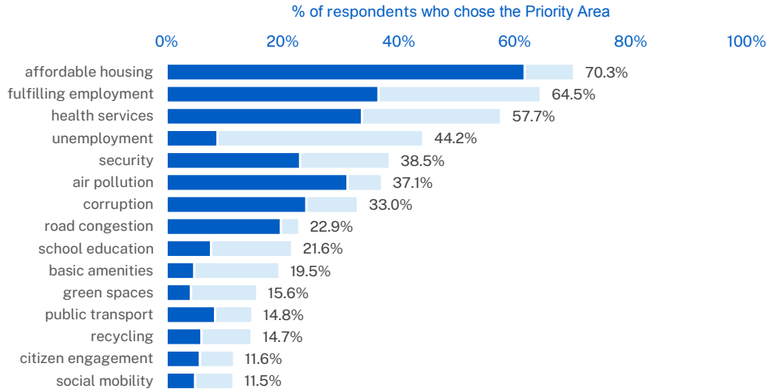

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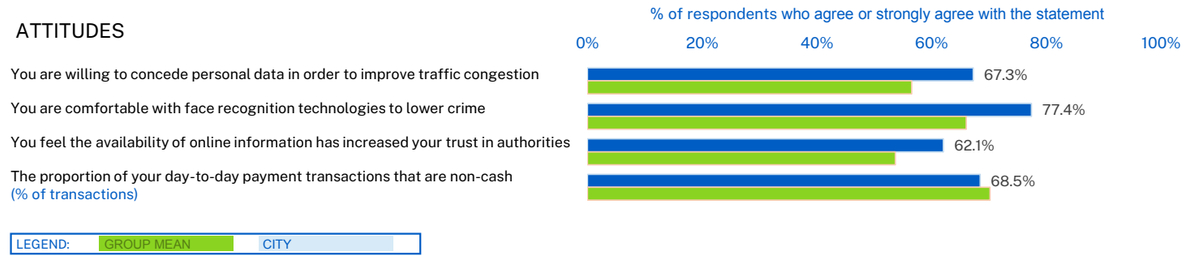

Makassar

SMART CITY RANKING

114

Out of 141

▼

102 out of 118 in 2021

SMART CITY RATING

CC

C in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,642,129	0.699

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.707	0.718	0.709	0.705	-0.004
Life expectancy at birth	71.5	71.7	68.8	67.6	-1.2
Expected years of schooling	12.9	13.6	13.8	13.8	+0.0
Mean years of schooling	8.0	8.2	8.6	8.6	+0.0
GNI per capita (PPP $)	11,256	11,459	11,142	11,466	+325

PRIORITY AREAS

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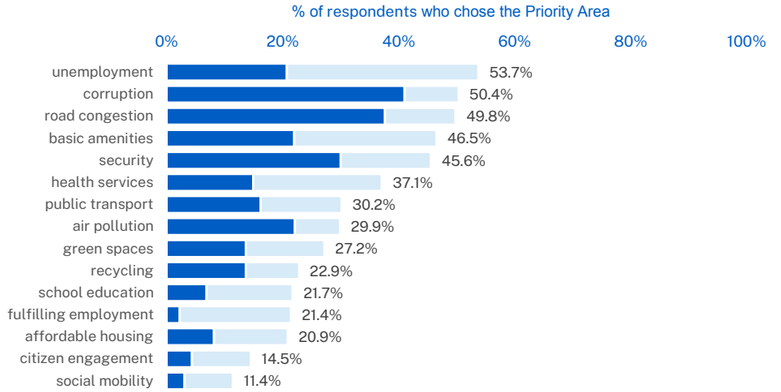

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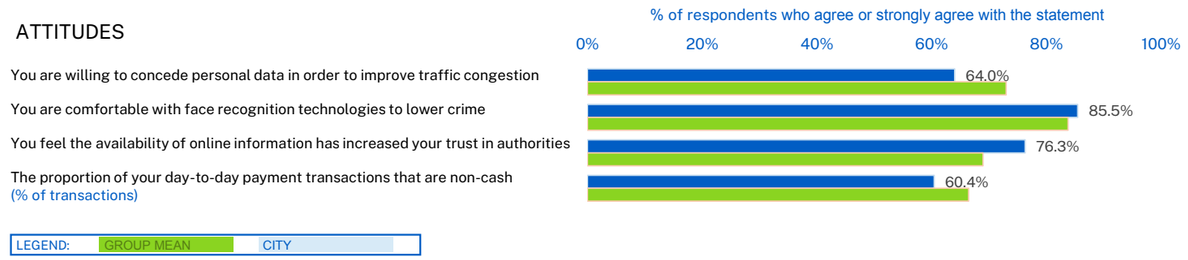

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	57.3
Recycling services are satisfactory	52.2
Public safety is not a problem	48.3
Air pollution is not a problem	42.9
Medical services provision is satisfactory	66.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	61.2

Mobility

Traffic congestion is not a problem	36.3
Public transport is satisfactory	57.9

Activities

Green spaces are satisfactory	64.1
Cultural activities (shows, bars, and museums) are satisfactory	65.4

Opportunities (Work & School)

Employment finding services are readily available	62.8
Most children have access to a good school	69.8
Lifelong learning opportunities are provided by local institutions	60.3
Businesses are creating new jobs	78.6
Minorities feel welcome	74.1

Governance

Information on local government decisions are easily accessible	64.8
Corruption of city officials is not an issue of concern	26.5
Residents contribute to decision making of local government	61.9
Residents provide feedback on local government projects	61.4

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	54.6
A website or App allows residents to easily give away unwanted items	53.5
Free public wifi has improved access to city services	55.7
CCTV cameras has made residents feel safer	67.7
A website or App allows residents to effectively monitor air pollution	52.3
Arranging medical appointments online has improved access	72.0

Mobility

Car-sharing Apps have reduced congestion	54.8
Apps that direct you to an available parking space have reduced journey time	51.2
Bicycle hiring has reduced congestion	46.6
Online scheduling and ticket sales has made public transport easier to use	71.9
The city provides information on traffic congestion through mobile phones	59.3

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	66.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	74.6
IT skills are taught well in schools	64.3
Online services provided by the city has made it easier to start a new business	68.0
The current internet speed and reliability meet connectivity needs	70.5

Governance

Online public access to city finances has reduced corruption	49.2
Online voting has increased participation	56.7
An online platform where residents can propose ideas has improved city life	58.6
Processing Identification Documents online has reduced waiting times	69.1

Manchester

SMART CITY RANKING

73

Out of 141

▼

58 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
553,230	0.915

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP $)	39,507	46,071	42,375	45,225	+2,850

PRIORITY AREAS

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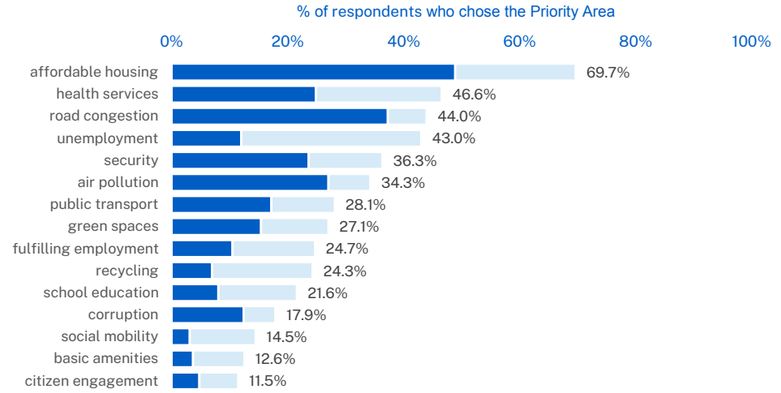

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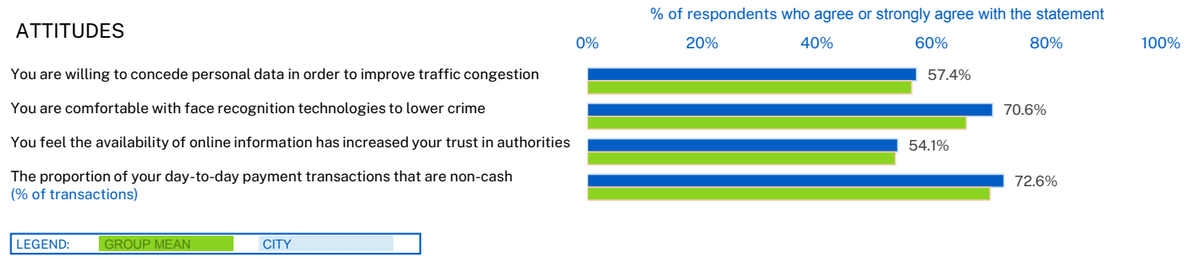

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	66.8
Recycling services are satisfactory	69.0
Public safety is not a problem	40.8
Air pollution is not a problem	36.8
Medical services provision is satisfactory	57.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	34.8

Mobility

Traffic congestion is not a problem	25.8
Public transport is satisfactory	58.0

Activities

Green spaces are satisfactory	59.9
Cultural activities (shows, bars, and museums) are satisfactory	76.4

Opportunities (Work & School)

Employment finding services are readily available	69.2
Most children have access to a good school	67.6
Lifelong learning opportunities are provided by local institutions	63.3
Businesses are creating new jobs	60.3
Minorities feel welcome	66.8

Governance

Information on local government decisions are easily accessible	59.9
Corruption of city officials is not an issue of concern	49.4
Residents contribute to decision making of local government	48.5
Residents provide feedback on local government projects	54.4

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	45.9
A website or App allows residents to easily give away unwanted items	63.4
Free public wifi has improved access to city services	58.9
CCTV cameras has made residents feel safer	58.3
A website or App allows residents to effectively monitor air pollution	32.3
Arranging medical appointments online has improved access	52.4

Mobility

Car-sharing Apps have reduced congestion	34.9
Apps that direct you to an available parking space have reduced journey time	37.3
Bicycle hiring has reduced congestion	42.1
Online scheduling and ticket sales has made public transport easier to use	60.2
The city provides information on traffic congestion through mobile phones	50.5

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	74.1

Opportunities (Work & School)

Online access to job listings has made it easier to find work	69.0
IT skills are taught well in schools	63.0
Online services provided by the city has made it easier to start a new business	52.1
The current internet speed and reliability meet connectivity needs	69.3

Governance

Online public access to city finances has reduced corruption	38.8
Online voting has increased participation	53.7
An online platform where residents can propose ideas has improved city life	44.3
Processing Identification Documents online has reduced waiting times	54.7

Manila

SMART CITY RANKING

115

Out of 141

▼

100 out of 118 in 2021

SMART CITY RATING

C

C in 2021

FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,846,513	0.760

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.712	0.718	0.710	0.699	-0.011
Life expectancy at birth	71.1	71.2	72.1	69.3	-2.9
Expected years of schooling	12.7	13.1	13.1	13.1	+0.0
Mean years of schooling	9.4	9.4	9.0	9.0	+0.0
GNI per capita (PPP $)	9,540	9,778	8,559	8,920	+362

PRIORITY AREAS

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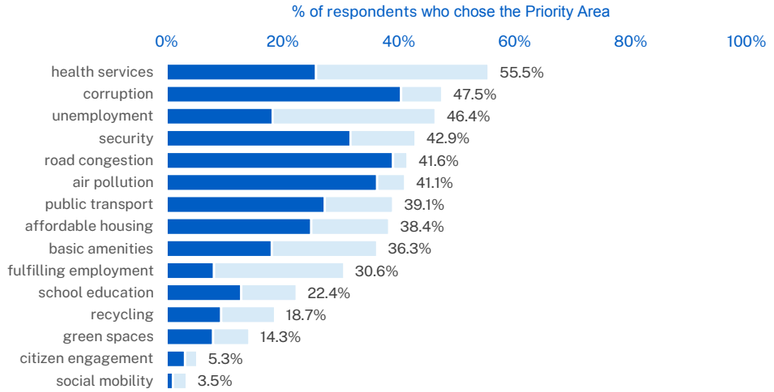

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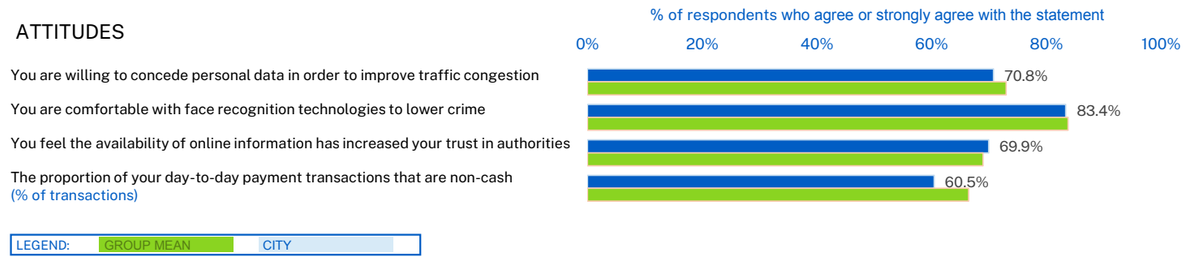

Marseille

SMART CITY RANKING

101

Out of 141

91 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
5,116,360	0.899

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP $)	40,511	47,173	43,048	45,937	+2,889

PRIORITY AREAS

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

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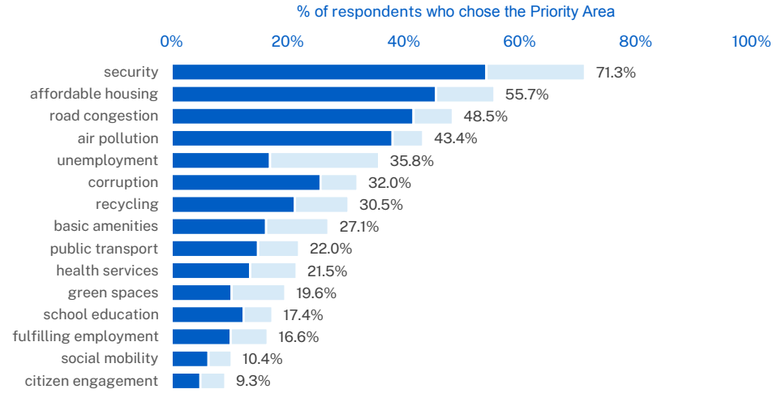
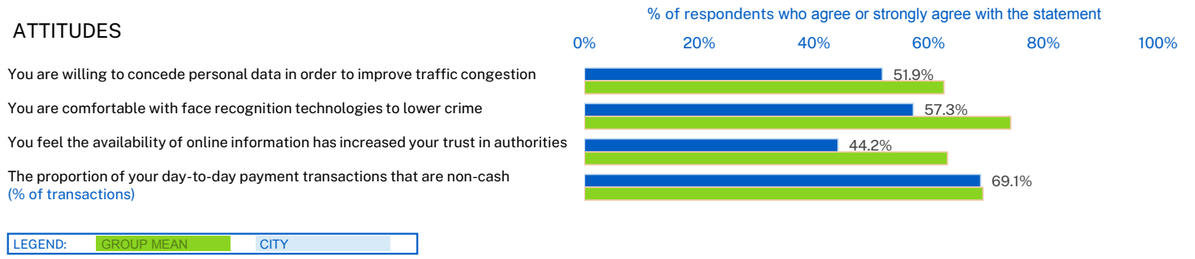


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score (0 20 40 60 80 100)

Health & Safety

Basic sanitation meets the needs of the poorest areas	46.1
Recycling services are satisfactory	39.5
Public safety is not a problem	33.1
Air pollution is not a problem	23.3
Medical services provision is satisfactory	59.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	29.1

Mobility

Traffic congestion is not a problem	21.5
Public transport is satisfactory	51.2

Activities

Green spaces are satisfactory	54.2
Cultural activities (shows, bars, and museums) are satisfactory	68.5

Opportunities (Work & School)

Employment finding services are readily available	54.0
Most children have access to a good school	52.7
Lifelong learning opportunities are provided by local institutions	48.8
Businesses are creating new jobs	48.9
Minorities feel welcome	46.2

Governance

Information on local government decisions are easily accessible	51.3
Corruption of city officials is not an issue of concern	34.5
Residents contribute to decision making of local government	35.8
Residents provide feedback on local government projects	39.7

TECHNOLOGIES

Score (0 20 40 60 80 100)

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	39.7
A website or App allows residents to easily give away unwanted items	55.8
Free public wifi has improved access to city services	55.0
CCTV cameras has made residents feel safer	52.0
A website or App allows residents to effectively monitor air pollution	42.8
Arranging medical appointments online has improved access	66.8

Mobility

Car-sharing Apps have reduced congestion	37.9
Apps that direct you to an available parking space have reduced journey time	41.0
Bicycle hiring has reduced congestion	46.9
Online scheduling and ticket sales has made public transport easier to use	58.4
The city provides information on traffic congestion through mobile phones	52.8

Activities

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

Opportunities (Work & School)

Online access to job listings has made it easier to find work	49.9
IT skills are taught well in schools	54.5
Online services provided by the city has made it easier to start a new business	44.5
The current internet speed and reliability meet connectivity needs	62.8

Governance

Online public access to city finances has reduced corruption	34.4
Online voting has increased participation	36.7
An online platform where residents can propose ideas has improved city life	42.1
Processing Identification Documents online has reduced waiting times	49.8

Mecca

SMART CITY RANKING

52

Out of 141

not out of 118 in 2021

SMART CITY RATING

B

not in 2021

FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,114,675	0.871

(UN World Urbanisation Prospects 2022 estimate)

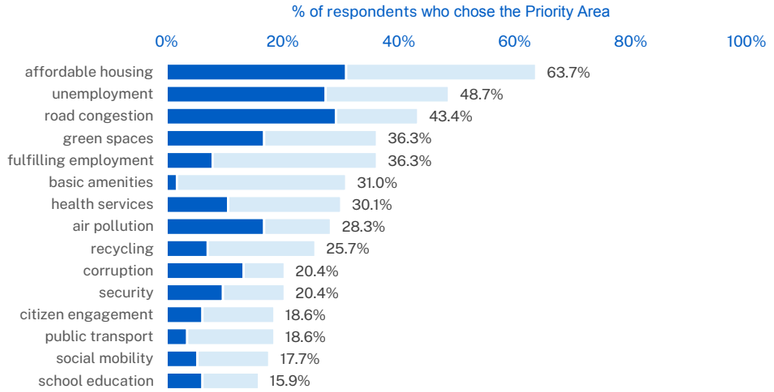
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.865	0.873	0.870	0.875	+0.005
Life expectancy at birth	77.2	77.3	76.2	76.9	+0.7
Expected years of schooling	15.7	16.0	16.1	16.1	+0.0
Mean years of schooling	10.6	8.3	8.3	8.3	+0.0
GNI per capita (PPP $)	5,072	5,307	5,601	5,745	+143

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most 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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



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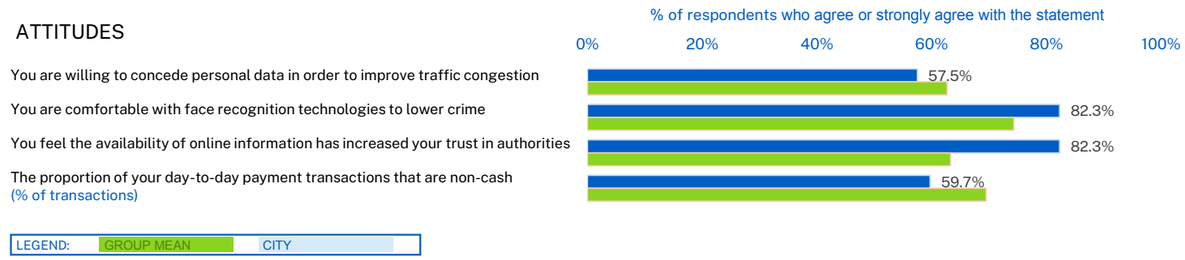

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	82.6
Recycling services are satisfactory	66.8
Public safety is not a problem	54.1
Air pollution is not a problem	38.9
Medical services provision is satisfactory	70.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	55.6

Mobility

Traffic congestion is not a problem	42.2
Public transport is satisfactory	74.9

Activities

Green spaces are satisfactory	68.0
Cultural activities (shows, bars, and museums) are satisfactory	68.3

Opportunities (Work & School)

Employment finding services are readily available	57.5
Most children have access to a good school	75.2
Lifelong learning opportunities are provided by local institutions	67.7
Businesses are creating new jobs	67.7
Minorities feel welcome	68.6

Governance

Information on local government decisions are easily accessible	79.1
Corruption of city officials is not an issue of concern	53.4
Residents contribute to decision making of local government	54.3
Residents provide feedback on local government projects	60.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	79.1
A website or App allows residents to easily give away unwanted items	68.6
Free public wifi has improved access to city services	62.2
CCTV cameras has made residents feel safer	78.5
A website or App allows residents to effectively monitor air pollution	61.4
Arranging medical appointments online has improved access	83.6

Mobility

Car-sharing Apps have reduced congestion	70.8
Apps that direct you to an available parking space have reduced journey time	71.4
Bicycle hiring has reduced congestion	50.9
Online scheduling and ticket sales has made public transport easier to use	77.1
The city provides information on traffic congestion through mobile phones	70.8

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	79.6

Opportunities (Work & School)

Online access to job listings has made it easier to find work	74.0
IT skills are taught well in schools	72.7
Online services provided by the city has made it easier to start a new business	74.2
The current internet speed and reliability meet connectivity needs	82.9

Governance

Online public access to city finances has reduced corruption	73.6
Online voting has increased participation	69.9
An online platform where residents can propose ideas has improved city life	70.8
Processing Identification Documents online has reduced waiting times	86.1

Medan

SMART CITY RANKING

112

Out of 141

▼

96 out of 118 in 2021

SMART CITY RATING

CC

C in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,435,252	0.711

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.707	0.718	0.709	0.705	-0.004
Life expectancy at birth	71.5	71.7	68.8	67.6	-1.2
Expected years of schooling	12.9	13.6	13.8	13.8	+0.0
Mean years of schooling	8.0	8.2	8.6	8.6	+0.0
GNI per capita (PPP $)	11,256	11,459	11,142	11,466	+325

PRIORITY AREAS

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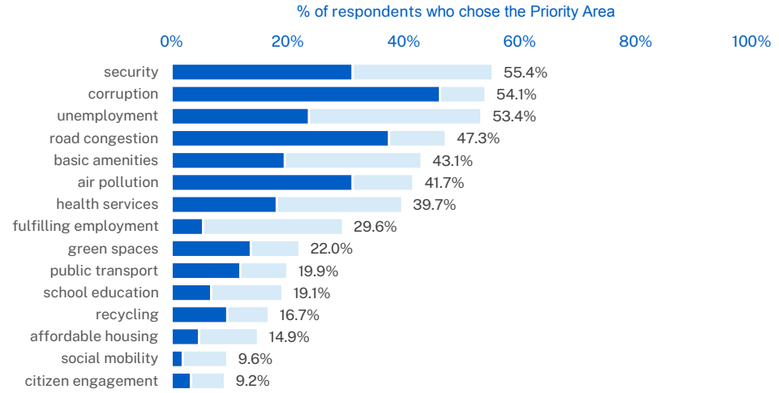

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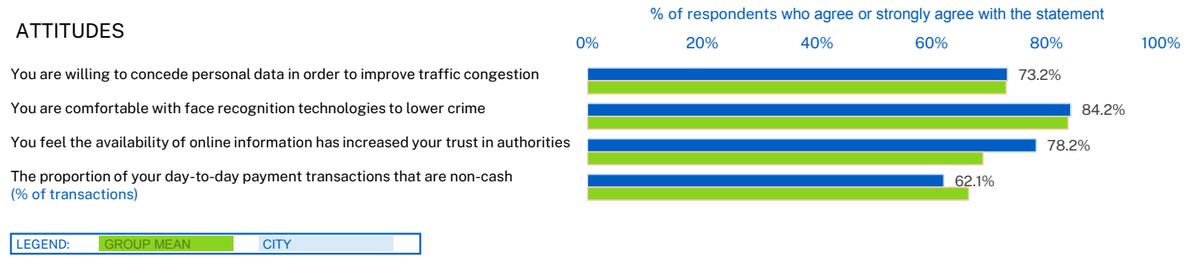

Medellin

SMART CITY RANKING

118

Out of 141

▼

99 out of 118 in 2021

SMART CITY RATING

C

C in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,372,330	0.757

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.761	0.767	0.756	0.752	-0.004
Life expectancy at birth	77.1	77.3	74.8	72.8	-1.9
Expected years of schooling	14.6	14.4	14.4	14.4	+0.0
Mean years of schooling	8.3	8.5	8.9	8.9	+0.0
GNI per capita (PPP $)	12,896	14,257	13,185	14,384	+1,199

PRIORITY AREAS

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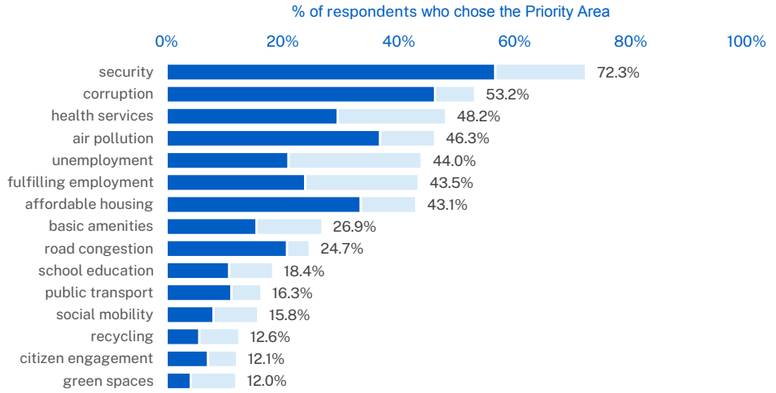
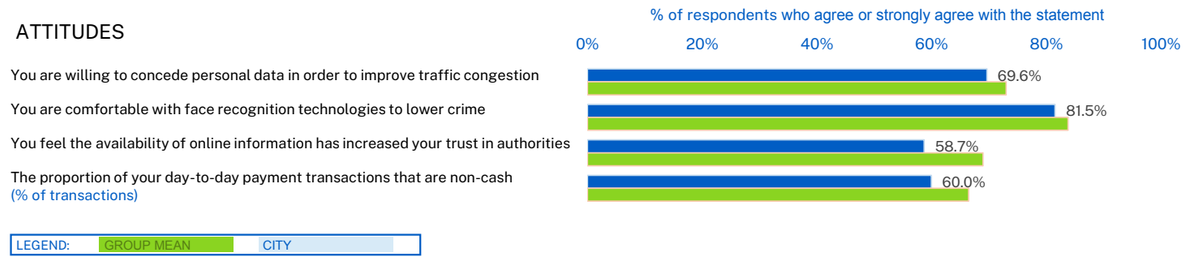


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	49.1
Recycling services are satisfactory	64.6
Public safety is not a problem	30.7
Air pollution is not a problem	27.2
Medical services provision is satisfactory	50.3
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	29.6

Mobility

	Score
Traffic congestion is not a problem	27.0
Public transport is satisfactory	60.7

Activities

	Score
Green spaces are satisfactory	73.1
Cultural activities (shows, bars, and museums) are satisfactory	75.0

Opportunities (Work & School)

	Score
Employment finding services are readily available	57.6
Most children have access to a good school	53.2
Lifelong learning opportunities are provided by local institutions	54.6
Businesses are creating new jobs	48.5
Minorities feel welcome	41.9

Governance

	Score
Information on local government decisions are easily accessible	47.7
Corruption of city officials is not an issue of concern	22.3
Residents contribute to decision making of local government	31.3
Residents provide feedback on local government projects	43.4

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	49.1
A website or App allows residents to easily give away unwanted items	46.8
Free public wifi has improved access to city services	63.7
CCTV cameras has made residents feel safer	56.4
A website or App allows residents to effectively monitor air pollution	57.8
Arranging medical appointments online has improved access	64.1

Mobility

	Score
Car-sharing Apps have reduced congestion	44.8
Apps that direct you to an available parking space have reduced journey time	44.8
Bicycle hiring has reduced congestion	53.9
Online scheduling and ticket sales has made public transport easier to use	64.6
The city provides information on traffic congestion through mobile phones	60.6

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	72.6

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	65.7
IT skills are taught well in schools	57.9
Online services provided by the city has made it easier to start a new business	57.7
The current internet speed and reliability meet connectivity needs	64.5

Governance

	Score
Online public access to city finances has reduced corruption	30.5
Online voting has increased participation	37.5
An online platform where residents can propose ideas has improved city life	44.4
Processing Identification Documents online has reduced waiting times	65.3

Medina

SMART CITY RANKING

85

Out of 141

▼

79 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
154,542	0.871

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.865	0.873	0.870	0.875	+0.005
Life expectancy at birth	77.2	77.3	76.2	76.9	+0.7
Expected years of schooling	15.7	16.0	16.1	16.1	+0.0
Mean years of schooling	10.6	8.3	8.3	8.3	+0.0
GNI per capita (PPP $)	5,072	5,307	5,601	5,745	+143

PRIORITY AREAS

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

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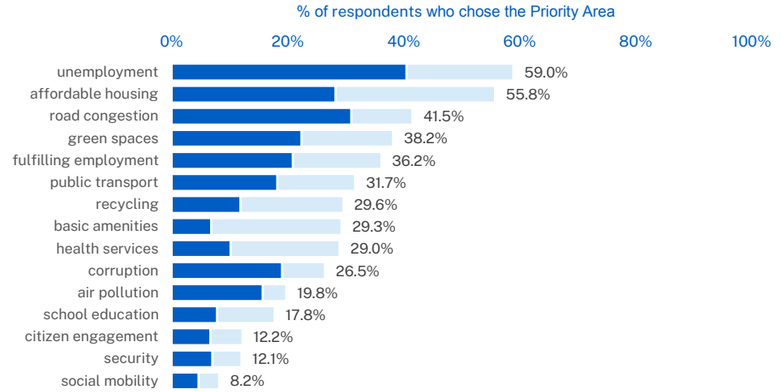

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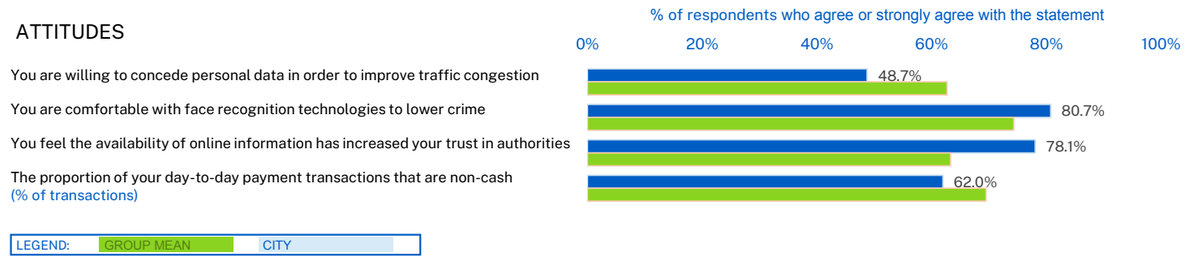


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	72.9
Recycling services are satisfactory	63.8
Public safety is not a problem	46.8
Air pollution is not a problem	29.8
Medical services provision is satisfactory	71.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	51.3

Mobility

Traffic congestion is not a problem	39.0
Public transport is satisfactory	58.6

Activities

Green spaces are satisfactory	56.6
Cultural activities (shows, bars, and museums) are satisfactory	62.3

Opportunities (Work & School)

Employment finding services are readily available	39.1
Most children have access to a good school	70.8
Lifelong learning opportunities are provided by local institutions	60.7
Businesses are creating new jobs	51.5
Minorities feel welcome	63.4

Governance

Information on local government decisions are easily accessible	72.0
Corruption of city officials is not an issue of concern	47.0
Residents contribute to decision making of local government	47.5
Residents provide feedback on local government projects	55.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	63.2
A website or App allows residents to easily give away unwanted items	58.7
Free public wifi has improved access to city services	46.8
CCTV cameras has made residents feel safer	62.5
A website or App allows residents to effectively monitor air pollution	44.8
Arranging medical appointments online has improved access	76.2

Mobility

Car-sharing Apps have reduced congestion	54.0
Apps that direct you to an available parking space have reduced journey time	64.9
Bicycle hiring has reduced congestion	41.8
Online scheduling and ticket sales has made public transport easier to use	68.0
The city provides information on traffic congestion through mobile phones	56.3

