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Tokyo is a publication issued periodically by the Tokyo Metropolitan Government with the aim to provide readers with the latest information on various aspects of Tokyo, including events, programs, and experiences. The contents of *Tokyo* are reprinted from the online magazine Tokyo Updates.





Sharing the latest upcoming technology and startups from Japan through SusHi Tech Tokyo

S usHi Tech Tokyo 2024, an event organized by the Tokyo Metropolitan Government (TMG) to create sustainable ways of solving urban issues using cutting-edge technology, held its Global Startup Program, one of the event's three pillars, at Tokyo Big Sight.



Showcasing Tokyo's Potential to the World

The program is part of the broader concept known as Sustainable High City Tech Tokyo, which aims to create sustainable new value by overcoming

> global urban challenges through cutting-edge technology, diverse ideas, and digital expertise.

> Over 80 countries, cities, and regions took part in the event, which drew over 430 startups and 40,000 participants. The two-day program, billed as Asia's largest and Japan's only global innovation conference, was a great success.

The aim of holding the Global Startup Program event at this time was to showcase Tokyo's strengths and potential to the world, and bring together many stakeholders. It was also an opportunity for innovation, as many of the business negotiations at the event proceeded to concrete discussions, with around 3,000 business meetings taking place throughout the two-day event.

Collaboration with Large-Scale French Startup Event

Governments worldwide are facing similar challenges, from environment and energy issues to demographic change, aging infrastructure, and passing on traditional culture. The Tokyo event's purpose is also as a startup support system, hopefully serving as a catalyst for solving these issues through innovation.

The current goals are to increase the number of startups by tenfold in five years, increase the number of unicorn startups tenfold, and increase the number of public-private partnerships by the same amount. As part of this effort, the TMG collaborated with the VIVA TECHNOLOGY 2024 event in France, with some of the startups from this program exhibiting at the Japan Pavilion. The TMG is strengthening ties between SusHi Tech Tokyo and VIVA TECHNOLOGY after Japan was selected as a special guest country

slot for the event in 2024, and there are ongoing plans for collaboration between the two events.

In France, the government has taken the lead in developing a startup support system that is truly a public-private partnership. This can serve as a point of reference for the TMG and Global Startup Program, with the aim of helping businesses rapidly expand globally.

Original Japanese Technology

Pocket RD, Inc., which took part in both the Tokyo event and VIVA TECHNOLOGY 2024, has developed a fully automated 3D avatar production solution.

Using a body scanner that can generate avatars for full-body imaging, avatars can be generated with their own unique editing application to

freely customize details, while retaining and utilizing their own characteristics. With this technology, generated avatars can make realistic movements that match the worldview of each digital space, such as metaverses and games.

While scanners used by other companies require 50 or 100 cameras and about three months to generate data, Pocket RD, Inc.'s scanner only uses 28 cameras and takes around 10 minutes, while still being able to generate realistic and detailed facial expressions and body movements.

CEO Momikura Atsuya's vision is for people to connect with others around the world through video and live streaming, potentially revitalizing society as a whole.

The company got a great response to the realization of their concept during the exhibitions at VIVA TECHNOLOGY 2024. Overseas companies and individuals are deeply interested in Japanese technology, which has a long track record of safety and reliability, which bodes well for the future and potential of new discoveries coming out of SusHi Tech Tokyo events.

A new future, originating from Japan, is just



Users operating avatars developed by Pocket RD

Tokyo's Deaf Athlete in the Running for Gold

The Tokyo 2025 Deaflympics in November will be the 100th anniversary of the Games and the first one hosted by Japan.

kada Mio is aiming to win medals in the Women's 800 meters and 1500 meters Athletics events at the Tokyo 2025 Deaflympics, an Olympics for deaf athletes. She started athletics while she was a student at the Central School for the Deaf run by the Tokyo Metropolitan Government. She has loved physical activity since childhood, and her parents inspired her interest in athletics.

"Both my parents were deaf athletes: my father in sprinting and my mother in the javelin. When I was young, my father sometimes took me to his team practices, so I naturally started competing when I was in high school. I always liked running. The middle distance especially suited me."

Vital Roles of Starting Lamps and Sign Language

Most of the rules for the deaf athletics are the same as the general ones, but the main difference is the use of light-stimulated starting lamps instead of a starter

Red: Yellow: Green: On Your Marks Set

The white devices at the start line are the starting lamps. Photo: courtesy of Japan Deaf Athletics Association

gun, which may be hard to hear or not heard at all by deaf athletes. The devices are placed near the feet of the athletes and the lights change color to signal the start, with red, yellow and green meaning "on your marks," "set," and "go" respectively.

Before that system was developed, "I used to start by watching the movements of the starter and other runners around me," says Okada. "Of course, that caused a delay and affected my time. In sprinting, where a tenth of a second counts, it had a big impact, but I had no choice but to accept it. My father also told me about his own frustrating experiences."

The Deaflympics have been using starting lamps for a while, and more and more events in Japan are using them. "I want to tell the next generation how the

Okada Mio shows the sign for the Deaflympics. The Tokyo Games will be her third Deaflympics.

situation regarding disadvantages has gradually improved," says Okada.

Another major difference is the use of sign language during competitions. In addition to the athletes themselves, referees and coaches also use it to give instructions. "Sign language can be used to communicate with someone farther away than voices can carry. Even at a train station with loud noises from trains and announcements, you can talk with your friend on the opposite platform in sign language. So, if a supporter uses it to say 'Good luck' from the stands, the athlete will understand it. And if you know sign language, you'll know what coaches are telling their athletes. In that sense, it's a fun sport to watch. But as an athlete, I feel that I can't say anything bad," Okada says with a laugh.

Relying on Visual Cues During a Race

In the 800m and 1500m events that Okada specializes in, hearing athletes often make decisions such as the timing of their last spurt based on auditory information such as the roughness of their competitors' breathing and the sound of their footsteps. How do deaf athletes make those decisions? "I make decisions based on my competitors' movements and shadows.

Also, I sometimes check the screens in the stadium that show how the race is going," explains Okada.

She won the bronze medal in the Women's 800m at the World Deaf Athletics Championships in Taiwan in July 2024. She was in second place throughout the race but was overtaken by a rival just before the finish line.

"She's a very strong athlete. I knew she was behind me from the screen, but when she caught up, I had no strength left," she recounts regretfully.



