

# J P C

J A P A N P O W E R C I T I E S

## JAPAN POWER CITIES

Profiling Urban Attractiveness



# 2020



MORI MEMORIAL  
FOUNDATION

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## Preface

Due to the impact of COVID-19 and the ensuing pandemic, people the world over have been forced to respond in previously unthought of ways to their daily lives and economic activities. Under these drastic circumstances, what will happen to "the city," where such vast numbers of people live and work? In this context, the analysis of the current state of the city has become more important than ever.

"Japan Power Cities (JPC) - Profiling Urban Attractiveness" is conducted from the viewpoint that in order to maintain the vitality of Japan as a whole, it is essential to raise the overall strength of cities by clarifying their strengths and appeal. The findings published since 2018 are used not only as a benchmark for city policy-making, but also as data that helps drive business and residential choices.

In Japan, while the rapid development of the tertiary sector continues to increase growth in major cities, there remains concern about the decline in both population and industry in the smaller, regional cities. The challenges faced concern the questions of what form big cities should take and how best to achieve the revitalization of regional cities. In order to solve these challenges, objectively evaluating the special characteristics of both large and regional cities, so as to clarify their strengths and weaknesses is indispensable.

This year, 37 new cities were added to the evaluation as a result of changing the selection criteria of target cities. In addition to updating the data on indicators that are subject to change over time, the definitions of some indicators were changed in order to make them more meaningful, and new indicators were added to better reflect changes in the urban environment.

The data used by the JPC2020 was mainly collected from January to March 2020, and the quantitative data used by the JPC2020 includes statistical data such as the "2015 Census" and "2014 Economic census." Therefore, the socio-economic impact of the COVID-19 virus has not yet been directly reflected in the results. However, we hope that through future JPC evaluations you will be provided an understanding of the characteristics and appeal of each city as it is affected by this global pandemic, and that this publication will help in the formulation of policies that will continue to vitalize the cities and Japan as a whole.

Japan Power Cities, Steering Committee, Chairman

**Hiroo Ichikawa**

August, 2020



# About Japan Power Cities 2020

## Background and Objective

While the world's population is predicted to keep on growing in the years ahead, the population of Japan is expected to shrink rapidly as a result of a declining birth rate and an aging society. In facing such circumstances head on, cities across Japan, in order to maintain their dynamism, must harness their respective characteristics and push ahead with urban development, while maintaining the “magnetism” required to attract people and companies, as well as the “growth potential” that continually demonstrates their urban appeal and strengths.

For this to be achieved, cities need to gain an objective understanding of their own strengths and then formulate and execute an urban strategy plan for the next generation. As part of Japan Power Cities–Profiling Urban Attractiveness, a study was carried out on the major cities of Japan for the purpose of conducting comparative and multi-faceted analyses of city strengths based on quantitative and qualitative data and to shed light on city characteristics such as strengths and attractiveness.

## Research Organization

### Steering Committee

Creating the assessment system, as well as performing evaluation & analysis

#### [Chairman]



**Hiroo Ichikawa**

Professor Emeritus,  
Meiji University

#### [Members]

**Institute for Urban Strategies,  
Mori Memorial Foundation**



### Expert Committee

Providing a technical point-of-view as well as advice to the Steering Committee

#### [Committee Members]



**Yasushi Asami**

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**Keisuke Hanaki**

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Professor Emeritus,  
University of Tokyo



**Shunya Yoshimi**

Professor,  
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Graduate School of  
Interfaculty Initiative  
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## Evaluation Method

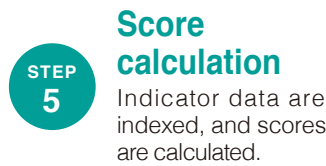
### ▶ Creating Framework



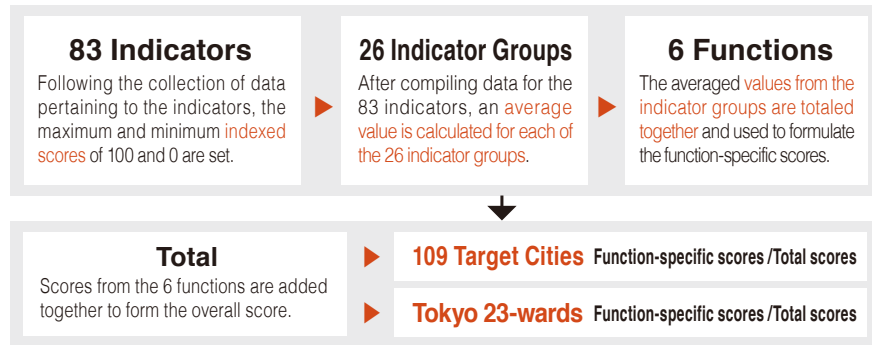
### ▶ Data Collection



### ▶ Indexation



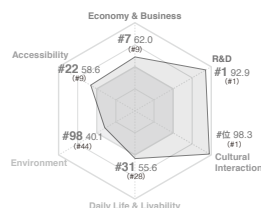
#### Score Calculation Method



### ▶ Evaluation and Analysis

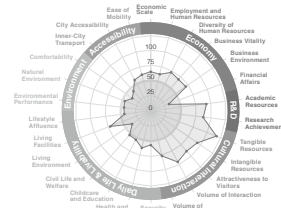


1 Function-specific radar chart



In order to allow evaluations of a city from a multifaceted perspective, radar charts were created using the deviation value of the score and rank.

2 Indicator group radar chart



Radar charts are used to clearly indicate the indicator groups in which each city possesses strengths.

# Target Cities

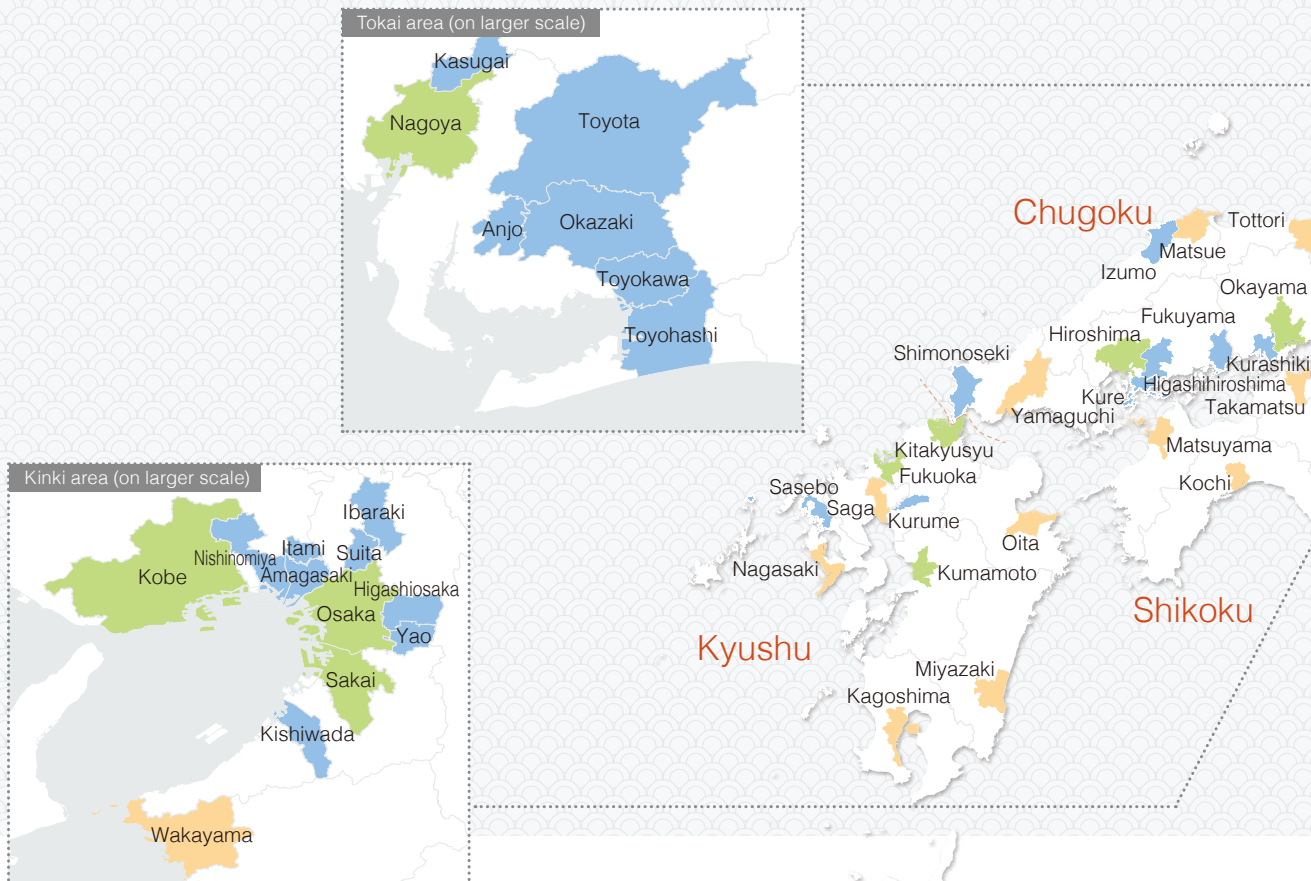
109 Japanese cities and the 23 wards of Tokyo were included as target cities in this study. For the 109 cities, the selection criteria were set as follows and the cities were selected:

1. Ordinance-designated cities
2. Location of prefectural offices (excluding ordinance-designated cities)
3. Cities with a population of 170,000 or more and a daytime - nighttime population ratio of 0.9 or more

	Ordinance-designated cities	Location of prefectural offices (excluding ordinance-designated cities)	Cities with a population of 170,000 or more and a daytime - nighttime population ratio of 0.9 or more
<b>Hokkaido</b>	Sapporo		Hakodate·Asahikawa·Kushiro·Tomakomai
<b>Tohoku</b>	Sendai	Aomori·Morioka·Akita·Yamagata·Fukushima	Hirosaki·Hachinohe·Koriyama·Iwaki
<b>Kanto</b>	Saitama·Chiba·Yokohama·Kawasaki·Sagamihara	Mito·Utsunomiya·Maebashi·Kofu·Nagano	Hitachi·Tsukuba·Takasaki·Isesaki·Ota·Kawagoe·Kumagaya·Kashiwa·Ichihara·Hachioji·Tachikawa·Fuchu·Machida·Yokosuka·Hiratsuka·Kamakura·Fujisawa·Odawara·Atsugi·Matsumoto
<b>Tokai</b>	Shizuoka·Hamamatsu·Nagoya	Gifu·Tsu	Numazu·Fuji·Toyohashi·Okazaki·Kasugai·Toyokawa·Toyota·Anjo·Yokkaichi·Suzuka
<b>Hokuriku</b>	Niigata	Toyama·Kanazawa·Fukui	Nagaoka·Joetsu·Takaoka
<b>Kinki</b>	Kyoto·Osaka·Sakai·Kobe	Otsu·Nara·Wakayama	Kishiwada·Suita·Ibaraki·Yao·Higashiosaka·Himeji·Amagasaki·Nishinomiya·Itami
<b>Chugoku</b>	Okayama·Hiroshima	Tottori·Matsue·Yamaguchi	Izumo·Kurashiki·Kure·Fukuyama·Higashihiroshima·Shimonoseki
<b>Shikoku</b>		Tokushima·Takamatsu·Matsuyama·Kochi	
<b>Kyushu</b>	Kitakyusyu·Fukuoka·Kumamoto	Saga·Nagasaki·Oita·Miyazaki·Kagoshima	Kurume·Sasebo
<b>Okinawa</b>		Naha	
	Chiyoda, Chuo, Minato, Shinjuku, Bunkyo, Taito, Sumida, Koto, Shinagawa, Meguro, Ota, Setagaya, Shibuya, Nakano, Suginami, Toshima, Kita, Arakawa, Itabashi, Nerima, Adachi, Katsushika, Edogawa		

109 Cities

Tokyo 23 wards








# Evaluation System

Each indicator was scored, with the averaged value of the scores generating the score for the indicator group. The totaled scores of the indicator groups then formulated the function-specific score, with a total score of 2,600 for all six function groups: (Economy & Business 600 pts, Research & Development 200 pts, Cultural Interaction 500 pts, Daily Life & Livability 700 pts, Environment 300 pts, and Accessibility 300 pts.)

Function	Indicator Group	Indicator	
Function	6 Indicator Groups	Economic Scale	1 Total Value Added
			2 Intra-regional Gross Expenditure
			3 Daytime-Nighttime Population Ratio
		Employment and Human Resources	4 Total Employment
			5 Wage Level
			6 Higher-Education Completion Rate
		7 Intake/Outflow of Young Employees	
		8 Female Employment Ratio	
	Diversity of Human Resources	9 Foreign Employment Ratio	
		10 Elderly Employment Rate	
	Business Vitality	11 Ratio of Newly Registered Businesses	
		12 Labor Productivity	
		13 Number of Certified Special Zones	
	Business Environment	14 Ratio of Employees in Service Industry for Business Enterprises	
		15 Total Supply of New Office Real Estate	
		16 Density of Flexible Workplaces	
	Financial Affairs	17 Financial Capability Index	
		18 Public Account Balance Ratio	
		19 Real Debt Expenditure Ratio	
		20 Future Burden Ratio	
Research & Development	2 Indicator Groups	Academic Resources	21 Ratio of Academic and Development Research Institution Employees
			22 Number of Leading Universities
	Research Achievement	23 Number of Papers Submitted	
		24 Number of Leading Firms in Global Niches	
Cultural Interaction	5 Indicator Groups	Tangible Resources	25 Number and Rating of Tourist Attractions
			26 Number of Designated Cultural Assets
			27 Active Approach to Scenic Town Planning
		Intangible Resources	28 Number and Rating of Events
			29 Workers in Creative Industries
		30 Opportunities for Cultural, Historical, and Traditional Interaction	
	Attractiveness to Visitors	31 Number of Accommodation Facility Guest Rooms	
		32 Number of Luxury Guest Rooms	
		33 Number of Event Halls	
		34 Multilingual Services at Tourist Information Desks and Hospitals	
Volume of Interaction	35 Weekend Visitor Population		
	36 Volume of People Visiting for Tourism or Sightseeing		
	37 Number of International Conferences and Exhibitions Held		
Volume of Communication	38 Tourism Promotion Activities		
	39 Number of Followers of Local Government SNS Accounts		
	40 Level of Attractiveness, Recognition, and Intention to Visit		



Function	Indicator Group	Indicator
Daily Life & Livability	7 Indicator Groups	41 Recognized Criminal Offenses
		42 Traffic Accident Fatalities
		43 Level of Safety During Disaster
		44 Vacancy Rate
		45 Number of Doctors
		46 Number of Hospitals and Clinics
		47 Life Expectancy and Healthy Life Expectancy Rate
	Childcare and Education	48 Total Fertility Rate
		49 Availability of Daycare Services
	Civil Life and Welfare	50 Assistance for Children's Medical Costs
		51 Variety of Educational Opportunities
		52 Ease of Integration for Foreign Residents
	Living Environment	53 Number of Elderly Requiring Assistance or Care
		54 Number of Regional Comprehensive Assistance Centers
55 Satisfaction with Living Environment 		
56 Volume of New Housing Supply		
Living Facilities	57 Size of Residences	
	58 Ratio of Barrier-free Homes	
Lifestyle Affluence	59 Density of Retails Businesses	
	60 Density of Restaurants	
	61 Density of Convenience Stores	
	62 Disposable Income	
	63 Price Level	
	64 Cost of Housing	
Environment	3 Indicator Groups	65 Percentage of Waste Recycled
		66 CO <sub>2</sub> Emissions
		67 Rate of Self-Sufficient Renewable Energy
	Natural Environment	68 Number of EV Charging Stations
		69 Satisfaction with Natural Environment 
	Comfortability	70 Green Coverage Ratio in Urban Areas
		71 Waterfront Areas
72 Annual Sunshine Hours		
Accessibility	3 Indicator Groups	73 Number of Comfortable Temperature / Humidity Days
		74 Air Quality
		75 Convenience of Public Transport 
	Inner-City Transport	76 Density of Train Stations and Bus Stops
		77 Frequency of Traffic Congestion
	City Accessibility	78 Travel Time to Airports
79 Ease of Access to Shinkansen		
80 Number of Interchanges		
Ease of Mobility	81 City Compactness	
	82 Commuting Time	
	83 Ratio of Barrier-free Stations	

:Indicators Q using questionnaires

For the top 16 cities based on total score, function-specific, as well as indicator group-specific radar charts were used to analyze their strengths and appeal (deviation values were calculated within the target 109 cities.)