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	70.9

Opportunities (Work & School)

Online access to job listings has made it easier to find work	63.5
IT skills are taught well in schools	61.9
Online services provided by the city has made it easier to start a new business	64.9
The current internet speed and reliability meet connectivity needs	68.9

Governance

Online public access to city finances has reduced corruption	56.4
Online voting has increased participation	61.5
An online platform where residents can propose ideas has improved city life	62.4
Processing Identification Documents online has reduced waiting times	77.4

Melbourne

SMART CITY RANKING

31

Out of 141

▲

36 out of 118 in 2021

SMART CITY RATING

A

BB in 2021

FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

GROUP

1

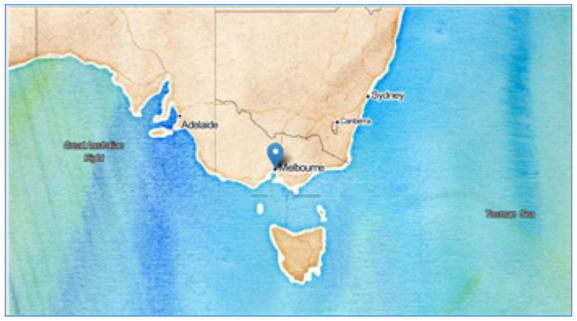
All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
4,196,198	0.948

(UN Data)



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

Country	2018	2019	2020	2021	1 yr change
HDI	0.941	0.941	0.947	0.951	+0.004
Life expectancy at birth	83.4	83.1	84.3	84.5	+0.2
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	12.6	12.1	12.4	12.4	+0.0
GNI per capita (PPP $)	43,821	52,085	49,392	52,293	+2,901

PRIORITY AREAS

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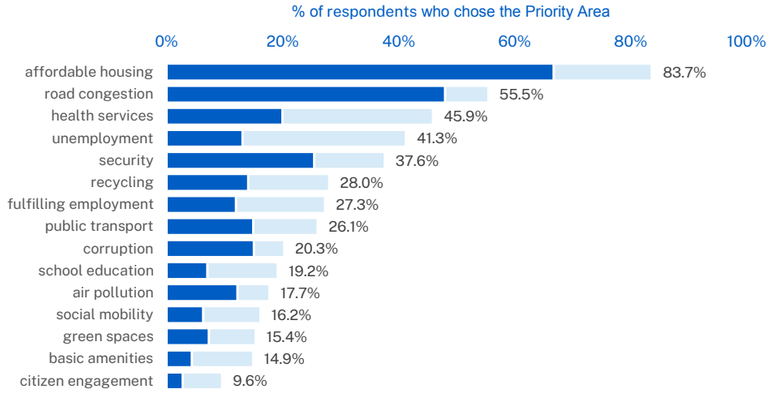

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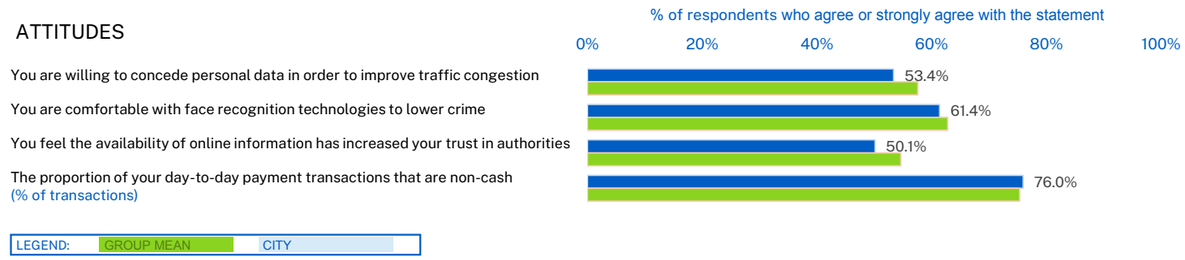


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	65.7
Recycling services are satisfactory	63.2
Public safety is not a problem	43.4
Air pollution is not a problem	47.0
Medical services provision is satisfactory	63.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	27.2

Mobility

Traffic congestion is not a problem	23.1
Public transport is satisfactory	56.2

Activities

Green spaces are satisfactory	70.3
Cultural activities (shows, bars, and museums) are satisfactory	78.5

Opportunities (Work & School)

Employment finding services are readily available	70.5
Most children have access to a good school	71.2
Lifelong learning opportunities are provided by local institutions	68.3
Businesses are creating new jobs	59.3
Minorities feel welcome	61.3

Governance

Information on local government decisions are easily accessible	58.1
Corruption of city officials is not an issue of concern	41.7
Residents contribute to decision making of local government	47.0
Residents provide feedback on local government projects	59.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.6
A website or App allows residents to easily give away unwanted items	59.1
Free public wifi has improved access to city services	63.1
CCTV cameras has made residents feel safer	55.1
A website or App allows residents to effectively monitor air pollution	40.5
Arranging medical appointments online has improved access	71.5

Mobility

Car-sharing Apps have reduced congestion	39.2
Apps that direct you to an available parking space have reduced journey time	40.7
Bicycle hiring has reduced congestion	42.7
Online scheduling and ticket sales has made public transport easier to use	60.0
The city provides information on traffic congestion through mobile phones	56.0

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	78.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	75.8
IT skills are taught well in schools	57.1
Online services provided by the city has made it easier to start a new business	52.0
The current internet speed and reliability meet connectivity needs	63.2

Governance

Online public access to city finances has reduced corruption	36.7
Online voting has increased participation	49.3
An online platform where residents can propose ideas has improved city life	46.4
Processing Identification Documents online has reduced waiting times	61.5

Mexico City

SMART CITY RANKING

121

Out of 141

▼

110 out of 118 in 2021

SMART CITY RATING

C

C in 2021

FACTOR RATINGS

C

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

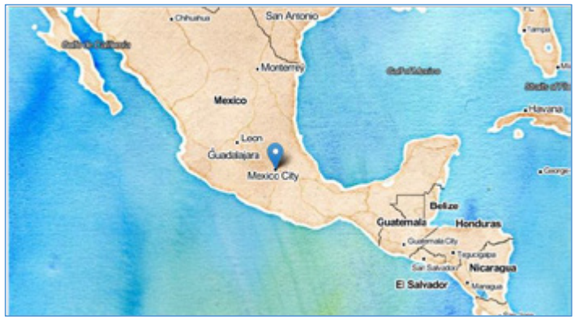
All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
22,085,139	0.815

(UN World Urbanisation Prospects 2022 estimate)



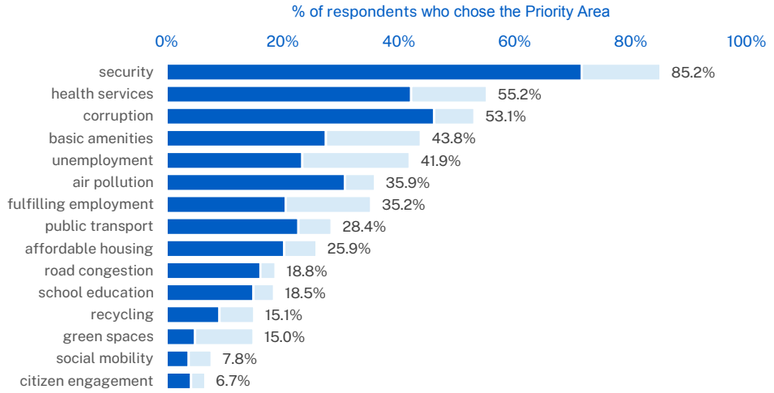
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.767	0.779	0.756	0.758	+0.002
Life expectancy at birth	75.0	75.1	70.1	70.2	+0.1
Expected years of schooling	14.3	14.8	14.9	14.9	+0.0
Mean years of schooling	8.6	8.8	9.2	9.2	+0.0
GNI per capita (PPP $)	17,628	19,160	17,235	17,896	+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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



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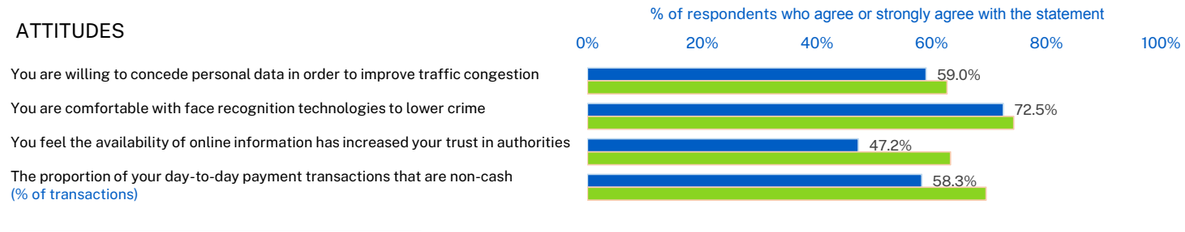

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

Basic sanitation meets the needs of the poorest areas	38.8
Recycling services are satisfactory	41.9
Public safety is not a problem	20.6
Air pollution is not a problem	18.5
Medical services provision is satisfactory	35.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	26.1

Mobility

Traffic congestion is not a problem	20.1
Public transport is satisfactory	28.9

Activities

Green spaces are satisfactory	57.1
Cultural activities (shows, bars, and museums) are satisfactory	70.4

Opportunities (Work & School)

Employment finding services are readily available	46.8
Most children have access to a good school	35.5
Lifelong learning opportunities are provided by local institutions	35.9
Businesses are creating new jobs	46.7
Minorities feel welcome	36.6

Governance

Information on local government decisions are easily accessible	49.3
Corruption of city officials is not an issue of concern	16.2
Residents contribute to decision making of local government	36.3
Residents provide feedback on local government projects	37.6

TECHNOLOGIES

Score

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	38.8
A website or App allows residents to easily give away unwanted items	44.0
Free public wifi has improved access to city services	59.6
CCTV cameras has made residents feel safer	51.3
A website or App allows residents to effectively monitor air pollution	48.7
Arranging medical appointments online has improved access	56.9

Mobility

Car-sharing Apps have reduced congestion	41.8
Apps that direct you to an available parking space have reduced journey time	42.8
Bicycle hiring has reduced congestion	52.2
Online scheduling and ticket sales has made public transport easier to use	51.9
The city provides information on traffic congestion through mobile phones	60.5

Activities

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

Opportunities (Work & School)

Online access to job listings has made it easier to find work	57.3
IT skills are taught well in schools	52.2
Online services provided by the city has made it easier to start a new business	54.3
The current internet speed and reliability meet connectivity needs	61.7

Governance

Online public access to city finances has reduced corruption	35.0
Online voting has increased participation	41.1
An online platform where residents can propose ideas has improved city life	44.1
Processing Identification Documents online has reduced waiting times	68.0

Milan

SMART CITY RANKING

82

Out of 141

▼

69 out of 118 in 2021

SMART CITY RATING

BB

CC in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
9,981,554	0.915

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.883	0.892	0.889	0.895	+0.006
Life expectancy at birth	83.4	83.5	82.4	82.9	+0.4
Expected years of schooling	16.2	16.1	16.2	16.2	+0.0
Mean years of schooling	10.2	10.4	10.7	10.7	+0.0
GNI per capita (PPP $)	36,141	42,776	39,901	42,840	+2,939

PRIORITY AREAS

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

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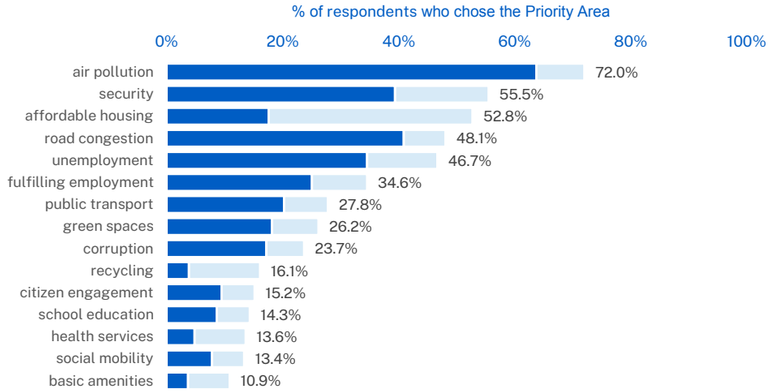

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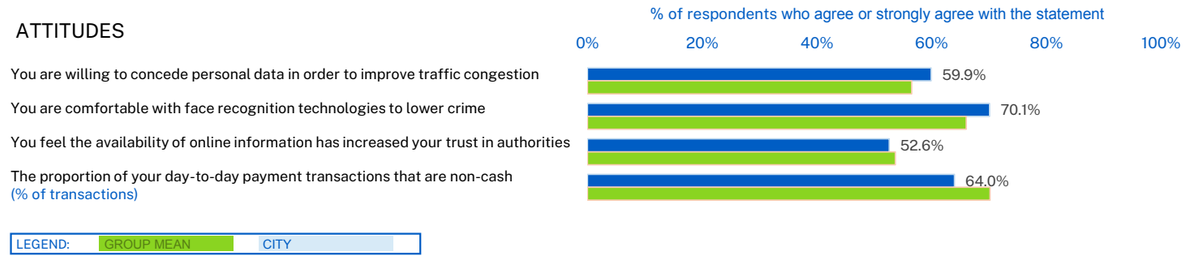

Montreal

SMART CITY RANKING

69

Out of 141

▼

55 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BBB

STRUCTURES

B

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,704,690	0.923

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.933	0.937	0.931	0.936	+0.005
Life expectancy at birth	82.1	82.4	82.1	82.7	+0.6
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	13.8	8.7	8.8	8.8	+0.0
GNI per capita (PPP $)	18,371	18,486	18,754	19,974	+1,220

PRIORITY AREAS

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

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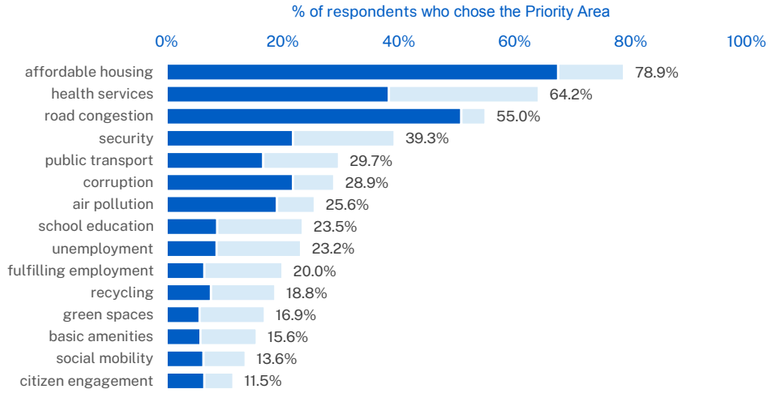

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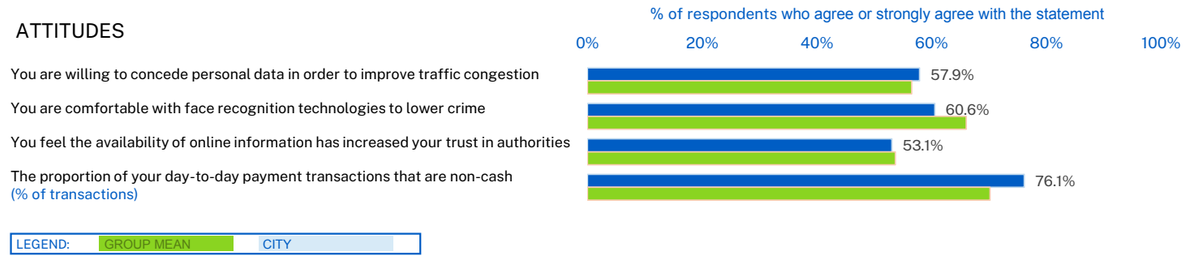

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	63.8
Recycling services are satisfactory	69.3
Public safety is not a problem	56.4
Air pollution is not a problem	42.5
Medical services provision is satisfactory	47.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	24.6

Mobility

	Score
Traffic congestion is not a problem	18.2
Public transport is satisfactory	59.2

Activities

	Score
Green spaces are satisfactory	72.3
Cultural activities (shows, bars, and museums) are satisfactory	80.6

Opportunities (Work & School)

	Score
Employment finding services are readily available	70.7
Most children have access to a good school	69.5
Lifelong learning opportunities are provided by local institutions	70.5
Businesses are creating new jobs	67.1
Minorities feel welcome	61.8

Governance

	Score
Information on local government decisions are easily accessible	60.3
Corruption of city officials is not an issue of concern	40.8
Residents contribute to decision making of local government	44.5
Residents provide feedback on local government projects	54.1

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	46.4
A website or App allows residents to easily give away unwanted items	55.6
Free public wifi has improved access to city services	50.8
CCTV cameras has made residents feel safer	44.9
A website or App allows residents to effectively monitor air pollution	38.7
Arranging medical appointments online has improved access	55.6

Mobility

	Score
Car-sharing Apps have reduced congestion	37.6
Apps that direct you to an available parking space have reduced journey time	38.9
Bicycle hiring has reduced congestion	47.9
Online scheduling and ticket sales has made public transport easier to use	54.3
The city provides information on traffic congestion through mobile phones	51.2

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	75.6

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	70.2
IT skills are taught well in schools	50.7
Online services provided by the city has made it easier to start a new business	46.9
The current internet speed and reliability meet connectivity needs	72.4

Governance

	Score
Online public access to city finances has reduced corruption	35.5
Online voting has increased participation	40.8
An online platform where residents can propose ideas has improved city life	45.2
Processing Identification Documents online has reduced waiting times	50.2

Mumbai

SMART CITY RANKING

109

Out of 141

▼

95 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
20,961,473	0.688

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.647	0.645	0.642	0.633	-0.009
Life expectancy at birth	69.4	69.7	70.2	67.2	-2.9
Expected years of schooling	12.3	12.2	11.9	11.9	+0.0
Mean years of schooling	6.5	6.5	6.7	6.7	+0.0
GNI per capita (PPP $)	6,829	6,681	6,107	6,590	+482

PRIORITY AREAS

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

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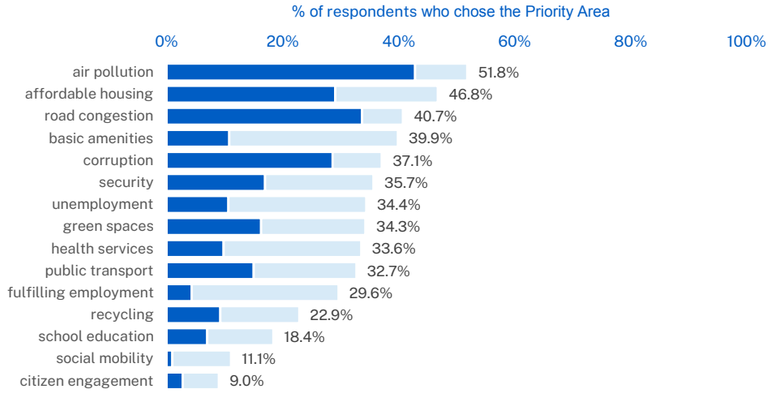

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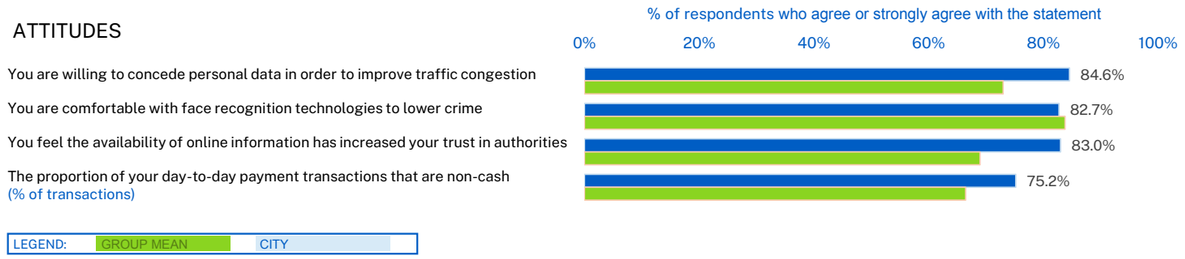

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	67.6
Recycling services are satisfactory	66.4
Public safety is not a problem	48.6
Air pollution is not a problem	25.6
Medical services provision is satisfactory	72.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	45.5

Mobility

Traffic congestion is not a problem	25.0
Public transport is satisfactory	65.8

Activities

Green spaces are satisfactory	61.5
Cultural activities (shows, bars, and museums) are satisfactory	74.5

Opportunities (Work & School)

Employment finding services are readily available	74.0
Most children have access to a good school	70.1
Lifelong learning opportunities are provided by local institutions	68.8
Businesses are creating new jobs	77.4
Minorities feel welcome	73.8

Governance

Information on local government decisions are easily accessible	75.8
Corruption of city officials is not an issue of concern	39.9
Residents contribute to decision making of local government	62.8
Residents provide feedback on local government projects	66.8

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	67.9
A website or App allows residents to easily give away unwanted items	61.2
Free public wifi has improved access to city services	69.1
CCTV cameras has made residents feel safer	81.2
A website or App allows residents to effectively monitor air pollution	62.1
Arranging medical appointments online has improved access	81.2

Mobility

Car-sharing Apps have reduced congestion	68.0
Apps that direct you to an available parking space have reduced journey time	63.1
Bicycle hiring has reduced congestion	61.8
Online scheduling and ticket sales has made public transport easier to use	81.1
The city provides information on traffic congestion through mobile phones	76.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	82.5

Opportunities (Work & School)

Online access to job listings has made it easier to find work	81.9
IT skills are taught well in schools	72.7
Online services provided by the city has made it easier to start a new business	80.3
The current internet speed and reliability meet connectivity needs	78.3

Governance

Online public access to city finances has reduced corruption	65.1
Online voting has increased participation	65.7
An online platform where residents can propose ideas has improved city life	72.8
Processing Identification Documents online has reduced waiting times	78.9

Munich

SMART CITY RANKING

20

Out of 141

▼

15 out of 118 in 2021

SMART CITY RATING

AA

AA in 2021

FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
13,140,183	0.950

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP $)	46,946	55,314	53,078	54,534	+1,457

PRIORITY AREAS

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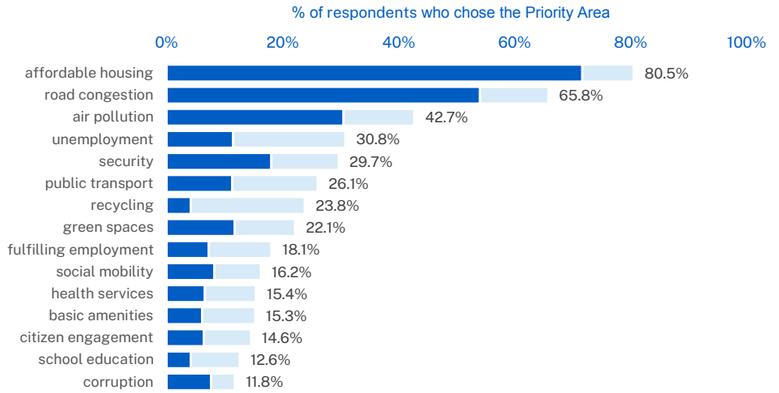

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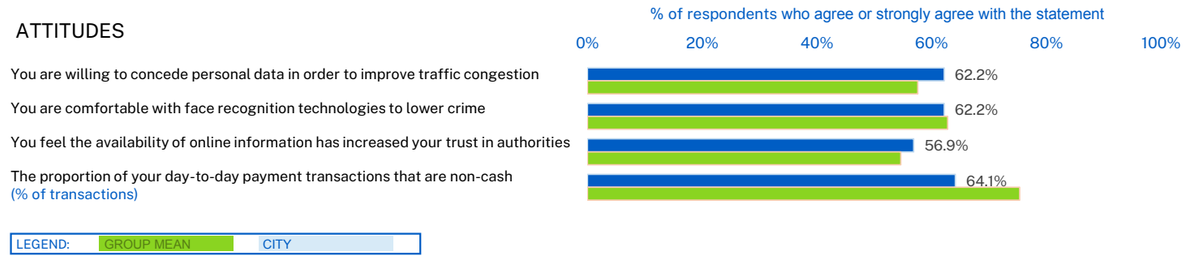

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	73.2
Recycling services are satisfactory	78.7
Public safety is not a problem	63.2
Air pollution is not a problem	42.8
Medical services provision is satisfactory	76.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	19.9

Mobility

Traffic congestion is not a problem	28.3
Public transport is satisfactory	66.9

Activities

Green spaces are satisfactory	71.9
Cultural activities (shows, bars, and museums) are satisfactory	84.3

Opportunities (Work & School)

Employment finding services are readily available	64.4
Most children have access to a good school	71.9
Lifelong learning opportunities are provided by local institutions	63.6
Businesses are creating new jobs	68.7
Minorities feel welcome	57.8

Governance

Information on local government decisions are easily accessible	62.6
Corruption of city officials is not an issue of concern	62.2
Residents contribute to decision making of local government	54.6
Residents provide feedback on local government projects	57.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	47.8
A website or App allows residents to easily give away unwanted items	57.0
Free public wifi has improved access to city services	60.8
CCTV cameras has made residents feel safer	51.3
A website or App allows residents to effectively monitor air pollution	36.1
Arranging medical appointments online has improved access	56.3

Mobility

Car-sharing Apps have reduced congestion	41.7
Apps that direct you to an available parking space have reduced journey time	46.5
Bicycle hiring has reduced congestion	47.8
Online scheduling and ticket sales has made public transport easier to use	71.5
The city provides information on traffic congestion through mobile phones	53.9

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	79.4

Opportunities (Work & School)

Online access to job listings has made it easier to find work	72.7
IT skills are taught well in schools	49.3
Online services provided by the city has made it easier to start a new business	46.8
The current internet speed and reliability meet connectivity needs	63.0

Governance

Online public access to city finances has reduced corruption	41.4
Online voting has increased participation	53.7
An online platform where residents can propose ideas has improved city life	48.6
Processing Identification Documents online has reduced waiting times	54.5

Muscat

SMART CITY RANKING

96

Out of 141

not out of 118 in 2021

SMART CITY RATING

B

not in 2021

FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
162,262	0.816

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.834	0.839	0.827	0.816	-0.011
Life expectancy at birth	78.0	78.0	74.8	72.5	-2.2
Expected years of schooling	14.1	14.3	14.6	14.6	+0.0
Mean years of schooling	10.8	11.2	11.7	11.7	+0.0
GNI per capita (PPP $)	30,632	29,071	27,277	27,054	-223

PRIORITY AREAS

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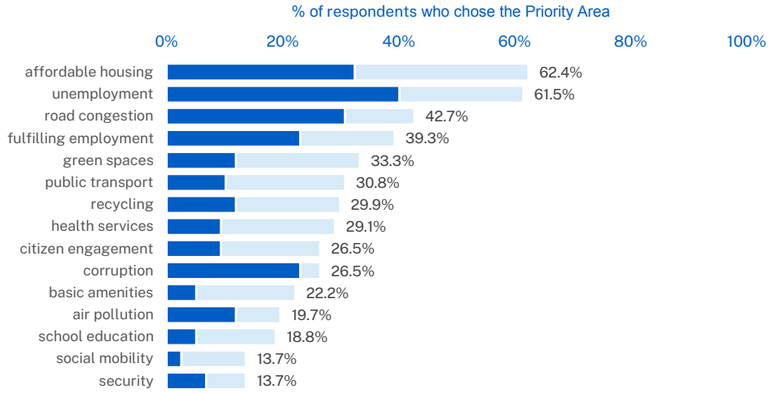

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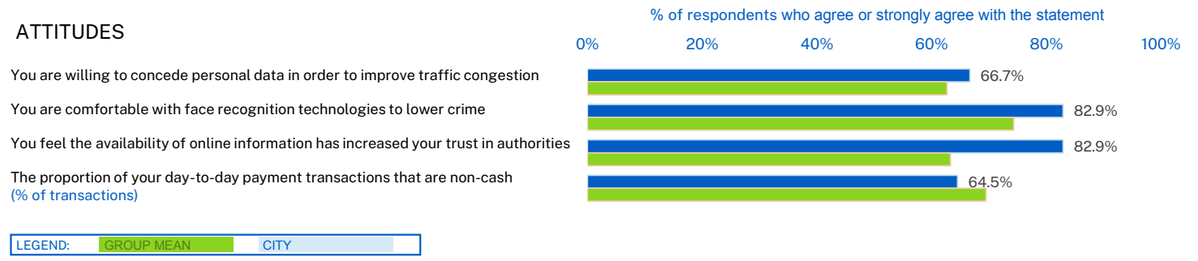

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	75.6
Recycling services are satisfactory	68.1
Public safety is not a problem	70.2
Air pollution is not a problem	61.4
Medical services provision is satisfactory	78.3
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	53.1

Mobility

Traffic congestion is not a problem	52.6
Public transport is satisfactory	68.7

Activities

Green spaces are satisfactory	72.9
Cultural activities (shows, bars, and museums) are satisfactory	68.8

Opportunities (Work & School)

Employment finding services are readily available	44.6
Most children have access to a good school	78.1
Lifelong learning opportunities are provided by local institutions	63.1
Businesses are creating new jobs	59.5
Minorities feel welcome	70.5

Governance

Information on local government decisions are easily accessible	73.5
Corruption of city officials is not an issue of concern	50.1
Residents contribute to decision making of local government	50.0
Residents provide feedback on local government projects	55.6

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	69.9
A website or App allows residents to easily give away unwanted items	61.5
Free public wifi has improved access to city services	57.4
CCTV cameras has made residents feel safer	73.1
A website or App allows residents to effectively monitor air pollution	43.2
Arranging medical appointments online has improved access	69.8

Mobility

Car-sharing Apps have reduced congestion	53.8
Apps that direct you to an available parking space have reduced journey time	55.7
Bicycle hiring has reduced congestion	40.0
Online scheduling and ticket sales has made public transport easier to use	72.5
The city provides information on traffic congestion through mobile phones	60.8

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	71.8

Opportunities (Work & School)

Online access to job listings has made it easier to find work	69.8
IT skills are taught well in schools	63.0
Online services provided by the city has made it easier to start a new business	64.0
The current internet speed and reliability meet connectivity needs	75.2

Governance

Online public access to city finances has reduced corruption	57.7
Online voting has increased participation	59.7
An online platform where residents can propose ideas has improved city life	56.1
Processing Identification Documents online has reduced waiting times	77.2

Nairobi

SMART CITY RANKING

131

Out of 141

115 out of 118 in 2021

SMART CITY RATING

C

D in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
5,118,844	0.636

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.579	0.601	0.578	0.575	-0.003
Life expectancy at birth	66.3	66.7	62.7	61.4	-1.3
Expected years of schooling	11.1	11.3	10.7	10.7	+0.0
Mean years of schooling	6.6	6.6	6.7	6.7	+0.0
GNI per capita (PPP $)	3,052	4,244	4,267	4,474	+207

PRIORITY AREAS

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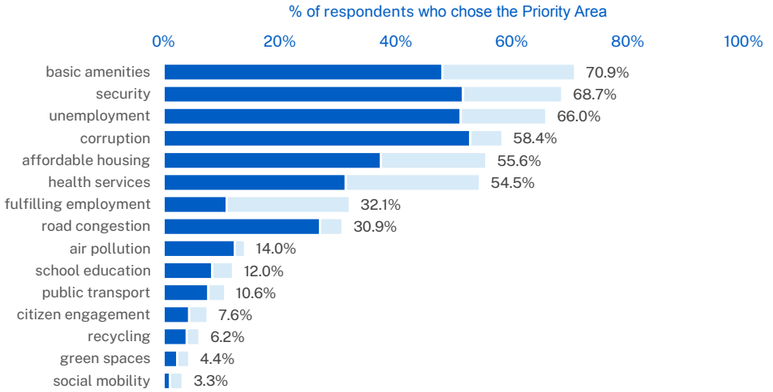