Okada competes in the hard-fought race Photo: courtesy of Japan Deaf Athletics Associatio

Raising Awareness About Deaf Athletes

In addition to athletics, there will be 21 other events at the Tokyo 2025 Deaflympics, including soccer, swimming, and table tennis. "I'm looking forward to seeing other events as well as interacting with deaf athletes. Each country competes for medals in the events, and this might sound over the top, but I also feel like I will be competing on behalf of my whole country. I want to turn that pressure into strength and win a medal with a nice color."

She also has hopes for the 2025 Games as a leading deaf athlete. Hearing impairments are called an 'invisible disability' because one cannot tell if someone has one just from appearances. Many deaf athletes are as physically capable as able-bodied athletes, and their efforts and struggles are often overlooked. "I hope that people will realize that there are deaf athletes who are committed to competition despite their disabilities by watching this tournament."

Her future training goals are clear. "First of all, I want to break my own records (Deaf Women's Japanese national records) in the 800m and 1500m before the Deaflympics. I'm not just aiming to match my record, but am determined to surpass it."

The competition for medals has begun.

Tokyo's Drive Toward Sustainable Mobility with Formula E

The highly successful 2024 Tokyo E-Prix has shone a spotlight on electric vehicle innovation and clean energy solutions.

net-zero CO₂ emissions by 2050 under the "Zero Emission Tokyo" initiative. Led by the Tokyo Metropolitan Government (TMG), the city's commitment to reducing its carbon footprint has resulted in a variety of environmental measures aimed at decarbonization, and the city's hosting of the 2024 Tokyo E-Prix on March 30 aligned perfectly with these goals. This marked the fifth race of the ABB FIA Formula E World Championship season and the first time a Formula E race has been held in Japan.

Formula E is a racing series designed to promote the use of electric vehicles (EVs) and encourage sustainable transportation. By bringing Formula E to Tokyo, the TMG has been able to demonstrate its support for clean energy to a greater audience, aligning sports and sustainability on a global stage.

Founded in 2014, Formula E was the brainchild of Alejandro Agag, the Chairman of Formula E Holdings



Buildings in Tokyo and a Nissan Gen3 car in special wrap

Ltd. (FEH). Gemma Roura Serra, Strategic Event Director Planning of Formula E Operations Ltd. and Tokyo E-Prix Host City Director, highlighted the overall mission. "Formula E was created to accelerate sustainable human progress through the power of electric racing. His initiative was not only a monumental step toward the development of sustainable,

zero-emission transport, but also a rethinking of how sports can impact the planet positively."

Formula E events are unique in that all activities, from practice and qualifying to the race itself, take place on the same day, offering an action-packed experience which appeals to a younger, more tech-savvy audience than traditional motorsports. Moreover, the races take place on city streets, offering fans an exciting, up-close experience with drivers and teams, which has also contributed to Formula E's growing popularity.

"Formula E is net zero carbon since inception—the first and so far, only sport to be net zero carbon from the start. We were amazed by the Tokyo E-Prix, from the support the government provided to the passion and enthusiasm of the fans. The media interest and excitement has been incredible to see in just our first race in the country," Serra said.

As electric vehicle technology advances, the series has attracted major automotive manufacturers such as Jaguar, Nissan, and Porsche. These companies have been able to use Formula E as a testing ground



Two Formula E Gen3 cars competing from Nissan

for innovative technologies with potential realworld applications.

As the first Japanese firm participating in Formula E, Nissan Motor Co., Ltd. views the series as an essential platform for promoting electrification and advancing sustainable mobility. "In addition to applying the technology developed for commercial vehicles to Formula E, we also work to incorporate the technology and knowledge gained through racing back into our commercial vehicles, creating a mutually beneficial cycle," a spokesperson for Nissan explained.

For Nissan, the Tokyo E-Prix offered an opportunity to showcase the environmental benefits of EVs while demonstrating their high performance and the excitement they bring to motorsports. "Vehicle electrification is a critical initiative for Nissan. Having support from government authorities, along with the efforts of automakers, is highly encouraging," the spokesperson added.

Nissan's involvement in Formula E aligns with its broader goal of developing sustainable solutions for the future of transportation. The company's long-term vision, "Nissan Ambition 2030," includes the launch of 27 electrified models by 2030, reinforcing its commitment to achieving carbon neutrality across the entire product lifecycle, including business activities, by 2050.

The integration of sustainable technologies into both sports and everyday life is a win-win situation, both for the government and for society as a whole. Through collaborations with stakeholders such as automakers and Formula E, Tokyo is on track with its journey toward a cleaner, more sustainable future.



NISSAN ARIYA NISMO, a commercial vehicle with technology developed through motorsports, including Formula E

Photo: courtesy of Nissan Motor Co., Ltd.



The Seiko Timing Team gathers at the 2023 World Athletics Championships in Budapest, Hungary.

Photo: courtesy of Seiko Time Creation Inc.

E xcitement is poised to reign at the Japan National Stadium from September 13-21, 2025, when Tokyo will host the 20th World Athletics Championships (WCH). Helping to make this possible is the Seiko Timing Team, which is responsible for the equipment that tracks and records competition performance scores—including those of the world's top athletes.

The team members are in charge of measuring and displaying athletes' time scores during the WCH and other domestic and international competitions. They arrive at the venue well in advance to ensure that all on-site timing equipment functions with impeccable accuracy.

"We provide full support to ensure consistently reliable and accurate measurements throughout each competition," explains Kobayashi Kazumasa, Manager of the Seiko Timing Department of Seiko Time Creation Inc. "Since any error could potentially impact athletes' careers, failure is not an option. Perfection is our consistent goal."

A New Technological Era

Kobayashi explains that while past methods for measuring scores were manual and time-consuming—

such as using long sticks, tape measures, and raising flags—recent technological developments have revolutionized the process. Image-based processing now allows for efficient tracking of athletes, with innovations like the Jump Management System to detect takeoff-line fouls and high-resolution cameras to measure jumping distances. Work is also underway to conduct measurements wirelessly, such as tracking road racing athletes using GPS.

Other new developments incorporate the use of LEDs for scoring display panels and opening and closing ceremony presentations.

The Seiko Timing Team comprises roughly 60 to 70 people, with the majority located in a Seiko group company in Manchester, England, along with additional members from Japan, the U.S., Germany, and Australia. The two-pronged team consists of sports and technical channels, whose members remain in constant communication with each other while also picking up essential knowledge from the other half of the team.

In fiscal 2023 only, the team provided support for 115 competitions and events for children. Seiko's timing technology is used for various competitions, including domestic swimming championships and other sports, such as gymnastics, judo, and marathons. In addition, Seiko's timing equipment is positioned permanently at the Japan National Stadium and at nearly every swimming venue in Japan.