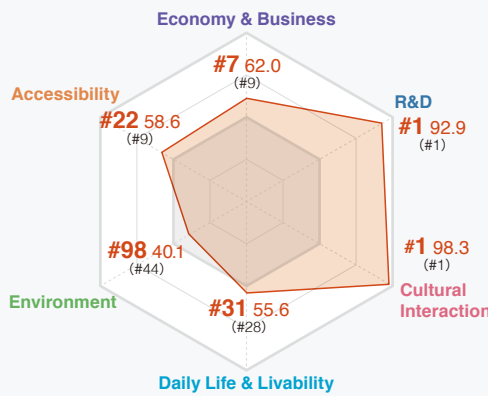
# 1 Kyoto



## An international city of culture standing atop two pillars – culture and research

Kyoto, which has been promoting its "Cultural Capital - Kyoto" initiative since 2017, leads in **Cultural Interaction** among the 109 cities in JPC. Within this function considerable strength can be seen in **Tangible Resources**, which consists of the three indicators Number and Rating of Tourist Attractions, Number of Designated Cultural Assets, and Active Approach to Scenic Town Planning. In addition, Kyoto ranks the highest in **Research & Development** among the target cities, with Number of Leading Universities and Number of Papers Submitted proving especially strong. Kyoto is a city which exudes magnetism, displaying not only world-class cultural resources, but also leading the way in intellectual accumulation.

### Function-specific rank and deviation



※The shape of the graph represents the deviation value

□ Function-specific deviation score ○ 50-point deviation line  
( ) Rank from 2019

### Indicator group-specific deviation score



□ 2020 Indicator group-specific deviation score ○ 50-point deviation line

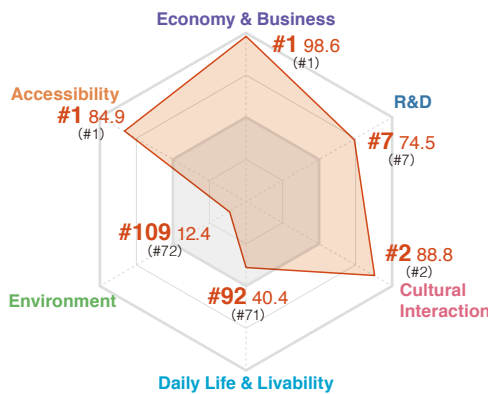
# 2 Osaka



## The predominant city in the Kansai region, alive with the interaction of people and commerce

Osaka sees another year of improvement in **Economy & Business** and **Cultural Interaction**, with the city's total score also proving very high. For the former, Economic Scale increases, as does Business Environment through a strong return in Total Supply of New Office Real Estate. As for **Cultural Interaction**, the city improves its score in Number of Accommodation Facility Guest Rooms, which was redefined to count the number of guest rooms, not facilities. This once again led to a good evaluation for **Attractiveness to Visitors**. **Daily Life & Livability**, where Living Facilities scores highly, improves with a better evaluation for Assistance for Children's Medical Costs. Any future improvement in Civil Life and Welfare will see a further increase in the score for this function.

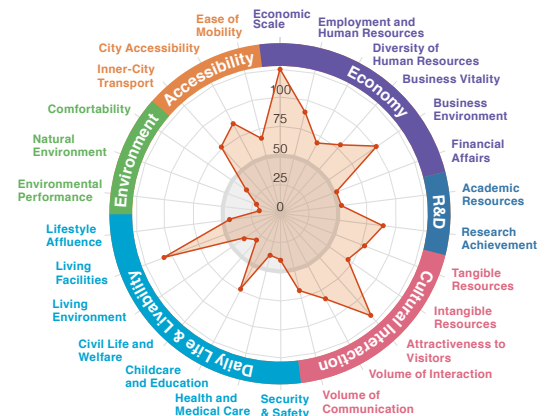
### Function-specific rank and deviation



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( ) Rank from 2019

### Indicator group-specific deviation score



□ 2020 Indicator group-specific deviation score ○ 50-point deviation line

# 3 Fukuoka

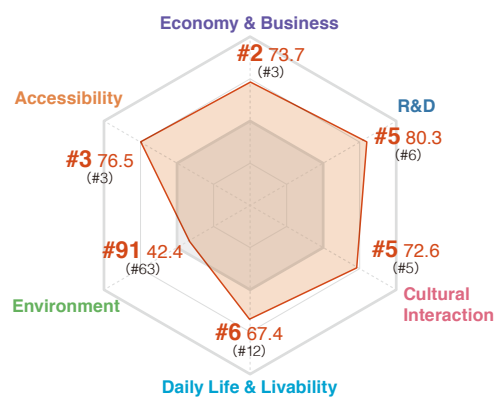


写真提供：福岡市

## A balanced city showing continued growth

Fukuoka displays considerable strength in **Economy & Business**, with Business Vitality and Business Environment scoring highly, and also in **Accessibility** through City Accessibility. In addition, it is worth noting that **Cultural Interaction**, **Research & Development**, and **Daily Life & Livability** all perform well. In comparison, **Environment** rates poorly, and there is room for improvement in Environmental Performance, which is composed of indicators such as Percentage of Waste Recycled and CO<sub>2</sub> emissions. However, there can be no doubt that Fukuoka, which has ambitions to be an “Asian exchange hub city,” is an appealing and well-balanced city that attracts large numbers of people and businesses.

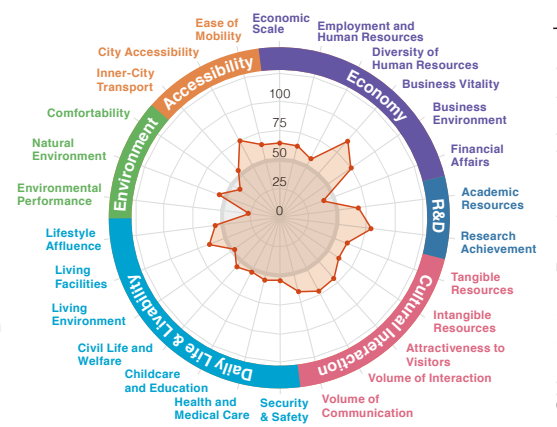
### Function-specific rank and deviation



※The shape of the graph represents the deviation value

□ Function-specific deviation score ○ 50-point deviation line  
( ) Rank from 2019

### Indicator group-specific deviation score



□ 2020 Indicator group-specific deviation score ○ 50-point deviation line

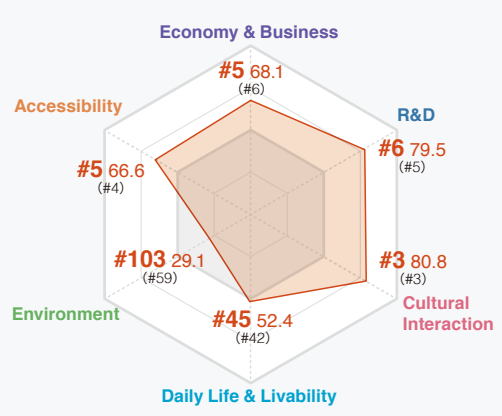
# 4 Yokohama



## A multi-functional city making strides through further refinement of its cultural interaction

Yokohama, with its emphasis on cultural and tourism policies, achieves high deviation scores in all five indicator groups for **Cultural Interaction**. Of particular note, Active Approach to Town Planning and Number of Followers of Local Government SNS Accounts receive the highest scores among the target cities. **Economy & Business** shows strength in Economic Scale, with Total Value Added third only to Osaka and Nagoya, and also in Employment & Human Resources, with Total Employment ranking second to Osaka. High scores are also returned for **Research & Development** and **Accessibility**, showing the city has a diverse range of urban functions operating at high levels. If the cultural tourism policies being promoted further extend its strength, it is expected that the city will experience an increase in its urban power.

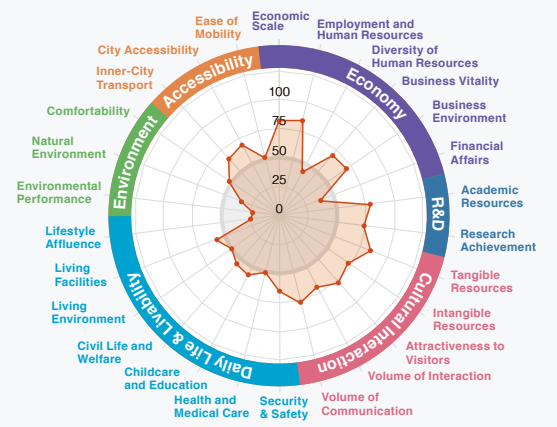
### Function-specific rank and deviation



※The shape of the graph represents the deviation value

□ Function-specific deviation score ○ 50-point deviation line  
( ) Rank from 2019

### Indicator group-specific deviation score



□ 2020 Indicator group-specific deviation score ○ 50-point deviation line



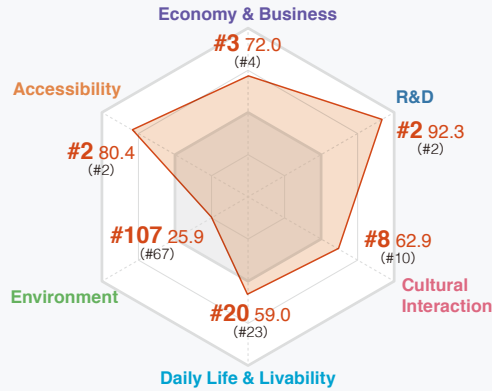
# 5 Nagoya



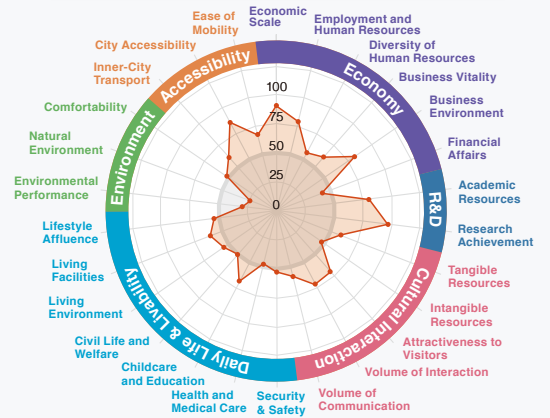
## The predominant city in the in the Chubu region excels in accessibility and R&D

Nagoya scores highly in **Accessibility** and **Research & Development**. Particular strength in **Accessibility** is seen in City Accessibility, which comes second only to Osaka, and clearly shows the city's prowess as a transportation hub. **Research & Development** performs well through Number of Leading Universities and Number of Papers Submitted, as it is home to some of the country's leading educational institutions, such as Nagoya University, Nagoya Institute of Technology, and Nagoya City University. In **Economy & Business**, high evaluations in Economic Scale and Business Environment reveal the strength of its economy as the principal city in the Chubu region. In addition, **Daily Life & Livability** sees stable evaluations throughout its indicator groups, led by Childcare and Education, clearly demonstrating the appeal and livability of the city.

Function-specific rank and deviation



Indicator group-specific deviation score



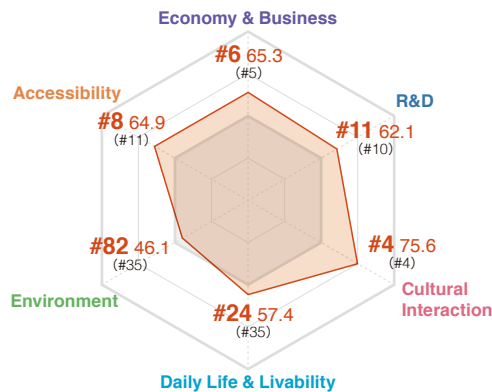
# 6 Kobe



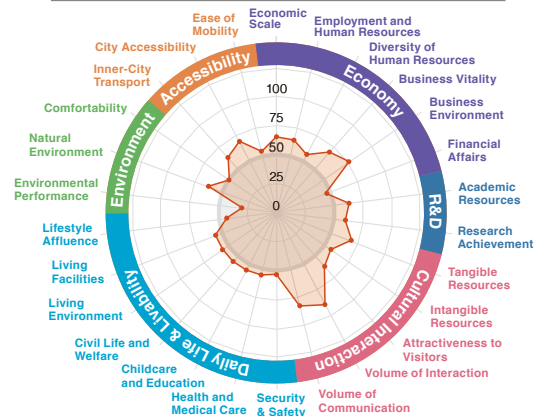
## A balanced city boasting both cultural appeal and economic strength

Kobe displays strength in **Cultural Interaction**, seen in Volume of Interaction particularly through Number of International Conferences and Exhibitions Held, which receives the highest score among the target cities, as well as a high evaluation in Level of Attractiveness, Recognition, and Intention to Visit in Volume of Communication. In **Economy & Business**, Business Environment scores well, as does City Accessibility in **Accessibility**. The city also receives a relatively high evaluation in **Daily Life & Livability**, despite cities with larger economies usually scoring adversely in this function. In **Environment**, strong results are found in Satisfaction with Natural Environment, Green Coverage Ratio in Urban Areas, and Waterfront Areas in Natural Environment, revealing that regardless of the city's size, it combines a richness of natural scenery with an ease of living.

