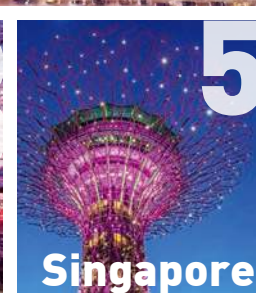
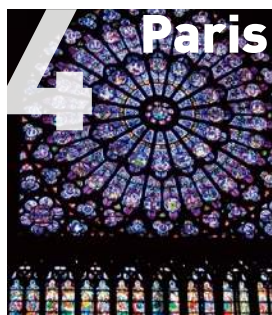




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# Global Power City Index 2016

Summary



October 2016



# Preface

In light of the globally intensifying competition between cities, the Global Power City Index (GPCI) evaluates and ranks the major cities of the world according to their “magnetism,” or their comprehensive power to attract creative people and business enterprises from around the world.

The Mori Memorial Foundation’s Institute for Urban Strategies first released its GPCI in 2008 and has continued to update its rankings every year based on new research. Currently, the GPCI is highly rated as one of the leading city indexes and is utilized as reference material for urban policies and business strategies not only in Tokyo and Japan, but also in many other cities and countries worldwide. Moreover, the Institute actively engages in the exchange of ideas on the topic of urban competitiveness with leading global research institutions at international conferences and lecture events.

The GPCI continues to evolve as improvements are made in how data are collected and information is updated. In the GPCI-2016, extra effort was made to ensure that the most recent qualitative data were obtained through surveys conducted on the residents of each city, in addition to the gathering of more reliable and highly objective quantitative data for a number of indicators. Moreover, Johannesburg and Jakarta – two leading and rapidly developing cities of the African and South East Asian regions – have been added to the GPCI, bringing the total to 42 cities.

The research results of the past nine years should serve as valuable data to help us understand the challenges faced by cities around the world, as well as what makes them appealing, and we hope that the GPCI can assist many people in the formulation of urban policies and corporate strategies.

\* More detailed results of research conducted for this ranking are scheduled to be published in January 2017 in the *Global Power City Index YEARBOOK 2016*. This report provides specific details on the methods of research used, scores for each city, ranking analyses, definitions of indicators and lists of data sources.

## Features of The Global Power City Index (GPCI)

1. As opposed to limiting the ranking to particular areas of research such as “Finance” and “Livability,” the GPCI focuses on a wide variety of functions in order to assess and rank the global potential and comprehensive power of a city.
2. 42 of the world’s leading cities were selected and their global comprehensive power evaluated based on the following viewpoints: six main functions representing city strength (**Economy**, **Research and Development**, **Cultural Interaction**, **Livability**, **Environment**, and **Accessibility**), and five global actors who lead the urban activities in their cities (**Manager**, **Researcher**, **Artist**, **Visitor**, and **Resident**), thus providing an all-encompassing view of the cities.
3. The GPCI reveals the strengths and weaknesses of each city and at the same time uncovers problems that need to be overcome.
4. This ranking has been produced with the involvement of the late Sir Peter Hall, a global authority in urban studies, as well as other academics in this field. It has been peer reviewed by third parties, all international experts from both the public and private sectors.

In this report, the names of the GPCI functions are marked in **bold**, those of the indicators in *italics*, and those of the indicator groups and the factors are enclosed in quotation marks (“”).

# 1. Key Findings of the GPCI-2016

## Key Findings

- ◆ As first-ranked London sees scores for *GDP* and *GDP Growth Rate* fall, the function score for **Economy** suffers, and the city's overall score decreases slightly. Alternatively, scores for *Visitors from Abroad* and *Number of International Students* are on the rise, showing that London still possesses an overwhelming strength in **Cultural Interaction**. Meanwhile, New York does not experience significant changes in its score, remaining at No. 2 again this year.
- ◆ Tokyo overtakes Paris in the GPCI-2016 to claim the No. 3 ranking. The increase owes mainly to the city boosting its scores for **Cultural Interaction** and **Livability**. The former benefited from an increase in *Number of Visitors from Abroad*, while the latter was the result of more favorable scores for *Price Level* and *Average House Rent* (both USD basis), helped along by the impact of an Abenomics-driven weaker yen. Accessibility also shows a positive impact on its score. Despite the weak Japanese currency denting the city's *Nominal GDP* score in **Economy**, it still remains the highest of all the 42 cities in the index. Tokyo's continued strength in this function is just another reason why the Japanese capital city claims the No. 3 spot this year.

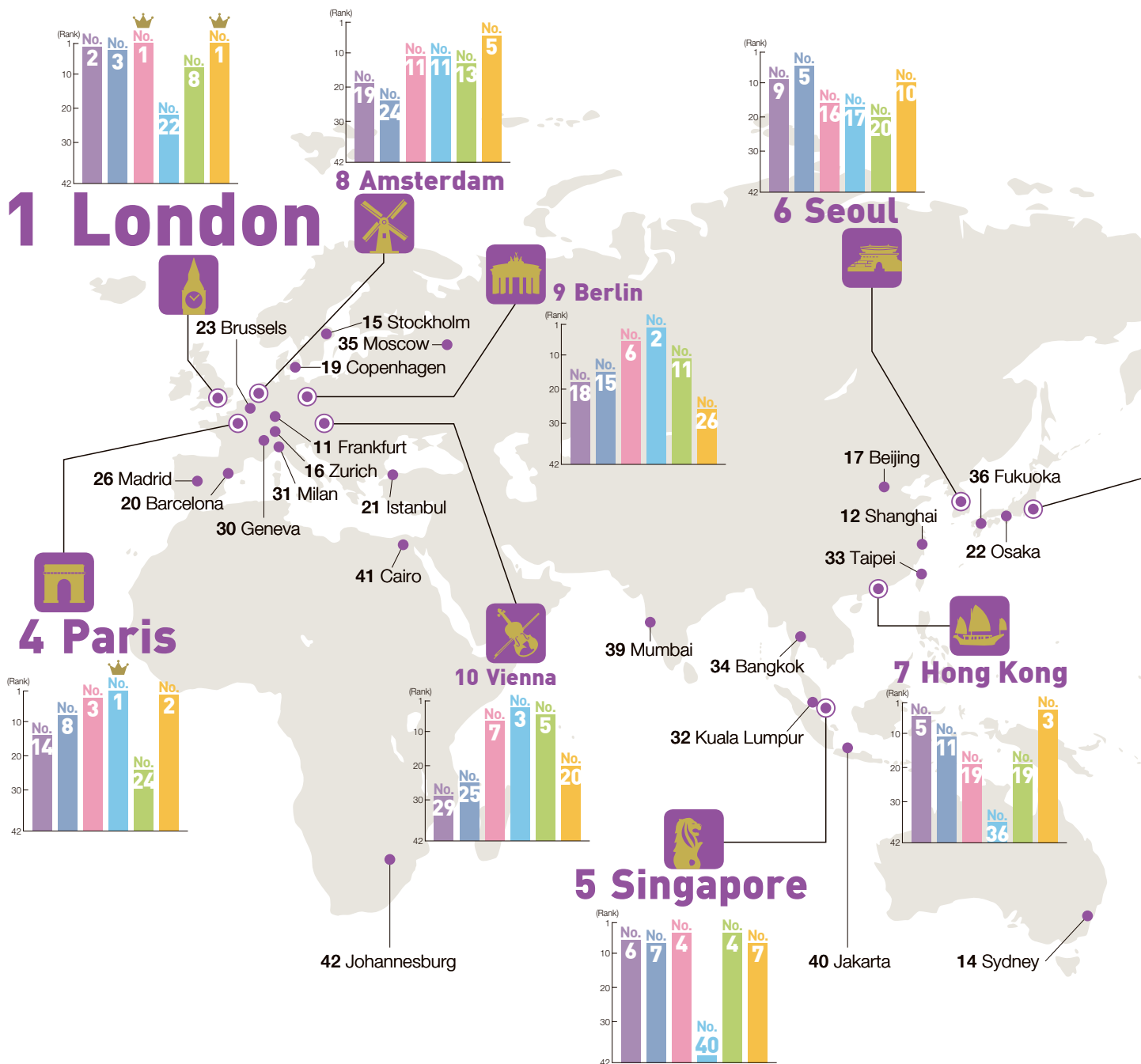
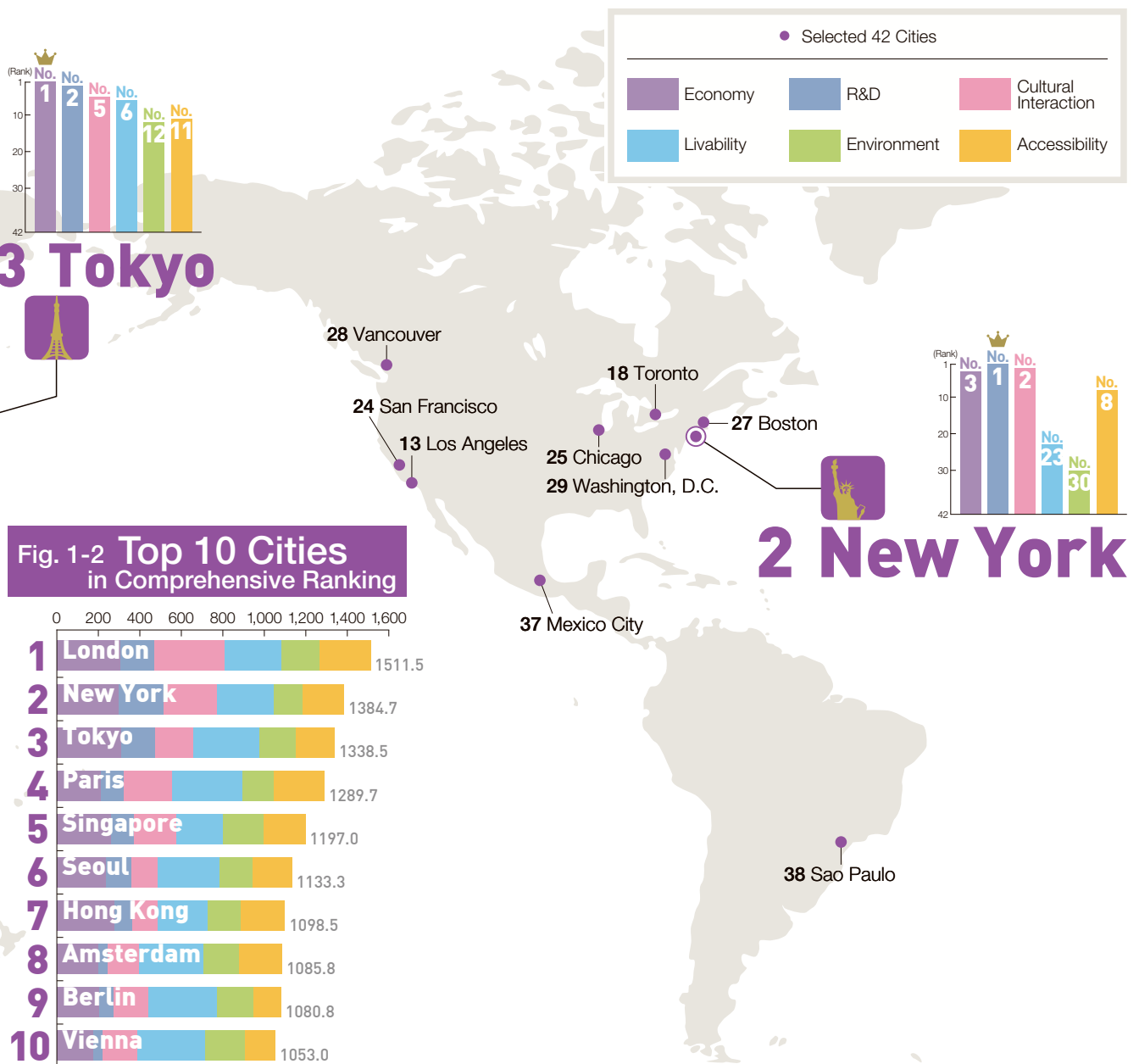


