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International Exchange Centers Index 2024

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Abstract

In the contemporary era, the global political and economic landscape is undergoing new changes, and the development of international exchange centers is showing new characteristics. The International Exchange Centers Index 2024 report is produced by the China Institute for Development Planning, Tsinghua University (THU-CIDP) in collaboration with Deloitte China, based on theoretical research and data analysis conducted by the joint research team. Against the backdrop of global post-pandemic recovery, the Index takes into account features of the time such as geopolitical conflicts and technological revolutions to depict the new characteristics of international exchange activities in the post-pandemic era. It accurately grasps the new trends in the evolution of international exchange centers, offering guidance for promoting the international development and enhancing the international exchange functions of major cities worldwide.

The Index follows the theoretical system, indicator framework, and technical methods of the first edition of the International Exchange Centers Index released in 2023. Adjustments and optimization were made to the evaluation methods of some indicators, and six new cities—**Brussels, Stockholm, Istanbul, Rio de Janeiro, Cairo, and Johannesburg**—were added as evaluation objects, with the goal of more comprehensively and accurately depicting the development characteristics of typical international exchange centers.

According to the evaluation, London, Paris, New York, Hong Kong, Singapore, Seoul, Beijing, Tokyo, Madrid, and San Francisco rank among the top ten cities in the comprehensive ranking, which remains generally stable compared to the previous report, with slight changes in some cities. London still ranks first. Paris has surpassed New York to rise to second place. Hong Kong has surpassed Singapore and Seoul to rise to fourth place, although the scores of these three cities are close. Beijing and Tokyo remain in seventh and eighth places, respectively, unchanged from the previous report. Madrid's ranking has improved by three places to ninth, making its first appearance in the top ten.

The report reveals some new characteristics of international exchange centers in the post-pandemic era. Firstly, cities that have recovered from the pandemic more quickly have experienced a relatively faster rise in the rankings, especially those that have made significant progress in restoring international direct flights and increasing the number of inbound tourists, such as Dubai, Madrid, and Hong Kong. Secondly, digital connectivity is crucial for offsetting the impacts of the pandemic and enhancing international influence. For instance, the rapid increase in Internet speed in Shanghai and Beijing has significantly improved the cities' digital connectivity with the international community. Thirdly, geopolitical conflicts and regional disputes have weakened the international exchange capacity of some cities like Moscow, while enhancing the role of other cities like Beijing, Cairo, and Paris in facilitating international diplomatic mediation. As a result, international exchange centers are increasingly becoming strategic hubs at the forefront of geopolitics and other discourse on global public affairs.

The report also analyzes and discerns new trends in the development of international exchange centers from three dimensions: attractiveness, influence, and connectivity. It delves into key topics such as the significance of urban security and business environment to cities, the value of international organizations and innovation capabilities to cities, and the impact of digital technology on urban transformation.

Looking ahead, international exchange centers are undergoing the test of the vicissitudes of the times. We hope that international exchange centers can continue to serve as bonds and platforms connecting countries around the world, contributing to bridging differences and achieving common peace and prosperity for all!

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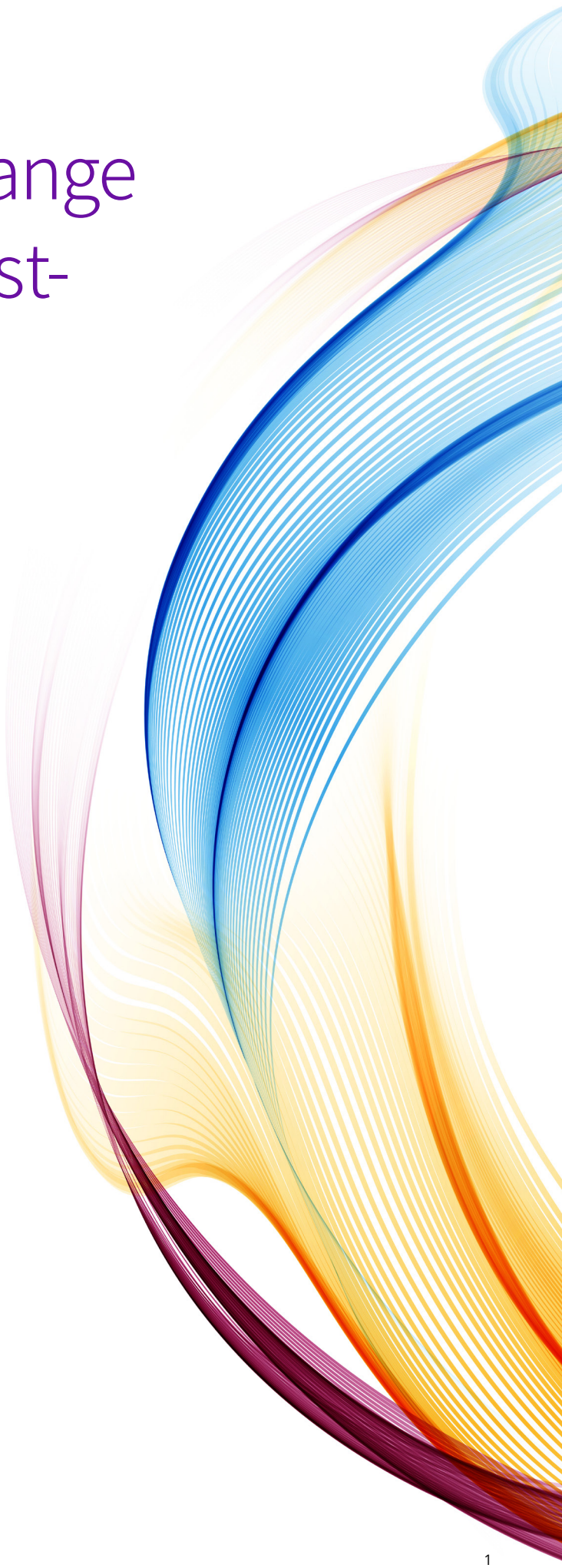
1. New Changes in International Exchange Activities in the Post-Pandemic Era

Today's world is characterized by revival and reconstruction, where competition and cooperation coexist, with the continuous emergence of technology and clash of civilizations prompting deep reflection among humanity. International exchange centers are playing increasingly significant roles in addressing common challenges facing humanity, promoting global development, and facilitating cultural exchanges and mutual learning. However, they are also facing more complex and volatile global political and economic landscapes and new challenges in globalization, necessitating rapid adaptation and adjustments.



1.1 Multiple Challenges to International Exchange Posed by the COVID-19 Pandemic and Geopolitical Conflicts

In 2023, the world economy overcame the impact of the COVID-19 pandemic, achieving a slow recovery. In the post-pandemic era, the global landscape is undergoing profound changes, with geopolitical security issues becoming more prominent. The UN-centered multilateral governance system has been severely weakened, and international relations have been influenced by ideological distractions, leading to the emergence of blocs and camps. The intensification of geopolitical conflicts has underscored the importance of diplomatic mediation and multilateral coordination. More than ever, countries aspire to solutions to global security challenges and shared human development, which further highlights the significance and role of international exchange centers.

1.2 New Features of the International Economic Situation and Globalization Landscape

The pandemic has significantly impacted cross-border personnel mobility and international transportation, leading to a slow recovery of global consumption. Foreign-related industries like international tourism, hotels catering to international guests, international business services and exhibitions have been greatly affected. International trade has been increasingly influenced by non-economic factors, with closer economic ties between the United States and Europe and the reshoring of transnational supply chains to developed countries and their neighboring regions. The global resource allocation model, formed through the decades-long globalization process, still holds significant advantages. In the post-pandemic era, the transnational flow of capital, technology, and talent is gradually recovering, and attempts to erect barriers cannot alter the historical trend of global economic development.

1.3 New Opportunities for International Exchange Activities Brought by the Wave of Digital Technology

Technological advancements and digital development have profound impacts on the content and forms of international exchanges. Online international communications that became prevalent during the pandemic continue to sustain, with the frequency of such interactions increasing due to the widespread use of online meetings, instant messaging, and social media. The breakthrough in generative artificial intelligence has had complex and far-reaching impacts on social interactions, exacerbating the digital divide and intelligent divide faced by developing countries. Some countries are drawing lines on ideological grounds, using technological monopolies and unilateral restrictive measures to create development barriers, and manipulating public opinion with AI strengths, further complicating the predicament of developing countries. It is a shared expectation of the global community, especially the Global South countries, that digital technology and AI can better empower global common development. Exchange of ideas on humanities and cultures remains a core driving force for global progress, and the trend of cultural exchange will not change. The prospect of digital technology empowering international exchanges and facilitating exchange among civilizations is promising.

Placing its research in the background of the world economy's slow recovery from the COVID-19 pandemic, the Ukraine crisis, and other impacts, the International Exchange Centers Index 2024 aims to study the new characteristics of international exchange activities in the post-pandemic era, comprehensively and accurately grasp the new trends in the evolution of cities serving as international exchange centers, thereby offering reference on promoting international development and enhancing international exchange functions of major cities worldwide.

2. Evaluation Framework

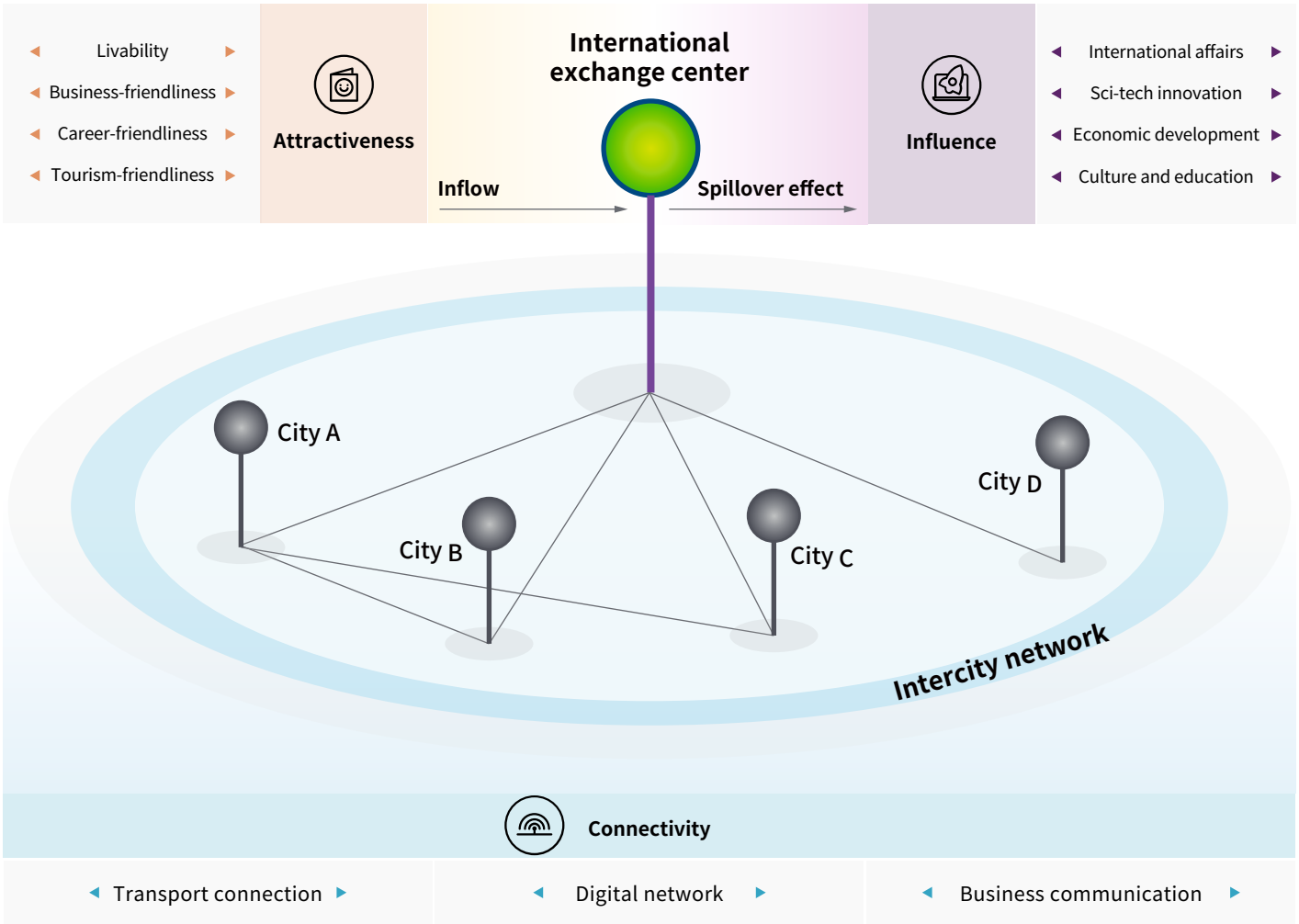
2.1 Evaluation Framework and Key Dimensions

International exchange centers are global or regional central cities **capable of connecting and serving the world, attracting international high-end elements, and playing significant roles in global affairs. They are key nodes and hub platforms in the dynamic network of international exchanges**. The essence of international exchange centers lies in three aspects: their ability and potential to promote global political, economic, technological, and cultural exchanges; their influence and contributions to global development, international affairs, and human civilization; and their capabilities to aggregate and allocate global resources, as well as institutions, platforms, and rules supporting such capabilities.

International exchange centers need to have at least three basic functions: (1) To attract and gather international high-end development elements. (2) To exert significant influence in global affairs such as diplomacy, global governance, economic development, sci-tech innovation, as well as culture and education. (3) To connect and serve the world.

Based on the above understanding, the Index retains the three first-level indicators—**Attractiveness, Influence, and Connectivity**—to evaluate the development status and potential of international exchange centers from the perspectives of **concentration of factors, reach of influence, and connectivity.** The evaluation framework is shown in Figure 1.

Figure 1 **Evaluation Framework**



The key dimensions is shown in Figure 2.

Figure 2 Key Dimensions

Attractiveness refers to the conditions that attract global human capital, physical capital and other high-end factor resources to the city. International exchange center cities often possess certain allure or "magnetism" that makes them more attractive to global high-end talent, international enterprises and overseas tourists. In terms of attractiveness, an international exchange center city should at least be a desirable place to live (livability), to get a job or start a business (career-friendliness), to invest and engage in business activities (business-friendliness), and to travel and shop (tourism-friendliness).

Influence refers to the potential to play a key role in allocating resources and leading development in regional or global political, economic, scientific, technological and cultural fields. International exchange centers are often drivers of economic development, sources of sci-tech innovations, magnets for international organizations, and contributors to the progress of human civilizations. In terms of influence, an international exchange center city should at least be able to participate in international affairs (international affairs), lead sci-tech innovation (sci-tech innovation), drive global economic development (economic development) and showcase the achievements of human civilizations (culture and education).

Connectivity refers to the scope and intensity of interconnectivity between a city and the rest of the world. International exchange centers, which tend to possess strong capabilities in global connection and communication, serve as hubs for linking their respective countries with the rest of the world. The connectivity of a city is mainly about its linkage with the world, which is underpinned by logistics infrastructure (transport connection), digital infrastructure (digital network), as well as information and personnel exchange platforms (business communication), among others. These factors are also essential for a city to engage in international exchanges, enhance its attractiveness, and show influence.

2.2 Optimization of the Evaluation Indicator System

The Index follows the principles of "science-based design, simple composition, data comparability and practical guidance" and builds upon the evaluation system of the previous report. Adjustments have been made to some third-level indicators under second-level dimensions to optimize indicator measurement and enhance the reliability and validity of the indicator system. The main adjusted indicators include seven third-level indicators under five second-level dimensions: **livability, tourism-friendliness, sci-tech innovation, culture and education, and transport connection**. The specific adjustments are as follows:

(1) Adjustment to the Livability Indicator

The third-level indicator of **murder rate** has been updated to **crime rate index**. While the murder rate is an important indicator and is representative of a city's security level, it is not complete and adequate. The 2024 Index incorporates the number of **prisoners per 100,000 inhabitants** as an indicator

and combines it with the **murder rate** indicator with equal weighting to form the **crime rate index**. The number of prisoners per 100,000 inhabitants reflects the proportion of offenders in a country who meet the standard for imprisonment, covering a wider spectrum of criminal behaviors. The new composite index better reflects the overall security of a city and its country.

(2) Adjustment to the Tourism-Friendliness Indicator

The indicator for **per capita consumption of inbound tourists** has been removed due to its susceptibility to the varying price levels of different cities and the lack of a unified calculation method and data source. The Index now only retains the **number of inbound tourists** to measure a city's tourism-friendliness.

(3) Adjustment to the Sci-Tech Innovation Indicator

The indicator for the **number of highly cited scientific papers** has been updated to the **high-level scientific paper index**. This index comprises the **number of highly cited papers published in Science Citation Index (SCI) journals**, the **proportion of highly cited papers**, and the **number of hot papers**, all of which are weighted and combined in a standardized manner. The composite index provides a more comprehensive evaluation of a city's capabilities in basic research and original innovation from the perspectives of long-term accumulation and frontier innovation.

(4) Adjustment to the Culture and Education Indicator

The Index assigns different weights to the **number of top global universities** according to their ranking segments. The number of top universities in each city is weighted to form a **global top university index**, incorporating both the quantity and quality of universities.

Additionally, the Index introduces the **high-level humanities and social sciences paper index**, which is composed of the number of highly cited papers, the proportion of highly cited papers, and the number of hot papers in the Social Science Citation Index (SSCI) and Arts and Humanities Citation Index (AHCI), weighted and combined in a standardized manner.