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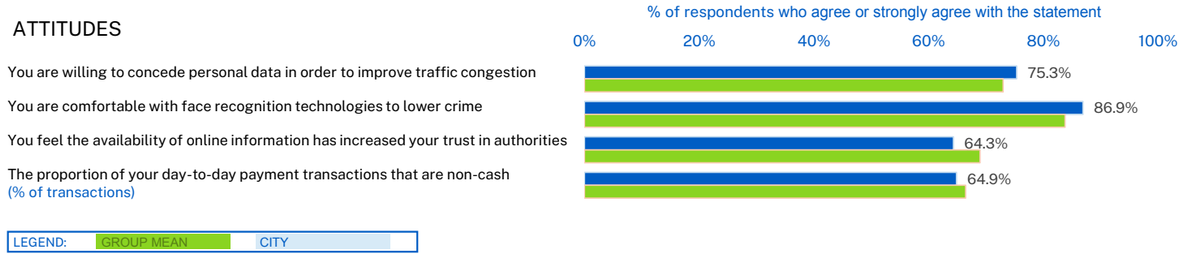

Nanjing

SMART CITY RANKING

58

Out of 141

▼

57 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
9,429,381	0.810

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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

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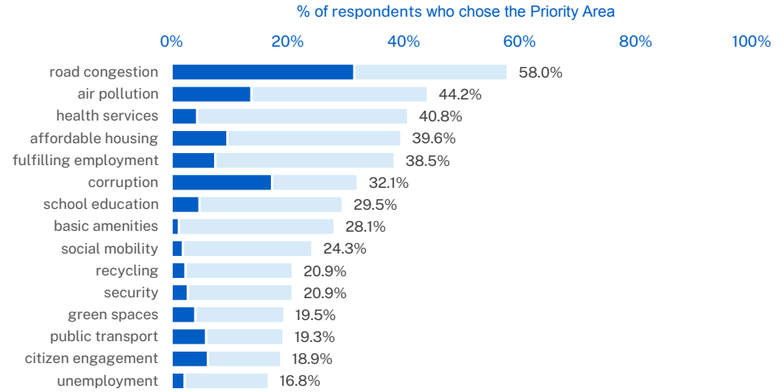

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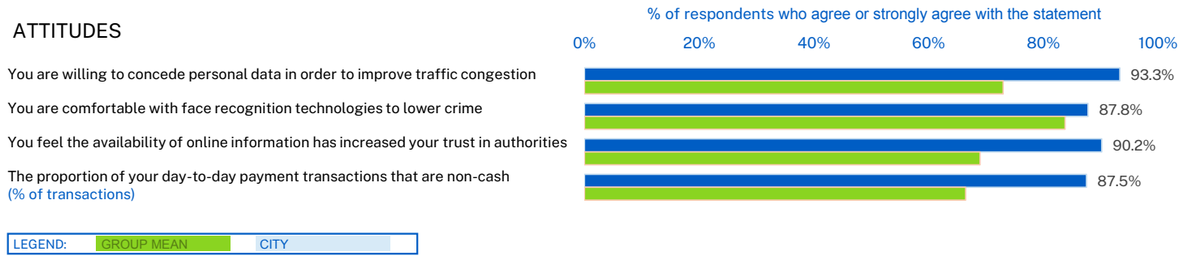

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	87.0
Recycling services are satisfactory	81.5
Public safety is not a problem	82.3
Air pollution is not a problem	67.4
Medical services provision is satisfactory	83.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	71.7

Mobility

Traffic congestion is not a problem	54.0
Public transport is satisfactory	77.7

Activities

Green spaces are satisfactory	85.0
Cultural activities (shows, bars, and museums) are satisfactory	83.3

Opportunities (Work & School)

Employment finding services are readily available	83.0
Most children have access to a good school	80.0
Lifelong learning opportunities are provided by local institutions	76.5
Businesses are creating new jobs	79.2
Minorities feel welcome	81.9

Governance

Information on local government decisions are easily accessible	76.8
Corruption of city officials is not an issue of concern	60.9
Residents contribute to decision making of local government	63.4
Residents provide feedback on local government projects	74.7

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	83.9
A website or App allows residents to easily give away unwanted items	77.3
Free public wifi has improved access to city services	80.8
CCTV cameras has made residents feel safer	82.8
A website or App allows residents to effectively monitor air pollution	77.9
Arranging medical appointments online has improved access	87.5

Mobility

Car-sharing Apps have reduced congestion	77.1
Apps that direct you to an available parking space have reduced journey time	81.6
Bicycle hiring has reduced congestion	83.8
Online scheduling and ticket sales has made public transport easier to use	87.9
The city provides information on traffic congestion through mobile phones	87.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	89.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	83.7
IT skills are taught well in schools	83.2
Online services provided by the city has made it easier to start a new business	78.7
The current internet speed and reliability meet connectivity needs	89.6

Governance

Online public access to city finances has reduced corruption	73.4
Online voting has increased participation	71.8
An online platform where residents can propose ideas has improved city life	81.1
Processing Identification Documents online has reduced waiting times	82.4

New York

SMART CITY RANKING

21

Out of 141

▼

19 out of 118 in 2021

SMART CITY RATING

BBB

AA in 2021

FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
8,804,190	0.938

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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

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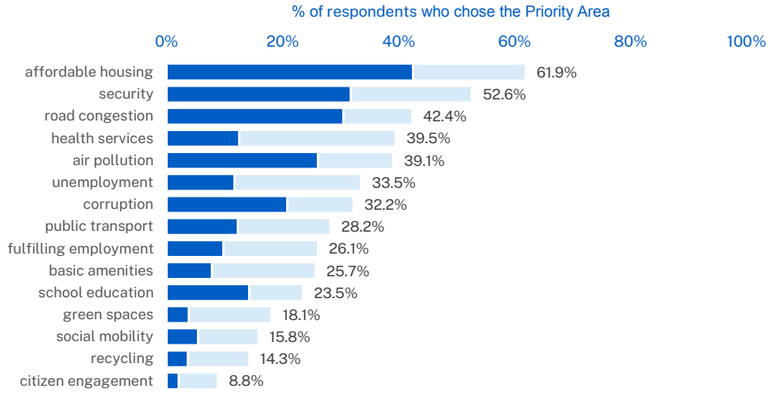

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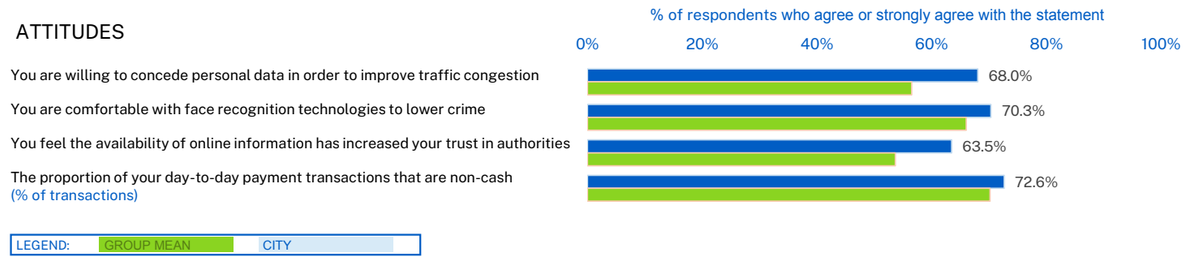

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	62.8
Recycling services are satisfactory	69.8
Public safety is not a problem	42.3
Air pollution is not a problem	38.8
Medical services provision is satisfactory	68.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	43.4

Mobility

Traffic congestion is not a problem	35.0
Public transport is satisfactory	56.4

Activities

Green spaces are satisfactory	69.6
Cultural activities (shows, bars, and museums) are satisfactory	77.5

Opportunities (Work & School)

Employment finding services are readily available	69.5
Most children have access to a good school	61.6
Lifelong learning opportunities are provided by local institutions	64.2
Businesses are creating new jobs	65.0
Minorities feel welcome	64.0

Governance

Information on local government decisions are easily accessible	67.0
Corruption of city officials is not an issue of concern	42.5
Residents contribute to decision making of local government	56.7
Residents provide feedback on local government projects	63.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	55.8
A website or App allows residents to easily give away unwanted items	61.2
Free public wifi has improved access to city services	69.0
CCTV cameras has made residents feel safer	61.7
A website or App allows residents to effectively monitor air pollution	53.0
Arranging medical appointments online has improved access	69.8

Mobility

Car-sharing Apps have reduced congestion	55.6
Apps that direct you to an available parking space have reduced journey time	60.6
Bicycle hiring has reduced congestion	59.6
Online scheduling and ticket sales has made public transport easier to use	68.7
The city provides information on traffic congestion through mobile phones	69.6

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	78.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	70.0
IT skills are taught well in schools	59.5
Online services provided by the city has made it easier to start a new business	60.2
The current internet speed and reliability meet connectivity needs	73.8

Governance

Online public access to city finances has reduced corruption	53.4
Online voting has increased participation	64.2
An online platform where residents can propose ideas has improved city life	56.7
Processing Identification Documents online has reduced waiting times	68.7

Newcastle

SMART CITY RANKING

77

Out of 141

▼

61 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

B

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,656,980	0.901

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP $)	39,507	46,071	42,375	45,225	+2,850

PRIORITY AREAS

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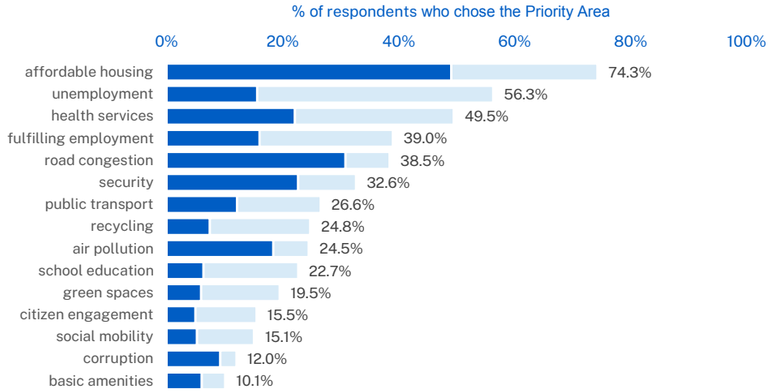

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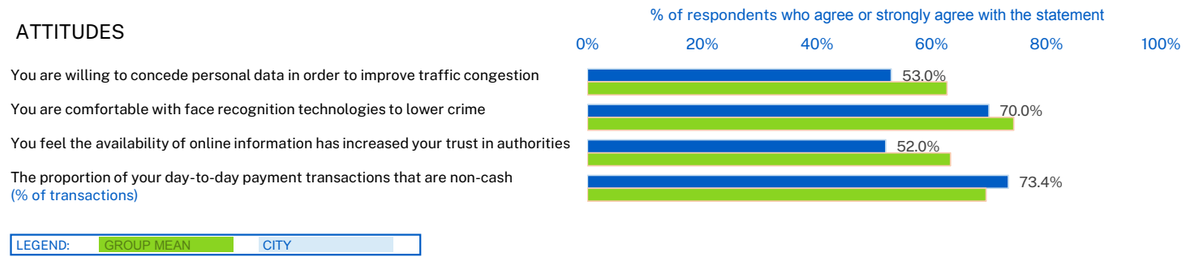

Nicosia

SMART CITY RANKING

117

Out of 141

not out of 118 in 2021

SMART CITY RATING

C

not in 2021

FACTOR RATINGS

CC

STRUCTURES

C

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
896,007	0.896

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.892	0.897	0.894	0.896	+0.002
Life expectancy at birth	81.4	81.4	81.4	81.2	-0.2
Expected years of schooling	15.4	15.7	15.7	15.7	+0.0
Mean years of schooling	12.3	12.4	12.4	12.4	+0.0
GNI per capita (PPP $)	38,544	39,568	36,519	38,188	+1,669

PRIORITY AREAS

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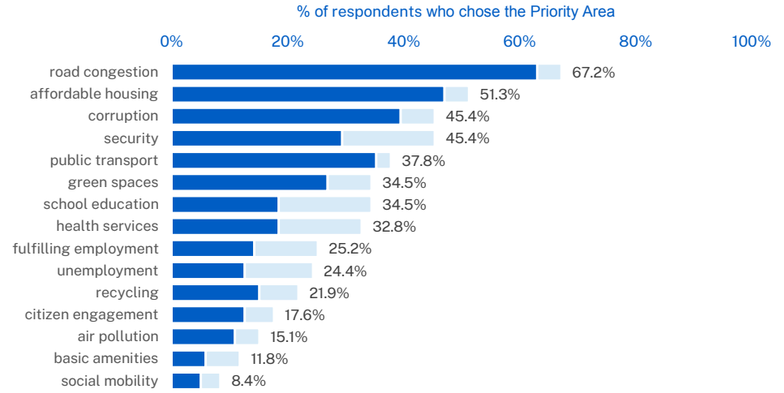

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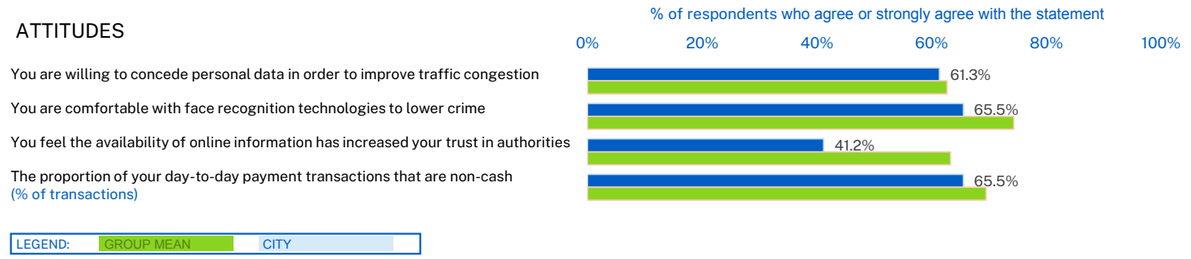

Osaka

SMART CITY RANKING

98

Out of 141

▼

90 out of 118 in 2021

SMART CITY RATING

B

CCC in 2021

FACTOR RATINGS

BB

STRUCTURES

CCC

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,752,412	0.928

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.915	0.919	0.923	0.925	+0.002
Life expectancy at birth	84.5	84.6	84.7	84.8	+0.1
Expected years of schooling	15.2	15.2	15.2	15.2	+0.0
Mean years of schooling	12.8	12.9	13.4	13.4	+0.0
GNI per capita (PPP $)	40,799	42,932	41,487	42,274	+787

PRIORITY AREAS

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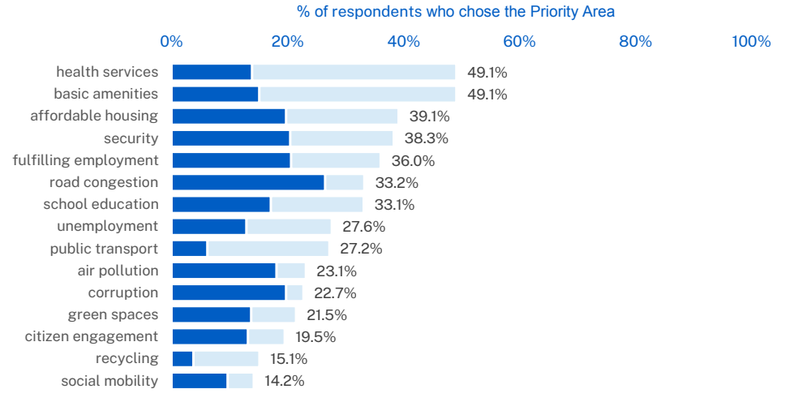

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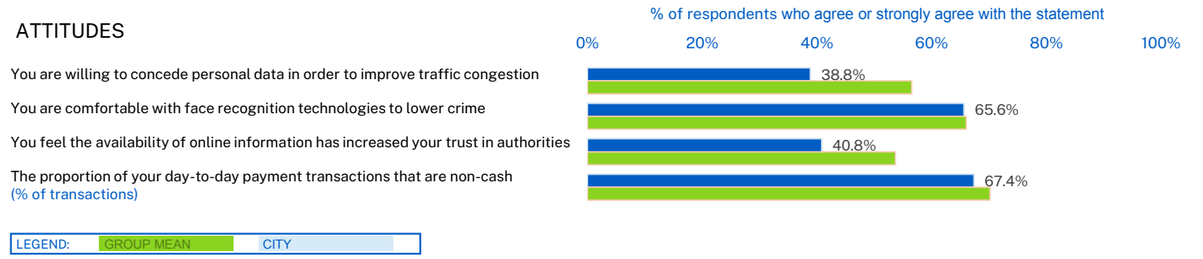

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	65.0
Recycling services are satisfactory	64.8
Public safety is not a problem	47.0
Air pollution is not a problem	39.4
Medical services provision is satisfactory	67.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	50.4

Mobility

Traffic congestion is not a problem	34.9
Public transport is satisfactory	70.9

Activities

Green spaces are satisfactory	47.3
Cultural activities (shows, bars, and museums) are satisfactory	56.3

Opportunities (Work & School)

Employment finding services are readily available	53.9
Most children have access to a good school	50.3
Lifelong learning opportunities are provided by local institutions	54.8
Businesses are creating new jobs	45.1
Minorities feel welcome	35.6

Governance

Information on local government decisions are easily accessible	53.7
Corruption of city officials is not an issue of concern	33.7
Residents contribute to decision making of local government	46.0
Residents provide feedback on local government projects	44.3

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	42.0
A website or App allows residents to easily give away unwanted items	49.7
Free public wifi has improved access to city services	42.4
CCTV cameras has made residents feel safer	51.5
A website or App allows residents to effectively monitor air pollution	35.0
Arranging medical appointments online has improved access	45.8

Mobility

Car-sharing Apps have reduced congestion	25.3
Apps that direct you to an available parking space have reduced journey time	35.0
Bicycle hiring has reduced congestion	27.9
Online scheduling and ticket sales has made public transport easier to use	45.6
The city provides information on traffic congestion through mobile phones	54.7

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	55.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	53.3
IT skills are taught well in schools	31.4
Online services provided by the city has made it easier to start a new business	35.4
The current internet speed and reliability meet connectivity needs	54.5

Governance

Online public access to city finances has reduced corruption	30.1
Online voting has increased participation	30.7
An online platform where residents can propose ideas has improved city life	31.8
Processing Identification Documents online has reduced waiting times	41.2

Oslo

SMART CITY RANKING

2

Out of 141

2 out of 118 in 2021

SMART CITY RATING

AAA

AAA in 2021

FACTOR RATINGS

AAA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
693,494	0.980

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.954	0.957	0.959	0.961	+0.002
Life expectancy at birth	82.3	82.4	83.2	83.2	+0.0
Expected years of schooling	18.1	18.1	18.0	18.0	+0.0
Mean years of schooling	12.6	12.9	13.0	13.0	+0.0
GNI per capita (PPP $)	68,059	66,494	62,573	64,660	+2,087

PRIORITY AREAS

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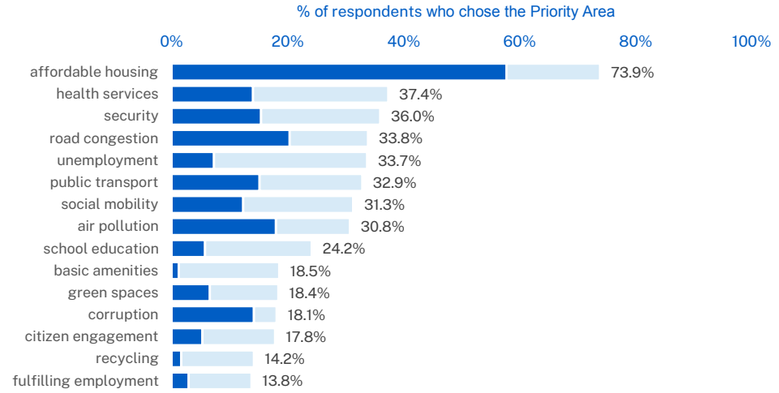

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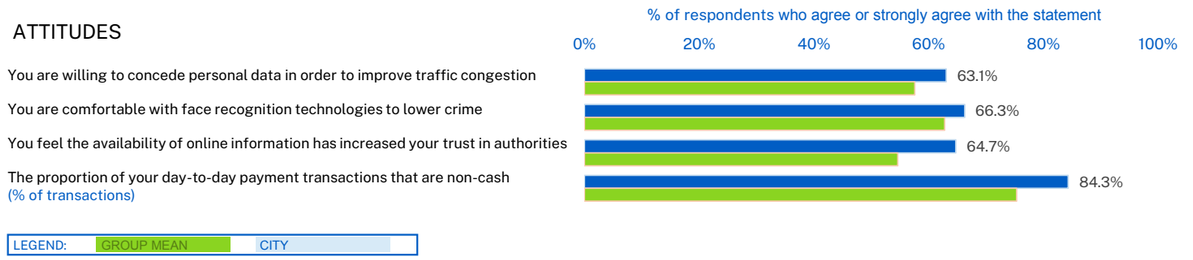

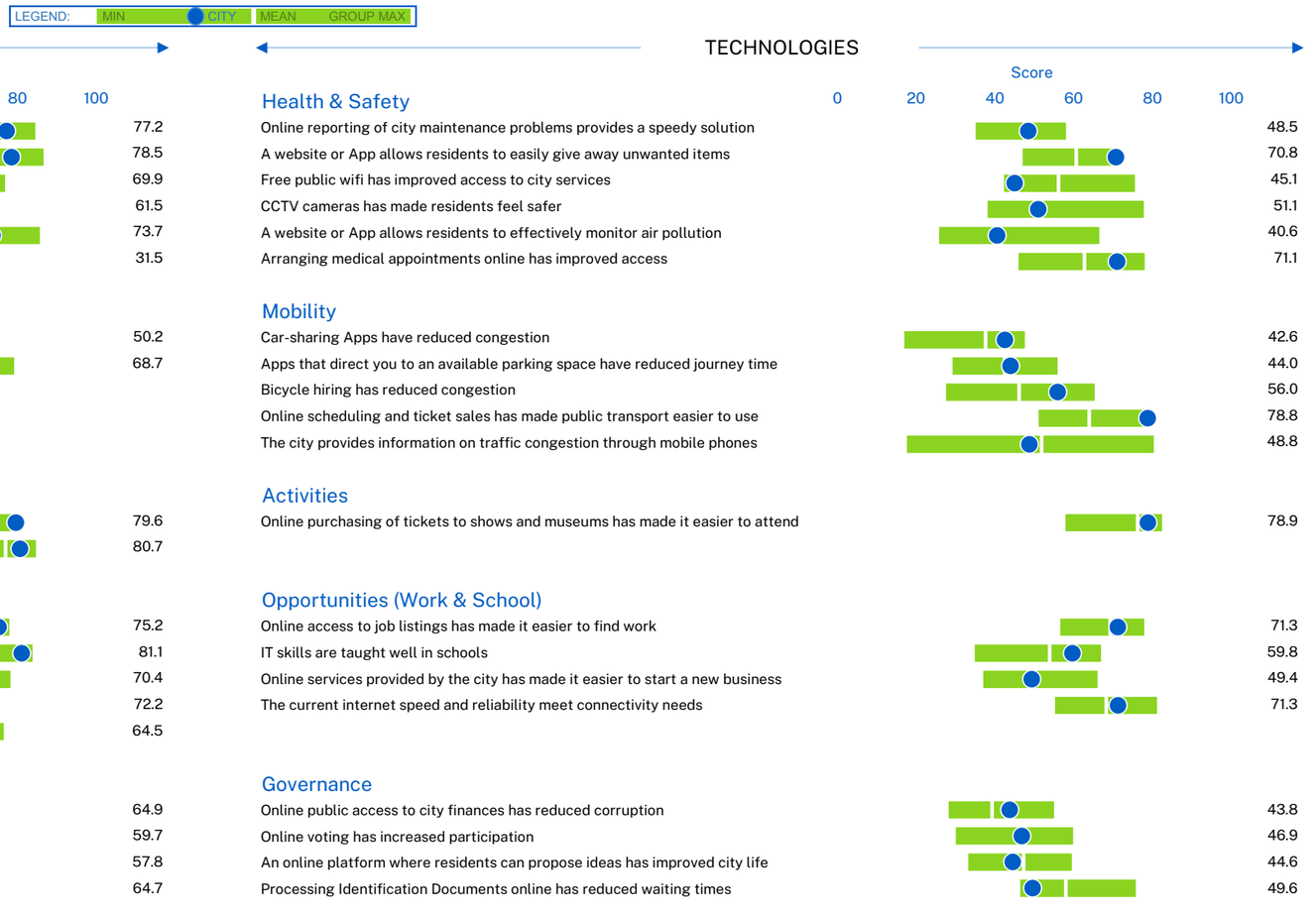

Ottawa

SMART CITY RANKING

40

Out of 141

not out of 118 in 2021

SMART CITY RATING

A

not in 2021

FACTOR RATINGS

AA

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
934,240	0.943

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.933	0.937	0.931	0.936	+0.005
Life expectancy at birth	82.1	82.4	82.1	82.7	+0.6
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	13.8	8.7	8.8	8.8	+0.0
GNI per capita (PPP $)	18,371	18,486	18,754	19,974	+1,220

PRIORITY AREAS

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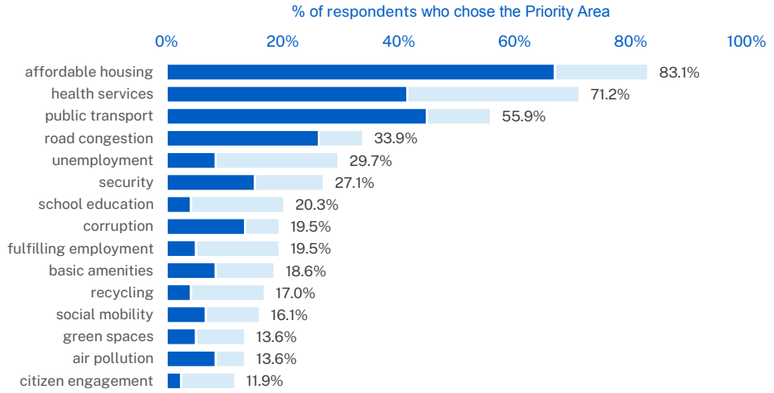

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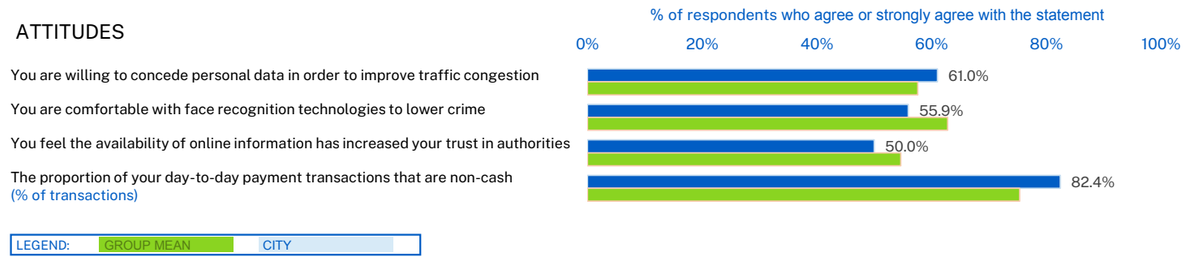

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	69.6
Recycling services are satisfactory	77.8
Public safety is not a problem	59.6
Air pollution is not a problem	59.6
Medical services provision is satisfactory	48.3
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	24.9

Mobility

Traffic congestion is not a problem	37.1
Public transport is satisfactory	37.6

Activities

Green spaces are satisfactory	81.4
Cultural activities (shows, bars, and museums) are satisfactory	77.5

Opportunities (Work & School)

Employment finding services are readily available	66.5
Most children have access to a good school	79.2
Lifelong learning opportunities are provided by local institutions	75.4
Businesses are creating new jobs	69.5
Minorities feel welcome	77.0

Governance

Information on local government decisions are easily accessible	65.8
Corruption of city officials is not an issue of concern	50.6
Residents contribute to decision making of local government	52.1
Residents provide feedback on local government projects	64.4

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	47.9
A website or App allows residents to easily give away unwanted items	60.6
Free public wifi has improved access to city services	47.6
CCTV cameras has made residents feel safer	39.1
A website or App allows residents to effectively monitor air pollution	32.1
Arranging medical appointments online has improved access	49.9

Mobility

Car-sharing Apps have reduced congestion	38.8
Apps that direct you to an available parking space have reduced journey time	29.1
Bicycle hiring has reduced congestion	34.2
Online scheduling and ticket sales has made public transport easier to use	53.2
The city provides information on traffic congestion through mobile phones	41.9

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	74.7

Opportunities (Work & School)

Online access to job listings has made it easier to find work	70.1
IT skills are taught well in schools	49.4
Online services provided by the city has made it easier to start a new business	49.6
The current internet speed and reliability meet connectivity needs	72.2

Governance

Online public access to city finances has reduced corruption	39.0
Online voting has increased participation	41.2
An online platform where residents can propose ideas has improved city life	36.7
Processing Identification Documents online has reduced waiting times	57.6

Paris

SMART CITY RANKING

46

Out of 141

49 out of 118 in 2021

SMART CITY RATING

BBB

BBB in 2021

FACTOR RATINGS

BB

STRUCTURES

A

TECHNOLOGIES

GROUP **1**

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,147,716	0.949

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP $)	40,511	47,173	43,048	45,937	+2,889

PRIORITY AREAS

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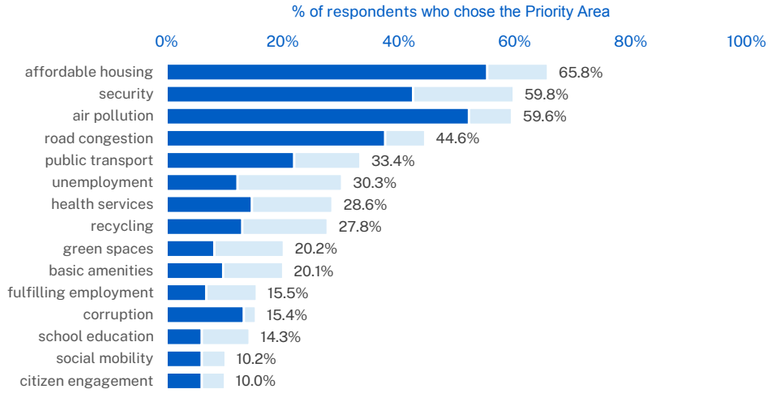

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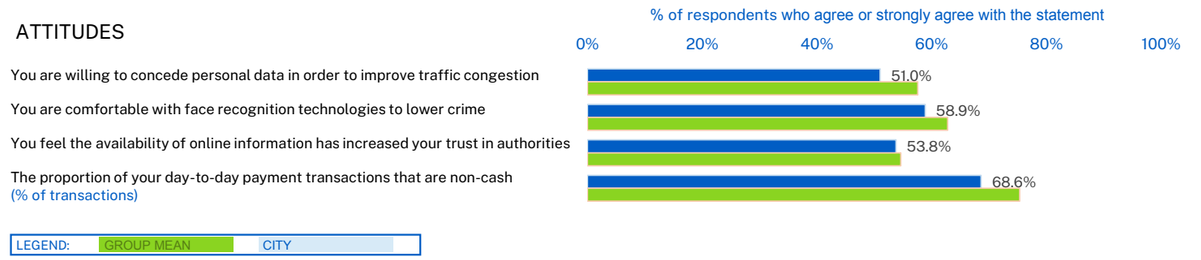

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	49.9
Recycling services are satisfactory	52.9
Public safety is not a problem	37.8
Air pollution is not a problem	18.5
Medical services provision is satisfactory	57.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	24.4

Mobility

Traffic congestion is not a problem	23.0
Public transport is satisfactory	51.1

Activities

Green spaces are satisfactory	66.6
Cultural activities (shows, bars, and museums) are satisfactory	79.1

Opportunities (Work & School)

Employment finding services are readily available	58.7
Most children have access to a good school	59.0
Lifelong learning opportunities are provided by local institutions	57.7
Businesses are creating new jobs	52.3
Minorities feel welcome	44.7

Governance

Information on local government decisions are easily accessible	58.3
Corruption of city officials is not an issue of concern	39.9
Residents contribute to decision making of local government	42.3
Residents provide feedback on local government projects	46.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	47.0
A website or App allows residents to easily give away unwanted items	63.3
Free public wifi has improved access to city services	57.0
CCTV cameras has made residents feel safer	52.6
A website or App allows residents to effectively monitor air pollution	54.0
Arranging medical appointments online has improved access	72.8