Fig. 1-1 Top 10 Cities by Function

- ◆ Paris sees its score decline in **Cultural Interaction** mostly due to decreases in *Number of Visitors from Abroad*, *Number of International Students*, and *Number of Foreign Residents*. Growing uncertainty regarding visiting Paris due to the terrorist attacks that gripped the city last November, is one major factor in its drop from No. 3 to No. 4.
- ◆ Within Asia, Singapore (No. 5), which increased its score last year, manages to maintain its ranking despite returning an overall lower score. The island city-state is showing signs of stagnation in **Economy** marked by trends such as a slowing *GDP Growth Rate* and a decline in *Total Employment*. Meanwhile, Shanghai makes considerable ground this year, climbing to No. 12 from No. 17 last year. In stark contrast to Singapore, Shanghai's **Economy** is on the move with a burgeoning *Nominal GDP* as well as rising *Total Employment* and demonstrates a particularly strong score for *Number of Employees in Service Industry for Business Enterprises*.
- ◆ Jakarta and Johannesburg, which were newly added to the ranking from 2016, are at No. 40 and No. 42, respectively. They both rank around No. 40 in any given function, which suggests they have many challenges to overcome if they are to compete with the world's leading urban centers.



# 2. GPCI-2016 Methodology

## 2-1 Research Structure

The GPCI is created by a research body which comprises two groups of individuals: the Committee and the Working Group. The Committee, chaired by Heizo Takenaka (Professor of Toyo University, Professor Emeritus of Keio University, Director of the Global Security Research Institute, and Chairman of The Mori Memorial Foundation's Institute for Urban Strategies), supervises the ranking creation process. It is comprised of six members, with the late Sir Peter Hall (Professor, University College London), who contributed to the original production of the GPCI, as Principal Advisor. The Working Group,

headed by Hiroo Ichikawa (Professor and Dean of the Professional Graduate School of Governance Studies at Meiji University, Executive Director of The Mori Memorial Foundation) as Principal, performs the data collection and analysis to create the rankings for the cities. It also seeks advice from expert partners worldwide to incorporate the perspectives of global actors into the evaluation. In order to ensure the impartiality of the ranking creation process and the results, two third-party Peer Reviewers validate the contents and provide suggestions for improvement.

Fig. 2-1 Research Organization



## 2-2 Target Cities

Fig. 2-2 42 Target Cities



Region	City
Europe	Madrid, Barcelona, London, Paris, Brussels, Amsterdam, Geneva, Frankfurt, Berlin, Zurich, Milan, Copenhagen, Vienna, Stockholm, Istanbul, Moscow
Africa	Cairo, Johannesburg
Asia	Mumbai, Bangkok, Kuala Lumpur, Singapore, Jakarta, Hong Kong, Beijing, Shanghai, Taipei, Seoul, Fukuoka, Osaka, Tokyo
Oceania	Sydney
North America	Vancouver, San Francisco, Los Angeles, Chicago, Toronto, Washington, D.C., New York, Boston
Latin America	Mexico City, Sao Paulo

### Criteria for Selection

1. Cities found in the top ten of existing, influential city rankings, such as the Global Financial Centres Index (GFCI, Z/Yen Group), Global Cities Index (GCI, A.T. Kearney), and Cities of Opportunity (PricewaterhouseCoopers).
2. Major cities of countries that are in the top ten in terms of competition according to influential international competitiveness rankings, such as the Global Competitiveness Report (World Economic Forum) and IMD Competitiveness Ranking (Institute for Management Development).
3. Cities which do not meet the above criteria but which are deemed appropriate for inclusion by the GPCI Committee or its Working Group members.