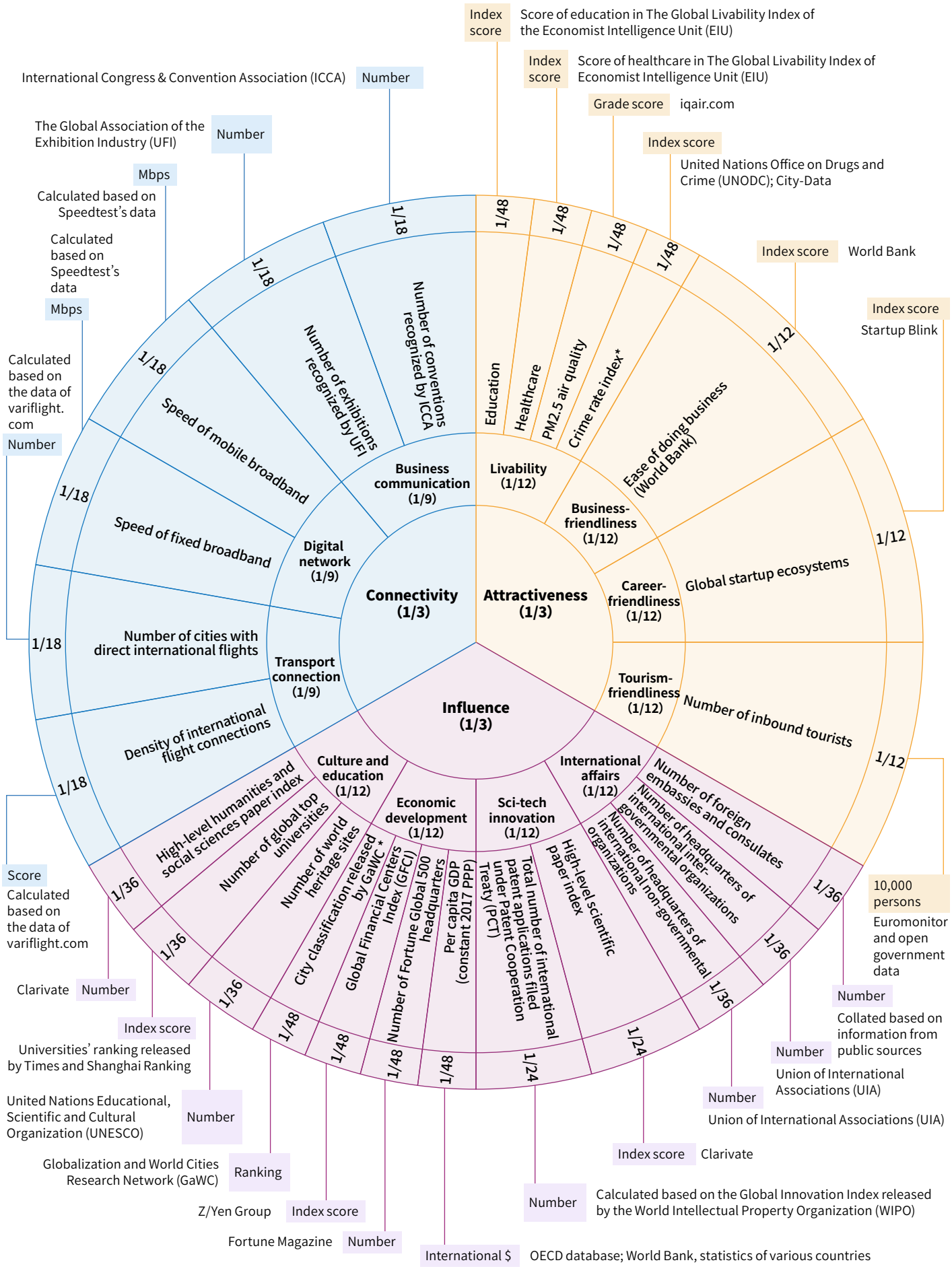
(5) Adjustment to the Transport Connection Indicator

The Index improves the calculation method of the **density of international flight connections**, defining it as the **actual number of flights departing from the city's airports and reaching overseas cities through direct or stopover flights**, divided by the number of cities with international direct flights with the city. The **actual number of international flights** can better reflect the real picture of flight connections between international cities.

Through these adjustments and optimization, the evaluation system for the International Exchange Centers Index is shown in Table 1. **Detailed calculation methods and indicator explanations are provided in the technical appendix.**

For the actual calculation, most indicators use data from the end of 2023 to reflect the latest situation after the pandemic. However, for some indicators, data from the latest year available is used due to data availability constraints. In addition, as the statistical systems in different countries vary, some indicators are based on the data released by the administrative cities, while others on that of the metropolitan areas.

Table 1 **The Evaluation System for International Exchange Centers 2024**



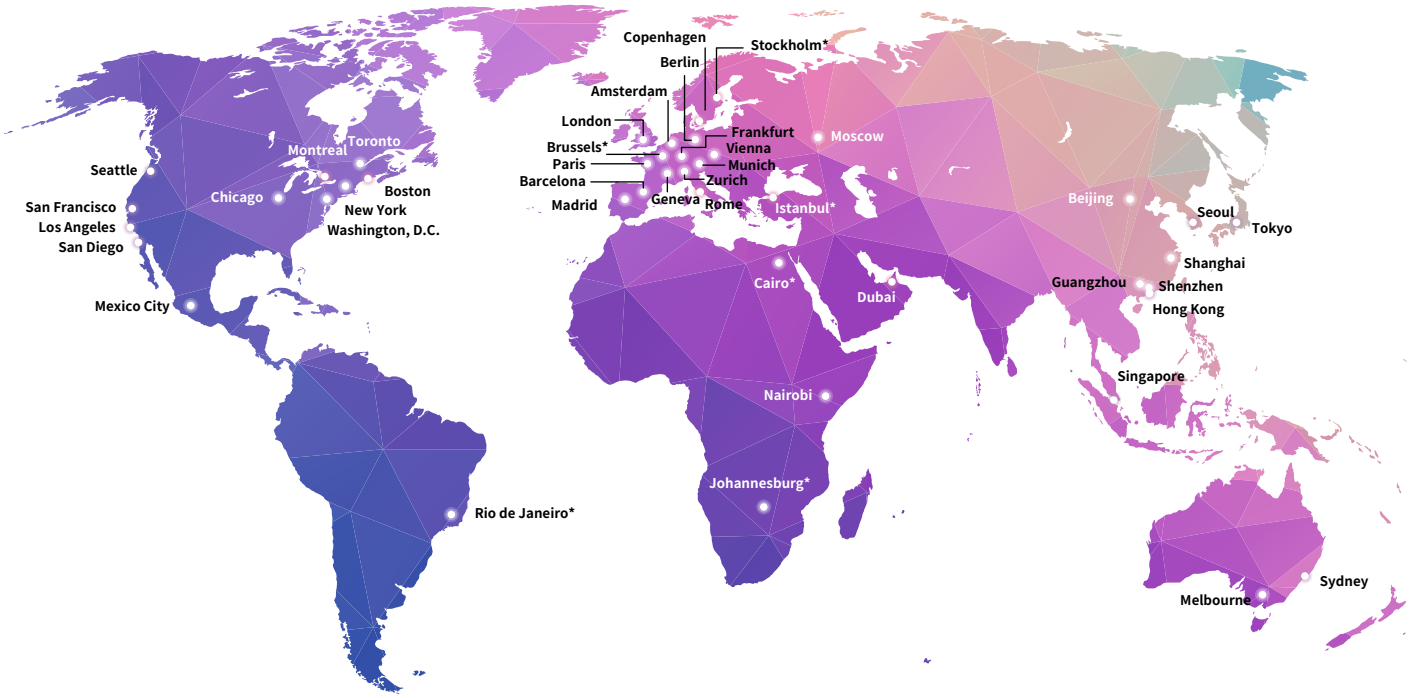
Note: means reverse indicators, which are subject to NMMS upon calculation.

2.3 Adjustments to Evaluation Targets

After referring to the well-established international city evaluation reports[1], the Index ultimately selected 43 cities based on the three dimensions, namely, attractiveness, influence, and connectivity. The selection process also took into account the political, economic, technological, and cultural development levels of each city, as well as data availability and international comparability. Some of these cities are already recognized international exchange centers, while others have the potential to become one.

1 Please refer to International Exchange Centers Index 2022, page 12.

Figure 3 Distribution of Cities Evaluated



Note: (*) indicates newly evaluated cities.

Table 2 List of Cities Evaluated

SN	City	Country
1	Amsterdam	Netherlands
2	Barcelona	Spain
3	Beijing	China
4	Berlin	Germany
5	Boston	USA
6	Brussels*	Belgium
7	Cairo*	Egypt
8	Chicago	USA
9	Copenhagen	Denmark
10	Dubai	UAE
11	Frankfurt	Germany
12	Geneva	Switzerland
13	Guangzhou	China
14	Hong Kong	China
15	Istanbul*	Turkey
16	Johannesburg*	South Africa
17	London	UK
18	Los Angeles	USA
19	Madrid	Spain
20	Melbourne	Australia
21	Mexico City	Mexico
22	Montreal	Canada
23	Moscow	Russia
24	Munich	Germany
25	Nairobi	Kenya
26	New York	USA
27	Paris	France
28	Rio de Janeiro*	Brazil
29	Rome	Italy
30	San Diego	USA
31	San Francisco	USA
32	Seattle	USA
33	Seoul	South Korea
34	Shanghai	China
35	Shenzhen	China
36	Singapore	Singapore
37	Stockholm*	Sweden
38	Sydney	Australia
39	Tokyo	Japan
40	Toronto	Canada
41	Vienna	Austria
42	Washington, D.C.	USA
43	Zurich	Switzerland

Note: Sorted by alphabetical order. Cities marked with an asterisk (*) are newly evaluated cities.

It is important to note that **although there are many cities worldwide that share certain features of international exchange centers, the Index only includes the 43 cities due to limitations in research resources and data availability. When conditions permit, more cities will be gradually incorporated in future evaluations.**

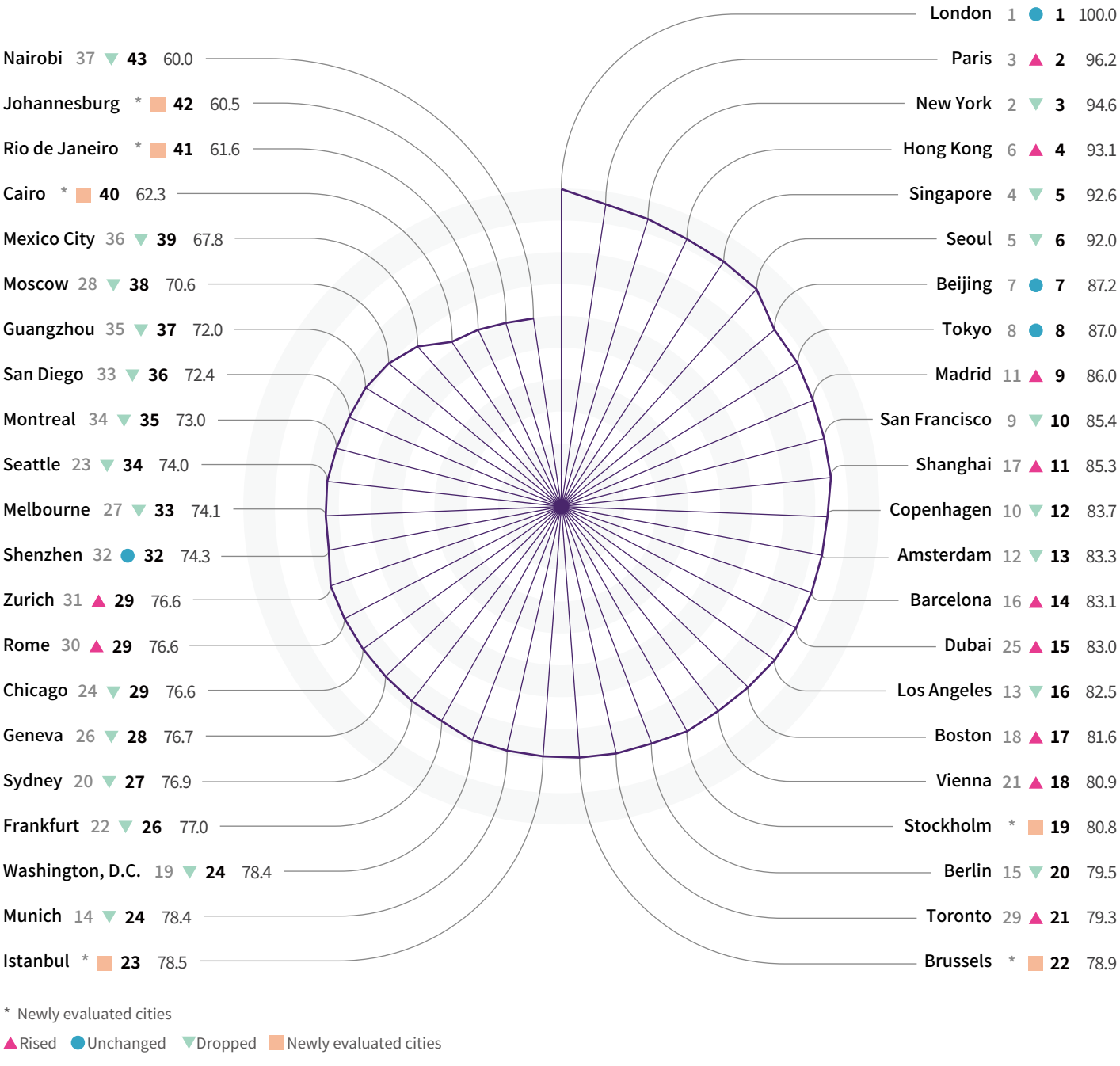
3. Overall Characteristics of International Exchange Centers in 2024

With the above-mentioned evaluation system, the Index calculated the comprehensive scores and rankings of the 43 international exchange center cities as shown in Figure 4 (for calculation methods, please see Appendix).

3.1 Comprehensive Rankings

From the evaluation of the Index, the top ten cities in the comprehensive rankings are **London, Paris, New York, Hong Kong, Singapore, Seoul, Beijing, Tokyo, Madrid, and San Francisco**.

Figure 4 **Comprehensive Scores and Rankings of All Cities Evaluated**



* Newly evaluated cities

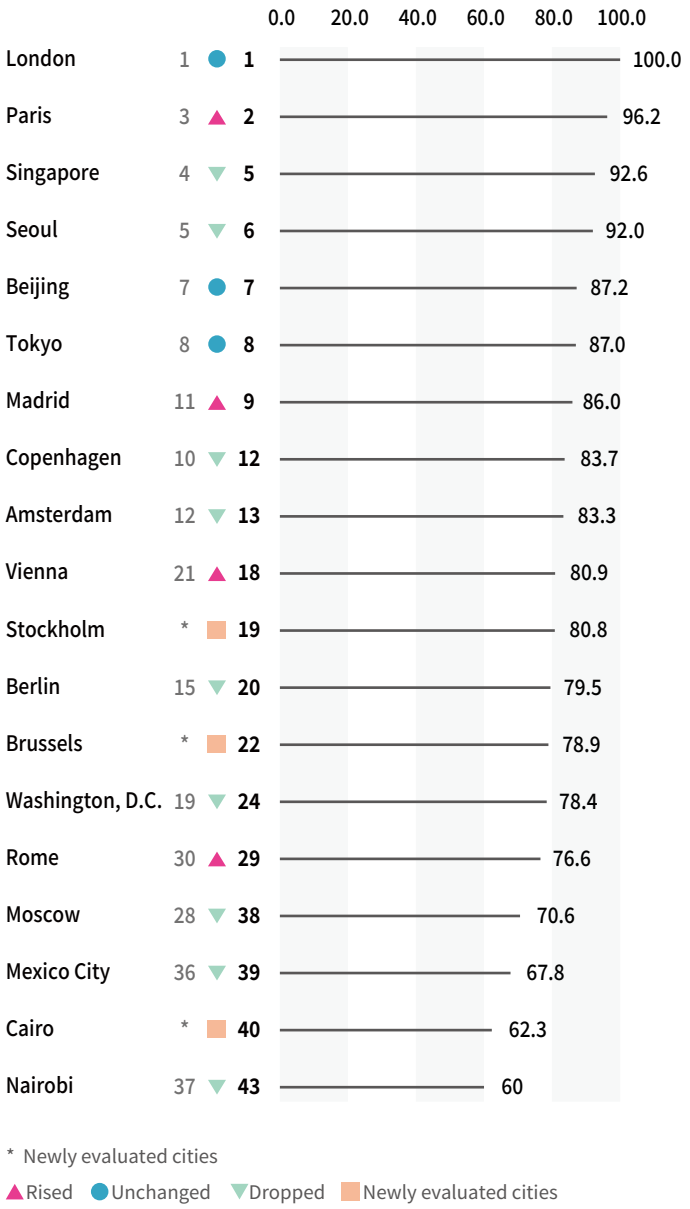
▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

3.2 General Characteristics and New Features of International Exchange Centers

Capital cities have inherent advantages in performing the functions of international exchange centers, but non-capital cities are increasingly demonstrating their unique roles in international exchanges. Among the top 20 cities in the comprehensive rankings, 12 are national capitals. These cities host the most important political, diplomatic, and policy resources of their countries and serve as the primary windows for diplomacy. The non-capital cities in the top 20 often act as significant platforms for international exchanges in areas such as economy, culture, science and technology, and education.