Function-specific rank and deviation



Indicator group-specific deviation score



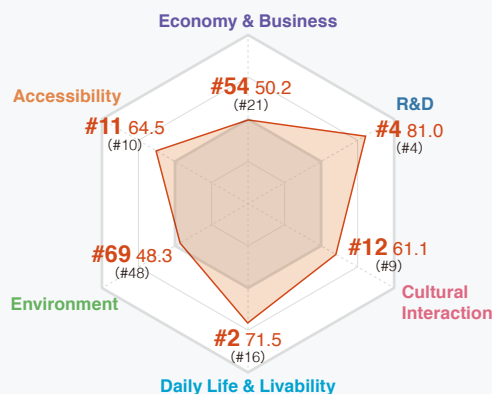
# 7 Sendai



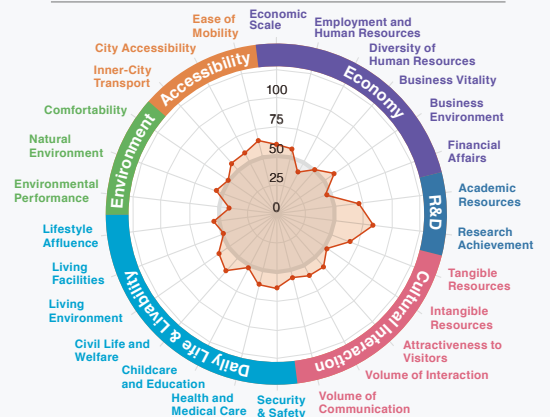
## The "City of Trees" boasts high appeal for its R&D and livability

Sendai is the predominant city in the Tohoku area and this is clearly demonstrated in **Daily Life & Livability**. Despite a lower than average return in Living Facilities, it scores highly in the other indicator groups including Civil Life & Welfare powered by Ease of Integration for Foreign Residents, and Security & Safety through Level of Safety During a Disaster. Additionally, **Research & Development** shows strength, the result not only of a high score in Number of Papers Submitted due to being home to a number of research institutions, but also due to the accumulation of manufacturing industries, reflected in Number of Leading Firms in Global Niches. The city also receives a high evaluation in **Cultural Interaction**, adding to the unique appeal of this "City of Trees."

Function-specific rank and deviation



Indicator group-specific deviation score





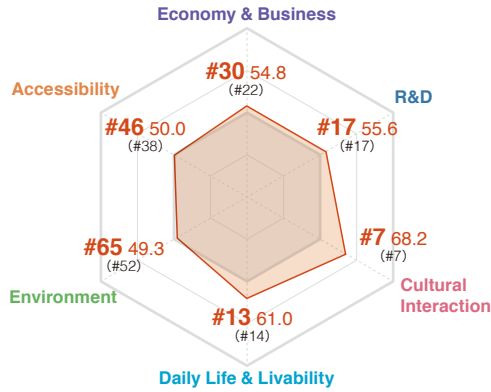
# 8 Kanazawa



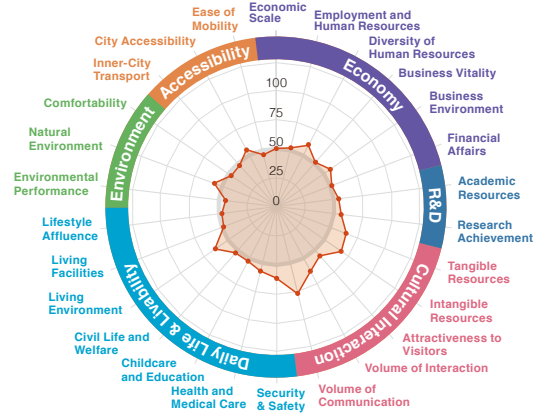
## A feudal castle town combining livability with a foundation for nurturing culture

Kanazawa, where a wide area of the city is deemed an "Important Cultural Landscape" under the Law for the Protection of Cultural Properties, returns a high score in **Cultural Interaction**, powered by the strong results in Tangible Resources through Active Approach to Scenic Town Planning; Intangible Resources through Opportunities for Cultural, Historical and Traditional Interaction; Volume of Interaction through Volume of People Visiting for Tourism and Sightseeing; and Volume of Communication through Level of Attractiveness, Recognition and Intention to Visit. **Daily Life & Livability** also proves strong, with particularly high evaluations in Living Environment and Security & Safety. Such results reflect Kanazawa's appeal both as a tourist destination rich in history and culture, as well as a place to live.

Function-specific rank and deviation



Indicator group-specific deviation score



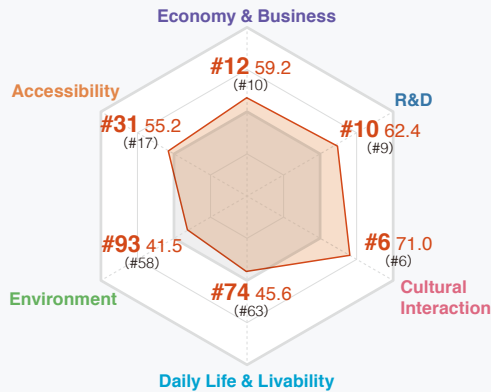
# 9 Sapporo



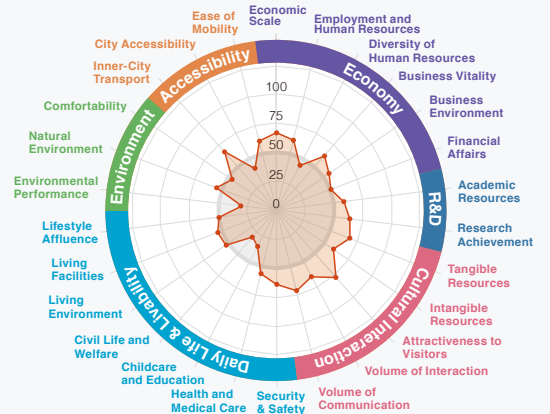
## The predominant city in Hokkaido appeals for its cultural tourism

Sapporo, one of Japan's leading tourist destinations, once again displays power in **Cultural Interaction** and receives high evaluations in all five indicator groups. Attractiveness to Visitors performs particularly well, with high scores in Number of Luxury Guest Rooms and Number of Event Halls. The highest score among the target cities can also be found here in Level of Attractiveness, Recognition and Intention to Visit. Next to **Cultural Interaction**, a strong performance can also be seen in **Research & Development**, with steady returns in Research Achievement. As the primary city in Hokkaido **Economy & Business** scores highly, primarily through Total Value Added, Intra-regional Gross Expenditure, and Total Employment, proving that Economic Scale and Employment & Human Resources are its economic strengths.

Function-specific rank and deviation



Indicator group-specific deviation score



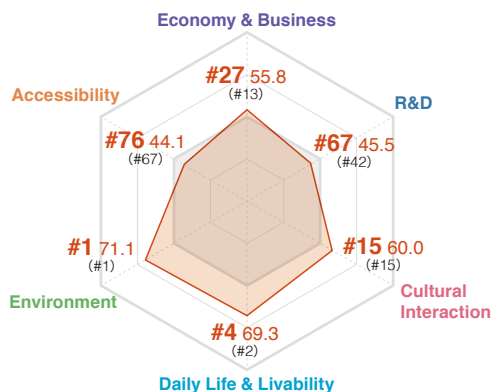
# 10 Matsumoto



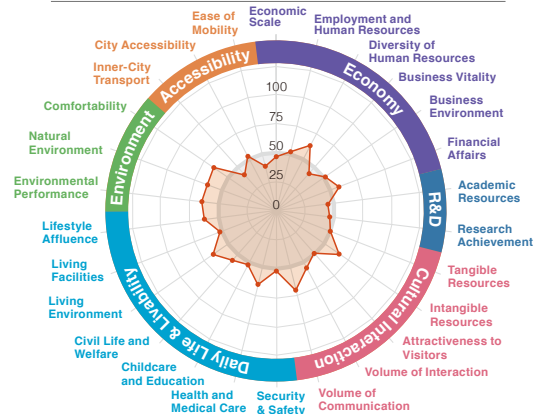
## A city blending a rich living environment surrounded by nature and cultural appeal

Matsumoto returns excellent results for **Environment** and **Daily Life & Livability**. The city boasts the highest score among the target cities for **Environment**, due to the high evaluations for CO<sub>2</sub> Emissions and Satisfaction with Natural Environment. In **Daily Life & Livability**, particular strength can be seen in Health and Medical Care through Life Expectancy and Healthy Life Expectancy Rate and Living Environment through Ratio of Barrier-Free Homes. In addition, the city is home to Matsumoto Castle and the Former Kaichi School, both of which are designated "National Treasures of Japan," and as such scores highly in **Cultural Interaction** through Tourism Promotion Activities and Opportunities for Cultural, Historical and Traditional Interaction. Matsumoto offers a rich historical and cultural appeal, combined with a lush natural environment and excellent livability.

Function-specific rank and deviation



Indicator group-specific deviation score



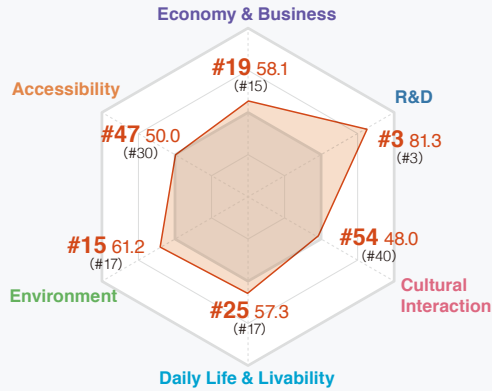
# 11 Tsukuba



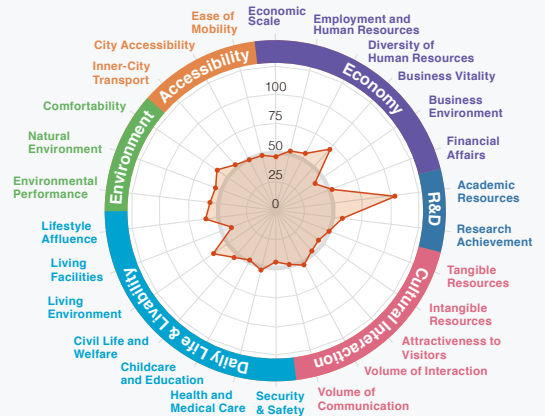
## A verdant city of science, home to Tsukuba Science City

Tsukuba, with its high concentration of cutting-edge research and educational institutions, scores highly in **Research & Development**, with Ratio of Academic and Development Research Institution Employees in Academic Resources displaying outstanding strength. In **Economy & Business**, Business Vitality is a force, powered by a healthy return in Ratio of Newly Registered Businesses. In addition, **Daily Life & Livability** and **Environment** perform well, the result of good returns for Lifestyle Affluence and Living Environment in the former and Comfortability in the latter, suggesting a high level of ease when living in the city. Combined with the unique level of excellent research institutes, it can be said that the city is extremely livable.

Function-specific rank and deviation



Indicator group-specific deviation score



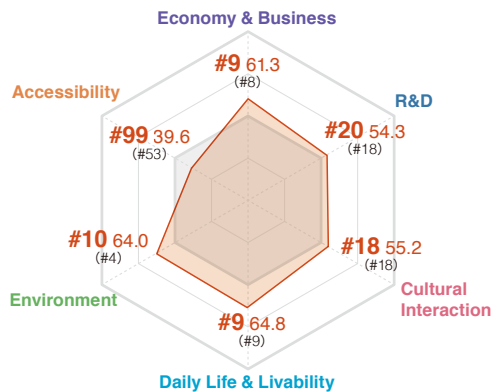
# 12 Hamamatsu



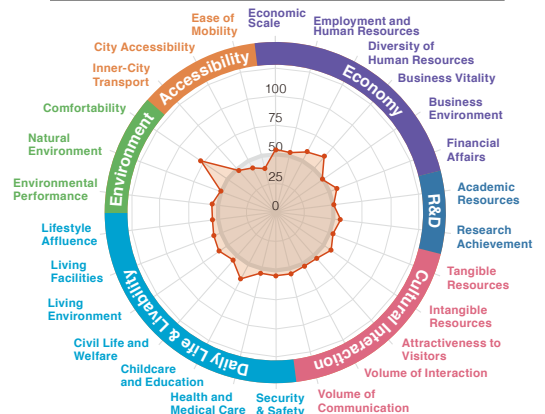
## A unique city combining vitality with an ease of living

Hamamatsu is a city that blends economic power with livability, as reflected in the strong returns in **Economy & Business** and **Daily Life & Livability**. In **Economy & Business** a high score is seen in Number of Certified Special Zones, while in **Daily Life & Livability** it is Availability of Daycare Services that proves a strength. **Environment** also performs well, with Comfortability standing out, the result of Annual Sunshine Hours receiving the highest score among the target cities. Considering the high score for Number of Leading Firms in Global Niches in **Research & Development**, and with Number of Certified Special Zones in **Economy and Business** also receiving a relatively high evaluation, it can be said that Hamamatsu is a city of vitality that takes advantage of its inherent strengths, showing an integration of its technological industries as well as policy making that supports manufacturing.

Function-specific rank and deviation



Indicator group-specific deviation score



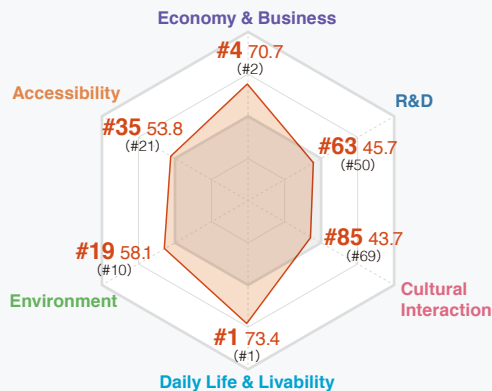
# 13 Toyota



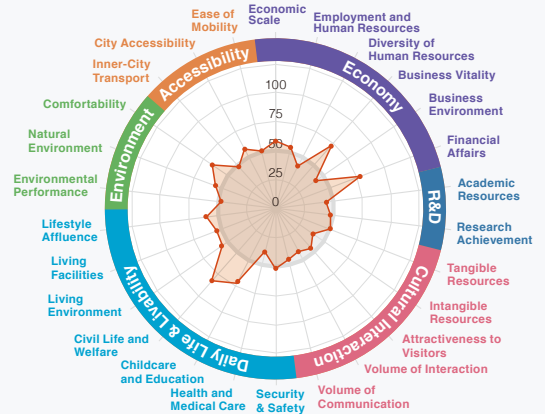
## A livable city with a strong economic base

Toyota scores very highly in both **Daily Life & Livability** and **Economy & Business**, coming close to the top-ranked cities. Childcare and Education proves strong, powered by Availability of Daycare Services and Assistance for Children's Medical Costs as does Civil Life and Welfare through the strong evaluations in Number of Regional Comprehensive Assistance Centers and Number of Elderly Requiring Assistance or Care. Furthermore, **Economy & Business** shows outstanding strength in Financial Affairs, especially through Financial Capability Index, Public Account Balance Ratio and Future Burden Ratio. There is also a high evaluation for Labor Productivity. Such results reveal that Toyota is a city with a strong economic foundation, which provides an ease of living for its residents.