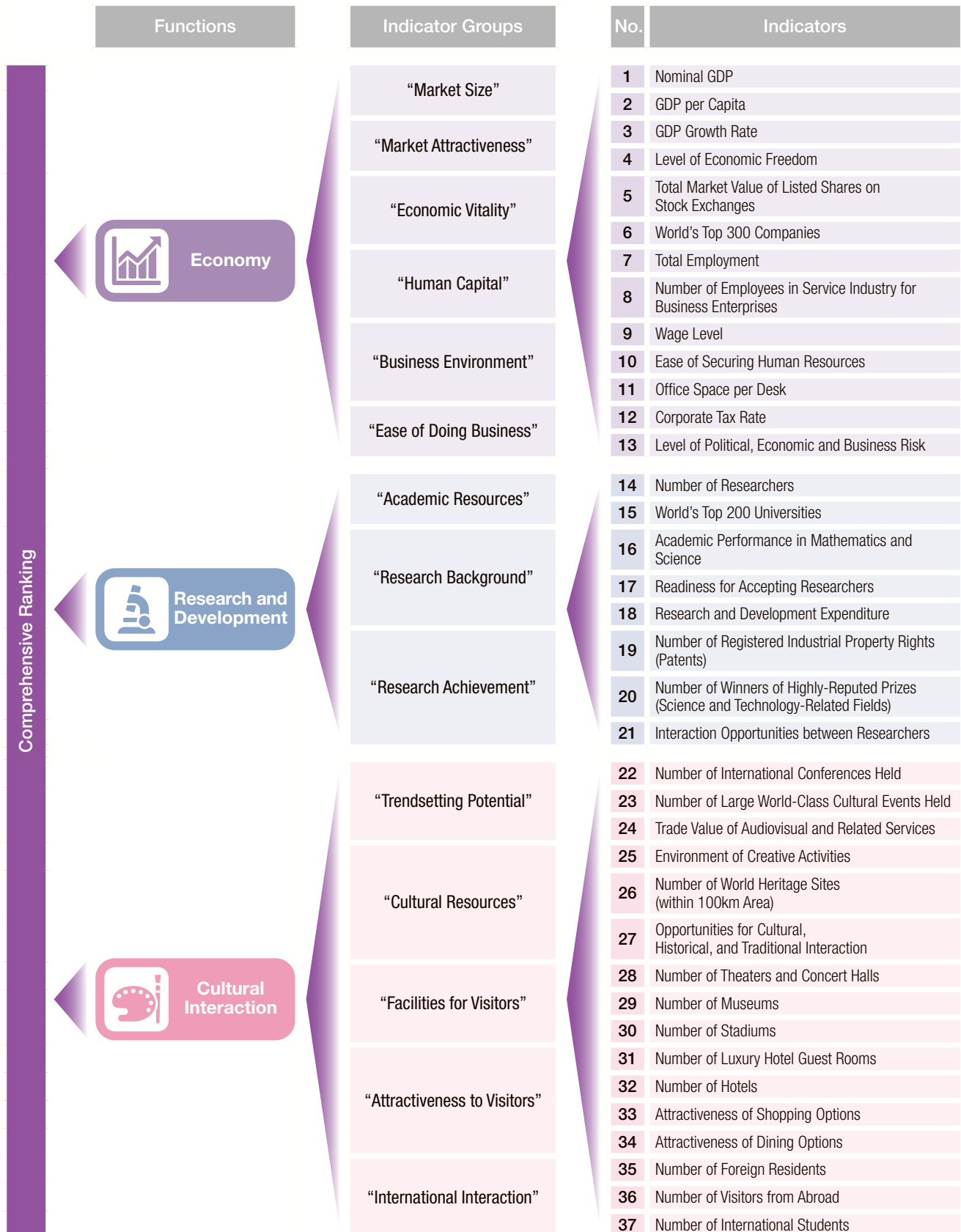
\* Some cities match one or more of the above criteria but are not evaluated in the GPCI as necessary data are not available.



# 3. Function-Specific Ranking

## 3-1 Ranking Creation

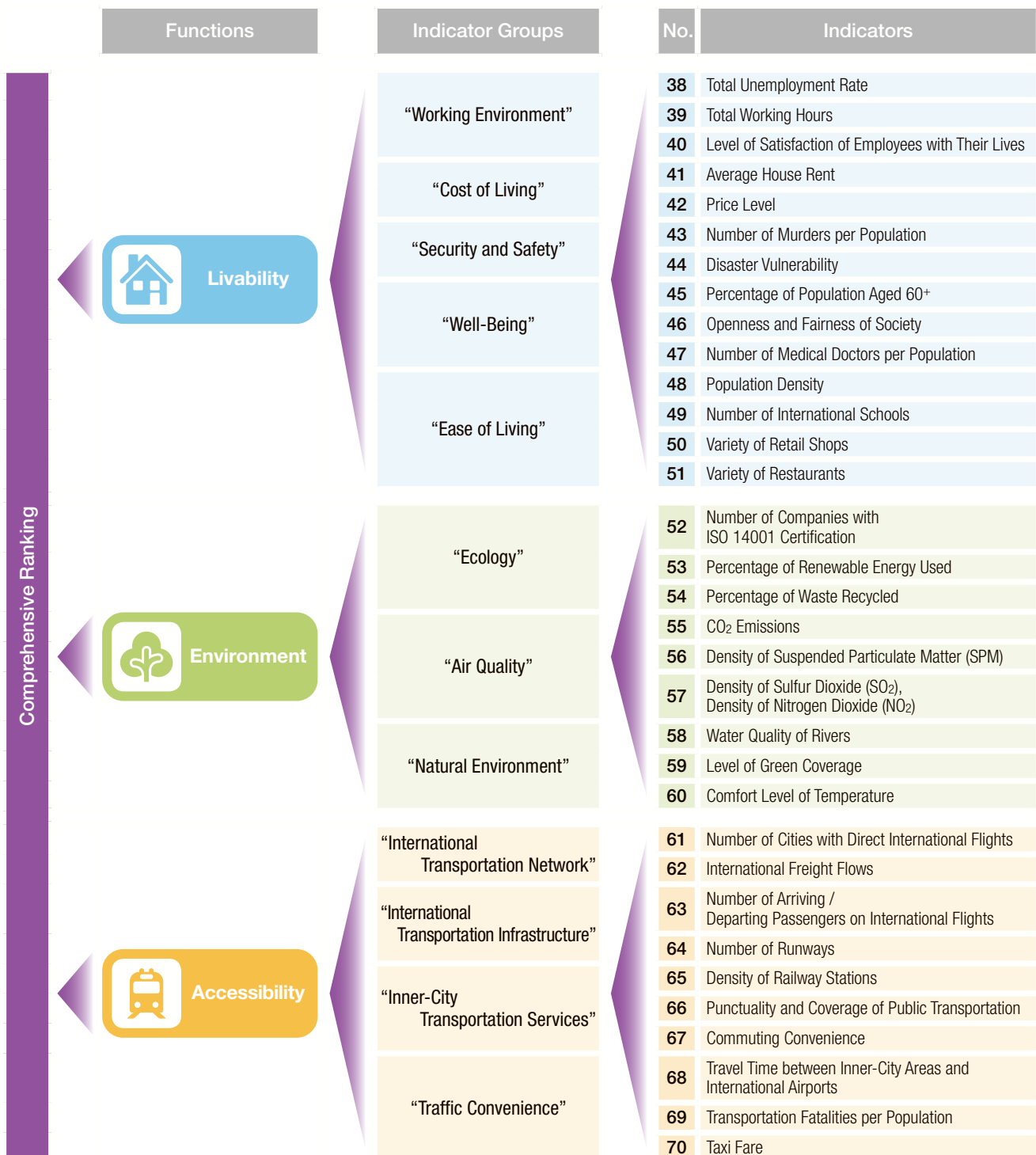
Fig. 3-1 Flow of Function-Specific Ranking





