

Tokyo

2020 Special Issue



Photo by Tokyo 2020 / Shugo TAKEMI
Tokyo 2020 Olympic Games medal

Precious Medals from Friendly Teamwork and Synergy

A huge number of old electronic items are recycled to help create Olympic and Paralympic medals.

by **Matthew Hernon**

Thanks to a ground-breaking initiative and a Herculean effort from the Japanese public, with contributions from embassy officials, foreign dignitaries, etc, every single one of the approximately 5,000 medals that will be handed out at the Olympic and Paralympic Games Tokyo 2020 will have been made from metal recycled from used electronic devices. The Tokyo 2020 Medal Project led to the collection of over 6 million used mobile phones as well as other devices such as laptops, handheld games, and cameras. The gold, silver, and bronze material required for the medals was extracted from 78,985 tonnes of used products under the theme “Be better, together—for the planet and the people.”

According to the Tokyo 2020 Organising Committee, “The initial collection rate was slow, however, it increased sharply in the last few months of the project as a sense of excitement built throughout Japan.” For many, it was a chance to contribute used appliances filled with memories such as mobile phones used in school days. “As well as hitting our target, it was great to hear many different stories,” says a Tokyo 2020 spokesperson. “By cooperating with educational institutions, it was also a great opportunity for children to learn about the existence and value of urban mines and the significance of recycling home appliances.”

Four years ago at Rio 2016, around 30 percent of the medals came from similar recycled materials. To get that

number up to 100 percent is a remarkable achievement. To find an appropriate design for the medals, a competition open to professional designers and design students was held. It was a rule to apply with a set of designs for both Olympic and Paralympic medals. Over 400 applied and that number was then whittled down to three each for both the Olympic and Paralympic medals.

Judges discussed their opinions openly before choosing Kawanishi Junichi as the Olympic medal designer. “I learned about the application in a public relations email from a design association,” says Kawanishi. “It is amazing that the Olympic Games will be held in this country, but I never thought it would be possible to participate in a competition to design medals for the top athletes in the world.”

Kawanishi quickly sent in his application and then set about creating a unique design featuring a “ring of light” that reflects light wherever it is viewed; “I had the idea of polishing a gemstone of talent and creating a diamond in the form of an athlete who puts their heart and soul into the Games,” he says. “I thought I could express their passion, energy, effort, and glory with a shining light. The most difficult thing was trying to produce a circle of light that could

express diversity and harmony among people from all over the world. It was important to create a curved surface that reflects light from any angle.”

He realized his objectives and in July 2019 was named the competition winner. A month later came the announcement that Matsumoto Sakiko had been selected to design the Paralympic medals. “My boss told me about the competition and I decided as there would not be such an opportunity again, I should go for it,” says Matsumoto. “With the design, I had three objectives. To express our Japanese character, I used the design motif of the traditional Japanese folding fan known as *ougi*. The athletes bringing people together regardless of nationality or ethnicity are represented by the pivot point that holds all parts of the folding fan together, and the tactile elements of the design are finished so that everyone could appreciate the medals more than just visually.”

The medals that will be used this summer will be remembered not only for their beautiful design, but also because of the way the material was collected. The Japanese public played a huge role in the creation of the eco-friendly medals, which each tell a story.

The reverse side of the three Olympic medals designed by Kawanishi Junichi shining brightly due to their “Myriad Circle” (page left), the Paralympic medals, also the reverse side, with the Japanese folding fan motif, designed by Matsumoto Sakiko (below).



Photo by Tokyo 2020 / Shugo TAKEMI
Tokyo 2020 Paralympic Games medal

One Cloth, a Thousand Ways of Using It

Furoshiki, blending traditional and modern ideas will be the ultimate, versatile Tokyo 2020 Games souvenir.

by **Kirsty Bouwers**



On the left, the Tokyo 2020 Olympic Tokyo Somekomon Wrapping cloth is shown simply as a scarf. On the right, the Tokyo 2020 Paralympic "Furoshiki" wrapping cloth is transformed into a practical and very charming handbag.

Furoshiki, or wrapping cloths, have a long-standing history in Japan, having been used as far back as the Nara period (710–784). At the time, they were simply known as *tsutsumi* (a wrapping), and were generally used to store valuables such as the clothing of the nobility. Their use became widespread a few centuries later, with people using them as cloth pouches when visiting a public bath. The word to describe the cloth thus changed to *furoshiki*: a mix of *furo* (bath) and *shiki* (a spread). Using them was an easy way for everyone to carry belongings. It also ensured one's clothing would not be mixed up with that of other bathers', and its size meant the cloth could be used as a bath mat if needed.

Beyond the bathhouse, *furoshiki* were also used as makeshift handbags, perfect to store things when wearing a pocketless kimono. They also started to be used as a way to wrap items such as bento boxes or gifts. With no prescribed size for *furoshiki*—they just need to be square—and a myriad of ways to tie them, it is a staple in many a Japanese household. Indeed, the versatility of *furoshiki* is what has kept this cloth relevant for centuries.

One of the more common ways of using *furoshiki* is as a bag for bottles and small items. Depending on the object, the cloth can be simply wrapped around the item and knotted into a clever bundle for easy handling. It is also possible to transform it into a proper carrier bag, either by tying a few points together or adding custom handles. It functions as an eco-bag, an eco-friendly and beautiful alternative to plastic bags and wrappings, while being incredibly easy to use, as it can wrap around anything regardless of shape.

Furoshiki used in this way also perfectly captures the spirit of *mottainai*, a Japanese phrase often invoked to express regret at wasting things.

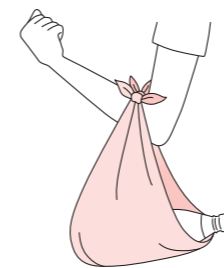
Furoshiki can even be used in emergency situations. If a natural disaster hits, the cloth can double as a makeshift sling or a nursing cover. Those that are water-resistant or repellent can even be used to carry water. Packing one of these cloths in an emergency kit is thus near-essential.

It is this heritage and innate adaptability that is embodied in the *furoshiki* products created for the Olympic and Paralympic Games Tokyo 2020. All have the Kumi-ichimatsu-mon motif, derived from the traditional Japanese checkered pattern called *ichimatsu moyo*, and have the Tokyo 2020 Games emblem on the edge. The blue *furoshiki* is a traditional Japanese indigo, a color expressing refined elegance and sophistication. The *furoshiki* cloth is created with a special dyeing technique, the Tokyo Somekomon technique. It can also be used as a scarf; its texture is soft to the touch and comfortable to wear.

Another unique product of the Tokyo 2020 Games is the *furoshiki* wrapping cloth—a *furoshiki* that comes with a set of handles, so you can transform it into a proper handbag that truly captures the essence of the Tokyo 2020 Games.

For a personal touch, try one of the myriad of folding techniques, from a simple single knot carrier to elaborate gift wrapping. The *furoshiki*'s incredible versatility means it is a very easy-to-use bag. Imbued with the Tokyo 2020 Games spirit, this simple cloth has something for everyone.