Figure 5 Comprehensive Scores and Rankings of Capital and Non-Capital Cities

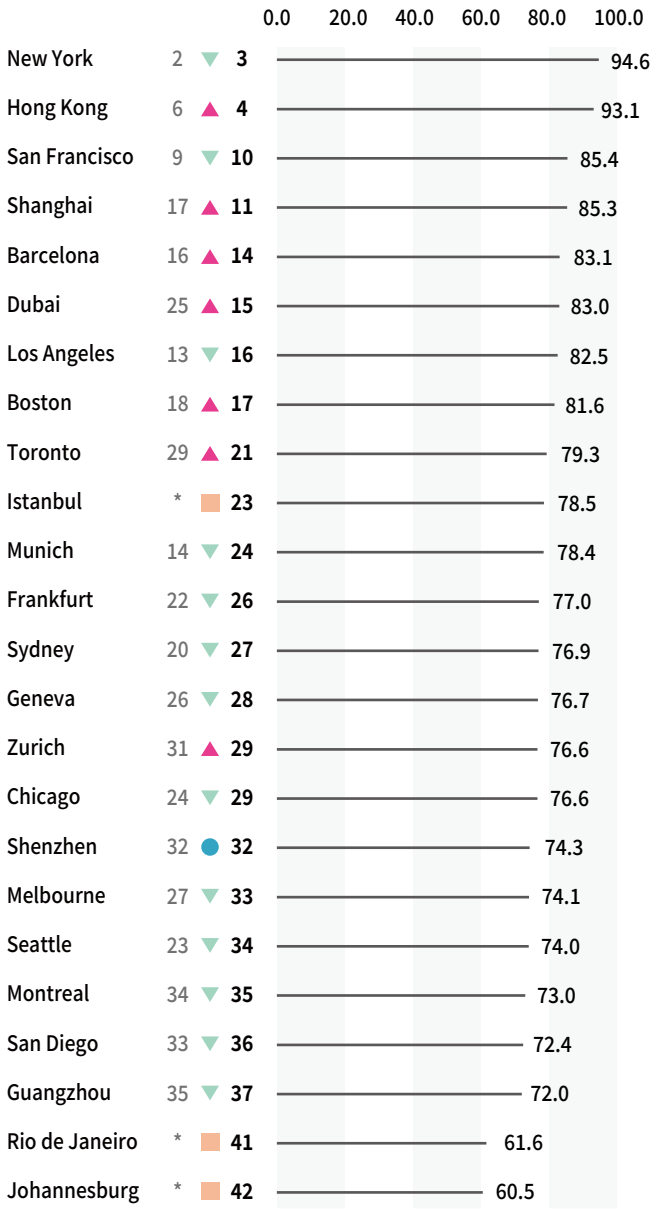
Comprehensive Scores and Rankings of Capital Cities



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

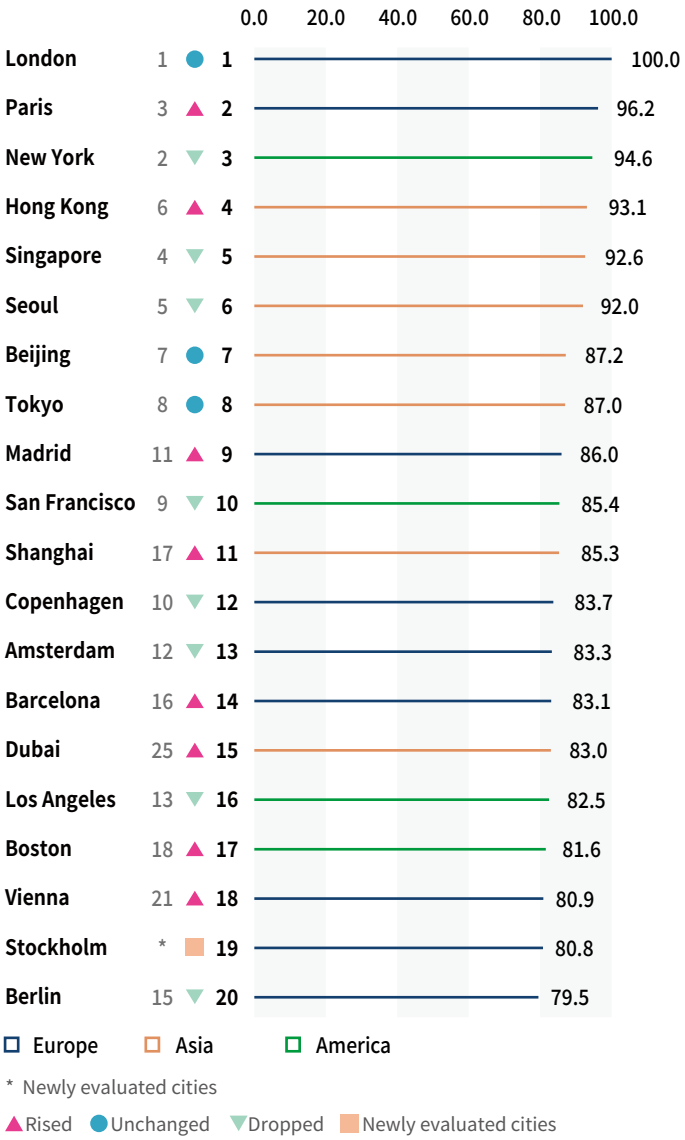
Comprehensive Scores and Rankings of Non-Capital Cities



In terms of geographical distribution, the most active international exchange centers are mainly concentrated in Europe, Asia, and North America, with Asian cities gradually gaining prominence. Among the top 20 cities, nine are in Europe. Historically, Europe was the political and economic center of the world, and major European cities still exhibit strong vitality for international exchanges today due to their rich historical heritage. Seven Asian cities are included in the top 20, reflecting the increasingly important role of Asian cities in international exchanges in the post-pandemic era. Four cities in North America rank in the top 20, demonstrating the comprehensive influence of the United States in international exchanges across political, economic, scientific and technological, cultural, and educational fields.

In terms of population, international exchange centers tend to have abundant human resources and diverse high-end resources. Among the top ten cities, London, Paris, New York, Seoul, Beijing, and Tokyo have populations of over ten million, while Hong Kong, Singapore, Madrid, and San Francisco have populations exceeding five million. These cities have high population density, strong economic vitality, and rich cultural resources. They are also home to international organizations, multinational corporations, and high-end talent, giving them outstanding advantages in resource aggregation and international influence.

Figure 6 Comprehensive Scores and Rankings of the Cities of Different Continents (Top 20)



Note: Oceania and Africa have few international exchange centers and are therefore not represented in the comparison.

Figure 7 Comprehensive Scores and Rankings of Cities with Different Population Sizes

Population between 5m and 10m

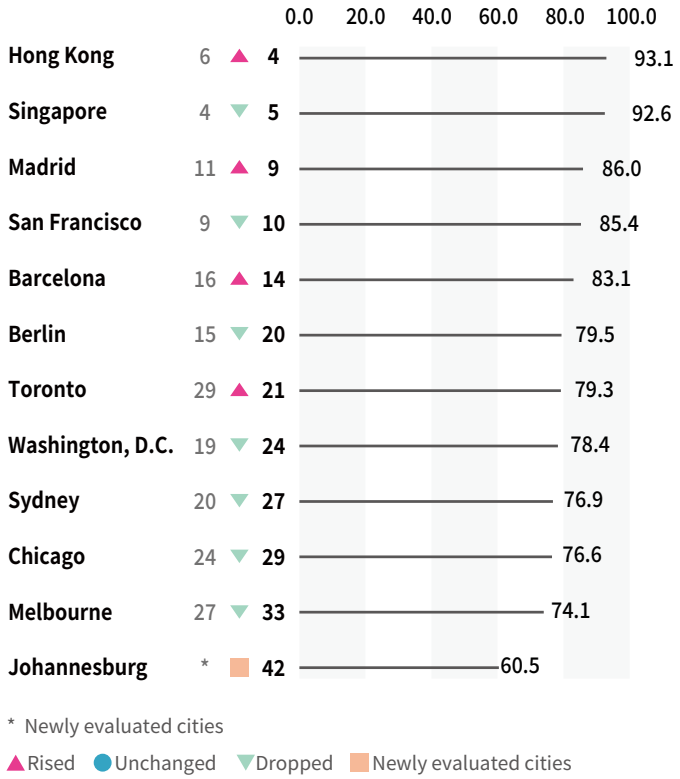
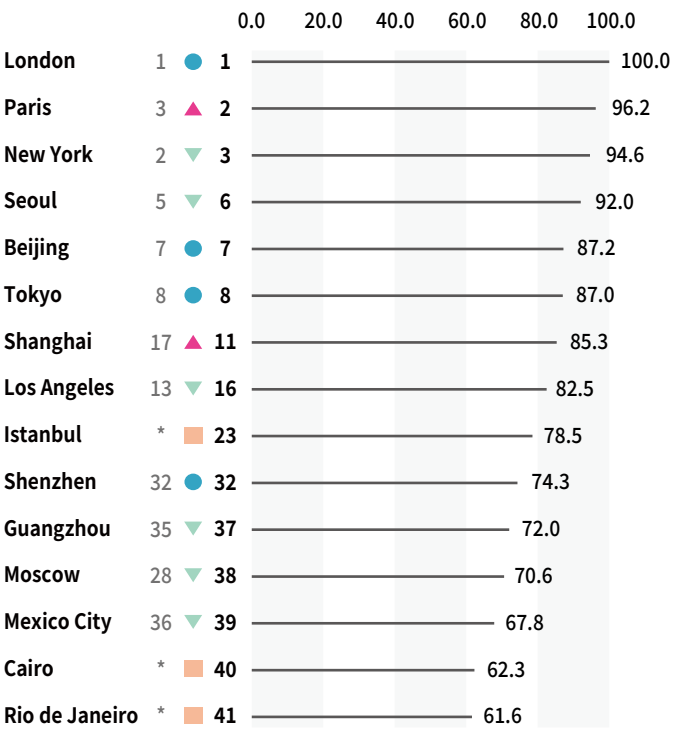
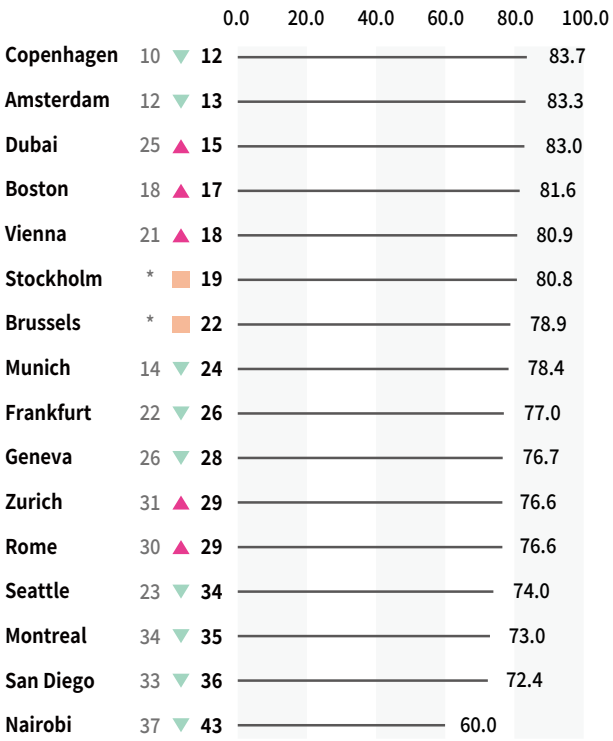


Figure 7 Comprehensive Scores and Rankings of Cities with Different Population Sizes (Cont.)

Population over 10m



Population less than 5m



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

Note: The population data of cities in OECD member countries are calculated by metropolitan area, and the data source is: https://stats.oecd.org/. The population data of the other cities are calculated by city. Among them, the population data of cities in the Chinese mainland come from the statistical yearbooks of each city, and the population data of Hong Kong, Dubai, Singapore, Moscow, Nairobi, Istanbul, Cairo, Rio de Janeiro, and Johannesburg come from the official websites of the statistical bureaus of each city or country.

Figure 8 Characteristics Comparison of Four Cities

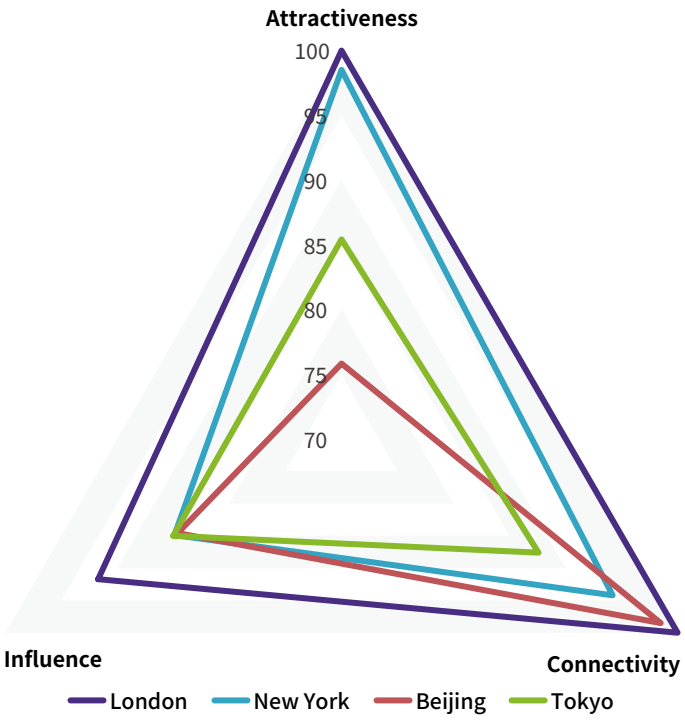
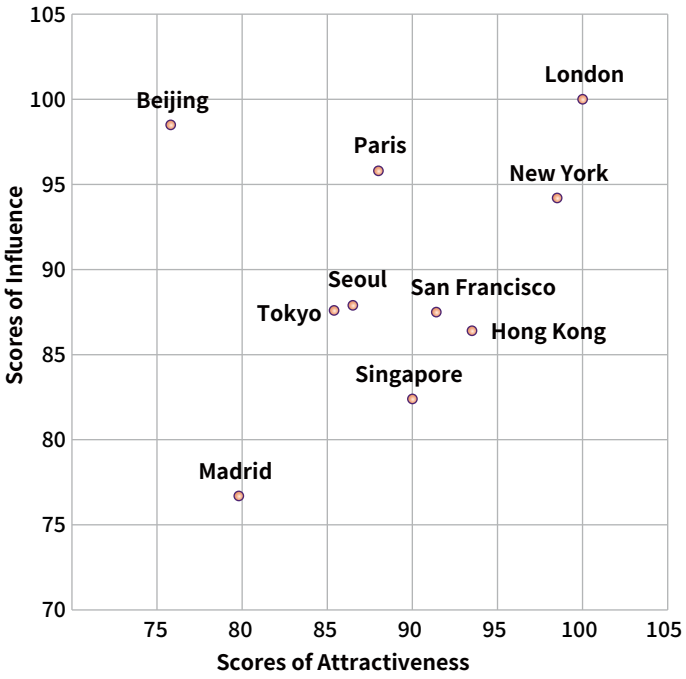
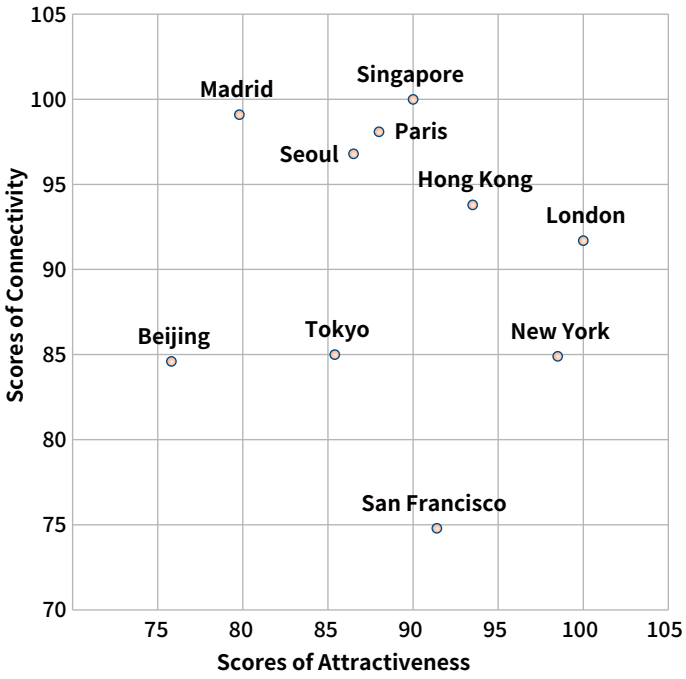
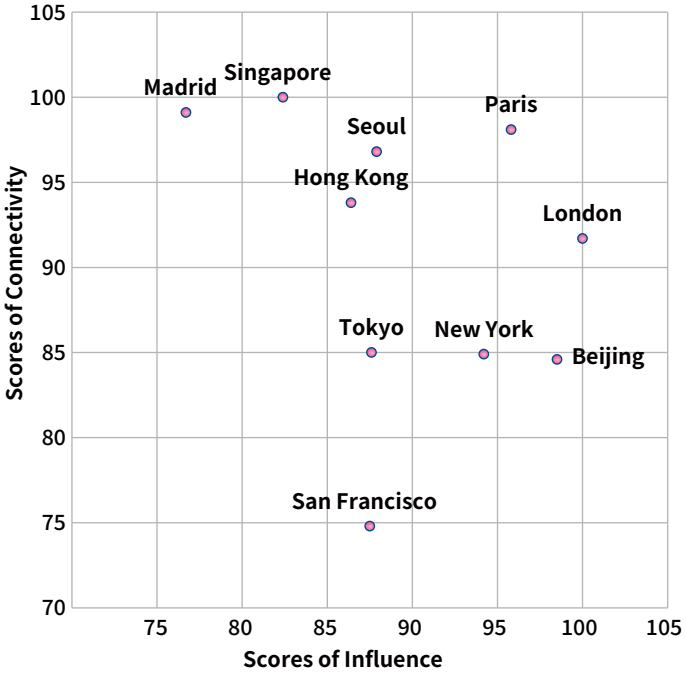


Figure 9 Evaluation of Development Balance in Terms of Attractiveness, Influence, and Connectivity







The result of the evaluation reveals some new features of international exchange centers. Firstly, cities that have rapidly risen in the rankings are often those that have quickly recovered in the post-pandemic era. Secondly, digital connection is crucial for offsetting the impacts of the pandemic and enhancing international influence. Thirdly, geopolitical conflicts and regional disputes have weakened the international exchange capacity of some cities, while highlighting the roles of some others in facilitating international diplomatic mediation.