Mobility

Car-sharing Apps have reduced congestion	42.9
Apps that direct you to an available parking space have reduced journey time	46.8
Bicycle hiring has reduced congestion	56.3
Online scheduling and ticket sales has made public transport easier to use	62.7
The city provides information on traffic congestion through mobile phones	59.5

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	77.2

Opportunities (Work & School)

Online access to job listings has made it easier to find work	56.4
IT skills are taught well in schools	53.0
Online services provided by the city has made it easier to start a new business	50.0
The current internet speed and reliability meet connectivity needs	67.8

Governance

Online public access to city finances has reduced corruption	40.2
Online voting has increased participation	48.4
An online platform where residents can propose ideas has improved city life	48.5
Processing Identification Documents online has reduced waiting times	57.7

Philadelphia

SMART CITY RANKING

92

Out of 141

85 out of 118 in 2021

SMART CITY RATING

B

B in 2021

FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,603,797	0.923

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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

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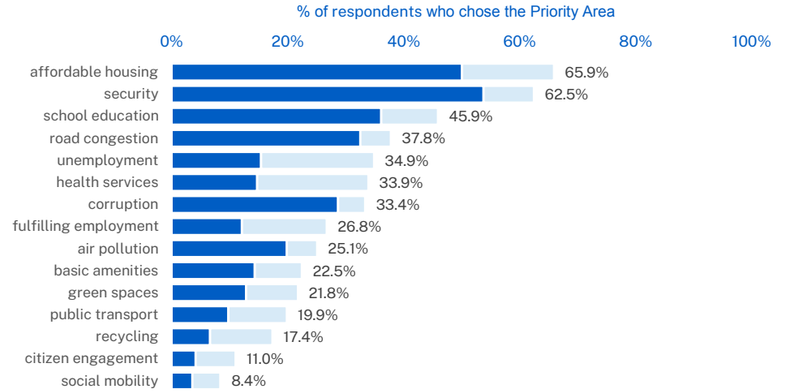

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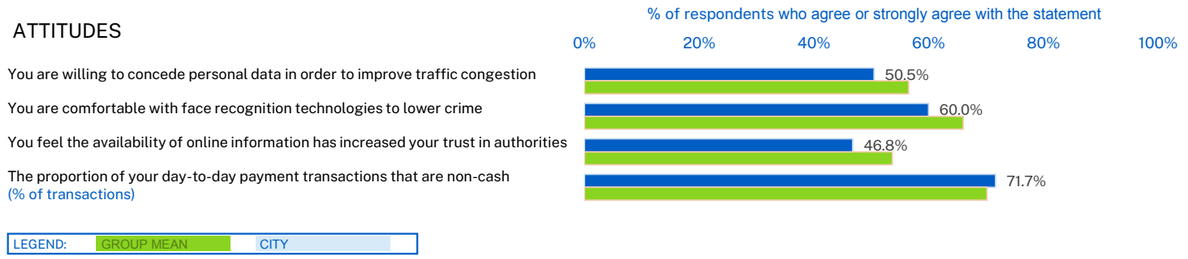

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score (0 20 40 60 80 100)

Health & Safety

Basic sanitation meets the needs of the poorest areas	45.0
Recycling services are satisfactory	54.0
Public safety is not a problem	23.6
Air pollution is not a problem	29.9
Medical services provision is satisfactory	60.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	32.1

Mobility

Traffic congestion is not a problem	22.0
Public transport is satisfactory	49.8

Activities

Green spaces are satisfactory	51.4
Cultural activities (shows, bars, and museums) are satisfactory	74.8

Opportunities (Work & School)

Employment finding services are readily available	58.3
Most children have access to a good school	38.6
Lifelong learning opportunities are provided by local institutions	50.1
Businesses are creating new jobs	54.4
Minorities feel welcome	57.7

Governance

Information on local government decisions are easily accessible	55.0
Corruption of city officials is not an issue of concern	34.2
Residents contribute to decision making of local government	45.2
Residents provide feedback on local government projects	51.3

TECHNOLOGIES

Score (0 20 40 60 80 100)

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	39.7
A website or App allows residents to easily give away unwanted items	56.7
Free public wifi has improved access to city services	47.1
CCTV cameras has made residents feel safer	46.5
A website or App allows residents to effectively monitor air pollution	35.2
Arranging medical appointments online has improved access	60.3

Mobility

Car-sharing Apps have reduced congestion	43.8
Apps that direct you to an available parking space have reduced journey time	46.7
Bicycle hiring has reduced congestion	44.1
Online scheduling and ticket sales has made public transport easier to use	57.6
The city provides information on traffic congestion through mobile phones	54.2

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	73.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	65.4
IT skills are taught well in schools	43.9
Online services provided by the city has made it easier to start a new business	44.3
The current internet speed and reliability meet connectivity needs	61.4

Governance

Online public access to city finances has reduced corruption	36.9
Online voting has increased participation	51.9
An online platform where residents can propose ideas has improved city life	43.5
Processing Identification Documents online has reduced waiting times	52.4

Phoenix

SMART CITY RANKING

93

Out of 141

▼

77 out of 118 in 2021

SMART CITY RATING

CC

CC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,608,139	0.908

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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

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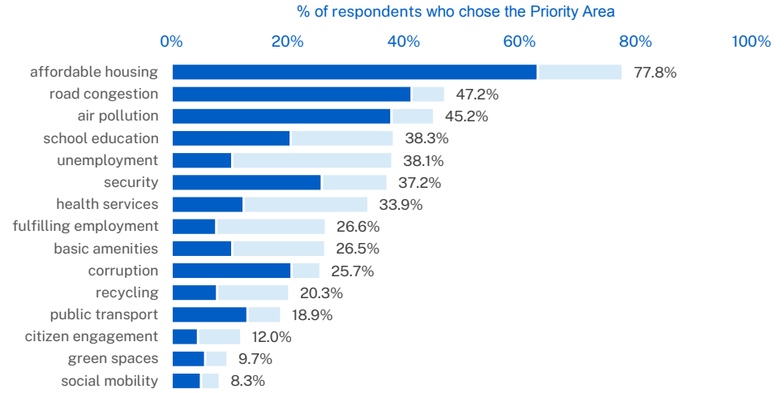

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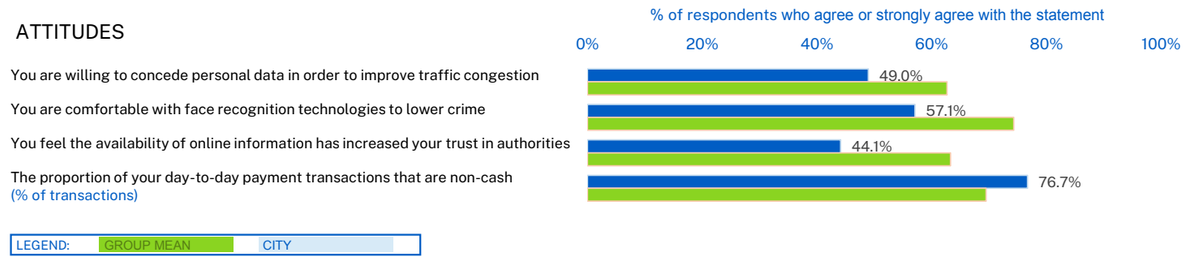

Prague

SMART CITY RANKING

14

Out of 141

▼

10 out of 118 in 2021

SMART CITY RATING

AA

A in 2021

FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,335,084	0.960

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.891	0.900	0.892	0.889	-0.003
Life expectancy at birth	79.2	79.4	78.6	77.7	-0.8
Expected years of schooling	16.8	16.8	16.2	16.2	+0.0
Mean years of schooling	12.7	12.7	12.9	12.9	+0.0
GNI per capita (PPP $)	31,597	38,109	37,551	38,745	+1,194

PRIORITY AREAS

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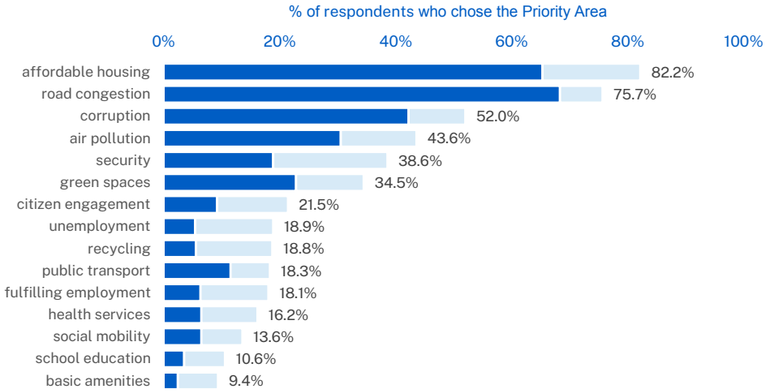

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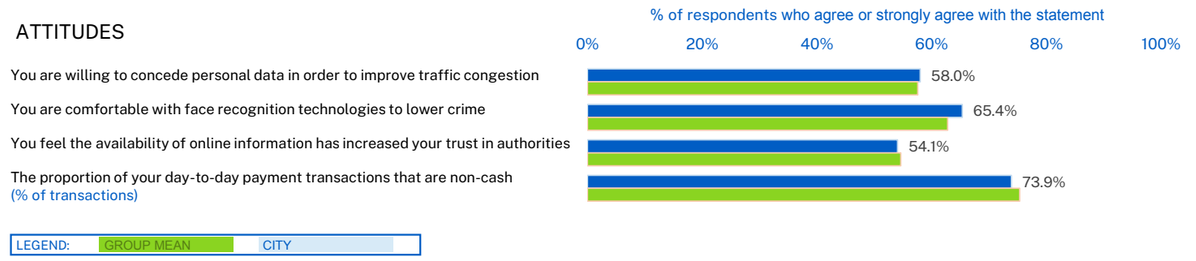

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	68.6
Recycling services are satisfactory	69.2
Public safety is not a problem	61.8
Air pollution is not a problem	43.3
Medical services provision is satisfactory	75.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	27.4

Mobility

Traffic congestion is not a problem	19.5
Public transport is satisfactory	68.5

Activities

Green spaces are satisfactory	49.3
Cultural activities (shows, bars, and museums) are satisfactory	81.8

Opportunities (Work & School)

Employment finding services are readily available	75.1
Most children have access to a good school	74.3
Lifelong learning opportunities are provided by local institutions	70.0
Businesses are creating new jobs	69.8
Minorities feel welcome	58.4

Governance

Information on local government decisions are easily accessible	63.7
Corruption of city officials is not an issue of concern	36.2
Residents contribute to decision making of local government	50.5
Residents provide feedback on local government projects	58.4

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	52.6
A website or App allows residents to easily give away unwanted items	64.1
Free public wifi has improved access to city services	56.4
CCTV cameras has made residents feel safer	62.7
A website or App allows residents to effectively monitor air pollution	46.1
Arranging medical appointments online has improved access	63.5

Mobility

Car-sharing Apps have reduced congestion	35.0
Apps that direct you to an available parking space have reduced journey time	47.1
Bicycle hiring has reduced congestion	42.3
Online scheduling and ticket sales has made public transport easier to use	72.2
The city provides information on traffic congestion through mobile phones	44.6

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	80.2

Opportunities (Work & School)

Online access to job listings has made it easier to find work	74.2
IT skills are taught well in schools	53.3
Online services provided by the city has made it easier to start a new business	49.0
The current internet speed and reliability meet connectivity needs	69.2

Governance

Online public access to city finances has reduced corruption	35.4
Online voting has increased participation	46.7
An online platform where residents can propose ideas has improved city life	52.1
Processing Identification Documents online has reduced waiting times	63.6

Rabat

SMART CITY RANKING

126

Out of 141

109 out of 118 in 2021

SMART CITY RATING

C

C in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
193,193	0.702

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.676	0.686	0.679	0.683	+0.004
Life expectancy at birth	76.5	76.7	73.9	74.0	+0.1
Expected years of schooling	13.1	13.7	14.2	14.2	+0.0
Mean years of schooling	5.5	5.6	5.9	5.9	+0.0
GNI per capita (PPP $)	7,480	7,368	6,882	7,303	+421

PRIORITY AREAS

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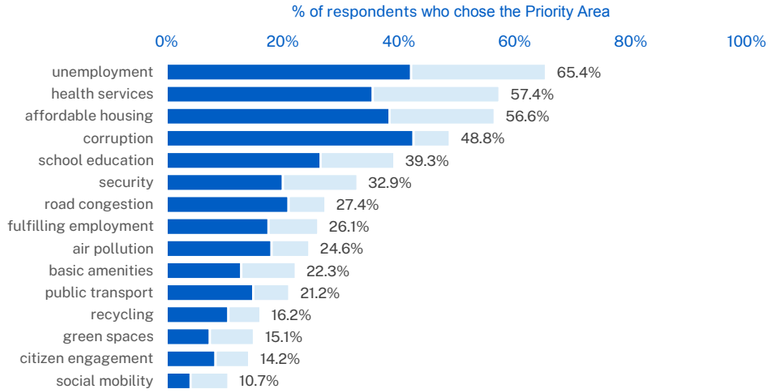

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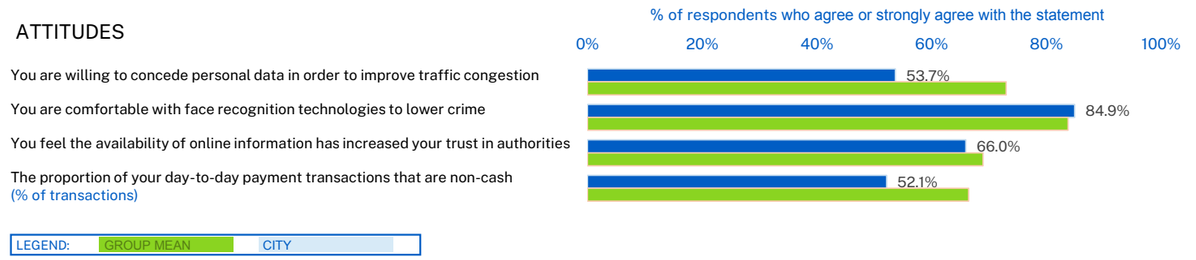

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	45.8
Recycling services are satisfactory	44.8
Public safety is not a problem	42.7
Air pollution is not a problem	34.9
Medical services provision is satisfactory	44.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	38.5

Mobility

Traffic congestion is not a problem	29.1
Public transport is satisfactory	53.1

Activities

Green spaces are satisfactory	70.9
Cultural activities (shows, bars, and museums) are satisfactory	69.5

Opportunities (Work & School)

Employment finding services are readily available	38.9
Most children have access to a good school	44.3
Lifelong learning opportunities are provided by local institutions	46.3
Businesses are creating new jobs	42.0
Minorities feel welcome	60.9

Governance

Information on local government decisions are easily accessible	52.2
Corruption of city officials is not an issue of concern	24.0
Residents contribute to decision making of local government	29.4
Residents provide feedback on local government projects	42.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	44.2
A website or App allows residents to easily give away unwanted items	39.3
Free public wifi has improved access to city services	45.1
CCTV cameras has made residents feel safer	59.6
A website or App allows residents to effectively monitor air pollution	36.4
Arranging medical appointments online has improved access	56.6

Mobility

Car-sharing Apps have reduced congestion	44.6
Apps that direct you to an available parking space have reduced journey time	49.5
Bicycle hiring has reduced congestion	39.6
Online scheduling and ticket sales has made public transport easier to use	66.5
The city provides information on traffic congestion through mobile phones	39.8

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	72.5

Opportunities (Work & School)

Online access to job listings has made it easier to find work	63.5
IT skills are taught well in schools	50.3
Online services provided by the city has made it easier to start a new business	55.6
The current internet speed and reliability meet connectivity needs	63.5

Governance

Online public access to city finances has reduced corruption	38.7
Online voting has increased participation	39.2
An online platform where residents can propose ideas has improved city life	41.5
Processing Identification Documents online has reduced waiting times	64.2

Reykjavik

SMART CITY RANKING

26

Out of 141

not out of 118 in 2021

SMART CITY RATING

BBB

not in 2021

FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
236,528	0.959

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.959	0.960	0.957	0.959	+0.002
Life expectancy at birth	82.8	82.4	82.6	82.7	+0.1
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	13.6	13.7	13.8	13.8	+0.0
GNI per capita (PPP $)	56,492	58,055	54,141	55,782	+1,641

PRIORITY AREAS

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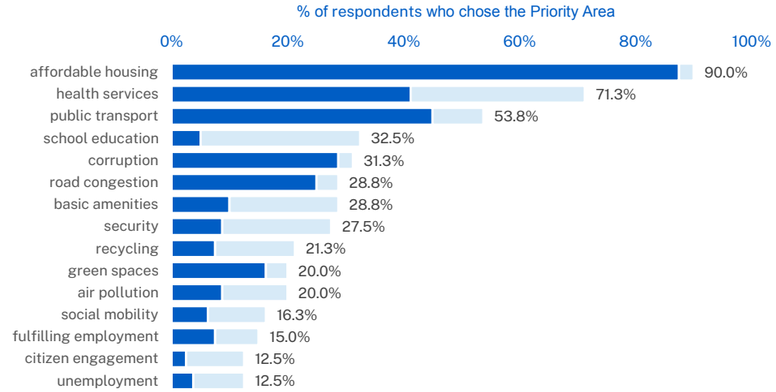

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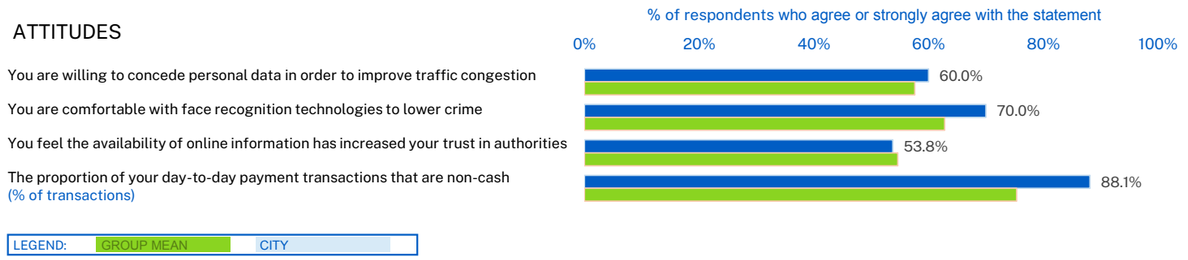

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	72.9
Recycling services are satisfactory	68.3
Public safety is not a problem	77.3
Air pollution is not a problem	60.8
Medical services provision is satisfactory	49.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	4.8

Mobility

	Score
Traffic congestion is not a problem	34.4
Public transport is satisfactory	28.3

Activities

	Score
Green spaces are satisfactory	61.7
Cultural activities (shows, bars, and museums) are satisfactory	80.8

Opportunities (Work & School)

	Score
Employment finding services are readily available	77.5
Most children have access to a good school	81.3
Lifelong learning opportunities are provided by local institutions	77.5
Businesses are creating new jobs	64.0
Minorities feel welcome	59.2

Governance

	Score
Information on local government decisions are easily accessible	53.5
Corruption of city officials is not an issue of concern	33.1
Residents contribute to decision making of local government	46.9
Residents provide feedback on local government projects	54.4

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	36.3
A website or App allows residents to easily give away unwanted items	61.5
Free public wifi has improved access to city services	49.0
CCTV cameras has made residents feel safer	49.0
A website or App allows residents to effectively monitor air pollution	56.3
Arranging medical appointments online has improved access	66.0

Mobility

	Score
Car-sharing Apps have reduced congestion	16.9
Apps that direct you to an available parking space have reduced journey time	30.8
Bicycle hiring has reduced congestion	31.7
Online scheduling and ticket sales has made public transport easier to use	55.2
The city provides information on traffic congestion through mobile phones	17.5

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	82.9

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	74.8
IT skills are taught well in schools	49.0
Online services provided by the city has made it easier to start a new business	36.9
The current internet speed and reliability meet connectivity needs	71.5

Governance

	Score
Online public access to city finances has reduced corruption	28.1
Online voting has increased participation	41.5
An online platform where residents can propose ideas has improved city life	59.4
Processing Identification Documents online has reduced waiting times	63.8

Riga

SMART CITY RANKING

83

Out of 141

not out of 118 in 2021

SMART CITY RATING

B

not in 2021

FACTOR RATINGS

B

STRUCTURES

B

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
614,618	0.929

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.866	0.871	0.871	0.863	-0.008
Life expectancy at birth	75.0	75.5	75.5	73.6	-1.9
Expected years of schooling	16.2	16.2	16.2	16.2	+0.0
Mean years of schooling	13.2	13.3	13.3	13.3	+0.0
GNI per capita (PPP $)	29,895	31,059	31,102	32,803	+1,701

PRIORITY AREAS

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

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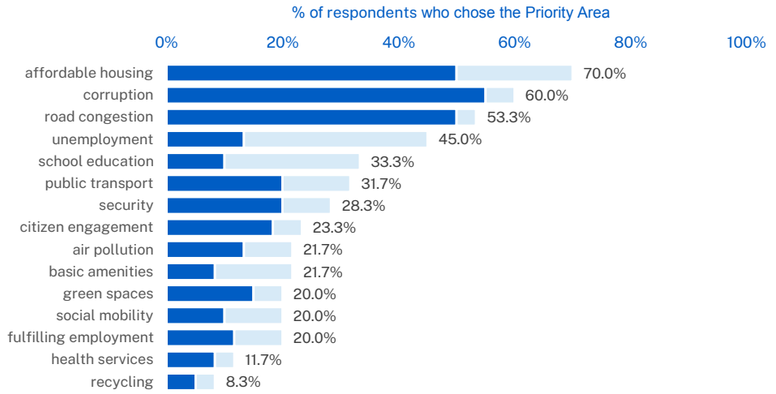

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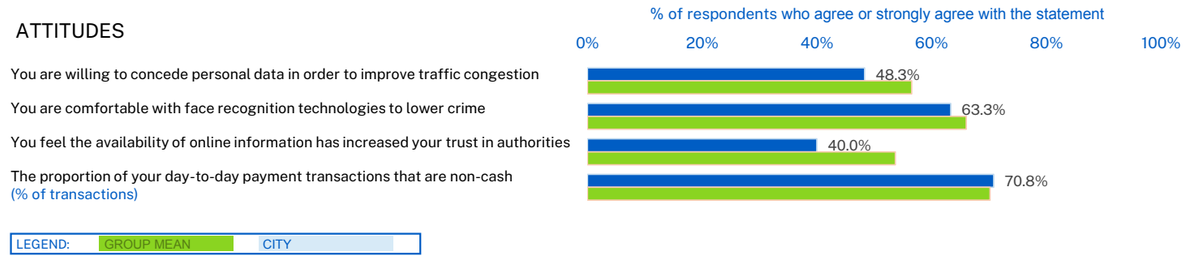

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	50.0
Recycling services are satisfactory	62.2
Public safety is not a problem	58.9
Air pollution is not a problem	48.1
Medical services provision is satisfactory	46.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	34.2

Mobility

Traffic congestion is not a problem	29.2
Public transport is satisfactory	54.2

Activities

Green spaces are satisfactory	58.3
Cultural activities (shows, bars, and museums) are satisfactory	66.4

Opportunities (Work & School)

Employment finding services are readily available	66.1
Most children have access to a good school	60.3
Lifelong learning opportunities are provided by local institutions	57.8
Businesses are creating new jobs	50.0
Minorities feel welcome	41.7

Governance

Information on local government decisions are easily accessible	44.4
Corruption of city officials is not an issue of concern	19.4
Residents contribute to decision making of local government	25.8
Residents provide feedback on local government projects	34.4

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	47.2
A website or App allows residents to easily give away unwanted items	53.1
Free public wifi has improved access to city services	55.3
CCTV cameras has made residents feel safer	55.6
A website or App allows residents to effectively monitor air pollution	40.8
Arranging medical appointments online has improved access	63.1

Mobility

Car-sharing Apps have reduced congestion	35.6
Apps that direct you to an available parking space have reduced journey time	38.9
Bicycle hiring has reduced congestion	42.5
Online scheduling and ticket sales has made public transport easier to use	64.2
The city provides information on traffic congestion through mobile phones	49.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	73.9

Opportunities (Work & School)

Online access to job listings has made it easier to find work	72.5
IT skills are taught well in schools	42.5
Online services provided by the city has made it easier to start a new business	47.5
The current internet speed and reliability meet connectivity needs	70.8

Governance

Online public access to city finances has reduced corruption	25.3
Online voting has increased participation	36.4
An online platform where residents can propose ideas has improved city life	37.5
Processing Identification Documents online has reduced waiting times	45.3

Rio de Janeiro

SMART CITY RANKING

136

Out of 141

▼

118 out of 118 in 2021

SMART CITY RATING

D

D in 2021

FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
13,634,274	0.783

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.764	0.766	0.758	0.754	-0.004
Life expectancy at birth	75.1	75.3	74.0	72.8	-1.3
Expected years of schooling	15.7	15.6	15.6	15.6	+0.0
Mean years of schooling	8.0	10.6	10.9	10.9	+0.0
GNI per capita (PPP $)	21,972	23,261	22,286	24,563	+2,277

PRIORITY AREAS

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

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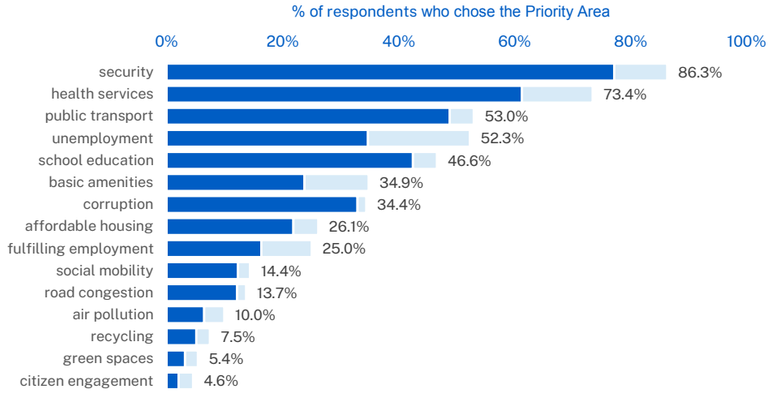

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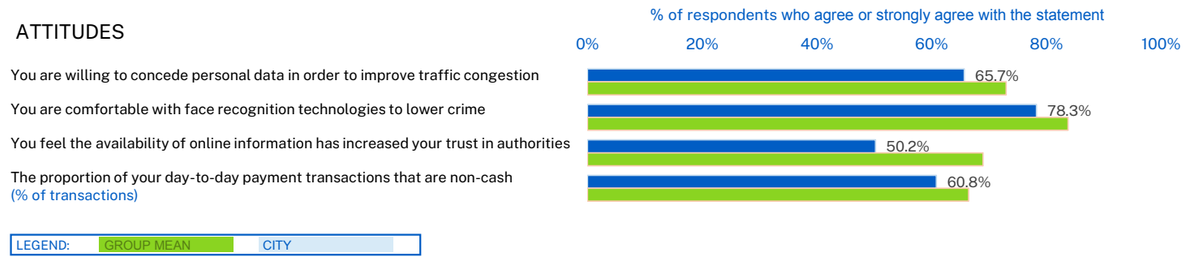

Riyadh

SMART CITY RANKING

30

Out of 141

39 out of 118 in 2021

SMART CITY RATING

BB

B in 2021

FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
75,382	0.900

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.865	0.873	0.870	0.875	+0.005
Life expectancy at birth	77.2	77.3	76.2	76.9	+0.7
Expected years of schooling	15.7	16.0	16.1	16.1	+0.0
Mean years of schooling	10.6	8.3	8.3	8.3	+0.0
GNI per capita (PPP $)	5,072	5,307	5,601	5,745	+143

PRIORITY AREAS

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

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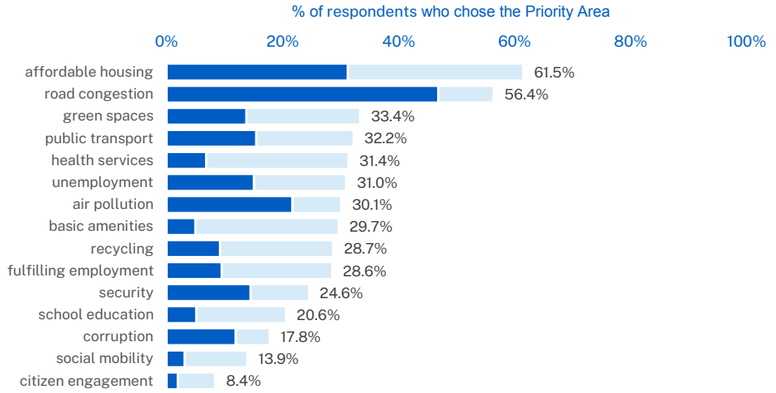

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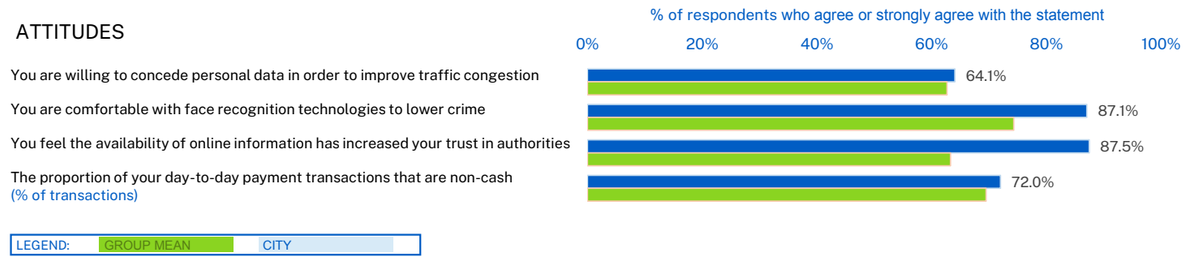

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	84.9
Recycling services are satisfactory	72.2
Public safety is not a problem	49.4
Air pollution is not a problem	36.0
Medical services provision is satisfactory	81.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	56.3

Mobility

Traffic congestion is not a problem	27.3
Public transport is satisfactory	60.8

Activities

Green spaces are satisfactory	69.2
Cultural activities (shows, bars, and museums) are satisfactory	77.2

Opportunities (Work & School)

Employment finding services are readily available	61.3
Most children have access to a good school	78.6
Lifelong learning opportunities are provided by local institutions	72.8
Businesses are creating new jobs	68.6
Minorities feel welcome	68.6

Governance

Information on local government decisions are easily accessible	82.7
Corruption of city officials is not an issue of concern	53.5
Residents contribute to decision making of local government	60.7
Residents provide feedback on local government projects	63.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	79.5
A website or App allows residents to easily give away unwanted items	71.3
Free public wifi has improved access to city services	64.8
CCTV cameras has made residents feel safer	81.1
A website or App allows residents to effectively monitor air pollution	62.7
Arranging medical appointments online has improved access	88.2

Mobility

Car-sharing Apps have reduced congestion	68.1
Apps that direct you to an available parking space have reduced journey time	71.8
Bicycle hiring has reduced congestion	55.7
Online scheduling and ticket sales has made public transport easier to use	75.7
The city provides information on traffic congestion through mobile phones	74.6

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	84.6

Opportunities (Work & School)

Online access to job listings has made it easier to find work	78.8
IT skills are taught well in schools	74.1
Online services provided by the city has made it easier to start a new business	76.8
The current internet speed and reliability meet connectivity needs	82.1

Governance

Online public access to city finances has reduced corruption	74.1
Online voting has increased participation	73.3
An online platform where residents can propose ideas has improved city life	76.8
Processing Identification Documents online has reduced waiting times	86.9

Rome

SMART CITY RANKING

122

Out of 141

▼

111 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
5,730,399	0.917

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.883	0.892	0.889	0.895	+0.006
Life expectancy at birth	83.4	83.5	82.4	82.9	+0.4
Expected years of schooling	16.2	16.1	16.2	16.2	+0.0
Mean years of schooling	10.2	10.4	10.7	10.7	+0.0
GNI per capita (PPP $)	36,141	42,776	39,901	42,840	+2,939