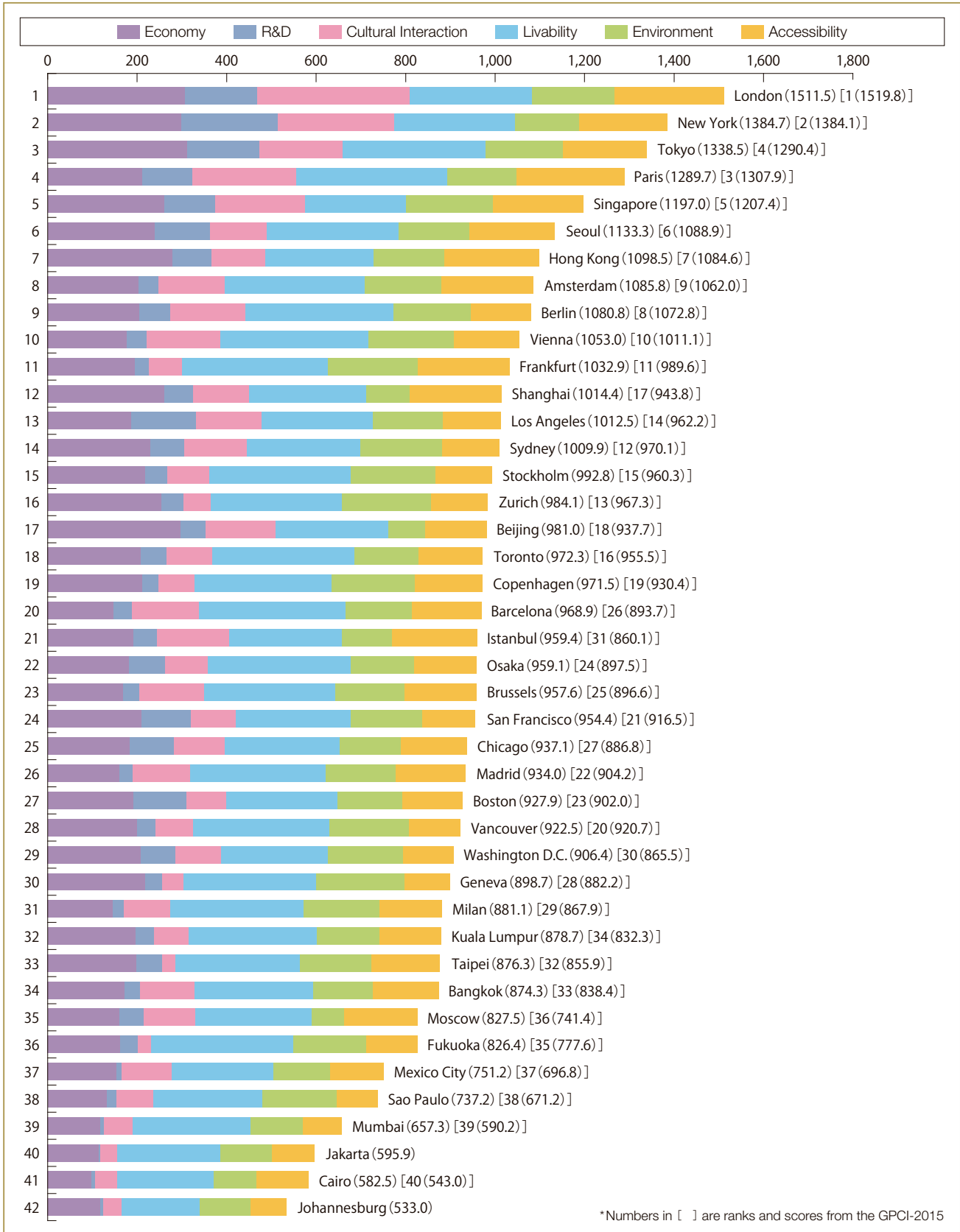
The GPCI evaluates its target cities in six urban functions: **Economy, Research and Development, Cultural Interaction, Livability, Environment, and Accessibility**. Each of the functions comprises multiple indicator groups, which in turn consists of several indicators.

A total of 70 indicators are used in the GPCI. The average indicator scores of the indicator groups are combined to create the function-specific rankings. The comprehensive ranking is created by the total scores of the function-specific rankings.



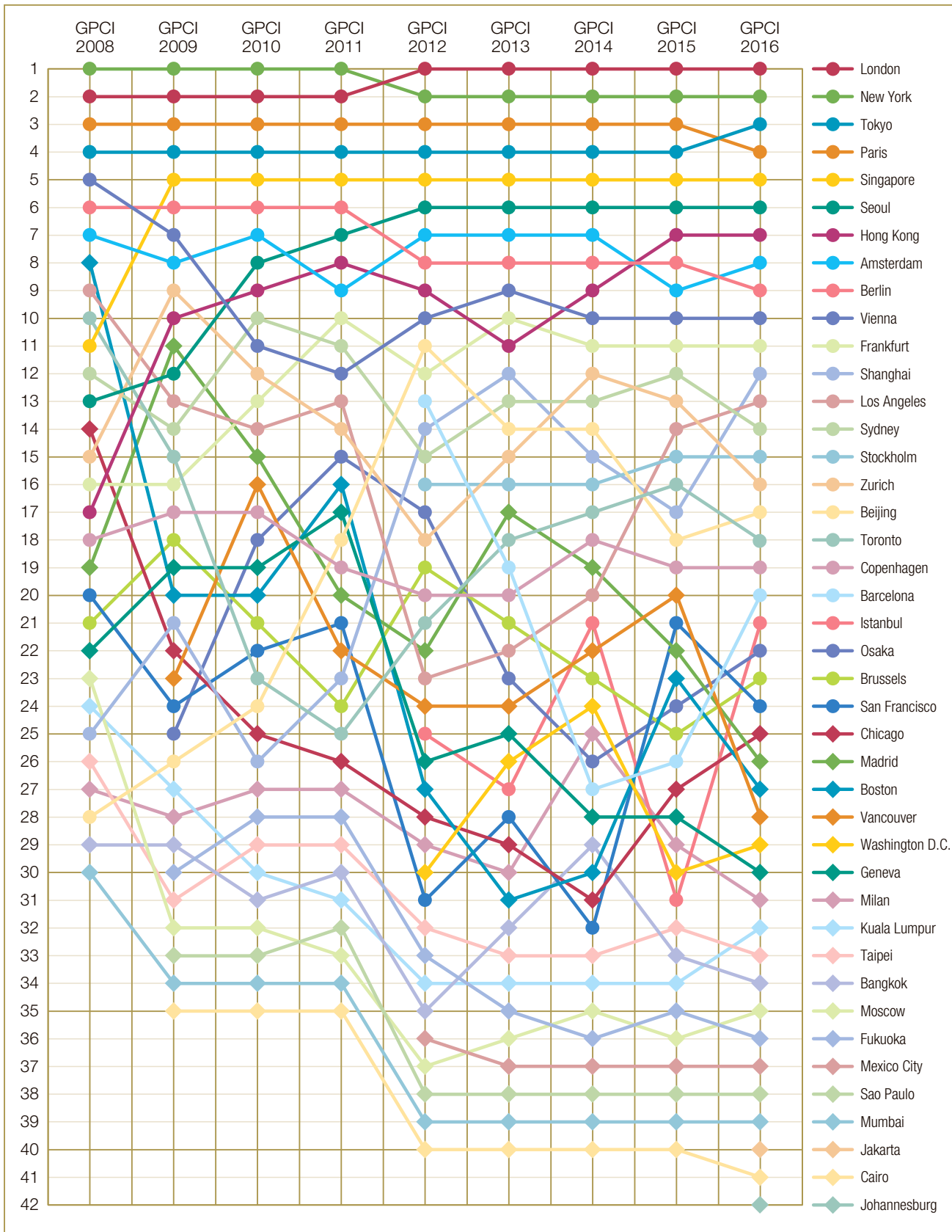
## 3-2 Comprehensive Ranking

Fig. 3-2 Comprehensive Ranking









### 3-3 Fluctuation in Comprehensive Ranking

Fig. 3-3 Fluctuation in Comprehensive Ranking (GPCI 2008-2016)



