CITIES OF CHOICE

Are People Happy Where They Live?

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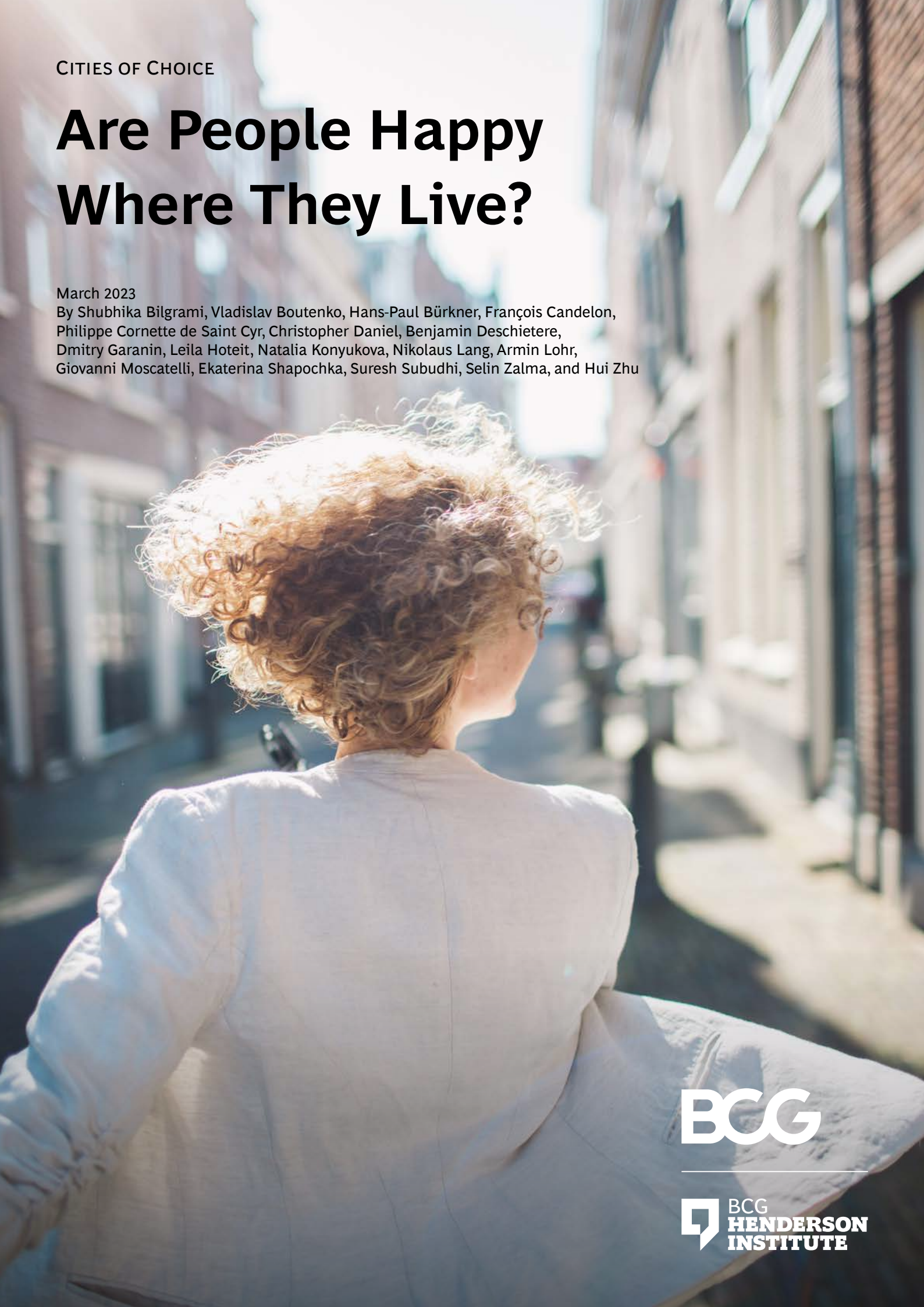

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Foreword

This edition of BCG's *Cities of Choice* report provides important insights into the factors that drive people's choices about where to live. It also delves into what city leaders and stakeholders can do to retain their current residents and attract new ones as the world emerges from the long shadow of COVID-19.

In developing the report, BCG drew on surveys of more than 50,000 people in 79 cities around the world. Participants' survey responses were assessed using more than 150 economic, social, and political metrics and indicators across five dimensions, including economic opportunities and quality of life, and 26 subdimensions, such as safety, housing, and the ability to influence events. BCG then combined these objective metrics of city performance with survey data that captures residents' assessments of what they want from their communities and how well their expectations are being satisfied. The report shows how global cities stack up.

No city is perfect; all have their strengths and weaknesses. London and New York, the world's two most important economic and financial centers, rate poorly on what the report dubs the speed of change—that is, how quickly residents feel their city is changing to meet their needs. Beijing and Shanghai score higher on social capital and speed of change, but lower on quality of life and interactions with authorities. Singapore scores reasonably well across the board, but it does not excel on any one dimension, lowering its overall rank.

Although COVID-19 has not proven to be the fundamental disruptor of cities and urban life that some pundits predicted it would be, the pandemic did accelerate a number of changes that were already underway in the way we live and work. It used to be that most people literally had to live near where they worked; housing markets and labor markets were conterminous. But the pandemic-fueled rise of remote work broke this connection. Now, knowledge and other professional workers can cast their nets much wider, allowing them to take advantage of locations that offer more affordable housing.

This report provides important insights into this shift. In doing so, it sorts cities into four categories: megacenters, the world's largest cities, are home to more than 10 million people each; cruiser weights are cities with more than 3 million people; middleweights are cities with populations of less than 3 million in countries with GDP per capita incomes that are above average; and developing cities are in emerging economies. One of the big findings of the report is that cruiser weight and middleweight cities often outperform megacenters on such factors as cleanliness, income equality, safety, and social connections.

This finding, however, does not portend the decline of megacenters. Knowledge and creative industries remain highly concentrated in superstar cities such as London and New York, which vie with each other as centers of world finance, advertising, and publishing, as well as with other smaller knowledge hubs such as the San Francisco Bay area and Seattle, as well as Bangalore for technology, Los Angeles for entertainment, and Nashville for music. And while older, midcareer people with families may be more likely to opt to move to suburbs, exurbs, and even rural areas in search of green space and affordability, younger people continue to flow into big cities to take advantage of the stimulation, companionship, art and music scenes, and deeper dating pools that they provide, as well as career opportunities.

The biggest impact of the pandemic on cities has been on their downtowns or central business districts. These emerged during the early-to-mid-20th century as places to pack and stack office workers in towers, where they were practically tethered to their desks. Digitization and remote work have made many of those office buildings redundant and hurt the businesses that supported them directly and indirectly. But urban downtowns had begun to change even before the pandemic, adding residents, nightlife, entertainment, and culture. Now they are morphing into veritable central connectivity districts, where people can live, work, play, and, most important, meet with one another 24-7. People are social animals, after all. The need to collaborate, socialize, and interact is what drives them and allows them to create and innovate. Larger, denser cities are still the best places to do those things.

The pandemic has also unmoored many people from their old ways of living, prompting them to ask deep questions about what they truly want. Some are now searching for places to live that better meet their own and their family's needs. With its rich survey data, this report sheds new light on the factors people value the most and where they can be found.

To my mind, the choice of a place to live is one of the three key decisions that we make in life, alongside our choice of vocation and a life partner. In fact, it is the most important, as it affects everything else, including the jobs we can find, our long-term economic prospects, who our friends will be, and the conditions in which our children will grow up. But while we hear no end of advice about our career and romantic choices, most of us have very little to go on when choosing where to live. Too many allow inertia to make the decision for them. This *Cities of Choice* report fills that gap with its city rankings and, especially, its data-driven assessments of the key factors that bear on quality of life—insights that will also be of value to place makers and city leaders.

The most important of those factors is not simply economic but deeply psychological. Where we live is important not only because it provides access to jobs or housing but also because it has a deep effect on our happiness or subjective well-being. To get at that, the surveys asked participants more than 150 questions, probing how satisfied they are with their community, how likely they are to recommend it to a friend or family member, and whether they see it as a good place for their children to build a future.

But it's important to remember that many of us are not in a position where we can choose where to live. In my book *Who's Your City?*, I point out that our social status and class position is a function not just of our education or income or the kind of work we do but also of our mobility, that is our ability to pick up and move to locations that offer more and better economic opportunity. To illustrate this, I divided the world's population into three broad classes on the basis of their propensity for geographic mobility. The mobile class consists of those with the means, skills, education, and fortitude to uproot themselves in search of something better. "As the most mobile people in human history, we are fortunate to have an incredibly diverse menu of places—in our own countries and around the world—from which to choose," I wrote. "That's important because each of us has different needs and preferences. Luckily, places differ as much as we do." Others of us are members of the rooted class; they have the means to move but prefer to stay close to family and friends. But far more people belong to the stuck class; they lack the resources to move to places that afford greater opportunities.

The pandemic has brought cities front and center in the global conversation about the economic and social future. I've been an urbanist for nearly four decades, and I have never heard so much talk about cities—and not only from pundits but also from ordinary people. With its detailed data and rankings, this report will advance the conversation in new and important ways.

Richard Florida
University Professor, University of Toronto

Preface

What makes residents want to move? And conversely, what makes them want to stay? We undertook this survey not only to answer these questions but also to understand the impact of people's decisions on urban areas and how city leaders should respond.

Interestingly, both questions have the same answer: residents' satisfaction with their city. People who are less satisfied with their city tend to want to move, and those who are more satisfied typically want to stay.

However, people are relocating on a massive scale. Remote-working technologies adopted during the COVID-19 pandemic established a new modus operandi for millions of people. The office—once the main factor that determined where people lived—is now less important.

Although the shift to working remotely was a major and pervasive change, it was not the only impetus for relocating. The number of people who speak more than one language has grown. Moving has become routine in more societies. And technology has made relocating easier than ever—whether people want to move across town or across the world.

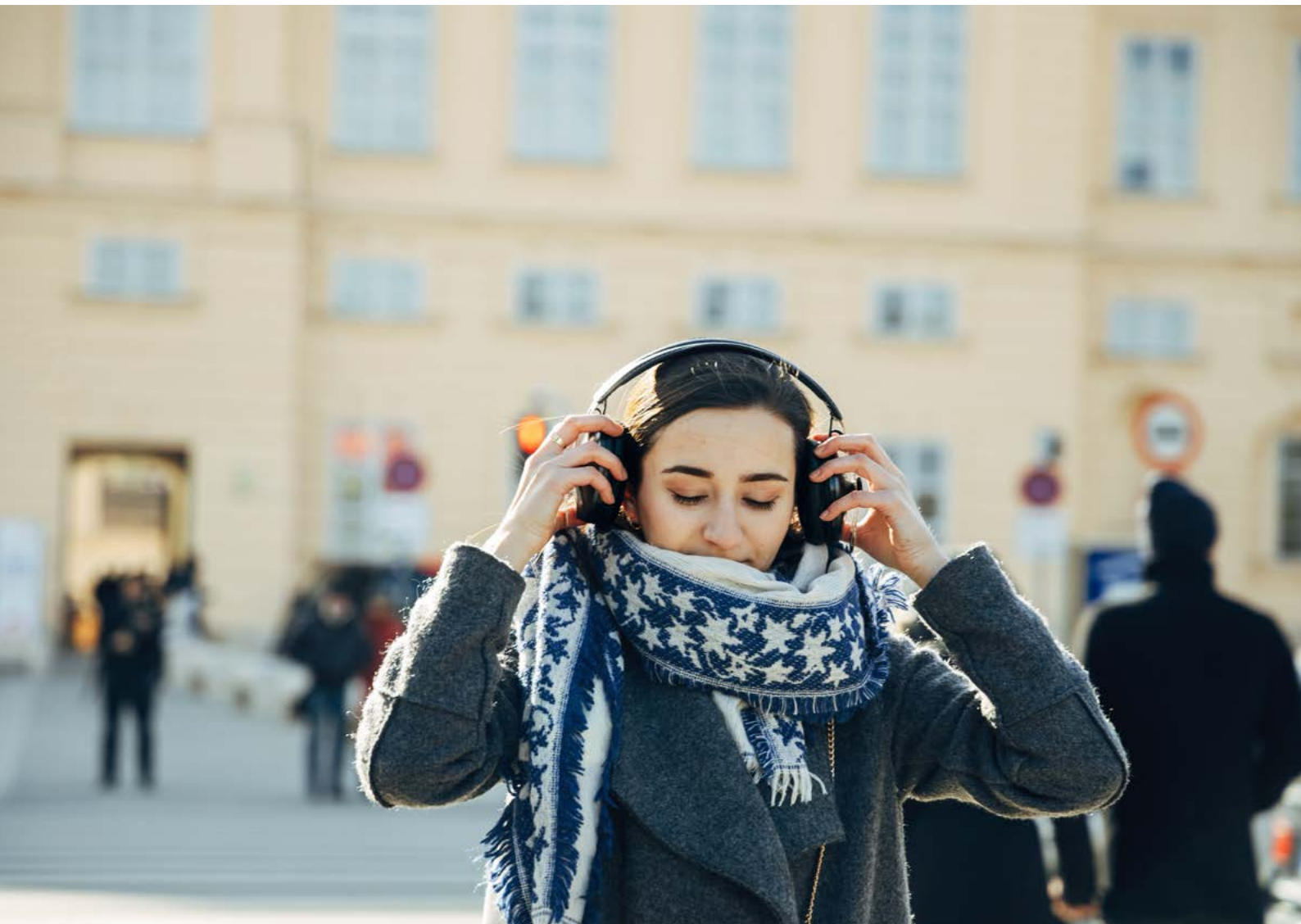
The challenge for city leaders is to determine what makes their residents happy so that they can retain current residents and attract new ones. What policies and actions do they need to implement to maintain and improve residents' satisfaction?

Before leaders can address that question, they need to delve into the nuances of how their city works—or doesn't work. It's not enough to determine that they need to improve residents' quality of life, for example. Leaders must drill down to determine if that means making it easier to start a business, extending subway hours, adding more bike lanes, improving the city's fiscal health, revitalizing public parks, or hosting more sporting events.

People have changed—and cities must too. This *Cities of Choice* report will help them to do so.

Vladislav Boutenko
Managing Director and Senior Partner, BCG

Ranking Cities:
A Comprehensive Approach



Dozens of global rankings examine cities for various purposes and many audiences. But each one does so from a particular angle. None seem to take a comprehensive approach—ranking cities by evaluating objective statistics and the subjective perspective of their residents. A comprehensive approach is increasingly important, though.

Traditionally, urban development priorities have focused on resolving problems related to infrastructure and utilities, such as insufficient housing stock, underdeveloped mobility options, and inadequate access to energy and water. And for the most part, the offices of city leaders and urban planners decided how to address the issues. Input from city residents was absent.

But in the past few decades, city leaders have made a marked shift toward understanding the needs of residents and what drives their happiness and well-being. This is an important change because having highly satisfied residents increasingly contributes to the sustainable development of a city.