Setting up the WCH for Success

The WCH, which focuses on track and field events, involves 23 tons of equipment for 49 different championship events, requiring a total of around 70 professionals from the Seiko Timing Team. In order to achieve flawless competition, members conduct multiple advance checks on all cables and equipment, with multiple backup plans also in place.

Once the competition begins, the team rapidly calculates scores and transmits them to officials on the ground while continuing to calibrate their equipment throughout the competition.

Still, however, events out of the team's control can sometimes derail their meticulously laid plans despite all of their best preparations.

During the 2022 WCH held in Eugene, Oregon, in the U.S., for example, the team faced delivery delays due to pandemic-era global container shortages and transportation issues, as well as on-site power supply and networking problems. When the competition was held the following year in Budapest, Hungary, heavy rains sparked fears of possible electrical malfunctions when turning on the equipment.



The Seiko Timing Team is working restlessly to ensure that the World Athletics Championships Tokyo 2025 is a great success.



Seiko Timing Team members set up scoring display panel ahead of a competition.

"At every competition, we feel extreme nervousness and pressure at the start of the first day," Kobayashi says. "If the equipment fails and there is no sound, or if the timing is not recorded, this would damage not only Seiko but also the athletes—we can't really ask them to start swimming or running again."

"So that moment when the event is over and the team members are shaking hands brings an enormous relief and a sense of achievement."

To ensure perfection for the Tokyo 2025 WCH competition, Kobayashi's team held a meeting about a

year in advance among the members of their technical supplier network, including electricity and infrastructure-related companies, wherein all needs were delineated in advance.

"The fact that we can rely on these partners is a huge benefit that gives us an extreme amount of confidence," he observes

Kobayashi also notes a particular sense of excitement since the 2025 WCH will mark 34 years since Tokyo last hosted the event.

"In 1991, there were legendary athletes performing there, including Carl Lewis and Mike Powell, and world records were established," he recalls. "I was only two at the time, so the thought of hosting the competition next year in Tokyo is extremely exciting."



Projection mapping inspired by ukiyo-e celebrates the art of woodblock printing on a grand scale

TOKYO CONCERTO uses projection and music to capture the essence of Tokyo over the years.

Regular screenings feature a variety of different projections, and include subjects as varied as Pac-Man and a Lunar Cycle projection that changes daily over the course of a month.

Some highlights are the GODZILLA: ATTACK ON TOKYO projection, which includes a 100-meter-tall appearance by Japan's most iconic monster. Ukiyo's projection art depicts various aspects of Japanese culture and daily life as it changed with the times, from the Edo period (1603-1868) to the present day. The magical colors and creatures of Golden Fortune are sure to enchant younger visitors, while the kaleidoscopic representations of Tokyo of POETIC STRUCTURES will thrill fans of modern art.

TOKYO GODZILLAs was released in late November 2024, the second projection featuring the beloved film monster, celebrating its 70th anniversary, followed by the *Idol* projection, set to the hit song by artists YOASOBI which was also used on the track for a popular anime series. Then the Japanese Instrument projection enchanted viewers, featuring the unique sounds of traditional instruments.

The colorful projections are shown at 30 minute intervals and are offered free of charge.

TOKYO LIGHTS has also provided more art after dark, with special events that have previously taken over the Meiji Memorial Picture Gallery near the Japan National Stadium, creating fantastical scenes projected on the walls of the beautiful retro building.

Tokyo has many landmarks and famous sightseeing spots, and the Tokyo Metropolitan Government is promoting efforts to add value to these existing resources by combining them with the Japanese technology of projection mapping art. By creating new, exciting attractions for visitors, Tokyo's nights will become livelier and more colorful than ever.



The audience enjoys a projection mapping event at the Meiji Memorial Picture Gallery.

ΩΩ

Vision for Esports and Tokyo's Draw

For this Saudi prince, both Tokyo and esports are something special, providing excitement and inspiration.

H is Royal Highness Prince Faisal bin Bandar bin Sultan Al-Saud, chairman of the Saudi Esports Federation, explained his vision for esports, and the attraction of Tokyo, during an interview in his favorite destination.

-What is the purpose of your visit to Japan?

To meet with some of our partners. How can we work with our partners to start looking at (the Middle East) as an individual market? So many gaming companies look at us as EMEA—Europe, the Middle East, and Africa. We deserve our own regional hub, our own localization, a Middle East office—not just an EMEA office.

—What is your vision for the development of esports in Saudi?

We are always saying our ambition in Saudi is to become a global hub for gaming and esports. Right now, Tokyo is a global hub together with Seoul, Los Angeles, Montreal, etc.

—Tell us about the attractiveness of esports.

Gaming is a way to learn to communicate: to build a community. Electronic gaming is a new version of that. It is borderless.

-What is your vision for the future of esports?

The gaming and esports industry changes on a daily



Photo: Yaroslav Astakhov - stock.adobe.com/jp

basis, not weekly or monthly. A new game comes up and an old game goes away but there is one thing that does not change: that's the community. You should focus on people behind the gaming industry, people behind esports, people who are playing. The community is part of this. That's how you can stay ahead of the curve. That's how you can keep a finger on the pulse of what is happening. That's how you know you are at the forefront of the industry rather than being left behind. Community is the most important thing. I expect future generations to build on everything we have done.

—Do you want Japan to continue leading the esports industry?

Absolutely. From an esports angle and a gaming angle, you cannot talk about the history of games without talking about Japan. It is an integral part and really the founding father of the gaming industry. The world is a better place with Tokyo being part of this industry.

—Is there anything you want to do next in Japan?

I met Hideo Kojima* on my last visit. I'm a huge fan. I would love an opportunity to explore, not just with him but with other creators here, how we can collaborate to bring some of the Saudi stories to life through their creative minds. It has nothing to do with acquisition. This is pure collaboration. If this is possible, it would be amazing.



Prince Faisal at an esports event venue Photo: courtesy of the Saudi Esports Federation

*Hideo Kojima: Game creator, known for his blockbuster titles such as the Metal Gear series and Death Stranding. He set up Kojima Productions in 2015.

—Tell us about your impressions of Tokyo.

If I am being completely honest, Tokyo is one of my favorite places. I come back here as often as I can. There are few places where I feel more comfortable: it is just one of those places where I can relax and enjoy myself.

—What is your most favorite place in Tokyo?