PRIORITY AREAS

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

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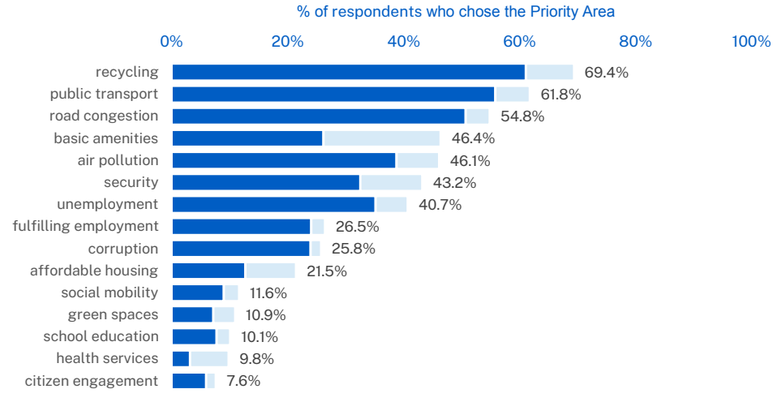

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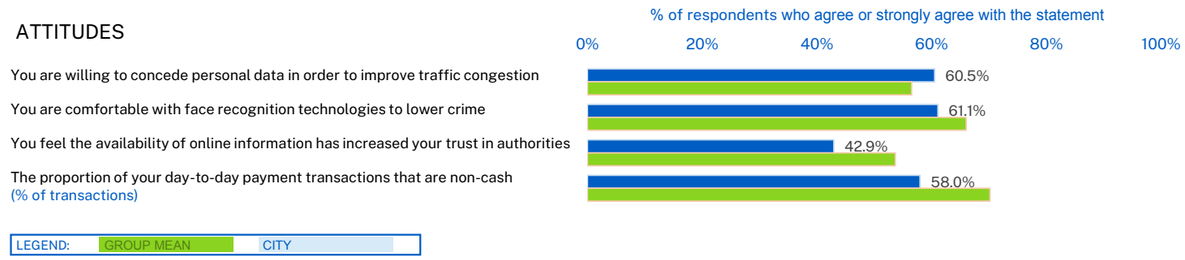

Rotterdam

SMART CITY RANKING

41

Out of 141

▲

43 out of 118 in 2021

SMART CITY RATING

A

BB in 2021

FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,726,050	0.941

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.934	0.944	0.939	0.941	+0.002
Life expectancy at birth	82.1	82.3	81.6	81.7	+0.0
Expected years of schooling	18.0	18.5	18.0	18.0	+0.0
Mean years of schooling	12.2	12.4	12.6	12.6	+0.0
GNI per capita (PPP $)	50,013	57,707	53,504	55,979	+2,476

PRIORITY AREAS

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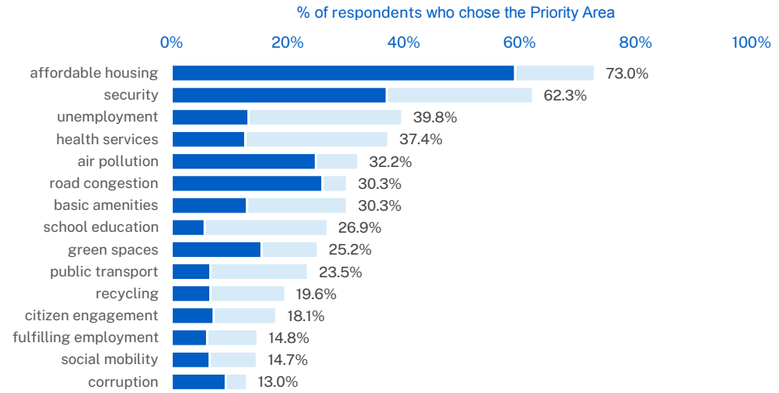

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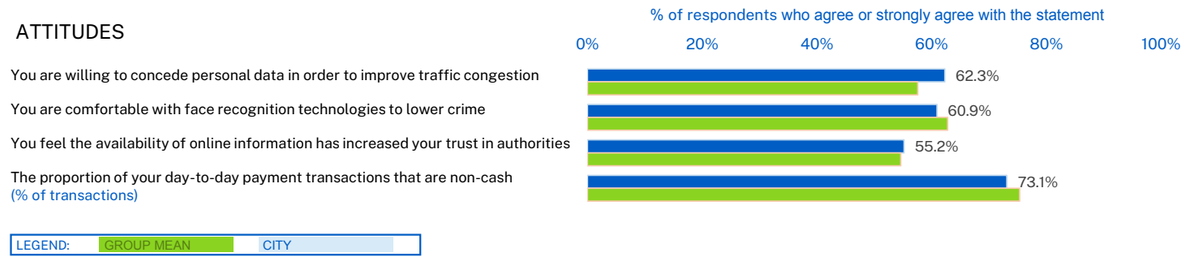


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	60.6
Recycling services are satisfactory	64.8
Public safety is not a problem	47.6
Air pollution is not a problem	36.7
Medical services provision is satisfactory	71.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	28.0

Mobility

Traffic congestion is not a problem	32.2
Public transport is satisfactory	69.5

Activities

Green spaces are satisfactory	56.4
Cultural activities (shows, bars, and museums) are satisfactory	75.3

Opportunities (Work & School)

Employment finding services are readily available	68.3
Most children have access to a good school	71.1
Lifelong learning opportunities are provided by local institutions	60.4
Businesses are creating new jobs	62.3
Minorities feel welcome	58.6

Governance

Information on local government decisions are easily accessible	58.8
Corruption of city officials is not an issue of concern	49.0
Residents contribute to decision making of local government	50.5
Residents provide feedback on local government projects	57.4

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	51.6
A website or App allows residents to easily give away unwanted items	59.8
Free public wifi has improved access to city services	57.1
CCTV cameras has made residents feel safer	52.5
A website or App allows residents to effectively monitor air pollution	39.6
Arranging medical appointments online has improved access	62.6

Mobility

Car-sharing Apps have reduced congestion	33.8
Apps that direct you to an available parking space have reduced journey time	50.4
Bicycle hiring has reduced congestion	49.5
Online scheduling and ticket sales has made public transport easier to use	59.6
The city provides information on traffic congestion through mobile phones	49.5

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	72.7

Opportunities (Work & School)

Online access to job listings has made it easier to find work	68.4
IT skills are taught well in schools	51.2
Online services provided by the city has made it easier to start a new business	49.4
The current internet speed and reliability meet connectivity needs	69.0

Governance

Online public access to city finances has reduced corruption	41.3
Online voting has increased participation	52.4
An online platform where residents can propose ideas has improved city life	53.2
Processing Identification Documents online has reduced waiting times	58.5

San Francisco

SMART CITY RANKING

68

Out of 141

▼

54 out of 118 in 2021

SMART CITY RATING

BB

B in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

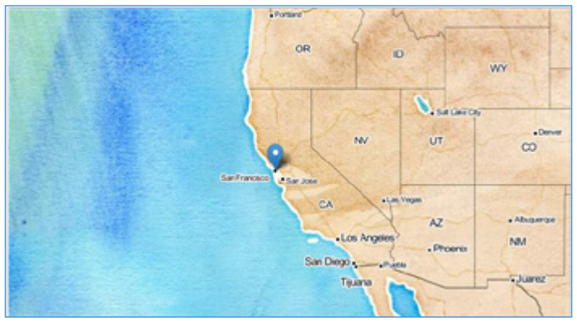
All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
873,965	0.931

(UN Data)



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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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

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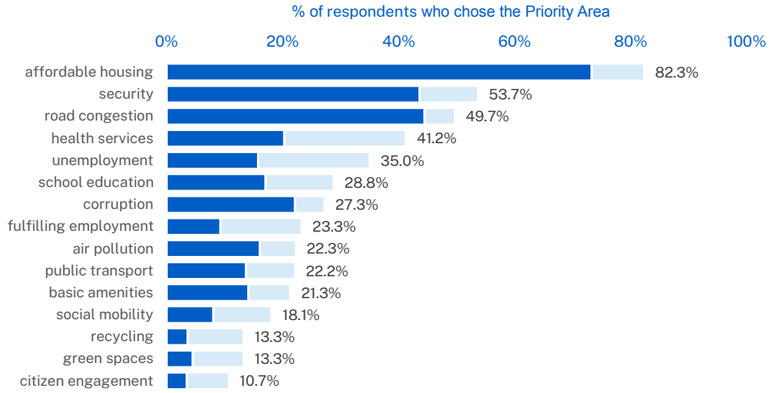

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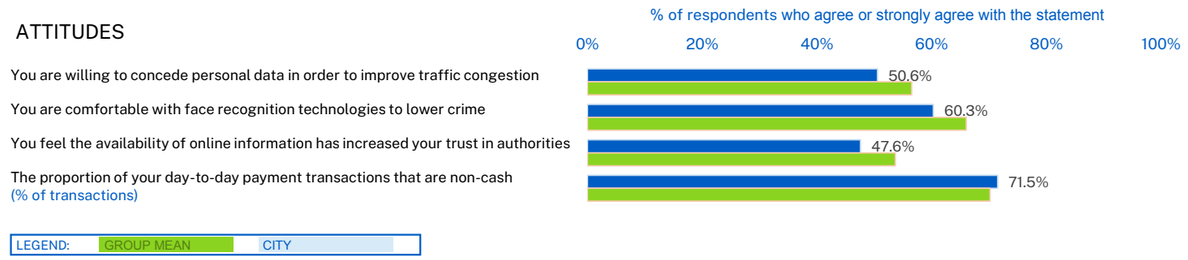

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	41.8
Recycling services are satisfactory	61.5
Public safety is not a problem	28.0
Air pollution is not a problem	43.1
Medical services provision is satisfactory	58.5
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	21.7

Mobility

Traffic congestion is not a problem	20.5
Public transport is satisfactory	49.1

Activities

Green spaces are satisfactory	63.3
Cultural activities (shows, bars, and museums) are satisfactory	76.2

Opportunities (Work & School)

Employment finding services are readily available	59.2
Most children have access to a good school	52.6
Lifelong learning opportunities are provided by local institutions	60.5
Businesses are creating new jobs	60.0
Minorities feel welcome	59.3

Governance

Information on local government decisions are easily accessible	63.5
Corruption of city officials is not an issue of concern	38.1
Residents contribute to decision making of local government	52.9
Residents provide feedback on local government projects	62.1

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	39.6
A website or App allows residents to easily give away unwanted items	56.0
Free public wifi has improved access to city services	51.0
CCTV cameras has made residents feel safer	43.5
A website or App allows residents to effectively monitor air pollution	48.0
Arranging medical appointments online has improved access	64.9

Mobility

Car-sharing Apps have reduced congestion	47.2
Apps that direct you to an available parking space have reduced journey time	51.8
Bicycle hiring has reduced congestion	46.7
Online scheduling and ticket sales has made public transport easier to use	61.9
The city provides information on traffic congestion through mobile phones	57.6

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	72.4

Opportunities (Work & School)

Online access to job listings has made it easier to find work	66.3
IT skills are taught well in schools	45.6
Online services provided by the city has made it easier to start a new business	46.4
The current internet speed and reliability meet connectivity needs	64.6

Governance

Online public access to city finances has reduced corruption	39.5
Online voting has increased participation	53.4
An online platform where residents can propose ideas has improved city life	48.3
Processing Identification Documents online has reduced waiting times	51.2

San José

SMART CITY RANKING

127

Out of 141

▼

112 out of 118 in 2021

SMART CITY RATING

C

D in 2021

FACTOR RATINGS

CC

STRUCTURES

C

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
351,958	0.826

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.811	0.819	0.816	0.809	-0.007
Life expectancy at birth	79.5	79.4	79.3	77.0	-2.3
Expected years of schooling	15.9	16.6	16.6	16.6	+0.0
Mean years of schooling	8.7	12.8	12.9	12.9	+0.0
GNI per capita (PPP $)	41,779	48,511	47,946	49,452	+1,506

PRIORITY AREAS

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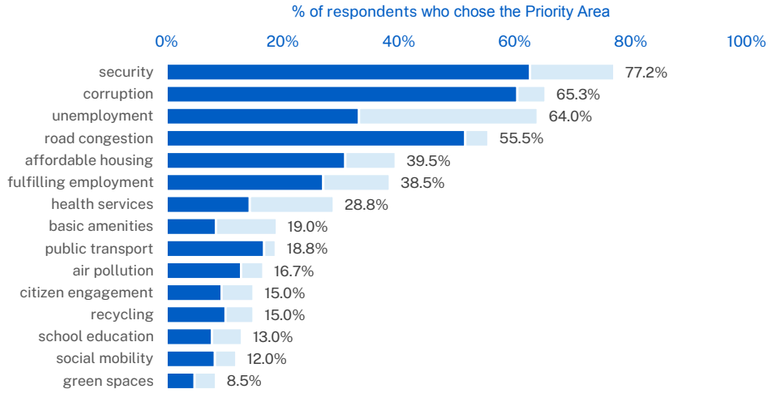

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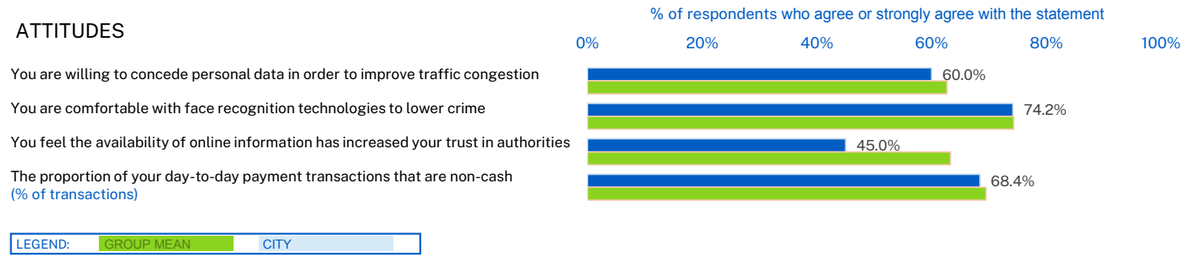

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	47.5
Recycling services are satisfactory	50.6
Public safety is not a problem	27.7
Air pollution is not a problem	38.3
Medical services provision is satisfactory	61.3
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	29.2

Mobility

Traffic congestion is not a problem	13.8
Public transport is satisfactory	30.8

Activities

Green spaces are satisfactory	61.8
Cultural activities (shows, bars, and museums) are satisfactory	65.2

Opportunities (Work & School)

Employment finding services are readily available	53.4
Most children have access to a good school	51.0
Lifelong learning opportunities are provided by local institutions	51.8
Businesses are creating new jobs	40.8
Minorities feel welcome	38.4

Governance

Information on local government decisions are easily accessible	41.0
Corruption of city officials is not an issue of concern	14.2
Residents contribute to decision making of local government	23.7
Residents provide feedback on local government projects	29.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	32.4
A website or App allows residents to easily give away unwanted items	32.9
Free public wifi has improved access to city services	51.2
CCTV cameras has made residents feel safer	49.5
A website or App allows residents to effectively monitor air pollution	21.8
Arranging medical appointments online has improved access	56.6

Mobility

Car-sharing Apps have reduced congestion	34.4
Apps that direct you to an available parking space have reduced journey time	39.0
Bicycle hiring has reduced congestion	26.2
Online scheduling and ticket sales has made public transport easier to use	36.8
The city provides information on traffic congestion through mobile phones	39.6

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	72.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	56.3
IT skills are taught well in schools	35.6
Online services provided by the city has made it easier to start a new business	40.9
The current internet speed and reliability meet connectivity needs	59.3

Governance

Online public access to city finances has reduced corruption	22.8
Online voting has increased participation	23.6
An online platform where residents can propose ideas has improved city life	28.4
Processing Identification Documents online has reduced waiting times	46.1

Sana'a

SMART CITY RANKING

140

Out of 141

not out of 118 in 2021

SMART CITY RATING

D

not in 2021

FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,181,655	0.521

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.459	0.461	0.460	0.455	-0.005
Life expectancy at birth	64.6	65.1	64.7	63.8	-0.9
Expected years of schooling	9.1	9.1	9.1	9.1	+0.0
Mean years of schooling	3.2	3.2	3.2	3.2	+0.0
GNI per capita (PPP $)	1,342	1,350	1,371	1,314	-56

PRIORITY AREAS

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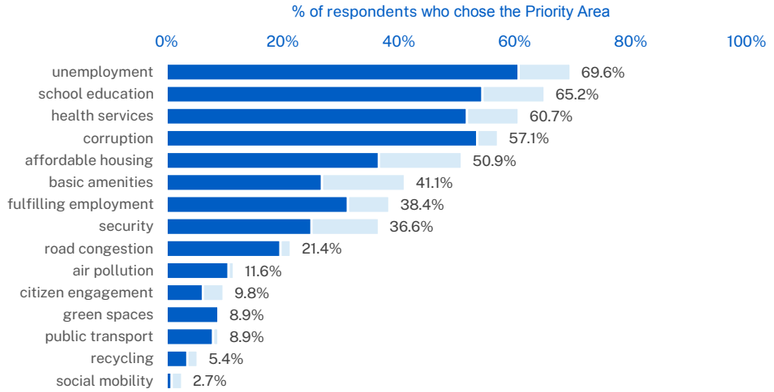
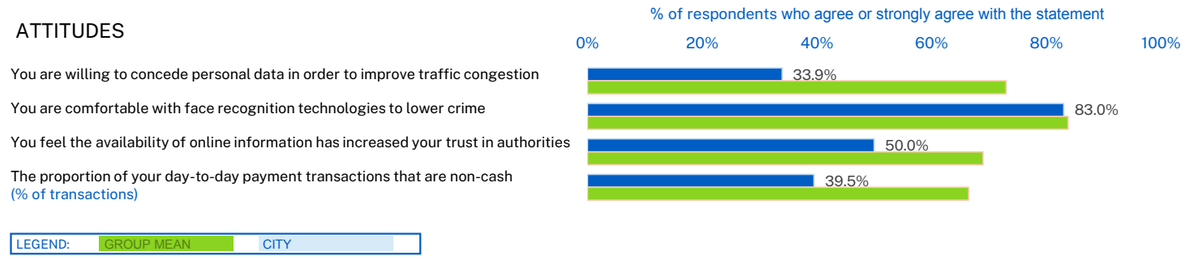


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	38.5
Recycling services are satisfactory	34.4
Public safety is not a problem	34.1
Air pollution is not a problem	16.2
Medical services provision is satisfactory	22.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	28.1

Mobility

Traffic congestion is not a problem	19.3
Public transport is satisfactory	35.7

Activities

Green spaces are satisfactory	29.9
Cultural activities (shows, bars, and museums) are satisfactory	33.6

Opportunities (Work & School)

Employment finding services are readily available	19.6
Most children have access to a good school	25.1
Lifelong learning opportunities are provided by local institutions	19.3
Businesses are creating new jobs	23.2
Minorities feel welcome	45.4

Governance

Information on local government decisions are easily accessible	28.1
Corruption of city officials is not an issue of concern	16.8
Residents contribute to decision making of local government	23.7
Residents provide feedback on local government projects	22.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	24.6
A website or App allows residents to easily give away unwanted items	27.5
Free public wifi has improved access to city services	34.8
CCTV cameras has made residents feel safer	69.2
A website or App allows residents to effectively monitor air pollution	29.6
Arranging medical appointments online has improved access	42.9

Mobility

Car-sharing Apps have reduced congestion	28.0
Apps that direct you to an available parking space have reduced journey time	36.8
Bicycle hiring has reduced congestion	50.0
Online scheduling and ticket sales has made public transport easier to use	46.1
The city provides information on traffic congestion through mobile phones	19.6

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	22.5

Opportunities (Work & School)

Online access to job listings has made it easier to find work	52.1
IT skills are taught well in schools	31.7
Online services provided by the city has made it easier to start a new business	33.8
The current internet speed and reliability meet connectivity needs	48.1

Governance

Online public access to city finances has reduced corruption	24.7
Online voting has increased participation	31.4
An online platform where residents can propose ideas has improved city life	28.3
Processing Identification Documents online has reduced waiting times	32.0

Santiago

SMART CITY RANKING

119

Out of 141

▼

107 out of 118 in 2021

SMART CITY RATING

C

C in 2021

FACTOR RATINGS

C

STRUCTURES

C

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
527,014	0.886

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.847	0.851	0.852	0.855	+0.003
Life expectancy at birth	80.0	80.2	79.4	78.9	-0.4
Expected years of schooling	16.5	16.4	16.7	16.7	+0.0
Mean years of schooling	10.4	10.6	10.9	10.9	+0.0
GNI per capita (PPP $)	21,972	23,261	22,286	24,563	+2,277

PRIORITY AREAS

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

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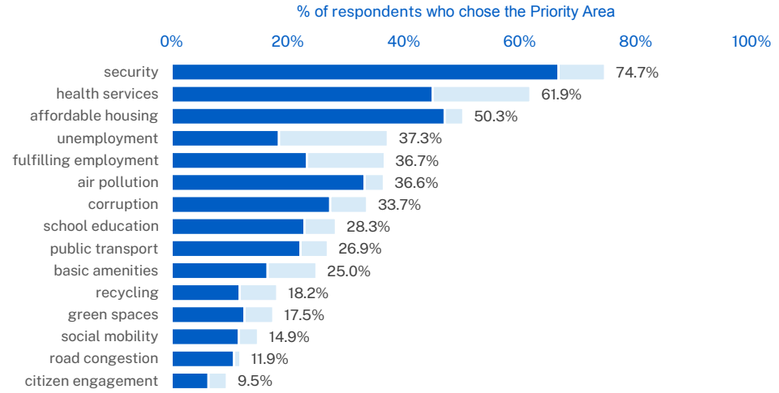

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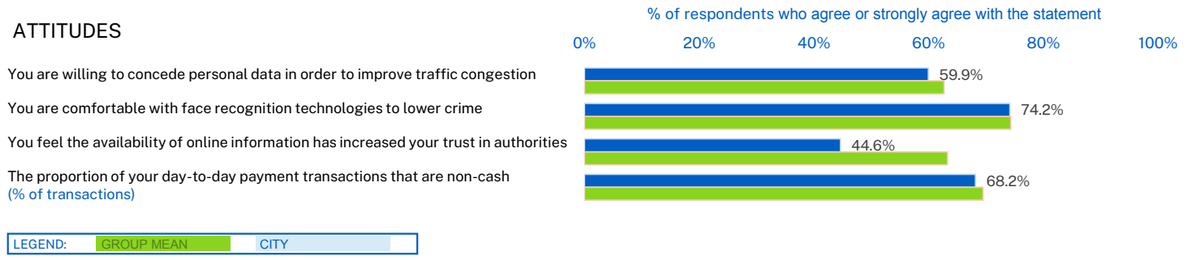

Sao Paulo

SMART CITY RANKING

130

Out of 141

▼

117 out of 118 in 2021

SMART CITY RATING

D

D in 2021

FACTOR RATINGS

D

STRUCTURES

C

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
22,429,799	0.780

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.764	0.766	0.758	0.754	-0.004
Life expectancy at birth	75.1	75.3	74.0	72.8	-1.3
Expected years of schooling	15.7	15.6	15.6	15.6	+0.0
Mean years of schooling	8.0	10.6	10.9	10.9	+0.0
GNI per capita (PPP $)	21,972	23,261	22,286	24,563	+2,277

PRIORITY AREAS

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

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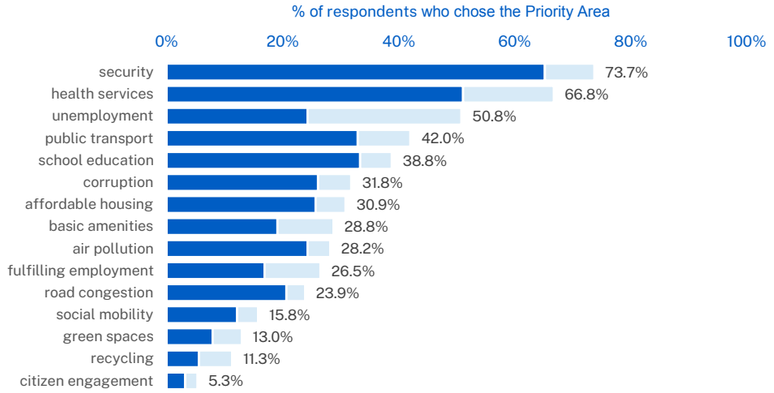

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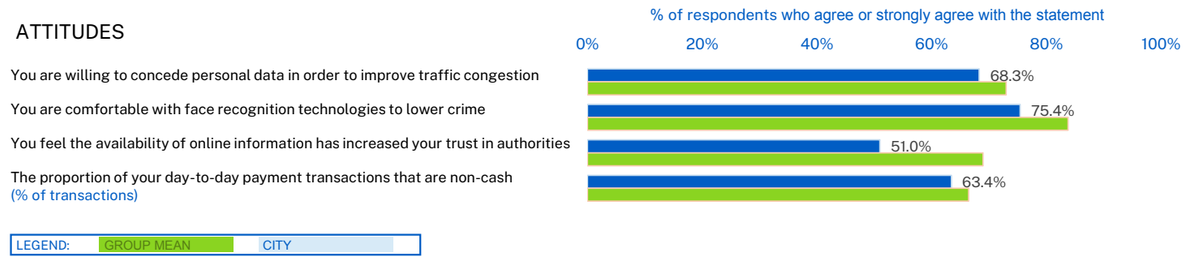

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	38.1
Recycling services are satisfactory	45.0
Public safety is not a problem	16.4
Air pollution is not a problem	17.6
Medical services provision is satisfactory	33.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	21.8

Mobility

	Score
Traffic congestion is not a problem	13.2
Public transport is satisfactory	25.1

Activities

	Score
Green spaces are satisfactory	49.3
Cultural activities (shows, bars, and museums) are satisfactory	66.9

Opportunities (Work & School)

	Score
Employment finding services are readily available	51.8
Most children have access to a good school	26.2
Lifelong learning opportunities are provided by local institutions	41.6
Businesses are creating new jobs	40.9
Minorities feel welcome	24.2

Governance

	Score
Information on local government decisions are easily accessible	40.4
Corruption of city officials is not an issue of concern	17.6
Residents contribute to decision making of local government	26.5
Residents provide feedback on local government projects	32.2

TECHNOLOGIES

Score

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	33.8
A website or App allows residents to easily give away unwanted items	45.9
Free public wifi has improved access to city services	43.8
CCTV cameras has made residents feel safer	44.8
A website or App allows residents to effectively monitor air pollution	34.8
Arranging medical appointments online has improved access	50.3

Mobility

	Score
Car-sharing Apps have reduced congestion	41.7
Apps that direct you to an available parking space have reduced journey time	50.3
Bicycle hiring has reduced congestion	44.4
Online scheduling and ticket sales has made public transport easier to use	58.9
The city provides information on traffic congestion through mobile phones	62.2

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	75.3

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	60.3
IT skills are taught well in schools	30.8
Online services provided by the city has made it easier to start a new business	52.2
The current internet speed and reliability meet connectivity needs	55.9

Governance

	Score
Online public access to city finances has reduced corruption	26.7
Online voting has increased participation	44.8
An online platform where residents can propose ideas has improved city life	43.3
Processing Identification Documents online has reduced waiting times	63.2

Seattle

SMART CITY RANKING

55

Out of 141

38 out of 118 in 2021

SMART CITY RATING

BB

BBB in 2021

FACTOR RATINGS

BB

STRUCTURES

B

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
737,015	0.940

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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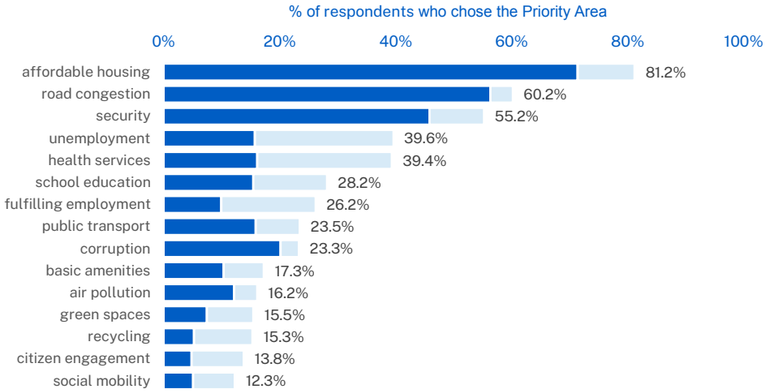

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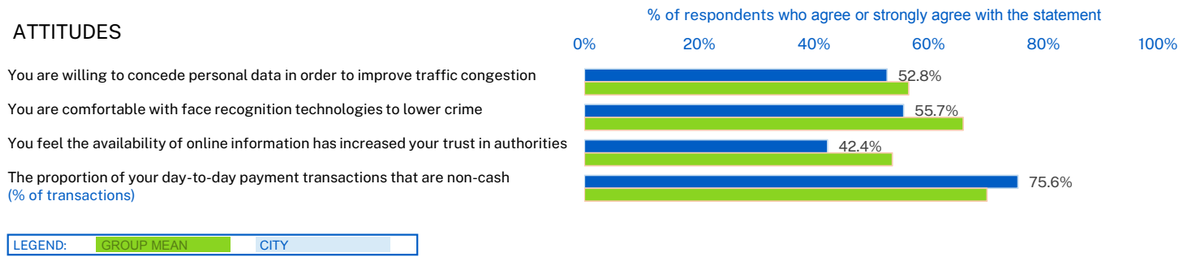

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	43.1
Recycling services are satisfactory	71.0
Public safety is not a problem	27.0
Air pollution is not a problem	43.6
Medical services provision is satisfactory	64.1
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	18.9

Mobility

Traffic congestion is not a problem	15.8
Public transport is satisfactory	54.4

Activities

Green spaces are satisfactory	64.3
Cultural activities (shows, bars, and museums) are satisfactory	78.1

Opportunities (Work & School)

Employment finding services are readily available	64.9
Most children have access to a good school	61.2
Lifelong learning opportunities are provided by local institutions	63.1
Businesses are creating new jobs	61.6
Minorities feel welcome	61.2

Governance

Information on local government decisions are easily accessible	63.8
Corruption of city officials is not an issue of concern	41.5
Residents contribute to decision making of local government	49.5
Residents provide feedback on local government projects	61.1

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	43.0
A website or App allows residents to easily give away unwanted items	60.5
Free public wifi has improved access to city services	44.3
CCTV cameras has made residents feel safer	37.8
A website or App allows residents to effectively monitor air pollution	43.0
Arranging medical appointments online has improved access	67.6

Mobility

Car-sharing Apps have reduced congestion	40.9
Apps that direct you to an available parking space have reduced journey time	40.1
Bicycle hiring has reduced congestion	37.8
Online scheduling and ticket sales has made public transport easier to use	54.9
The city provides information on traffic congestion through mobile phones	57.8

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	71.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	66.9
IT skills are taught well in schools	47.0
Online services provided by the city has made it easier to start a new business	40.9
The current internet speed and reliability meet connectivity needs	64.1

Governance

Online public access to city finances has reduced corruption	34.3
Online voting has increased participation	52.8
An online platform where residents can propose ideas has improved city life	43.9
Processing Identification Documents online has reduced waiting times	51.9

Seoul

SMART CITY RANKING

16

Out of 141

▲

18 out of 118 in 2021

SMART CITY RATING

AA

AA in 2021

FACTOR RATINGS

BBB

STRUCTURES

AAA

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
9,601,693	0.952

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.906	0.916	0.922	0.925	+0.003
Life expectancy at birth	82.8	83.0	83.6	83.7	+0.1
Expected years of schooling	16.4	16.5	16.5	16.5	+0.0
Mean years of schooling	12.2	12.2	12.5	12.5	+0.0
GNI per capita (PPP $)	36,757	43,044	42,698	44,501	+1,803

PRIORITY AREAS

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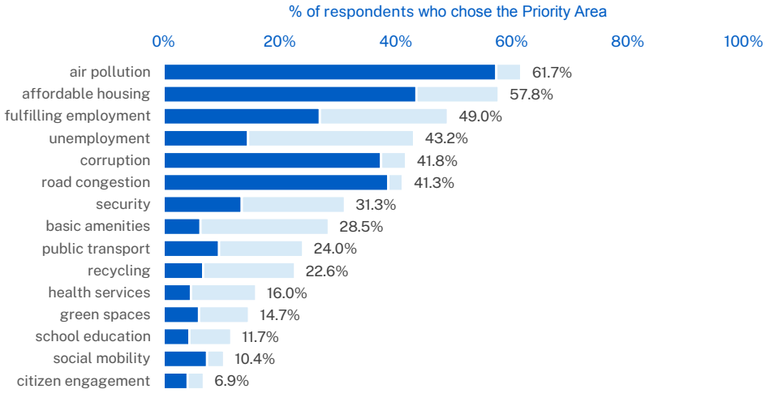