Some practical uses of *furoshiki*



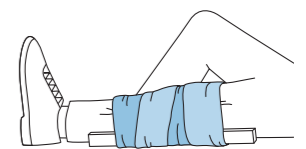
The four corners can be tied together to make a tote bag.



Diagonally folded into a triangle with both ends of the long side knotted together makes a sling.



The same triangular shape can be used as a diaper for a baby.



The *furoshiki* can also be used as a bandage or to secure splints around a broken bone.



A Symphony of Symbols, the Harmonic Language

The new sports pictograms for the Olympic and Paralympic Games Tokyo 2020 build on their unique heritage for a truly inclusive experience.

by **Kirsty Bouwers**

The largest sporting events in the world, the Olympic Games and Paralympic Games, have an inherent challenge: communicating information to athletes and spectators from across the globe. How do you manage to clearly convey what is when or where, without having to translate it into a dizzying variety of languages? After being introduced on a large scale at the Tokyo 1964 Games, pictograms have been the go-to solution for every Games since. The 50 sports pictograms of the 33 Olympic sports and 23 for the 22 Paralympic sports represented at the Olympic and Paralympic Games Tokyo 2020 pay homage to and build on this legacy, based on the branding vision of “Innovation from Harmony.”

Japan has had a strong connection to the visual for millennia. From traditional woodblock prints to modern-day manga, visual communication has been an enduring part of everyday life. Even the Japanese writing system, using kanji (Chinese characters), partly relies on the visual to convey meaning. The latest additions to this Japanese communications line-up are emoji, the symbols now used across the globe to show emotion without resorting to text.

The Tokyo 1964 pictograms fit neatly into this lineage as both a typically Japanese solution and as

game-changers. The first Olympic and Paralympic Games to be held in an Asian country, perhaps it was the first Games to have to deal with such serious language barriers. To overcome these barriers, Japanese gestated pictograms were proposed which used simple lines and shapes. Pictograms were developed not only for the various venues, but also for strategic locations such as airports, emergency facilities, banks, toilets, and more. Their introduction put the spotlight on graphic design to convey information, which set the tone for its future use across the world.

The sports pictograms for the Tokyo 2020 Games are a continuation of this unique history. Two years and a tremendous amount of development went into making the designs, says graphic designer Hiramura Masaaki who worked on the design. Building on the pictograms of the Tokyo 1964 Games, which emphasized the point of “transmitting information accurately,” he evolved and developed, while respecting the accomplishments of his predecessors, an innovative set of pictograms for a new era. Based on a huge amount of video and photographic materials, he created original versions and, in consultation with sports federations and related parties, produced sample sports

pictograms that captured the most impressive and attractive moments of each competition.

The resulting sports pictograms all utilize the same shade of blue used for the Tokyo 2020 emblems, creating a harmonious look, while showcasing the unique dynamism of athletes. They will be used on posters, tickets, and websites, as well as appear on maps, signboards, guidebooks, and more. As they are part of the core brand identity, they will be used prominently at every competition venue during the Games, with various licensed products set to be embossed with these new pictograms.

In another nod to 1964, these pictograms are also going to make life easier for foreign tourists moving around Tokyo on their way to one of the many events. The idea is to use them at stations and along the way to venues to create a clearly signposted route that will make the journey much smoother.

Various initiatives are underway in preparation for the Tokyo 2020 Games so that everyone can enjoy the best experience. This includes making it free from both hard and soft barriers, and the use of pictograms is one example. Harmonizing visitors’ experiences by creating a lovely symphony of symbols? 2020 is set to be full of such innovations.

Art Meets Life

Enchanting performance art transforms the urban landscape for the Tokyo Tokyo FESTIVAL.

by Rosie Ball

On a cool September evening people start slowly filing into Adachi Wholesale Market, just a few minutes' walk from Senjuohashi Station in northeastern Tokyo. In its off-hours, the typically bustling marketplace is calm and quiet. However, tonight a 4-tonne cargo truck is parked in



The Adachi Wholesale Market parking lot is filled with light, sound and dance of DANCE TRUCK TOKYO, one of the 13 special events brought by the Tokyo Tokyo FESTIVAL.



The performance is brought to the people, in a truck.

the middle of the square, flanked by two geometric sculptures with hundreds of threadlike ribbons streaming out onto the cement. Glittering in the nearby light projections, the ribbons make it appear as if the truck is caught in the web of a huge, mystical spider. Beyond the market, a Keisei train zooms past and lights from the surrounding buildings shine bright in the darkness. While Tokyo life goes on as usual outside, many of us are not sure what we are about to see here.

The audience is here for DANCE TRUCK TOKYO, a mobile dance performance project produced by the Japan Dance Truck Association as part of the Tokyo Tokyo FESTIVAL (TTF). TTF is an initiative by the Tokyo Metropolitan Government and the Arts Council Tokyo (Tokyo Metropolitan Foundation for History and

Culture), installing cultural events across the city in the lead up to the Olympic and Paralympic Games Tokyo 2020. Its aim is to generate excitement and enliven the city, celebrating the Tokyo 2020 Games as not just a sporting festival, but also as a cultural festival.

Among the TTF programs, "TTF Special 13" is a program in which 13 projects were selected through an open application process focusing on three core values. The first is "Challenge the Mirai (Future)," emphasizing the power of art to shape cultures. The second is "No Borders," giving people of all ages and backgrounds from Japan and beyond the chance to interact with the arts. The third is "Old meets New," highlighting the intersection between tradition and innovation that lies at the heart of Tokyo's unique culture. Of the 2,436 applicants only 13 were chosen and DANCE TRUCK TOKYO is one of them.

In the year leading up to the Tokyo 2020 Games, the truck with built-in LED lighting and sound system will pop up in 15 different locations across the Tokyo metropolis, including central Tokyo, the Tama district in western Tokyo, and the outlying islands, playing host to numerous cutting-edge artists, sound, and lighting engineers.

Produced by Okazaki Matsue and curated by renowned choreographers Higashino Yoko, Shirai Tsuyoshi, and Suzuki Yukio, each free event is "unique and site-specific, incorporating the particular landscape and personality of the particular location."

At exactly six o'clock the show begins. Immediately the audience is hypnotized, unsure of exactly what they are watching and unable to look away. Each 15-minute performance subverts traditional notions of "dance," skillfully creating drama and meaning through subtle movement, repetition, light, sound, and sometimes even humor.

"We've never seen anything like this before," says a mother standing with her five-year-old daughter who is jumping up and down excitedly. "This kind of thing makes a big impression on children." A Canadian-Japanese couple standing a little farther back echoes these sentiments, keeping an eye on their son and daughter darting through the crowd. "This whole setup with the truck in this historic market creates a kind of surreal experience," they say. "Our kids were a little scared because it was a little mysterious. But they chose to stay. They were asking us, 'what are we supposed to feel?'"

Tonight's event has reached people far and wide through various means—social media, leaflets, word of mouth. Producer Okazaki and curator Higashino are passionate about bringing Japanese contemporary dance into the public consciousness. Their goal is to have the performing arts "not only in theaters but also in the city... the more we do it in public space, the more expansive it will be." Their ultimate goal is to touch the hearts of the audience in some way. "Japanese contemporary dance is still not well-known," Okazaki says, "I want everyone to see it." Traditional venues are often inaccessible to the public and they sometimes have a harsh impact on the environment. Transforming the truck, which is equipped with solar panels, into a stage is also "a step towards energy-saving and sustainable performances."