## 3-4 Function-Specific Ranking

Table 3-1 Function-Specific Ranking

Rank	 Economy	 R&D	 Cultural Interaction	 Livability	 Environment	 Accessibility
1	Tokyo 311.0	New York 215.8	London 338.9	Paris 336.6	Frankfurt 201.9	London 245.0
2	London 307.5	Tokyo 162.9	New York 259.4	Berlin 331.9	Zurich 199.3	Paris 241.1
3	New York 298.7	London 162.4	Paris 233.4	Vienna 330.3	Geneva 196.6	Hong Kong 211.0
4	Beijing 297.5	Los Angeles 145.7	Singapore 202.0	Barcelona 327.7	Singapore 195.1	Shanghai 205.7
5	Hong Kong 278.1	Seoul 122.7	Tokyo 184.7	Frankfurt 325.6	Vienna 191.8	Amsterdam 205.6
6	Singapore 261.3	Boston 118.4	Berlin 168.4	Tokyo 320.6	Stockholm 189.7	Frankfurt 204.9
7	Shanghai 261.1	Singapore 112.7	Vienna 164.3	Toronto 319.2	Copenhagen 186.6	Singapore 201.2
8	Zurich 254.6	Paris 111.9	Istanbul 161.8	Osaka 318.0	London 183.3	New York 196.7
9	Seoul 239.8	San Francisco 111.0	Beijing 154.9	Fukuoka 317.2	Sydney 182.9	Istanbul 190.4
10	Sydney 230.4	Chicago 99.6	Barcelona 149.9	Stockholm 316.9	Vancouver 178.8	Seoul 190.0
11	Geneva 218.4	Hong Kong 87.6	Amsterdam 147.4	Amsterdam 312.4	Berlin 172.9	Tokyo 186.6
12	Stockholm 217.2	Osaka 79.5	Brussels 145.6	Copenhagen 307.0	Tokyo 172.5	Moscow 163.5
13	Copenhagen 211.7	Washington D.C. 78.5	Los Angeles 145.6	Vancouver 304.9	Amsterdam 171.7	Brussels 160.2
14	Paris 211.5	Sydney 75.0	Sydney 140.0	Madrid 302.7	Milan 168.6	Barcelona 155.4
15	San Francisco 209.9	Berlin 67.5	Madrid 129.1	Milan 298.3	Washington D.C. 166.7	Madrid 154.7
16	Washington D.C. 207.7	Shanghai 64.2	Seoul 127.0	Geneva 297.0	Sao Paulo 165.8	Taipei 152.6
17	Toronto 207.6	Taipei 57.4	Shanghai 124.7	Seoul 294.8	Fukuoka 164.1	Copenhagen 149.7
18	Berlin 205.6	Toronto 57.3	Bangkok 122.6	Brussels 293.8	Taipei 159.6	Chicago 148.1
19	Amsterdam 203.0	Beijing 56.9	Hong Kong 121.7	Zurich 292.7	Hong Kong 159.3	Bangkok 147.6
20	Vancouver 200.4	Moscow 54.0	Moscow 115.0	Kuala Lumpur 285.9	Seoul 159.1	Vienna 144.8
21	Taipei 198.3	Istanbul 53.1	Chicago 113.3	Taipei 277.9	San Francisco 159.0	Toronto 142.7
22	Kuala Lumpur 197.8	Stockholm 50.9	Mexico City 111.5	London 274.4	Los Angeles 158.0	Milan 139.6
23	Frankfurt 194.5	Zurich 49.9	Milan 104.3	New York 271.7	Madrid 157.7	Osaka 138.9
24	Istanbul 191.8	Amsterdam 45.8	Toronto 102.0	Bangkok 265.6	Paris 155.2	Beijing 137.7
25	Boston 191.6	Vienna 45.1	Washington D.C. 101.4	Shanghai 262.3	Brussels 153.4	Kuala Lumpur 137.3
26	Los Angeles 186.7	Barcelona 41.5	San Francisco 99.6	Mumbai 262.2	Barcelona 147.4	Berlin 134.5
27	Chicago 182.9	Fukuoka 40.5	Osaka 97.2	Moscow 260.5	Boston 146.3	Boston 134.4
28	Osaka 182.5	Vancouver 40.4	Stockholm 93.0	San Francisco 257.8	Toronto 143.5	Los Angeles 128.8
29	Vienna 176.7	Kuala Lumpur 40.2	Boston 89.2	Chicago 257.5	Osaka 142.9	Sydney 127.6
30	Bangkok 172.1	Copenhagen 37.1	Vancouver 83.5	Sydney 253.9	New York 142.5	Zurich 127.2
31	Brussels 169.4	Geneva 37.0	Sao Paulo 82.1	Beijing 252.0	Kuala Lumpur 139.5	Stockholm 125.1
32	Fukuoka 161.3	Brussels 35.0	Copenhagen 79.6	Istanbul 252.0	Chicago 135.7	Mexico City 119.2
33	Madrid 160.9	Bangkok 33.6	Kuala Lumpur 78.1	Boston 247.9	Bangkok 132.7	San Francisco 117.1
34	Moscow 160.8	Frankfurt 31.9	Frankfurt 74.2	Los Angeles 247.9	Mexico City 127.3	Cairo 116.5
35	Mexico City 153.6	Madrid 28.8	Mumbai 65.2	Sao Paulo 244.2	Mumbai 118.4	Vancouver 114.5
36	Barcelona 147.1	Milan 23.6	Zurich 60.3	Hong Kong 240.8	Jakarta 114.8	Fukuoka 113.8
37	Milan 146.7	Sao Paulo 20.5	Cairo 48.9	Washington D.C. 239.9	Johannesburg 112.6	Washington D.C. 112.1
38	Sao Paulo 133.1	Mexico City 12.0	Geneva 48.2	Jakarta 230.6	Istanbul 110.3	Geneva 101.4
39	Johannesburg 119.2	Cairo 8.9	Johannesburg 41.3	Mexico City 227.6	Shanghai 96.5	Jakarta 94.9
40	Mumbai 117.8	Mumbai 7.8	Jakarta 38.7	Singapore 224.6	Cairo 94.8	Sao Paulo 91.6
41	Jakarta 114.1	Johannesburg 4.7	Taipei 30.5	Cairo 215.8	Beijing 82.0	Mumbai 85.9
42	Cairo 97.6	Jakarta 2.8	Fukuoka 29.5	Johannesburg 175.6	Moscow 73.5	Johannesburg 79.7

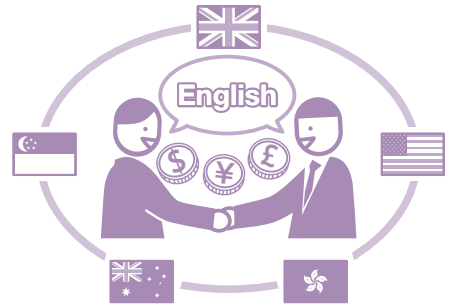
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## Function-Specific Ranking Key Findings



## Economy

- ◆ The top five cities in **Economy** remain unchanged from last year: Tokyo, London, New York, Beijing, and Hong Kong, respectively. Of these cities, Hong Kong (No. 5) increases its score this year mostly due to a strong result for *World's Top 300 Companies*. Shanghai jumps up two spots from No. 9 to No. 7 with stronger scores for *Total Market Value of Listed Shares on Stock Exchanges* and *World's Top 300 Companies*.
- ◆ Of the top 10 cities in **Economy**, five of them designate English as their official language (London, New York, Hong Kong, Singapore, and Sydney), which is beneficial to *Level of Economic Freedom* and *Ease of Securing Human Resources*. Meanwhile, Zurich (No. 8), despite performing poorly in indicators related to economic scale, such as *Nominal GDP* and *Total Employment*, returns excellent scores with respect to indicators related to production efficiency, such as *GDP per Capita*, *Wage Level*, and *Office Space per Desk*, and enters the top 10.
- ◆ The newcomers to the GPCI this year, Johannesburg and Jakarta, rank No. 39 and No. 41, respectively. Overall they place very low in this function and face considerable challenges in the areas of *Level of Economic Freedom*, *Wage Level*, and *Ease of Securing Human Resources*.



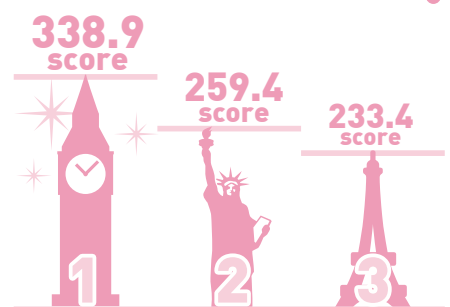
## R&amp;D

- ◆ New York, Tokyo, London, Los Angeles, and Seoul, in that order, head the list of cities in **Research and Development**. New York (No. 1) pulls away from the other four cities with high scores in *World's Top 200 Universities* and *Research and Development Expenditure*.
- ◆ Five of the top 10 cities can be found in the United States (New York, Los Angeles, Boston, San Francisco, and Chicago), all of which command strong scores for *Number of Winners of Highly-Reputed Prizes (Science and Technology-Related Fields)*, *Research and Development Expenditure*, and *World's Top 200 Universities*.
- ◆ Owing to a sharp decrease in scores for *World's Top 200 Universities* and *Interaction Opportunities between Researchers*, Paris slips down the list in this function from No. 5 to No. 8.
- ◆ Tokyo and Seoul both score highly for *Number of Registered Industrial Property Rights (Patents)* and thus surge ahead of the other cities in this indicator.



## Cultural Interaction

- ◆ Once again this year, the top five cities in **Cultural Interaction** are London, New York, Paris, Singapore, and Tokyo respectively, with Singapore and Tokyo making significant progress in terms of scores. Trailing the top five are three cities brimming with rich history and culture: Berlin, Vienna, and Istanbul.
- ◆ London (No. 1) is far ahead of all other cities, with high scores in almost all indicators. The UK capital is evaluated particularly highly for *Number of Large World-Class Cultural Events Held*, *Trade Value of Audiovisual and Related Services*, *Number of Stadiums*, and *Number of Visitors from Abroad*.
- ◆ Singapore returns excellent scores for "Trendsetting Potential," and "International Interaction," but regarding cultural, historical, and traditional contact opportunities, is rated poorly for "Cultural Resources."
- ◆ Tokyo increases its scores from last year for almost all indicators in **Cultural Interaction**. Most notably, the city's scores surge upwards for *Number of International Conferences Held*, *Number of Visitors from Abroad*, *Attractiveness of Shopping Options*, and *Attractiveness of Dining Options*.