My first home is Saudi Arabia. This is my second home. I enjoy being here more than traveling to most other places. I feel freer in Tokyo than I do in most



Prince Faisal during this interview

other places. I love walking around the gardens of the Imperial Palace especially when it starts to get dark. Obviously, as a gamer, Akihabara is a must-see. There is no better place in the world to just sit down and watch people than Shinjuku. Ginza for me is much more relaxing. I like to stay in this area because of the ready access to train stations and the ease of walking. I like to discover. So, I have not found my favorite place in Tokyo yet: I am going to keep looking. Visiting Tokyo once or twice a year is simply not often enough.

—What are Tokyo's strongest points?

For me, it is the history of its culture. There is something so unique about Tokyo and about the people here, the city and the culture, which you will not find anywhere else. In Ginza, for example, everything is organized and clean. It blows my mind. There are no cans on the street. You can't find things like that anywhere else. It is what draws people in and makes people want to come back. And people here are obviously welcoming, polite, and kind.



The Tokyo Stock Exchange

In April 2019, the Organization of Global Financial City Tokyo, branded as FinCity. Tokyo, was established as Japan's first public-private partnership financial promotion organization. One of the roles of FinCity. Tokyo is to promote Tokyo globally as an international financial hub, and the organization has carried out roadshows overseas as part of this. In October 2023, it hosted a one-week roadshow in New York. "Some 140 financial related people took part in the main event and investor interest was very high," said FinCity. Tokyo Chairman Nakaso Hiroshi.

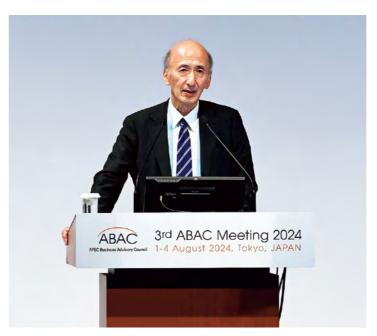
The other role is to formulate policies based on dialogue with market participants. "In cooperation with the national government, relevant ministries and agencies, local governments, and industry associations, we have been working to improve Tokyo's environment as a financial city," said Nakaso. Through these efforts, the number of its members, including financial institutions, real estate, venture companies, and universities, has increased from 30 at the beginning to 57 currently.

Bridging Firms and Investors

One key project is the promotion of the "Emerging Managers Program (EMP)," which supports small- and medium-sized listed companies in securing growth capital when financial backing from venture capital diminishes after going public. FinCity.Tokyo hosts the annual Tokyo Asset Management Forum (TAMF), providing an opportunity for direct dialogue and matchmaking between emerging managers and investors internationally. The forum provides companies with much-needed growth capital and offers opportunities for emerging managers to enter the market.

Held alongside TAMF, the FinCity Global Forum (FGF) highlights Tokyo's strengths and potential as an international financial hub. This forum gathers industry leaders and overseas investors to discuss Tokyo's competitive advantages and vision for the future.

Another important focus is FinCity.Tokyo's English-language disclosure support for small- and



FinCity.Tokyo Chairman Nakaso speaks at the ABAC event in Tokyo.

Photo: courtesy of FinCity, Tokyo

medium-sized listed companies. By enhancing the accessibility of corporate information for overseas investors, this initiative strengthens connections between Japanese companies and global investors. "FinCity. Tokyo serves as a bridge between companies and investors both domestically and internationally," says Nakaso.

Special Financial Zone

In June 2024, the national government designated Tokyo as a "Special Zone for Financial and Asset Management Businesses". This means that Tokyo's efforts as an international financial center are linked to national policies as a whole and are being promoted in coordination with other cities. "By taking full advantage of the special zone status, FinCity.Tokyo aims to leverage Tokyo's strengths and provide investment opportunities, while actively being involved in formulating government-led policies," he said.

One key project to be pushed in the zone is to build an interoperable carbon credit market in Asia. The project will facilitate decarbonization in the region and provide a mechanism for companies to trade carbon credits to offset their emissions. Under the project, FinCity. Tokyo aims to create sustainable investment flows and strengthen Tokyo's position as a hub for sustainable finance. "Tokyo's role in the decarbonization of the Asian region is essential to its future development as an international financial city," said Nakaso.

Presence on the Regional Stage

The Asia-Pacific Economic Cooperation Business Advisory Council (ABAC) held a meeting in Tokyo in August 2024, when Nakaso chaired a finance task force. ABAC is the only official private-sector advisory body where representatives from its 21 economies and regions make recommendations on regional issues to Asia-Pacific Economic Cooperation (APEC) leaders. During the event, FinCity.Tokyo hosted a keynote speech and panel discussion on decarbonization and sustainable finance in Asia.

"It is a significant achievement for us to be able to inform so widely about Tokyo's strengths as an international financial center through this ABAC conference, and to demonstrate our commitment to public-private partnerships to address the urgent issue of decarbonization, a shared challenge in the APAC region," Nakaso said.



Photo: JIJIPRES

Potential of Tokyo

Nakaso stresses that Tokyo has the potential to become a hub for global financial institutions. "While Tokyo boasts the rich resources befitting a real economy such as the manufacturing and service sectors, its financial system is also extremely reliable," Nakaso said. "Furthermore, the extension of Japan's supply chain throughout Asia makes Tokyo 'well-positioned' to provide cross-border financial support," he continued. "Tokyo's robust financial infrastructure and its size give it a comparative advantage in international financial markets."

"FinCity.Tokyo will continue to capitalize on its strengths as a public-private partnership to attract foreign companies in Tokyo," he added. "Through these initiatives, FinCity.Tokyo is committed to connecting investors and businesses at home and overseas, and further help establish Tokyo as an international financial hub that drives sustainable economic growth."



Alongside preserving traditional recipes, Shinbashi Tamakiya's 10th-generation owner Tamaki Kyoko has introduced wine and food pairings to her *tsukudani* business.

T sukudani is a mainstay of traditional Japanese cuisine, combining ingredients indigenous to the island nation's natural environment, such as seaweed, fish, and shellfish, with essential seasonings like soy sauce and mirin. The results are sweet and salty morsels eaten as rice toppings at meals or inside onigiri rice balls.

Tsukudani is also deeply connected with Tokyo's history. In the early Edo period, fishers from the Tsukuda area of Osaka were invited to live in Edo (now Tokyo), by shogun Tokugawa Ieyasu in repayment for helping him during a battle; the fishers named their new home Tsukuda too. By the mid-Edo period, they were preserving small fish, clams, and seaweed—gathered from the nearby rivers, mudflats, and bay—with soy sauce produced in neighboring Chiba.

Established in 1782 in Edo, Shinbashi Tamakiya originally sold *zazen-mame*, simmered black beans, and the third-generation owner also began producing various types of tsukudani. As the shop's popularity spread throughout the capital, local geisha from the

nearby entertainment district would drink the beans' sauce because they believed it would improve their voices, and, during the Meiji era (1868–1912), customers lined up to buy zazen-mame for their New Year's celebrations.