Function-specific rank and deviation



Indicator group-specific deviation score





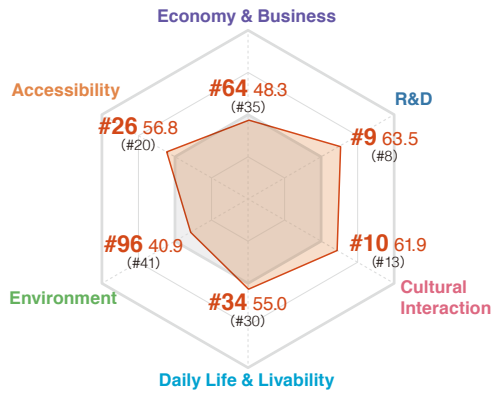
# 11 Hiroshima



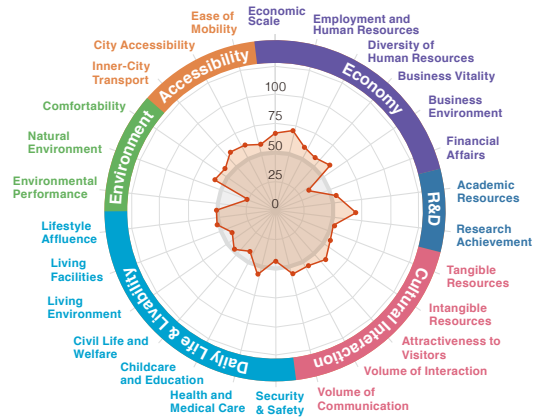
## A city dedicated to peace attracting tourists from around the world

Hiroshima prides itself on being an 'International City of Peace and Culture', and as such receives a high evaluation for **Cultural Interaction**. This is due in part to the strong return in Multilingual Services at Tourist Information Desks and Hospitals in Attractiveness to Visitors. In addition to promotional activities utilizing the name of Hiroshima as the atomic-bomb site, the city encompasses a wide area in its tourism efforts, including Hiroshima, Miyajima, Iwakuni, Setouchi, and Matsuyama, resulting in a high score in Tourism Promotion Activities. Strength is also seen in **Research & Development**, with a high return in Number of Leading Firms in Global Niches for Research Achievement. With stable results also garnered by **Accessibility** and **Daily Life & Living**, it can be said that Hiroshima is a city that provides both an ease of living and a high level of convenience.

### Function-specific rank and deviation



### Indicator group-specific deviation score



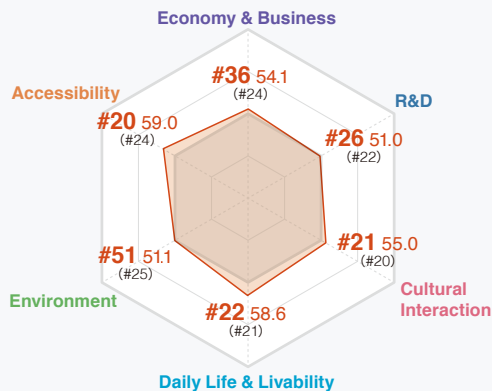
# 15 Shizuoka



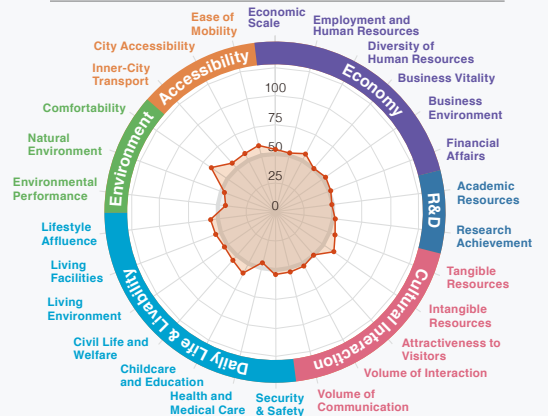
## A city that strengthens its presence through its own individuality

Shizuoka, a city committed to the goal of creating a 'City of World Standards,' receives a very well-balanced evaluation across all six functions. With the image of a 'City of History and Culture,' correspondingly high scores are seen in both Tangible Resources and Intangible Resources in **Cultural Interaction**. Furthermore, in addition to Comfortability in **Environment** scoring well, **Life & Livability** also proves a strength, with above average returns in Childcare and Education and Lifestyle Affluence. In addition to its comprehensive balance, it can be said that Shizuoka possesses a unique sense of individuality, demonstrated through its cultural appeal and the comfort provided by its natural surroundings.

### Function-specific rank and deviation



### Indicator group-specific deviation score



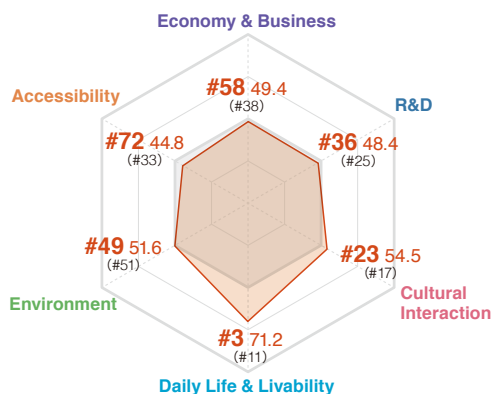
# 16 Kumamoto



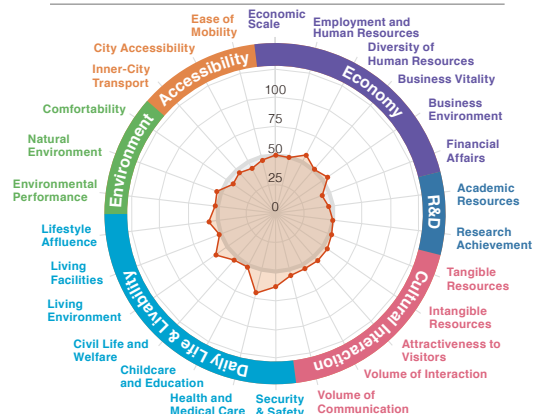
## A city creating peace of mind for residents and appeal for tourists

Kumamoto, committed to the goal of creating a "High Quality of Life City," performs very well in **Daily Life & Livability** and clearly provides a high ease of living. In particular, Health and Medical Care, which consists of indicators such as Number of Hospitals and Clinics is outstanding. With low crime rates in the city, Security & Safety shows strength, with Recognized Criminal Offenses receiving the highest evaluation of all the target cities and indicates that the city is being developed with an eye to creating peace of mind in the community. Furthermore, while **Cultural Interaction** returns above average scores in all its indicator groups, Level of Attractiveness, Recognition, and Intention to Visit in Volume of Communication is particularly high, showing the city also possesses particular appeal as a tourist destination.

### Function-specific rank and deviation



### Indicator group-specific deviation score



# Function-Specific Scores



## Economy & Business

Rank	City	Score	Rank	City	Score
1	Osaka	265.4	36	Shizuoka	137.7
2	Fukuoka	193.8	37	Fujisawa	137.2
3	Nagoya	188.9	38	Machida	137.2
4	Toyota	185.2	39	Kurume	137.0
5	Yokohama	177.7	40	Odawara	136.9
6	Kobe	169.7	41	Saga	135.1
7	Kyoto	160.2	42	Numazu	134.6
8	Tachikawa	158.5	43	Okazaki	132.5
9	Hamamatsu	158.4	44	Sagamihara	131.8
10	Gifu	156.7	45	Fuji	131.1
11	Anjo	156.5	46	Kagoshima	131.0
12	Sapporo	152.3	47	Kumagaya	130.6
13	Yokkaichi	151.9	48	Takamatsu	130.1
14	Fuchu	150.2	49	Tsu	130.0
15	Okayama	150.0	50	Sakai	129.6
16	Kawasaki	149.8			
17	Fukuyama	149.6		Hakodate,Asahikawa,Kushiro,	
18	Suita	149.3		Tomakomai,Aomori,Hirosaki,	
19	Tsukuba	149.1		Hachinohe,Morioka,Sendai,	
20	Ibaraki	147.9		Akita,Yamagata,Fukushima,	
21	Toyohashi	146.5		Koriyama,Iwaki,Mito,Hitachi,	
22	Kashiwa	146.1		Utsunomiya,Maebashi,	
23	Kamakura	145.3		Takasaki,Isesaki,Ota,Kawagoe,	
24	Saitama	144.7		Chiba,Ichihara,Yokosuka,	
25	Nishinomiya	143.1		Hiratsuka, Niigata, Nagaoka,	
26	Higashiroshima	143.0	51	Joetsu, Toyama, Takaoka, Fukui,	
27	Matsumoto	142.6	109	Kofu, Kasugai, Suzuka,	
28	Toyokawa	141.4		Kishiwada, Yao, Amagasaki,	
29	Hachioji	140.4		Itami, Nara, Wakayama, Tottori,	
30	Kanazawa	139.8		Matsue, Izumo, Kurashiki,	
31	Otsu	139.2		Hiroshima, Kure, Shimonoseki,	
32	Higashiosaka	138.8		Yamaguchi, Tokushima,	
33	Himeji	138.5		Matsuyama, Kochi, Kitakyusyu,	
34	Nagano	138.4		Nagasaki, Sasebo, Kumamoto,	
35	Atsugi	137.7		Oita, Miyazaki, Naha	

(Listed by city code)



## Research & Development

Rank	City	Score	Rank	City	Score
1	Kyoto	106.6	36	Kumamoto	12.3
2	Nagoya	105.5	37	Tokushima	12.2
3	Tsukuba	82.1	38	Otsu	11.2
4	Sendai	81.5	39	Toyohashi	11.2
5	Fukuoka	80.1	40	Hiratsuka	11.0
6	Yokohama	78.3	41	Morioka	11.0
7	Osaka	67.7	42	Tsu	10.5
8	Atsugi	46.7	43	Nishinomiya	10.4
9	Hiroshima	44.4	44	Toyama	10.3
10	Sapporo	42.0	45	Matsuyama	10.2
11	Kobe	41.5	46	Saga	10.1
12	Suita	33.8	47	Takamatsu	10.0
13	Chiba	32.4	48	Fukui	10.0
14	Okayama	30.1	49	Amagasaki	9.9
15	Kitakyusyu	29.6	50	Hitachi	9.8
16	Niigata	28.5			
17	Kanazawa	27.5		Asahikawa, Kushiro,	
18	Hakodate	26.0		Tomakomai, Aomori, Hirosaki,	
19	Utsunomiya	24.9		Hachinohe, Yamagata,	
20	Hamamatsu	24.8		Fukushima, Koriyama, Iwaki,	
21	Akita	22.4		Mito, Maebashi, Takasaki,	
22	Kashiwa	21.6		Isesaki, Ota, Kawagoe,	
23	Kawasaki	21.6		Kumagaya, Ichihara, Tachikawa,	
24	Hachioji	20.0		Machida, Yokosuka, Kamakura,	
25	Fujisawa	19.8	51	Odawara, Joetsu, Takaoka, Kofu,	
26	Shizuoka	17.8	109	Nagano, Matsumoto, Numazu,	
27	Higashiroshima	17.8		Fuji, Okazaki, Kasugai,	
28	Saitama	17.1		Toyokawa, Toyota, Anjo,	
29	Nagaoka	16.5		Yokkaichi, Suzuka, Kishiwada,	
30	Sagamihara	15.6		Ibaraki, Yao, Higashiosaka,	
31	Nagasaki	15.0		Himeji, Itami, Nara, Wakayama,	
32	Fuchu	14.9		Tottori, Matsue, Izumo,	
33	Kagoshima	13.5		Kurashiki, Kure, Fukuyama,	
34	Gifu	13.0		Shimonoseki, Yamaguchi,	
35	Sakai	12.4		Kochi, Kurume, Sasebo, Oita,	
				Miyazaki, Naha	

(Listed by city code)



## Cultural Interaction

Rank	City	Score	Rank	City	Score
1	Kyoto	345.3	36	Kochi	91.7
2	Osaka	294.8	37	Mito	90.9
3	Yokohama	252.6	38	Kushiro	90.5
4	Kobe	224.7	39	Okayama	90.3
5	Fukuoka	208.9	40	Asahikawa	89.1
6	Sapporo	200.7	41	Shimonoseki	88.3
7	Kanazawa	185.5	42	Niigata	87.7
8	Nagoya	157.8	43	Kofu	87.0
9	Naha	157.6	44	Miyazaki	86.2
10	Hiroshima	152.5	45	Tachikawa	84.9
11	Nagasaki	150.9	46	Tottori	83.5
12	Sendai	148.0	47	Fukushima	83.5
13	Nara	146.7	48	Saitama	83.4
14	Hakodate	144.6	49	Wakayama	82.5
15	Matsumoto	142.5	50	Otsu	80.7
16	Kamakura	139.4			
17	Kurashiki	118.2		Tomakomai,Aomori,Hachinohe,	
18	Hamamatsu	116.8		Akita,Yamagata,Koriyama,	
19	Nagano	116.6		Iwaki,Hitachi,Tsukuba,	
20	Takamatsu	116.1		Utsunomiya,Maebashi,	
21	Shizuoka	116.0		Takasaki,Iseaki,Ota,	
22	Himeji	114.4		Kumagaya,Kashiwa,Ichihara,	
23	Kumamoto	113.0		Hachioji,Fuchu,Machida,	
24	Kitakyusyu	110.9		Kawasaki,Sagamihara,	
25	Kagoshima	106.2		Yokosuka,Hiratsuka,Fujisawa,	
26	Izumo	106.0	51	Atsugi,Nagaoka,Joetsu,	
27	Matsuyama	105.9	109	Takaoka,Fukui,Gifu,Numazu,	
28	Morioka	102.1		Fuji,Toyohashi,Okazaki,	
29	Chiba	99.6		Kasugai,Toyokawa,Toyota,	
30	Matsue	97.4		Anjo,Tsu,Yokkaichi,Suzuka,	
31	Kawagoe	96.7		Sakai,Kishiwada,Suita,Ibaraki,	
32	Odawara	96.1		Yao,Higashiosaka,Amagasaki,	
33	Toyama	95.8		Nishinomiya,Itami,Kure,	
34	Hirosaki	95.3		Fukuyama,Higashiroshima,	
35	Sasebo	93.6		Yamaguchi,Tokushima	
				,Kurume,Saga,Oita	
				(Listed by city code)	