#### Livability

◆ The top five-ranked cities in **Livability** are all found in Europe: Paris, Berlin, Vienna, Barcelona, and Frankfurt. Paris (No. 1) is rated highly overall and especially stands out with an exceptionally high score for *Number of Medical Doctors per Population*. All the other cities from Europe, except London (No. 22) and Moscow (No. 28), feature in the top 20.

- ◆ Tokyo works its way up to No. 6 from No. 15 last year with big score gains for *Total Working Hours*, *Average House Rent*, and *Price Level*. The other Japanese cities of Osaka and Fukuoka make strong inroads by climbing into the top 10.
- ◆ In contrast, Vancouver, Geneva, and Zurich all slide out, mostly because of changes in scores for *Price Level* due to foreign exchange rate volatility.
- ◆ Moscow ranked bottom in this function last year, but a considerably higher score in 2016 that reflects an improvement in *Level of Satisfaction of Employees with Their Lives* and lower *Average House Rent* helps the Russian capital city climb up to No. 27.
- ◆ The European cities return the highest scores for *Total Working Hours*. The cities of Asia do increase their scores from last year for this indicator but not enough to compete with their European counterparts.
- ◆ Singapore falls down the **Livability** ranking in 2016, hampered by its high "Cost of Living."



#### Environment

◆ Seven of the 10 highest ranked cities in **Environment** are European, while Singapore is the only Asian city inside the top 10 thanks to its No. 1 ranking for *Percentage of Waste Recycled*.

◆ *CO<sub>2</sub> Emissions* in Geneva, Zurich, Copenhagen, and Stockholm are extremely low, but very high in Beijing, Shanghai, and Moscow.

- ◆ Taipei (18) and Hong Kong (19) both improve their rankings this year thanks to better scores for *Density of Suspended Particulate Matter (SPM)* and *Density of Sulfur Dioxide (SO<sub>2</sub>)*, *Density of Nitrogen Dioxide (NO<sub>2</sub>)*.
- ◆ Although Sao Paulo ranks near the bottom of the comprehensive ranking at No. 38, Brazil's largest city is rated highly in **Environment** and outperforms the other 41 cities in *Comfort Level of Temperature* and *Percentage of Renewable Energy Used*.



#### Accessibility

◆ Since the release of the first GPCI in 2008, London and Paris have continued to battle for top spot in this function, with the former reclaiming its top position this year. London increases its scores for *International Freight Flows*, and *Transportation Fatalities per Population*, and *Taxi Fare*.

- ◆ Amsterdam (5), Frankfurt (6), and Istanbul (9) all place in the top 10 with high scores for "International Transportation Network" and "International Transportation Infrastructure."
- ◆ Despite securing high scores for "Inner-City Transportation Services" and "Traffic Convenience," Tokyo (No. 11) still returns low scores for "International Transportation Network" and "International Transportation Infrastructure."





# 4. Actor-Specific Ranking

## 4-1 Ranking Method

The Actor-Specific Ranking is analyzed from the viewpoints of five specific actors: a Manager, a Researcher, an Artist, a Visitor, and a Resident. After determining the key “needs” of each actor, indicators corresponding to

that actor’s needs are extracted from the 70 indicators used in the Function-Specific Ranking to calculate the city-score for each actor.

Fig. 5-1 Flow of Actor-Specific Ranking

Evaluated Indicators	Functions							Actor-Specific Ranking
	Economy	R&D	Cultural Interaction	Livability	Environment	Accessibility		
<b>Manager</b>								
1. Accumulation of Enterprises & Business Deals	○	—	○	○	—	—	51 indicators	Manager Score
2. Potential of Business Growth	○	—	—	—	—	—		
3. Ease of Doing Business	○	—	—	—	—	—		
4. Business Environment	○	—	—	—	○	○		
5. Richness of Human Resources	○	○	○	—	—	—		
6. Accumulation of Industry to Support Business	○	—	○	—	—	—		
7. Favorable Environment for Employees & Their Families	—	—	○	○	○	○		
8. Political & Economic Risk, & Disaster Vulnerability	○	—	—	○	—	—		
<b>Researcher</b>								
1. Qualities of Research Institutions, Researchers & Directors	—	○	—	—	—	—	36 indicators	Researcher Score
2. Accumulation of Research Institutions & Researchers	—	○	—	—	—	—		
3. Opportunities That Stimulate Researchers to Conduct Academic Activities	—	○	○	—	—	—		
4. Readiness for Accepting Researchers (Research Funding, Support with Living Expenses etc.)	—	○	○	○	—	—		
5. Career Opportunities for Researchers	○	—	—	○	—	—		
6. Daily Life Environment (Ease of Living)	—	—	○	○	○	○		
<b>Artist</b>								
1. Cultural Stimulation	—	—	○	—	—	—	26 indicators	Artist Score
2. Accumulation of Artists	—	—	○	—	—	—		
3. Accumulation of Art Markets	○	—	○	—	—	—		
4. Environment for Creative Activities (Studio Rent & Spaces)	—	—	—	○	—	—		
5. Daily Life Environment (Ease of Living)	—	—	○	○	○	○		
<b>Visitor</b>								
1. Cultural Attractiveness & Opportunities for Interaction	—	—	○	—	—	—	26 indicators	Visitor Score
2. Public Safety	—	—	—	○	—	○		
3. Richness of Tourist Attractions	—	—	○	—	—	—		
4. High-Class Accommodations	—	—	○	—	—	—		
5. Dining (Variety of Cuisines, Prices etc.)	—	—	○	○	—	—		
6. Shopping (Environment, Prices, Attractiveness etc.)	—	—	○	○	—	—		
7. Mobility (Travel Time & Fares to Destinations)	—	—	—	—	—	○		
<b>Resident</b>								
1. Environment to Purchase Goods (Prices & Access to Products)	○	—	—	○	—	○	40 indicators	Resident Score
2. Daily Life Environment (Ease of Living)	—	—	○	○	○	○		
3. Work Environment (Income & Employment Opportunities)	○	—	—	○	—	—		
4. Educational Environment	—	○	—	—	—	—		
5. Leisure Activities	—	—	○	○	○	—		
6. Public Safety	—	—	—	○	—	○		
7. Quality of Medical Treatment	—	—	—	○	—	—		