4. Attractiveness

Attractiveness represents the unique charm or “magnetism” of international exchange centers and fully reflects the quality and taste of a city. London, New York, Hong Kong, San Francisco, and Singapore are the top five cities in terms of attractiveness, while some cities have seen significant fluctuations in their rankings.

Cities that recovered rapidly after the pandemic have seen significant improvements in livability.

The overall trend of livability for the evaluated cities follows a descending order of Oceania, Europe, North America, Asia, and Africa. Benefiting from superior natural environments, lower population densities, excellent air quality, and rapid restoration of urban functions in the post-pandemic era, Sydney and Melbourne share the top spot for livability. In the "Global Livability Index 2023," Melbourne and Sydney ranked third and fourth, with full marks for education services and medical services. Hong Kong's medical services also improved significantly after the pandemic, with its score rising to 87.5.

Chinese mainland cities like Beijing, Shanghai, Guangzhou, and Shenzhen generally lag behind in livability, but the overall quality of education services in these cities has improved.

Column 1

Sydney: Implementing Green and Sustainable Development Strategies to Continuously Optimize the Urban Environment

Sydney adheres to the principle of "sustainable development" in urban planning, continuously optimizing the urban environment through city greening, environmental research, green energy, and green transportation.

1. Enhancing urban greening.

2. Conducting specialized environmental research.

3. Optimizing the city's energy system.

4. Actively developing green transportation.

Cities in East Asian and Europe have a higher level of social security compared to American cities.

Generally, social security levels in East Asian and European cities are relatively higher, while major U.S. cities rank lower due to soaring crime rates. The murder rates (per 100,000 inhabitants) in Singapore, Japan, Hong Kong, the Chinese mainland, and South Korea are 0.12, 0.23, 0.4, 0.5, and 0.53, respectively. Apart from New York, the murder rates in other evaluated U.S. cities have shown an upward trend.

The livability scores of American cities have systematically declined, mainly due to the inclusion of a new indicator measuring the number of prisoners (per 100,000 inhabitants), on which American cities perform poorly.

Excellent business environment is a key feature of international exchange centers.

The business-friendly indicator is measured by the World Bank's Doing Business scores. Among the 43 cities evaluated, the top five are Singapore, Copenhagen, Hong Kong, New York, and San Diego. As a city-state, Singapore's superior business environment is mainly attributed to its efficient and transparent administrative system and highly law-based social environment. Copenhagen benefits from Denmark's geographic advantage, which provides excellent conditions for cross-border trading. Denmark ranks first globally in the World Bank's cross-border trade index, with low compliance costs for imports and exports, fostering a good environment for the free flow of cross-border trade. Hong Kong maintains low tax rates with no sales, capital gains, or dividend taxes. It ranks first globally in terms of the ease of obtaining construction permits and third in terms of the ease of paying taxes. The procedures for company registration and business registration in Hong Kong are extremely simple, and can be completed in as little as one hour.

Cities in the U.S. and China enjoy a clear advantage in entrepreneurship ecosystem.

Among the top ten cities for "career-friendliness", five are located in the U.S. (San Francisco, New York, Los Angeles, Boston, and Seattle) and two are located in China (Beijing and Shanghai). San Francisco, leveraging the innovation and entrepreneurship ecosystem of Silicon Valley, is a leading global hub for business startups. Beijing and Shanghai rank sixth and seventh, respectively.

Column 2

Beijing: Actively Promoting High-Tech Industry Innovation and Entrepreneurship

Beijing continuously cultivates and develops future oriented industries, and accelerates the pace of innovation and entrepreneurship in high-tech industries.

1. Providing policy support for high-tech enterprises.

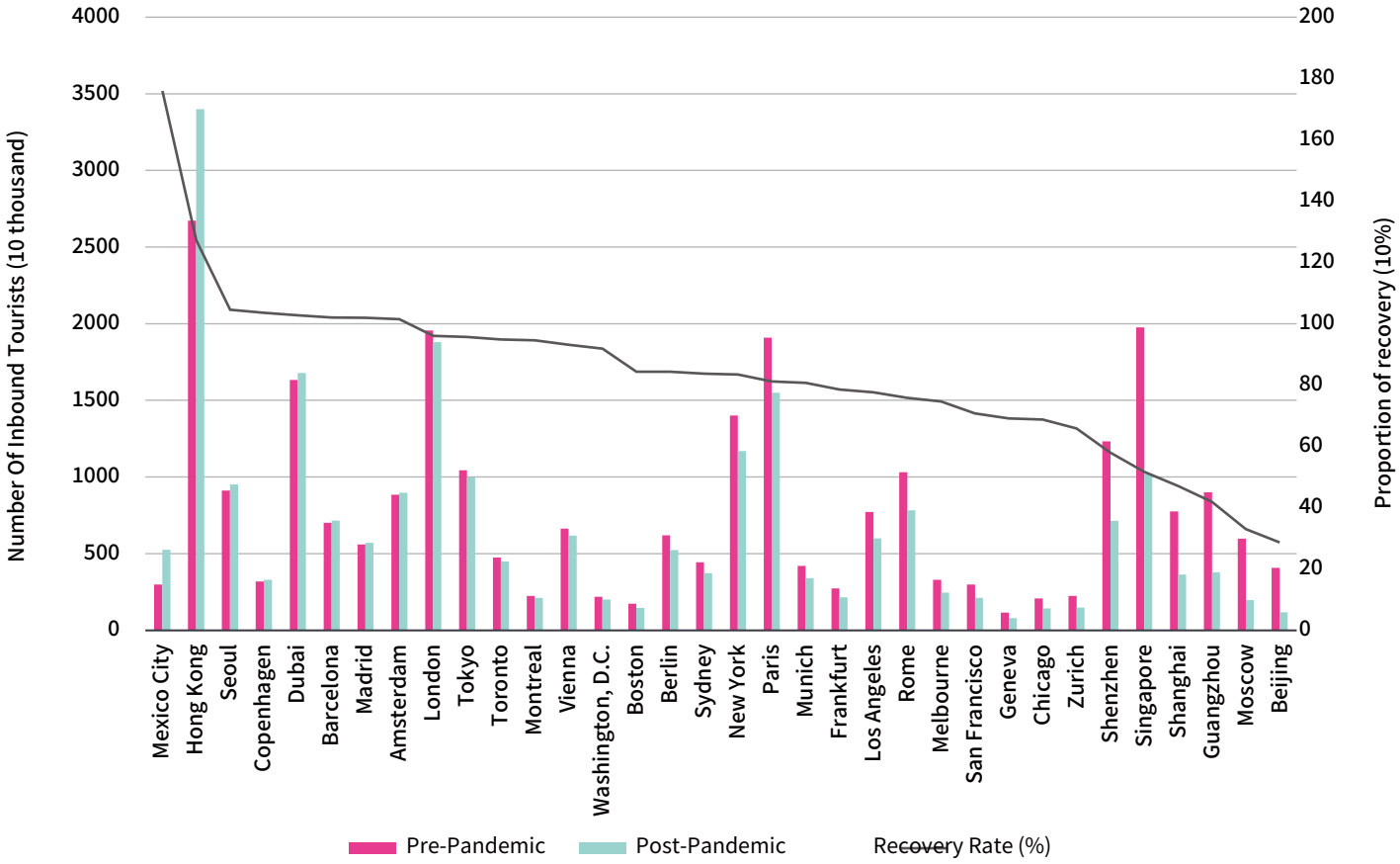
2. Accelerating the deployment of digital infrastructure.

3. Driving innovation and entrepreneurship through the digital development of the city.

The tourism markets are recovering gradually across the globe, but not at the same pace.

Given that tourism was hit the most directly by the pandemic, its recovery is crucial for boosting global economic confidence. According to the World Tourism Organization, the number of global inbound tourists in 2023 maintained steady growth, recovering to 87.9% of the 2019 levels. However, the speed of recovery varies across cities, with European, American, and Middle Eastern cities recovering faster, while those in Asia recovering generally slower than expected, as shown in Figure 10.

Figure 10 **Recovery of Inbound Tourism**

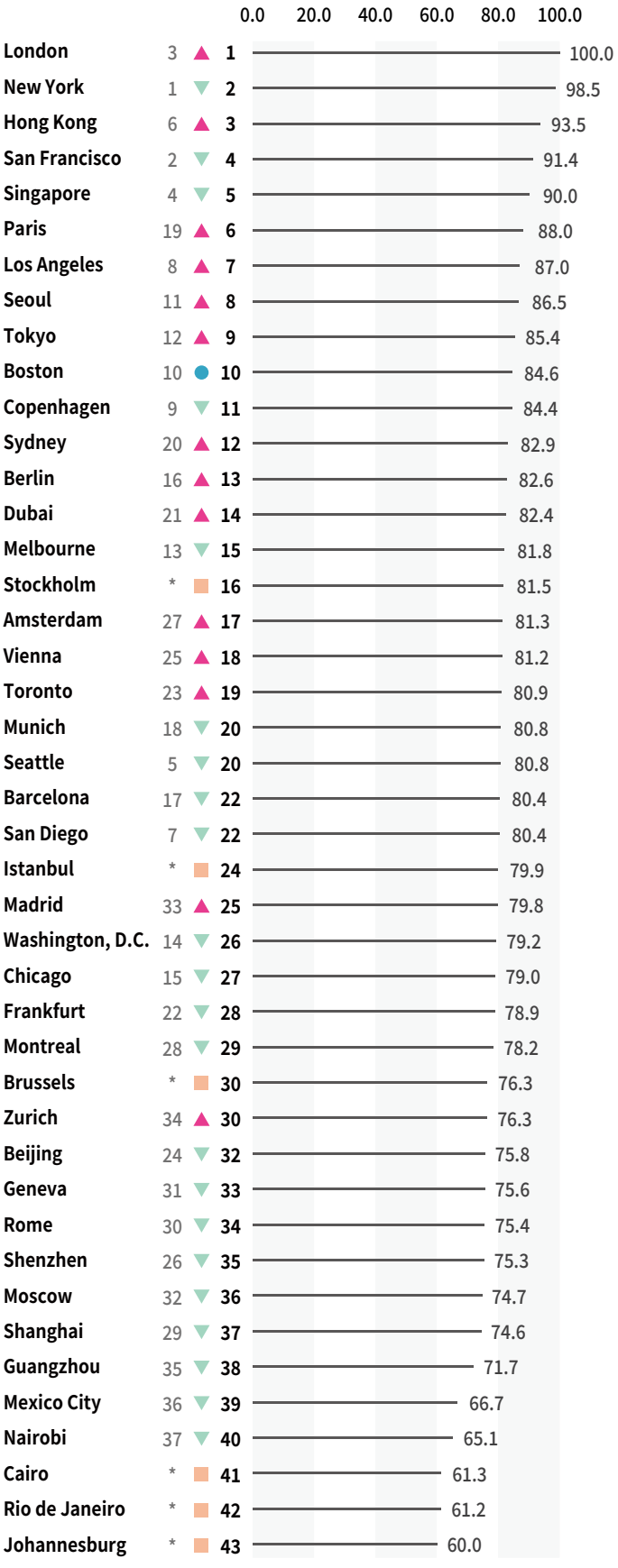


Note: Cities newly added to this evaluation are not included; the pre-pandemic data for most cities is from 2019, with the exception of seven cities where the data is from 2016; the post-pandemic data for most cities is from 2023, with the exception of two cities where the data is from 2022, and of Moscow where the data is from 2021.

According to data from the Hong Kong SAR government, the city witnessed 212 million inbound and outbound trips in 2023, a 39-fold increase year-on-year, recovering to 70% of the 2019 levels. The number of inbound trips alone was approximately 34 million, the highest among all cities evaluated. Among these inbound tourist visits, about 78.7%, or 26.76 million, were from the Chinese mainland, reflecting the importance of Hong Kong's close ties with the mainland in its rapid recovery from the pandemic. Istanbul ranks second on the list for receiving 20.17 million inbound tourist visits in 2023, indicating that Turkey's tourism industry has successfully emerged from the pandemic and achieved continuous growth. Most Asian cities, however, have not yet fully recovered from the pandemic's impact on inbound tourism.

The Index uses four second-level indicators and seven third-level indicators to measure the attractiveness of international exchange centers. The scores and rankings of the cities evaluated are as follows:

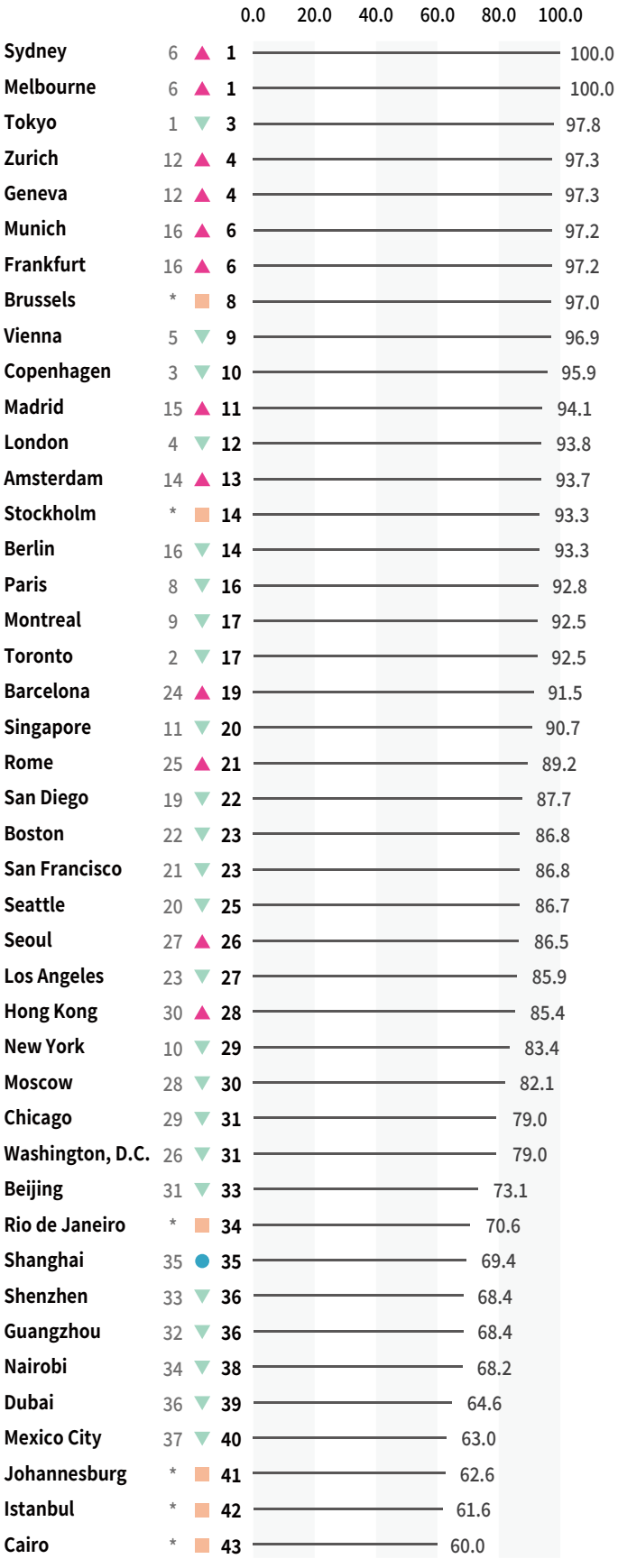
Figure 11 Scores and Rankings by *Attractiveness*