Some rankings have shifted their methodology in response to this trend. OECD, for instance, issued guidelines for measuring subjective well-being in 2013. The guidelines discuss assessing subjective areas such as life satisfaction, individual experiences, and positive and negative emotions. Similarly, in its 2020 edition, the *World Happiness Report* began to rank cities by measuring subjective well-being. By comparing urban residents' current evaluation of life with their expected evaluation of their future life, the report examines how social, urban, and natural environments affect the well-being and happiness of residents.

Still, no rankings seem to take a comprehensive approach. So, we decided to change the pattern. In 2020, we surveyed 25,000 city residents across the world to understand their satisfaction with the city in which they live. (See the sidebar "The City Advocacy Index.") Then, we combined our human-centered and objective analyses, focusing on where it feels good to live.

In 2022, we took the same approach to ranking cities, basing our findings on a combination of survey results and our analysis of various external indices. We also fine-tuned our methodology. To develop a more comprehensive and well-rounded ranking system, we added more than 50 new indicators to create more differentiated results in subdimensions such as public spaces, housing, the ability to influence events, and the consumption of goods and services. Also, we increased the number of cities significantly, from 45 to 79.

This report also goes a step further and includes thought leadership on areas that are pertinent to city leaders. In the next chapter, "Where Is It Good to Live?," our analysis compares groups of cities that have similar socioeconomic features. We divided the cities into four categories (megacenters, cruiser weights, middleweights, and developing cities), enabling us to understand the challenges they face taking into account their specifics (such as size and financial resources). Then, in the third chapter, "What Motivates Residents to Relocate?," we talk about why people move between cities. We also cover the actions and policies that city administrators can implement to attract new residents to their city and motivate current residents to stay. Overall, our rankings reflect the capability of a city to meet the expectations of its residents.

We hope this report acts as a guide and catalyst for city leaders across the world who want to transform not only their cities but also the lives of their residents.

While cities occupy only 2% of the Earth's surface, the World Bank estimates that they generate about 80% of all economic growth. This is because of concentration effects. According to OECD, for each doubling of the size of the population, the productivity level of a city increases by 2% to 5% as a result of the better allocation of labor, education, entrepreneurship, innovation, and so forth. At the same time, although cities occupy only 2% of the planet's surface, they are responsible for more than 60% of energy consumption, 70% of greenhouse gas emissions, and 70% of global waste. This is why national governments need to focus on the governance and the strategies of cities: What are the imperatives for the future to ensure that two-thirds of the world's population will live happily in these cities? How do cities drive global innovation and reduce their harmful impact on the planet?

This *Cities of Choice* report presents an effective tool to assess the policies of cities and their performance. In the next decade, we will see that the most successful cities will be able to attract and keep residents not only to ensure productivity but also to offset the risks and impact of their growing consumption.

— Hans-Paul Bürkner
Global Chair Emeritus

The City Advocacy Index

To facilitate the creation of a comprehensive ranking system, BCG Henderson Institute developed the City Advocacy Index. It is a subjective, sociological metric that not only reflects residents' satisfaction with their city but also shows the factors that influence residents' advocacy, or support, for their city.

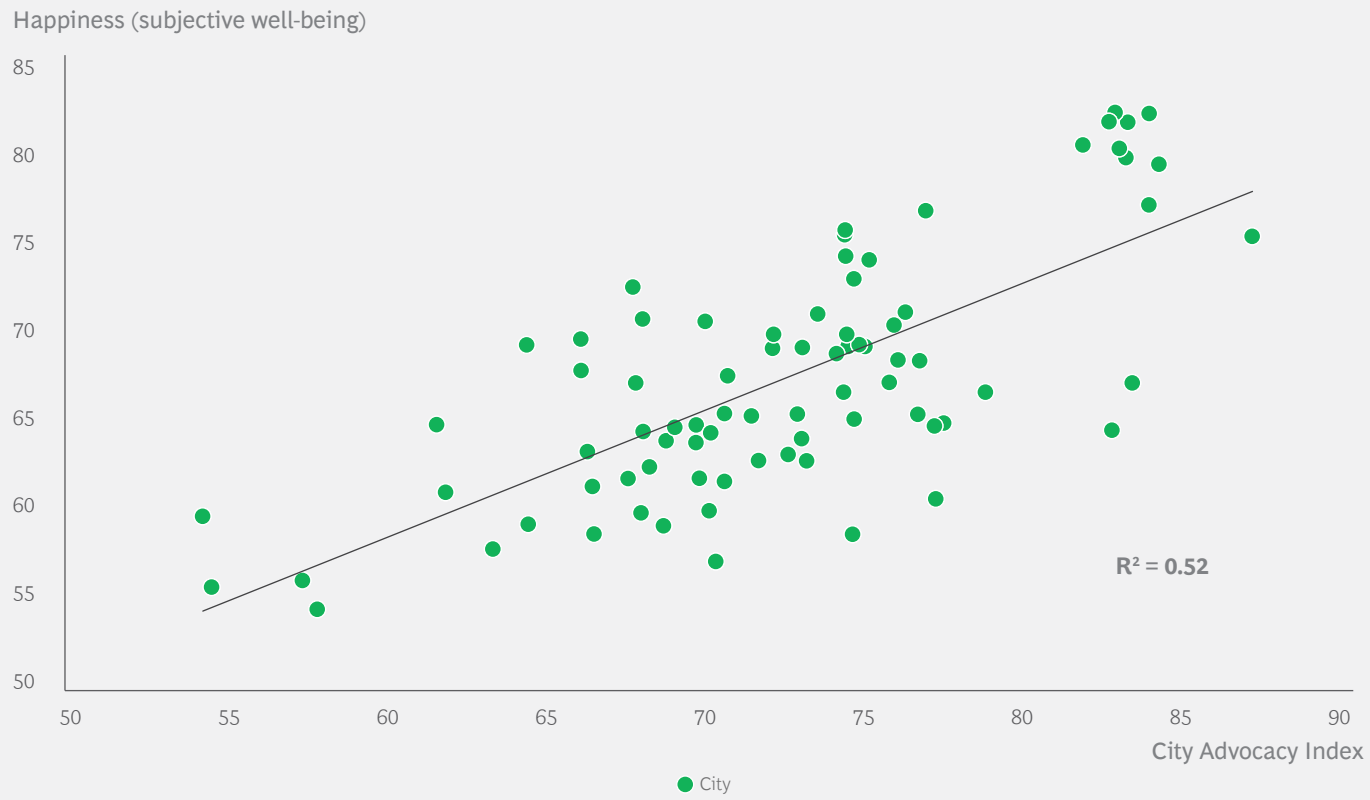
We conducted a survey of city residents around the world. Of the 150 survey questions, we used the following five to calculate a city's score:

- Are you satisfied to live in [city]?
- How likely are you to recommend [city] to a friend from another city as a place to live and work?
- Have you recommended or criticized [city] as a place to live and work in the past 12 months?
- Do you see your children living in [city] 20 years from now?
- Do you believe [city] will prosper in the future?

When we analyzed the responses, we also took into account factors that are not related to each city but that influence residents' satisfaction. These factors include social and economic events that occur outside the city. Such factors explain about 50% of the variance among cities in the subjective well-being score. Therefore, the City Advocacy Index score can be interpreted as the contribution made by the urban environment to residents' subjective well-being. (See the exhibit.)

The City Advocacy Index influenced the creation of the Cities of Choice Index, which focuses on the objective factors that influence residents' satisfaction. We used the City Advocacy Index to weight the factors during our objective analysis.

The City Advocacy Index Measures a City's Contribution to the Prosperity of Its Residents



Source: BCG analysis.

Key Ranking Principles

When we designed the Cities of Choice ranking system, we sought to measure and compare cities' achievements and track their trajectory across the major areas of urban life. To do this, we decided to analyze cities' achievements subjectively, from the viewpoints of their residents, and objectively, on the basis of statistical data. For us, considering residents' perspectives was the key: a resident is the measure of all things in the city, and a city works well when it works for the benefit of its residents.

Often, ranking methods that focus on residents use mostly population surveys. As a result, their rankings are subjective, owing to cultural differences and the inherent mismatch in the expectation levels of residents of different cities. In contrast, ranking methods that take an objective approach use statistical data, which limits the focus on residents.

To ensure that we achieved our goal and considered both the subjective perspective and objective data, we developed the following four principles to serve as the basis for the Cities of Choice Index:

- The ranking structure should reflect the drivers behind residents' needs from their city.
- The weights assigned to the subdimensions (for example, housing or safety) should reflect residents' priorities. (For this purpose, the weighting system was adjusted for each city.) (See Appendix 1.)
- Priority should be given to the statistical indicators (87% of ranking indicators are statistics, rather than subjective perceptions of the respondents).
- The ranking structure should not be adjusted for the country context (to ensure the maximum comparability) or for the degree of influence that the city administration has (to ensure capturing all residents' needs and preferences, except the strictly personal ones). Following this logic, the assessment included indicators that the city administration has no direct control of—specifically, a comfortable climate and the availability of personal loans.

On the basis of these principles, we developed the calculation methodology for the Cities of Choice ranking system.

Calculation Methodology

The calculation methodology used to rank cities is governed by three elements: the ranking structure, subdimension weighting, and indicators used to assess the subdimensions.

Ranking Structure. When designing the ranking structure, we essentially looked for an answer to the fundamental question of what makes a person happy. We were fortunate that so many scholars have devoted so much attention to this issue.

The majority of scholars who study the question agree on one thing: happiness and well-being are influenced by a combination of factors that is different for every person. This idea is reflected in the structure of our ranking system.

We first identified residents' current needs. These needs were determined by the social roles that people may play, with each role corresponding to a different set of needs. The 22 needs cover primary requirements (such as housing and safety) and secondary ones (such as social connections and the ability to influence events), and the needs are structured into four groups (economic opportunities, quality of life, social capital, and interactions with authorities).

Resident centricity is becoming a mantra for cities that want to excel. Leaders are asking themselves: How comfortable are residents? How easily can they get the services they need? Does the city allow residents to minimize nonproductive time and maximize value creation? And when it comes to infrastructure, does the city put residents first—particularly in mature, dense cities, where any renovation may cause significant disturbance to residents or even put at risk historical heritage?

City leaders need to understand how resident centric their infrastructure is. Our rankings provide a view on this topic. We integrated the results in the accessibility (or availability) of roads, public spaces, housing, and city services, and then we produced a subranking. We found that the most resident-centric infrastructure is in Wellington, Copenhagen, and Helsinki. European cities are better in this subranking across the list, while African, Asian, and Middle Eastern cities are lagging behind. But interestingly, the developing cities have much more of an opportunity to transform themselves and become resident centric because they have more space and less legacy infrastructure.

— Giovanni Moscatelli
Managing Director and Partner

These four groups also determine the speed at which a city's environment changes. One of the main principles on which the ranking methodology is built is that happiness depends not only on what an individual possesses but also on what a person expects to gain. Gradually, an individual's expectations tend to adapt to reality. In his book, *21 Lessons for the 21st Century*, Yuval Noah Harari notes, "Homo sapiens is just not built for satisfaction. Human happiness depends less on objective conditions and more on our own expectations. Expectations, however, tend to adapt to conditions, including the conditions of other people." Since expectations are guided, among other things, by past experiences, rapid positive changes enable residents' expectations to outpace reality, whereas gradual positive changes enable residents' expectations to reflect reality. Generally speaking, our analysis shows a clear link between residents' satisfaction and the speed of change in their city's fundamental conditions. That link means that, on average, people who do not live in the best city (from an objective perspective) but a rapidly changing one may be more satisfied than people whose city proposes better conditions today but changes slowly.

We then developed a ranking structure that consists of five dimensions. The first four dimensions—economic opportunities, quality of life, social capital, and interactions with authorities—are composed of 22 subdimensions that reflect residents' needs. The fifth dimension has four subdimensions that determine a city's speed of change. (See Exhibit 1). For each of the five dimensions, a city can be considered a success if it is able to drive residents' well-being and, therefore, their advocacy (or support) for the city. Specifically, a city should:

- Provide good opportunities for earning an income, including job opportunities and chances for career and professional development that are relevant to residents.
- Offer a high quality of life and unique experiences in key life situations through the availability and quality of infrastructure, resources, services, and efficient processes.
- Provide conditions that enable social interactions, an atmosphere of mutual respect and trust, and equal opportunities.

Exhibit 1 - The Cities of Choice Ranking Structure Consists of 5 Dimensions and 26 Subdimensions

Economic opportunities	Quality of life	Social capital	Interactions with authorities	Speed of change
Opportunities for work, career, and earnings	Housing	Social connections	Ability to influence events	Speed of change in economic opportunities
Equality of income	Mobility	Inclusivity and equality	Government services	Speed of change in quality of life
Opportunities for business	Medical care	Identity with culture and history	Business environment	Speed of change in social capital
Availability of personal loans	Education and development	Safety		Speed of change in interactions with authorities
	Public spaces			
	Consumption of goods and services			
	Entertainment and recreation			
	Ecology			
	Cleanliness and hygiene			
	Comfortable climate			
	Resilience to emergency situations			

Source: BCG analysis.

- Build an open dialogue between residents and authorities in which the voice of the resident is heard and taken into account while decisions are made concerning the development of the city.

- Adapt quickly to today's trends, foreseeing and surpassing residents' expectations.

Subdimension Weighting. In a ranking structure that covers a wide variety of assessment areas, the choice of weightings can have a dramatic impact on the final rankings.

The importance of each of the 26 subdimensions was estimated using the results of the global survey. For each city, the importance of a subdimension was adjusted to reflect the priorities held by its residents. As a result, the weight for each subdimension was calculated for each city and normalized to 100%. (See Exhibit 2 and Appendix 2.)

Indicators. In order to evaluate each of the 26 subdimensions in the ranking structure, we developed a set of 171 indicators. We also sought for these indicators to be of comparable importance for the residents of each city. Thus, we created a subindex for each of the 26 subdimensions. In calculating the final score, the weights developed in the previous step were applied to each of the 26 subindices. All indicators within a subdimension were assigned the same weight. (See Appendix 3.)

City Selection and Comparison Methodology

The 2021 edition of the *Cities of Choice* report ranked 45 cities, which were selected on the basis of two factors. First, the cities traditionally had high scores in the most-quoted city rankings for at least one of the four dimensions of residents' needs (economic opportunities, quality of life, social capital, or interactions with authorities). Second, the cities showed high dynamics of change.

In 2022, we significantly expanded the number of cities ranked to 79. In doing so, we sought to ensure the maximum diversity in terms of regional representation. We added several cities representing the African continent and significantly expanded the representation of Asian, Middle Eastern, and North American cities.[1] (See Exhibit 3.)

To seamlessly compare the 79 cities across various subdimensions, we divided the cities into four homogeneous groups. This approach would not only help in analyzing the results in a holistic manner but also help guide city leaders and change makers to learn from each other and take targeted action steps should the need arise.