Shinbashi Tamakiya puts special care into each product. "We keep our sauce separate for each type of tsukudani. For example, the shrimp sauce is just



Tsukudani, such as the kombu seaweed tsukudani pictured here, is traditionally eaten as an accompaniment to rice.

for shrimp, the clam sauce is just for clams," explains 10th-generation owner Tamaki Kyoko. "The sauce continues to mature, developing a sweetness, depth, and luster that can't be achieved with normal soy sauce at home."

Pairing Tradition with New Ideas

Although Shinbashi Tamakiya's team has a deep respect for traditions, they are by no means bound by them.

"I think it's important not to be satisfied just maintaining the status quo, but to always consider new ideas and to find what makes today's customers happy," says Tamaki. She does not want the store's impressive history to create a tense atmosphere or make customers overawed.

"I try to live by my mother's words: Never forget to be kind and humble, no matter how much experience you have," she adds.

Since taking over as owner in 2021, Tamaki has pioneered new ways for customers to enjoy tsukudani. She and her

team developed a wine *mariage* course for the dish, pairing Japanese and European flavors in exciting new combinations.

The course pairs three different wines with nine types of tsukudani and various other ingredients. Dishes include dried bonito with camembert cheese and apricot jam; eel with dark chocolate and fruit; and clam with Japanese pepper and lemon pasta.

Each dish is a new discovery, with flavors that evolve in the mouth, showcasing each ingredient while maintaining a cohesive whole. The menu, designed as a light summer meal, presents daring combinations that are still simple enough for guests to try replicating at home.

A Creative Future for Tsukudani

Tsukudani has many benefits for people, both in Japan and abroad, in the modern era.

As such, Shinbashi Tamakiya is part of the Tokyo Metropolitan Government's Edo Tokyo Kirari Project that aims to share traditional products from the capital. Based on the concept of "old meets new," the project introduces Tokyo brands that exhibit innovative ways of passing on traditional, high-quality crafts to future generations.

"The fish have good, healthy minerals such as calcium, and tsukudani keeps well for a long time without artificial preservatives," Tamaki explains. The dish is an example of the Edo period's eco-friendly production and consumption practices, she adds.

Ironically, interest in traditional tsukudani is waning in Japan. "It is seen as old-fashioned," Tamaki says. Her wine mariage is, in part, a bid to reignite interest among Japanese customers. So far, it has been a hit with her compatriots. International customers are also open to the wine mariage idea. Tamaki says she hopes they will feel the depth and sweetness of Shinbashi Tamakiya's products, as well as invent new pairings of their own.

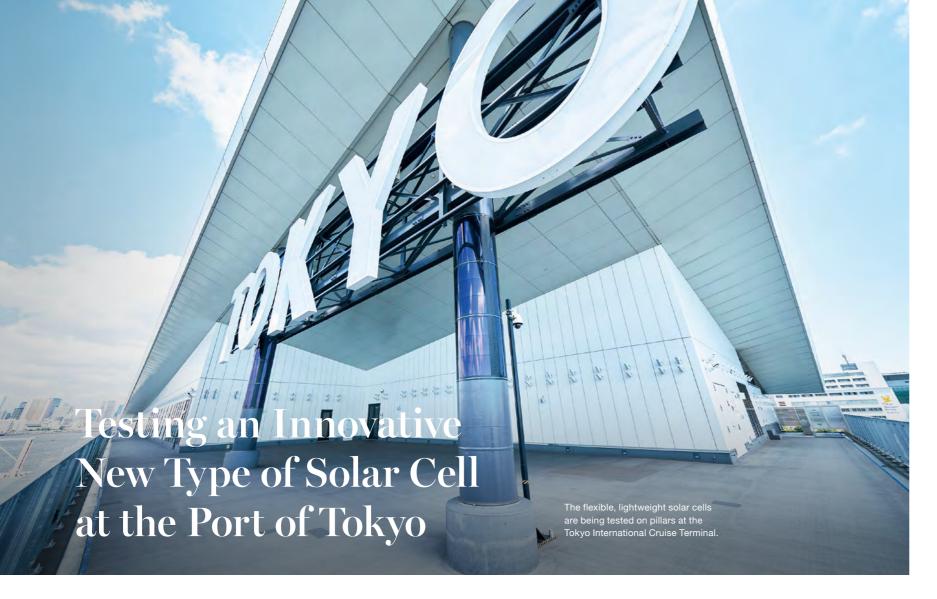
Tamaki and her team, too, will surely continue to honor traditional Tokyo cuisine while embracing new ideas inspired by modern, international culinary culture.



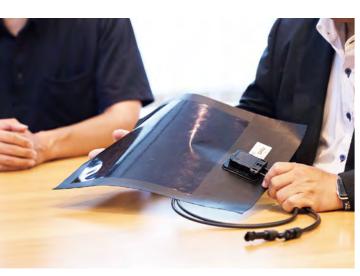
The dessert "beans and yogurt chantilly" utilizes the shop's simmered black beans.



Capellini pasta with lemon and olive oil sauce is paired with clams and Japanese pepper.



Tokyo is promoting the implementation of light and flexible next-generation solar cells, which can contribute to decarbonization.



The thin, flexible solar cells are bendable and can be installed on curved surfaces.

A s the world races to reduce greenhouse gas emissions to mitigate climate change, companies like SEKISUI CHEMICAL CO., LTD. are developing new technologies to generate clean electricity. One such highly anticipated technology is iodine-based, film-type solar cells using a specific type of crystal structure.

In contrast to stiffer, heavier silicon solar cells—which currently command a global market share of over 97 per cent—film-type cells are lightweight and flexible, meaning they can be installed in places where silicon cells are untenable. SEKISUI CHEMICAL and its partners are testing the cells in various environments, including at power plants, in agriculture, on building exteriors, floating in swimming pools, and at public facilities such as the Tokyo International Cruise Terminal.

"In crowded places, which is often the case in Japan, there is not enough land for traditional silicon solar cells," says Hisata Shinichi, a marketing team senior expert with SEKISUI CHEMICAL's solar cell project. The company is intentionally targeting places with high solar potential but which are unsuitable for silicon cells, he explains.

Alongside high expectations, manufacturers are also working to overcome remaining challenges, including understanding how outdoor conditions will impact the cells, ensuring safe usage of—or finding alternatives to—the cells' lead content, and lowering production costs. However, strong interest from Japan's national government, local governments, and partner corporations shows that there is plentiful support to overcome these challenges.