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

Figure 12 Scores and Rankings by *Livability*



* Newly evaluated cities

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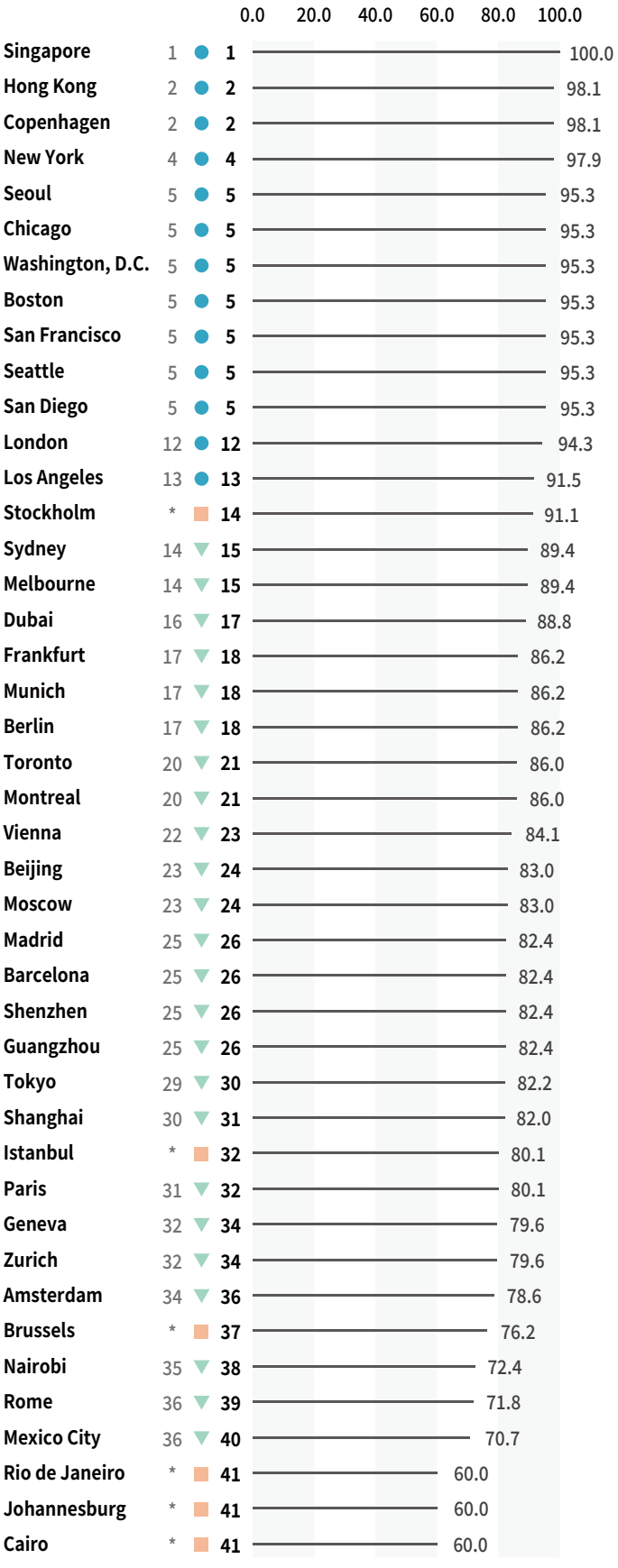
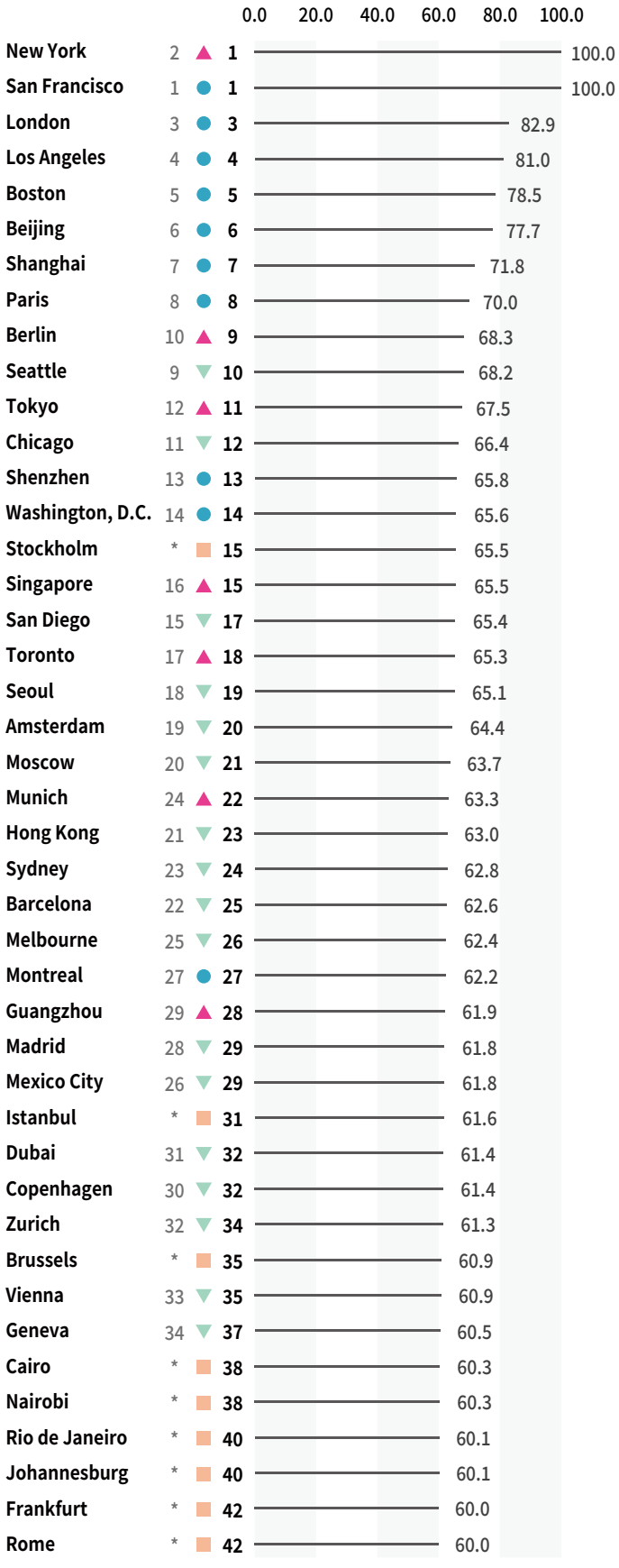
Figure 13 Scores and Rankings by Business-friendliness



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

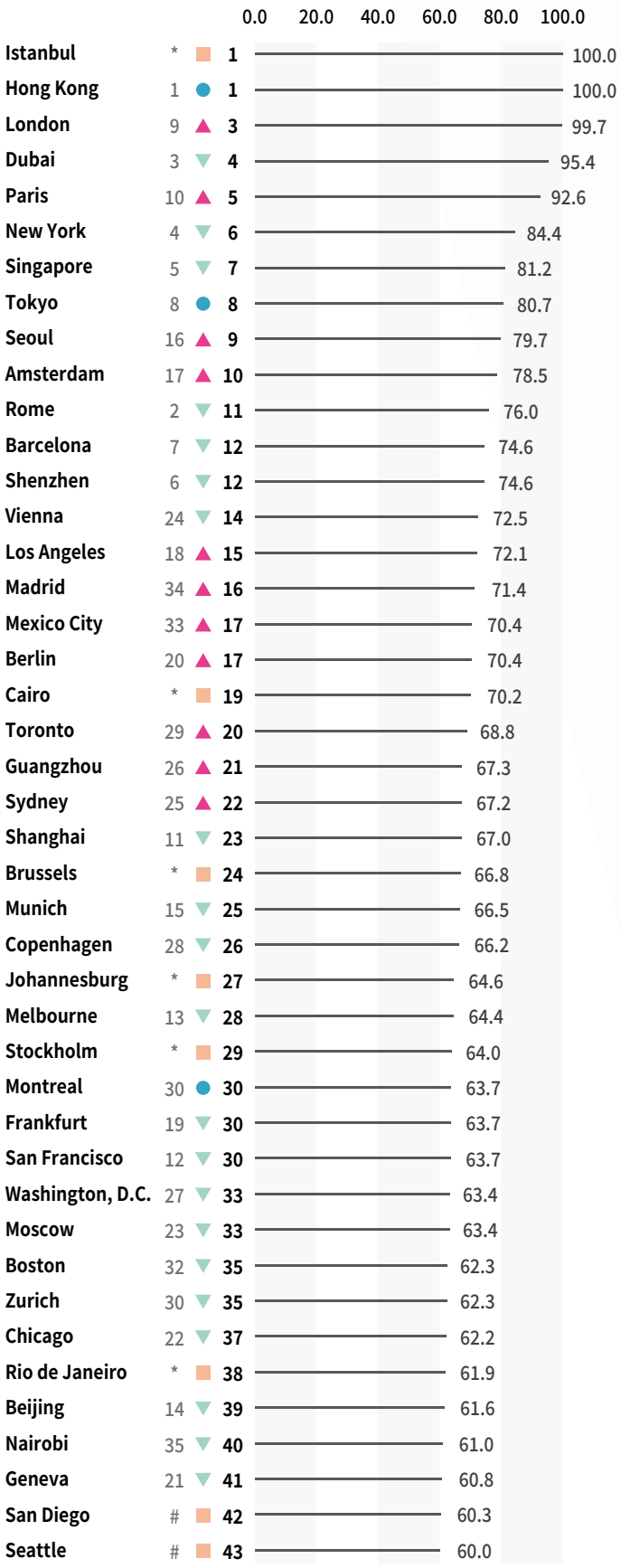
Figure 14 Scores and Rankings by Career-friendliness



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

Figure 15 *Scores and Rankings by Tourism-friendliness*



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

5. Influence

International exchange centers usually have the capabilities to allocate global or regional resources regarding international affairs, economic development, sci-tech innovation, as well as culture and education. The top five cities in terms of influence are London, Beijing, Paris, New York, and Seoul. London stands out in its influence on culture, education and economic development; Beijing has a significant influence on sci-tech innovation, culture, and education; New York excels in economic influence; and Paris is prominent in international affairs, culture, and education.

Capital cities are endowed with advantages in international affairs, and cities that host many UN agencies, such as New York and Geneva, have also become important platforms for global governance.

International exchange centers are not only primary venues for international communication, cooperation, and dialogue, but also important platforms for hosting major international events, coordinating significant international affairs, and facilitating global governance. Cities with numerous foreign embassies, consulates and headquarters of inter-governmental and non-governmental international organizations, like Paris, Washington, D.C., London, Vienna, New York, and Geneva, play a sustained and crucial role in global agenda-setting, international rule-making, and resource allocation. **Brussels** tops the list in terms of international affairs.

Column 3

Brussels: Providing High-Quality Institutional and Infrastructural Support Catered to the Demands of International Organizations

Brussels' ability to attract a significant number of international organizations stems from its historical, geographical, and cultural endowments, as well as the long-term efforts of the Brussels government.

1. Endowments in history, geographical location, culture and other aspects.

2. Tax incentives and meticulous services for international organizations.

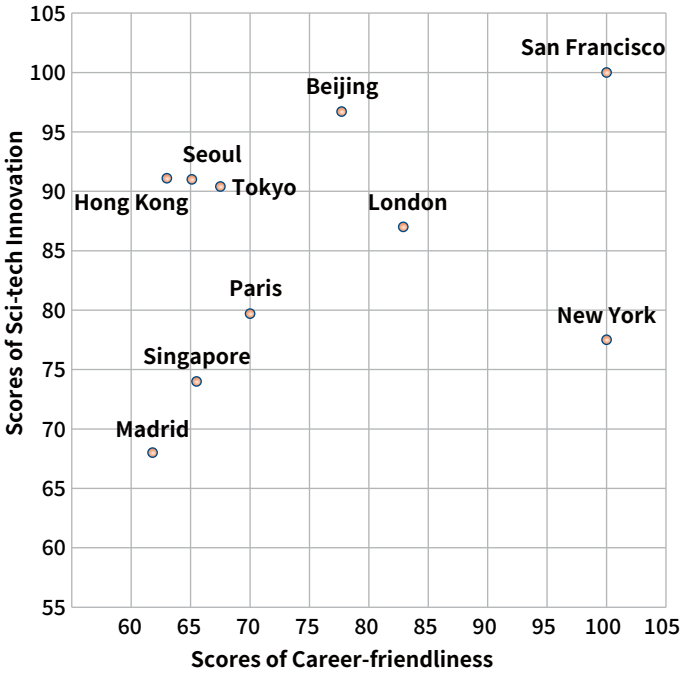
3. Advanced conference facilities for international exchanges.

American cities remain comparatively advanced in sci-tech innovation, while Chinese cities are rapidly catching up.

Three American cities (including San Francisco), six Eastern Asian cities (including Beijing), and London are rated as the ten most competitive cities that spearhead global sci-tech innovation.

San Francisco and Beijing continue to hold the top two positions in this year's evaluation. In terms of sci-tech innovation and career-friendliness, the San Francisco Bay Area, with Silicon Valley at its core, is among the best thanks to its well-established industry-academia-research ecosystem and its status as a hub for sci-tech innovation, as shown in Figure 16. Beijing, home to a great number of universities and research institutions, gathers talent dedicated to basic and applied research, which enables the city to excel in the number of highly cited scientific papers, hot papers, and PCT patent applications. However, Beijing's performance in career-friendliness lags behind its level of sci-tech innovation. For Beijing to develop into an international sci-tech innovation center, the key is to further improve its innovation and entrepreneurship ecosystem.

Figure 16 Comparison of Scores by "Career-Friendliness" and "Sci-Tech Innovation"



Apart from San Francisco and Boston, eight other American cities evaluated all rank among the top 20, reflecting the country's leading edge in frontier technology. China is catching up with strong momentum, as evidenced by the presence of five Chinese cities among the top 20. As for the number of **highly cited scientific papers** over the past decade, Beijing, Boston, London, Shanghai, San Francisco, Los Angeles, Paris, Guangzhou, Seattle, and Chicago make the top ten. **For the number of hot scientific papers**, Beijing takes lead with 410, followed by Boston with 303, with London, Shanghai, and San Francisco rounding out the top five. Tokyo ranks first in the number of patent applications filed under the PCT, followed by Shenzhen and Seoul.

Cities with global economic influence are usually home to leading international financial institutions and headquarters of supersized enterprises.

Supported by systemically important financial institutions including central banks, commercial banks, stock exchanges, and large insurance companies, these cities play vital roles in global markets for stocks, bonds, foreign exchange, commodities, and financial derivatives. Additionally, they are crucial players in macroeconomic policy-making and global capital allocation.

Column 4

Shanghai: Continuously Opening Up and Developing the Financial Sector to Build an International Financial Center

As a renowned international financial center, Shanghai has made significant strides in developing an all-factor financial market, expanding institutional opening up, promoting green finance, and fostering financial technology in recent years.

1. Continuously strengthen global financial resource allocation capabilities.

2. Expand high-standard institutional opening up of the financial sector.

3. Support the development of emerging sectors such as green and low-carbon finance.

Given their unique historical and cultural resources and world-class higher education resources, international exchange centers play a vital role in civilization exchanges and mutual learning.

Beijing, London, Paris, and Rome, among other cities, boast numerous natural and cultural heritages recognized by the United Nations, reflecting their profound history, culture and significant contributions to human civilization. London, Paris, San Francisco, Boston, Beijing, and New York, among other cities, boast a large number of top universities, and gather the most important educational and cultural resources globally. They are not only critical players in human knowledge creation, cultural communication, and the shaping of values, but also important birthplaces of contemporary ideas, values and concepts.

The 2024 Index has adjusted and refined culture and education related indicators. Firstly, the "number of top global universities" indicator is replaced by "global top universities index", which values both quality and quantity, as shown in Figure 17. Secondly, the index of high-level papers on humanities and social sciences is newly added to measure cities' achievements in facilitating researches on thoughts, values, and theories, with the top ten cities on this indicator listed in Table 3.

Figure 17 Comparison of "Number of Top Global Universities" and "Global Top Universities Index"

Note: Newly added cities are not included.

Table 3 Top 10 Cities by Index of High-Level Papers on Humanities and Social Sciences

City	Index Score (Percentage)	Number of Highly Cited Papers on Humanities and Social Sciences	Proportion of Highly Cited Papers on Humanities and Social Sciences	Number of Hot Papers on Humanities and Social Sciences
Beijing	100.0	700	2.0%	24
Boston	99.4	893	1.9%	14
London	94.1	706	1.1%	15
Hong Kong	90.8	439	1.6%	11
Shanghai	89.0	318	1.7%	16
Guangzhou	80.1	201	1.8%	6
Los Angeles	79.0	301	1.2%	5
San Francisco	78.7	321	1.2%	3
Sydney	78.1	248	0.9%	9
Chicago	77.7	263	1.2%	5

Source: Calculated based on Clarivate Analytics data.

Column 5

Boston: Leveraging Top Universities to Drive Sci-Tech Innovation and Build a Comprehensive Innovation Ecosystem

Boston, one of the world's most innovative cities, fully leverages universities in driving sci-tech innovation as part of its efforts to build a world-class research and innovation ecosystem.

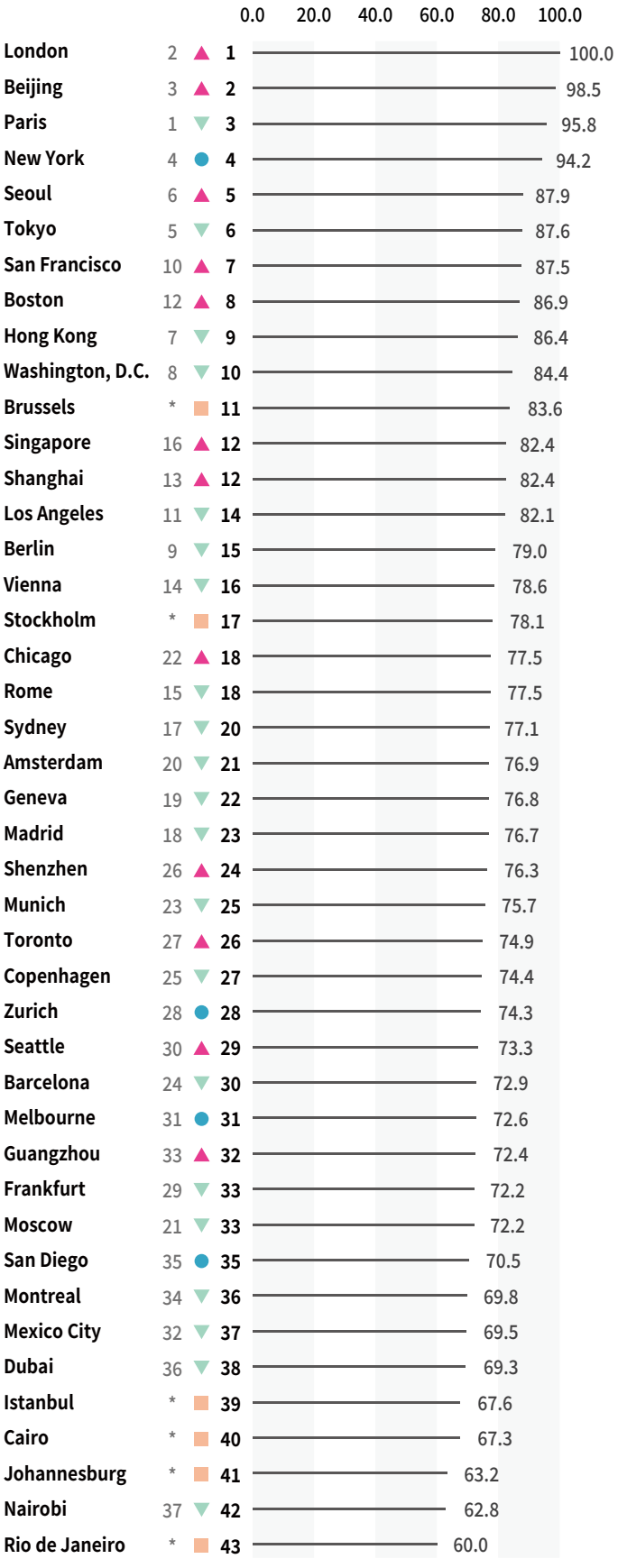
1. Leverage universities as core drivers to build a research and innovation network.