## 4-2 Actor-Specific Ranking

Table 4-1 Actor-Specific Ranking

Rank	 Manager	 Researcher	 Artist	 Visitor	 Resident
1	London 57.8	New York 66.6	Paris 52.0	London 57.2	Paris 62.2
2	Singapore 56.3	London 54.8	New York 49.7	Paris 51.6	London 57.8
3	Hong Kong 53.9	Tokyo 52.8	Vienna 48.7	New York 50.3	New York 57.3
4	Shanghai 49.0	Los Angeles 46.3	Berlin 48.1	Istanbul 49.0	Frankfurt 55.5
5	Beijing 48.9	San Francisco 45.7	London 47.2	Tokyo 45.9	Zurich 54.7
6	Istanbul 48.5	Paris 45.4	Barcelona 46.7	Berlin 42.8	Tokyo 53.7
7	Tokyo 47.7	Chicago 39.0	Tokyo 46.4	Barcelona 42.3	Vienna 53.6
8	New York 47.3	Boston 38.8	Amsterdam 45.5	Beijing 42.1	Berlin 53.2
9	Seoul 45.6	Singapore 38.0	Los Angeles 43.3	Vienna 41.4	Stockholm 52.3
10	Kuala Lumpur 45.1	Seoul 37.0	Toronto 42.3	Shanghai 41.2	Geneva 51.6
11	Paris 45.0	Washington D.C. 34.4	Beijing 42.2	Singapore 41.0	Amsterdam 51.0
12	Taipei 43.2	Sydney 33.5	Vancouver 40.4	Bangkok 39.9	Washington D.C. 50.7
13	Berlin 42.2	Hong Kong 32.7	Madrid 40.1	Amsterdam 39.6	Copenhagen 50.7
14	Stockholm 40.7	Beijing 32.3	Stockholm 39.9	Madrid 37.3	Boston 49.1
15	Bangkok 40.2	Berlin 30.5	Osaka 38.6	Seoul 35.3	San Francisco 47.9
16	Zurich 40.1	Osaka 30.4	Washington D.C. 38.0	Hong Kong 35.0	Osaka 47.7
17	Copenhagen 40.1	Toronto 29.4	Milan 37.9	Osaka 34.6	Seoul 47.4
18	Amsterdam 39.8	Vancouver 26.4	Istanbul 37.9	Brussels 34.2	Barcelona 47.4
19	Toronto 39.6	Vienna 26.2	Frankfurt 37.7	Frankfurt 34.1	Brussels 47.0
20	Sydney 39.6	Amsterdam 25.8	Mexico City 37.4	Moscow 33.2	Toronto 46.8
21	Vienna 38.9	Stockholm 25.7	Brussels 37.3	Milan 32.7	Milan 46.7
22	Boston 38.3	Zurich 25.5	Shanghai 37.2	Chicago 31.6	Hong Kong 46.5
23	Vancouver 37.9	Moscow 25.1	Seoul 36.7	Toronto 31.5	Vancouver 46.4
24	Frankfurt 37.8	Geneva 23.6	Moscow 36.7	Copenhagen 30.2	Fukuoka 46.2
25	Geneva 37.2	Copenhagen 23.1	Fukuoka 36.4	Sydney 30.1	Los Angeles 45.4
26	Osaka 36.2	Shanghai 22.5	Chicago 36.3	Mexico City 29.6	Singapore 45.3
27	Brussels 35.4	Barcelona 22.1	Sao Paulo 36.2	Boston 29.6	Madrid 45.2
28	San Francisco 35.2	Madrid 21.5	Kuala Lumpur 36.1	San Francisco 29.5	Sydney 45.1
29	Chicago 35.1	Brussels 21.3	Mumbai 35.3	Vancouver 29.5	Taipei 43.9
30	Barcelona 34.7	Bangkok 21.2	Bangkok 34.9	Kuala Lumpur 29.5	Chicago 43.2
31	Washington D.C. 34.6	Frankfurt 21.0	Copenhagen 34.6	Los Angeles 28.9	Shanghai 43.1
32	Madrid 34.4	Istanbul 20.3	Boston 32.4	Stockholm 28.5	Beijing 42.8
33	Los Angeles 34.2	Taipei 20.3	San Francisco 31.2	Washington D.C. 28.4	Moscow 38.1
34	Fukuoka 32.5	Milan 19.7	Cairo 31.0	Taipei 27.7	Mexico City 37.2
35	Milan 32.5	Fukuoka 19.7	Jakarta 29.1	Mumbai 27.2	Sao Paulo 36.9
36	Mumbai 30.7	Mexico City 19.1	Zurich 29.0	Cairo 26.9	Istanbul 36.5
37	Moscow 30.3	Kuala Lumpur 18.6	Sydney 27.6	Zurich 26.3	Bangkok 33.2
38	Mexico City 27.7	Sao Paulo 18.1	Geneva 26.3	Fukuoka 25.8	Kuala Lumpur 32.7
39	Sao Paulo 25.6	Mumbai 15.7	Johannesburg 24.7	Sao Paulo 24.7	Mumbai 30.7
40	Cairo 23.8	Cairo 11.2	Singapore 23.1	Geneva 23.8	Cairo 29.2
41	Jakarta 23.1	Jakarta 11.0	Taipei 22.4	Jakarta 21.6	Jakarta 25.4
42	Johannesburg 22.4	Johannesburg 9.0	Hong Kong 22.2	Johannesburg 15.1	Johannesburg 21.2

### 4-3 Actor-Specific Ranking Key Findings

#### Manager



- ◆ The top three cities of London, Singapore, and Hong Kong retain their rankings from last year in this actor group. Istanbul makes a big jump up to No. 6 from No. 15 thanks to a better score for "Potential of Business Growth."
- ◆ Tokyo, which places first in **Economy**, scores highly in "Accumulation of Enterprises and Business Deals," but weak scores for "Potential of Business Growth" and "Ease of Doing Business" mean the Japanese capital only rises one position to No. 7.

#### Researcher



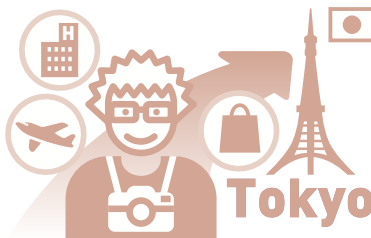
- ◆ In **Researcher**, New York once again comes in at No. 1 thanks to high scores for "Qualities of Research Institutions, Researchers, and Directors" and "Readiness for Accepting Researchers." This marks nine years running during which the city has maintained its top rank. Los Angeles climbs one spot to No. 4 this year, as does San Francisco from No. 6 to No. 5. Both cities see improvements in "Readiness for Accepting Researchers" and "Career Opportunities for Researchers," while an increase in *Number of International Students* also contributes to their higher rankings.
- ◆ Tokyo remains at No. 3 from last year because a comparison with the top two cities shows it receives lower scores for *World's Top 200 Universities* and *Number of Winners of Highly-Reputed Prizes (Science and Technology-Related Fields)* within the factor of "Qualities of Research Institutions, Researchers, and Directors." The same can be seen for *Readiness for Accepting Foreign Researchers* in "Readiness for Accepting Researchers."

#### Artist



- ◆ This year, Paris again wins top spot with excellent ratings for "Cultural Stimulation" and "Daily Life Environment." Despite receiving high scores in "Cultural Stimulation," "Accumulation of Artists," and "Accumulation of Art Markets," New York's (No. 2) overall score still falls short of that for Paris.
- ◆ Vienna (No. 3) and Berlin (No. 4) garner strong ratings for *Opportunities for Cultural, Historical and Traditional Interaction* and *Number of Museums*. As a result, Vienna (No. 5 in 2015) and London (No. 3 in 2015) exchange places this year.
- ◆ Barcelona surges upwards to No. 6 from No. 10 last year in this actor group on the back of a stronger score for "Accumulation of Art Markets" and "Environment for Creative Activities." Owing to the fact that the *Average House Rent* in Singapore and Hong Kong is very expensive, which is a key factor for artists in "Environment for Creative Activities," these two cities rank No. 40 and No. 42, respectively.

#### Visitor



- ◆ In **Visitor**, the top four cities of London (No. 1), Paris (No. 2), New York (No. 3), and Istanbul (No. 4) retain their respective rankings from last year. London and Paris are highly rated in "Cultural Attractiveness and Opportunities for Interaction," "Richness of Tourist Attractions," and "Mobility."
- ◆ Together with high ratings in "Dining" and "Shopping," significantly higher scores for *Price Level* and *Number of Visitors from Abroad* nudge Tokyo up to No. 5 from No. 6 last year. However, the city needs to improve in "Cultural Attractiveness and Opportunities for Interaction" and "High-Class Accommodations."

#### Resident



- ◆ Paris, London, and New York remain the top three cities in **Resident** this year.
- ◆ Frankfurt (No. 4) and Zurich (No. 5) are rated highly for *CO<sub>2</sub> Emissions* and *Level of Green Coverage*, two important factors for city residents with respect to **Environment**.
- ◆ Buoyed by a better score for "Environment to Purchase Goods," Tokyo jumps up to No. 6 from No. 8 last year. However, the Japanese capital fails to score highly for environment-related indicators such as *CO<sub>2</sub> Emissions* and *Percentage of Renewable Energy Used*, providing an explanation as to why such a gulf exists between it and the cities of Europe.

# Special Feature: City Perception Survey

## Objective

The Global Power City Index comprehensively measures the ability of cities to attract resources, capital and people—ranking their global ‘magnetism’. When individuals do decide to visit or establish a residence in a particular city, a key factor that influences that decision relates to their conscious “perception” of the area. Because of this, it is important for cities to strategically

create image branding in order to compete globally with other major cities. The City Perception Survey, through surveying and analyzing the public image of 8 target cities, aims to understand each city’s special characteristics and contribute to the process of creating new image branding strategies for major urban centers.

\* The complete results of the research are available in the *City Perception Survey* published in October 2016.

## Target Cities

1. The top four of the Global Power City Index, between 2008 and 2016	London New York Tokyo Paris
2. Four high-ranking cities in Asia	Singapore Seoul Hong Kong Shanghai

## Survey Methodology

A questionnaire was conducted in March of 2016, asking respondents for keywords representing their ‘image’ of the eight cities being studied. A total of 2,132 completed surveys were collected garnering 27,781 keywords from respondents in 41 global cities\*.