To divide the cities into groups, we examined three specific socioeconomic parameters:

- First, we looked at country income based on the average GDP per capita according to the World Bank.[2] This data provided insight into residents' economic well-being and the cities' economic capabilities to finance their development.

- Second, we examined the population of urban areas.[3] This analysis helped us to understand the burden on each city's infrastructure.

- Third, we assessed whether each city has the status of a multifunctional capital. This is a unique parameter that helps us identify those cities that are a political, economic, cultural, financial, or religious capital and, therefore, experience additional pressures. For example, because of a city's multifunctional status, it may have extra pressure on transportation, connectivity, housing, and other systems.

1. African cities were not included in the 2021 edition because of the timing of data collection and processing.
2. According to the World Bank, GDP per capita income that is greater than or equal to $4,095 is above average. GDP per capita income that is less than $4,095 is below average.
3. According to *Demographia World Urban Areas*, July 2022, an urban area is a continuously built-up land mass of urban development that is within a labor market.

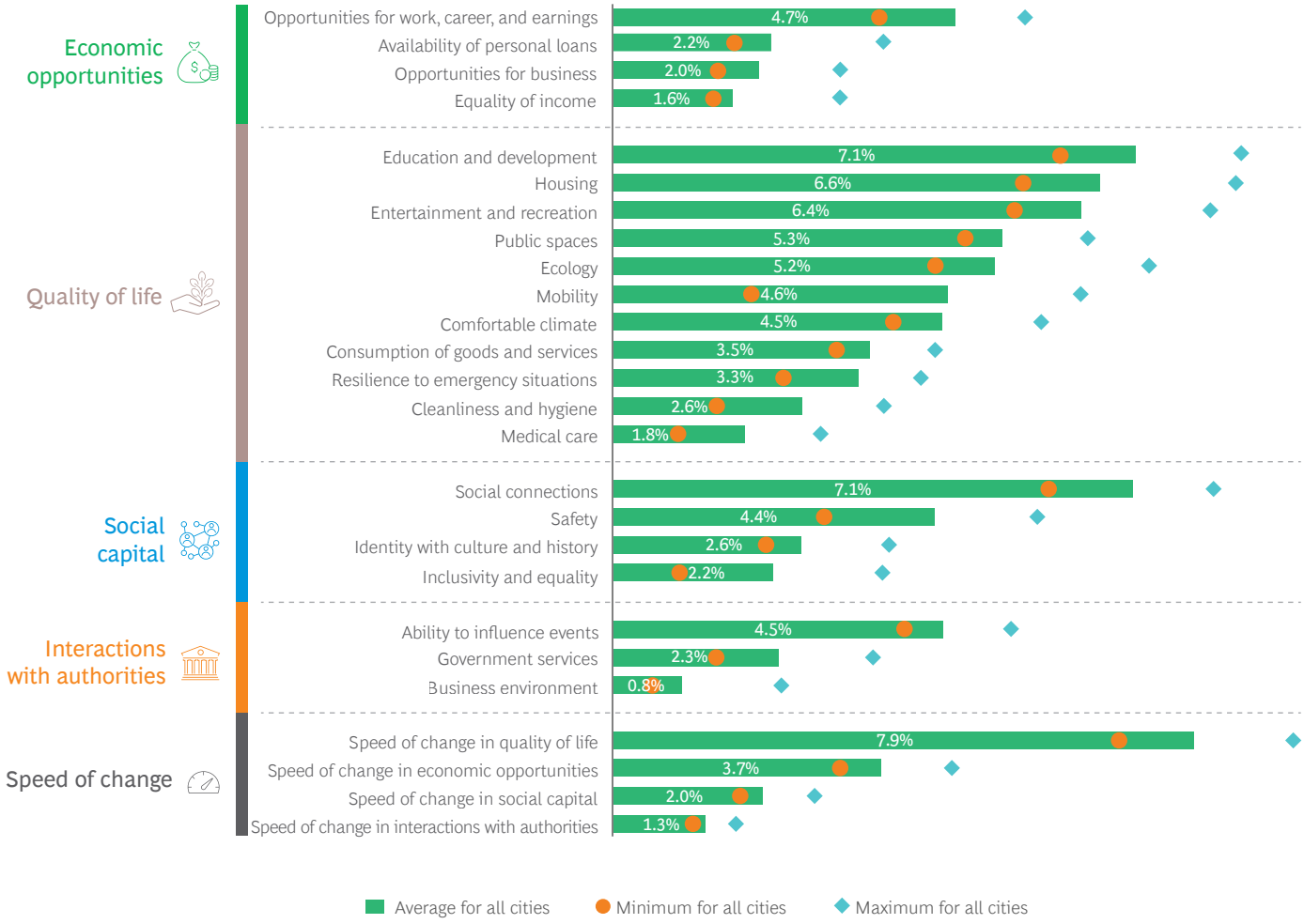
In this report, we make intercity migration a special focus. It is a very timely topic. Post-COVID-19 restrictions are being lifted, and people have learned that it is not necessary to live in the same city (or even in the same country) where they work. This means that cities can take steps to attract new residents.

Our survey shows that more than half of all urban residents have a desire or plans to move to another city. And many cities are building their development strategy around attracting these people. For example, Riyadh set the goal of doubling its population by 2030. One way it will achieve this is by welcoming new migrants.

The question we asked ourselves in this regard was how different should cities' strategies be to retain and attract residents. Our research shows that it is not enough to achieve high results in the main five dimensions; rather, retaining and attracting residents requires cities to have a clear understanding of who they want to attract and why those residents will stay or move. Standard recipes will not work. We will see new success stories built on proven strategies and bold decisions.

— Armin Lohr
Managing Director and Senior Partner

Exhibit 2 - Weights Were Defined Individually for Each Subdimension



Source: BCG analysis.

In the 2021 report, we proved that residents' advocacy is closely related to the speed of change: residents who see that their city is changing rapidly tend to expect that to continue and are more likely to associate their future with the city. The high degree of uncertainty brought about by COVID-19 has undermined the advocacy of many city residents and also harmed residents' trust in their city's administration.

Only a few cities (mainly those that coped with the pandemic earlier than others) did not experience a decrease in the subjective assessments of residents. It will be interesting to see how quickly advocacy is restored.

— François Candelon
Managing Director and Senior Partner

Exhibit 3 - Seventy-Nine Cities Are Included in the Rankings

Source: BCG analysis.

Quality of life is the largest dimension in our rankings. This is understandable, owing to the role quality of life plays in people's decisions to move to cities and their satisfaction with cities. Interestingly, large cities compete not only with each other to offer the highest quality of life but also with rural areas and small towns that can provide larger living spaces, lower prices for comparable comfort, access to nature, and, recently, even similar economic opportunities due to remote work, though only for a smaller section of the population. Large cities, however, still maintain a scale advantage to provide best-in-class services to their residents, a wider variety of lifestyle offerings, and higher connectivity.

They also can mobilize more resources in emergency situations, making them more resilient overall. The Middle East has been on the frontline of the competition for higher living standards, with the objective to attract the best talent in the world—talent that is increasingly mobile and selective in deciding where to live.

— Benjamin Deschietere
Managing Director and Partner

We used the following four city groupings and definitions. (See Exhibit 4.)

- **Megacenters** are large urban centers with an urban population of more than 10 million people. They are in countries with a GDP per capita income that is above average, and they are known for their multifunctional-capital status. Cities such as London, New York, and Tokyo fall in this group.
- **Cruiser weights** are cities with an urban population of more than 3 million people. They are also part of countries with a GDP per capita income that is above average. Examples of these cities are Dubai, Singapore, and Washington, DC.
- **Middleweights** are medium-sized cities with an urban population of less than 3 million people; these cities are in countries with a GDP per capita income that is above average. This group is dominated by European cities such as Copenhagen, Stockholm, and Vienna.
- **Developing cities** are rapidly advancing cities. Their urban populations vary in size, and they are in countries that have a GDP per capita income that is below average. These cities can be distinctly identified for their high speed of change but lower quality of life. Therefore, we have not applied a population lens to these cities. Cities such as Delhi, Mumbai, and Nairobi are part of this group.

Data Gathering Approach

A key advantage to our ranking system is the uniqueness of the data used. In 2022, we increased by 32% the share of unique metrics derived from BCG's proprietary analytics tools (including geo-analytics tools) and our global survey data.

The global urban-population survey was conducted in the summer and autumn of 2021 using an online questionnaire. We received 27,000 responses from residents in 79 cities around the world. The sample structure in each city corresponded to its population structure by gender, age, and income. The questionnaire contained more than 150 questions. Some questions were asked in order to determine the subjective perception of the respondent,[4] while other questions focused on objective facts about participants' lives and behaviors (for example, how often do they go to sporting events or meet their friends).

It is important to bear in mind that to accomplish certain objectives (for example, the scoring of weights), we combined 2022's database of 27,000 responses with 2021's database of 25,000 responses, since the preferences of residents seldom change from year to year. That decision enabled us to analyze 52,000 responses.

4. The bulk of this data was not included in the ranking; it was used to identify the residents' preferences and calculate the weights of different indicators.

The rankings for 2022 show that Abu Dhabi, Doha, Dubai, Kuwait City, and Riyadh share some common features: They are strong in social connections and interactions with authorities, and most are strong in the speed of change overall. However, they received low scores in the quality-of-life dimension.

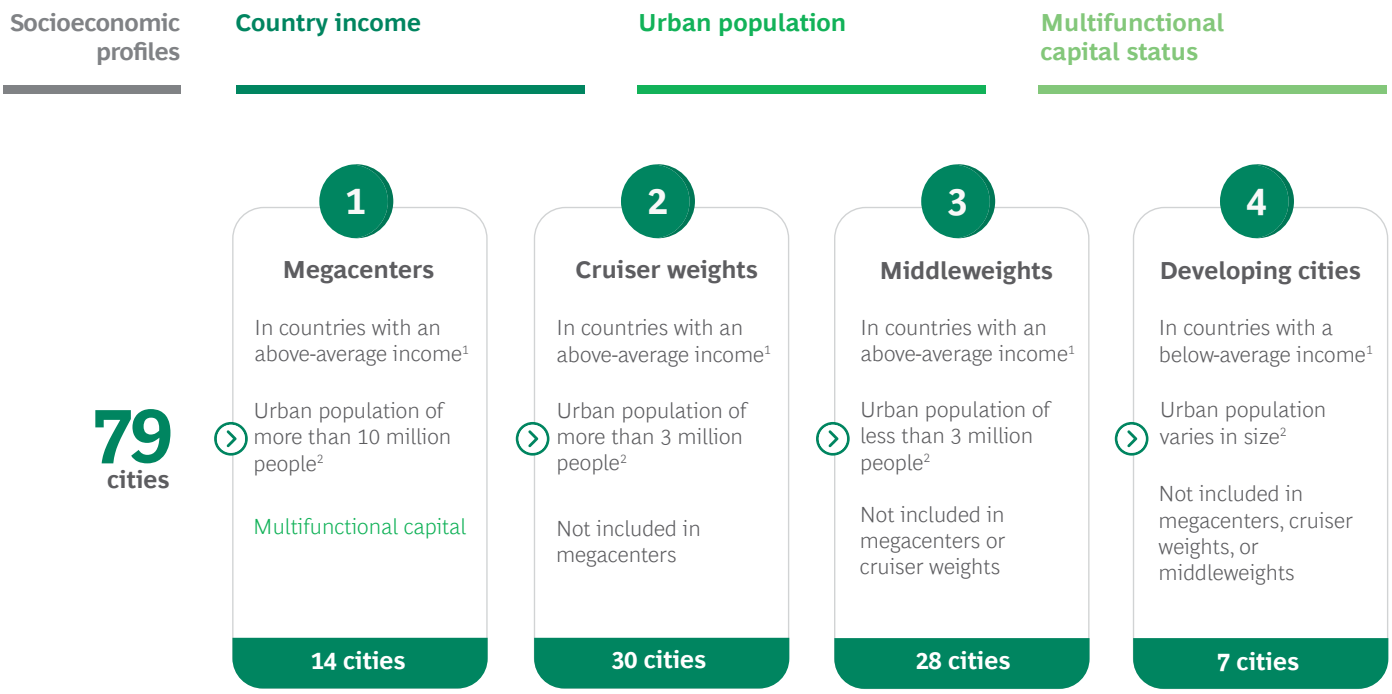
With the growing dependence of cities on their residents, quality of life becomes a key weapon in cities' fight for residents. How does a city accommodate residents' style of life and rhythm of work? How accessible are city services? How much do residents use and like the city's public spaces? How large is the average apartment? Our surveys of more than 50,000 people in 79 cities has revealed that these questions are becoming more and more important. Middle Eastern cities are making great progress in upgrading their infrastructure through large projects. Their next step should be to focus on services and urban planning in neighborhoods and communities.

The speed of change is also important for residents: this is how they know city leaders are accelerating changes for a better life. The speed of change plays a critical role in the subjective well-being of residents. In a way, it reflects the operating efficiency of city administrations, and it can also be an engine—or a barrier—for successes in other areas.

By building on their strengths, these Middle Eastern cities can leapfrog into the future.

— Christopher Daniel
Managing Director and Senior Partner

Exhibit 4 - Cities Were Divided into Four Groups on the Basis of Their Socioeconomic Profiles



Sources: World Bank; Demographia; BCG analysis.

[1]According to the World Bank, a GDP per capital income that is greater than or equal to $4,095 is above average. A GDP per capital income that is less than $4,095 is below average.

[2]According to *Demographia World Urban Areas,* July 2022, an urban area is a continuously built-up land mass of urban development that is within a labor market.

Where Is It Good to Live?

For any city to become a leader in the Cities of Choice rankings, it must demonstrate the following:

- **Leadership in Economic Opportunities.** This achievement implies that a city has good conditions for career and business development, combined with reasonable price levels that help maintain a high standard of living.
- **Leadership in Quality of Life.** This capability depends directly on the availability of a well-developed physical and social infrastructure, including high-quality housing, accessibility to schools and hospitals, and a robust urban mobility system. During the pandemic, a city's resilience in bouncing back from emergencies became particularly important.
- **Leadership in Social Capital.** This competency requires that residents identify with the city, its culture, and its history. It also requires that the city provides conditions for maintaining meaningful social relations and a high level of security and trust.
- **Leadership in Interactions with Authorities.** This distinction is held by those cities that traditionally have a high level of respect for the authorities or a high degree of institutional development. The involvement of residents in a city's decision-making process also becomes equally important.
- **Leadership in the Speed of Change.** This achievement implies that a city can quickly improve the quality of life, social capital, and interactions with authorities. Interestingly, most of the cities that have this capability demonstrate mediocre leadership in economic opportunities.

The rankings for 2022—like those for 2021—show that no one city meets all these criteria. Consequently, no one city meets all its residents' needs. Each city has areas that need improvement, and our rankings highlight these areas by comparing cities. In this way, leaders can understand the roots of their challenges and create a clear baseline for spurring and measuring change.