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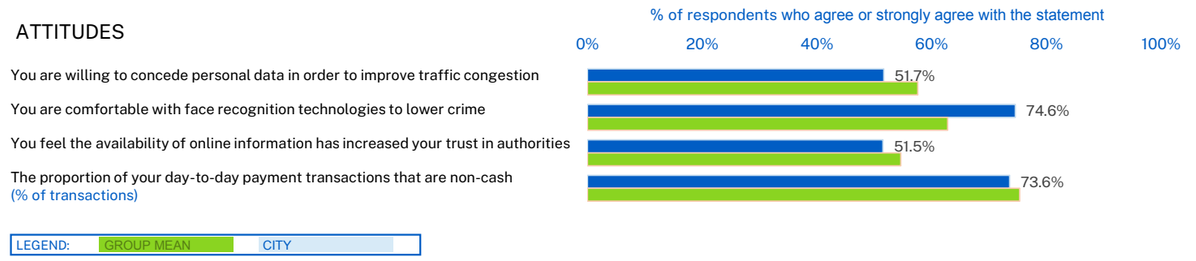


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	72.5
Recycling services are satisfactory	70.4
Public safety is not a problem	65.4
Air pollution is not a problem	14.8
Medical services provision is satisfactory	75.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	31.3

Mobility

Traffic congestion is not a problem	21.9
Public transport is satisfactory	71.8

Activities

Green spaces are satisfactory	56.4
Cultural activities (shows, bars, and museums) are satisfactory	69.3

Opportunities (Work & School)

Employment finding services are readily available	63.1
Most children have access to a good school	57.2
Lifelong learning opportunities are provided by local institutions	63.5
Businesses are creating new jobs	48.3
Minorities feel welcome	32.2

Governance

Information on local government decisions are easily accessible	63.2
Corruption of city officials is not an issue of concern	28.5
Residents contribute to decision making of local government	52.1
Residents provide feedback on local government projects	50.5

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	58.4
A website or App allows residents to easily give away unwanted items	70.0
Free public wifi has improved access to city services	76.0
CCTV cameras has made residents feel safer	78.3
A website or App allows residents to effectively monitor air pollution	67.0
Arranging medical appointments online has improved access	75.6

Mobility

Car-sharing Apps have reduced congestion	46.7
Apps that direct you to an available parking space have reduced journey time	51.4
Bicycle hiring has reduced congestion	46.1
Online scheduling and ticket sales has made public transport easier to use	71.9
The city provides information on traffic congestion through mobile phones	80.9

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	79.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	66.9
IT skills are taught well in schools	62.8
Online services provided by the city has made it easier to start a new business	56.7
The current internet speed and reliability meet connectivity needs	78.0

Governance

Online public access to city finances has reduced corruption	44.0
Online voting has increased participation	60.3
An online platform where residents can propose ideas has improved city life	60.0
Processing Identification Documents online has reduced waiting times	76.3

Shanghai

SMART CITY RANKING

25

Out of 141

32 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

3

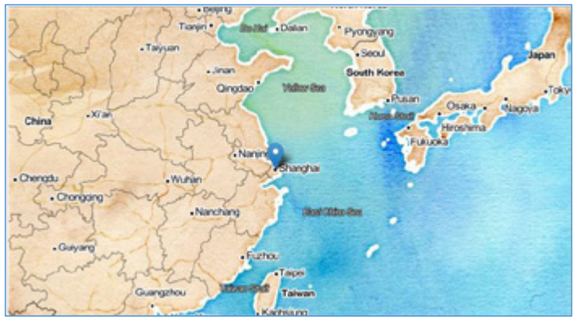
All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
28,516,903	0.880

(UN World Urbanisation Prospects 2022 estimate)



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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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

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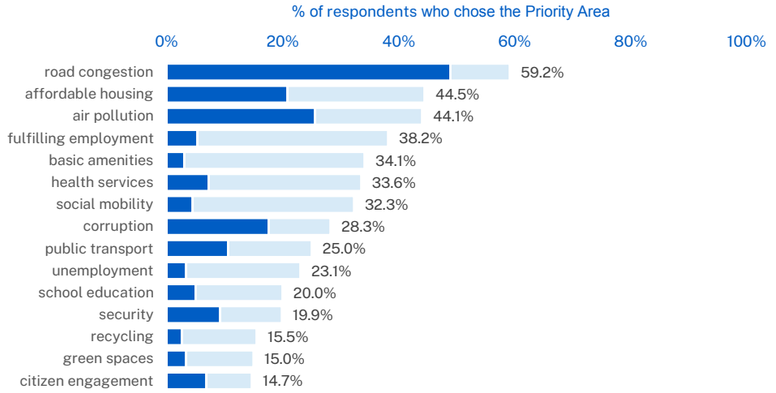

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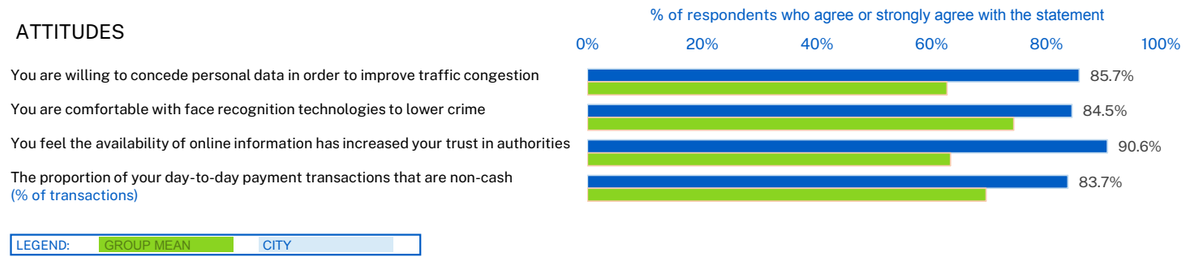

Shenzhen

SMART CITY RANKING

66

Out of 141

▼

60 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,283,133	0.799

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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

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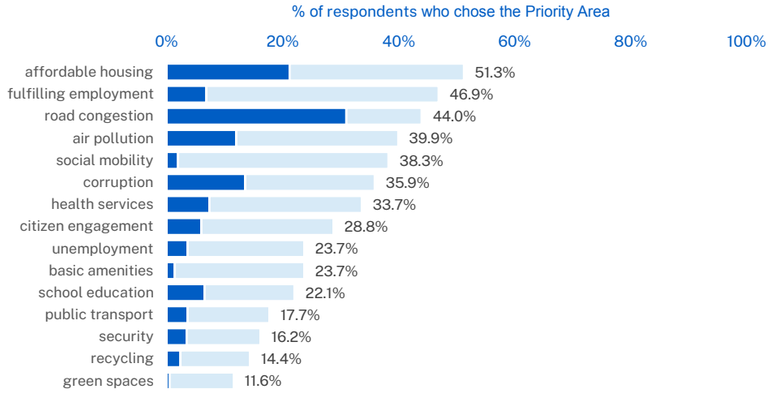
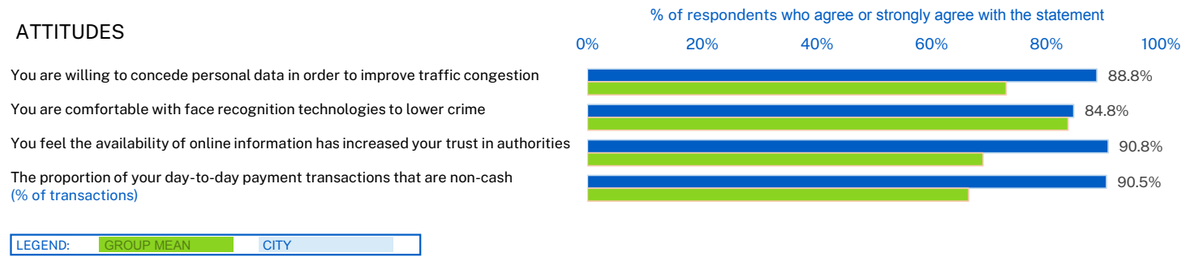


ATTITUDES



Singapore

SMART CITY RANKING

7

Out of 141

7 out of 118 in 2021

SMART CITY RATING

A

A in 2021

FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
5,453,566	0.939

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.935	0.938	0.939	0.939	+0.000
Life expectancy at birth	83.5	83.6	82.9	82.8	-0.1
Expected years of schooling	16.3	16.4	16.5	16.5	+0.0
Mean years of schooling	11.5	11.6	11.9	11.9	+0.0
GNI per capita (PPP $)	83,793	88,155	81,035	90,919	+9,884

PRIORITY AREAS

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

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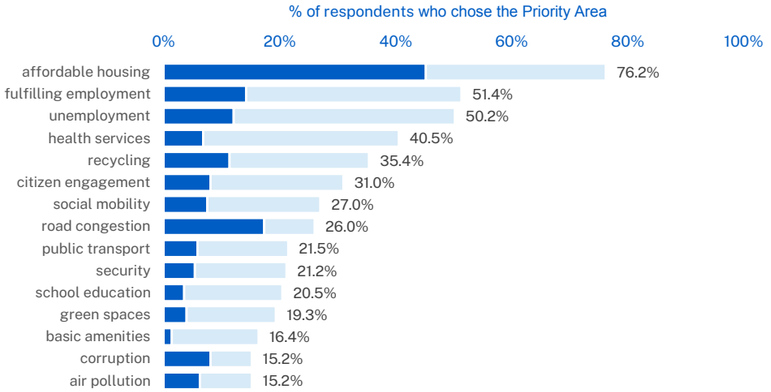
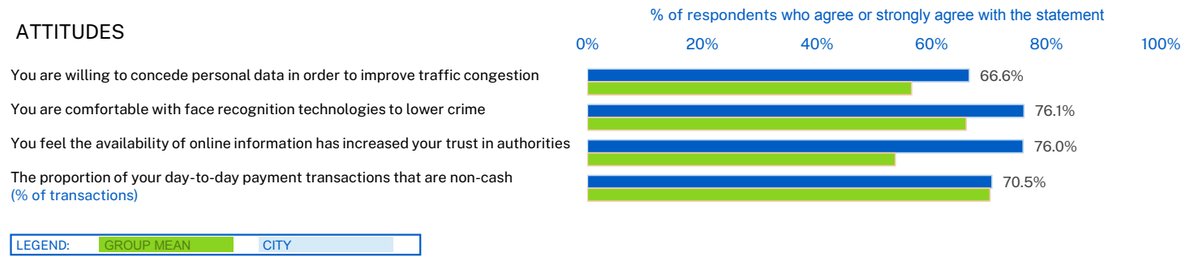


ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	85.0
Recycling services are satisfactory	68.3
Public safety is not a problem	80.4
Air pollution is not a problem	67.3
Medical services provision is satisfactory	84.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	45.8

Mobility

Traffic congestion is not a problem	49.3
Public transport is satisfactory	78.9

Activities

Green spaces are satisfactory	78.0
Cultural activities (shows, bars, and museums) are satisfactory	76.7

Opportunities (Work & School)

Employment finding services are readily available	74.8
Most children have access to a good school	80.1
Lifelong learning opportunities are provided by local institutions	81.1
Businesses are creating new jobs	70.5
Minorities feel welcome	70.6

Governance

Information on local government decisions are easily accessible	78.3
Corruption of city officials is not an issue of concern	71.1
Residents contribute to decision making of local government	61.0
Residents provide feedback on local government projects	68.8

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	70.4
A website or App allows residents to easily give away unwanted items	66.4
Free public wifi has improved access to city services	74.6
CCTV cameras has made residents feel safer	81.1
A website or App allows residents to effectively monitor air pollution	61.4
Arranging medical appointments online has improved access	80.7

Mobility

Car-sharing Apps have reduced congestion	58.4
Apps that direct you to an available parking space have reduced journey time	55.7
Bicycle hiring has reduced congestion	54.0
Online scheduling and ticket sales has made public transport easier to use	63.0
The city provides information on traffic congestion through mobile phones	75.3

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	83.0

Opportunities (Work & School)

Online access to job listings has made it easier to find work	79.5
IT skills are taught well in schools	70.9
Online services provided by the city has made it easier to start a new business	71.1
The current internet speed and reliability meet connectivity needs	84.2

Governance

Online public access to city finances has reduced corruption	58.9
Online voting has increased participation	51.3
An online platform where residents can propose ideas has improved city life	61.4
Processing Identification Documents online has reduced waiting times	79.7

Sofia

SMART CITY RANKING

111

Out of 141

103 out of 118 in 2021

SMART CITY RATING

CC

C in 2021

FACTOR RATINGS

CC

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,085,071	0.856

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.816	0.816	0.802	0.795	-0.007
Life expectancy at birth	74.9	75.1	73.7	71.8	-1.9
Expected years of schooling	14.8	14.4	13.9	13.9	+0.0
Mean years of schooling	11.8	11.4	11.4	11.4	+0.0
GNI per capita (PPP $)	19,646	23,325	22,020	23,079	+1,058

PRIORITY AREAS

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

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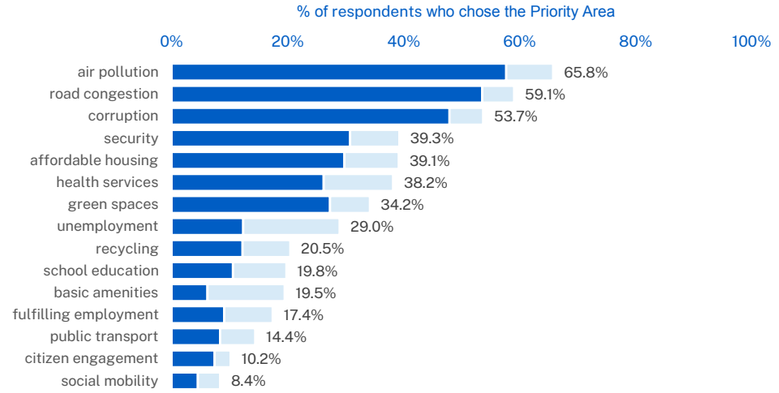

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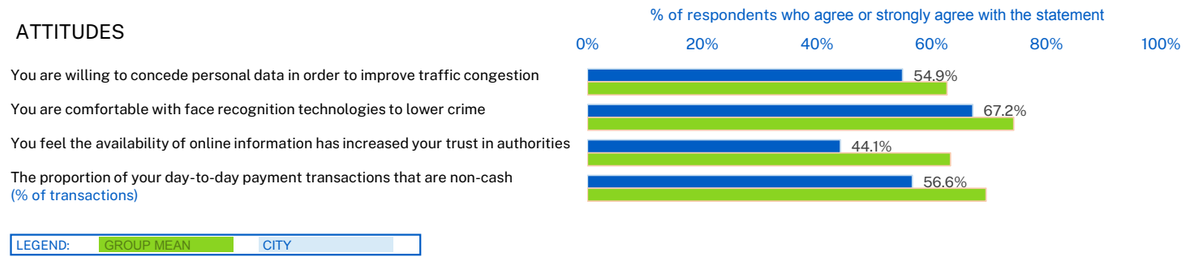

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	54.0
Recycling services are satisfactory	42.9
Public safety is not a problem	37.3
Air pollution is not a problem	20.4
Medical services provision is satisfactory	45.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	28.8

Mobility

Traffic congestion is not a problem	16.6
Public transport is satisfactory	51.6

Activities

Green spaces are satisfactory	42.7
Cultural activities (shows, bars, and museums) are satisfactory	67.9

Opportunities (Work & School)

Employment finding services are readily available	64.3
Most children have access to a good school	55.7
Lifelong learning opportunities are provided by local institutions	49.9
Businesses are creating new jobs	55.9
Minorities feel welcome	41.0

Governance

Information on local government decisions are easily accessible	41.3
Corruption of city officials is not an issue of concern	18.8
Residents contribute to decision making of local government	28.3
Residents provide feedback on local government projects	36.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	46.8
A website or App allows residents to easily give away unwanted items	51.9
Free public wifi has improved access to city services	54.9
CCTV cameras has made residents feel safer	49.7
A website or App allows residents to effectively monitor air pollution	55.7
Arranging medical appointments online has improved access	58.4

Mobility

Car-sharing Apps have reduced congestion	38.8
Apps that direct you to an available parking space have reduced journey time	47.5
Bicycle hiring has reduced congestion	41.9
Online scheduling and ticket sales has made public transport easier to use	55.9
The city provides information on traffic congestion through mobile phones	53.3

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	74.7

Opportunities (Work & School)

Online access to job listings has made it easier to find work	70.4
IT skills are taught well in schools	51.2
Online services provided by the city has made it easier to start a new business	50.5
The current internet speed and reliability meet connectivity needs	71.7

Governance

Online public access to city finances has reduced corruption	28.4
Online voting has increased participation	36.2
An online platform where residents can propose ideas has improved city life	43.0
Processing Identification Documents online has reduced waiting times	57.3

Stockholm

SMART CITY RANKING

10

Out of 141

11 out of 118 in 2021

SMART CITY RATING

A

A in 2021

FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,391,990	0.972

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.937	0.945	0.942	0.947	+0.005
Life expectancy at birth	82.7	82.8	82.4	83.0	+0.5
Expected years of schooling	18.8	19.5	18.0	18.0	+0.0
Mean years of schooling	12.4	12.5	12.6	12.6	+0.0
GNI per capita (PPP $)	47,955	54,508	52,359	54,489	+2,130

PRIORITY AREAS

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

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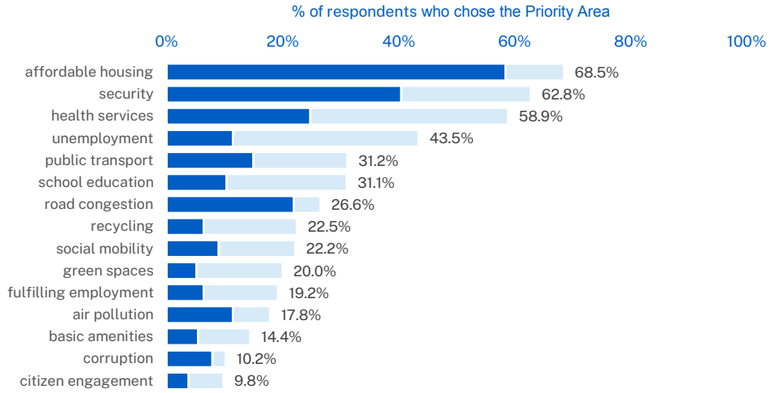

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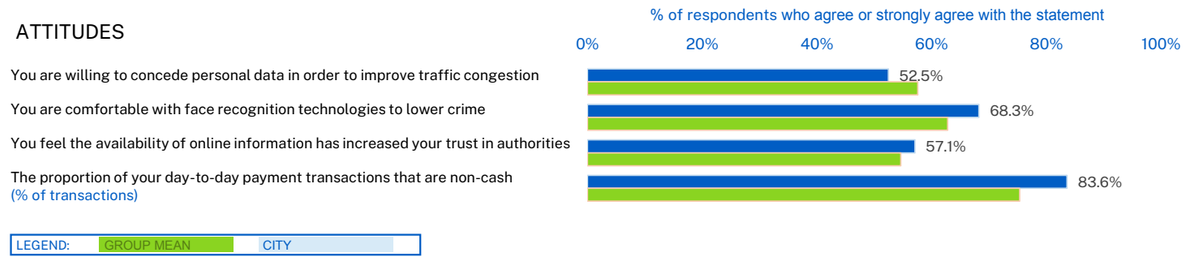

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	63.6
Recycling services are satisfactory	70.4
Public safety is not a problem	44.2
Air pollution is not a problem	53.0
Medical services provision is satisfactory	60.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	26.2

Mobility

Traffic congestion is not a problem	29.6
Public transport is satisfactory	56.2

Activities

Green spaces are satisfactory	73.6
Cultural activities (shows, bars, and museums) are satisfactory	78.8

Opportunities (Work & School)

Employment finding services are readily available	69.4
Most children have access to a good school	72.2
Lifelong learning opportunities are provided by local institutions	67.1
Businesses are creating new jobs	66.3
Minorities feel welcome	54.7

Governance

Information on local government decisions are easily accessible	65.0
Corruption of city officials is not an issue of concern	52.9
Residents contribute to decision making of local government	50.7
Residents provide feedback on local government projects	56.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.4
A website or App allows residents to easily give away unwanted items	61.6
Free public wifi has improved access to city services	54.7
CCTV cameras has made residents feel safer	53.1
A website or App allows residents to effectively monitor air pollution	39.7
Arranging medical appointments online has improved access	62.6

Mobility

Car-sharing Apps have reduced congestion	33.4
Apps that direct you to an available parking space have reduced journey time	41.3
Bicycle hiring has reduced congestion	40.0
Online scheduling and ticket sales has made public transport easier to use	70.0
The city provides information on traffic congestion through mobile phones	55.6

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	77.4

Opportunities (Work & School)

Online access to job listings has made it easier to find work	62.4
IT skills are taught well in schools	54.9
Online services provided by the city has made it easier to start a new business	50.2
The current internet speed and reliability meet connectivity needs	67.8

Governance

Online public access to city finances has reduced corruption	39.3
Online voting has increased participation	45.0
An online platform where residents can propose ideas has improved city life	48.7
Processing Identification Documents online has reduced waiting times	50.0

Sydney

SMART CITY RANKING

18

Out of 141

▲

29 out of 118 in 2021

SMART CITY RATING

AA

BB in 2021

FACTOR RATINGS

A

STRUCTURES

AA

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
4,321,535	0.952

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.941	0.941	0.947	0.951	+0.004
Life expectancy at birth	83.4	83.1	84.3	84.5	+0.2
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	12.6	12.1	12.4	12.4	+0.0
GNI per capita (PPP $)	43,821	52,085	49,392	52,293	+2,901

PRIORITY AREAS

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

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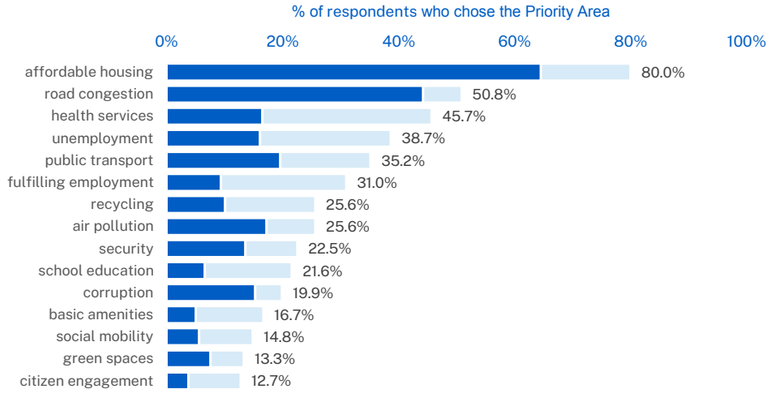

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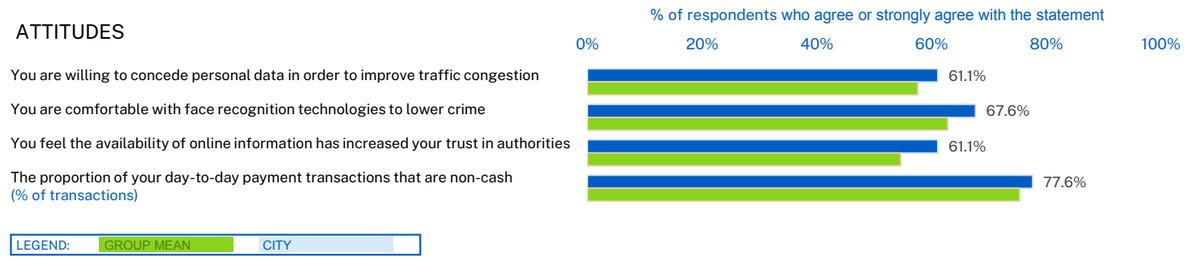

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	67.1
Recycling services are satisfactory	71.8
Public safety is not a problem	53.2
Air pollution is not a problem	42.6
Medical services provision is satisfactory	67.8
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	27.3

Mobility

	Score
Traffic congestion is not a problem	25.7
Public transport is satisfactory	58.5

Activities

	Score
Green spaces are satisfactory	67.1
Cultural activities (shows, bars, and museums) are satisfactory	74.7

Opportunities (Work & School)

	Score
Employment finding services are readily available	69.8
Most children have access to a good school	75.3
Lifelong learning opportunities are provided by local institutions	66.8
Businesses are creating new jobs	64.1
Minorities feel welcome	63.0

Governance

	Score
Information on local government decisions are easily accessible	61.6
Corruption of city officials is not an issue of concern	40.5
Residents contribute to decision making of local government	53.2
Residents provide feedback on local government projects	62.7

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	52.1
A website or App allows residents to easily give away unwanted items	67.1
Free public wifi has improved access to city services	58.2
CCTV cameras has made residents feel safer	64.4
A website or App allows residents to effectively monitor air pollution	43.5
Arranging medical appointments online has improved access	73.7

Mobility

	Score
Car-sharing Apps have reduced congestion	40.8
Apps that direct you to an available parking space have reduced journey time	44.0
Bicycle hiring has reduced congestion	40.2
Online scheduling and ticket sales has made public transport easier to use	62.2
The city provides information on traffic congestion through mobile phones	63.4

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	78.8

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	73.8
IT skills are taught well in schools	54.1
Online services provided by the city has made it easier to start a new business	53.1
The current internet speed and reliability meet connectivity needs	63.4

Governance

	Score
Online public access to city finances has reduced corruption	40.4
Online voting has increased participation	52.9
An online platform where residents can propose ideas has improved city life	51.9
Processing Identification Documents online has reduced waiting times	67.2

Taipei City

SMART CITY RANKING

29

Out of 141

▼

25 out of 118 in 2021

SMART CITY RATING

A

B in 2021

FACTOR RATINGS

BBB

STRUCTURES

A

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI (2019)
2,742,379	0.916

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.911	0.916	NA	NA	NA
Life expectancy at birth	80.7	80.9	NA	NA	NA
Expected years of schooling	16.5	16.5	NA	NA	NA
Mean years of schooling	12.2	12.3	NA	NA	NA
GNI per capita (PPP $)	49,403	52,573	NA	NA	NA

PRIORITY AREAS

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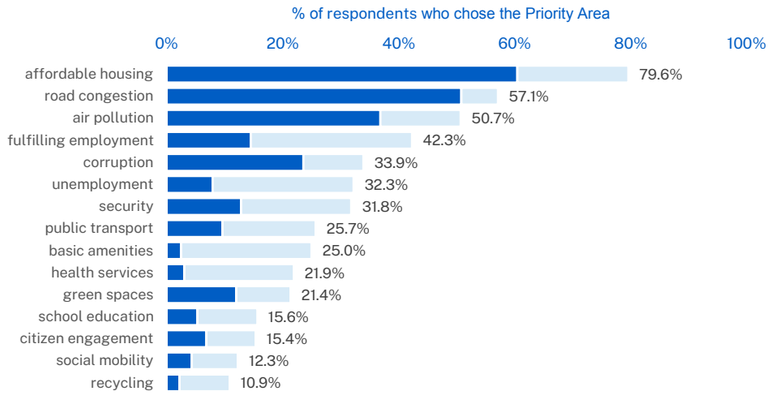

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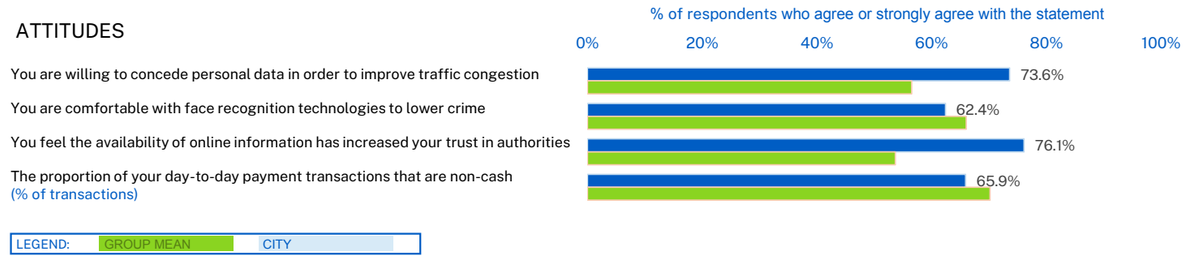

Tallinn

SMART CITY RANKING

32

Out of 141

▼

24 out of 118
in 2021

SMART CITY RATING

BBB

BBB in 2021

FACTOR RATINGS

BBB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
613,158	0.932

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.882	0.892	0.892	0.890	-0.002
Life expectancy at birth	78.6	78.8	78.3	77.1	-1.2
Expected years of schooling	16.1	16.0	15.9	15.9	+0.0
Mean years of schooling	13.0	13.1	13.6	13.6	+0.0
GNI per capita (PPP $)	30,379	36,019	35,132	38,048	+2,916

PRIORITY AREAS

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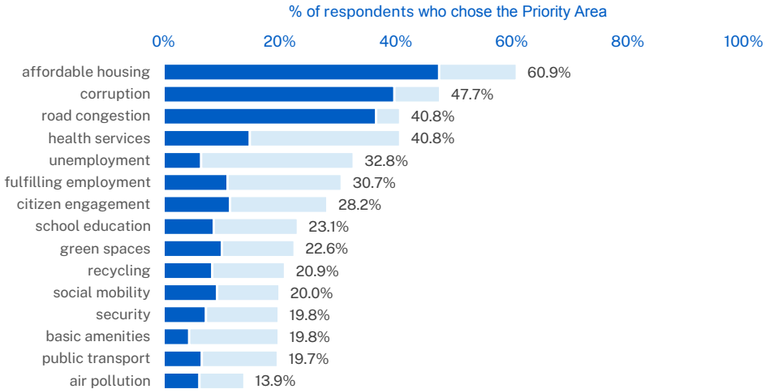

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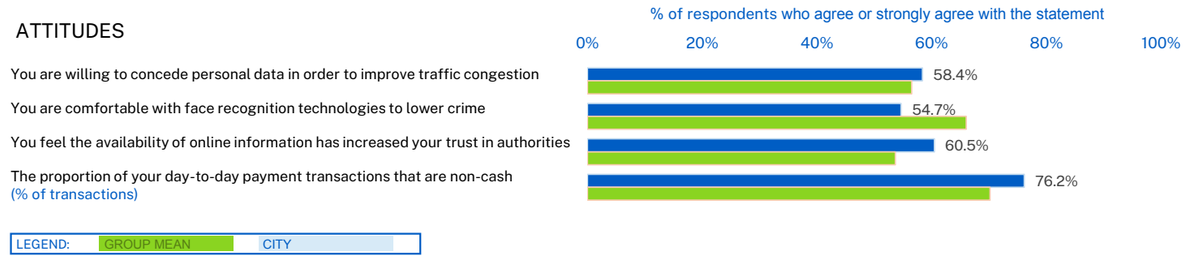

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	72.9
Recycling services are satisfactory	74.4
Public safety is not a problem	78.2
Air pollution is not a problem	71.8
Medical services provision is satisfactory	73.3
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	32.4

Mobility

Traffic congestion is not a problem	28.1
Public transport is satisfactory	72.6

Activities

Green spaces are satisfactory	75.0
Cultural activities (shows, bars, and museums) are satisfactory	85.1

Opportunities (Work & School)

Employment finding services are readily available	79.5
Most children have access to a good school	72.6
Lifelong learning opportunities are provided by local institutions	65.4
Businesses are creating new jobs	67.4
Minorities feel welcome	52.5

Governance

Information on local government decisions are easily accessible	67.5
Corruption of city officials is not an issue of concern	33.9
Residents contribute to decision making of local government	41.8
Residents provide feedback on local government projects	53.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	54.3
A website or App allows residents to easily give away unwanted items	55.9
Free public wifi has improved access to city services	62.5
CCTV cameras has made residents feel safer	64.0
A website or App allows residents to effectively monitor air pollution	38.5
Arranging medical appointments online has improved access	69.7