2. Tap into the resources of universities in innovation to cultivate versatile talent with both professional and innovative capabilities.

3. Promote the commercialization of sci-tech achievements through venture capital and investment incubation strategies.

The Index uses four second-level indicators and 12 third-level indicators to measure the influence of international exchange centers. The scores and rankings of the cities evaluated are as follows.

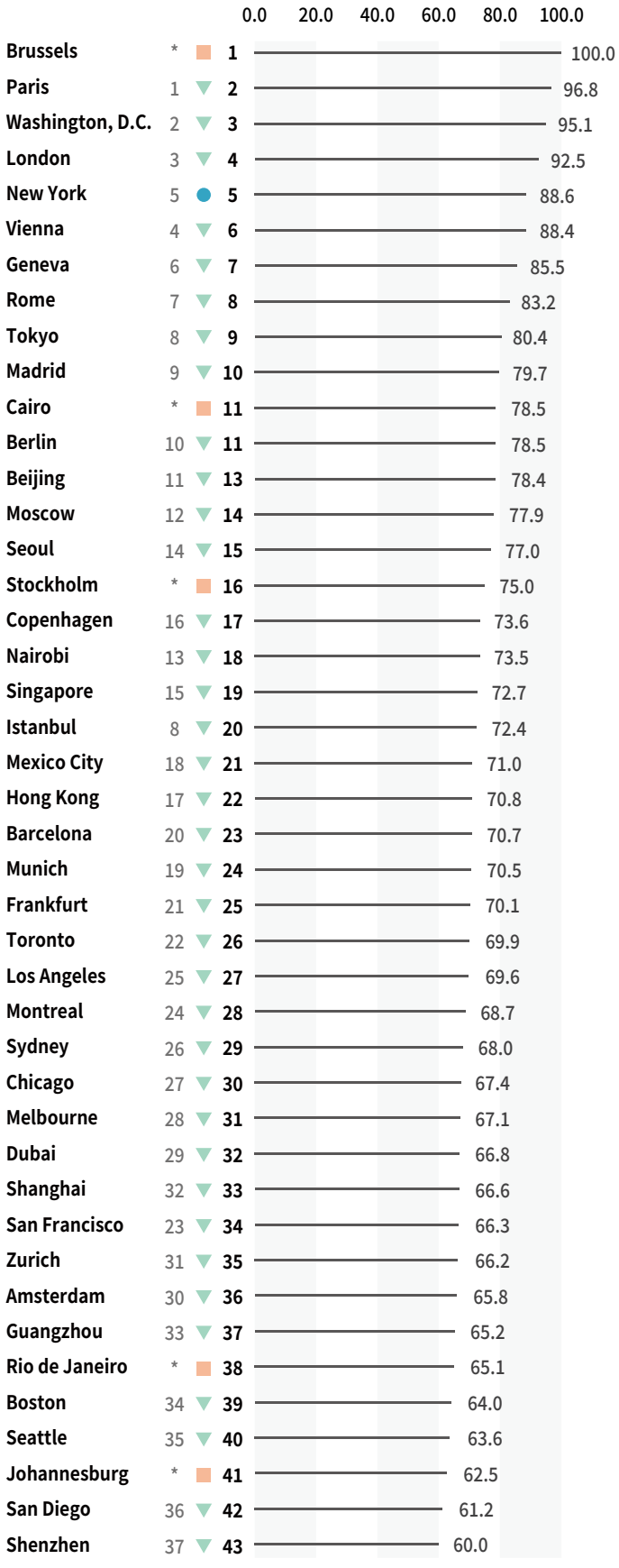
Figure 18 Scores and Rankings by *Influence*



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

Figure 19 Scores and Rankings by *International Affairs*



* Newly evaluated cities

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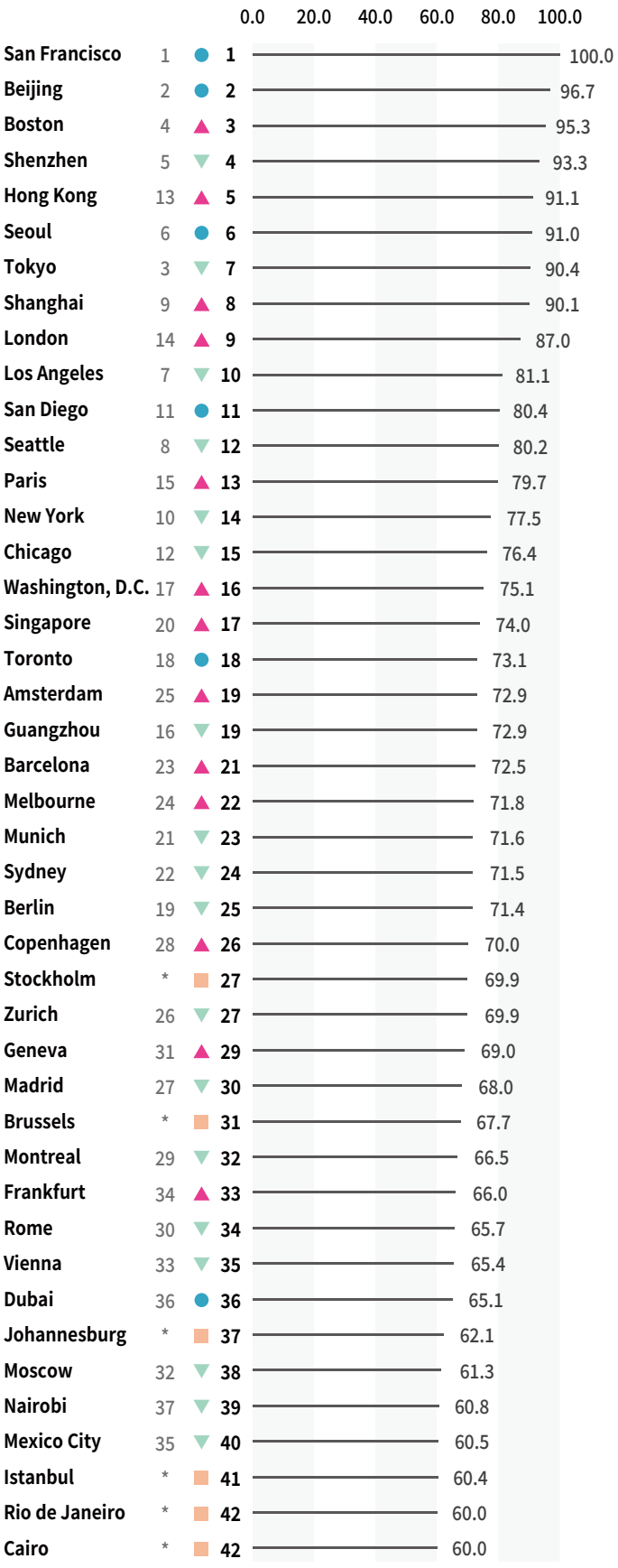
Figure 20 Scores and Rankings by *Sci-Tech Innovation*



* Newly evaluated cities

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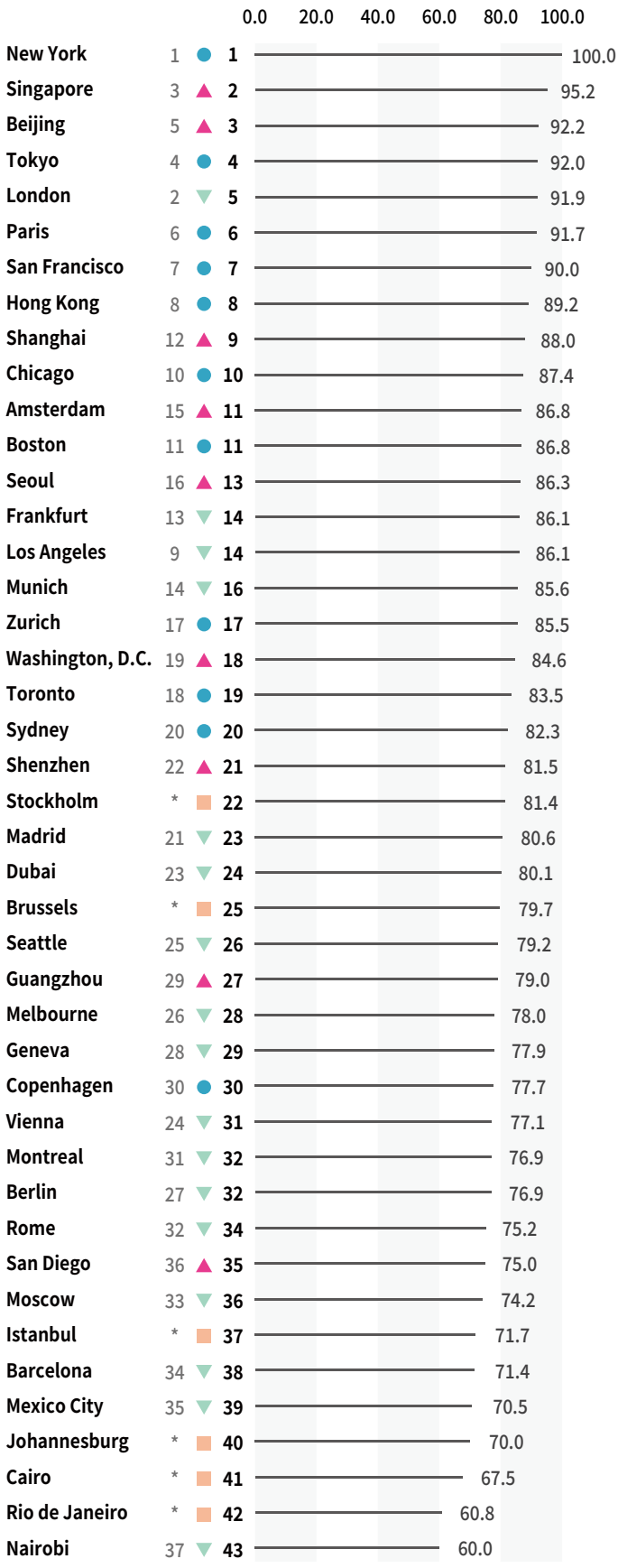
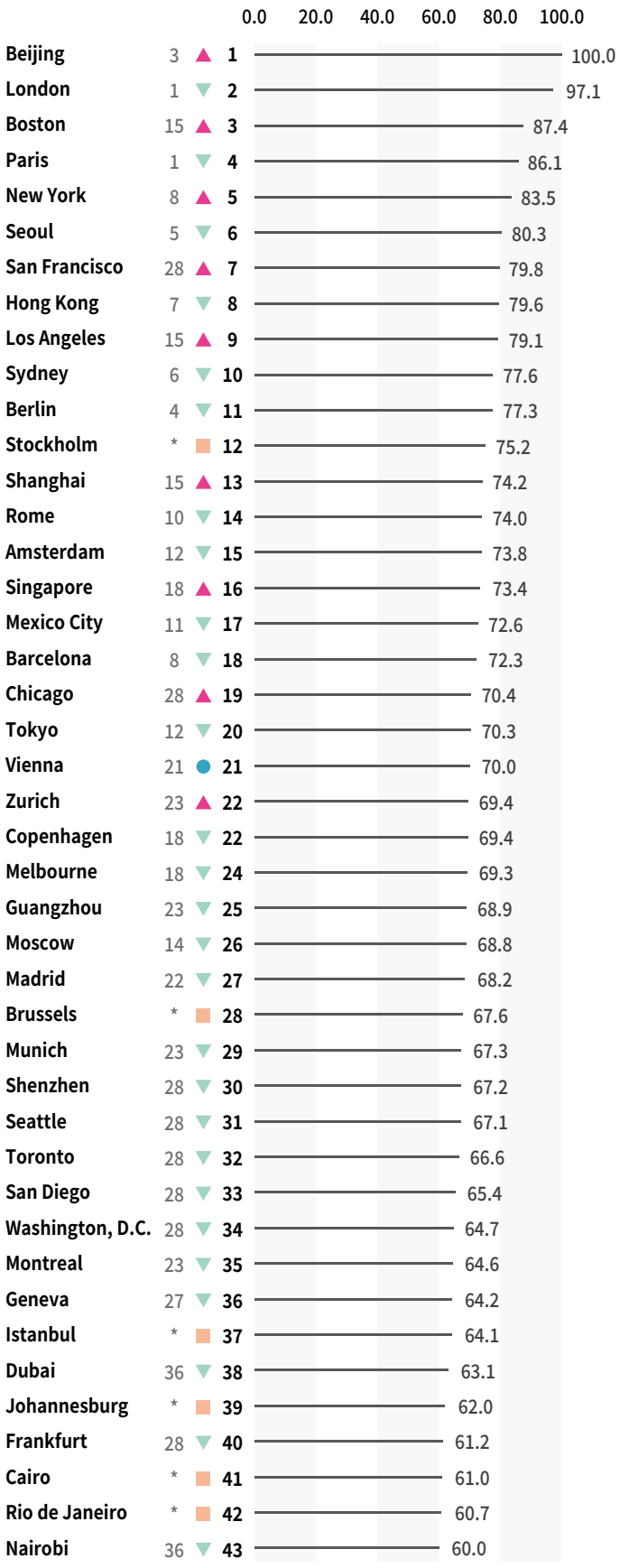
Figure 21 Scores and Rankings by *Economic Development*



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

Figure 22 Scores and Rankings by *Culture and Education*



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

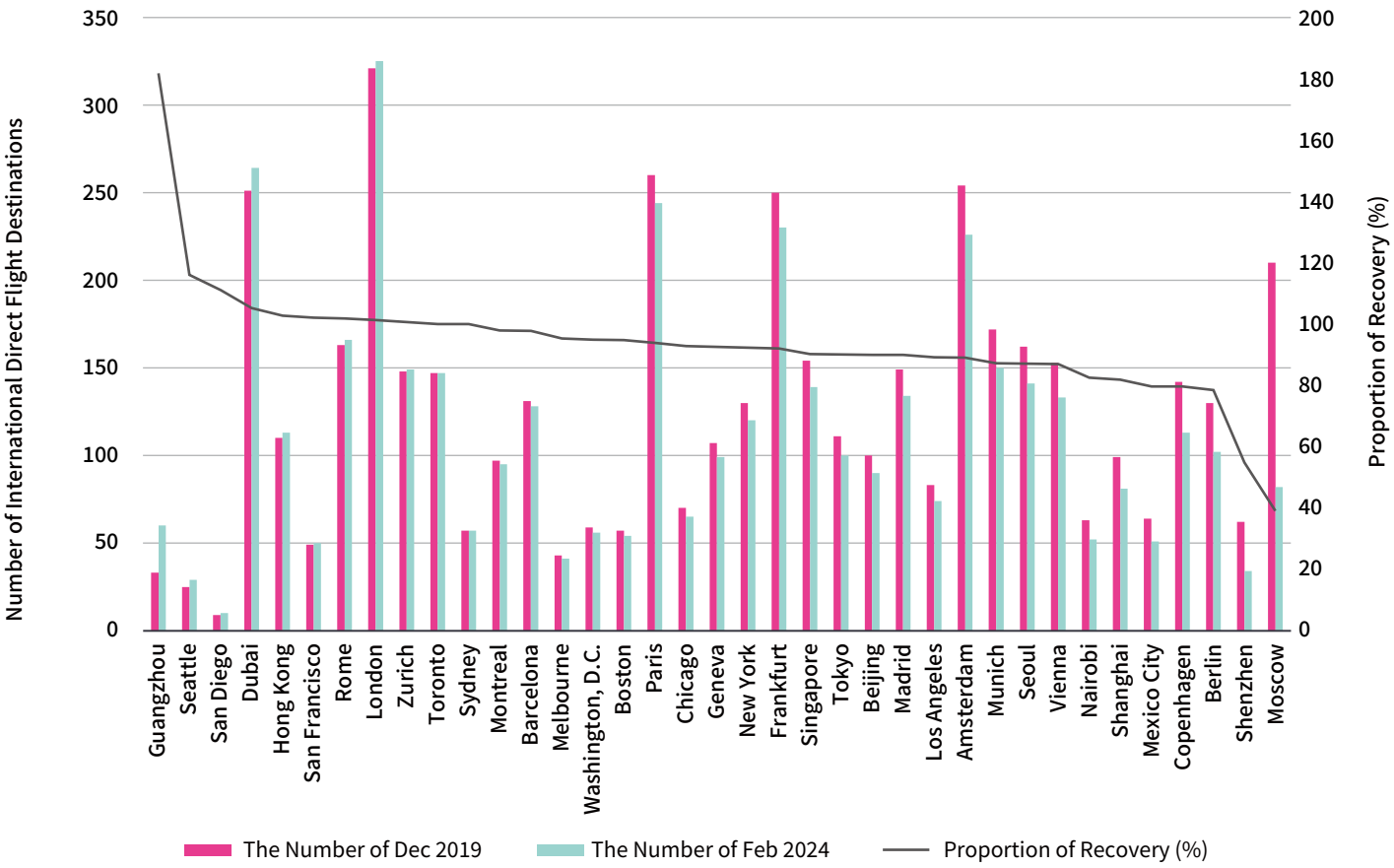
6. Connectivity

Resource exchange and factor circulation are basic elements of international exchanges. The development of international exchange centers has significantly enhanced global connectivity, promoting the transnational flow of people, goods, capital, and information. These cities are crucial hubs in global cultural exchanges and business interactions, fostering interdependence among countries to form a community with a shared future. European and Asian cities hold significant advantages in international connectivity. Despite the impact of the pandemic and other uncontrollable factors, the application of digital networks has helped to mitigate the impact on physical connectivity by enhancing digital connectivity levels.