A Verification Test Site that Anyone Can Visit

The Tokyo Metropolitan Government (TMG) aims to take the lead in promoting the visibility and implementation of next-generation solar cells, as part of its efforts toward decarbonization.

Following an installation at a wastewater treatment facility, in May 2024 the TMG and SEKISUI CHEMICAL launched a verification test at the Tokyo International Cruise Terminal to moni-

tor the cells' power generation efficiency and response to the bay area's environmental conditions.

The implementation team wrapped the cells around pillars on the cruise terminal's fourth-floor balcony, which also offers a sweeping view of the port. Electricity generated by the cells is stored in batteries and used to help illuminate the terminal's towering "Tokyo" sign directly overhead.

"We hope this type of solar cell will become familiar to citizens," Hisata says. "At the cruise terminal, anyone who wants to see the cells up close can do so without needing special permission." The TMG was one of the first organizations to partner with SEKISUI CHEMICAL to help test and promote these cells, he adds.

"In addition to tests at TMG-owned facilities, this fiscal year the TMG has begun to subsidize development costs for companies that conduct demonstration projects in Tokyo, to encourage early commercialization," explains an official from the TMG's Bureau of Environment, Climate Change Division. "We will continue to study and implement measures necessary to expand the use of next-generation solar cells."



Tokyo International Cruise Terminal

Aiming for a Decarbonized Power Supply

If all goes to plan, these solar cells will soon be hitting the market. As SEKISUI CHEMICAL prepares for commercialization, the company aims to source from domestic suppliers as much as possible. Luckily, Japan boasts the world's second-largest production share of the cells' primary material, iodine, and which is especially concentrated in a natural gas field near Tokyo.

Learning from supply chain disruptions during the COVID-19 pandemic, Hisata says his company is "working on procuring materials that can be adequately supplied even in the event of a disaster." Domestically produced materials, although sometimes more expensive than imports, can also lower the cells' lifecycle greenhouse gas emissions by reducing transportation-related emissions.

"Alongside improving service life and power generation efficiency as technological development progresses, we expect mass production will lower manufacturing costs and create an environment in which anyone can easily generate power anywhere, including at their home, using these solar cells," notes the Bureau of Environment official.

Informed by the ongoing verification test results, the TMG and SEKISUI CHEMICAL will continue working to refine solar cell technology and expand its deployment, aiming for a decarbonized power supply.

Never-Ending Battle Against Infectious Diseases

Tokyo iCDC is a network of experts who provide advice based on scientific evidence on infectious disease control measures of the Tokyo Metropolitan Government.

he Tokyo Center for Infectious Diseases Prevention and Control, known as Tokyo iCDC, was established in October 2020 amid the COVID-19 pandemic at the initiative of the Tokyo Metropolitan Government (TMG).

"Normally, a national center for infectious disease control is created by a country, but the fact that this system has been established by the TMG is quite a milestone," said Tokyo iCDC Director Kaku Mitsuo.

The center has nine teams of experts as well as individual task forces, involving more than 80 experts.

"Tokyo iCDC is a virtual intelligence network that brings together experts in various areas of infectious diseases from all over Japan online," Kaku explained. "It is a brand new, unprecedented organization."

Since its establishment, Tokyo iCDC has, via the TMG's monitoring conferences, analyzed relationships between the movement of people and the spread of

infection, while providing detailed information on mutant strains.

During the pandemic, the center also offered direct support at elderly care facilities and hospitals where mass infections occurred, while distributing brochures to residents to share information about COVID-19. "We were very active in information literacy and risk communications," he recalled.

The TMG has established the "Tokyo Model" as a comprehensive health and medical care delivery system for COVID-19. The administration, medical institutions, the people of Tokyo, and experts from Tokyo iCDC have formed a united front to deal with the disease.

"Front-line experts fully engage in discussions with the TMG, and then present the results to citizens of Tokyo and to medical professionals," he said. "The comprehensive response is a very important feature.



Tokyo iCDC Director Kaku during this interview

Pillars of Future Tokyo iCDC Initiatives

Tokyo iCDC advances its initiatives organized around the following three pillars in order to realize the vision of Tokyo being a city resilient against infectious disease

Upgrading Intelligence functions

Upgrading Tokyo iCDC's intelligence functions by expanding its networks and strengthening its studies and analysis structure

Promoting collaboration with the Tokyo Metropolitan Institute of Public Health and the Tokyo Metropolitan Government initiatives at academic symposiums, international conferences, etc.)

Upgrading Tokyo iCDC back-office functions -in_July 2023, the Survey and Analysis Section was established within the Infectious Disease Control Division, expanding survey, analysis, and data management functions)

Broadening the scope of Tokyo iCDC activities from COVID-19 to cover all infectious diseases, supporting effective infectious disease response by the Tokyo Metropolitan Government

Collaborating with the lead departments within the agency regarding all infectious diseases in addition to restructuring the taskforce

Stengthening preparations for unknown infectious diseases (Considering prevention, detection, and treatment measures against infectious diseases originating from animals)

Securing and developing human resources skilled in infectious disease medicine (Training infectious disease citicians and public health physicians based on training programs formulated by the iCDC)

Working to increase the infectious disease prevention plan (basic plan to comprehensively promote infectious disease prevention) from the formulation stage

Providing advice across a wide range of fields such as building a resilient city

Conducting public education initiatives to residents about infectious diseases to increase the infectiou resilience

Pillars of Future Tokyo iCDC Initiatives

We believe this has led to Japan and Tokyo, along with New Zealand, having an extremely low mortality rate compared with other OECD members," Kaku said in his evaluation of the Tokyo Model.

As COVID-19 was downgraded in May 2023 in Japan to class 5, the same level as seasonal influenza, the role of Tokyo iCDC has changed. "We are moving from contingency to normal circumstances," he said. "We have faced a variety of challenges, so it is necessary to create a robust system during normal times," he continued. "We must look ahead to the next pandemic."

Tokyo iCDC currently has three pillars of future initiatives. The first is to upgrade its intelligence functions: the center will strengthen its study and analysis function as well as expand its networks. It will also cooperate with similar facilities at home and abroad, while introducing the TMG's initiatives to academic conferences.

The second is to broaden the scope of its activities from COVID-19 to cover all infectious diseases. It will strengthen its preparations for unknown infectious diseases and work to secure and help develop human resources.