In the next section, we present the results for each group of cities and the individual cities and discuss the patterns that emerged.

City Rankings

One of the main innovations that we introduced in 2022 is the division of cities into four groups on the basis of their socioeconomic characteristics. Using this lens is instructive because it shows that leaders across the groups may use diverse strategies to build necessary advantages and achieve top positions.

For example, there is a stark difference between the scores of developing cities and the scores of the other three groups—megacities, cruiser weights, and middleweights—in terms of economic opportunities, the quality of life, and interactions with authorities. (See Exhibit 5.) Developing cities lag considerably. However, the difference is not as stark in terms of social capital and the speed of change. In fact, developing cities outperform on these two dimensions.

Exhibit 5 - An Analysis of City Rankings Reveals Dimension Interdependencies and Standard Deviations Within Each Group

	Megacenters		Cruiser weights		Middleweights		Developing cities	
Group total score[1]	49		51		55		34	
Dimension	*Dimension score*	*Standard deviation*	*Dimension score*	*Standard deviation*	*Dimension score*	*Standard deviation*	*Dimension score*	*Standard deviation*
Economic opportunities	44	High	52	Medium	57	Low	36	High
Quality of life	49	Low	53	Low	58	Low	19	Low
Social capital	48	Medium	48	Low	50	Low	62	Medium
Interactions with authorities	49	Medium	55	Medium	51	Low	21	High
Speed of change	47	Medium	48	Medium	48	Medium	62	Medium

Source: BCG analysis.

[1]The highest possible score is 100.

Such findings led us to delve into the interdependencies between dimensions. We calculated the correlation between cities' scores across each pair of dimensions. In doing so, we found that there is a relatively high correlation between economic opportunities and quality-of-life results. The quality-of-life dimension depends heavily on a city's infrastructure, and the development of infrastructure requires a strong economic baseline. We also see that cities with a lower quality-of-life score have a higher speed of change because they have a low economic baseline.

We also assessed the standard deviation—or range of difference—of cities' scores within each group. Megacenters and developing cities are more diverse, and their scores are characterized by a greater deviation. Middleweights and cruiser weights are more homogeneous, sharing more common features, including a similar dynamic of change in their scores, compared with the results for 2021.

A closer look at the Cities of Choice rankings in each group provide further insights.

Megacenters. London and New York rank number one and two, respectively, for 2022, repeating their performance in the 2021 *Cities of Choice* report. (See Exhibit 6.) London and New York performed very well across four dimensions—economic opportunities, quality of life, social capital, and interactions with authorities. However, these cities have a relatively low speed of change. A failure to accelerate their speed of change may lead to losing their top spots in the coming years.

Among the three groups of cities with higher-than-average GDP per capita income, megacenters can be considered the weakest group. Its average score of 49 (across all dimensions) is lower than both cruiser weights (51) and middleweights (55). In fact, despite being megacenters, only 6 out of 14 cities have a score that is higher than the median score.

The score can be partially explained by the high deviation across cities' results. As one of two groups with the most diverse results, megacenters encompass leading cities (of today or tomorrow, or both) and those that currently are not able to convert their large-population benefits into economic potential. This group shows below-average results in economic opportunities that, in turn, have a negative impact on the quality of life. At the same time, as a group, megacenters did not perform strongly on any one dimension. The multifunctional capital status of the cities in this group is not helpful; in fact, it makes the job of city leaders even more difficult.

Cruiser Weights. Composed of 30 cities, cruiser weights is the largest set of cities among the four groups. The average score of 51 is marginally higher than that of megacenters (49) but lower than the average score of middleweights (55). Overall, the group shows stable results, with Washington, DC, Singapore, and San Francisco faring as the group's leaders. (See Exhibit 7.)

Exhibit 6 - How Megacenters Scored in Each Dimension

Rank	City	Total score	Economic opportunities	Quality of life	Social capital	Interactions with authorities	Speed of change
1	London	64.3	70	69	64	72	43
2	New York	64.3	68	64	65	97	44
3	Shanghai	60.1	55	51	69	51	92
4	Beijing	57.1	67	46	71	36	87
5	Los Angeles	56.0	55	59	49	74	44
6	Paris	55.0	63	61	43	57	39
7	Seoul	52.1	53	54	52	51	47
8	Tokyo	46.2	43	56	40	22	34
9	Istanbul	45.9	24	45	49	63	51
10	Osaka	41.3	34	47	35	44	35
11	São Paulo	38.9	19	39	33	56	48
12	Mexico City	37.2	38	31	48	66	32
13	Buenos Aires	34.2	10	40	25	66	27
14	Rio de Janeiro	30.7	11	28	35	44	40

First quintile Second quintile Third quintile Fourth quintile Fifth quintile

Source: BCG analysis.

Note: Two cities may appear to have the same score because of rounding. Fourteen megacenters were divided into five quintiles.

Exhibit 7 - How Cruiser Weight Cities Scored in Each Dimension

Rank	City	Total score	Economic opportunities	Quality of life	Social capital	Interactions with authorities	Speed of change
1	Washington	64.2	75	68	57	76	46
2	Singapore	63.6	60	62	58	75	73
3	San Francisco	62.2	77	66	55	68	42
4	Guangzhou	59.6	63	49	65	48	91
5	Madrid	58.1	48	64	56	63	44
6	Boston	57.6	64	63	43	78	39
7	Seattle	57.2	69	63	34	61	53
8	Dubai	57.2	71	51	74	61	43
9	Sydney	56.2	47	65	52	55	40
10	Atlanta	56.1	63	56	48	65	56
11	Shenzhen	55.9	66	44	66	39	84
12	Berlin	55.2	44	62	47	67	44
13	Miami	54.6	56	59	46	68	42
14	Houston	53.9	58	56	40	65	51
15	Barcelona	53.9	33	62	51	47	47
16	Dallas	53.1	62	53	40	78	50
17	Melbourne	52.8	45	64	46	63	21
18	San Diego	52.3	59	52	44	72	46
19	Milan	52.1	43	62	33	36	51
20	Chicago	51.8	52	56	43	62	40
21	Toronto	50.9	47	57	37	80	32
22	Philadelphia	50.5	49	56	35	76	37
23	Montreal	49.2	50	58	37	62	27
24	Hong Kong	48.9	52	55	39	48	34
25	Riyadh	47.8	61	30	66	43	79
26	Rome	45.7	34	52	37	42	43
27	Kuala Lumpur	41.8	47	40	39	26	53
28	Kuwait City	41.7	61	30	67	26	47
29	Santiago	28.7	31	23	34	32	38
30	Johannesburg	19.8	12	21	28	25	13

First quintile Second quintile Third quintile Fourth quintile Fifth quintile

Source: BCG analysis.

Note: Two cities may appear to have the same score because of rounding. Thirty cruiser weight cities were divided into five quintiles.

During the past two years, the amount of living space per person has decreased in almost all the cities included in the rankings. COVID-19's impact on the construction industry is the reason for this phenomenon: in many countries, construction was stopped during the pandemic, impacting the new-housing supply. Also, residents had less opportunities to buy new apartments because of lockdowns. Besides, COVID-19 impacted the incomes of many people, causing them to put their plans for purchasing a house on hold.

Cities have different archetypes of the amount of living space per person. For example, in Mumbai, the typical amount is 12.8 square meters, whereas in Riyadh, it is 64 square meters. But the question is how, going forward, cities will optimize their space and address the urban sprawl, while providing residents with opportunities to improve their living conditions.

— Philippe Cornette de Saint Cyr
Managing Director and Partner

Leaders should also delve into the nuances of how their city works–or doesn't work–to improve residents' quality of life.

Furthermore, dominated by North American cities, cruiser weight cities have distinctly higher scores in the interactions-with-authorities dimension. This signifies that most of the cities have a resident-centric government, and residents are highly involved in city decision making. However, these cities do not fare as well on other dimensions, such as social capital and the speed of change.

Middleweights. Middleweight cities performed the best as a group. Eighteen of the 28 cities received an overall score that is above the median score. Mostly made up of European cities, middleweight cities stand out for receiving high scores for their quality of life. (See Exhibit 8.)

Developing Cities. Developing cities are characterized by a high growth rate and rapid urbanization. These cities are key employment and business centers for their respective countries, and that has led to high migration and challenges related to housing and urban mobility. While most of these cities are above average in social capital and speed of change, their low scores for their quality of life hold back the overall score. (See Exhibit 9.) Many factors—such as a higher weighting of the quality-of-life dimension, the low capacity of these cities to manage their COVID-19 response, and an increased burden on their resources—have expanded the gap between the cities in this group and the leaders in the other groups.

Cities' Scores for Subdimensions. While it is instructive to see how megacenters, cruiser weights, middleweights, and developing cities rank against their peers and score on the five dimensions, it is also helpful to look at how cities score on subdimensions. (See Appendix 4.) These scores provide city administrators with a window into their challenges and the areas that need improvement to meet their goals and maintain or improve their standing. The scores also provide leaders of peer cities an opportunity to examine their urban centers to see how they measure up.

Impact of Methodology Changes

It's worthwhile noting the methodology-related changes that we introduced in 2022 and their impact. The changes can be classified into three areas:

- **More Indicators.** We introduced more than 50 new indicators to capture more-differentiated results in subdimensions such as public spaces, the ability to influence events, opportunities for business, and the consumption of goods and services. This change boosted the scores of those cities that have put more emphasis on these subdimensions. We also reduced the share of yes-no indicators that were not helpful to assessing the prevalence of services in a city, and we cut the share of subjective indicators. The latter change, in particular, increased the scores for Australian, European, and US cities and decreased the scores for Asian and Middle Eastern cities. Finally, we increased the share of digital indicators and those indicators that are directly linked to urban populations, especially in the mobility subdimension. These changes boosted the scores of recognized digital leaders and those cities whose nonurban populations reside within administrative borders.

For our rankings, mobility is one of the key subdimensions because it has a high correlation with city advocacy and, consequently, weight. At the same time, this subdimension is so dynamic that, to be up to date, we adapt its structure each year to follow the latest trends. Mobility features that a city was proud of just a couple of years ago might be outdated and not sufficient today. A good example of these dynamics is the availability of Wi-Fi in public transportation: this was a differentiator two to three years ago, but it isn't anymore, since many cities provide free Wi-Fi to passengers on public transportation.

Today, most of the subdimension leaders are European cities with an extensive subway system and a high availability of public and alternative transportation modes. But at the same time, we see the criteria for mobility change very quickly. New cities can become leaders tomorrow if they invest heavily in infrastructure (as Shanghai, Beijing, Guangzhou, and Shenzhen have done) or if they invest in alternative modes of transportation and implement the 15-minute city concept.

— Nikolaus Lang
Managing Director and Senior Partner;
Global Leader, Global Advantage Practice

Exhibit 8 - How Middleweight Cities Scored in Each Dimension

Rank	City	Total score	Economic opportunities	Quality of life	Social capital	Interactions with authorities	Speed of change
1	Copenhagen	63.4	60	68	61	48	61
2	Vienna	61.8	56	74	51	51	41
3	Amsterdam	61.0	70	68	51	58	43
4	Warsaw	60.9	61	55	58	56	85
5	Stockholm	59.6	53	71	56	40	41
6	Munich	58.1	61	63	46	66	50
7	Zurich	57.8	73	66	44	48	38
8	Oslo	57.8	55	65	57	38	45
9	Abu Dhabi	57.8	73	43	83	65	63
10	Hamburg	57.3	55	61	51	55	51
11	Wellington	56.6	44	68	53	55	30
12	Nice	56.5	69	60	36	48	63
13	Düsseldorf	56.3	70	65	45	53	30
14	Dublin	55.1	73	56	45	41	55
15	Frankfurt	55.1	58	62	32	68	47
16	Helsinki	55.1	57	65	46	45	34
17	Doha	54.6	75	40	81	25	76
18	Adelaide	54.3	43	64	43	58	40
19	Tel Aviv	53.9	68	54	55	45	46
20	Vancouver	53.5	46	64	38	64	33
21	Ottawa	52.3	55	56	48	61	39
22	Austin	51.9	67	55	43	70	33
23	Perth	51.8	45	57	49	55	41
24	Calgary	49.4	47	55	39	72	35
25	Auckland	48.6	36	60	37	58	26
26	Mecca	47.1	54	32	76	30	73
27	Almaty	39.4	41	35	45	14	60
28	Astana	39.2	35	32	32	31	78

First quintile Second quintile Third quintile Fourth quintile Fifth quintile

Source: BCG analysis.

Note: Two cities may appear to have the same score because of rounding. Twenty-eight middleweight cities were divided into five quintiles.

To assess the education sphere, we looked at two aspects: the accessibility of education and its quality. We see that the cities in our rankings have already achieved high accessibility of education: literacy rate is approaching 100% and the average number of students per teacher is also best practice across the list. This is why cities should now focus on the quality of education.

As a rule, cities do not govern the education sphere: this is typically a responsibility of national governments. However, many cities are responsible for providing primary and secondary education services and, hence, can contribute to its quality through the residents' experience related to education delivery and the school environment. On the basis of the results of our survey of more than 50,000 residents in 79 cities, people in Helsinki are the happiest in Europe with schools' education quality and the quality-accessibility combination.

In the higher education sphere, cities have less involvement but suffer from a mismatch of skills and the needs of their economies, provoking unemployment. We analyzed the ratio of employed in the cities to their residents of working age. The champions are Zurich, Tel Aviv, and Frankfurt, with ratios that strongly exceed 1. That means that the city provides enough jobs to residents and nonresidents (those who work in the city but live outside it). Mecca, Cairo, Delhi, and Johannesburg are lagging behind, with ratios lower than 0.5. To address unemployment caused by a mismatch of skills and needs, cities should facilitate various platforms for vocational and other professional training programs and have city enterprises play the leading roles.

— Leila Hoteit
Managing Director and Senior Partner

Exhibit 9 - How Developing Cities Scored in Each Dimension

Rank	City	Total score	Economic opportunities	Quality of life	Social capital	Interactions with authorities	Speed of change
1	Bangalore	43.8	49	25	68	36	86
2	Mumbai	41.9	47	20	76	43	75
3	Delhi	40.1	45	23	75	25	70
4	Ho Chi Minh City	37.8	51	24	60	5	66
5	Cairo	29.0	23	17	57	5	62
6	Nairobi	25.9	23	17	50	19	39
7	Lagos	21.0	21	10	55	22	20

First quintile Second quintile Third quintile Fourth quintile Fifth quintile

Source: BCG analysis.

Note: Seven developing cities were divided into five quintiles.

In this report, four Chinese cities—Shanghai, Beijing,Guangzhou, and Shenzhen—occupy relatively high positions in their groups. Perhaps no one will be surprised to see these cities in leading positions in the speed-of-change dimension. It is also quite clear that they are becoming stronger in the economic opportunities dimension, including opportunities for work, career, and earnings, as well as the availability of personal loans.

It is important to emphasize that these cities are ranked relatively high in several quality-of-life subdimensions, including mobility (thanks to their large infrastructure projects) and education and development. Given these cities' leading positions in speed of change and economic opportunities, we believe they will continue on this trajectory.