This is the perfect opportunity for overseas visitors to immerse themselves in Tokyo's unique cultural aspects—music, dance, theater, and traditional performing arts. The Tokyo Metropolitan Government's choice of performances, delivered to even the smallest corners of Tokyo, demonstrates the city's devotion to promoting creative talent. The Tokyo 2020 Games is not only a sporting festival but a cultural festival, and it is through sharing culture that we can build a harmonious future.



Various programs including arts, dance, music, and theater were held.

Photo: Ichioka Yūjiro (TAM. inc)



Shooting for the Stars

Wheelchairs produced by a collection of small factories in the partially industrial town of Ota are attracting the attention of domestic wheelchair basketball athletes.

by **Matthew Hernon**

One of the most eagerly anticipated events at every Paralympic Games is wheelchair basketball. Initially devised as a rehabilitation exercise for injured war veterans in the United States, the sport has spread to more than 100 countries, intensifying the competition worldwide. It is a fast and frenetic sport that was first featured at the Paralympic Games in Rome in 1960 and debuted for women in Tel Aviv eight years later. Featured at every Paralympic Games since, it has become increasingly popular over the years.

For countries participating in the Paralympic Games, the performance ability of the equipment used makes a big difference in competitiveness. The wheelchairs used for playing basketball are conceived to be the player's legs and so they are designed to give maximum performance.

With this in mind, a leading wheelchair manufacturer has enlisted the aid of various small factories in Ota Ward, and by combining their technical expertise and skills they are producing excellent wheelchairs that are light and easy to maneuver. One of their aims is for their machines to be adopted by teams in the Tokyo 2020 Paralympic Games.

Ota Ward, which is home to Haneda International Airport, is a key industrial base with many small to medium-sized urban enterprises known as *machi-koba* specializing in machinery and metal processing. They are famed for finished products with high-precision and short delivery times, mainly made possible through neighboring networking.

There are currently around 3,500 *machi-koba* in the

Wheelchair basketball is a fast and furious sport, and demands the best, both of the players and on the equipment.



The *machi-koba* of Ota Ward are constantly upgrading their manufacturing techniques and are keeping pace with growing new demands.

highly praised by some members of a Tokyo-based basketball team who have been playing in them this season.

"I have been impressed by the changes," says one of the players on the

team. "I am heavy but have a weak torso. Using the previous models, I would often sink in the seat when trying to generate power. With these new designs, I can move easily. These chairs are ideal for me."

"My previous wheelchair from a different manufacturer broke down three times a year," adds one of his teammates. "As my torso is weak, I need a strong backrest. These chairs feel sturdier and more dependable. Also, these new white wheels are smaller and harder than the old ones I used to use; I can move my chair more quickly in the way I want."

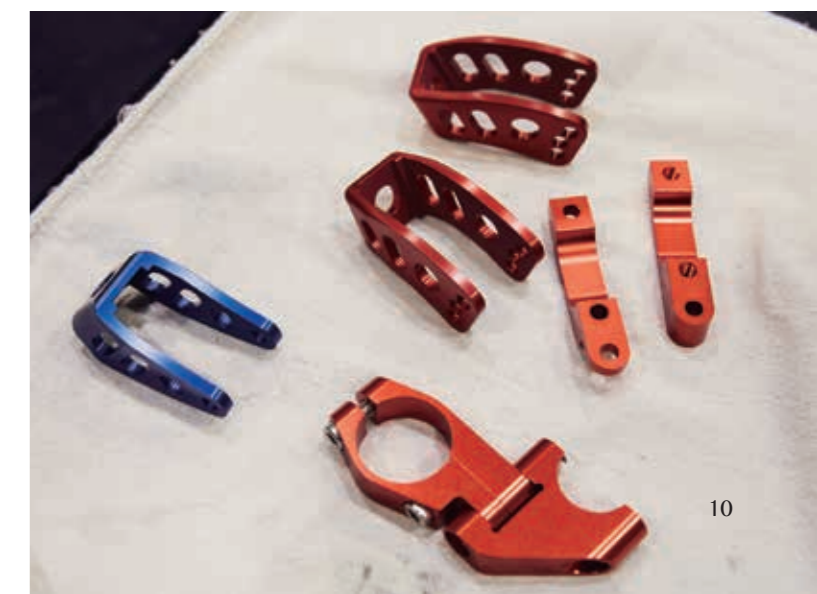
Ota Ward's *machi-koba* are not limited to machinery and metal processing. They are also entering new industrial fields such as healthcare and agriculture. And so just like the basketball players using the equipment manufactured there, the industries in Ota too, are aiming high, and shooting for the stars.

According to the company president, what makes working in Ota Ward so special is the camaraderie and sense of community spirit among the various *machi-koba*. That feeling of togetherness intensified further following the 2008 global financial crisis.

"Until that point, many factories felt they could make money individually, but since then you see those companies working closely together," he says. "Everyone knows each other and there is a lot of respect between the different organizations. We pass on things we are unable to complete ourselves, which means everyone can focus on what they do well. Employees then go above-and-beyond to create high-quality products."

A great example of this is the wheelchairs manufactured in Ota. Durable, dynamic, and very flexible, they were

Some of the light and strong aluminum components specifically manufactured for wheelchair basketball.



Going Green

Tokyo is building hydrogen power for 2020 and beyond.

by **Tim Hornyak**



One of the Tokyo Metropolitan Government's new fuel cell buses at bus depot near the Kasai Rinkai Park, facing Tokyo Bay. These buses are completely powered by hydrogen.

If you have been to Tokyo Station recently, you may have seen one of Tokyo's futuristic zero emission public buses. The fuel cell electric vehicle (FCEV) buses run on hydrogen, a cleaner energy source than the light oil that powers most public buses in Japan. Manufacturer Toyota Motor Corporation began commercial production of the

Fuel Cell Bus SORA in 2018 and is now rolling them out in greater numbers.

SORA is an acronym for sky, ocean, river, air, which represents the earth's water cycle, as water is the only thing the buses emit. The hydrogen fuel cell system was adopted from Toyota's Mirai FCEV, one of the first hydrogen-powered sedans to be sold commercially. In addition to being a zero emission form of public transport, the SORA fuel cell stack can function as an emergency power station in times of disaster. It has a maximum output of 9 kilowatts and can supply 235 kilowatt-hours, so it would be possible to power the lights in a gymnasium shelter for about five days.

In the battle against global warming, more and more municipalities around the world have recognized and promoted hydrogen-powered vehicles as clean alternatives to carbon-emitting cars, buses, and trucks. The Tokyo Metropolitan Government (TMG) began operating two FCEV buses in March 2017, running them between Tokyo Station and the Tokyo Big Sight international exhibition hall in the Odaiba waterfront district.

As of November 2019, 16 SORA, each able to carry up to 78 passengers, are running in Tokyo starting from the waterfront area, including one operated by a private company. The TMG plans to increase the SORA fleet to 70 for the Olympic and Paralympic Games Tokyo 2020. Escalated rollout of SORA requires development of regular hydrogen-refueling stations; as of

September 2019, there were 14 stations in operation with a further 7 under construction. The TMG is aiming to have 150 hydrogen stations by 2030.