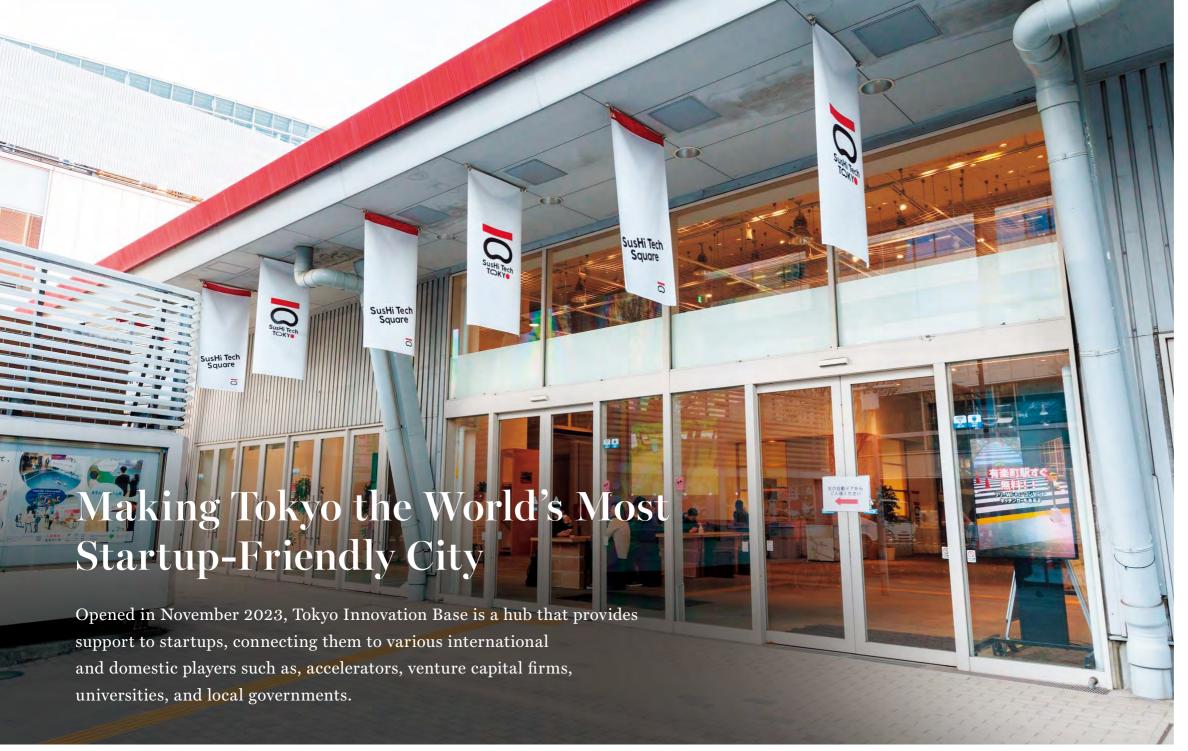
Thirdly, it aims to increase the infection resilience of society overall and contribute to creating a sustainable city. The center will advise the TMG on medium- and long-term infection control measures and help boost awareness about infectious diseases in an effort to increase the infection resilience of local communities.

The TMG has also made efforts to disseminate information to travelers from overseas and foreign residents in the capital. "Tokyo is a cosmopolitan metropolis with some 700,000 people from other countries," he said. The TMG sends out information not only in English but also in various other languages, while providing information to embassies in Tokyo. "We would like to provide the same kind of information not only within Japan but also to the rest of the world, and work to create a system that allows people to live a safe and secure life in Tokyo," he said.

In order to achieve its objectives, the data and knowledge accumulated to date are regarded as significant assets. "We must not lose what we have gained over the past four years. The lessons learnt at the risk of life will be invaluable in the next step," he said.

"Infectious diseases are an eternal challenge. There is no end to the battle. No one knows what will happen in the future. We will overcome these challenges through our network, which will also encourage people to work together with a spirit of caring for each other. That is the best vaccine. I am convinced that we can create a resilient society."

 $9 \hspace{1.5cm} 2$



Tokyo Innovation Base is located on the second and third floors of SusHi Tech Square.

S ince Tokyo Innovation Base (TIB)'s opening, it has become an important base where startups and their supporters can gather and interact. Featuring a large event space that can fit around 300 people, the base has a variety of functions that serve different needs. Events and support programs allow founders to connect with various players such as cohorts, supporters, and senior entrepreneurs who can help assist them through the challenges of startups.

Tokyo is the richest city in the world with a nominal GDP of over 1 trillion dollars, while also being one of the cities with the highest quality human resources

and safest environments in Asia, making it an ideal spot to start a new venture. TIB is one of the concrete ways the Tokyo Metropolitan Government (TMG) is seeking to reach its "10x10x10" goal, as part of its startup strategy Global Innovation with STARTUPS. By 2027, the TMG aims to increase the number of Tokyo-based unicorn companies, startups created in Tokyo and the number of public-private partnerships with the TMG by 10 times over.

TIB functions as a node for innovators from around the world, and also serves as a point of contact for overseas startups and entrepreneurs looking to expand into Tokyo, serving various support needs ranging from business to lifestyle. Founders can learn about the business environment in Tokyo and also get opportunities to connect with large companies.

According to the Global Startup Ecosystem Ranking published by US research company Startup Genome, which ranks the world's cities in order of ease of startup growth, in 2024 Tokyo drastically rose to 10th place from 15th place in 2023.

One possible factor behind this was an increase in the number of large-scale exits, with the city becoming more active in developing its ecosystem. However, the amount of funding raised per startup is still small compared to the rest of the world, and in order for the city to develop further, it is necessary to nurture startups targeting not only the domestic market but also markets overseas. As such, TIB's main goal is to become a node for innovation around the world, while also acting as the first point of entry for international startups and investors wanting to expand into Japan.

"Create Together" Through Unified Public-Private Partnerships

As of the end of May 2024, 30 companies and organizations were part of the first wave of TIB Starting Members, who worked with TMG officials to plan and carry out projects since the organization's launch. The second wave of Starting Members kicked off a few months later in September 2024, and companies, organizations, universities, and local governments across Japan are applying to become TIB Partners, who organize events and programs that aim to support startups.

Asia's largest startup conference, SusHi Tech Tokyo 2025, will be held at Tokyo Big Sight in May 2025. This will accelerate open innovation in Tokyo by further enhancing opportunities for startups to negotiate with investors and interact with other cities around the world. The two initiatives of TIB and SusHi Tech Tokyo will create a cycle of continuous innovation.



One of the many events held at TIB



Garden Plaza on the lower level takes advantage of the difference in elevation, and boldly incorporates rooftop greenery.

Photo: courtesy of Mori Building Co., Ltd.