— Hui Zhu
Managing Director and Partner

- **Modified Weighting.** We advanced our approach to subdimension weighting and combined 2021's database of 25,000 responses with 2022's database of 27,000 responses. We made these changes to have a truer picture of the drivers that influence residents' well-being. Accordingly, this led to a decrease in the weight placed on such subdimensions as public spaces, resilience to emergency situations, identity with culture and history, and opportunities for work, a career, and earnings. It also led to an increase in the weight placed on such subdimensions as the ability to influence events, medical care, and education and development.

- **New Cities.** We added 34 cities, bringing the total surveyed to 79, to have a more diverse representation across the globe. Many of these additional urban areas are developing cities, whose residents value a high speed of change. Adding them had a direct impact on the weights of the speed-of-change dimensions and, thus, the final scores of some cities. Large Asian cities saw a jump in their scores, while cities that change slowly saw a decline.

We calculated the correlation of coefficients between cities' total scores in 2021's rankings and 2022's rankings to assess how the cities' results have changed. Despite the methodology modifications and the changes in the underlying indicators, the correlation between cities' 2021's scores and 2022's scores was 85%, which is relatively high. It means that despite the changes, the *Cities of Choice* report provides a consistent assessment of cities' ability to deliver residents' satisfaction.

How the Pandemic Has Changed City Life

As expected, the COVID-19 pandemic had a detrimental effect on cities' scores in 2022. The pandemic was the key driver of changes in both the survey responses and statistical scores.

For the survey responses, the effect was mostly unambiguous—only eight cities received higher ratings from their residents than they did in 2021. We compared residents' 2020 and 2021 responses to the same survey question and determined that in 2021, residents were less optimistic assessing their cities; on average, they gave their cities lower scores. City residents downgraded their ratings across all quality-of-life dimensions. Also, they saw fewer attractive jobs and career opportunities and reported less certainty in professional self-realization. On a more intangible aspect, residents were less likely to feel kindness or respect or to benefit from the helpfulness of others. Given that the survey was conducted in mid-2021, many of the responses were influenced by the pandemic.

While most of the survey scores declined, indicating that residents in most of the cities viewed life less positively, the pandemic's impact on the objective measures were more varied. In fact, we saw a dip in large-city issues (such as crime, air pollution, and traffic), which supported the results of big cities. However, smaller cities lost some key strengths, such as safety, social connections among residents, and good public spaces.

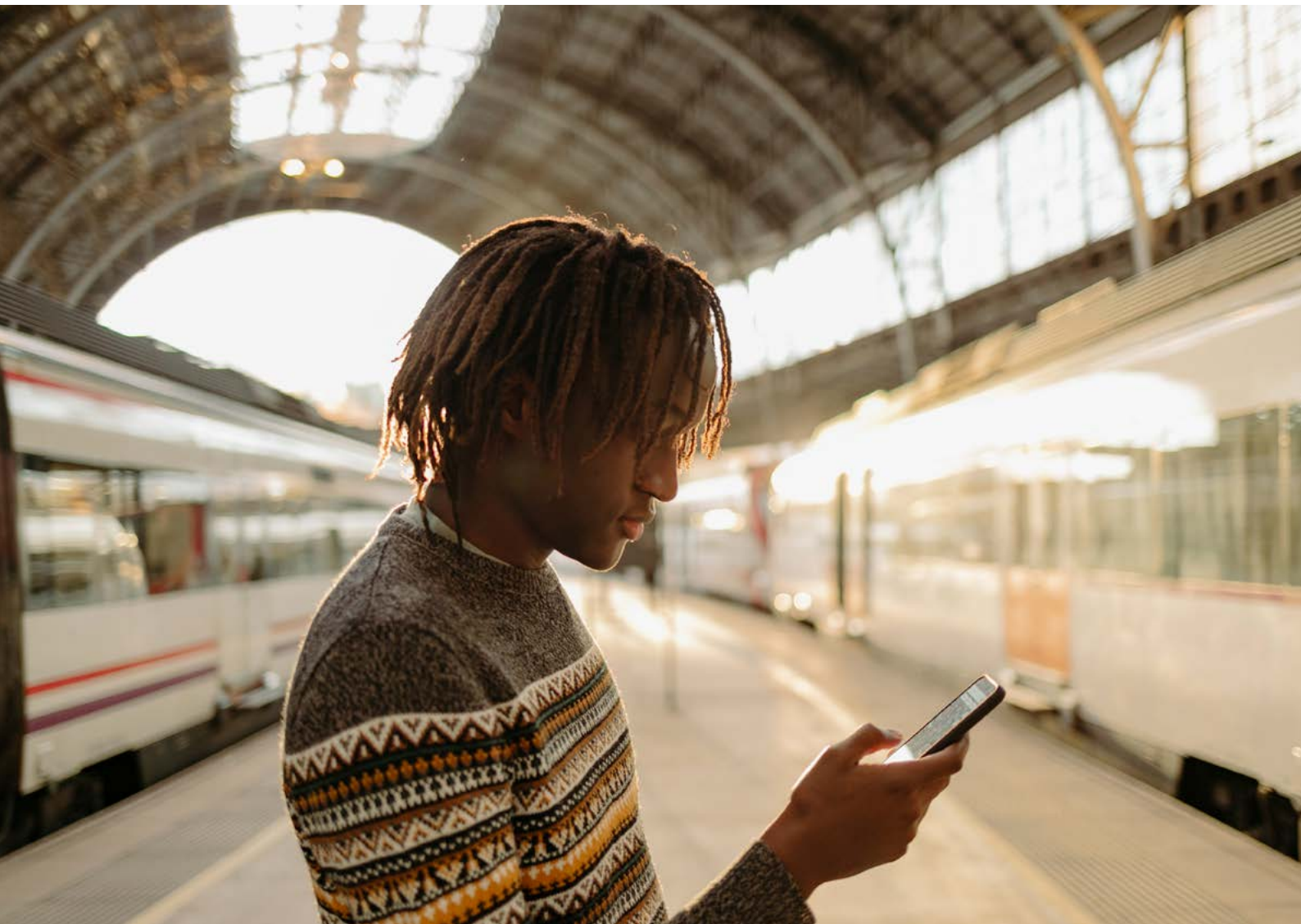
The COVID-19 pandemic has become a strong test of the resilience of most cities. In fact, many cities have not yet emerged from it. This hurt their scores not only in the resilience-to-emergency-situations subdimension (because of high mortality rates from viral infections, for example) but also in many others.

Overall, we see that cities' rankings in resilience to emergency situations strongly correlate with cities' financial resources, since maintaining a high level of resilience requires investments in infrastructure—medical, social, transportation, and security. So, mainly European and North American cities are occupying leading positions in this subdimension on the basis of indicators such as the number of ambulances per 100,000 population, the number of artificial-lung ventilators per 100,000 population, and the number of intensive-care beds per 100,000 population. At the same time, we see that Asian and South American cities are investing heavily in safety and security infrastructure.

Cities that take a structured and comprehensive approach to resilience will create synergies and empower quick responses to any emergency.

— Selin Zalma
Managing Director and Partner

What Motivates Residents to Relocate?



With the advent of "hyperglobalization" and the expansion of economic opportunities, relocation between cities has become a common phenomenon across the world. Of the 52,000 residents who responded to our surveys, 50% have relocated to another city at some point. Furthermore, 48% are considering moving in the future.

More residents are moving or contemplating it because relocating is becoming easier: transportation infrastructure is advancing, the number of people who speak more than one language is growing, the short-term rental market is improving, and new technologies facilitate the relocation process.

During the COVID-19 pandemic, the number of relocations between cities declined significantly. But as the restrictions have eased, the number is increasing. Considering this, we took an in-depth look at relocation. Specifically, what makes people relocate, and how can leaders make a city attractive for relocation.

Analyzing the data that we collected revealed two important findings:

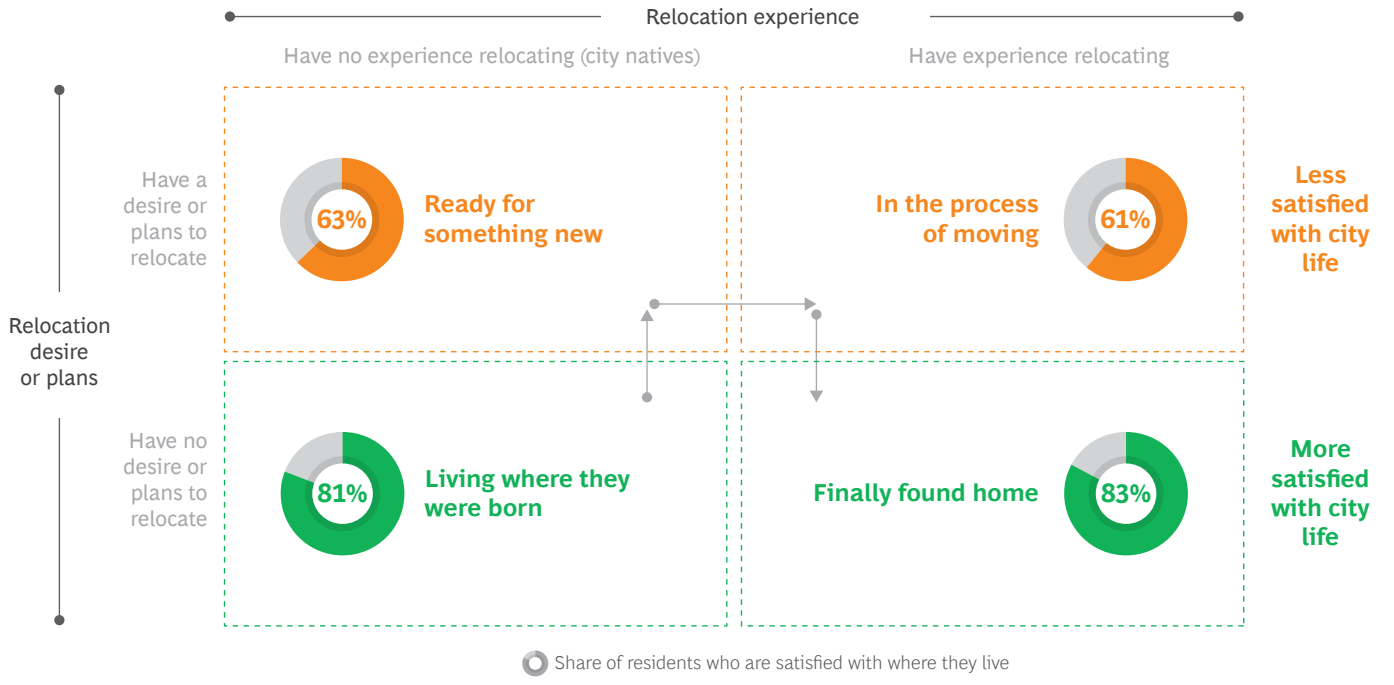
- **A strong relationship exists between residents' satisfaction with their city and their desire to relocate.** Overall, the desire to move or to stay is strongly related to residents' satisfaction with their life: residents who do not plan to move (because they have already relocated or because they live where they were born and do not plan to relocate) are generally more satisfied than those who have some plans for relocation.
- **Finding a city to call home may take a lot of time and several attempts.** Residents may relocate to several cities before staying in one. Satisfaction with life in their city is at its highest when residents decide to stay.

To better understand these findings, we divided the 52,000 respondents into four groups. (See Exhibit 10.)

- **Living where they were born.** These respondents live in the place where they were born and do not plan to relocate.
- **Ready for something new.** These participants have not relocated, but they plan to move in the future.
- **In the process of moving.** These respondents have already relocated and are in the process of moving again.
- **Finally found home.** These participants have already relocated and would like to stay where they are now.

We then looked for patterns in how these four groups of residents are present in different cities. We found that some cities do not have a particular profile—all four groups are equally represented. Other cities have a clear profile—one group of residents prevails over the other groups, in which case, the profiles of cities are intuitive. For example, Dubai is predictably populated by residents who are in the process of moving again. Whereas Wellington's residents say that they have finally found home.

Exhibit 10 - Residents Who Have No Desire to Relocate Are More Satisfied Than Those Who Want to Move



Source: BCG analysis.

Interestingly, some cities that have the same profile are quite different in terms of residents' satisfaction level. For example, Wellington and Tokyo are populated by residents who finally found home. That makes sense for Wellington, given that the city has a high share of satisfied residents. But the profile does not make sense for Tokyo, which has a high share of unsatisfied residents. In fact, this finding counters our earlier one that residents who do not plan to move are generally more satisfied than those who have some plans for relocation. So, why do some residents stay when they are dissatisfied with their city? Conversely, why do some residents move when they are satisfied with their city?

Residents are often divided into two sociocultural types: "topophils," defined as those who have a deep attachment to their place of residence, and nomads, defined as those who frequently move between cities. This division helps to explain why some residents do not want to move, even in cases where, on average, they do not enjoy life in their city, while other residents are more mobile and willing to move in search of greater happiness. By making this division, we shifted the focus from cities to their residents.

A Guide for Leaders

We believe that these sociocultural classifications can act as a guide for city leaders and administrators. While there are no good or bad residents for a city, there are certainly those that fit better according to the requirements of a city. For example, nomads are a key requirement for large modern cities that are building infrastructure at a rapid pace. Cities such as Dubai and Singapore have attracted construction workers to meet those needs. At the same time, other cities will benefit from attracting topophils who will live in the city for the rest of their days.

Thus, each city needs to answer two key questions:

- Which type of resident forms the main population of the city now?
- Which type of resident should prevail to make the city more successful in accordance with its target vision?

These questions can guide urban leaders in implementing the policies that can not only attract new residents but also deter current ones from leaving, particularly those who are pertinent for growth. For instance, to boost its deteriorating tourism-dependent economy, Venice launched Venywhere—a program aimed to attract nomads, such as IT developers, artists, and freelance consultants who don't have a fixed base for work. Foreigners could avail themselves of several services, including help finding accommodations, navigating local processes, and getting integrated into the local culture.

At the same time, a lot of important issues for new residents are not covered by the mandate of city authorities. A city has to have good relationships with national authorities and collaborate with them to provide nomads with visas, tax incentives, health care, education programs, and other services.

When we divided the 52,000 survey respondents into nomads and topophils, we found that nomads value subdimensions such as a comfortable climate, the consumption of goods and services, and entertainment and recreation; by contrast, topophils value subdimensions such as safety, medical care, and government services.