## Daily Life & Livability

Rank	City	Score	Rank	City	Score
1	Toyota	371.1	36	Okayama	317.0
2	Sendai	365.8	37	Takaoka	316.4
3	Kumamoto	364.9	38	Fujisawa	315.7
4	Matsumoto	359.6	39	Nishinomiya	315.2
5	Anjo	355.2	40	Koriyama	314.8
6	Fukuoka	354.0	41	Kitakyusyu	313.9
7	Takasaki	352.9	42	Numazu	313.8
8	Yamagata	348.0	43	Ota	313.1
9	Hamamatsu	346.5	44	Saitama	311.3
10	Okazaki	345.4	45	Yokohama	311.1
11	Toyohashi	343.0	46	Toyokawa	310.9
12	Izumo	337.9	47	Naha	310.2
13	Kanazawa	335.7	48	Hgashiroshima	308.6
14	Toyama	335.6	49	Nagaoka	307.2
15	Nagano	335.3	50	Kashiwa	306.4
16	Saga	335.3			
17	Fukui	333.4		Sapporo,Hakodate,Asahikawa,	
18	Nara	330.4		Kushiro,Tomakomai,Aomori,	
19	Maebashi	330.2		Hirosaki,Hachinohe,Morioka,	
20	Nagoya	329.9		Akita,Iwaki,Mito,Hitachi,Iseaki,	
21	Kofu	329.2		Kawagoe,Kumagaya,Chiba,	
22	Shizuoka	328.7		Ichihara,Hachioji,Tachikawa,	
23	Fukushima	327.5		Fuchu,Machida,Kawasaki,	
24	Kobe	325.4		Sagamihara,Yokosuka,	
25	Tsukuba	325.0	51	Hiratsuka,Kamakura,Odawara,	
26	Suita	324.6	109	Atsugi,Niigata,Joetsu,Fuji,Tsu,	
27	Miyazaki	322.3		Yokkaichi,Suzuka,Otsu,Osaka,	
28	Kurume	321.8		Sakai,Kishiwada,Ibaraki,Yao,	
29	Kagoshima	321.1		Higashiosaka,Himeji,	
30	Oita	320.8		Amagasaki,Itami,Wakayama,	
31	Kyoto	320.1		Tottori,Matsue,Kurashiki,Kure,	
32	Gifu	319.2		Fukuyama,Shimonoseki,	
33	Kasugai	318.6		Yamaguchi,Tokushima,	
34	Hiroshima	318.5		Takamatsu,Matsuyama,Kochi,	
35	Utsunomiya	317.9		Nagasaki,Sasebo	
				(Listed by city code)	

# Function-Specific Scores



## Environment

Rank	City	Score	Rank	City	Score
1	Matsumoto	188.6	36	Suzuka	154.7
2	Yamaguchi	181.0	37	Isesaki	153.9
3	Maebashi	178.8	38	Hachioji	153.7
4	Miyazaki	178.7	39	Gifu	153.6
5	Kochi	176.7	40	Otsu	152.1
6	Izumo	175.7	41	Niigata	152.1
7	Toyohashi	175.2	42	Kagoshima	151.8
8	Shimonoseki	175.2	43	Nara	151.7
9	Tsu	175.0	44	Joetsu	151.3
10	Hamamatsu	174.5	45	Kushiro	151.0
11	Tottori	171.9	46	Nagasaki	149.9
12	Kure	170.8	47	Akita	149.8
13	Iwaki	170.4	48	Okayama	149.7
14	Matsue	169.7	49	Kumamoto	149.7
15	Tsukuba	168.9	50	Tomakomai	149.4
16	Kamakura	166.0		Sapporo,Hakodate,Asahikawa,	
17	Higashiroshima	164.8		Aomori,Hirosaki,Hachinohe,	
18	Saga	164.8		Morioka,Sendai,Yamagata,	
19	Toyota	162.7		Fukushima,Koriyama,	
20	Yokosuka	162.5		Utsunomiya,Saitama,	
21	Odawara	161.8		Kawagoe,Kumagaya,Chiba,	
22	Takasaki	161.3		Kashiwa,Ichihara,Tachikawa,	
23	Hitachi	161.3		Fuchu,Machida,Yokohama,	
24	Toyokawa	160.3		Kawasaki,Sagamihara,	
25	Matsuyama	160.1	51	Hiratsuka,Fujisawa,Atsugi,	
26	Nagano	160.0	}	Nagaoka,Takaoka,Kanazawa,	
27	Sasebo	160.0	109	Fuku,Shizuoka,Fuji,Nagoya,	
28	Tokushima	159.2		Okazaki,Kasugai,Anjo,	
29	Toyama	159.0		Yokkaichi,Kyoto,Osaka,Sakai,	
30	Oita	157.3		Kishiwada,Suita,Ibaraki,Yao,	
31	Numazu	156.6		Higashiosaka,Kobe,Himeji,	
32	Mito	156.3		Amagasaki,Nishinomiya,Itami,	
33	Ota	156.0		Wakayama,Kurashiki,	
34	Takamatsu	155.6		Hiroshima,Fukuyama,	
35	Kofu	155.0		Kitakyusyu,Fukuoka,Kurume,	
				Naha (Listed by city code)	



## Accessibility

Rank	City	Score	Rank	City	Score
1	Osaka	212.6	36	Niigata	141.7
2	Nagoya	202.4	37	Saitama	140.4
3	Fukuoka	193.5	38	Gifu	139.0
4	Itami	176.1	39	Hitachi	137.6
5	Yokohama	170.8	40	Anjo	137.6
6	Amagasaki	169.8	41	Kurume	135.6
7	Suita	167.5	42	Numazu	135.1
8	Kobe	167.1	43	Morioka	134.8
9	Kawasaki	167.0	44	Yokkaichi	134.7
10	Kitakyusyu	166.5	45	Tomakomai	133.4
11	Sendai	166.1	46	Kanazawa	133.2
12	Nishinomiya	163.8	47	Tsukuba	133.2
13	Ibaraki	160.7	48	Aomori	133.1
14	Chiba	159.8	49	Akita	132.4
15	Sakai	158.3	50	Machida	132.3
16	Kishiwada	157.3		Asahikawa,Kushiro,Hirosaki,	
17	Fuchu	155.7		Hachinohe,Yamagata,	
18	Higashiosaka	155.0		Fukushima,Koriyama,Iwaki,	
19	Naha	154.3		Mito,Utsunomiya,Maebashi,	
20	Shizuoka	153.7		Takasaki,Isesaki,Ota,Kawagoe,	
21	Hakodate	153.4		Kumagaya,Kashiwa,Hachioji,	
22	Kyoto	152.8		Sagamihara,Kamakura,	
23	Tachikawa	152.7		Odawara,Nagaoka,Joetsu,	
24	Yokosuka	151.4		Toyama,Takaoka,Fukui,Kofu,	
25	Kagoshima	149.0	51	Nagano,Matsumoto,	
26	Hiroshima	148.6	}	Hamamatsu,Fuji,Toyohashi,	
27	Hiratsuka	147.9	109	Okazaki,Toyokawa,Tsu,Suzuka,	
28	Fujisawa	145.4		Otsu,Himeji,Wakayama,	
29	Kasugai	145.2		Tottori,Matsue,Izumo,	
30	Yao	145.2		Okayama,Kurashiki,Kure,	
31	Sapporo	145.0		Fukuyama,Higashiroshima,	
32	Atsugi	144.0		Shimonoseki,Yamaguchi,	
33	Nara	143.5		Tokushima,Takamatsu,	
34	Ichihara	143.0		Matsuyama,Kochi,Saga,	
35	Toyota	141.9		Nagasaki,Sasebo,Kumamoto,	
				Oita,Miyazaki (Listed by city code)	



## Total Score

Rank	City	Score	Rank	City	Score
1	Kyoto	1,211.7	36	Takamatsu	829.7
2	Osaka	1,188.4	37	Fuchu	829.5
3	Fukuoka	1,161.5	38	Saga	824.2
4	Yokohama	1,095.2	39	Himeji	822.7
5	Nagoya	1,082.6	40	Niigata	821.3
6	Kobe	1,067.0	41	Matsuyama	820.9
7	Sendai	1,030.9	42	Anjo	820.3
8	Kanazawa	966.8	43	Numazu	818.9
9	Sapporo	961.0	44	Otsu	818.7
10	Matsumoto	959.4	45	Takasaki	816.1
11	Tsukuba	937.3	46	Okazaki	814.0
12	Hamamatsu	930.7	47	Atsugi	811.3
13	Toyota	923.7	48	Kurashiki	811.0
14	Hiroshima	913.1	49	Izumo	810.9
15	Shizuoka	902.5	50	Kofu	810.7
16	Kumamoto	885.4			
17	Nara	879.4			
18	Naha	879.0			
19	Nagano	876.4			
20	Kitakyusyu	875.2			
21	Kagoshima	872.5			
22	Okayama	861.1			
23	Gifu	860.1			
24	Kamakura	858.0			
25	Toyohashi	849.2			
26	Suita	844.4			
27	Toyama	844.4			
28	Nagasaki	839.9			
29	Tachikawa	839.8			
30	Fujisawa	839.4			
31	Chiba	836.7			
32	Miyazaki	835.3			
33	Nishinomiya	832.2			
34	Kurume	830.4			
35	Hakodate	829.7			
			51	Asahikawa, Kushiro, Tomakomai, Aomori, Hiroasaki, Hachinohe, Morioka, Akita, Yamagata, Fukushima, Koriyama, Iwaki, Mito, Hitachi, Utsunomiya, Maebashi, Isesaki, Ota, Saitama, Kawagoe, Kumagaya, Kashiwa, Ichihara, Hachioji, Machida, Kawasaki, Sagami-hara, Yokosuka, Hiratsuka, Odawara, Nagaoka, Joetsu, Takaoka, Fukui, Fuji, Kasugai, Toyokawa, Tsu, Yokkaichi, Suzuka, Sakai, Kishiwada, Ibaraki, Yao, Higashiosaka, Amagasaki, Itami, Wakayama, Tottori, Matsue, Kure, Fukuyama, Higashihiroshima, Shimonoseki, Yamaguchi, Tokushima, Kochi, Sasebo, Oita	
			} 109		

(Listed by city code)

# Actor-Specific Scores

In order to evaluate the function-specific characteristics of cities from the viewpoint of 'people', 6 types of actors (Single, Family, Seniors, Tourist, Executive, Employee) were established for this report. To calculate the actor-specific score, first the individual urban needs are determined for each actor, after which the indicators associated with those needs are selected and values are averaged to produce a score.



## Single Number of Indicators 20/83

Rank	City	Score	Rank	City	Score
1	Fukuoka	53.8	36	Suzuka	42.7
2	Nagoya	52.0	37	Tottori	42.6
3	Kumamoto	49.4	38	Oita	42.5
4	Osaka	49.2	39	Nagano	42.3
5	Sendai	48.4	40	Sakai	42.3
6	Kitakyusyu	48.2	41	Izumo	42.2
7	Kobe	47.6	42	Tsukuba	42.2
8	Shizuoka	47.2	43	Ibaraki	42.1
9	Matsumoto	46.8	44	Yamaguchi	42.1
10	Kagoshima	46.5	45	Fujisawa	42.1
11	Miyazaki	45.9	46	Niigata	42.1
12	Hiroshima	45.9	47	Sapporo	42.1
13	Nara	45.4	48	Kasugai	41.9
14	Naha	45.4	49	Toyokawa	41.8
15	Hakodate	45.2	50	Okazaki	41.8
16	Hamamatsu	45.2		Asahikawa,Kushiro,Tomakomai	
17	Toyota	45.1		,Aomori,Hirosaki,Hachinohe,	
18	Suita	45.1		Akita,Yamagata,Fukushima,	
19	Kyoto	45.0		Koriyama,Iwaki,Mito,Hitachi,	
20	Okayama	45.0		Utsunomiya,Maebashi,Isesaki,	
21	Matsuyama	44.9		Ota,Saitama,Kawagoe,	
22	Kofu	44.5		Kumagaya,Chiba,Kashiwa,	
23	Yokohama	44.2		Ichihara,Hachioji,Tachikawa,	
24	Higashiroshima	44.2		Fuchu,Machida,Kawasaki,	
25	Nishinomiya	44.1		Sagamihara,Yokosuka,	
26	Kanazawa	43.9	51	Hiratsuka,Kamakura,Odawara,	
27	Kurume	43.8	109	Atsugi,Nagaoka,Joetsu,	
28	Saga	43.8		Toyama,Takaoka,Fukui,	
29	Toyohashi	43.5		Numazu,Fuji,Anjo,Yokkaichi,	
30	Morioka	43.1		Otsu,Kishiwada,Yao,	
31	Gifu	43.0		Higashiosaka,Himeji,	
32	Takamatsu	43.0		Amagasaki,Wakayama,	
33	Itami	42.9		Matsue,Kurashiki,Kure,	
34	Tsu	42.9		Fukuyama,Shimonoseki,	
35	Takasaki	42.8		Tokushima,Kochi,Nagasaki,	
				Sasebo	
				(Listed by city code)	



## Family Number of Indicators 38/83

Rank	City	Score	Rank	City	Score
1	Fukuoka	53.3	36	Okayama	45.2
2	Sendai	51.4	37	Morioka	45.2
3	Matsumoto	49.7	38	Nagano	45.2
4	Kumamoto	49.3	39	Kofu	45.2
5	Tsukuba	49.0	40	Akita	45.1
6	Kitakyusyu	49.0	41	Mito	45.1
7	Kagoshima	48.9	42	Tsu	45.1
8	Toyota	48.5	43	Niigata	45.0
9	Nagoya	48.3	44	Toyokawa	45.0
10	Izumo	48.3	45	Ibaraki	44.8
11	Kobe	48.3	46	Kasugai	44.7
12	Hamamatsu	48.0	47	Yokohama	44.7
13	Shizuoka	47.9	48	Yamagata	44.7
14	Toyama	47.9	49	Hirosaki	44.6
15	Gifu	47.7	50	Kochi	44.6
16	Maebashi	47.7		Sapporo,Asahikawa,Kushiro,	
17	Kanazawa	47.6		Tomakomai,Aomori,	
18	Toyohashi	47.4		Hachinohe,Fukushima,	
19	Kurume	47.3		Koriyama,Iwaki,Hitachi,	
20	Miyazaki	47.0		Utsunomiya,Isesaki,Ota,	
21	Nara	46.9		Saitama,Kawagoe,Kumagaya,	
22	Tottori	46.7		Chiba,Kashiwa,Ichihara,	
23	Matsue	46.6		Hachioji,Tachikawa,Fuchu,	
24	Takamatsu	46.3		Machida,Kawasaki,	
25	Nishinomiya	46.2	51	Sagamihara,Yokosuka,	
26	Takasaki	46.2	109	Hiratsuka,Kamakura,Fujisawa,	
27	Matsuyama	46.2		Odawara,Atsugi,Nagaoka,	
28	Kyoto	46.1		Joetsu,Takaoka,Fukui,Numazu,	
29	Hakodate	46.0		Fuji,Okazaki,Yokkaichi,Suzuka	
30	Saga	45.9		,Otsu,Sakai,Kishiwada,Suita,	
31	Naha	45.8		Yao,Higashiosaka,Himeji,	
32	Nagasaki	45.6		Amagasaki,Itami,Wakayama,	
33	Higashiroshima	45.4		Kurashiki,Hiroshima,Kure,	
34	Anjo	45.3		Fukuyama,Shimonoseki,	
35	Osaka	45.3		Yamaguchi,Tokushima,	
				Sasebo,Oita	
				(Listed by city code)	