Mobility

Car-sharing Apps have reduced congestion	34.5
Apps that direct you to an available parking space have reduced journey time	36.8
Bicycle hiring has reduced congestion	37.6
Online scheduling and ticket sales has made public transport easier to use	76.8
The city provides information on traffic congestion through mobile phones	25.9

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	84.4

Opportunities (Work & School)

Online access to job listings has made it easier to find work	79.7
IT skills are taught well in schools	59.7
Online services provided by the city has made it easier to start a new business	58.3
The current internet speed and reliability meet connectivity needs	73.3

Governance

Online public access to city finances has reduced corruption	37.6
Online voting has increased participation	73.2
An online platform where residents can propose ideas has improved city life	52.3
Processing Identification Documents online has reduced waiting times	76.7

Tel Aviv

SMART CITY RANKING

91

Out of 141

59 out of 118 in 2021

SMART CITY RATING

B

BB in 2021

FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
462,210	0.919

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.906	0.919	0.917	0.919	+0.002
Life expectancy at birth	82.8	83.0	82.4	82.3	-0.1
Expected years of schooling	16.0	16.2	16.1	16.1	+0.0
Mean years of schooling	13.0	13.0	13.4	13.4	+0.0
GNI per capita (PPP $)	33,650	40,187	39,015	41,524	+2,509

PRIORITY AREAS

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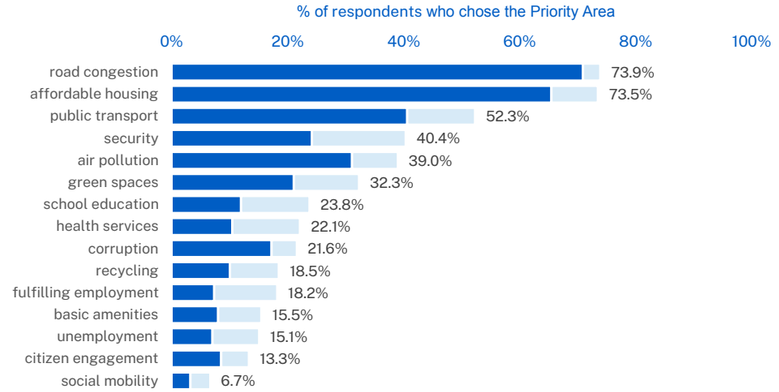

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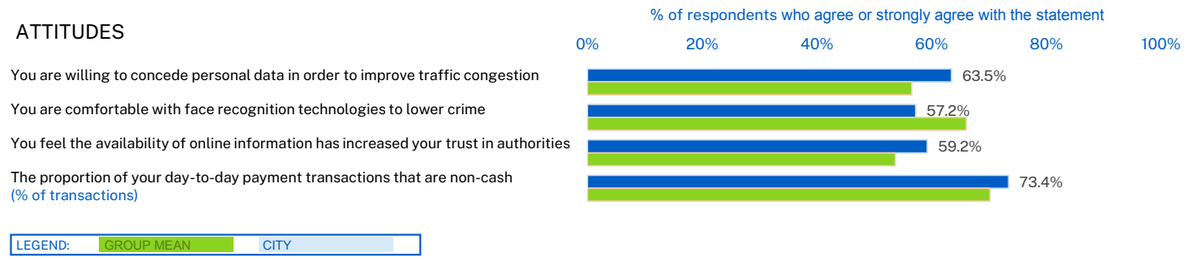


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	48.1
Recycling services are satisfactory	55.8
Public safety is not a problem	46.3
Air pollution is not a problem	27.9
Medical services provision is satisfactory	67.0
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	16.4

Mobility

Traffic congestion is not a problem	10.3
Public transport is satisfactory	33.7

Activities

Green spaces are satisfactory	48.6
Cultural activities (shows, bars, and museums) are satisfactory	76.0

Opportunities (Work & School)

Employment finding services are readily available	52.7
Most children have access to a good school	62.1
Lifelong learning opportunities are provided by local institutions	57.0
Businesses are creating new jobs	60.7
Minorities feel welcome	41.9

Governance

Information on local government decisions are easily accessible	53.9
Corruption of city officials is not an issue of concern	36.7
Residents contribute to decision making of local government	37.8
Residents provide feedback on local government projects	48.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	57.9
A website or App allows residents to easily give away unwanted items	57.0
Free public wifi has improved access to city services	51.3
CCTV cameras has made residents feel safer	48.1
A website or App allows residents to effectively monitor air pollution	33.8
Arranging medical appointments online has improved access	76.8

Mobility

Car-sharing Apps have reduced congestion	33.3
Apps that direct you to an available parking space have reduced journey time	38.8
Bicycle hiring has reduced congestion	49.5
Online scheduling and ticket sales has made public transport easier to use	61.3
The city provides information on traffic congestion through mobile phones	45.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	77.3

Opportunities (Work & School)

Online access to job listings has made it easier to find work	64.3
IT skills are taught well in schools	55.2
Online services provided by the city has made it easier to start a new business	52.1
The current internet speed and reliability meet connectivity needs	62.1

Governance

Online public access to city finances has reduced corruption	35.3
Online voting has increased participation	37.0
An online platform where residents can propose ideas has improved city life	48.1
Processing Identification Documents online has reduced waiting times	59.2

The Hague

SMART CITY RANKING

43

Out of 141

▼

35 out of 118 in 2021

SMART CITY RATING

A

BB in 2021

FACTOR RATINGS

A

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,726,050	0.941

(Eurostat)

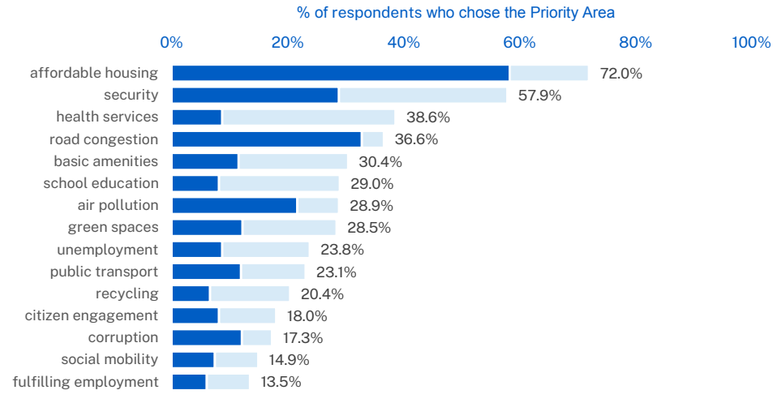
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.934	0.944	0.939	0.941	+0.002
Life expectancy at birth	82.1	82.3	81.6	81.7	+0.0
Expected years of schooling	18.0	18.5	18.0	18.0	+0.0
Mean years of schooling	12.2	12.4	12.6	12.6	+0.0
GNI per capita (PPP $)	50,013	57,707	53,504	55,979	+2,476

PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most 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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



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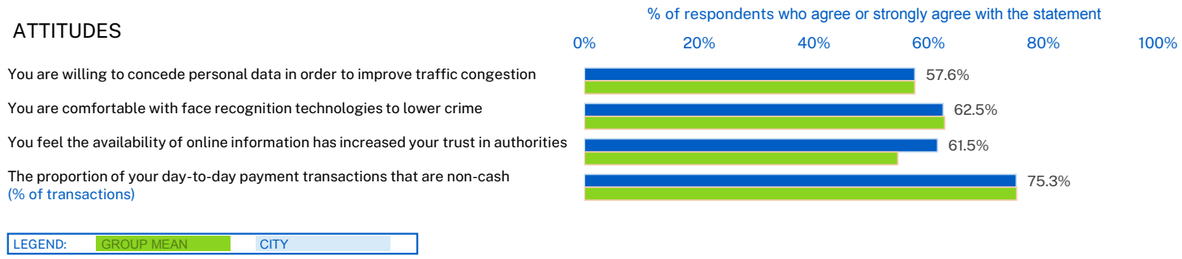

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	67.4
Recycling services are satisfactory	67.3
Public safety is not a problem	52.8
Air pollution is not a problem	40.8
Medical services provision is satisfactory	74.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	28.4

Mobility

Traffic congestion is not a problem	29.5
Public transport is satisfactory	66.3

Activities

Green spaces are satisfactory	63.5
Cultural activities (shows, bars, and museums) are satisfactory	75.8

Opportunities (Work & School)

Employment finding services are readily available	66.3
Most children have access to a good school	72.5
Lifelong learning opportunities are provided by local institutions	63.1
Businesses are creating new jobs	62.4
Minorities feel welcome	58.8

Governance

Information on local government decisions are easily accessible	60.2
Corruption of city officials is not an issue of concern	48.8
Residents contribute to decision making of local government	53.0
Residents provide feedback on local government projects	57.6

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.3
A website or App allows residents to easily give away unwanted items	56.2
Free public wifi has improved access to city services	54.7
CCTV cameras has made residents feel safer	53.6
A website or App allows residents to effectively monitor air pollution	38.8
Arranging medical appointments online has improved access	62.7

Mobility

Car-sharing Apps have reduced congestion	35.5
Apps that direct you to an available parking space have reduced journey time	44.3
Bicycle hiring has reduced congestion	47.3
Online scheduling and ticket sales has made public transport easier to use	62.1
The city provides information on traffic congestion through mobile phones	45.0

Activities

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

Opportunities (Work & School)

Online access to job listings has made it easier to find work	65.2
IT skills are taught well in schools	53.5
Online services provided by the city has made it easier to start a new business	49.6
The current internet speed and reliability meet connectivity needs	67.4

Governance

Online public access to city finances has reduced corruption	38.7
Online voting has increased participation	46.4
An online platform where residents can propose ideas has improved city life	51.5
Processing Identification Documents online has reduced waiting times	55.8

Tianjin

SMART CITY RANKING

67

Out of 141

▼

50 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

B

STRUCTURES

BB

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
14,011,828	0.844

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

PRIORITY AREAS

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

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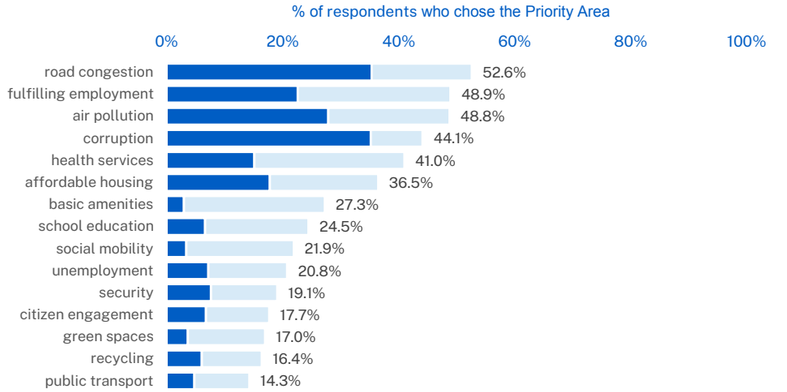

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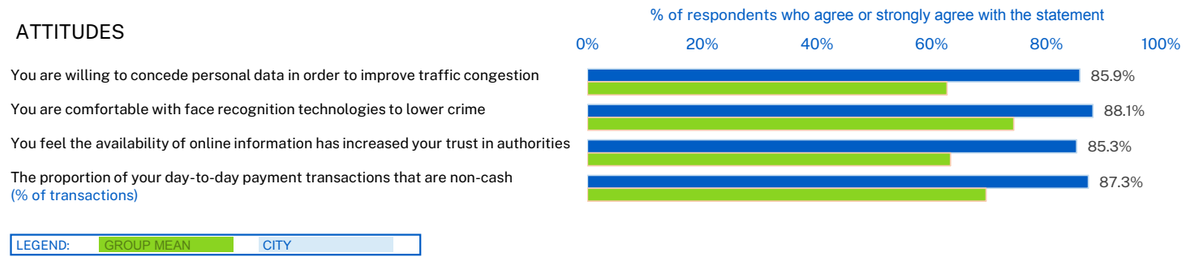

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

Basic sanitation meets the needs of the poorest areas	78.2
Recycling services are satisfactory	70.2
Public safety is not a problem	72.7
Air pollution is not a problem	51.2
Medical services provision is satisfactory	68.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	59.5

Mobility

Traffic congestion is not a problem	42.3
Public transport is satisfactory	63.7

Activities

Green spaces are satisfactory	73.1
Cultural activities (shows, bars, and museums) are satisfactory	76.7

Opportunities (Work & School)

Employment finding services are readily available	72.9
Most children have access to a good school	75.0
Lifelong learning opportunities are provided by local institutions	62.1
Businesses are creating new jobs	64.7
Minorities feel welcome	77.4

Governance

Information on local government decisions are easily accessible	65.8
Corruption of city officials is not an issue of concern	42.6
Residents contribute to decision making of local government	48.5
Residents provide feedback on local government projects	59.1

TECHNOLOGIES

Score

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	78.5
A website or App allows residents to easily give away unwanted items	71.2
Free public wifi has improved access to city services	74.7
CCTV cameras has made residents feel safer	79.6
A website or App allows residents to effectively monitor air pollution	71.6
Arranging medical appointments online has improved access	87.4

Mobility

Car-sharing Apps have reduced congestion	68.7
Apps that direct you to an available parking space have reduced journey time	74.2
Bicycle hiring has reduced congestion	76.4
Online scheduling and ticket sales has made public transport easier to use	83.9
The city provides information on traffic congestion through mobile phones	85.1

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	87.6

Opportunities (Work & School)

Online access to job listings has made it easier to find work	80.5
IT skills are taught well in schools	74.5
Online services provided by the city has made it easier to start a new business	71.0
The current internet speed and reliability meet connectivity needs	84.8

Governance

Online public access to city finances has reduced corruption	60.7
Online voting has increased participation	62.7
An online platform where residents can propose ideas has improved city life	71.3
Processing Identification Documents online has reduced waiting times	74.7

Tokyo

SMART CITY RANKING

72

Out of 141

▼

67 out of 118 in 2021

SMART CITY RATING

BB

BB in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
9,733,276	0.951

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.915	0.919	0.923	0.925	+0.002
Life expectancy at birth	84.5	84.6	84.7	84.8	+0.1
Expected years of schooling	15.2	15.2	15.2	15.2	+0.0
Mean years of schooling	12.8	12.9	13.4	13.4	+0.0
GNI per capita (PPP $)	40,799	42,932	41,487	42,274	+787

PRIORITY AREAS

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

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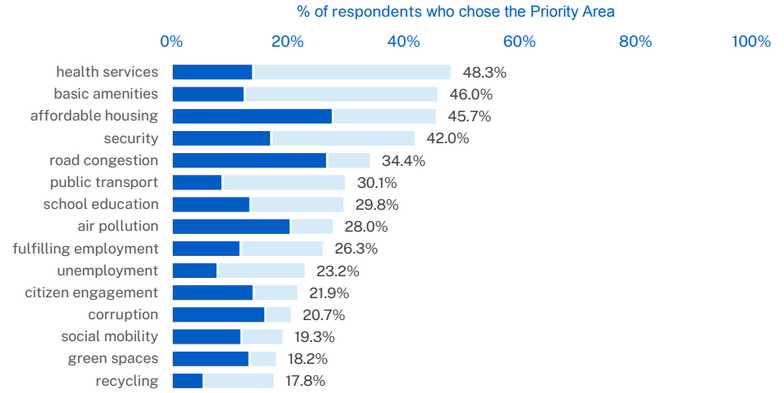

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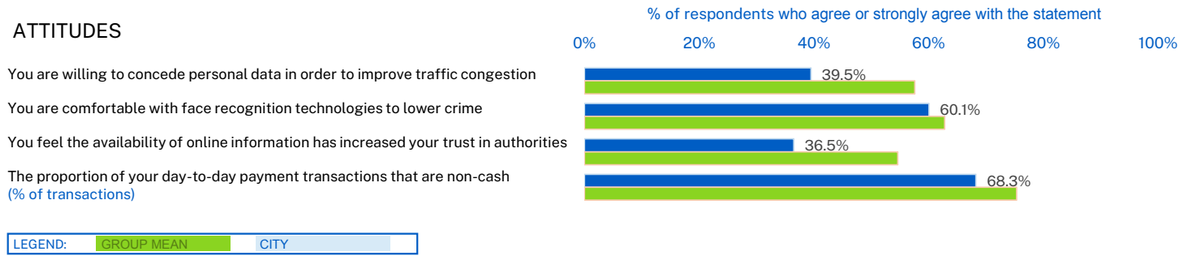

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	70.9
Recycling services are satisfactory	64.0
Public safety is not a problem	60.1
Air pollution is not a problem	40.8
Medical services provision is satisfactory	67.0
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	42.1

Mobility

	Score
Traffic congestion is not a problem	31.5
Public transport is satisfactory	69.8

Activities

	Score
Green spaces are satisfactory	39.4
Cultural activities (shows, bars, and museums) are satisfactory	61.5

Opportunities (Work & School)

	Score
Employment finding services are readily available	57.5
Most children have access to a good school	54.4
Lifelong learning opportunities are provided by local institutions	55.8
Businesses are creating new jobs	49.2
Minorities feel welcome	37.7

Governance

	Score
Information on local government decisions are easily accessible	51.8
Corruption of city officials is not an issue of concern	32.2
Residents contribute to decision making of local government	40.7
Residents provide feedback on local government projects	37.6

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	43.0
A website or App allows residents to easily give away unwanted items	59.2
Free public wifi has improved access to city services	49.6
CCTV cameras has made residents feel safer	54.8
A website or App allows residents to effectively monitor air pollution	35.7
Arranging medical appointments online has improved access	53.1

Mobility

	Score
Car-sharing Apps have reduced congestion	24.8
Apps that direct you to an available parking space have reduced journey time	34.0
Bicycle hiring has reduced congestion	27.5
Online scheduling and ticket sales has made public transport easier to use	50.9
The city provides information on traffic congestion through mobile phones	59.9

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	57.8

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	56.5
IT skills are taught well in schools	34.7
Online services provided by the city has made it easier to start a new business	38.9
The current internet speed and reliability meet connectivity needs	55.1

Governance

	Score
Online public access to city finances has reduced corruption	28.1
Online voting has increased participation	29.9
An online platform where residents can propose ideas has improved city life	33.1
Processing Identification Documents online has reduced waiting times	46.3

Toronto

SMART CITY RANKING

48

Out of 141

▼

31 out of 118 in 2021

SMART CITY RATING

BBB

A in 2021

FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,731,570	0.943

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.933	0.937	0.931	0.936	+0.005
Life expectancy at birth	82.1	82.4	82.1	82.7	+0.6
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	13.8	8.7	8.8	8.8	+0.0
GNI per capita (PPP $)	18,371	18,486	18,754	19,974	+1,220

PRIORITY AREAS

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

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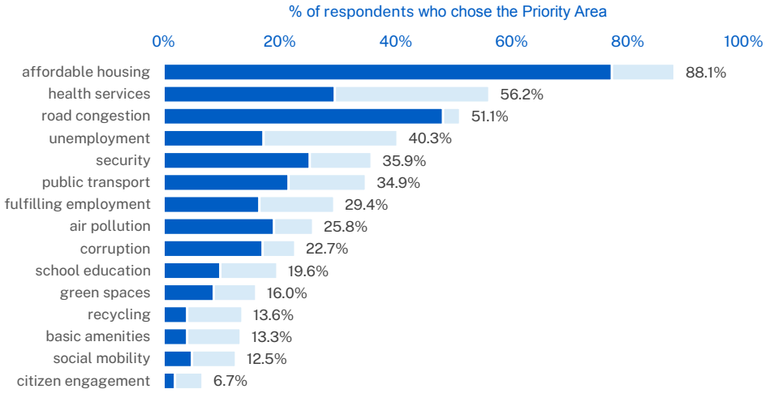

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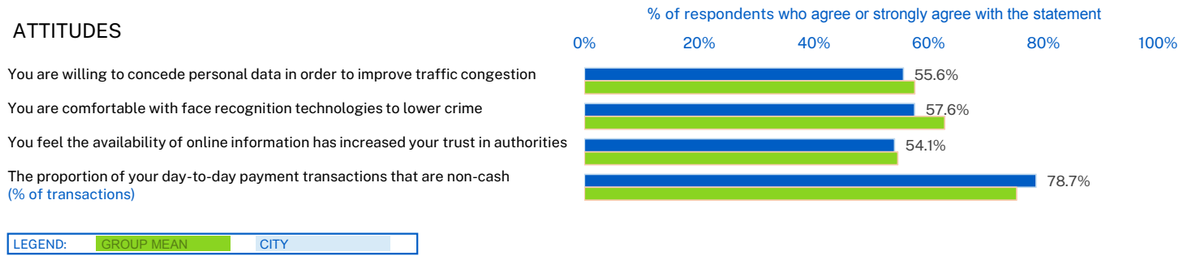

Tunis

SMART CITY RANKING

137

Out of 141

not out of 118 in 2021

SMART CITY RATING

D

not in 2021

FACTOR RATINGS

D

STRUCTURES

D

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
2,439,404	0.775

(UN World Urbanisation Prospects 2022 estimate)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.743	0.745	0.737	0.731	-0.006
Life expectancy at birth	76.0	76.0	75.3	73.8	-1.5
Expected years of schooling	15.3	15.4	15.4	15.4	+0.0
Mean years of schooling	7.4	7.4	7.4	7.4	+0.0
GNI per capita (PPP $)	11,027	10,910	10,046	10,258	+211

PRIORITY AREAS

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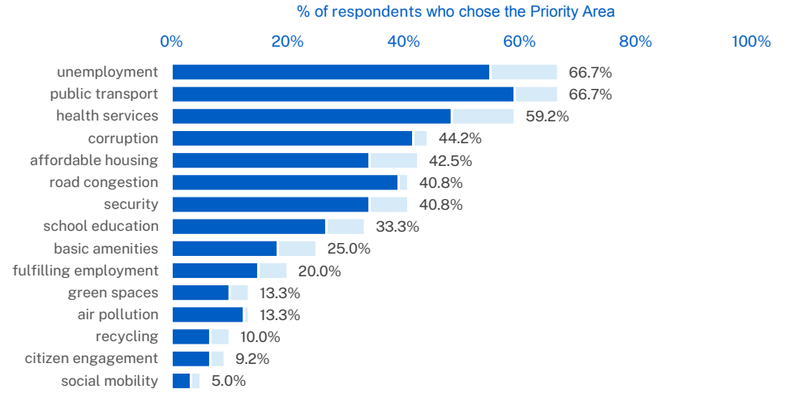

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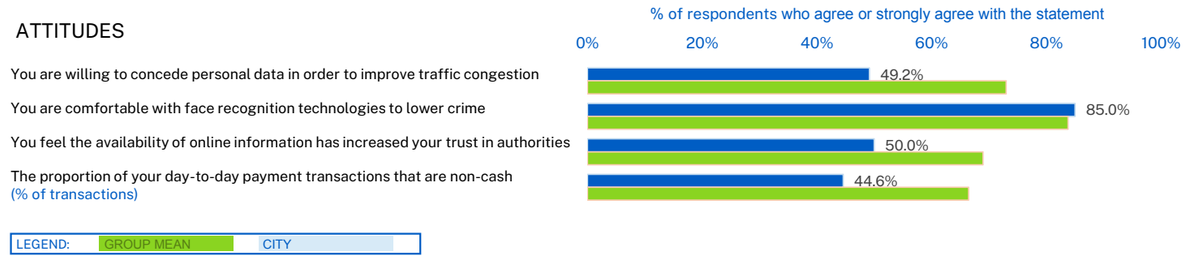


Vancouver

SMART CITY RANKING

42

Out of 141

28 out of 118 in 2021

SMART CITY RATING

A

A in 2021

FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

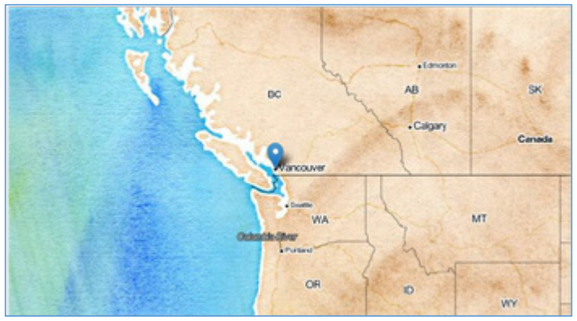
All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
631,490	0.944

(UN Data)



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

Country	2018	2019	2020	2021	1 yr change
HDI	0.933	0.937	0.931	0.936	+0.005
Life expectancy at birth	82.1	82.4	82.1	82.7	+0.6
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	13.8	8.7	8.8	8.8	+0.0
GNI per capita (PPP $)	18,371	18,486	18,754	19,974	+1,220

PRIORITY AREAS

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

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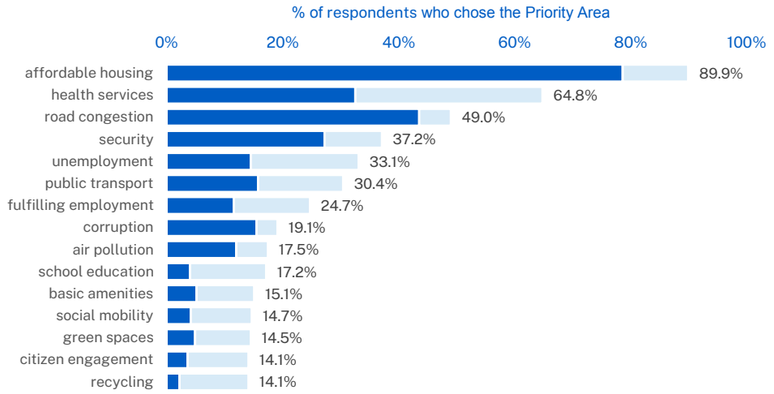

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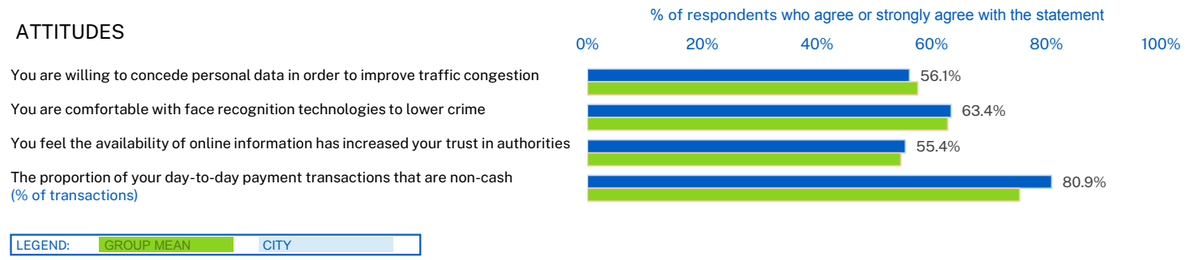

Vienna

SMART CITY RANKING

28

Out of 141

▼

20 out of 118 in 2021

SMART CITY RATING

AA

AA in 2021

FACTOR RATINGS

AA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,920,949	0.942

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.914	0.922	0.913	0.916	+0.003
Life expectancy at birth	81.4	81.5	81.5	81.6	+0.1
Expected years of schooling	16.3	16.1	16.0	16.0	+0.0
Mean years of schooling	12.6	12.5	12.3	12.3	+0.0
GNI per capita (PPP $)	46,231	56,197	51,574	53,619	+2,044

PRIORITY AREAS

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

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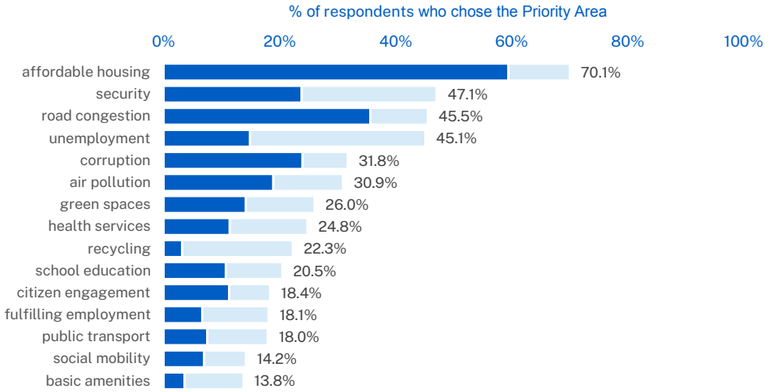
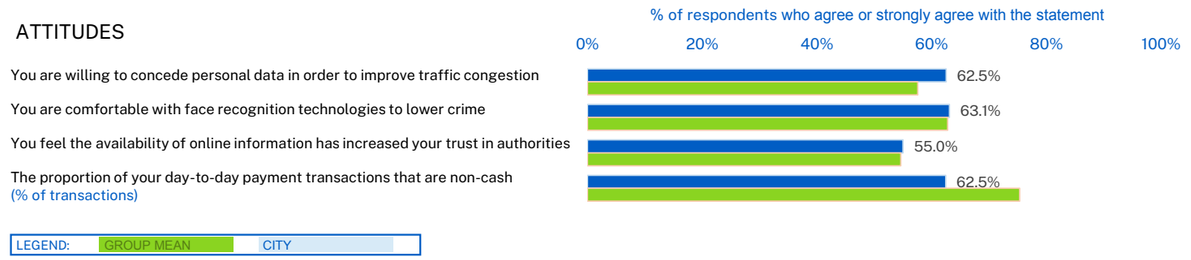


ATTITUDES



STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	78.9
Recycling services are satisfactory	79.6
Public safety is not a problem	62.1
Air pollution is not a problem	52.1
Medical services provision is satisfactory	76.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	27.2

Mobility

	Score
Traffic congestion is not a problem	37.7
Public transport is satisfactory	74.5

Activities

	Score
Green spaces are satisfactory	66.7
Cultural activities (shows, bars, and museums) are satisfactory	84.9

Opportunities (Work & School)

	Score
Employment finding services are readily available	65.8
Most children have access to a good school	67.8
Lifelong learning opportunities are provided by local institutions	69.4
Businesses are creating new jobs	67.8
Minorities feel welcome	61.3

Governance

	Score
Information on local government decisions are easily accessible	59.1
Corruption of city officials is not an issue of concern	43.1
Residents contribute to decision making of local government	46.8
Residents provide feedback on local government projects	53.1

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	49.1
A website or App allows residents to easily give away unwanted items	62.0
Free public wifi has improved access to city services	56.5
CCTV cameras has made residents feel safer	44.5
A website or App allows residents to effectively monitor air pollution	38.6
Arranging medical appointments online has improved access	59.5

Mobility

	Score
Car-sharing Apps have reduced congestion	37.3
Apps that direct you to an available parking space have reduced journey time	41.2
Bicycle hiring has reduced congestion	49.0
Online scheduling and ticket sales has made public transport easier to use	70.5
The city provides information on traffic congestion through mobile phones	56.5

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	78.6

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	70.7
IT skills are taught well in schools	58.1
Online services provided by the city has made it easier to start a new business	52.2
The current internet speed and reliability meet connectivity needs	67.6

Governance

	Score
Online public access to city finances has reduced corruption	37.3
Online voting has increased participation	48.4
An online platform where residents can propose ideas has improved city life	47.2
Processing Identification Documents online has reduced waiting times	58.4

Vilnius

SMART CITY RANKING

65

Out of 141

not out of 118 in 2021

SMART CITY RATING

BB

not in 2021

FACTOR RATINGS

BB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
829,983	0.913

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.880	0.884	0.879	0.875	-0.004
Life expectancy at birth	75.7	76.2	75.1	73.7	-1.3
Expected years of schooling	16.6	16.3	16.3	16.3	+0.0
Mean years of schooling	13.3	13.4	13.5	13.5	+0.0
GNI per capita (PPP $)	33,963	35,705	36,077	37,931	+1,855

PRIORITY AREAS

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

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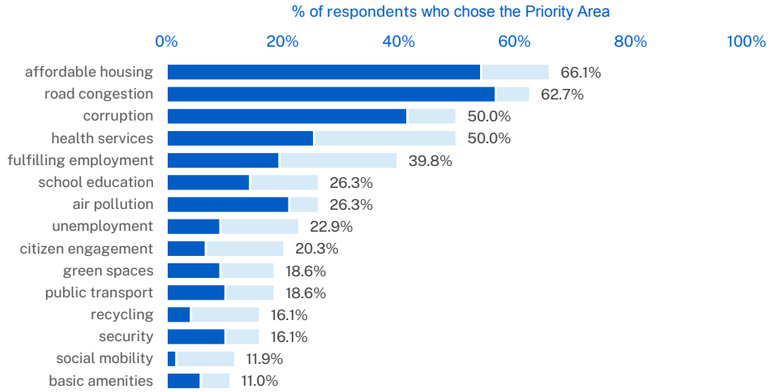