The SORA also provide passenger comfort and safety, and these two aspects are being further enhanced. Aside from their sleek looks and a surprisingly quiet ride with minimal vibration, the interior has universal design features such as seats that automatically fold into the wall, creating space for wheelchairs and strollers. Launched in August 2019, a new version has an optional automatic steering and deceleration function that brings the vehicle right up to the bus stop curb so that wheelchair and stroller users do not have to struggle with gaps between the sidewalk and the bus itself.

Technology to monitor its surroundings and a connected driving feature called Intelligent Transport Systems communication are employed. The bus can receive information from other vehicles as well as roadside infrastructure about oncoming vehicles, traffic signals, and pedestrians, for instance warning drivers about hazards when making right turns. The system allows for buses traveling in a convoy to maintain contact and an appropriate distance from each other so they will not get separated at traffic lights and bus stations. This can help buses run on time, minimizing inconveniences for passengers. Meanwhile, eight high-definition cameras in and around the bus provide the driver with detailed views of the exterior to help ensure passenger and pedestrian safety. Even in the unlikely event of a driver suddenly falling ill, passengers can press emergency brake buttons that cause the bus to automatically come to a safe halt.

The Harumi waterfront district, which is visible from Odaiba, is the venue of the Olympic and Paralympic Village for the Tokyo 2020 Games. The village will be partly powered by hydrogen produced from renewable energy in Fukushima Prefecture. This is one way to promote reconstruction support for the prefecture, which was damaged by the Great East Japan Earthquake in 2011. This place will become a model of an environmentally advanced city after the competition. Tokyo continues to move toward a cleaner future while contributing to regional recovery.

Making Crowds Smart

Tokyo is tackling overcrowding at large-scale public events.

by **Tim Hornyak**

About 10 million spectators are expected for the Olympic and Paralympic Games Tokyo 2020. With some 40 million travelers from overseas anticipated for the whole year, there will inevitably be congestion on the roads and sidewalks, as well as in the train stations of the capital. In the past, crowds have been an unavoidable aspect of any large sports event, sometimes producing frustration among attendees, and occasionally overly congested situations. Researchers today, however, are trying to harness computers to minimize these problems.

Scientists at a major Japanese telecom's research institute have developed technology for crowd-flow optimization using AI that can be used for sports and other events that attract big numbers. It is based on predicting the flow of people and forecasting where congestion will occur with a technology called multi-agent simulation that attempts to reproduce the movements of each person in the crowd. Directing the "human flow" with AI and accumulated human know-how from past experience can help reduce congestion and potentially hazardous situations. The laboratory has been doing research into human flow simulation and optimization since 2015. It has conducted experiments at Saitama Super Arena, one of the Tokyo 2020 Games venues, to predict congestion using video and mobile phone location information.

The team has been researching test case scenarios based on popular fireworks displays. In one simulation, the system analyzed 1.57 million possible routes for some 85,000 attendees at a fireworks event. The system's optimization technology found the most efficient routes for the attendees in only two hours—previous methods would have taken a whole year. The routes identified by the program have shorter wait times and fewer dangerous areas compared to simulations without any crowd flow control. By directing crowds based on recommendations from the technology, fireworks fans can get home faster and safer. The laboratory is continuing



For example, even after going to a crowded fireworks venue, people will be able to return home without stress due to human flow guidance technology.

to develop the system so it can analyze events in real time.

While knowledge and expertise accumulated from previous Games will guide crowd-control strategies, the Tokyo 2020 Games will have a number of new venues that have yet to host large-scale international events. This new technology and new methods and insights gained from the recent groundwork carried out by the research institute may also be used to supplement human experience at the Games.

The goal is that spectators will be able to enjoy the events and return home with minimal stress.

The Tokyo Metropolitan Government (TMG) is also striving to reduce congestion in the capital, not only for the Games but year-round. Under its Smooth Biz campaign, which calls for teleworking and flexible hours, the TMG is working with private-sector companies to implement various measures under Travel Demand Management to

ease congestion on roads, rails and other impacts on public infrastructure ahead of the 2020 Games.

"Smooth Biz is a new initiative to ease congestion during the Games," Tokyo Governor Koike Yuriko told a press conference. "Our hope is that as flexible work styles gain traction, we will see increased productivity and greater participation for people from a more diverse range of backgrounds."

The Secrets of Cleaning Up the City

Spogomi turns picking up trash into a festive competition that helps clean up Tokyo and the city's rivers and waterside.

by **Rosie Ball**

On a clear Saturday morning a crowd of people assemble in Tama Center in Tokyo's western suburbs for a very special kind of sports tournament. The people of all ages and many different nationalities are gathered together for Spogomi, a coined word combining sport and *gomi* (trash), a program that turns picking up litter around Tokyo into an exhilarating team game that involves strategy, action, and fair play. More than just a fun and friendly source of entertainment, the tournament raises awareness about the



effects of littering in a hands-on, constructive way.

The rules of the contest are simple: teams of up to five people have one hour to pick up as much trash as possible, and then return to the starting point where they sort and weigh their findings. Each team's litter is graded on a valued scoring system, with different types of trash earning different amounts of points. The fun lies in the challenge of choosing which trash to prioritize while factoring in time constraints. It is a system easy enough for children to grasp, and for adults to enjoy the challenge.

"Sports are fun," explains Spogomi founder and organizer Mamitsuka Kenichi, "so I thought I could turn something like this, which is good for society, into a pleasurable and rewarding game." Mamitsuka held his first tournament in 2008, and since then 930 events have been held nationwide with a total of over 88,000 participants.



Adults and children alike enjoy the fun challenges of the Spogomi held recently at the Tama Center.

"The sports aspect is an attractive point to people, and kids are especially serious about competing with someone," he says. However, the most important part is shifting people's perception of waste. "Before participating you never think about the trash around you, but on your way home you're more aware of it."

As today's game draws to a close, one male participant in his twenties reflects on his own shift in outlook. "I usually don't litter but I never thought about actually picking up trash myself," he says. "I didn't think it could be a sport, but once you take part you realize it is actually

fun." Another young woman expresses similar sentiments. "Thanks to being involved, I think I will become more conscious of garbage," she says.

Becoming more aware about trash is a step in the right direction towards making Tokyo a more environmentally friendly city. Today's Spogomi competition was held around the station, but they are also held along riverbanks and at beaches. Until recently, about half of Tokyo residents did not know the term "marine litter." The Tokyo Metropolitan Government (TMG) has bolstered its efforts to curb generation of marine litter as well as to smoothly gather and process it. Collection and disposal programs are being carried out around the Port of Tokyo, the Izu Islands located in the sea south of mainland Tokyo, and the Ogasawara Islands located even further south. Educational materials, including a short film about marine litter, have also been adopted in elementary schools, encouraging children to reflect on these issues in class.