## Seniors Number of Indicators 34/83

Rank	City	Score	Rank	City	Score	
1	Sendai	54.6	36	Oita	47.3	
2	Matsumoto	53.2	37	Kyoto	47.2	
3	Fukuoka	53.1	38	Numazu	47.2	
4	Toyota	52.0	39	Hiroshima	47.1	
5	Miyazaki	51.1	40	Sapporo	47.0	
6	Toyohashi	51.0	41	Utsunomiya	46.9	
7	Takasaki	50.6	42	Toyokawa	46.9	
8	Kumamoto	50.6	43	Higashiroshima	46.8	
9	Hamamatsu	50.5	44	Hachioji	46.7	
10	Nishinomiya	50.4	45	Kasugai	46.6	
11	Izumo	50.2	46	Atsugi	46.6	
12	Maebashi	50.1	47	Mito	46.5	
13	Suita	49.9	48	Kofu	46.5	
14	Shizuoka	49.8	49	Morioka	46.2	
15	Tsukuba	49.3	50	Matsuyama	46.2	
16	Kobe	49.2				
17	Kanazawa	49.1		Hakodate,Asahikawa,Kushiro,		
18	Fujisawa	49.0		Tomakomai,Aomori,Hirosaki,		
19	Nagasaki	49.0		Hachinohe,Akita,Yamagata,		
20	Kagoshima	48.8		Fukushima,Koriyama,Iwaki,		
21	Ibaraki	48.8		Isesaki,Ota,Saitama,Kawagoe,		
22	Nagano	48.5		Kumagaya,Chiba,Kashiwa,		
23	Toyama	48.4		Ichihara,Machida,Yokohama,		
24	Anjo	48.3		Kawasaki,Sagamihara,		
25	Nara	48.3		Yokosuka,Hiratsuka,Kamakura,		
26	Naha	48.2		Odawara,Niigata,Nagaoka,		
27	Kitakyusyu	48.2	51	Joetsu,Takaoka,Fukui,Fuji,		
28	Okazaki	47.9	} 109	Nagoya,Tsu,Yokkaichi,Suzuka,		
29	Saga	47.7		Otsu,Osaka,Sakai,Kishiwada,		
30	Fuchu	47.7		Yao,Higashiosaka,Himeji,		
31	Tachikawa	47.6		Amagasaki,Itami,Wakayama,		
32	Gifu	47.5		Tottori,Okayama,Kurashiki,		
33	Hitachi	47.5		Kure,Fukuyama,Shimonoseki,		
34	Matsue	47.4		Yamaguchi,Tokushima,		
35	Kurume	47.3		Takamatsu,Kochi,Sasebo		
					(Listed by city code)	



## Tourist Number of Indicators 32/83

Rank	City	Score	Rank	City	Score	
1	Kyoto	54.4	36	Tsukuba	29.3	
2	Osaka	52.8	37	Otsu	29.2	
3	Yokohama	48.8	38	Fuchu	29.1	
4	Kobe	46.1	39	Hachioji	28.8	
5	Fukuoka	46.0	40	Kawasaki	28.8	
6	Sapporo	40.9	41	Miyazaki	28.8	
7	Nagoya	38.8	42	Kochi	28.7	
8	Kanazawa	38.2	43	Tachikawa	28.7	
9	Sendai	37.6	44	Nishinomiya	28.7	
10	Naha	37.2	45	Sasebo	28.6	
11	Hiroshima	37.1	46	Toyota	28.6	
12	Nara	36.2	47	Hirosaki	28.5	
13	Matsumoto	35.3	48	Gifu	28.4	
14	Nagasaki	35.3	49	Kurume	28.3	
15	Hakodate	34.8	50	Okayama	28.3	
16	Kamakura	34.5				
17	Shizuoka	33.5		Asahikawa,Kushiro,Tomakomai,		
18	Kitakyusyu	32.8		Aomori,Hachinohe,Akita,		
19	Kagoshima	32.4		Yamagata,Fukushima,		
20	Hamamatsu	32.3		Koriyama,Iwaki,Mito,Hitachi,		
21	Chiba	31.7		Utsunomiya,Maebashi,		
22	Izumo	31.6		Takasaki,Isesaki,Ota,Saitama,		
23	Takamatsu	31.6		Kawagoe,Kumagaya,Kashiwa,		
24	Kurashiki	31.0		Ichihara,Machida,Sagamihara,		
25	Kumamoto	30.8		Hiratsuka,Atsugi,Nagaoka,		
26	Nagano	30.7		Joetsu,Takaoka,Fukui,Kofu,		
27	Matsue	30.5	51	Numazu,Fuji,Toyohashi,		
28	Morioka	30.1	} 109	Okazaki,Kasugai,Toyokawa,		
29	Yokosuka	30.1		Anjo,Tsu,Yokkaichi,Suzuka,		
30	Matsuyama	30.0		Sakai,Kishiwada,Suita,		
31	Odawara	29.9		Ibaraki,Yao,Higashiosaka,		
32	Fujisawa	29.8		Amagasaki,Itami,Wakayama,		
33	Himeji	29.7		Tottori,Kure,Fukuyama,		
34	Niigata	29.6		Higashiroshima,Shimonoseki,		
35	Toyama	29.5		Yamaguchi,Tokushima,Saga,		
					Oita	
					(Listed by city code)	

# Actor-Specific Scores



## Executive Number of Indicators 34/83

Rank	City	Score	Rank	City	Score
1	Osaka	54.9	36	Atsugi	24.8
2	Nagoya	41.7	37	Himeji	24.6
3	Fukuoka	41.0	38	Toyokawa	24.5
4	Yokohama	37.0	39	Niigata	24.4
5	Kyoto	36.5	40	Sakai	24.3
6	Kobe	35.5	41	Takamatsu	24.3
7	Sapporo	32.6	42	Hachioji	24.0
8	Toyota	30.7	43	Itami	24.0
9	Sendai	30.6	44	Naha	24.0
10	Suita	28.1	45	Matsuyama	24.0
11	Kawasaki	28.0	46	Nagano	23.9
12	Kanazawa	27.8	47	Miyazaki	23.9
13	Hamamatsu	27.6	48	Okazaki	23.9
14	Tsukuba	27.6	49	Utsunomiya	23.8
15	Okayama	27.3	50	Suzuka	23.8
16	Fuchu	27.1			
17	Higashiroshima	27.0			
18	Nishinomiya	26.9			
19	Shizuoka	26.8			
20	Hiroshima	26.8			
21	Tachikawa	26.7			
22	Anjo	26.5			
23	Ibaraki	26.5			
24	Yokkaichi	26.4			
25	Gifu	26.1			
26	Chiba	25.9	51		
27	Saitama	25.8	109		
28	Matsumoto	25.6			
29	Toyohashi	25.4			
30	Fukuyama	25.3			
31	Kagoshima	25.3			
32	Kitakyusyu	25.2			
33	Otsu	25.1			
34	Fujisawa	24.9			
35	Kashiwa	24.8			
				Hakodate,Asahikawa,Kushiro,	
				Tomakomai,Aomori,Hirosaki,	
				Hachinohe,Morioka,Akita,	
				Yamagata,Fukushima,	
				Koriyama,Iwaki,Mito,Hitachi,	
				Maebashi,Takasaki,Ise,	
				Ota,Kawagoe,Kumagaya,	
				Ichihara,Machida,Sagamihara,	
				Yokosuka,Hiratsuka,Kamakura,	
				Odawara,Nagaoka,Joetsu,	
				Toyama,Takaoka,Fukui,Kofu,	
				Numazu,Fuji,Kasugai,Tsu,	
				Kishiwada,Yao,Higashiosaka,	
				Amagasaki,Nara,Wakayama,	
				Tottori,Matsue,Izumo,Kurashiki,	
				Kure,Shimonoseki,Yamaguchi,	
				Tokushima,Kochi,Kurume,	
				Saga,Nagasaki,Sasebo,	
				Kumamoto,Oita	
				(Listed by city code)	



## Employee Number of Indicators 17/83

Rank	City	Score	Rank	City	Score
1	Osaka	51.7	36	Itami	29.2
2	Nagoya	42.1	37	Kochi	29.2
3	Fukuoka	40.0	38	Izumo	29.0
4	Kyoto	36.1	39	Yamaguchi	29.0
5	Kobe	35.0	40	Takamatsu	29.0
6	Hiroshima	33.7	41	Matsuyama	28.9
7	Yokohama	33.5	42	Takaoka	28.9
8	Kitakyusyu	32.5	43	Sakai	28.6
9	Kagoshima	32.4	44	Nagano	28.4
10	Kurume	32.4	45	Suita	28.4
11	Amagasaki	32.0	46	Toyohashi	28.3
12	Gifu	31.5	47	Chiba	28.3
13	Kanazawa	31.3	48	Hamamatsu	28.0
14	Niigata	31.2	49	Nara	27.9
15	Okayama	31.1	50	Yamagata	27.9
16	Toyama	30.9			
17	Hakodate	30.8			
18	Shizuoka	30.8			
19	Sendai	30.8			
20	Fukui	30.6			
21	Tsu	30.5			
22	Matsumoto	30.3			
23	Saga	30.3			
24	Higashiroshima	30.2			
25	Nishinomiya	30.2	51		
26	Hirosaki	29.9	109		
27	Morioka	29.9			
28	Shimonoseki	29.9			
29	Kumamoto	29.9			
30	Sapporo	29.8			
31	Higashiosaka	29.7			
32	Tottori	29.6			
33	Kawasaki	29.4			
34	Miyazaki	29.3			
35	Matsue	29.3			
				Asahikawa,Kushiro,	
				Tomakomai,Aomori,Hachinohe,	
				Akita,Fukushima,Koriyama,	
				Iwaki,Mito,Hitachi,Tsukuba,	
				Utsunomiya,Maebashi,	
				Takasaki,Ise,Ota,Saitama,	
				Kawagoe,Kumagaya,Kashiwa,	
				Ichihara,Hachioji,Tachikawa,	
				Fuchu,Machida,Sagamihara,	
				Yokosuka,Hiratsuka,Kamakura,	
				Fujisawa,Odawara,Atsugi,	
				Nagaoka,Joetsu,Kofu,Numazu,	
				Fuji,Okazaki,Kasugai,	
				Toyokawa,Toyota,Anjo,	
				Yokkaichi,Suzuka,Otsu,	
				Kishiwada,Ibaraki,Yao,Himeji,	
				Wakayama,Kurashiki,Kure,	
				Fukuyama,Tokushima,	
				Nagasaki,Sasebo,Oita,Naha	
				(Listed by city code)	

# Tokyo 23 Wards Japan Power Cities 2020 Results and Analysis

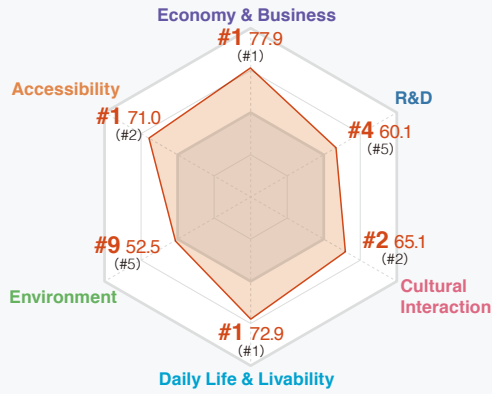
For the top 3 wards based on total score, function-specific, as well as indicator group-specific radar charts were used to analyze their strengths and appeal (deviation values were calculated within the 23 wards of Tokyo.)

## 1 Chiyoda

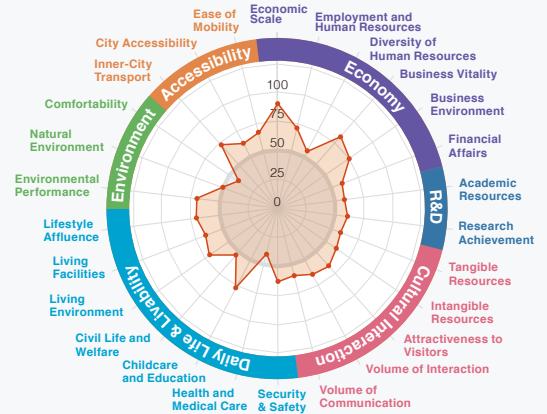
### Tokyo's central ward shines in multiple areas

Chiyoda, home to a high concentration of diversity in culture and arts, industry, transportation, as well as ministries and agencies, scores highly across all functions with the exception of **Environment**. Predominant power can be seen in **Economy & Business**, **Daily Life & Livability**, and **Accessibility**, with Chiyoda taking the top spots in these functions among the 23 wards. In addition, **Cultural Interaction** performs well, with Number of Luxury Guest Rooms, Number of Event Halls, and Number of International Conferences and Exhibitions Held proving strengths. The rich urban environment of Chiyoda City is nurtured by history, and it is evident that the area has numerous powerful points of appeal.

#### Function-specific rank and deviation



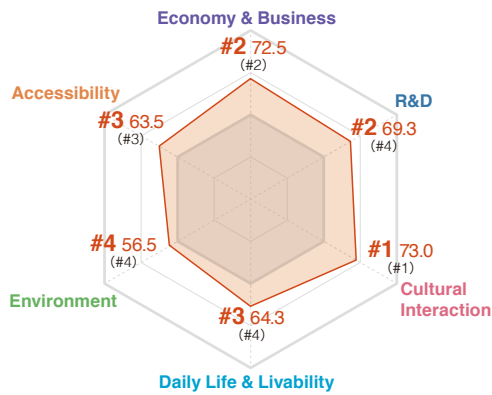
#### Indicator group-specific deviation score



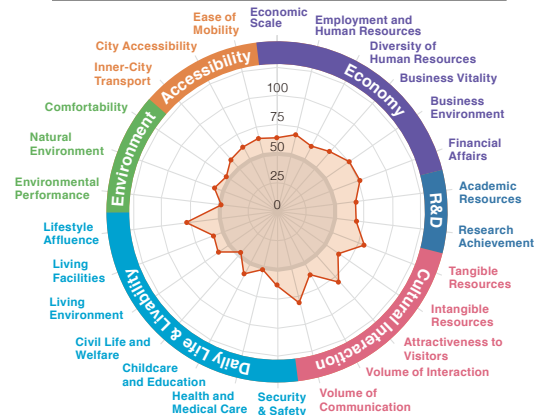
### A balanced city that continues to evolve in a multitude of areas centered on culture and economy

Minato receives consistently high scores across all functions. While **Economy & Business** and **Cultural Interaction** prove strong, **Research & Development** and **Daily Life & Livability** make significant gains and are starting to perform well. Rated particularly highly are Tangible Resources, Attractiveness to Visitors, and Volume of Communication in **Cultural Interaction**, indicating that the city is making use of its wealth of tourism resources in its goal to be an "international city open to the world." Additional strength is also displayed through Lifestyle Affluence in **Daily Life & Livability**, further highlighting the comprehensively well-balanced appeal of the city.