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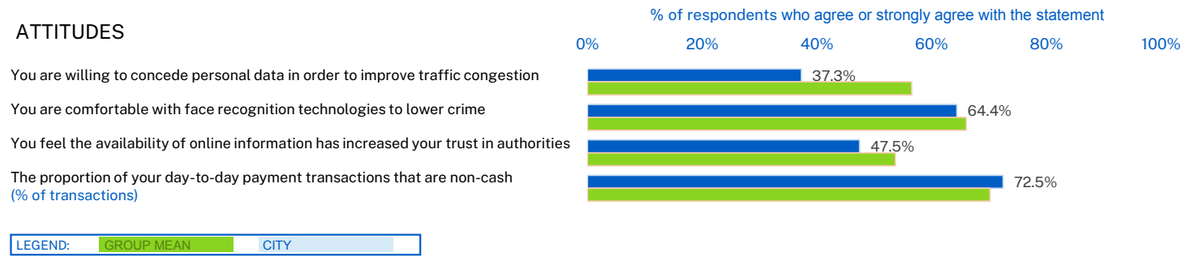

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score

Health & Safety

	0 20 40 60 80 100
Basic sanitation meets the needs of the poorest areas	71.8
Recycling services are satisfactory	75.3
Public safety is not a problem	59.5
Air pollution is not a problem	46.6
Medical services provision is satisfactory	57.2
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	27.3

Mobility

Traffic congestion is not a problem	18.4
Public transport is satisfactory	55.2

Activities

Green spaces are satisfactory	64.4
Cultural activities (shows, bars, and museums) are satisfactory	75.8

Opportunities (Work & School)

Employment finding services are readily available	71.5
Most children have access to a good school	56.8
Lifelong learning opportunities are provided by local institutions	54.1
Businesses are creating new jobs	60.5
Minorities feel welcome	47.9

Governance

Information on local government decisions are easily accessible	48.3
Corruption of city officials is not an issue of concern	26.3
Residents contribute to decision making of local government	33.9
Residents provide feedback on local government projects	54.4

TECHNOLOGIES

Score

Health & Safety

	0 20 40 60 80 100
Online reporting of city maintenance problems provides a speedy solution	53.5
A website or App allows residents to easily give away unwanted items	73.9
Free public wifi has improved access to city services	64.0
CCTV cameras has made residents feel safer	59.2
A website or App allows residents to effectively monitor air pollution	56.5
Arranging medical appointments online has improved access	60.2

Mobility

Car-sharing Apps have reduced congestion	37.4
Apps that direct you to an available parking space have reduced journey time	47.9
Bicycle hiring has reduced congestion	42.9
Online scheduling and ticket sales has made public transport easier to use	75.8
The city provides information on traffic congestion through mobile phones	55.4

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	81.2

Opportunities (Work & School)

Online access to job listings has made it easier to find work	76.1
IT skills are taught well in schools	67.2
Online services provided by the city has made it easier to start a new business	56.2
The current internet speed and reliability meet connectivity needs	78.2

Governance

Online public access to city finances has reduced corruption	35.3
Online voting has increased participation	43.8
An online platform where residents can propose ideas has improved city life	46.8
Processing Identification Documents online has reduced waiting times	66.5

Warsaw

SMART CITY RANKING

44

Out of 141

▼

41 out of 118 in 2021

SMART CITY RATING

BBB

BB in 2021

FACTOR RATINGS

BBB

STRUCTURES

BBB

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
3,095,025	0.926

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.872	0.880	0.876	0.876	+0.000
Life expectancy at birth	78.5	78.7	76.9	76.5	-0.5
Expected years of schooling	16.4	16.3	16.0	16.0	+0.0
Mean years of schooling	12.3	12.5	13.2	13.2	+0.0
GNI per capita (PPP $)	27,626	31,623	31,164	33,034	+1,869

PRIORITY AREAS

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

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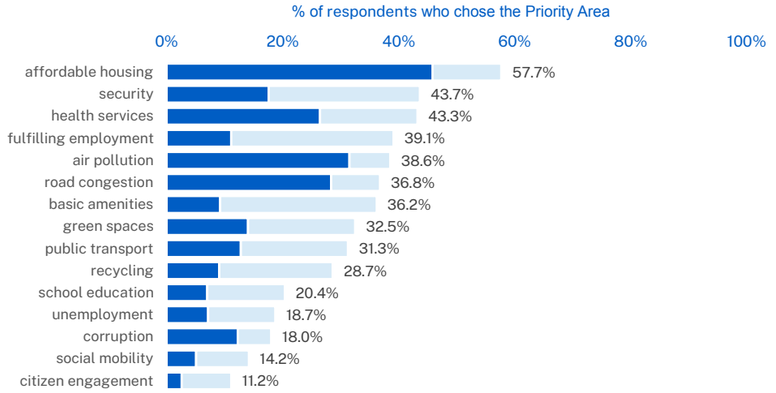

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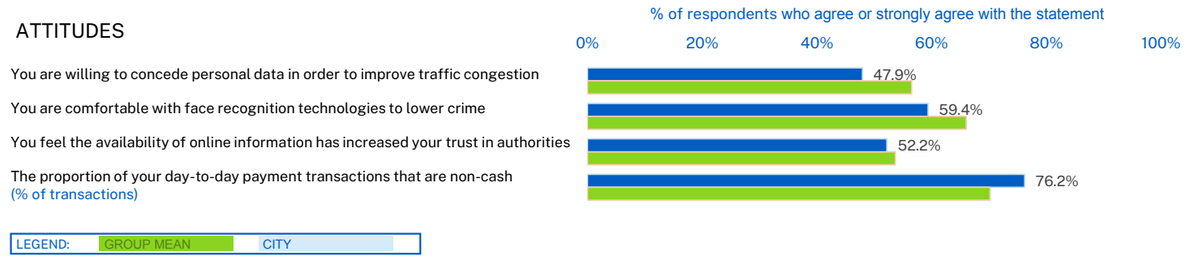


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	64.1
Recycling services are satisfactory	61.3
Public safety is not a problem	61.1
Air pollution is not a problem	31.6
Medical services provision is satisfactory	46.3
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	28.6

Mobility

Traffic congestion is not a problem	31.4
Public transport is satisfactory	63.0

Activities

Green spaces are satisfactory	63.0
Cultural activities (shows, bars, and museums) are satisfactory	77.6

Opportunities (Work & School)

Employment finding services are readily available	65.4
Most children have access to a good school	68.4
Lifelong learning opportunities are provided by local institutions	70.4
Businesses are creating new jobs	69.3
Minorities feel welcome	58.3

Governance

Information on local government decisions are easily accessible	62.1
Corruption of city officials is not an issue of concern	40.7
Residents contribute to decision making of local government	54.7
Residents provide feedback on local government projects	63.3

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	51.3
A website or App allows residents to easily give away unwanted items	62.2
Free public wifi has improved access to city services	62.6
CCTV cameras has made residents feel safer	55.2
A website or App allows residents to effectively monitor air pollution	64.4
Arranging medical appointments online has improved access	66.4

Mobility

Car-sharing Apps have reduced congestion	49.1
Apps that direct you to an available parking space have reduced journey time	50.7
Bicycle hiring has reduced congestion	59.6
Online scheduling and ticket sales has made public transport easier to use	71.8
The city provides information on traffic congestion through mobile phones	50.1

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	78.7

Opportunities (Work & School)

Online access to job listings has made it easier to find work	78.7
IT skills are taught well in schools	58.7
Online services provided by the city has made it easier to start a new business	63.7
The current internet speed and reliability meet connectivity needs	71.3

Governance

Online public access to city finances has reduced corruption	45.2
Online voting has increased participation	57.6
An online platform where residents can propose ideas has improved city life	63.7
Processing Identification Documents online has reduced waiting times	67.3

Washington D.C.

SMART CITY RANKING

39

Out of 141

▼

26 out of 118 in 2021

SMART CITY RATING

BB

A in 2021

FACTOR RATINGS

BB

STRUCTURES

BB

TECHNOLOGIES

GROUP

2

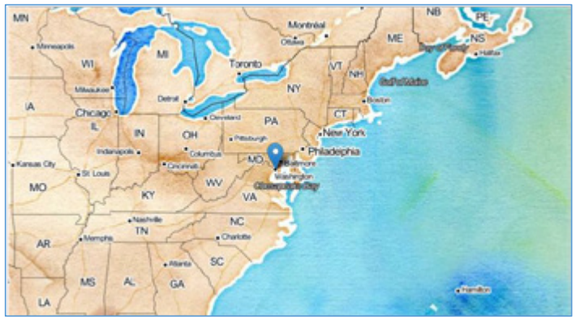
All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
689,545	0.940

(UN Data)



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

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP $)	56,140	63,826	61,462	64,765	+3,304

PRIORITY AREAS

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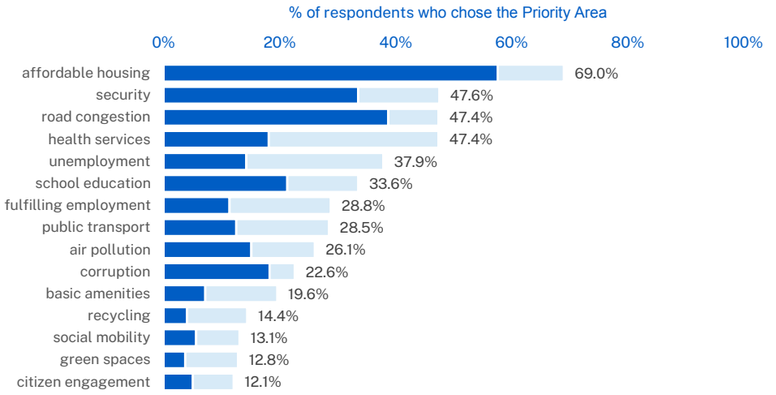

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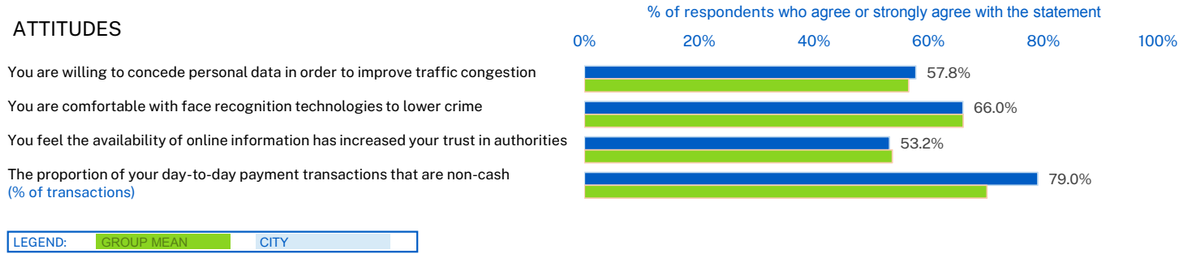

Wellington

SMART CITY RANKING

23

Out of 141

not out of 118 in 2021

SMART CITY RATING

A

not in 2021

FACTOR RATINGS

A

STRUCTURES

BBB

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
201,786	0.958

(UN Data)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.936	0.937	0.936	0.937	+0.001
Life expectancy at birth	82.4	82.6	82.7	82.5	-0.3
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	13.1	7.9	8.7	8.7	+0.0
GNI per capita (PPP $)	16,129	17,781	16,804	17,030	+226

PRIORITY AREAS

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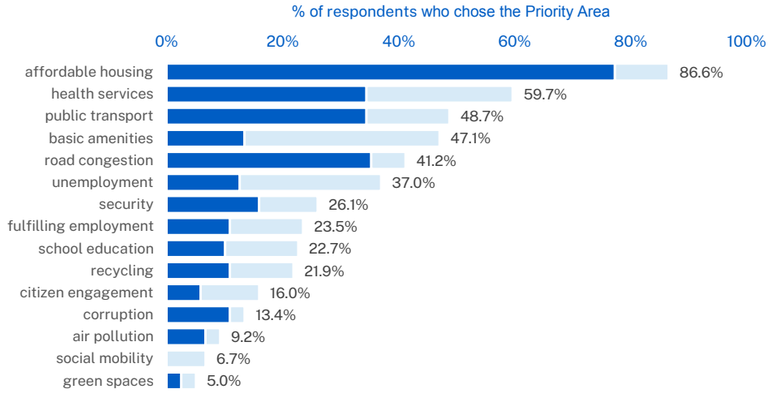

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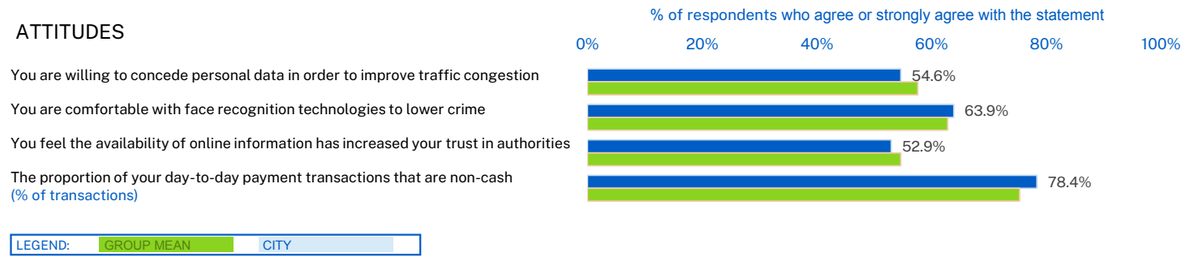

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	68.3
Recycling services are satisfactory	69.0
Public safety is not a problem	53.5
Air pollution is not a problem	63.3
Medical services provision is satisfactory	52.9
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	19.2

Mobility

Traffic congestion is not a problem	32.5
Public transport is satisfactory	47.2

Activities

Green spaces are satisfactory	73.0
Cultural activities (shows, bars, and museums) are satisfactory	75.1

Opportunities (Work & School)

Employment finding services are readily available	68.6
Most children have access to a good school	69.7
Lifelong learning opportunities are provided by local institutions	69.6
Businesses are creating new jobs	60.4
Minorities feel welcome	61.6

Governance

Information on local government decisions are easily accessible	53.1
Corruption of city officials is not an issue of concern	53.2
Residents contribute to decision making of local government	51.8
Residents provide feedback on local government projects	59.8

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	44.3
A website or App allows residents to easily give away unwanted items	61.9
Free public wifi has improved access to city services	61.2
CCTV cameras has made residents feel safer	50.1
A website or App allows residents to effectively monitor air pollution	33.3
Arranging medical appointments online has improved access	57.3

Mobility

Car-sharing Apps have reduced congestion	30.0
Apps that direct you to an available parking space have reduced journey time	36.1
Bicycle hiring has reduced congestion	38.8
Online scheduling and ticket sales has made public transport easier to use	51.7
The city provides information on traffic congestion through mobile phones	48.0

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	73.7

Opportunities (Work & School)

Online access to job listings has made it easier to find work	74.2
IT skills are taught well in schools	48.6
Online services provided by the city has made it easier to start a new business	41.3
The current internet speed and reliability meet connectivity needs	69.5

Governance

Online public access to city finances has reduced corruption	38.7
Online voting has increased participation	43.7
An online platform where residents can propose ideas has improved city life	40.8
Processing Identification Documents online has reduced waiting times	51.8

Zagreb

SMART CITY RANKING

106

Out of 141

not out of 118 in 2021

SMART CITY RATING

CCC

not in 2021

FACTOR RATINGS

B

STRUCTURES

CCC

TECHNOLOGIES

GROUP

2

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
809,235	0.916

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.856	0.861	0.855	0.858	+0.003
Life expectancy at birth	78.3	78.7	78.0	77.6	-0.4
Expected years of schooling	15.2	15.1	15.1	15.1	+0.0
Mean years of schooling	12.1	12.2	12.2	12.2	+0.0
GNI per capita (PPP $)	27,784	28,898	27,185	30,132	+2,947

PRIORITY AREAS

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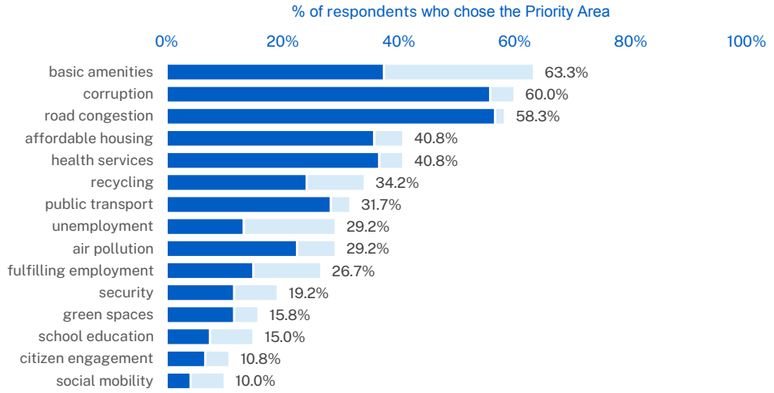

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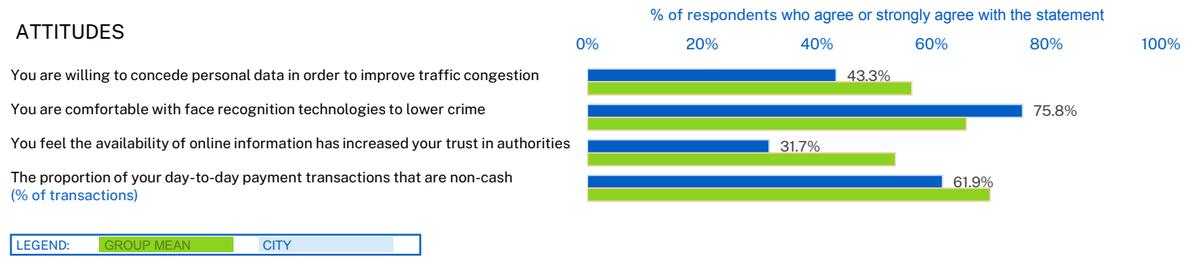

LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Health & Safety

	Score
Basic sanitation meets the needs of the poorest areas	43.1
Recycling services are satisfactory	40.0
Public safety is not a problem	64.3
Air pollution is not a problem	35.8
Medical services provision is satisfactory	38.6
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	17.9

Mobility

	Score
Traffic congestion is not a problem	12.5
Public transport is satisfactory	32.1

Activities

	Score
Green spaces are satisfactory	50.3
Cultural activities (shows, bars, and museums) are satisfactory	70.0

Opportunities (Work & School)

	Score
Employment finding services are readily available	58.9
Most children have access to a good school	56.7
Lifelong learning opportunities are provided by local institutions	50.3
Businesses are creating new jobs	48.2
Minorities feel welcome	58.3

Governance

	Score
Information on local government decisions are easily accessible	44.9
Corruption of city officials is not an issue of concern	17.2
Residents contribute to decision making of local government	25.6
Residents provide feedback on local government projects	31.9

TECHNOLOGIES

Health & Safety

	Score
Online reporting of city maintenance problems provides a speedy solution	34.0
A website or App allows residents to easily give away unwanted items	47.9
Free public wifi has improved access to city services	56.8
CCTV cameras has made residents feel safer	43.1
A website or App allows residents to effectively monitor air pollution	45.1
Arranging medical appointments online has improved access	48.1

Mobility

	Score
Car-sharing Apps have reduced congestion	28.5
Apps that direct you to an available parking space have reduced journey time	29.7
Bicycle hiring has reduced congestion	28.3
Online scheduling and ticket sales has made public transport easier to use	54.4
The city provides information on traffic congestion through mobile phones	32.4

Activities

	Score
Online purchasing of tickets to shows and museums has made it easier to attend	77.2

Opportunities (Work & School)

	Score
Online access to job listings has made it easier to find work	66.5
IT skills are taught well in schools	58.1
Online services provided by the city has made it easier to start a new business	47.4
The current internet speed and reliability meet connectivity needs	60.3

Governance

	Score
Online public access to city finances has reduced corruption	26.1
Online voting has increased participation	36.5
An online platform where residents can propose ideas has improved city life	35.8
Processing Identification Documents online has reduced waiting times	55.8

Zaragoza

SMART CITY RANKING

54

Out of 141

▼

51 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

B

STRUCTURES

CC

TECHNOLOGIES

GROUP

3

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,331,133	0.912

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.893	0.904	0.899	0.905	+0.006
Life expectancy at birth	83.4	83.6	82.3	83.0	+0.7
Expected years of schooling	17.9	17.6	17.9	17.9	+0.0
Mean years of schooling	9.8	10.3	10.6	10.6	+0.0
GNI per capita (PPP $)	35,041	40,975	36,516	38,354	+1,838

PRIORITY AREAS

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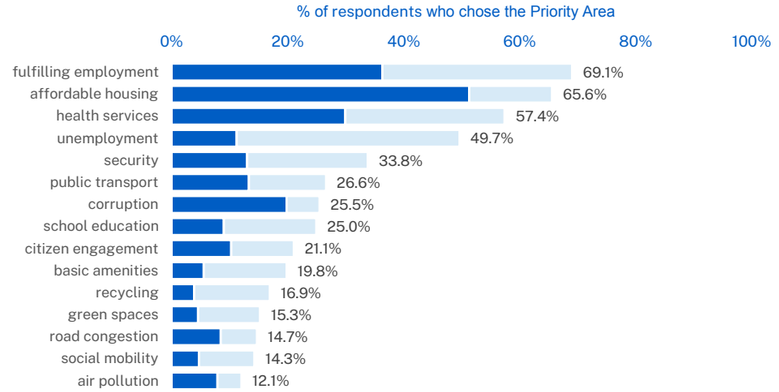

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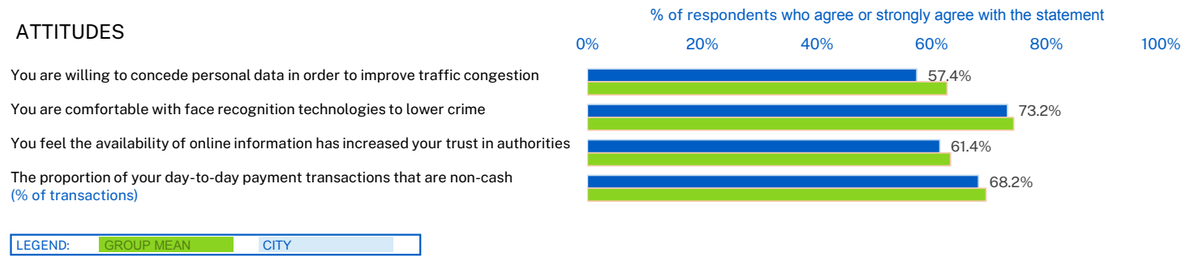


LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score: 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	68.1
Recycling services are satisfactory	74.0
Public safety is not a problem	67.9
Air pollution is not a problem	53.3
Medical services provision is satisfactory	58.7
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	30.7

Mobility

Traffic congestion is not a problem	49.9
Public transport is satisfactory	67.0

Activities

Green spaces are satisfactory	80.3
Cultural activities (shows, bars, and museums) are satisfactory	77.6

Opportunities (Work & School)

Employment finding services are readily available	74.6
Most children have access to a good school	73.2
Lifelong learning opportunities are provided by local institutions	73.7
Businesses are creating new jobs	51.4
Minorities feel welcome	63.0

Governance

Information on local government decisions are easily accessible	61.0
Corruption of city officials is not an issue of concern	44.5
Residents contribute to decision making of local government	44.1
Residents provide feedback on local government projects	49.0

TECHNOLOGIES

Score: 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	48.9
A website or App allows residents to easily give away unwanted items	56.4
Free public wifi has improved access to city services	48.4
CCTV cameras has made residents feel safer	46.2
A website or App allows residents to effectively monitor air pollution	45.5
Arranging medical appointments online has improved access	71.1

Mobility

Car-sharing Apps have reduced congestion	44.4
Apps that direct you to an available parking space have reduced journey time	45.0
Bicycle hiring has reduced congestion	60.5
Online scheduling and ticket sales has made public transport easier to use	62.9
The city provides information on traffic congestion through mobile phones	51.0

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	83.1

Opportunities (Work & School)

Online access to job listings has made it easier to find work	67.2
IT skills are taught well in schools	55.2
Online services provided by the city has made it easier to start a new business	50.4
The current internet speed and reliability meet connectivity needs	76.8

Governance

Online public access to city finances has reduced corruption	39.7
Online voting has increased participation	42.4
An online platform where residents can propose ideas has improved city life	48.1
Processing Identification Documents online has reduced waiting times	61.9

Zhuhai

SMART CITY RANKING

60

Out of 141

52 out of 118 in 2021

SMART CITY RATING

CCC

CCC in 2021

FACTOR RATINGS

CCC

STRUCTURES

CCC

TECHNOLOGIES

GROUP

4

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,847,411	0.799

(UN World Urbanisation Prospects 2022 estimate)

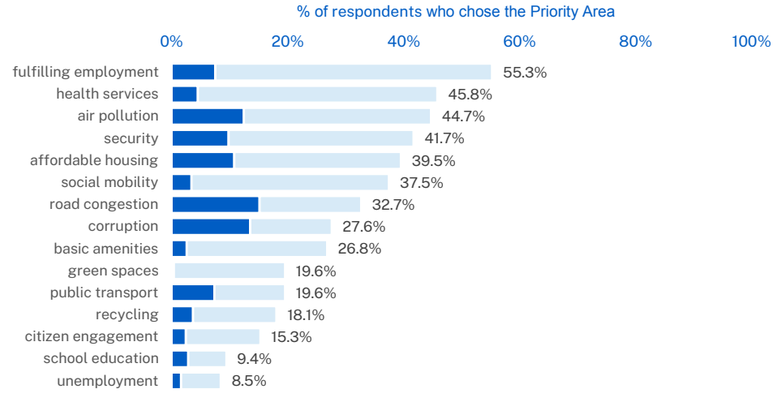
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP $)	16,127	16,057	16,201	17,504	+1,303

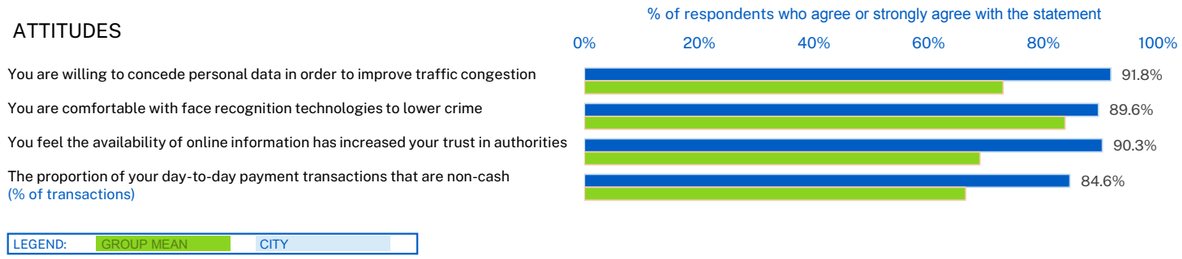
PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most 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, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



ATTITUDES



LEGEND: MIN CITY MEAN GROUP MAX

STRUCTURES

Score 0 20 40 60 80 100

Health & Safety

Basic sanitation meets the needs of the poorest areas	83.6
Recycling services are satisfactory	80.0
Public safety is not a problem	71.4
Air pollution is not a problem	73.8
Medical services provision is satisfactory	84.4
Finding housing with rent equal to 30% or less of a monthly salary is not a problem	75.0

Mobility

Traffic congestion is not a problem	69.7
Public transport is satisfactory	75.5

Activities

Green spaces are satisfactory	87.0
Cultural activities (shows, bars, and museums) are satisfactory	83.6

Opportunities (Work & School)

Employment finding services are readily available	79.6
Most children have access to a good school	74.2
Lifelong learning opportunities are provided by local institutions	73.7
Businesses are creating new jobs	80.1
Minorities feel welcome	85.5

Governance

Information on local government decisions are easily accessible	77.6
Corruption of city officials is not an issue of concern	67.9
Residents contribute to decision making of local government	70.7
Residents provide feedback on local government projects	81.2

TECHNOLOGIES

Score 0 20 40 60 80 100

Health & Safety

Online reporting of city maintenance problems provides a speedy solution	85.9
A website or App allows residents to easily give away unwanted items	80.9
Free public wifi has improved access to city services	84.1
CCTV cameras has made residents feel safer	86.6
A website or App allows residents to effectively monitor air pollution	85.1
Arranging medical appointments online has improved access	88.9

Mobility

Car-sharing Apps have reduced congestion	82.7
Apps that direct you to an available parking space have reduced journey time	83.3
Bicycle hiring has reduced congestion	84.3
Online scheduling and ticket sales has made public transport easier to use	88.3
The city provides information on traffic congestion through mobile phones	87.9

Activities

Online purchasing of tickets to shows and museums has made it easier to attend	88.8

Opportunities (Work & School)

Online access to job listings has made it easier to find work	85.9
IT skills are taught well in schools	79.5
Online services provided by the city has made it easier to start a new business	80.3
The current internet speed and reliability meet connectivity needs	89.7

Governance

Online public access to city finances has reduced corruption	77.8
Online voting has increased participation	78.5
An online platform where residents can propose ideas has improved city life	86.0
Processing Identification Documents online has reduced waiting times	88.6

Zurich

SMART CITY RANKING

1

Out of 141

1 out of 118 in 2021

SMART CITY RATING

AAA

AAA in 2021

FACTOR RATINGS

AAA

STRUCTURES

A

TECHNOLOGIES

GROUP

1

All ratings range from AAA to D

BACKGROUND INFORMATION

City

Population	HDI
1,553,423	0.989

(Eurostat)

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

Country	2018	2019	2020	2021	1 yr change
HDI	0.946	0.955	0.956	0.962	+0.006
Life expectancy at birth	83.6	83.8	83.1	84.0	+0.9
Expected years of schooling	16.2	16.3	16.5	16.5	+0.0
Mean years of schooling	13.4	13.4	13.9	13.9	+0.0
GNI per capita (PPP $)	59,375	69,394	65,011	66,933	+1,922

PRIORITY AREAS

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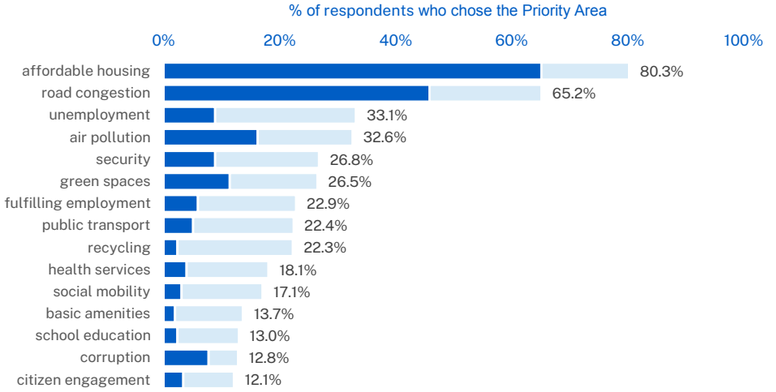
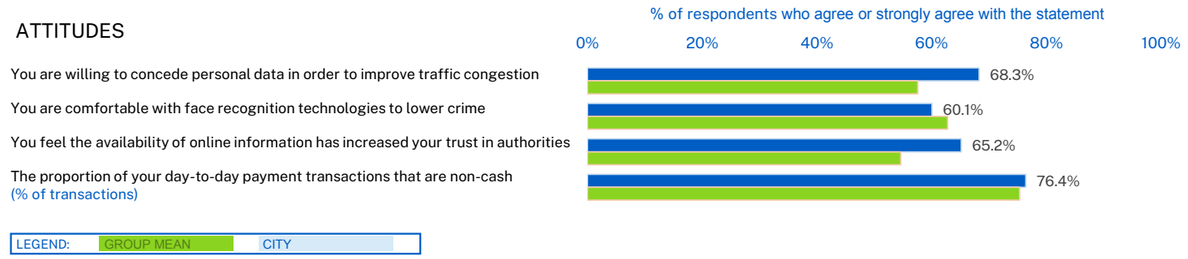


ATTITUDES



IMD / World Competitiveness Center

In partnership with

WeGO
World Smart Sustainable Cities Organization