Community-based activities such as Spogomi and the environmental education measures implemented by the TMG are at the forefront of raising awareness about trash. By encouraging people to reconnect with their own surroundings, these initiatives are paving the way for real environmental improvement. Tokyo is famous as one of the cleanest cities in the world. To keep the city and its waterside beautiful, it is important to keep building a sense of community and respect for nature in each individual. This is the secret to cleaning Tokyo.



Vehicles that Drive Themselves

Tokyo is pushing ahead with mobility-as-a-service initiatives.
by **Tim Hornyak**

Cars that can drive themselves were once the stuff of science fiction, but they are now on the roads and taking on an increasing share of the burden of driving. With automakers around the world rolling out autonomous driving platforms, observers are looking to Japan, home to leading car companies as well as a rapidly aging population that could benefit from the technology, for a glimpse of the future of driving.

There are several arguments to be made for self-driving vehicles. Proponents say they will be safer than traditional vehicles because they will eliminate human error, which in the United States is associated with 94 percent of serious accidents. They may reduce traffic congestion and vehicle emissions, which are associated with global warming. They can help address shortages of drivers for public transit, and open up mobility options for those with few options, such as elderly people living in rural areas.

The changes to the automotive industry, as well as society as a whole, could be staggering. It is no wonder, then, that companies, governments, and organizations in Japan are feverishly moving ahead with autonomous driv-

ing policies and research and development.

One research lab affiliated with a leading Japanese carmaker notes that the number of companies working on autonomous driving jumped to more than 250 in 2017 from only a few in the year before. One reason for this is that cloud networks can now deploy solutions using deep learning, a form of artificial intelligence technology. For its part, the lab is using deep learning and other means with an eye to creating the world's safest self-driving vehicles suitable for mass production. For instance, it runs numerous computer simulations to test its autonomous driving platform's response to conditions such as nighttime driving, inclement weather including fog, and pedestrians appearing in front of the vehicle. However, the lab has not forgotten that many people enjoy driving, and thus instead of replacing drivers, it envisions self-driving cars as teammates that can take over when drivers feel tired.

The public sector is working with industry to realize the dream of autonomous vehicles. The Japanese Cabinet has paved the way for Level 3 autonomous driving on public roads, which allows drivers to safely turn their attention

away from driving, for instance to watch a movie. Level 4 autonomous driving requires even less intervention by drivers, and Level 5 means the vehicle handles all aspects of driving.

The Tokyo Metropolitan Government, meanwhile, is advancing the spread of self-driving vehicles in several ways. It established the Tokyo Self-Driving One Stop Center to experiment with and answer questions on the new technology. Over a two-year period since it opened in September 2017, the center received more than 500 inquiries from 64 businesses. It also supported 25 trials, including Japan's first trial of a remote-type autonomous driving system. Since then, the number of consultations and demonstrations has continued to increase. Other mobility as a service (MaaS) experimental projects at the center include self-driving hybrid-drive taxis linked with airport limousine buses, in which the city worked with a taxi company and an autonomous driving company. Also autonomous all-electric buses connect the airport and tourist information center on Hachijojima Island, located about 300 kilometers south of mainland Tokyo.

Toyota also announced e-Palette, a multipurpose electric self-driving car for MaaS. Couriering goods, mobile restaurants with kitchens, and mobile offices are some of the various expected purposes it is to be used for.

The Japan Automobile Manufacturers Association (JAMA) is planning a variety of autonomous driving demonstrations ahead of the Olympic and Paralympic Games Tokyo 2020. Approximately 80 autonomous vehicles (Level 2–4 autonomous driving) of 10 JAMA member companies will take part in the demonstrations around Haneda International Airport, on expressways between the airport and central Tokyo, and in the waterfront area.

JAMA sees the effects of such initiatives going far beyond 2020. It expects the Tokyo 2020 Games to be a stepping stone to future mobility and to leave a legacy of autonomous driving infrastructure, improved regulations, and increased social acceptance. It also expects exponential development to create a society with zero traffic accidents in which everybody has freedom of movement. It is one way in which the Tokyo 2020 Games are changing society.



Some of the exciting concept vehicles that are being realized for our future autonomous driving lives.

© TOYOTA MOTOR CORPORATION

they say that this strong relationship is an important factor in the success of their business. In order to deal with family crests, after all, one should be part of a close, happy family to be able to understand and reflect the strong bonds that tie together the history of any family. In the beginning, the business was chiefly concerned with hand-painting kamon onto kimono. Kamon is only painted on very formal kimono, with the craftsmen using a *bun-mawashi* (bamboo compass) and an ink-dipped brush to create the extremely intricate curves of each emblem. Kamon are also all created using only perfect circles and straight lines. These crests were originally only held by houses of the imperial court, but were gradually adopted by samurai and commoners. Unlike Western families' coat of arms, Japanese kamon are generally more abstract in their symbolism and kamon are used by organizations other than families. Clients can request crests whose form could be inspired by favorite words or concepts or names and the like, that reflect identity or brand image.



A kamon delicately engraved into the bottom of a glass. Very pleasing as a celebratory gift.

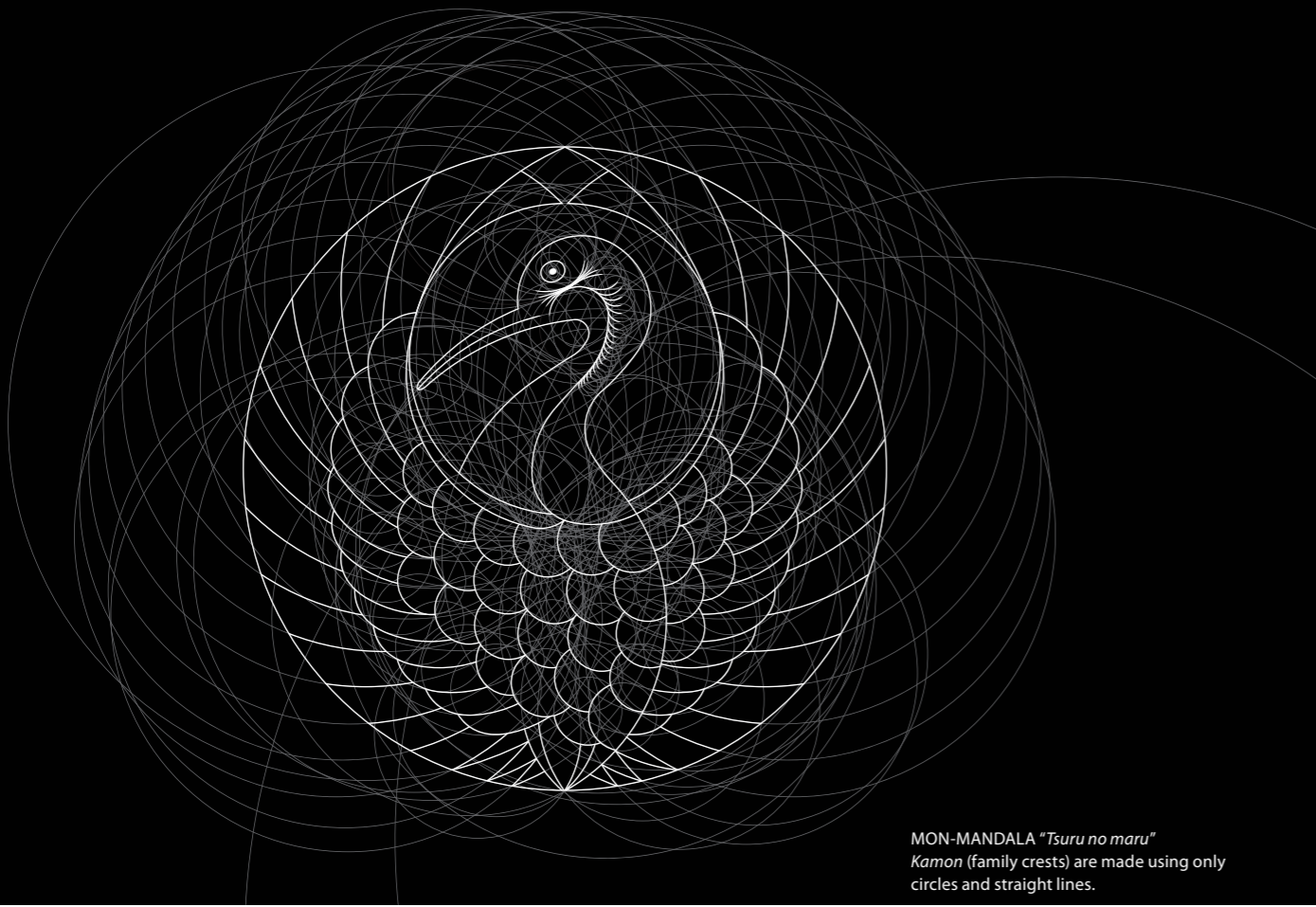
with Yohji mastering design software and thereby opening up an entirely new world of possibilities in terms of what kind of designs they could create as well as the genres into which they could expand. As a result, they are now able to combine a traditional craft used since the Heian period (794–1185) and spread to the commoners in the Edo period, with the requirements and aesthetic desires of modern artists, interior decorators, and fashion designers, in addition to brands in need of package and product design.