#### Function-specific rank and deviation



#### Indicator group-specific deviation score

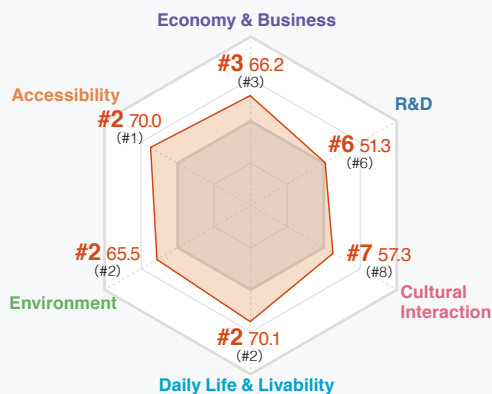


## 3 Chuo

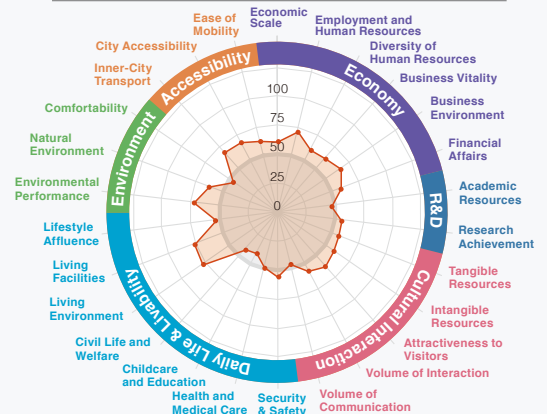
### A vibrant city boasting strengths in transportation convenience and living environment

Chuo scores highly in numerous areas such as **Accessibility**, **Daily Life & Livability**, **Environment** and **Economy & Business**. In addition to strong results for Living Environment and Living Facilities in **Daily Life & Livability**, the city is ranked the highest among the 3 central wards of Tokyo in **Environment**. This is the result of both Number of EV Charging Stations in Environmental Performance and Waterfront Areas in Natural Environment earning high scores. Despite its central location, Chuo provides an ease of living through both its exceptional convenience and rich natural environment.

#### Function-specific rank and deviation



#### Indicator group-specific deviation score



# Function-Specific Scores



## Economy & Business

Rank	City	Score
1	Chiyoda	436.2
2	Minato	395.4
3	Chuo	348.9
4	Shibuya	297.6
5	Shinjuku	282.5
6	Shinagawa	237.6
7	Toshima	230.3
8	Meguro	229.3
9	Bunkyo	221.7
10	Taito	215.8
11	Koto	214.3
12	Nakano	204.8
13	Setagaya	197.5
14	Suginami	193.2
15	Arakawa	186.2
16	Sumida, Ota, Kita, Itabashi, Nerima, Adachi, Katsushika, Edogawa	(Listed by city code)
23		



## Research & Development

Rank	City	Score
1	Bunkyo	105.2
2	Minato	70.3
3	Shinjuku	63.2
4	Chiyoda	46.1
5	Meguro	32.6
6	Chuo	23.2
7	Setagaya	15.6
8	Toshima	13.0
9	Shibuya	12.3
10	Ota	10.9
11	Koto	10.1
12	Shinagawa	8.5
13	Itabashi	8.2
14	Katsushika	6.6
15	Nakano	4.7
16	Taito, Sumida, Suginami, Kita, Arakawa, Nerima, Adachi, Edogawa	(Listed by city code)
23		



## Cultural Interaction

Rank	City	Score
1	Minato	241.8
2	Chiyoda	197.8
3	Shinjuku	183.9
4	Shibuya	182.1
5	Taito	169.8
6	Koto	168.0
7	Chuo	154.5
8	Bunkyo	145.0
9	Sumida	129.9
10	Toshima	122.8
11	Shinagawa	119.5
12	Setagaya	94.2
13	Meguro	90.7
14	Ota	79.3
15	Katsushika	78.6
16	Nakano, Suginami, Kita, Arakawa, Itabashi, Nerima, Adachi, Edogawa	(Listed by city code)
23		



## Daily Life & Livability

Rank	City	Score
1	Chiyoda	403.2
2	Chuo	390.7
3	Minato	365.8
4	Shibuya	355.8
5	Bunkyo	351.7
6	Shinjuku	341.7
7	Setagaya	308.4
8	Toshima	304.3
9	Suginami	303.0
10	Meguro	300.2
11	Taito	297.0
12	Itabashi	291.2
13	Shinagawa	288.5
14	Koto	284.9
15	Arakawa	284.5
16	Sumida, Ota, Nakano, Kita, Nerima, Adachi, Katsushika, Edogawa	(Listed by city code)
23		



## Environment

Rank	City	Score
1	Koto	140.9
2	Chuo	124.9
3	Edogawa	123.5
4	Minato	112.6
5	Nerima	110.8
6	Katsushika	108.8
7	Sumida	108.1
8	Suginami	107.2
9	Chiyoda	107.1
10	Ota	106.8
11	Shinagawa	106.7
12	Arakawa	103.6
13	Setagaya	103.6
14	Kita	101.6
15	Bunkyo	99.3
16	Shinjuku, Taito, Meguro, Shibuya, Nakano, Toshima, Itabashi, Adachi	(Listed by city code)
23		



## Accessibility

Rank	City	Score
1	Chiyoda	221.5
2	Chuo	219.7
3	Minato	208.2
4	Shibuya	205.4
5	Shinagawa	198.7
6	Shinjuku	194.7
7	Taito	193.1
8	Bunkyo	192.7
9	Koto	189.4
10	Toshima	188.8
11	Meguro	185.6
12	Ota	181.6
13	Edogawa	178.1
14	Sumida	174.4
15	Arakawa	174.0
16	Setagaya, Nakano, Suginami, Kita, Itabashi, Nerima, Adachi, Katsushika	(Listed by city code)
23		

## Total Score

Rank	City	Score
1	Chiyoda	1,412.0
2	Minato	1,394.1
3	Chuo	1,261.8
4	Shinjuku	1,156.7
5	Shibuya	1,142.4
6	Bunkyo	1,115.6
7	Koto	1,007.5
8	Taito	971.7
9	Shinagawa	959.6
10	Toshima	935.0
11	Meguro	931.0
12	Setagaya	890.2
13	Sumida	877.4
14	Suginami	840.4
15	Ota	834.8
16	Nakano, Kita, Arakawa, Itabashi, Nerima, Adachi, Katsushika, Edogawa	(Listed by city code)
23		



# Actor-Specific Scores

Tokyo 23  
Wards

In order to evaluate the function-specific characteristics of cities from the viewpoint of 'people', 6 types of actors (Single, Family, Seniors, Tourist, Executive, Employee) were established for this report. To calculate the actor-specific score, first the individual urban needs are determined for each actor, after which the indicators associated with those needs are selected and values are averaged to produce a score.



## Single Number of Indicators 20/83

Rank	City	Score
1	Chuo	63.6
2	Chiyoda	63.3
3	Minato	58.4
4	Shibuya	54.5
5	Shinjuku	51.5
6	Bunkyo	51.2
7	Taito	49.5
8	Shinagawa	48.5
9	Toshima	48.5
10	Meguro	47.7
11	Suginami	44.6
12	Setagaya	44.4
13	Koto	42.6
14	Arakawa	42.3
15	Sumida	42.3
16-23	Ota, Nakano, Kita, Itabashi, Nerima, Adachi, Katsushika, Edogawa (Listed by city code)	



## Family Number of Indicators 38/83

Rank	City	Score
1	Chuo	55.4
2	Chiyoda	54.4
3	Minato	53.4
4	Shibuya	49.4
5	Bunkyo	49.3
6	Shinjuku	48.5
7	Shinagawa	46.3
8	Koto	45.8
9	Meguro	45.8
10	Taito	44.9
11	Setagaya	44.6
12	Suginami	44.4
13	Toshima	44.0
14	Sumida	42.7
15	Ota	42.5
16-23	Nakano, Kita, Arakawa, Itabashi, Nerima, Adachi, Katsushika, Edogawa (Listed by city code)	



## Seniors Number of Indicators 34/83

Rank	City	Score
1	Chuo	59.5
2	Chiyoda	59.4
3	Minato	56.3
4	Bunkyo	54.9
5	Shibuya	53.7
6	Shinjuku	51.5
7	Koto	49.6
8	Meguro	49.1
9	Taito	48.8
10	Shinagawa	48.7
11	Suginami	47.9
12	Setagaya	47.5
13	Toshima	46.6
14	Sumida	46.6
15	Arakawa	46.2
16-23	Ota, Nakano, Kita, Itabashi, Nerima, Adachi, Katsushika, Edogawa (Listed by city code)	



## Tourist Number of Indicators 32/83

Rank	City	Score
1	Minato	51.6
2	Chiyoda	47.9
3	Chuo	47.4
4	Shinjuku	42.2
5	Shibuya	42.1
6	Koto	41.7
7	Taito	41.0
8	Bunkyo	37.6
9	Shinagawa	36.0
10	Sumida	34.1
11	Toshima	32.8
12	Meguro	31.0
13	Setagaya	30.7
14	Ota	29.5
15	Edogawa	29.4
16-23	Nakano, Suginami, Kita, Arakawa, Itabashi, Nerima, Adachi, Katsushika (Listed by city code)	



## Executive Number of Indicators 34/83

Rank	City	Score
1	Chiyoda	65.6
2	Minato	61.8
3	Chuo	54.5
4	Shibuya	47.0
5	Shinjuku	46.2
6	Bunkyo	41.2
7	Shinagawa	39.6
8	Koto	38.9
9	Meguro	38.3
10	Toshima	38.1
11	Taito	36.2
12	Nakano	33.6
13	Setagaya	33.2
14	Ota	32.2
15	Suginami	32.1
16-23	Sumida, Kita, Arakawa, Itabashi, Nerima, Adachi, Katsushika, Edogawa (Listed by city code)	



## Employee Number of Indicators 17/83

Rank	City	Score
1	Chuo	69.8
2	Chiyoda	66.2
3	Minato	61.7
4	Shibuya	55.8
5	Shinjuku	55.3
6	Taito	53.0
7	Toshima	50.1
8	Shinagawa	46.0
9	Bunkyo	44.1
10	Meguro	43.8
11	Sumida	42.1
12	Arakawa	42.0
13	Nakano	39.7
14	Koto	39.6
15	Ota	37.6
16-23	Setagaya, Suginami, Kita, Itabashi, Nerima, Adachi, Katsushika, Edogawa (Listed by city code)	

# Definitions of Indicators

Indicators were established based on quantitative data (79 indicators) drawn from statistical materials, and survey data (4 indicators) obtained from a resident questionnaire carried out by the Mori Memorial Foundation. Data acquisition methods are outlined in (1) and (2) below.

## (1) Data derived from statistical materials (79 indicators) (2) Resident Questionnaire (4 indicators)

- When available, data is taken from official public sources.
- Regarding data not obtained from public statistics, other reputable sources are used.
- Data was collected in the period of January – April 2020.
- Survey method: internet questionnaire
- Respondents: residents aged 20 years and above, living in one of the 132 target cities.
- Number of responses: 39,600 responses (300 per city) with a 1:1 male-female ratio. Respondent age ranges were set at a ratio of 6:4 for 20-59-year-olds to those 60 years old and over.
- Survey period: March, 2020
- Survey items: Respondents were asked to answer 6 questions on a 4-step scale regarding the level of satisfaction for the city in which they are living.
- Surveyed by: Survey Research Center Co., Ltd.

Function	Indicator Group	No.	Indicator names	Definitions
Economy & Business	Economic Scale	1	Total Value Added	The total value added in terms of number of enterprises in the target city or ward.
		2	Intra-regional Gross Expenditure	The total expenditure recorded intraregionally in the target city. For Tokyo's 23 wards, data was estimated using population figures and total employment(excluding public entities), with values being added together for each ward as a ratio of the total value of gross expenditure for all wards.
		3	Daytime-Nighttime Population Ratio	The ratio of the population commuting to work or school in the target city or ward divided by the residential population of the target city or ward.
	Employment and Human Resources	4	Total Employment	The number of employees (excluding public entities) in the target city or ward.
		5	Wage Level	The sum values for total salary and total welfare payments divided by the total number of employees (excluding public entities) in the target city or ward.
		6	Higher-Education Completion Rate	The ratio of higher-education graduates (junior college, national college of technology, 4-year program) that exist among the total population aged 18 and above in the target city or ward.
		7	Intake/Outflow of Young Employees	The ratio of the population in 2015 who have not yet entered higher-education (aged 15-19), against the population in 2017 who had completed their higher-education (aged 25-29).
	Diversity of Human Resources	8	Female Employment Ratio	The ratio of female workers between the ages of 15-64 to the total number of employees aged 15-64 in the target city or ward.
		9	Foreign Employment Ratio	The ratio of foreign workers aged 15 and above to the total number of employees aged 15 and above in the target city or ward. For unlisted cities, the numbers from each prefectural Labor Bureau were used. For cities not listed in the bureau, estimates were made using the foreign population.
		10	Elderly Employment Rate	The elderly employment rate calculated as the number of employees aged 65 and above divided by the total population aged 65 and above in the target city or ward.
	Business Vitality	11	Ratio of Newly Registered Businesses	The number of newly designated corporations in 2019 divided by the total number of corporations in each city.
		12	Labor Productivity	The ratio of total value added to the number of employees in general industries (excluding public entities) in the target city or ward.
		13	Number of Certified Special Zones	The number of projects certified as "National Strategic Special Zones" and the number of special zones in "Comprehensive Special Zones" and "Structural Reform Special Zones" were indexed separately and then combined. (Those certified at the prefectural level were weighted at 0.5.)
	Business Environment	14	Ratio of Employees in Service Industry for Business Enterprises	The ratio of employees in business service professions (goods leasing, special services, and advertising) to the total number of employees (excluding public entities) in the workforce for the target city or ward.
		15	Total Supply of New Office Real Estate	The average floor area of real estate buildings over the last three years.
		16	Density of Flexible Workplaces	Calculated based on the following criteria: (1) value obtained by dividing the number of coffee shops by the total land area in use, and (2) value obtained by dividing the number of co-working spaces by the total land area in use.
	Financial Affairs	17	Financial Capability Index	The value in the Ministry of Internal Affairs and Communications' Financial Strength Index. For Tokyo's 23 wards, the value in the General Affairs Bureau's Economic Strength Index is used.
		18	Public Account Balance Ratio	The current account balance ratio for the target city or ward.
		19	Real Debt Expenditure Ratio	The total value of debt payments divided by the annual public income for the target city or ward.
		20	Future Burden Ratio	The total outstanding debt divided by the annual public income for the target city or ward.