The following feature contains excerpts from the research conducted on 4 of the 8 cities and includes 2 of the 4 analyses: Word Clouds and Ranking.

<h3>01</h3> <p><b>Word Clouds</b> (Visualization of word frequency)</p>	<h3>02</h3> <p><b>Ranking</b></p>	<h3>03</h3> <p><b>Visitor/Non-Visitor Analysis</b></p>	<h3>04</h3> <p><b>Location-Specific Analysis</b></p>
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\* These cities were chosen from the 42 cities covered in the Global Power City Index 2016 (GPCI), with Cairo being excluded due to logistical inaccessibility.





# LONDON



## City Perception Ranking

Rank	Word	Quantity
1	EXPENSIVE	153
2	HISTORY	141
3	BIG BEN	136
4	CULTURE	108
5	RAIN	84
6	TRADITION	71
7	BEAUTIFUL	69
8	FOG	65
9	DIVERSE	61
10	QUEEN	57

Having a long history, London is associated with keywords like **HISTORY**, and **TRADITION**, while at the same time being considered a multicultural city, evident in words like **COSMOPOLITAN** and **DIVERSE**. Furthermore, a wide range of landmarks such as **BIG BEN** and **DOUBLE DECKER BUS** are also associated with London. While weather-related words such as **RAIN**, **FOG**, and **COLD** are frequently mentioned characteristics for London, these responses are strongly associated with non-visitors. By integrating these various responses, London's overall image is a global city with somewhat gloomy weather, but brimming with landmarks, and possessing a unique history and tradition.





# NEW YORK



## City Perception Ranking

Rank	Word	Quantity
1	BUSY	147
2	SKYSCRAPERS	126
3	STATUE OF LIBERTY	92
4	METROPOLIS	88
4	DIVERSE	88
5	BIG APPLE	87
6	CROWDED	76
7	BIG	73
8	MODERN	71
9	EXPENSIVE	67
10	FASHION	59

New York displays symbols of its urban power through keywords like **SKYSCRAPERS**, **METROPOLIS**, **DI-DIVERSE**, **COSMOPOLITAN**, and **BIG**, while also being associated with a restless atmosphere represented in the words **BUSY**, **CROWDED**, and **FAST**. Other impressions include **BIG APPLE** (nickname), **TIMES SQUARE**, and **BROADWAY**, which are linked to the city's landmarks. Through these perceptions, New York presents itself as a world city always in motion with urban activity, and filled with diverse cultural energy.



# TOKYO

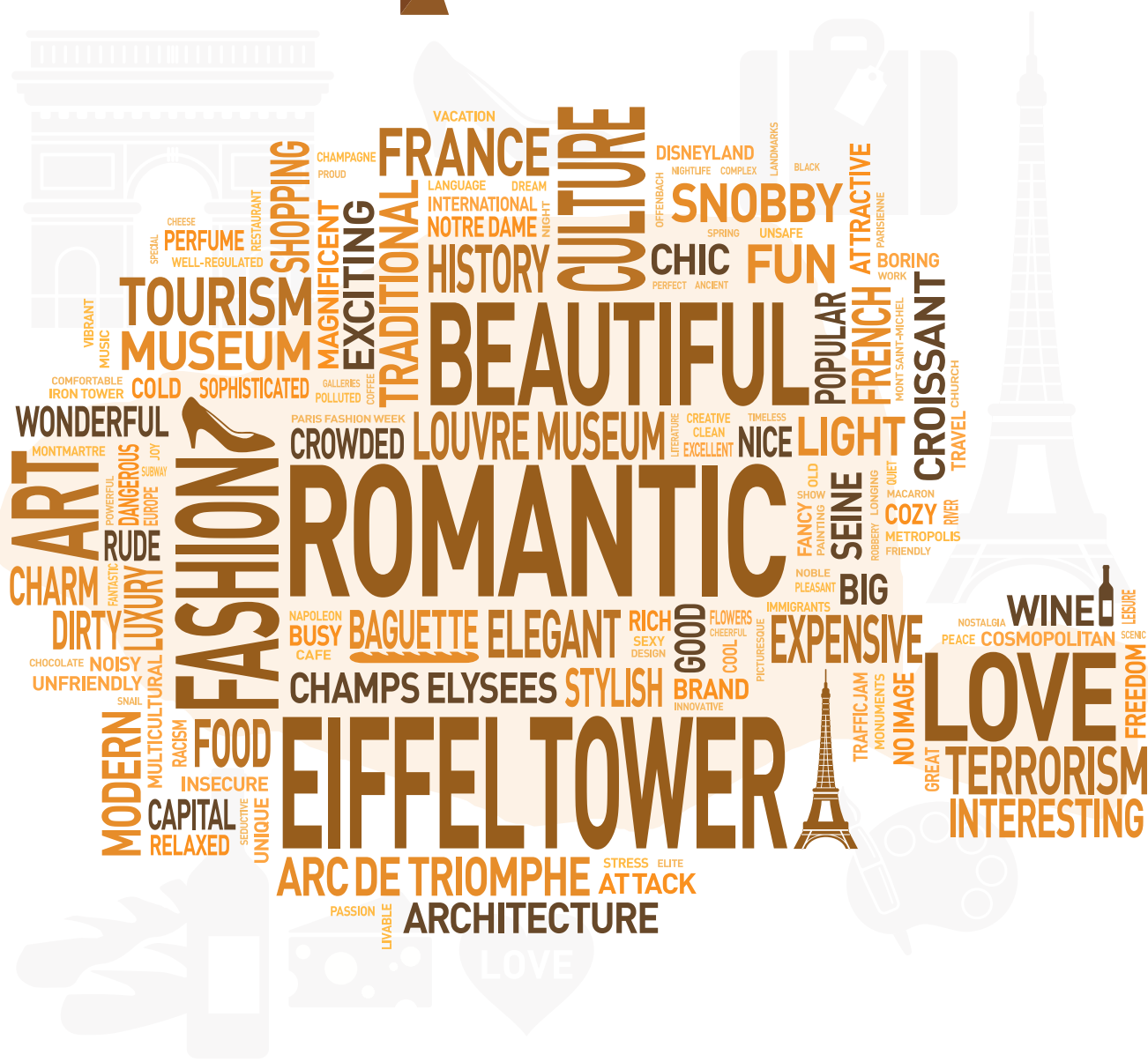


## City Perception Ranking 👑

Rank	Word	Quantity
1	<b>CROWDED</b>	254
2	<b>TECHNOLOGY</b>	206
3	<b>MODERN</b>	133
4	<b>JAPAN</b>	127
5	<b>BUSY</b>	104
6	<b>EXPENSIVE</b>	80
6	<b>CULTURE</b>	80
7	<b>CLEAN</b>	72
8	<b>SUSHI</b>	59
8	<b>FOOD</b>	59
9	<b>ORGANIZED</b>	57
10	<b>TRADITIONAL</b>	51

In contrast to Tokyo's impression as **CROWDED**, the world's most populated city is also recognized as being **ORGANIZED** efficiently, and has an image of **TECHNOLOGY** and **MODERN** advancement. For landmarks, the responses for **SKYTREE** and **TOKYO TOWER**, are mostly mentioned by residents in Japanese cities. The overall perception of Tokyo is as an efficient and advanced metropolis, though landmarks are not well-recognized internationally.

 **PARIS**



**City Perception Ranking** 

Rank	Word	Quantity
1	EIFFEL TOWER	311
2	ROMANTIC	288
3	BEAUTIFUL	222
4	FASHION	207
5	LOVE	169
6	CULTURE	168
7	ART	142
8	FOOD	97
9	HISTORY	84
10	TERRORISM	70

With keywords strongly connected to themes of culture and love, Paris displays an image that is distinct from the other target cities. Also, Paris is the only target city where the top ranked keyword is represented by a landmark, indicating the global popularity of the **EIFFEL TOWER**. Other places like the **LOUVRE MUSEUM** and the **ARC DE TRIOMPHE** are likewise associated with the city, regardless of whether respondents had visited or not. Furthermore, the image of Paris is overwhelmingly positive, reflected in words such as **ROMANTIC**, **BEAUTIFUL** and **LOVE**. In all, Paris represents an image of impressive landmarks and beautiful scenery, as well as being a romantic city full of love and culture.



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# Global Power City Index 2016

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- 2 New York
- 3 Tokyo
- 4 Paris
- 5 Singapore
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- 19 Copenhagen
- 20 Barcelona
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