Some of their most notable works include the kamon for a Nihonbashi shopping complex, a range of artworks

displayed inside a 2018-launched hotel, and a collaboration with one of Japan's top fashion designers for the brand's autumn/winter 2019 clothing collection, which was presented on the runway at the Paris Fashion Week. Aside from their evident artistic talents, Shoryu and Yohji agree that they owe part of their current success to an appearance on a popular TV program in 2016, after which they garnered much attention and began receiving more regular orders, about once every two weeks, from overseas.

Of course, despite surging forward into the future, the father-and-son artisan duo will always maintain the more tradi-

tional side of their business—that is, creating original family crests. In doing this, they say, it is important to think about how to represent the family's name while taking into account any specific requests from the client. They still consult the pictorial book of crests called *mon-cho* in which as many as 3,000 types of kamon have been recorded since the Edo period. And they still use the old-school bamboo compass. Because true Japanese artisans understand that without the “old,” we could never have the “new.”



MON-MANDALA “Tsuru no maru”
Kamon (family crests) are made using only circles and straight lines.

The Art of Kamon

How one father-and-son team is transforming the traditional culture of creating Japanese family crests into an in-demand modern art form.

by Anne Lucas

Over the last few years, Tokyo has seen a range of its revered traditional arts and crafts experience a modern revival of sorts. Several local businesses, which have been steadfastly creating traditional Japanese products since the Edo period (1603–1868), have found unique ways in which to balance the respected “old” arts with new and innovative production methods and usages for these items. In 2016, Tokyo Governor Koike Yuriko launched

the Edo Tokyo Kirari Project to highlight the companies leading this trend. The businesses selected to be part of the project are all praised for their high quality products and superior skills, as well as for their determination to pass on Japanese culture to future generations.

One of the companies being honored by the project consists of father-and-son team Hatoba Shoryu and Yohji, who work side-by-side as *monsho uwaeshi* (artisans of family crest design and painting) at their studio in Inaricho, on a quiet backstreet in Tokyo's *shitamachi* (downtown) area, just a few minutes' walk from Ueno. Together, they are taking the time-honored skill of creating *kamon* (family crests) to new, contemporary heights with their stylish sensibilities and incorporation of digital technologies.

As third- and fourth-generation *monsho uwaeshi* respectively, Shoryu and his son Yohji come from a long line of artisans with a history that stretches back to 1910. The pair work well together, getting along as friends, and



The father-and-son team at work using both ancient and modern technology.

In 2010, exactly 100 years since their family business was founded, Shoryu and Yohji decided to make a significant change and transformed the company into a more comprehensive design studio. There were a few key reasons for this shift. They considered the fact that kimono are increasingly only worn for more formal occasions, and that there are more commercial institutions using kamon to represent their name, so they realized the potential for new opportunities. They also embraced digital technology,



The *bun-mawashi* (bamboo compass) has been used for centuries in the design of *kamon*.

Planting Seeds for the Future

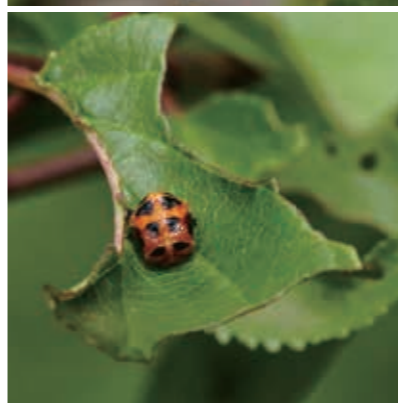
One botanical garden's mission: ensure the continuation of Tokyo's native flora.

by **Kirsty Bouwers**

The center of Tokyo has plenty of famous parks and gardens: think of Ueno Park, Yoyogi Park, or Shinjuku Gyoen National Garden. One garden, a short 30-minute train ride away from the city center, stands out for its commitment to biodiversity. Famed for its 5,000-strong rose garden, the Jindai Botanical Gardens, located next to the ancient Jindaiji Temple in Chofu City, western Tokyo, is the only botanical garden operated by the Tokyo Metropolitan Government.

Prior to the opening of the gardens in 1961, it was a nursery for trees set to be replanted along Tokyo's streets. Nowadays, the sprawling site is home to a staggering amount of plant life native to Tokyo, making it an excellent place to enjoy the city's flora in all its guises. It is home to around 4,800 species, with an estimated 100,000 plants on the premises. Laid out in a beautiful, symmetrical sunken garden, the famed rose garden alone has 400 types of roses. That includes the so-called "Olympic Torch," a special type of rose created in 1966, in honor of the Tokyo 1964 Olympic Games.

To learn about the breadth of the gardens' collection, visitors should head to the Center for Plant Diversity, located across the road on the northern side of the gardens. The center, which is devoted to preserving and protecting plant life diversity, is divided into three main sections. Each is an ecological system representative of the namesake area: the hilly, fertile Musashino plain set around the Tama River basin in the midland of Tokyo; the mountainous Okutama region in the west; and the volcanic, coastal areas of the Izu Islands located in the sea south of mainland Tokyo. Located even further south, the Ogasawara Islands are also represented, and to recreate the subtropical climate of that region and protect the plant life against winter, the plants are held in a greenhouse, reopened in 2016 after renovations, in the adjacent botanical gardens. All of the zones carry a number of species which have become less common or endangered in their native habitats,



Here the Great Greenhouse can be seen just beyond the famed rose garden at the Jindai Botanical Gardens. Other images show examples of the vast diversity of the plant life to be seen at the Jindai Botanical Gardens and the Center for Plant Diversity in June.

says center manager Horie Takayuki.