European cities maintain an advantage in transport connection, while key Asian pivot cities have emerged as new connectivity hubs.

Among the top ten cities in transport connection, Europe accounts for four, Asia for five, and North America for one. Cities such as London, Seoul, and New York, with their prominent international airports, function as pivotal aviation hubs in their respective regions and globally. London, with direct international flights to 325 cities, remains first in the OAG's 2023 Global Mega Hub Airport Index.

Figure 23 Comparison of the Number of Direct International Flight Destinations Pre- and Post-Pandemic



Note: Newly added cities are not included.

Key pivots in Asia are poised to become new connectivity hubs. Hong Kong, relying on the large population and market size of the Chinese mainland, has become one of the global transportation hubs. Dubai aims to position itself as the "connector between East and West". Driven by a thriving tourism industry, Dubai has built the most modern airport in the Middle East, Dubai International Airport, with direct international flights reaching 264 cities, making it an aviation hub for both the Middle East and the world. Singapore, as a pivotal city-state, is actively enhancing its sea-air transport infrastructure to build a modern connectivity system. The Civil Aviation Authority of Singapore has signed air transport agreements with 130 countries and regions worldwide, and the number of international flights is expected to increase further.

Column 6

Amsterdam: Developing Multi-Modal Air-Rail Transportation to Become an International Passenger and Cargo Hub

According to the Airports Council International (ACI), Amsterdam Schiphol Airport ranked third among the world's top 10 busiest airports in 2023, handling 61.88 million international passengers. This marks a year-on-year growth of 17.9%[I] compared to 2022.

In 2023, Schiphol Airport announced plans to increase flight capacity in 2024, with 483,000 flights scheduled for the year. Currently, Schiphol Airport is collaborating with Hardt Hyperloop to conduct research on the feasibility of using hyperloops to replace some short-haul flights. This initiative will significantly advance Schiphol Airport's progress towards a sustainable multi-modal transport hub[II].

I Top 10 busiest airports in the world shift with the rise of international air travel demand | ACI World

II Schiphol | Hyperloop to the future

Beijing, Shanghai, and Copenhagen take the lead in digital network development, and significant improvements have been made in cities like Dubai and Barcelona.

Beijing and Shanghai occupy the top two spots in the digital network ranking, followed by Copenhagen in third place. In 2023, the median speed of fixed broadband in Singapore, Hong Kong, Madrid, and Barcelona exceeded 200 Mbps, while the median speed of mobile networks in Dubai, Beijing, Shanghai, and Copenhagen exceeded 100 Mbps. The three cities with the fastest growth in mobile network speeds are Dubai, Beijing, and Shanghai, while the three cities with the fastest growth in fixed broadband speeds are Guangzhou, Dubai, and Amsterdam.

Copenhagen ranks third in the digital network ranking and first in *The Economist's Digital Cities Index*, thanks to its open and efficient digital development environment.

Column 7

Dubai: Proactively Developing Digital Infrastructure to Strengthen Urban Digital Capabilities

According to the Global Index released by Speedtest, a global network speed testing website, the United Arab Emirates ranked first globally for mobile internet speed in June 2023, with a download speed of 204.24 Mbps and an upload speed of 22.72 Mbps. The fixed broadband download speed was 239.2 Mbps, ranking first among Middle East and Arab countries.

Dubai is at the forefront of digital economy development across various industries, achieved through government digital transformation, smart government initiatives, and internal digital restructuring of government agencies.

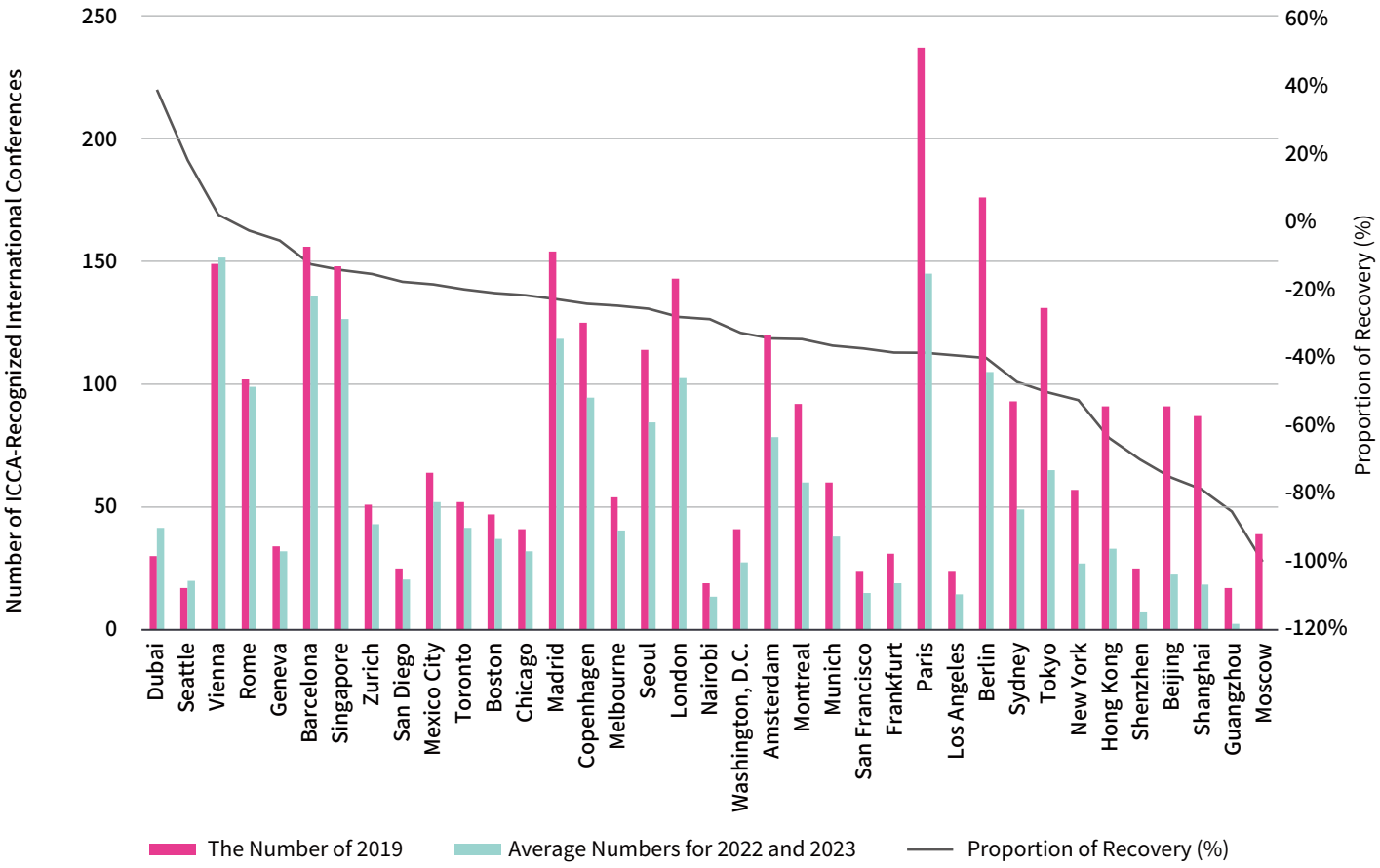
Dubai adopts an open approach to developing the crypto economy and was one of the pioneers in proposing the building of a "Blockchain City", driving the upgrade of digital communication infrastructure based on demand. Additionally, Dubai's local operators actively collaborate with leading global 5G infrastructure providers to build digital infrastructures for future urban development.

Cities on the Eurasian continent remain the centers for international business exchanges.

European cities such as Madrid, Barcelona, Paris, and Istanbul rank among the top four for business communication, while Asian cities like Singapore, Seoul, Shanghai, and Hong Kong remain in the top ten. However, the number of ICCA-recognized international conferences held by the cities evaluated in 2022 and 2023 decreased by 37% and 28.3%, respectively, compared to pre-pandemic levels in 2019. Only five cities - Dubai, Rome, Seattle, Singapore, and Nairobi - were able to recover to or exceed pre-pandemic levels in 2023.

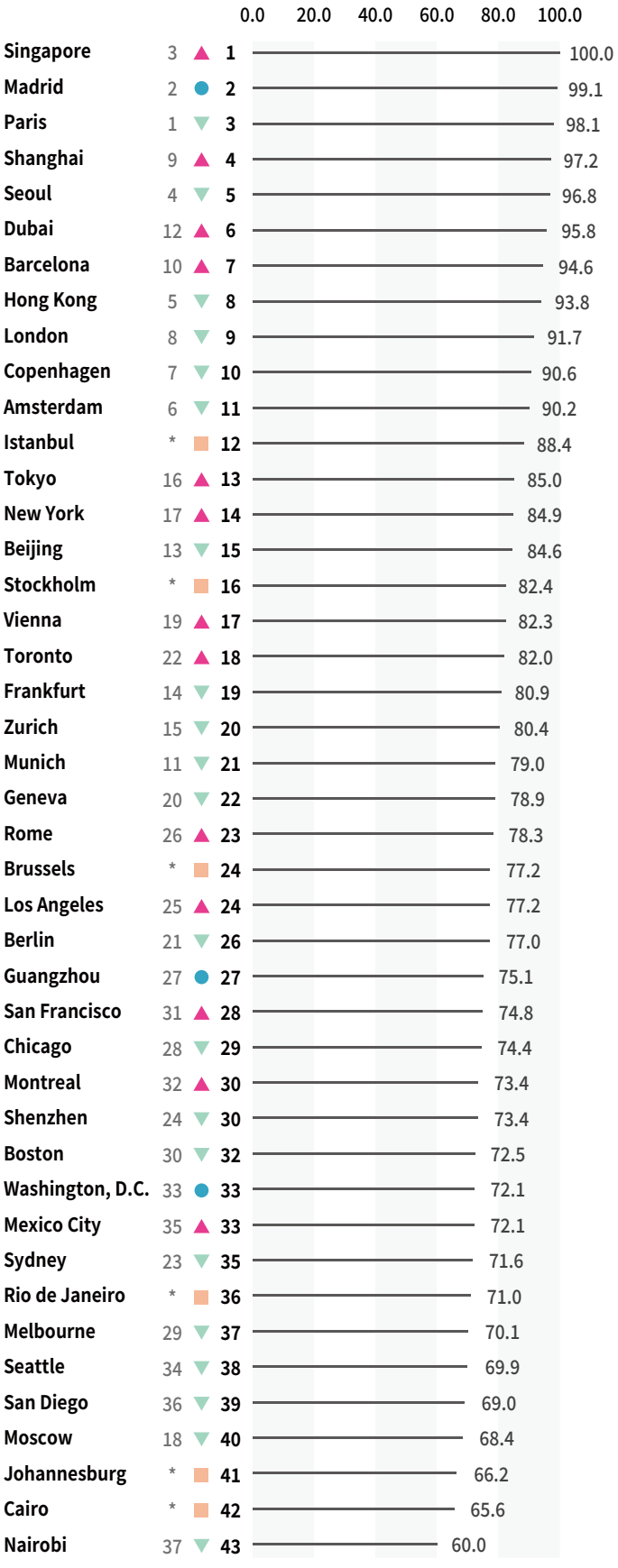
Istanbul's exhibition industry is particularly prosperous, having hosted 56 UFI-recognized exhibitions by November 2023, ranking first among the evaluated cities.

Figure 24 Change in the Number of ICCA-Recognized International Conferences



The Index uses three second-level indicators and six third-level indicators to measure the connectivity of international exchange centers. The scores and rankings of the cities evaluated are as follows:

Figure 25 Scores and Rankings by *Connectivity*



* Newly evaluated cities

▲Rised ●Unchanged ▼Dropped ■Newly evaluated cities

Figure 26 Scores and Rankings by *Transport Connection*

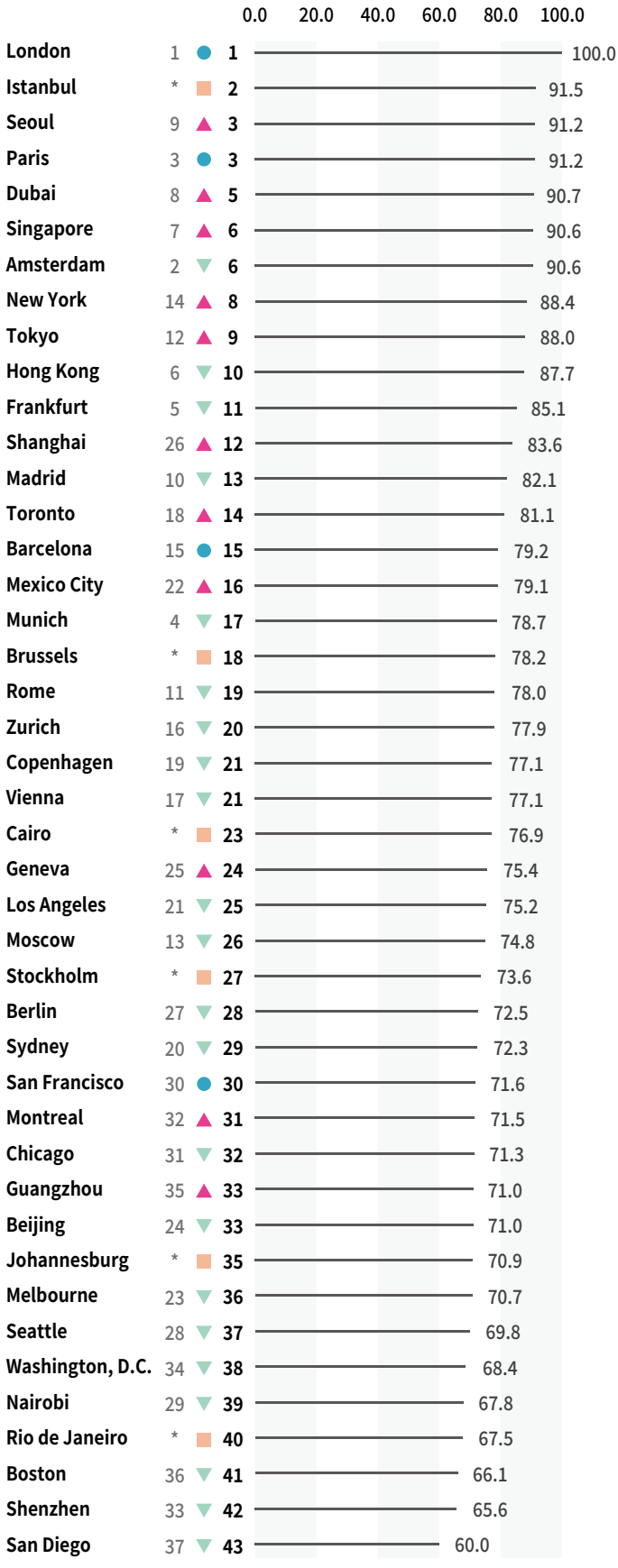


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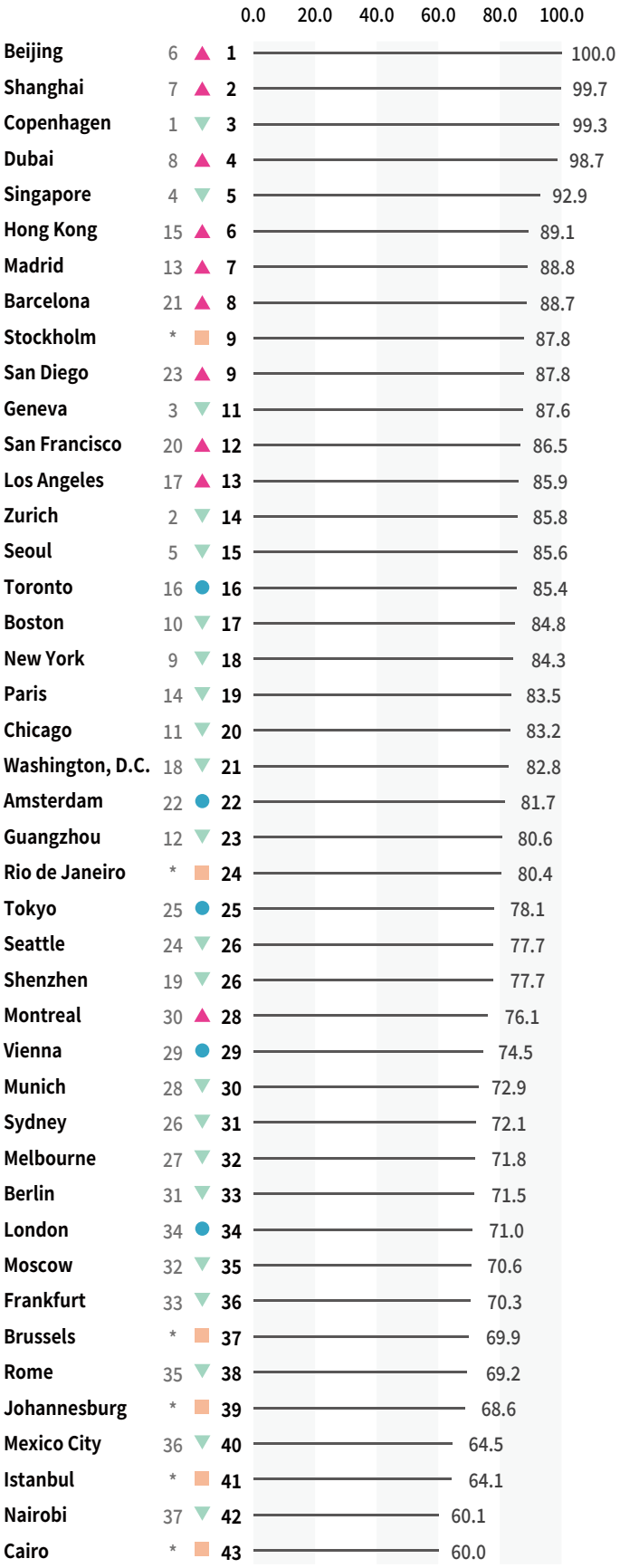
Figure 27 Scores and Rankings by *Digital Network*