Azabudai Hills: Harmony Between People and Nature

Tokyo's new neighborhood offers a healthy way of living, combining biodiverse green spaces with community and sustainable practices.

B orn in November 2023, Azabudai Hills is a Vertical Garden City* that offers offices, residences, hotels, shops, medical facilities, and even an international school, all within walking distance. The developer, Mori Building Co., Ltd., consider this verdant skyscraper city, or Vertical Garden City, as the ideal model for urban living.

Operating on the concept that envisions green urban development for the next 100 years, the Tokyo

Metropolitan Government is pushing initiatives to protect, cultivate and utilize Tokyo's greenery. Azabudai Hills is an excellent example of a private-sector project that stands alongside the TMG's initiatives to increase greenery in the capital.

The area around Kamiyacho Station on the Tokyo Metro Hibiya Line was once a long, narrow, valley-like plot, densely populated with small wooden houses and buildings. After around 35 years of planning, Azabudai



Adjacent to the Central Green, an event space with a characteristically designed roof that can be used for many purposes.

Hills is bringing new energy to the area, which over the decades had evolved to become an important spot for cultural and international exchange, due to the

presence of many hotels and embassies.

A completely new type of neighborhood for Tokyo, Azabudai Hills has three towers and lower-level buildings built around a plaza where people can gather, all surrounded by lots of greenery. Despite its central location in Japan's often crowded capital, the total area of the plaza is around 6,000 square meters, with around 2.4 hectares of green space. Taking advantage of the hilly terrain, water flows through the neighborhood, and a wide variety of plants are spread throughout the site.

Unlike the conventional way of planning buildings first and then greening the spaces in-between, the developers at Mori Building took a new approach of creating a seamless landscape with a plaza at the heart of the space. The idea was to create an environment surrounded by refreshing greenery, as contact with nature brings about a more human way of living.

A rich variety of plants seamlessly connect the various areas of Azabudai Hills. A certified arborist selected around 320 plant species based on the existing vegetation that used to flourish on this eastern edge of the Musashino Plateau. The new Sakuraasa-dori street is lined with ten kinds of trees, and ten varieties of

cherry trees with different blooming times have also been planted throughout the area, to ensure strolls in springtime are a delightful experience.

Easy access to art and cultural events also play an important role in making Azabudai Hills a vibrant, exciting place to live or visit. As multifaceted community connections that result from human interactions become richer over time, Azabudai Hills offers multiple public artworks and galleries throughout the complex.

Even more importantly, Azabudai Hills is entirely powered by renewable energy and promotes decarbonization and recycling, with additional goals of

proactively protecting biodiversity, conserving energy, and extending healthy life expectancy.

It will be exciting to see what possibilities this Vertical Garden City will open up in the next 50 to 100 years. By promoting initiatives like the creation of greenery in city centers together with urban development, the TMG's efforts aim to transform Tokyo into a sustainable city that exists in harmony with nature.



Public artworks are placed throughout the plaza. Shown is "Miss Forest in Tokyo" (2023) by Nara Yoshitomo.

Photo: courtesy of Mori Building Co., Ltd.

^{*}Vertical Garden City:

An urban concept envisioned by Mori Building. By consolidating land and creating a compact city through high-rise development they aim to realize a new urban environment that solves many of the issues conventional cities face.

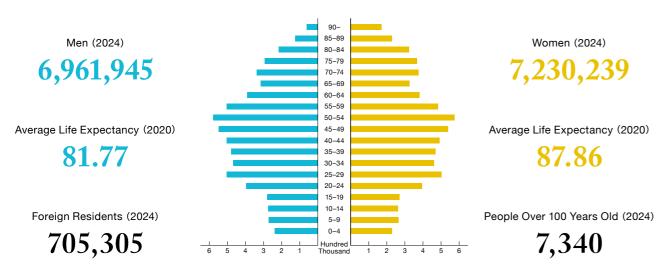
Tokyo Basics

POPULATION

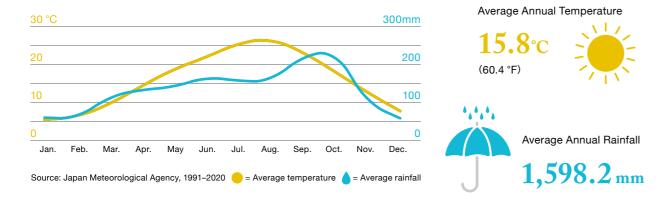
Total Population of Tokyo (2024)

14,192,184

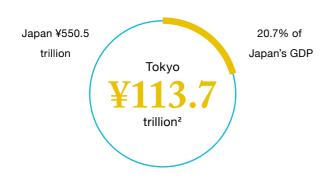
Population Age Structure by Gender (2024)



AVERAGE MONTHLY TEMPERATURE AND RAINFALL



TOKYO'S GMP1 (Nominal) as a Share of Japan's GDP (FY2021)



1. GMP: Gross Metropolitan Product 2. US\$1.01 trillion 2021 annual average conversion rate ¥1 = US\$0.0089

TOKYO'S BUDGET (Initial FY2024)

¥16,558



* US\$109 billion ¥1 = US\$0.0066 (Bloomberg, October 31, 2024)

World 2,199.94 sq. kilometers Tama Area Tachikawa Hachioji AREA 2,199.94 sq. kilometers 23 Special-Ward Area Ueno Shinjuku Tokyo Shibuya Shinagawa

SISTER AND FRIENDSHIP CITIES / STATES*

Islands

- 1 New York (USA)
- ② Beijing (China)
- ③ Paris (France)
- 4 New South Wales* (Australia)
- Seoul (South Korea)
- 6 Jakarta (Indonesia)
- 7 São Paulo* (Brazil)
- 8 Cairo (Egypt)
- Moscow (Russia)
- 10 Berlin (Germany)
- 11) Rome (Italy)
- 12 London (UK)

ANNUAL FOREIGN TOURISTS (2023)



19.5

SYMBOLS



The somei yoshino cherry tree was developed in the late Edo period to early Meiji era (late 1800s) by crossbreeding wild cherry trees. The light-pink blossoms in full bloom and falling petals scattering in the wind are a magnificent sight to behold.



Ginkgo biloba is a deciduous tree with distinctive fan-shaped leaves that change from light green to bright yellow in autumn. The ginkgo tree is commonly found along Tokyo's streets and avenues and is highly resistant to pollution and fire.



The yurikamome gull has a vermillion bill and legs. It comes south to Tokyo in late October every year and sojourns at the surrounding ports and rivers until the following April. A favorite theme of poets and painters, it is also called miyakodori (bird of the capital).



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