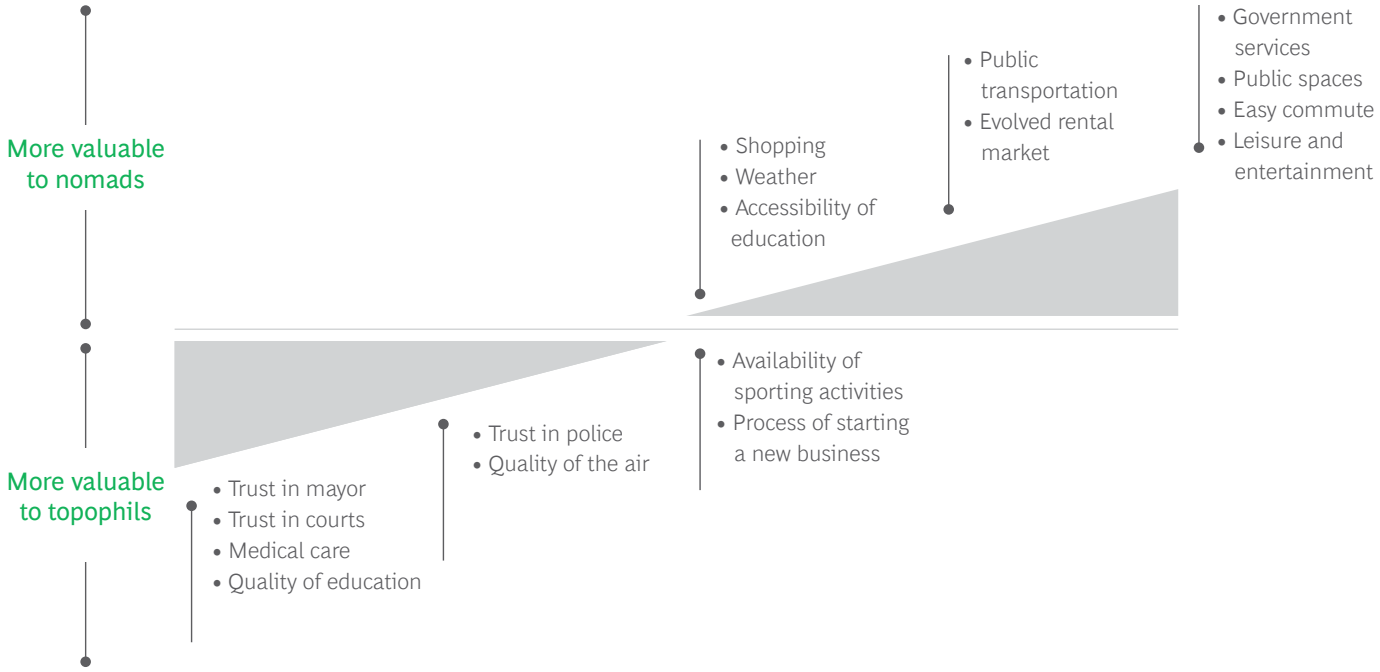
Over the next ten years, $30 trillion will be invested in infrastructure globally. Cities will absorb a big chunk of this expense building extensive residential, commercial, transportation, digital, energy, and social infrastructure. This significant amount of capital will drive substantial growth of city economies, so it is important to steer the expenditure to the right areas.

One imperative is to upgrade the current infrastructure, making it a smart and sustainable built environment that addresses the growing demands of residents for comfort while climate and environmental challenges increase. Although some cities have announced smart-city projects, few have yet achieved a true hybrid experience for residents. The investments in sustainability and resilience are just gaining momentum, and we don't have the luxury of time to get it right.

— Suresh Subudhi
Managing Director and Senior Partner;
Global Leader, Travel, Cities, and Infrastructure

Therefore, if a city wants to target a certain type of resident, it should implement policies that encourage the services and amenities that are appreciated by that type. (See Exhibit 11.) To attract nomads, cities should develop areas that define everyday comfort, such as an easier commute, an evolved rental market, varied jobs opportunities, and well-equipped modern public places. In a similar manner, to attract topophils, cities should invest in long-term strategic areas, such education and medical care, and they should identify avenues that can bridge gaps between authorities and residents.

Exhibit 11 - "Topophils" and Nomads Seek Different City Services and Amenities



Source: BCG analysis.

Note: "Topophils" are people who have a deep attachment to their place of residence; nomads are people who frequently move between cities.

Appendix 1

Selecting Weights for the Subdimensions

One of our principles for the ranking system is that the weights assigned to the subdimensions should reflect residents' priorities. However, the system should also allow that residents' priorities may vary across cities, requiring appropriate adjustments to be made in the coefficients. Since a direct survey usually does not enable accurate identification of respondents' preferences, they need to be identified using indirect methods.

Using our survey data and multivariate regression, we were able to answer this question: How much, with all else being equal, would the same change in satisfaction for each of the subdimensions increase the level of city advocacy? The coefficients obtained show the average importance of each of the subdimensions for a person; in other words, a resident's preferences. These coefficients could then be translated directly into ranking weights when the ranking is developed.

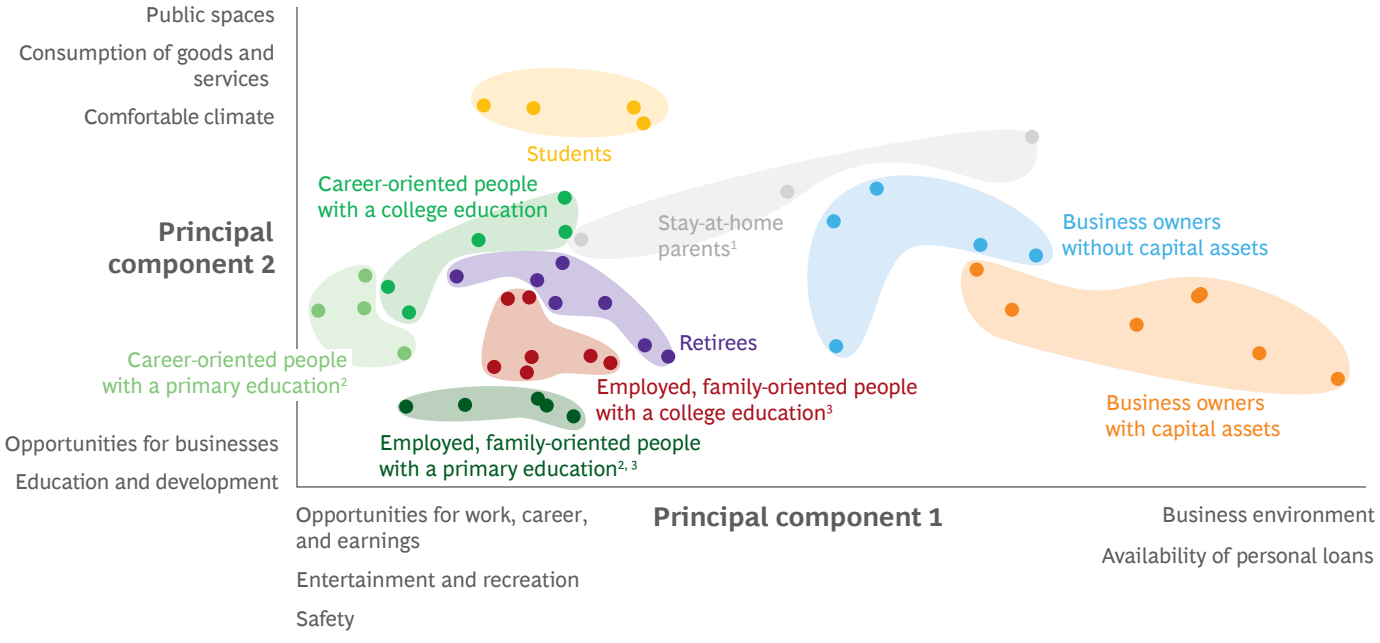
Specifically, we divided the 52,000 respondents into nine segments, which were homogeneous in terms of their preferences and sociodemographic parameters. (See the exhibit.) But the segments were significantly different from one another in terms of their preferences. The coefficients were then calculated for each of the segments.

On the basis of each segment's share of a city's population, we calculated weighted averages of these coefficients for each city and, subsequently, translated them into ranking weights. This means that we were able to take into account the differences in preferences among cities and adapt the ranking weights for each of the 79 cities.

To identify the nine preference-based segments, we used advanced data analysis:

- First, we divided the sample of 52,000 respondents into 50 random groups and determined the typical preferences in each group. This analysis helped us identify six sociodemographic parameters that best explain the differences in preferences. The six parameters are gender, education, age, economic status (working, entrepreneur, or not working), family, and the ownership of real estate.
- Second, we regrouped all 52,000 respondents on the basis of these six parameters. We obtained a total of 46 groups and determined the preferences for each of them.
- Third, using the hierarchical clustering method, these 46 groups were combined into nine segments on the basis of preference scores and sociodemographic parameters.

Segments of Residents and Their Preferences



Source: BCG analysis.

Note: In order to assess satisfaction, we asked several questions regarding the availability, quality, and overall experience inherent to the subdimension. Then we selected the combination of scores that best explained residents' city advocacy score. In the analysis, the satisfaction across all segments was normalized so that it had the same standard deviation.

[1]A stay-at-home parent is a parent who remains at home while the other parent earns the family income. A stay-at-home parent is generally responsible for domestic chores, including childrearing.

[2]A person with a primary education has received instruction in the fundamental skills of reading, writing, and math.

[3]People who are family-oriented prioritize spending time with their family.

Appendix 2

Data Normalization and Weighting

When calculating the score for a particular subdimension, each of the indicators was normalized in two steps.

First, the value was converted into a Z-score for a sample of 79 cities (a value with a sample mean equal to zero and a standard deviation equal to one). If necessary, the Z-score was multiplied by –1 so that a larger value corresponds to a better city.

Second, the Z-score was converted into points ranging from 0 to 100, so that $Z \leq -2$ corresponds to 0 points, $Z \geq 2$ corresponds to 100 points, and $-2 < Z < 2$ is converted to [50 + Z x 25]. This way, the 2% to 3% of cities, on average, with the best scores for the indicator receive 100 points, and the 2% to 3% of cities with the lowest scores receive 0 points. The resulting transformed variables are added within the dimension, with the weights chosen for them. Then the obtained sum is transformed again in a similar way, which forms the resulting score for each dimension that is distributed, on average, as follows:

- Average cities get 50 points
- 2% to 3% of the best cities out of 79 get 100 points
- 2% to 3% of the worst cities out of 79 get 0 points
- 25% of the best cities get 67 points or more
- 25% of the worst cities get 33 points or fewer

These scores are weighted using each dimension's weight and then added up to determine the aggregate ranking score.

Appendix 3

Choosing Indicators for the Subdimensions

The indicators for the 26 subdimensions in the ranking structure were selected by taking two steps.

First, on the basis of experts' opinions, we chose a set of six criteria that defined a good city. The criteria corresponded to the typical needs of a current resident for each of the 26 subdimensions. For example, for the mobility subdimension (in the quality-of-life dimension), the criteria were high connectivity between different districts, low amounts of traffic and road congestion, comfort and safety, shared consumption, the integration of different modes of transportation, and the maturity of digital services. Then we selected indicators for each criterion.

Second, data was researched and collected using public and paid sources and BCG's global resident survey mentioned earlier.

Then we analyzed the data using three methods.

Model Calculations. For example, in the housing subdimension, for the indicator *average mortgage payment relative to average monthly household disposable income*, the values were calculated on the basis of the assumptions about the average size of a household, the average availability of living space per capita, the average cost of one square meter of housing, the average mortgage rate, and the average household income.

Geo-analytics. For example, in the public spaces subdimension, for the indicator *share of the city's area allocated for green spaces*, the value was calculated using geo-analytical data.

Scoring. For example, in the mobility subdimension, for the indicator *number of public transportation modes under one fare system*, the value was calculated by giving the city one point for each type of transportation.

The complete list of indicators with data sources is provided below.

Economic opportunities

Opportunities for work, career, and earnings

Indicator	Additional comments	Unit of measurement	Source
The ratio of employed to residents of a working age	The indicator is calculated as the ratio of the number of employed to the working-age population; therefore, it includes jobs occupied by labor migrants and so forth	%	Oxford Economics; national statistical offices; BCG's calculations
Unemployment rate, according to the International Labour Organization's methodology	None	%	International Labour Organization
I have an opportunity here for professional self-realization	Score is calculated as a weighted average of participants' responses to the statement "I can realize myself professionally"	Score	BCG's global survey
Average yearly household income, price adjusted, US dollars per year (before taxes)	None	USD/year	BCG's calculations
Average yearly expenses, price adjusted, US dollars per year	None	USD/year	BCG's calculations

Economic opportunities			
Opportunities for work, career, and earnings *(continued)*			
Indicator	**Additional comments**	**Unit of measurement**	**Source**
Food expenses as a share of total expenses	None	%	Euromonitor
Number of Fortune Global 500 companies with the head office in the city	None	Number	Fortune Global 500
GDP based on purchasing power parity per employed person per year	None	USD/year	Public sources; BCG's calculations
Existence of attractive work opportunities	Score is calculated as a weighted average of participants' responses to the statement "I see many attractive job opportunities"	Score	BCG's global survey
Opportunities for business			
Tax burden	Taxes on corporate income	%	PwC and the World Bank Group
Total early-stage entrepreneurial activity rate	The share of adults (aged 18 to 64) that are starting or running a new business	%	Global Entrepreneurship Monitor
Share of service sector in the economy	None	%	Oxford Economics; national statistical offices; BCG's calculations
Number of startups per 100,000 population	None	Number	2thinknow; BCG's calculations
Opportunities to start a business	Score is calculated as a weighted average of participants' responses to the statement "I see many opportunities to start a business"	Score	BCG's global survey

Indicator	Additional comments	Unit of measurement	Source
Economic opportunities			
Equality of income			
Gini coefficient	City-level indicator	Score	Public sources; BCG's calculations
Availability of personal loans			
Availability of loans	Score is calculated as a weighted average of participants' responses to the statement "I can always get a loan if needed"	Score	BCG's global survey
Average rate of personal loans	Weighted average interest rate of all new loans, including mortgages	%	Eurostat; public sources
Quality of life			
Housing			
Number of square meters of living space per person	None	m^2/person	Public sources
Availability of an application or service with full coverage of all potential offers for real estate sales	The indicator has a value from 0 to 2: 1 point is added for the availability of an application with real estate offers that enable a mortgage application, and 1 point is added if the number of real estate offers exceeds 0.2% of the city population	Score	Public sources
Number of hours that a person needs to work to purchase one square meter of housing	The indicator reflects the average number of hours a city resident needs to work to purchase one square meter of housing based on the average cost of one square meter of housing and the average salary after taxes	Hours	Numbeo; public sources; BCG's calculations
Average mortgage payment relative to average monthly household disposable income	The indicator reflects the share of average monthly household disposable income that should be paid for the average apartment in accordance with the city's average living space per person and average household size	%	Public sources; BCG's calculations
Number of offerings of rental housing per city population	According to the most popular real estate rental websites	%	Public sources; BCG's calculations