* Newly evaluated cities

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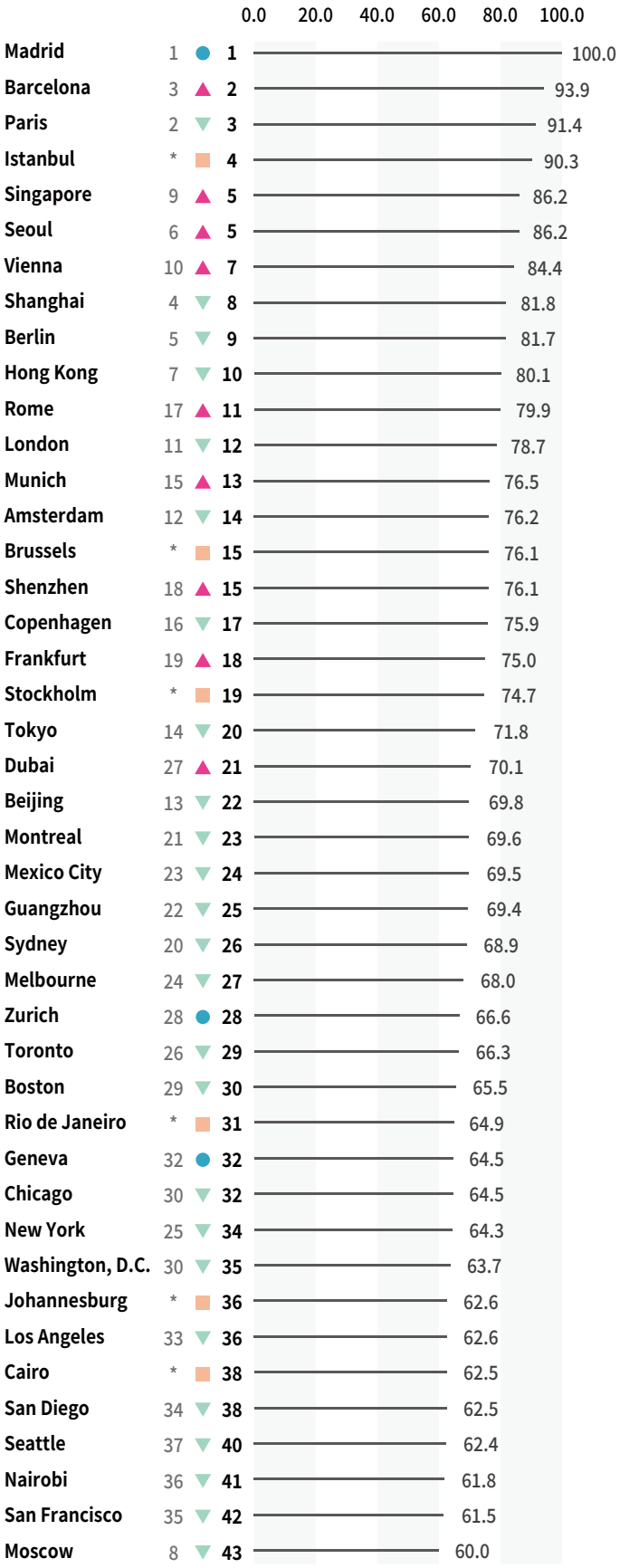
Figure 28 Scores and Rankings by *Business Communication*



* Newly evaluated cities

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7. New Trends in the Development of International Exchange Centers

In comparison to the previous report, the research team has made partial adjustments and optimizations to the indicators, with an emphasis on quality and efficiency. The focus is more on a city's participation and potential in global resource aggregation, political and economic exchanges, and cultural interactions. This year's report also places greater importance on a city's influence on international relations, global order, and human civilization, and emphasizes the ability to allocate global resources as well as the institutions, platforms, and rules that underpin such ability.

The Index is primarily based on data from 2023, with a few indicators using the most recent available statistics. Overall, it portrays the post-pandemic state of each city. Compared with the previous report, this edition highlights the impact of **digital technology, geopolitical factors**, and the **pandemic recovery process** on cities.

Digital technology has a profound impact on international exchanges, presenting new challenges to urban development and international governance.

Strengthening urban digital infrastructure, developing and applying digital technologies, and creating digital scenarios have become the main paths for cities to achieve smart transformation and enhance their attractiveness, influence, and connectivity. However, disparities in digital infrastructure development, digital capabilities, and conditions for digital life among cities have hindered the process of using digital technology to empower cities and enhance the efficiency and convenience of exchanges. In the digital age, cross-border movement requires adjustment for "digital-lag"[1] in addition to "jet-lag", significantly changing the form of international exchanges.

The evolving global security landscape has transformed international exchange centers from only platform providers for diplomacy to active practitioners of global cooperation and development concepts.

These centers serve as geopolitical hubs and forefronts, and are the birthplaces of global public agenda. The flourishing decentralized urban diplomacy has led to a loose relationship between cities and their respective states. Many city leaders are playing increasingly important and unique roles in international affairs. Therefore, international exchange centers have become practitioners of global cooperation and development concepts. Green development, openness, inclusiveness, resilience, and sustainability have become key features of international exchange centers. Many cities are providing infrastructures and public services that accommodate the living and social needs of people of different ethnicities, religious beliefs, and cultural backgrounds, with the rights and interests of ethnic minorities and vulnerable groups being better protected.

Resilience and safety have become key criteria for global immigration destinations in the post-pandemic era.

Urban resilience and safety, including public security, health and epidemic control, and disaster and emergency response capabilities, are increasingly valued by immigrants.

The development of city clusters injects new vitality into international exchanges.

City clusters are playing an increasingly prominent role in turning cities into metropolises. Many international exchange centers have grown into city clusters that transcend administrative and geographical boundaries. International metropolises continue to expand, with growing demographic diversity in terms of race and class. Living conditions have been improved through technological advancements and the development of green and smart cities, promoting the prosperity of diverse city clusters. World-class city clusters are evolving, providing new ecosystems for the aggregation of more international and diverse resources for work and life.

1 Digital-lag, in the Index, refers to the need for cross-border travelers to adapt to different mobile applications and products, such as electronic payment and social media apps upon arriving at different countries.

8. Conclusion and Outlook

International exchange centers serve as bulwarks against anti-globalization tides. They are becoming increasingly important in addressing common challenges, promoting global development, and facilitating cultural exchanges and mutual learning.

Firstly, international exchange centers shall have a unique appeal.

To achieve this, cities must highlight their unique features and strengths while addressing weaknesses in urban development to boost their attractiveness, influence, and connectivity. It is important to strike a balance between building on advantages and addressing weaknesses. Additionally, top-level planning should be improved and actions that are tailored to local conditions should be taken in a phased manner to enhance functions for international exchange. It is crucial to respect market rules and involve residents in city governance, so that "the city is built by and for its people".

Secondly, it is important to achieve a balance between localization and internationalization to foster an open, inclusive, innovative, resilient, and sustainable urban environment.

Cities should embrace global, digital, and green trends and align with international standards in urban management. This involves upgrading infrastructure, facilities, management, services, standards, and regulations, as well as mindset and culture. Efforts should also be made to develop a modern urban service system and enhance safety, resilience, and quality of the city to attract high-end resources and inject impetus into urban development.

Thirdly, the ability to live and interact in the digital age should be enhanced to create diverse modes of international exchange.

We should embrace the concept of extensive consultation, joint contribution and shared benefits, in order to strengthen international cooperation and bridge the digital divide. This will ensure that digital technology and artificial intelligence can benefit all humanity. Cities in developing countries should accelerate the improvement of digital infrastructure, deployment of digital applications, and enhancement of digital literacy across society to improve the ability to live in and adapt to the digital age. It is important to oppose the imposition of ideological boundaries and the creation of "small yard and high fence" by some countries that exploit technological monopolies and unilateral measures to erect development barriers and deprive developing countries of digital and AI dividends. Additionally, it is crucial to respect and protect cultural and linguistic diversity in the AI era and provide inclusive interfaces for all people, so as to empower human development through digital technology progress.

Fourth, it is necessary to build efficient and connected networks of international exchange centers to shape an open and inclusive world order and promote the building of a community with a shared future for mankind.

Cities should strive to create a favorable landscape for international exchanges where cooperation outweighs competition. The spatial layout of international exchange centers should be improved to establish a well-developed framework for global connectivity.

Looking ahead, international metropolises will encounter both greater opportunities and challenges resulting from technological progress and complex changes in the global landscape. As benchmarks for global development, international exchange centers possess enormous potential for growth and a promising outlook due to their strong openness, inclusiveness, and global appeal. We will conduct further research on how to enhance cities' international exchange capabilities and contribute to the growth of cities worldwide.

Appendix 1 Overall Rankings and Rankings of First-level Indicators

City	Country	Overall ranking	Attractiveness	Influence	Connectivity
London	UK	1	1	1	9
Paris	France	2	6	3	3
New York	USA	3	2	4	14
Hong Kong	China	4	3	9	8
Singapore	Singapore	5	5	12	1
Seoul	South Korea	6	8	5	5
Beijing	China	7	32	2	15
Tokyo	Japan	8	9	6	13
Madrid	Spain	9	25	23	2
San Francisco	USA	10	4	7	28
Shanghai	China	11	37	12	4
Copenhagen	Denmark	12	11	27	10
Amsterdam	Netherlands	13	17	21	11
Barcelona	Spain	14	22	30	7
Dubai	UAE	15	14	38	6
Los Angeles	USA	16	7	14	24
Boston	USA	17	10	8	32
Vienna	Austria	18	18	16	17
Stockholm	Sweden	19	16	17	16
Berlin	Germany	20	13	15	26
Toronto	Canada	21	19	26	18
Brussels	Belgium	22	30	11	24
Istanbul	Turkey	23	24	39	12
Munich	Germany	24	20	25	21
Washington, D.C.	USA	24	26	10	33
Frankfurt	Germany	26	28	33	19
Sydney	Australia	27	12	20	35
Geneva	Switzerland	28	33	22	22
Chicago	USA	29	27	18	29
Rome	Italy	29	34	18	23
Zurich	Switzerland	29	30	28	20
Shenzhen	China	32	35	24	30
Melbourne	Australia	33	15	31	37
Seattle	USA	34	20	29	38
Montreal	Canada	35	29	36	30
San Diego	USA	36	22	35	39
Guangzhou	China	37	38	32	27
Moscow	Russia	38	36	33	40
Mexico City	Mexico	39	39	37	33
Cairo	Egypt	40	41	40	42
Rio de Janeiro	Brazil	41	42	43	36
Johannesburg	South Africa	42	43	41	41
Nairobi	Kenya	43	40	42	43

Appendix 2 Rankings of Second-level Indicators of Attractiveness

City	Country	Attractiveness	Livability	Business-friendliness	Career-friendliness	Tourism-friendliness
London	UK	1	12	12	3	3
New York	USA	2	29	4	1	6
Hong Kong	China	3	28	2	23	1
San Francisco	USA	4	23	5	1	30
Singapore	Singapore	5	20	1	15	7
Paris	France	6	16	32	8	5
Los Angeles	USA	7	27	13	4	15
Seoul	South Korea	8	26	5	19	9
Tokyo	Japan	9	3	30	11	8
Boston	USA	10	23	5	5	35
Copenhagen	Denmark	11	10	2	32	26
Sydney	Australia	12	1	15	24	22
Berlin	Germany	13	14	18	9	17
Dubai	UAE	14	39	17	32	4
Melbourne	Australia	15	1	15	26	28
Stockholm	Sweden	16	14	14	15	29
Amsterdam	Netherlands	17	13	36	20	10
Vienna	Austria	18	9	23	35	14
Toronto	Canada	19	17	21	18	20
Munich	Germany	20	6	18	22	25
Seattle	USA	20	25	5	10	43
Barcelona	Spain	22	19	26	25	12
San Diego	USA	22	22	5	17	42
Istanbul	Turkey	24	42	32	31	1
Madrid	Spain	25	11	26	29	16
Washington, D.C.	USA	26	31	5	14	33
Chicago	USA	27	31	5	12	37
Frankfurt	Germany	28	6	18	42	30
Montreal	Canada	29	17	21	27	30
Brussels	Belgium	30	8	37	35	24
Zurich	Switzerland	30	4	34	34	35
Beijing	China	32	33	24	6	39
Geneva	Switzerland	33	4	34	37	41
Rome	Italy	34	21	39	42	11
Shenzhen	China	35	36	26	13	12
Moscow	Russia	36	30	24	21	33
Shanghai	China	37	35	31	7	23
Guangzhou	China	38	36	26	28	21
Mexico City	Mexico	39	40	40	29	17
Nairobi	Kenya	40	38	38	38	40
Cairo	Egypt	41	43	41	38	19
Rio de Janeiro	Brazil	42	34	41	40	38
Johannesburg	South Africa	43	41	41	40	27

Appendix 3 Rankings of Second-level Indicators of Influence

City	Country	Influence	International affairs	Sci-tech innovation	Economic development	Culture and education
London	UK	1	4	9	5	2
Beijing	China	2	13	2	3	1
Paris	France	3	2	13	6	4
New York	USA	4	5	14	1	5
Seoul	South Korea	5	15	6	13	6
Tokyo	Japan	6	9	7	4	20
San Francisco	USA	7	34	1	7	7
Boston	USA	8	39	3	11	3
Hong Kong	China	9	22	5	8	8
Washington, D.C.	USA	10	3	16	18	34
Brussels	Belgium	11	1	31	25	28
Singapore	Singapore	12	19	17	2	16
Shanghai	China	12	33	8	9	13
Los Angeles	USA	14	27	10	14	9
Berlin	Germany	15	11	25	32	11
Vienna	Austria	16	6	35	31	21
Stockholm	Sweden	17	16	27	22	12
Chicago	USA	18	30	15	10	19
Rome	Italy	18	8	34	34	14
Sydney	Australia	20	29	24	20	10
Amsterdam	Netherlands	21	36	19	11	15
Geneva	Switzerland	22	7	29	29	36
Madrid	Spain	23	10	30	23	27
Shenzhen	China	24	43	4	21	30
Munich	Germany	25	24	23	16	29
Toronto	Canada	26	26	18	19	32
Copenhagen	Denmark	27	17	26	30	22
Zurich	Switzerland	28	35	27	17	22
Seattle	USA	29	40	12	26	31
Barcelona	Spain	30	23	21	38	18
Melbourne	Australia	31	31	22	28	24
Guangzhou	China	32	37	19	27	25
Frankfurt	Germany	33	25	33	14	40
Moscow	Russia	33	14	38	36	26
San Diego	USA	35	42	11	35	33
Montreal	Canada	36	28	32	32	35
Mexico City	Mexico	37	21	40	39	17
Dubai	UAE	38	32	36	24	38
Istanbul	Turkey	39	20	41	37	37
Cairo	Egypt	40	11	42	41	41
Johannesburg	South Africa	41	41	37	40	39
Nairobi	Kenya	42	18	39	43	43
Rio de Janeiro	Brazil	43	38	42	42	42

Appendix 4 Rankings of Second-level Indicators of Connectivity

City	Country	Connectivity	Transport connection	Digital network	Business communication
Singapore	Singapore	1	6	5	5
Madrid	Spain	2	13	7	1
Paris	France	3	3	19	3
Shanghai	China	4	12	2	8
Seoul	South Korea	5	3	15	5
Dubai	UAE	6	5	4	21
Barcelona	Spain	7	15	8	2
Hong Kong	China	8	10	6	10
London	UK	9	1	34	12
Copenhagen	Denmark	10	21	3	17
Amsterdam	Netherlands	11	6	22	14
Istanbul	Turkey	12	2	41	4
Tokyo	Japan	13	9	25	20
New York	USA	14	8	18	34
Beijing	China	15	33	1	22
Stockholm	Sweden	16	27	9	19
Vienna	Austria	17	21	29	7
Toronto	Canada	18	14	16	29
Frankfurt	Germany	19	11	36	18
Zurich	Switzerland	20	20	14	28
Munich	Germany	21	17	30	13
Geneva	Switzerland	22	24	11	32
Rome	Italy	23	19	38	11
Los Angeles	USA	24	25	13	36
Brussels	Belgium	24	18	37	15
Berlin	Germany	26	28	33	9
Guangzhou	China	27	33	23	25
San Francisco	USA	28	30	12	42
Chicago	USA	29	32	20	32
Shenzhen	China	30	42	26	15
Montreal	Canada	30	31	28	23
Boston	USA	32	41	17	30
Washington, D.C.	USA	33	38	21	35
Mexico City	Mexico	33	16	40	24
Sydney	Australia	35	29	31	26
Rio de Janeiro	Brazil	36	40	24	31
Melbourne	Australia	37	36	32	27
Seattle	USA	38	37	26	40
San Diego	USA	39	43	9	38
Moscow	Russia	40	26	35	43
Johannesburg	South Africa	41	35	39	36
Cairo	Egypt	42	23	43	38
Nairobi	Kenya	43	39	42	41