The study of these endangered species is the main focus of the facility's research. The center was originally opened in 2012, with the aim of preserving natural history and disseminating information on these matters. It also functions as an education center of sorts, with people being able to stop by and ask questions about the vegetation they encounter.

Many of the species in the center are considered endangered, with the reasons for their decline varying from the introduction of non-native plants, to human interference, and the destruction of their natural environment. Keeping the plants in optimum surroundings is at the forefront of the center's efforts. The position of each plant is decided based on its favoured conditions, such as access to light and shade. An artificial stream has also been installed to further emulate pristine nature.

The difficulties lie with the rarer types of vegetation, notes Horie, as what they need might be unknown. Sometimes it is a case of trial and error to ascertain what works best for these plants. Even if these plants are replanted into the soil they originally came from, they might not do well. It is a complicated process that leads to valuable research, he says.

Research is not the only thing the center espouses, though. With human interference being a key factor in the loss of biodiversity, the center also seeks to show visitors how they can be part of the solution. Horie has a few simple suggestions: be curious about your environment but respectful, enjoy the flora, but take only photographs and leave only footprints. And do not post the location of a rare plant on social media as that will only endanger it further.

Thus, a visit comes with a special bonus. The Jindai Botanical Gardens as a whole are a stunning place to visit because the sheer variety of plant life ensures the gardens are in bloom year-round. Yet it is the educational aspect of the Center for Plant Diversity that has a lasting impression. It is through the center's work that visitors may realize that many of these plants are endangered, which leads to a newfound appreciation of Tokyo's native flora—and a zeal to protect it. To stop and smell the roses has never been for a more worthwhile cause.

Journey through Time

The Edo-Tokyo Museum offers 400 years of history, in just a few hours.

by **Rosie Ball**



© Edo-Tokyo Museum

The bustle of the Edo period is apparent in this miniature 1/30 in scale of the Ryogoku Bridge district on the east side of Edo.

Japan's illustrious Edo period (1603–1868) ended in the 19th century, and thanks to the Tokyo Metropolitan Edo-Tokyo Museum it has never been more accessible. Beloved by local and international visitors alike since its establishment in 1993, the Museum provides a space where visitors can see, hear, and touch their way around 400 years of vibrant history, physically tracking the city's evolution from Edo to present day Tokyo.

Located in Ryogoku, inside a unique elevated-floor building designed by architect Kikutake Kiyonori, the journey to Edo begins with an awe-inspiring replica of Nihonbashi Bridge, which is about 8 meters wide and about 25 meters long, half the actual size. The bridge is our first



© Edo-Tokyo Museum

People wearing kimono walk around westernized streets in a detail of the miniature replica 1/25 in scale of Ginza "Bricktown" in the Meiji era.



The modern exterior of the Edo-Tokyo Museum. A wealth of history, culture and tradition is to be found inside.

impression of the sheer scale of Edo period ingenuity, transporting visitors right into the cultural center of Edo. On the other side of it, visitors will find various miniature replicas, including the vibrant streetscapes of the Nihonbashi area and immense households of the powerful feudal lords. With binoculars placed at each model, visitors can peek into the personal lives of the miniature figurines, whose circumstances, facial expressions, and clothing paint an immersive picture of the people of the time and the world they lived in.

There are also hands-on exhibits. For example, visitors are invited to take a seat inside a replica of a gorgeous palanquin. During the Edo period, members of powerful families would sit inside of this compact compartment as up to four people carried them to their various destinations. Entering the palanquin brings forth a compelling mix of sensations—the glee of entering a space that was once mostly used by the elite classes, and the surprise of discovering that these compartments were actually very small.

After witnessing the lifestyle of the Edo period, subsequent displays are laid out in chronological order, the timeline of Tokyo's progress toward modernization. In the Meiji era (1868–1912) section there are two high wheel bicycles that look quite difficult to ride, featured in front of a full-sized replica of a newspaper office, all innovations of that period. And further along, it is possible to take a peek inside the nostalgic kitchens and bathrooms of a Showa era (1926–1989) housing complex. Most impressively, the number of permanent exhibitions is around 2,000, and since these are routinely modified and upgraded, repeat patrons to the museum are never disappointed.

As varied as the permanent exhibition is, so too

is the diversity of visitors. "I knew nothing, so this is all very new for me," says one woman from Australia, "I like the way it progresses from the old to the new... it's very well done." A French couple wandering around the "Life of the Townspeople" corner is more affected by the extent of the exhibition. "It is great because we can see the history on a human scale," they say, "we can *feel* Edo." Regardless of age, culture, or

prior knowledge of Japanese history, reactions from tourists are overwhelmingly positive.

Perhaps one of the greatest highlights of the museum is how it caters to a variety of languages. Audio guides in 13 different languages are available, as well as free volunteer-guided tours in 8 languages. Even if visitors do not use these guides, touch screen panels can be found throughout the exhibition hall, allowing them to easily tap into information written in the language of their choice. For the visually impaired, information in braille, including maps, are to be found throughout the exhibition hall.

In the lead-up to the Olympic and Paralympic Games Tokyo 2020, the Edo-Tokyo Museum has its eye on the future as well as the past. The recent interior renovation of the facility has improved accessibility so every visitor can have a more comfortable and interactive experience. The museum seems to combine the social and cultural aspects of Tokyo's history to encourage people from home and abroad to think about the future of the city and their aspirations here. More than ever, Tokyo is opening its doors so that the world can get to know it better.



© Edo-Tokyo Museum

A full-scale replica of a typical performance shows the exuberance of kabuki, the most popular form of entertainment in Edo.

Good Food for Everybody

Halal and vegan dining options have never been easier to find in Tokyo.

by Rosie Ball



A delicious bowl of halal ramen with deep-fried chicken.

Anyone who visits this city will agree: Tokyo is home to some of the best food in the world. Whether visitors are searching for a high-end dining experience, an affordable meal, traditional Japanese cuisine, or something modern, finding the right place to eat has never been easier. In recent years, a diverse range of restaurants and food options has begun popping up across the city to accommodate the growing number of international visitors. This includes an array of exciting halal and non-animal product options aimed at Muslim and vegan customers. No matter what the dietary requirement or preference, absolutely everyone in Tokyo can enjoy delicious food.

Bursting with casual dining options and cafés, the Ebisu neighborhood is heaven for food-lovers looking for a bite to eat. Nestled in a quiet side street is a certified halal ramen restaurant with an extensive and delicious menu. With its warmly lit interiors, this place has the atmosphere of a traditional Japanese ramen shop, while providing a small prayer space for customers to use in privacy. The restaurant is one of the over 100 restaurants and food stores featured in the *Tokyo Muslim Travelers' Guide*, a comprehensive booklet with lots of Muslim specific information, including finding halal food and prayer spaces around the city, issued by the Tokyo Metropolitan Government.