Quality of life

Housing *(continued)*

Indicator	Additional comments	Unit of measurement	Source
The average cost of renting a one-room apartment outside the city's downtown area in relation to the average monthly disposable income for a household	None	%	Numbeo; public sources; BCG's calculations
Extreme or insufficient population density for urban area	The indicator reflects an extremely high or low population density (more than 6,000 people or less than 3,000 people per square kilometer, respectively)	People/km²	*Demographia World Urban Areas*, 17th Annual Edition, 2021
The share of the utilities costs in the average monthly disposable household income	None	%	Euromonitor; public sources; BCG's calculations
Level of domestic comfort	Share of housing equipped with washing machines, dishwashers, and internet access	%	Euromonitor; public sources; BCG's calculations
Mobility			
Average time lost in traffic jams per resident	None	Hours	TomTom; Inrix; BCG's calculations
Average length of the road network and driveways per 100,000 vehicles	Average length of the road network and driveways per vehicle, including courtyard areas	km	Public sources; Euromonitor; BCG's calculations
Number of cars available for car-sharing services per 100,000 population	None	Number	Public sources
Number of taxis per 100,000 population	None	Number	Public sources
Length of subway lines in the urban area of the city	The indicator reflects the length of the subway lines in the urban area of the city	km/km²	Public sources; BCG's calculations

Quality of life

Mobility *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Number of passengers that use the subway per day per 1,000 population	None	Number	Euromonitor; public sources; BCG's calculations
Availability of public transportation during night hours	The indicator has a value from 0 to 2: 1 point is added for the availability of night buses, and 1 point is added pro rata for the number of hours per day that the subway works	Score	Public sources; BCG's calculations
Cost of a monthly public transportation ticket as a share of monthly earnings	None	%	Numbeo; public sources; BCG's calculations
Proximity of subway stations and/or bus stops to home and/or to place of work or study	Score is calculated as a weighted average of participants' responses to the statement "Station or bus stop is too far from my house, work, or school"	Score	BCG's global survey
Number of traffic accidents per 100,000 population per year	None	Number	Euromonitor; public sources; BCG's calculations
Availability of information about parking online and opportunity to pay for parking online	The indicator has a value from 0 to 2: 1 point is added for the availability of parking information online, and 1 point is added for the availability to pay for parking online	Score	Public sources
Time to commute from home to place of work or study	Average time is based on responses to the question "How long is your usual trip from home to work or study?"	Minutes	BCG's global survey
Share of population that has convenient access to public transportation	Estimated share of urban population that can access a public transportation stop within a walking distance of 500 meters (for low-capacity public transportation systems) and/or 1,000 meters (for high-capacity public transportation systems) along the street network	%	United Nations Human Settlements Programme (UN-Habitat)

Quality of life

Mobility *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Availability of dedicated lanes for public transportation	None	Yes or no	Public sources
Infrastructure for bike transportation	The score reflects the length of dedicated bike lanes and the number of bikes available for sharing	Score	Public sources
Density of subway stations	The indicator calculates the density of subway stations in the urban area of the city	Number/km^2	Public sources; BCG's calculations
Number of public transportation modes under one fare system	The indicator shows the number of public transportation modes under one fare system in which you can pay with a unified travel card	Number	Public sources
Medical care			
Number of doctors per 100,000 population	None	Number	Public sources
Number of hospital beds per 100,000 population	None	Number	Public sources
Number of ambulances per 100,000 population	None	Number	Public sources
Share of medical institutions that use electronic medical records	None	%	Public sources
Politeness and competency of medical personnel	Score is calculated as a weighted average of participants' responses to the statement "Medical personnel is polite and competent"	%	BCG's global survey
Life expectancy at birth	This ranking uses country-level indicators for some of the cities	Years	United Nations Population Division
Average healthy life expectancy	This ranking uses country-level indicators for some of the cities	Years	World Bank

Quality of life

Medical care *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Number of nurses per 100,000 population	None	Number	Public sources
Education and development			
Availability of preschool education	Score is calculated as a weighted average of participants' responses to the statement "Preschool education is accessible and affordable" (only parents are taken into account)	Score	BCG's global survey
Share of children aged four attending kindergarten	This ranking uses country-level indicators for some of the cities	%	Public sources
Literacy rate among residents over the age of 15	Country-level indicator	%	World Bank
Number of students per teacher	None	Number	Public sources
Test results from TIMSS	Mostly country-level indicators; city results are used for calculation if they are available	Score	IEA TIMSS and PIRLS International Study Center
Test results from PISA	Total score in mathematics, reading, and science literacy tests; mostly country-level indicators—city results are used for the calculation if they are available	Score	OECD (PISA)
International Olympiad results across eight disciplines	The number of International Junior Olympiad medal winners, weighted on the basis of medals won (gold—3 points, silver—2 points, and bronze—1 point) in mathematics, computer science, physics, chemistry, biology, geography, science, astronomy, and astrophysics	Score	Public sources

Quality of life

Public spaces

Indicator	Additional comments	Unit of measurement	Source
Share of the city's area allocated for green spaces	The indicator reflects the share of the city's area allocated for green spaces within the administrative boundaries	%	BCG's estimate is based on geo-analytics, national statistics agencies, and public sources
The total area of parks per one city resident	The indicator reflects the total area of urban parks and green public spaces per person	m^2/per person	BCG's estimate is based on geo-analytics, national statistics agencies, and public sources
Share of population living within a convenient walking distance to an open public space	The indicator is calculated as share of population that can access or live within a walking distance of 400 meters (along a street network) to an open public space	%	United Nations Human Settlements Programme (UN-Habitat)
Number of children's playgrounds per 100,000 population	None	Number	Public sources
Quality of public spaces	Score is calculated as a weighted average of participants' responses to the statement "In my experience, public spaces (for example, parks and squares) are clean, in good condition, and well equipped"	Score	BCG's global survey
Time spent outdoors each week	The indicator has a value from 0 (the person does not spend any time outdoors) to 100 (the person spends more than eight hours per week outdoors)	Score	BCG's global survey

Entertainment and recreation

Number of museums per 100,000 population	None	Number	Tripadvisor; World Cities Culture Forum; public sources; BCG's calculations
Number of theaters per 100,000 population	None	Number	Tripadvisor; World Cities Culture Forum; public sources; BCG's calculations

Quality of life

Entertainment and recreation *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Number of cinemas per 100,000 population	None	Number	Cinema Treasures; public sources; BCG's calculations
Number restaurants per 100,000 population	None	Number	Tripadvisor; BCG's calculations
Availability of options for entertainment and recreation	Score is calculated as a weighted average of participants' responses to the statement "I can always find opportunities for leisure and entertainment (for example, restaurant, cinema, and theater)"	Score	BCG's global survey
Number of fitness centers and swimming pools per 100,000 population	None	Number	Google Maps; public sources; BCG's calculations
Number of the world's highest-grossing concert tours held in the city in ten years	The indicator reflects the number of times the city has hosted shows of musical artists whose concert tours are classified as the highest-grossing concert tours in ten years	Number	*Pollstar*; *Billboard*; *Forbes* (list of highest-grossing concert tours by year); public sources (concert tours by region)
Number of international film festivals	None	Number	Public sources
Number of Michelin-rated restaurants	The indicator reflects the number of all restaurants mentioned in the list (not only starred restaurants)	Number	*Michelin Guide*
The presence of significant events in popular sports	The indicator has a value from 0 to 4, where 1 point is given for soccer matches (UEFA Champions League, UEFA Europa League, Asian Football Confederation Champions League, and FIFA Club World Cup), 1 point for tennis tournaments (Grand Slam tournaments and ATP Masters), 1 point for Formula One rounds (all three types of competitions are accounted for over two years), and 1 point for hockey games (Champions Hockey League and National Hockey League playoffs) played in the city over a five-year period	Score	Public sources

Quality of life

Entertainment and recreation *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Number of museums in the top 100 most-visited art museums in the world, according to the *Art Newspaper*	None	Number	*Art Newspaper*
Number of exhibitions hosted by the city's museums ranked among the world's most-visited art exhibitions by the *Art Newspaper*	None	Number	*Art Newspaper*
Number of libraries per 100,000 population	None	Number	Public sources; BCG's calculations
Presence in the ranking of the best cities, according to *Time Out*	None	Yes or no	*Time Out*
Share of adult population that regularly practices sports (one or more times per week)	None	%	BCG's global survey

Consumption of goods and services

Square meters of retail space per 100,000 population	None	m^2	Public sources
Working hours of main shops	The indicator calculates the total number of working hours per week for four types of retailers: Ikea, the largest shopping mall, the largest grocery chain, and the largest pharmacy chain	Hours/week	Ikea; public sources
Number of local farmers' markets with the opportunity to buy fresh food per 100,000 population	None	Number	2thinknow; BCG's calculations

Quality of life

Consumption of goods and services *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Number of points of sale per 100,000 population	None	Thousands	2thinknow; BCG's calculations
Accessibility of grocery stores (index)	Score is calculated as a weighted average of participants' responses to the statement "There is a grocery store within walking distance from my house"	Score	BCG's global survey
Penetration rate of noncash payments	Calculated index that assesses the level of penetration of noncash payments on the basis of the following data: the number of ATMs, the possibility of noncash payments in hotels and small stores, and the prevalence of contactless mobile payments	Score	2thinknow; public sources; BCG's calculations
Share of the population using internet sales channels	None	%	2thinknow
The presence and variety of the most well-known luxury goods shops	The indicator reflects the number of stores of the most valuable luxury brands	Number	*Forbes* (lists of most valuable luxury brands and stores)
Nonfood prices (index)	The indicator reflects the total cost of eight nonfood products manufactured by Ikea, Apple, H&M, and Zara (two per brand) in US dollars	USD	Ikea; Apple; H&M; Zara
Online services availability for the one-hour delivery of everyday purchases	None	Yes or no	Public sources

Ecology

Air quality: $PM_{2.5}$ content	None	µg/m³	Euromonitor; Air Matters
Air quality: PM_{10} content	None	µg/m³	Euromonitor; Air Matters

Quality of life

Ecology *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Air quality: NO_2 content	None	µg/m³	Euromonitor; Air Matters
Air quality: O_3 content	None	µg/m³	Euromonitor; Air Matters
Existence of measures and initiatives to help preserve the climate	A city receives 0 points if it is not part of the C40 Cities Climate Leadership Group and has no emission-reduction strategy, 1 point if one of the conditions is met, and 2 points if both conditions are met	Score	C40 Cities Climate Leadership Group; public sources
Share of solid household waste that is recycled or recovered	None	%	2thinknow; public sources
Cleanliness and hygiene			
Number of public toilets available per 100,000 population	None	Number	Toilet finder website (pee.place/en); QS Supplies; national statistics agencies; public sources
Share of houses equipped with a water supply	None	%	National statistics agencies; public sources
Quality of garbage collection and removal services	Score is calculated as a weighted average of participants' responses to the statement "I am satisfied with garbage collection and removal in the city"	Score	BCG's global survey
Quality and cleanliness of sidewalks	Score is calculated as a weighted average of participants' responses to the statement "In my experience, sidewalks are clean, in good condition, and convenient"	Score	BCG's global survey
Resilience to emergency situations			
Number of security cameras per city unit of area	Including cameras located in the subway system	Number/km²	Public sources; BCG's calculations
Number of ambulances per 100,000 population	None	Number	Public sources; BCG's calculations

Quality of life

Resilience to emergency situations *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Number of hospital beds per 100,000 population	None	Number	Public sources; BCG's calculations
Number of doctors per 100,000 population	None	Number	Public sources; BCG's calculations
Number of artificial-lung ventilators per 100,000 population	None	Number	Public sources; BCG's calculations
Number of intensive-care beds per 100,000 population	None	Number	Public sources; BCG's calculations
Number of police officers per 100,000 population	None	People	Public sources; BCG's calculations
Number of emergency-service personnel per 100,000 population	None	People	Public sources; BCG's calculations
Stability of the city's economic system in the event of economic instability	Regression equation coefficient $y = ax + b$, where x is the country's real GDP growth and y is city's real GDP (or gross regional product) growth	Coefficient	BCG's calculations
Average city GDP annual loss from 22 manmade and natural threats	None	%	Lloyd's City Risk Index
Level of development for the insurance system: ratio of gross written premium to GDP	Country-level indicator	%	OECD; public sources
Availability of free city-level psychological support services	None	Yes or no	Public sources; BCG's calculations

Quality of life

Resilience to emergency situations *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Level of exposure to natural disasters and the estimated potential impact of natural disasters (index)	Rated between 0 and 5, where 5 is the most favorable situation in terms of natural disasters; includes exposure to earthquakes, extreme temperatures, floods, and wildfires	Score	2thinknow
Mortality rate from viral infections	Average number of deaths from viral infections per year per 100,000 population	People	2thinknow; public sources; BCG's calculations
Number of deaths from natural disasters in the past ten years per 100,000 population	None	People	Public sources; BCG's calculations
Number of victims of terrorist attacks in the past ten years per 100,000 population	None	People	Global Terrorism Database
Number of deaths from terrorist attacks in the past ten years per 100,000 population	None	People	Global Terrorism Database

Comfortable climate

Extreme temperatures score	Score reflects the sum of differences between extreme temperature limits (day and night) and historical month averages (day and night) (35°C or below 0°C)	Score	World Meteorological Organization; public sources; BCG's calculations
Average number of hours of sunshine per year	None	Hours/year	Current Results; public sources
Number of months with a comfortable daytime temperature	Number of months when the temperature does not exceed 25°C and does not fall below 16°C during the day and 12°C at night	Number	World Meteorological Organization; public sources; BCG's calculations
The average annual intraday temperature difference	Score reflects the difference between the average maximum and the average minimum temperatures	Score	Public sources; BCG's calculations

Social capital

Social connections

Indicator	Additional comments	Unit of measurement	Source
Feeling of loneliness (index)	Weighted average of the scores received as answers to the question "Did you feel lonely yesterday (on a scale from 1 to 10, where 1 is not at all and 10 is strongly)?"	Score	BCG's global survey
Belonging to any community	Weighted average of the scores received as answers to the question "Do you consider yourself part of a certain community (for example, a community related to a hobby, interests, an activity, a neighborhood, etc.)?"	Score	BCG's global survey
Number of neighbors whom the respondent knows personally	Estimate based on respondents' answers to the question "How many neighbors do you know personally?"	People	BCG's global survey
The frequency of meetings with friends (index)	Weighted average of the scores received as answers to the question "How often do you meet with your friends or colleagues outside work or study?"	Score	BCG's global survey
Helping a stranger	Share of people who said that they had helped a stranger in the month prior to interview	%	Charities Aid Foundation's World Giving Index 2021
Donating money	Share of people who said that they had donated money to a charity in the month prior to interview	%	Charities Aid Foundation's World Giving Index 2021
Feeling trust of city's citizens	Score is calculated as a weighted average of participants' responses to the statement "I trust the people in my city"	Score	BCG's global survey

Social capital

Identity with culture and history

Indicator	Additional comments	Unit of measurement	Source
The number of UNESCO cultural heritage sites	The score indicates whether the city has sites that are included in the World Heritage List and accounts for the type of sites (cultural or natural) and accessibility (in the city or accessible on a one-day round trip)	Score	UNESCO
Number of nominations for prestigious international contemporary architecture awards over the past ten years	None	Number	ArchDaily
The number of films from IMDb's top-250 list that take place in the city	None	Number	IMDb
Feeling proud of the city's culture and history	Score is calculated as a weighted average of participants' responses to the statement "I am proud of the history and culture of the city"	Score	BCG's global survey