Function	Indicator Group	No.	Indicator names	Definitions
Research & Development	Academic Resources	21	Ratio of Academic and Development Research Institution Employees	The total number of employees in research & development institutions divided by the total number of employees (excluding public entities) in the workforce for the target city or ward.
		22	Number of Leading Universities	Calculated based on the following criteria: (1) the indexed score based on the rank of universities featured in Benesse's World Ranking of Top 150 Universities - Japan Edition that are located in the target city or ward; and (2) the indexed score based on the rank of universities featured in Times Higher Education's The World University Rankings that are located in the target city or ward. For both (1) and (2), universities with campuses in different cities, the total number of these was divided by the number of campuses
	Research Achievement	23	Number of Papers Submitted	The average number of papers on National Institute of Informatics' CiNii Articles in the past year submitted from the 136 universities which have published 1000 or more theses for the 10-year period between 2004-2013 according to NISTEP's 2015 Japanese Universities' Research Theses Benchmarking report. Papers were searched on 2016,2017 and 2018, with the average values for both dates used. For universities with campuses in different cities, the total number of theses was divided by the number of campuses.
		24	Number of Leading Firms in Global Niches	The number of headquarters, offices, and factories maintained by companies featured in the Ministry of Economy, Trade & Industry's "Global Niche Top 100 Companies".
Cultural Interaction	Tangible Resources	25	Number and Rating of Tourist Attractions	The value obtained by adding the indexed number of tourist spots and the indexed number of reviews in each of the eight categories of "Sightseeing" in TripAdvisor Japan: "Famous Tourist Spots," "Nature and Parks," "Outdoors," "Museums," "Zoos and Aquariums," "Leisure Facilities," "Concerts and Shows," and "Amusement Parks and Theme Parks."
		26	Number of Designated Cultural Assets	The number of designated cultural assets recognized by UNESCO. Points awarded as follows: UNESCO world heritage site (3 points); national treasures, special historical landmark, special place of scenic beauty, important traditional architecture preservation district (2 points); important cultural property, registered tangible cultural properties, historical landmark, registered monument, place of scenic beauty, important cultural scenery (1 point).
		27	Active Approach to Scenic Town Planning	Calculated based on the following criteria: (1) the existence of scenery planning as well as scenic town planning model districts; (2) the number of prizes awarded and activities carried out after 2011 in the categories of urban space, scenic town planning activities-training, and scenery planning activities, according to the Executive Committee of Scenic Planning Day; the number districts awarded the "Beautiful Townscape Prize" between the years 2001-2010; and the number of districts recognized in the "Urban Scenery 100" between the years 1991-2000 (1 point / award). Those awarded to the prefecture are not counted.
	Intangible Resources	28	Number and Rating of Events	Calculated based on the following criteria: (1) The indexed value of the number of events and comments recorded in Tripadvisor's "Events" listing for "Sightseeing" in the target city or ward.(2) the number of "local performing arts" and "festivals" listed in "All Events" of the Japan Travel and Tourism Association promotion "miru-navi" in the target city or ward.
		29	Workers in Creative Industries	The ratio of workers in relevant creative industries to the total employment (excluding public entities) for each target city or ward. The definition of "creative industries" is based on information provided by the UNDP, UNESCO, and the Tokyo Metropolitan Government's Bureau of Industrial and Labor Affairs, with 44 relevant industry classifications selected from the Ministry of Internal Affairs and Communications' 2016 Economic Census.
		30 Q	Opportunities for Cultural, Historical, and Traditional Interaction	Based on responses from a resident questionnaire asking whether there are abundant opportunities for cultural, historical, and traditional interaction for people visiting from other cities.
	Attractiveness to Visitors	31	Number of Accommodation Facility Guest Rooms	The number of guest rooms recorded on Recruit's "Jalan.net" website.
		32	Number of Luxury Guest Rooms	The number of guest rooms in lodging facilities rated as "High Class" according to Recruit's "Jalan.net" travel website.
		33	Number of Event Halls	The number of theatres and concert halls according to the MEXT Social Education Survey, as well as the number of "High Class" hotels offering banquet hall facilities according to Recruit's "Jalan.net" travel website.
		34	Multilingual Services at Tourist Information Desks and Hospitals	Calculated based on the following criteria: (1) the weighted value of the number of tourist information centers offering multilingual services and sightseeing guidance according to the JNTO; (2) the number of medical institutions suited to accepting foreigners according to the JNTO.
	Volume of Interaction	35	Weekend Visitor Population	The number taken by subtracting the nighttime population from the tourist population, then dividing by the daytime population.
		36	Volume of People Visiting for Tourism or Sightseeing	The percentage of visitors to the target city or ward selecting "Pleasure / Sightseeing" as their purpose of visit according to the "Regional Brand Survey" conducted by the Brand Research Institute.
		37	Number of International Conferences and Exhibitions Held	The added index values of the number of conference events held and the number of exhibitions held in the target city or ward.
	Volume of Communication	38	Tourism Promotion Activities	Calculated based on the following criteria: (1) An indexed value of total points based on 1 point given for each Destination Marketing Organization (DMO) registered in the target city or ward, and 0.5 points given for each wide-area cooperation DMO or regional cooperation DMO located in the target city or ward; (For Tokyo's 23 wards, DMO corporations were added based on an independent survey conducted by the Mori Memorial Foundation.) (2) the indexed value of total points based on 1 point given for each exhibition organization (excluding private companies) in the target city or ward registered on Tourism Expo Japan, and 0.5 points given for each prefectural-level organization.
		39	Number of Followers of Local Government SNS Accounts	The indexed value of the number of followers on social media accounts (Facebook, Twitter and YouTube) attributed to local self-governing bodies or tourism associations, excluding disaster information services and election-related channels.
		40	Level of Attractiveness, Recognition, and Intention to Visit	The total points given for level of attractiveness, recognition, and intention to visit as assigned in the "Regional Brand Survey" conducted by the Brand Research Institute.

Q : Indicators using questionnaires

Function	Indicator Group	No.	Indicator names	Definitions
Daily Life & Livability	Security and Safety	41	Recognized Criminal Offenses	Calculated based on the total number of criminal offenses as provided by police headquarters, prefectural police stations, or the publically released information on acknowledged criminal offenses, divided by the daytime population (000s) of the target city or ward.
		42	Traffic Accident Fatalities	The average number of traffic fatalities over the past three years divided by the daytime population (per 10,000 people.)
		43	Level of Safety During Disaster	Based on the scores for the following 5 categories: 1) The ratio of total number of households constructed before 1980 to the total number of households; 2) the ratio of total number of households located over 1km away from public evacuation zones to the total number of households; 3) the ratio of estimated area affected by potential flooding to the total area; 4)The sediment-related disaster risk area divided by the total area; 5)the ratio of total number of building fire outbreaks to the daytime population (000s) of the target city or ward.
		44	Vacancy Rate	The total number of vacant residential units divided by the total number of residential units in the target city or ward.
	Health and Medical Care	45	Number of Doctors	The total number of doctors employed at medical facilities divided by the daytime population (000s) of the target city or ward.
		46	Number of Hospitals and Clinics	Calculated based on the indexed value of the total number of hospitals, as well as the total number of general medical clinics, divided by the daytime population (per million people) in the target city or ward.
		47	Life Expectancy and Healthy Life Expectancy Rate	Calculated based on the following criteria: (1) life expectancy for the target city or ward; (2) healthy life expectancy for the target city or ward. As this data is taken from the prefectural level, (2) is weighted at half of (1).
	Childcare and Education	48	Total Fertility Rate	The total fertility rate (Bayes estimate) for the target city or ward.
		49	Availability of Daycare Services	The ratio of the number of daycare applicants aged 0-2 years to the total capacity in the target city or ward.
		50	Assistance for Children's Medical Costs	The total points awarded for medical costs of a "visit" and "hospitalization" based on age categories (before entering school: 1 point; up to 7-9 years old: 2 points; up to 12 years old: 3 points; up to 15 years old: 4 points; up to 18 years old: 5 points) in the target city or ward, as well as the total points awarded based on income restrictions or partial self-payment requirements (1 point given if none exist).
		51	Variety of Educational Opportunities	Calculated based on the following criteria: (1) number of "free schools," and (2) number of high schools with deviations of 65 or more.
	Civil Life and Welfare	52	Ease of Integration for Foreign Residents	The indexed value of points awarded for policies or initiatives related to easing the integration of foreign residents. The 13 policy categories are based on those found in a 2019 Nikkei Newspaper study. Points awarded as follows: 1 point for categories with policies already implemented; 0.5 points for categories with policies under consideration; 0 points for categories with no policies or no response. For cities not covered in the report, their municipal administrative bodies were consulted.
		53	Number of Elderly Requiring Assistance or Care	The number of people aged 65 and above requiring primary nursing care, divided by the total population aged 65 and above in the target city or ward. Saga City used local municipality data. The cities of Toyohashi, Toyokawa and Suzuka made estimates.
		54	Number of Regional Comprehensive Assistance Centers	The number of self-governing, or social welfare centers that are open to the public (including branches, sub-centers, annexes) within the target city or ward, as well as the total number of centers offering at-home support, divided by the total elderly population (000s).
	Living Environment	55 Q	Satisfaction with Living Environment	Based on responses from a resident questionnaire regarding the level of satisfaction with their living environment (including disaster prevention, crime, convenience, etc.).
		56	Volume of New Housing Supply	The average value of the total floor area of residential housing for the past three years divided by the nighttime population (per 10,000 people.)
		57	Size of Residences	The gross floor area per residence in the target city or ward.
		58	Ratio of Barrier-free Homes	The number of barrier-free households in which a family member aged 65 and above resides divided by the number of households in which a family member aged 65 or over resides in the target city or ward.
	Living Facilities	59	Density of Retails Businesses	The number of retail businesses (small goods; textiles, clothing, personal effects; food and drink; mechanical parts; and other small retail shops) divided by the total land area in use for the target city or ward.
		60	Density of Restaurants	The total number of food and drink establishments as well as take-out and delivery services divided by the total area in use of the target city or ward.
		61	Density of Convenience Stores	The total number of convenience stores divided by the total area in use of the target city or ward.
	Lifestyle Affluence	62	Disposable Income	The total monthly disposable income (income after expenses) in a household with 2 or more members within the target city or ward. For Tokyo's 23 wards, estimates were made using "taxable income" and "number of households."
		63	Price Level	The total indexed value of the regional differentiation in price level (where that national level = 100), excluding rent. For cities not hosting a prefectural office, or not defined as ordinance-designated cities, data was unavailable and thus taken from prefectural sources.
		64	Cost of Housing	The total cost of homeownership-related expenses and rental expenses (for those not owning a home) for an occupied dwelling. For Tokyo's 23 wards, estimates were made based on the following two data points: (1) the value of "housing costs" and the "imputed rent for owner-occupied dwellings" in Yokohama and the average values of the two costs in the 23 wards of Tokyo, and (2) the housing rental rates in each of Tokyo's special wards and Yokohama as listed on a representative rental real estate site (for a standard 2LDK.)



Function	Indicator Group	No.	Indicator names	Definitions
Environment	Environmental Performance	65	Percentage of Waste Recycled	The percentage of waste recycled in the target city or ward. For Tokyo's 23 wards, the average value of special wards of Tokyo is applied.
		66	CO <sub>2</sub> Emissions	The total estimated amount of CO <sub>2</sub> emissions in the target city or ward.
		67	Rate of Self-Sufficient Renewable Energy	The rate of self-sufficient renewable energy use (electric and thermal) in the target city or ward. For the generation of solar, commercial, geothermal, small hydro, and biomass power; biomass heating, solar heat utilization, and geothermal utilization.
		68	Number of EV Charging Stations	The number of electric vehicle charging stations divided by the total number of passenger vehicles (general, private, and business-use) of the target city or ward.
	Natural Environment	69 Q	Satisfaction with Natural Environment	Based on responses from a resident questionnaire regarding the level of satisfaction with the natural environment (mountains, forests, ocean, rivers, green parks, roadside trees etc.) in the target city or ward.
		70	Green Coverage Ratio in Urban Areas	The total area of green coverage (including rice fields, agricultural fields, forests, vacant land, parks, green tracts, golf courses) divided by the total area of the target city or ward. The total area of the target city or ward is defined as the "urban area", taken from the 5-types of planning areas delineated by the national government.
		71	Waterfront Areas	The estimated total area of waterfronts divided by the total area of the target city or ward. The estimate is based on the following rules: (1) For areas with polygonal water features (mostly ocean), the area is calculated within a 100m radius from shore; (2) for areas with line-based water features (mostly rivers), the length of line-data within a 100m radius of the shore is calculated and a width of 10m is used to attain the applicable area. (Depending on the data acquisition criteria used, the numerical value of the water area may be 0.)
	Comfortability	72	Annual Sunshine Hours	The total number of sunshine hours in a one-year period for the target city or ward.
		73	Number of Comfortable Temperature / Humidity Days	The number of days in a calendar year with a discomfort index score between 60-75 according to the observation point nearest to the target city or ward's primary local government office. The discomfort index is calculated using the average daily temperature as well as the average daily humidity. The discomfort index (DI) is drawn from the following equation: $DI=0.81T(\text{temperature})+0.01H(\text{humidity})\times(0.99T-14.3)+46.3$
		74	Air Quality	The indexed value of the average daily concentration of Nitrous Oxide and PM2.5 in the air for the target city or ward.
Accessibility	Inner-City Transport	75 Q	Convenience of Public Transport	Based on responses from a resident questionnaire regarding the level of satisfaction with public transport (railroad and bus operations, facilities & equipment, service etc.) in the target city or ward.
		76	Density of Train Stations and Bus Stops	The indexed value of the number of rail and bus stations divided by the total area as defined by city planning in the target city or ward. The number of train stations counted by line.
		77	Frequency of Traffic Congestion	The average daytime speed of traffic over a 12-hour period on roads (excluding automobile-exclusive roads) traveling out from, and into, the center of the target city or ward.
	City Accessibility	78	Travel Time to Airports	The average travel time from the target city ward office to airports reachable within two hours. Average travel time was calculated using the following two data points: (1) the shortest access time from each city ward office to the nearest airports as calculated by Google Maps (with a 10am arrival on weekdays, when traveling by car), and (2) the number of passengers per year by airports (total of domestic and international flights.) The average time required for each destination city was calculated based on the number of passengers and the time required at each airport.
		79	Ease of Access to Shinkansen	Calculated based on the following criteria: 1) for cities with Shinkansen stations, the total number of passengers using Shinkansen stations (including Yamagata and Akita Shinkansen lines). For cities without Shinkansen stations, the total number of passengers at the Shinkansen station nearest to the target city's biggest (by passenger volume) train station; and 2) for cities with no Shinkansen station, the total travel time from the target city's central station (station with highest passenger volume) to the nearest Shinkansen station (arriving at 10:00am on a weekday by train). For cities with Shinkansen stations, the travel time is set at 0. Data is not recorded for cities from which it would not be possible to reach the Shinkansen station by 10:00am. For stations not recording passenger numbers, additional data was collected.
		80	Number of Interchanges	The number of general interchanges as well as 'smart interchanges'.
	Ease of Mobility	81	City Compactness	The concentration of population divided by the nighttime population expressed as a ratio. The concentration of population is determined by (1) joining the districts within the city or ward that show densities above 4,000 people / km <sup>2</sup> , and (2) selecting those adjoined districts that possess populations above 5,000 people according to the national census.
		82	Commuting Time	The median value for the commuting time of a household's primary supporter in the target city or ward.
		83	Ratio of Barrier-free Stations	The points value for barrier-free facilities awarded as follows: access routes with no difference in level = 1 point; station attendant assistance available = 0.5 points; no assistance available = 0 point. Furthermore, points are awarded based on information provided by the railway corporation. If no information is available, the station is awarded 0 points.

Q : Indicators using questionnaires



## Japan Power Cities – Profiling Urban Attractiveness

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Published in February, 2021

**Edited by**  
**Institute for Urban Strategies, The Mori Memorial Foundation**

**Designed by Mitsumura Printing Co., Ltd.**  
**Translated by: Alex Yeoman, Peter Dustan**

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J a p a n

P o w e r

C i t i e s

Profiling Urban Attractiveness