Inclusivity and equality

Share of disabled people of working age who are employed	None	%	Public sources
Share of public transportation that is accessible to people with disabilities	None	%	Public sources; 2thinknow; BCG's calculations
Equal opportunities for woman (index)	Share of women who responded who completely agree or tend to agree with the statement "People have equal opportunities regardless of gender, ethnicity or race, religion, sexual orientation, or other social or personal characteristics"	%	BCG's global survey

Indicator	Additional comments	Unit of measurement	Source
Social capital			
Safety			
Murders per year per 100,000 population (index)	None	Number	Websites of local law enforcement agencies; national statistical offices; 2thinknow; BCG's calculations
Having an experience of being physically assaulted or robbed, insulted, or molested in a public place or at home (index)	Score is calculated as a weighted average of participants' responses to the statement "Do you know of any cases when you or anyone you know personally got physically attacked or robbed, insulted, or pestered while in a public space or at home?"	Score	BCG's global survey
Street lighting	Mean score within city boarders	Score	Light pollution map website (lightpollutionmap.info); Google Maps; BCG's calculations
Number of security cameras per city unit of area	Including cameras located in the subway system	Number/km2	Public sources; BCG's calculations
Interactions with authorities			
Ability to influence events			
Ability to influence things in the city	Score is calculated as a weighted average of participants' responses to the statement "I feel that I can influence things in this city"	Score	BCG's global survey
Ability to vote for the city head	The indicator has a value from 0 to 2: 2 points are added for the direct election of the city head by the residents, and 1 point is added for the nondirect election of the city head by the residents	Score	Public sources; BCG's calculations

Interactions with authorities

Ability to influence events *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Ability to solve the most popular problems using online tools	The indicator has a value from 0 to 3: 1 point is added if it is possible to file one of the following complaints virtually (a complaint about the poor condition of a playground, a complaint about litter on a street, or a complaint about the absence of a pedestrian crosswalk); the possibilities were checked through search queries in the most popular language in the city through the most popular search engine	Score	Public sources; BCG's calculations
Availability of a special mobile app for citizens to influence the features of city development	The indicator has a value from 0 to 2: 1 point is added for the availability of an application that covers at least two different city-life dimensions (medicine, transportation, education, and so forth), and 1 point is added if the application allows you to leave feedback	Score	Public sources; BCG's calculations
Government services			
E-Government Development Index	The ranking uses the recalculated Local Online Service Index's ranking value where available; otherwise, it is adjusted using a country-level value	Score	United Nations E-Government Development Index; United Nations Local Online Service Index
Business environment			
Conditions for the development of a socially responsible business	Country-level indicator	Score	Survey (the best countries to be social entrepreneur)
Cost of business startup procedures	Country-level indicator	% gross national income per capita	World Bank's ease of doing business rankings
Time required to start a business	Country-level indicator	Days	World Bank's ease of doing business rankings
Number of coworking facilities per 100,000 population	None	Number	StartupBlink
Availability of information on the support available to private business	Score is calculated as a weighted average of participants' responses to the statement "I know where to find the information on the support available to my business"	Score	BCG's global survey

Speed of change

Speed of change in quality of life

Indicator	Additional comments	Unit of measurement	Source
Dynamics of quality of life in the city (index)	Score is calculated as a weighted average of participants' responses to the statement "Overall, the city has become a better place to live in the last three years"	Score	BCG's global survey
Average mortgage payment relative to the average monthly household disposable income (a ratio of 2021's figure to 2011's figure)	None	%	Public sources; BCG's calculations
Average cost of renting an apartment versus the average monthly income: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Numbeo; public sources; BCG's calculations
Number of square meters of living space per person: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	2thinknow; public sources; BCG's calculations
Number of new subway stations built within the last ten years (2011–2021)	Or from earliest date after 2011 to latest available date	Number	Public sources; BCG's calculations
Average life expectancy at birth: average growth rate (2010–2019)	None	%	WHO; national statistical offices; BCG's calculations
Students' results in the PISA test: change over ten years	Differences in the total scores from 2009 and 2018 (tested every three years)	Score	OECD (PISA)
Number of retail outlets per 100,000 population: average annual growth rate (2012–2020)	None	%	2thinknow; BCG's calculations

Speed of change

Speed of change in quality of life *(continued)*

Indicator	Additional comments	Unit of measurement	Source
Air quality: $PM_{2.5}$ content, average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Euromonitor; Air Quality Index (China); BCG's calculations
Air quality: PM_{10} content, average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Euromonitor; Air Quality Index (China); BCG's calculations
Speed of change in economic opportunities			
Real household income: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Euromonitor; Oxford Economics; national statistical offices; BCG's calculations
Number of jobs: average annual growth rate (2011-2020)	Or from earliest date after 2011 to latest available date	%	Euromonitor; Oxford Economics; BCG's calculations
Gini coefficient: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	2thinknow; public sources; BCG's calculations
Ratio of employed to working-age residents: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Euromonitor; Oxford Economics; national statistical offices; BCG's calculations
The average rate of unemployment: average annual growth rate (2011–2021)	Or from 2011 to latest available date	%	International Labour Organization; BCG's calculations
Change in financial situation (index)	Score is calculated as a weighted average of participants' responses to the statement "My financial situation has improved in the last three years"	Score	BCG's global survey

Speed of change

Speed of change in social capital

Indicator	Additional comments	Unit of measurement	Source
Number of crimes per year per 100,000 population: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Websites of local law enforcement agencies; national statistical offices; 2thinknow; BCG's calculations
Number of murders per year per 100,000 population: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Websites of local law enforcement agencies; national statistical offices; 2thinknow; BCG's calculations
Helping a stranger: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Charities Aid Foundations' World Giving Index
Donating money: average annual growth rate (2011–2021)	Or from earliest date after 2011 to latest available date	%	Charities Aid Foundations' World Giving Index
Change in openness and tolerance (index)	Score is calculated as a weighted average of participants' responses to the statement "People in the city have become more open to communication and tolerant in the past three years"	Score	BCG's global survey

Speed of change in interactions with authorities

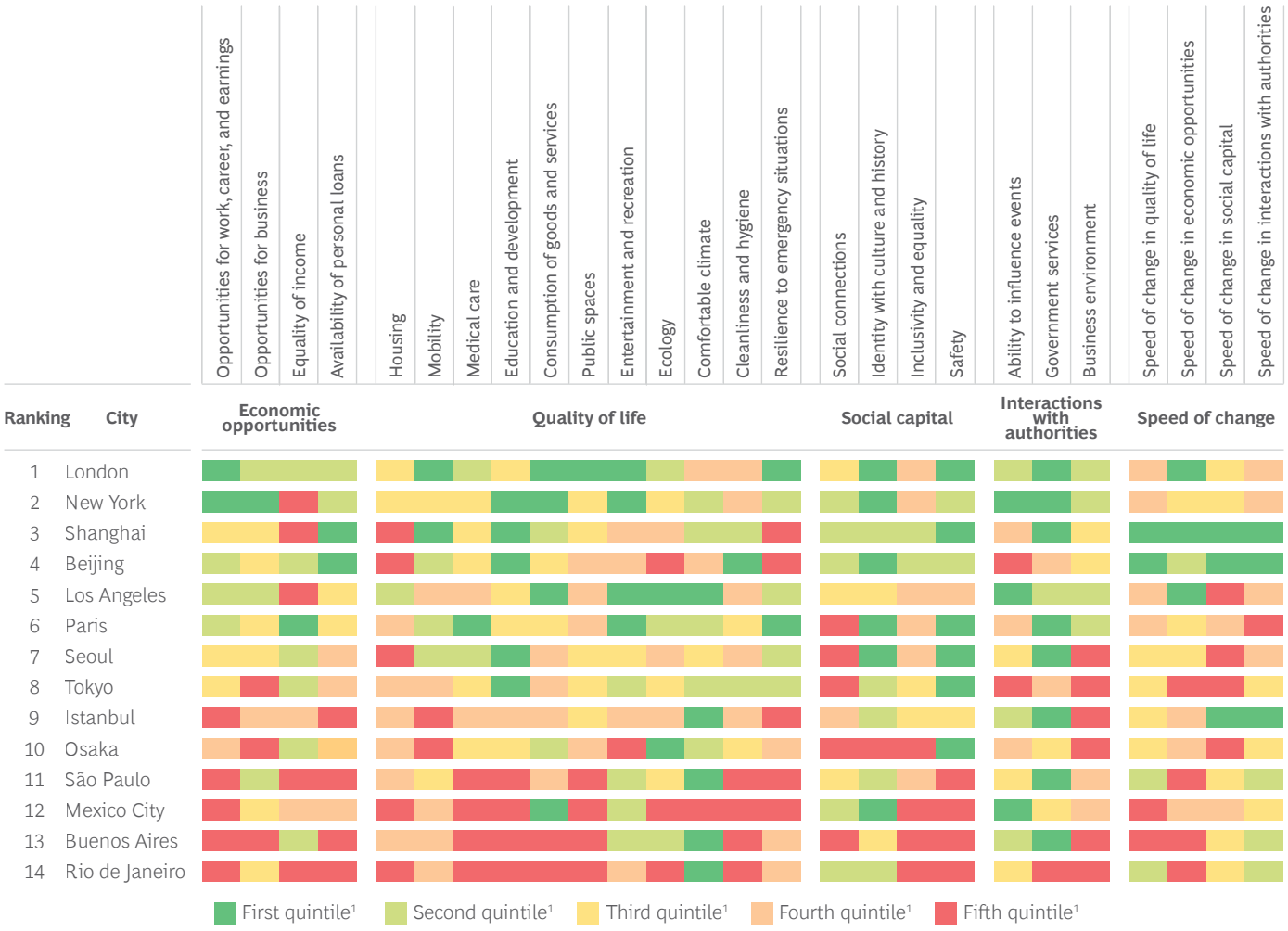
E-Government Development Index: average annual growth rate (2010–2020)	The indicator is calculated as the difference between the percentage ranks assigned at the beginning and at the end of the assessment period	%	United Nations E-Government Development Index
Change in level of trust in the city authorities (index)	Score is calculated as a weighted average of participants' responses to the statement "I trust the city authorities more than I did three years ago"	Score	BCG's global survey

Note: USD = US dollar; m = meter; km = kilometer; TIMSS = Trends in International Mathematics and Science Study; IEA = International Association for the Evaluation of Educational Achievement; PIRLS = Progress in International Reading Literacy Study; PISA = Programme for International Student Assessment. In the ecology subdimension: PM = particulate matter; NO_2 = nitrogen dioxide; O_3 = ozone; µg = microgram.

Appendix 4

Cities' Scores for All Subdimensions

Megacenters Encompass Leading Cities and Those That Cannot Convert a Large Population into Economic Potential



Source: BCG analysis.

[1]Among all cities included in the Cities of Choice rankings.

Cruiser Weight Cities Show Strong Results in Quality of Life and in Interactions with Authorities

Source: BCG analysis.

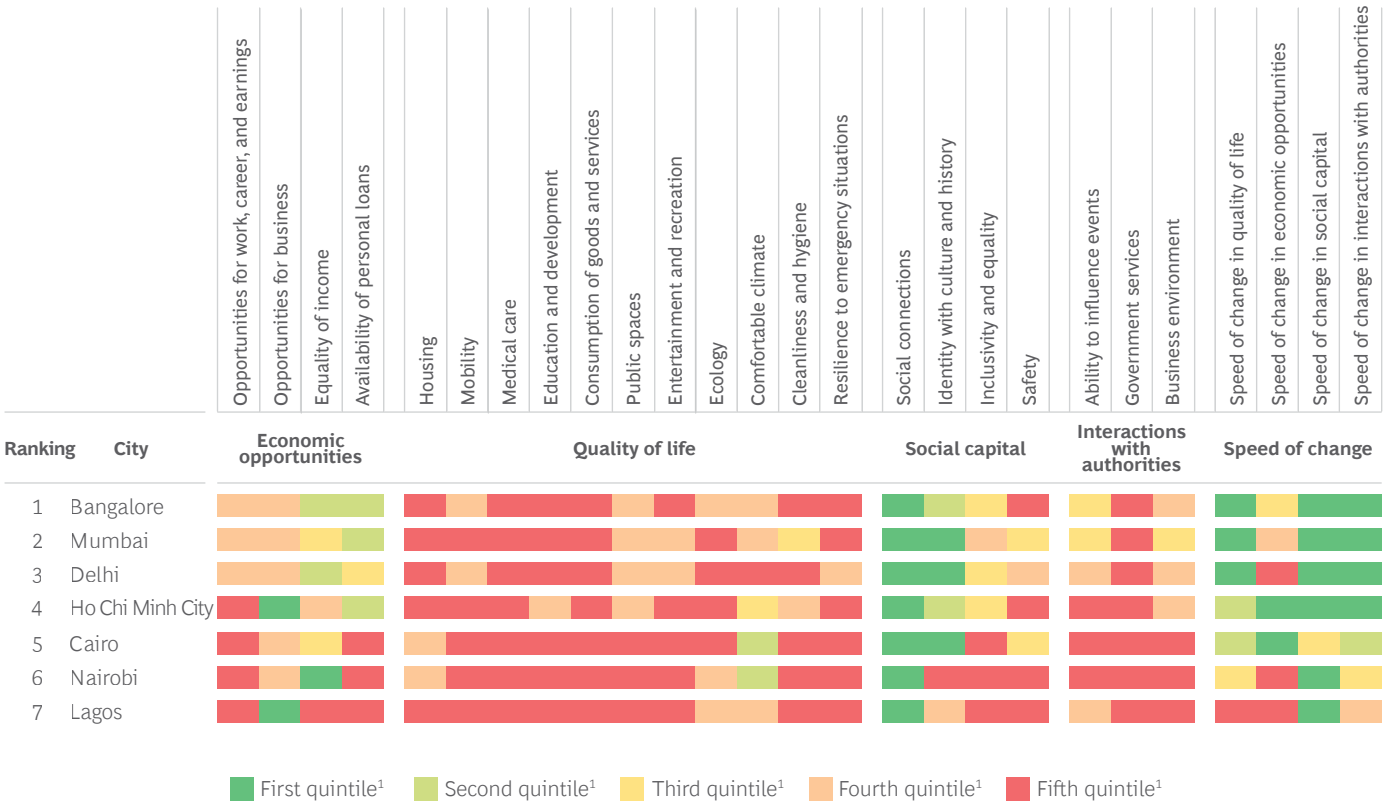
[1]Among all cities included in the Cities of Choice rankings.

Middleweight Cities Received High Scores for Their Quality of Life

Source: BCG analysis.

[1]Among all cities included in the Cities of Choice rankings.

Developing Cities Are Strong in Their Speed of Change



Source: BCG analysis.

[1]Among all cities included in the Cities of Choice rankings.

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