The concept for the halal ramen chain began to grow in 2015, when Shimasue Satoshi realized that millions of Muslim people around the world were unable to eat traditional Japanese pork-based ramen. In 2016 he opened his first halal shop specializing in chicken-based ramen, bringing Japanese-style ramen to a more international audience. "Since pork cannot be used as any ingredient in halal cuisine, the issue is how to produce the tasty flavor," he says. "It is rare to find ramen of a chicken-based soup with deep-fried chicken. This allows us to offer ramen that is fun, delicious, and voluminous." With its rich, creamy broth, the spicy chicken ramen is a favorite among tourists from overseas. As Shimasue points out, "Many customers can eat ramen for the first time." They can also try other popular dishes such as the halal *gyoza*, fried then steamed dumplings, which usually contain minced pork, but here the *gyoza* is made with chicken and tofu. "The theme is to provide ramen that foreign clientele will enjoy," he says. In fact, the food served is so delicious that Japanese regulars enjoy it as well.

There are many other notable restaurants that have uniquely international perspectives in Tokyo. Right at home amongst Aoyama's many cutting-edge fashion boutiques and trendy cafés, a specialty shop was opened in 2011 by Ota Yukari, who wanted to bring people together over dishes of 100 percent vegan food and to celebrate organic, pesticide-free farming, and natural cultivation.

"For the meals I was providing I wanted to concentrate on the vitality and power of plants," says Ota, "where people can eat the same meal at the same table without worrying about differences in religion or constitution, and think 'this is delicious!'" The menu's focus is on its

range of delicious juicy burgers containing zero animal-derived ingredients. It also offers fresh salads, and South Indian style curry, using traditional Japanese fermented seasoning and Asian spices to create thoughtful, tasty dishes. "However, the hidden popular menu items are the vegan sweets," she says. Made entirely without dairy products, eggs, or white sugar, the vegan cheesecake is thick, creamy, and very memorable. According to Ota, people even travel from overseas just to try it.

One of the key concepts at this vegan restaurant is to serve as "a second home when you come to Tokyo." This idea extends beyond the menu and into the restaurant's spacious interior. From the dark herringbone flooring to the cozy suede chairs, eclectic art adorning the walls, and soul music quietly flowing from the speakers, everything about the design says comfort. For the diverse mix of international and Japanese customers, Ota has touched on the universal idea of "the kitchen," a place where anyone will feel welcome, regardless of race, language, or religion.

As the Olympic and Paralympic Games Tokyo 2020 draw closer, international visitors to Japan can feel confident about finding delicious food options that cater to their

One of the astonishing and popular vegan desserts.



© Sugimoto Atsuya

needs in Tokyo. The ever-growing selection of diverse restaurants has something to offer everyone, a chance to make wonderful memories through sharing and enjoying food.



Completely free of any animal-based products, this burger will entice everyone.

© Sugimoto Atsuya

Keeping Up with the Kimono Time

Meet two innovative people inspiring fresh ways to accessorize and wear the traditional garment of Japan as part of a modern wardrobe.

by Anne Lucas

Everyone says, “Tokyo has changed.” In many ways, it has. But in an equal number of ways, it has retained its intrinsic traditions and culture. This feeling of old meets new is evident in all aspects of life here, including in the realms of cuisine, architecture, business, and fashion.

Perhaps one of the most obvious and quintessentially Japanese examples of how the city—and the country, no less—has kept its essence alive is in the fact that we still see kimono on the streets, not to mention on the catwalks. Naturally, as everyday style has modernized, this form of attire is not as prevalent as it once was. It is also perhaps looked upon by the youth as out of date and difficult to wear, taking hours to put on for the unaccustomed.

But deep down, whether they are young or old, and whether they will openly admit it or not, all Japanese love and respect their history and deep culture. So instead of simply giving in to the hurdles of integrating the past into contemporary lifestyles, Tokyo is bustling with creative minds continuously coming up with ways to let the two worlds meet. Two people in particular are working hard to inspire a fresh generation of kimono and *yukata* wearers. Writer, illustrator, and kimono *bancho* (boss) Matsuda Megumi and designer for a bespoke kimono tailor Hiramatsu Gen may have different backgrounds and skills, but they are both dedicated to changing the way people view and wear the traditional garment of Japan.

Growing up, Matsuda says, she enjoyed *ukiyo-e* (woodblock print art) but was not too aware of other Japanese cultural traditions. After traveling abroad to study as a teen, she realized that her foreign friends often took the time to learn more about Japan and its traditions than she did. So she began to observe, look, and listen, and immerse herself in cultural activities



© Matsuda Megumi
Kimono Bancho

A light summer kimono styled with a marine theme.



Kimono *bancho* (boss) Matsuda Megumi.

such as kabuki, shamisen (a traditional Japanese stringed instrument) and *rakugo* (a traditional Japanese art of storytelling). Around that time, she explains, there was a boom in vintage shops and she found herself quickly collecting a variety of different kimono of various colors, patterns, and fabrics. Using her skill as an illustrator and combining her love of manga and pop culture, she began creating drawings that show how to wear and accessorize kimono in a more edgy or *kawaii* (cute) fashion. She gathered the illustrations and knowledge into a book called *Kimono Bancho*, and people started calling her kimono *bancho*.



The casual styling of a kimono from the tailor where Hiramatsu works, with undershirt and hat.

Hiramatsu, by contrast, has been working his way up within a traditional Japanese company that has been tailor-making kimonos for over 100 years. While the main clientele of the tailor has historically been largely female, in 2012 they noticed an increase in male customers, so they decided to launch a store selling a special collection for men. Located right next to Kanda Myojin Shrine, one of Tokyo’s oldest and most important shrines, designated to watch over 108 neighborhoods in central Tokyo, including Nihonbashi, Akihabara, and Marunouchi, the store has a most auspicious location.

A seasoned textile designer, Hiramatsu says that while his tailoring is based on tradition, he enjoys playing with coordination and encourages people to pair their kimono or *haori* (traditional Japanese jacket) with casual clothing such as jeans and a T-shirt. His mission is to update Japanese culture to the present day, and with 10 percent of his clientele now international, it seems he is well on his way to achieving this goal.

Although their styles may differ, one thing that Matsuda and the kimono tailor where Hiramatsu works have in common is their effective use of the internet and social media for attracting new readers and customers. As a result, both have fans from around the world and of varying ages, from 20 up to 70. A quick glance at Matsuda’s Instagram account conveys her sense of playfulness. For example, she favors bright, bold hues and candy colored jewelry; she might recommend using a scarf that your mother used when you were young as an *obi-age* (a kimono accessory that is used to help keep the upper part of the obi belt knot in place). The kimono tailor where Hiramatsu works, on the other hand, presents a more subdued approach with chic tones of navy, sky blue, black, gray, and beige taking center stage.

For both creatives, it is clear that they are highly respectful of kimono traditions, enjoying the age-old allure of the unseen, or the features of which we can only catch a glimpse. At the same time, they understand that the key to updating the look lies in the accessories—and perhaps, ultimately, the attitude.



© Matsuda Megumi
Kimono Bancho

Sandals and record shaped earrings complete the rock themed styling of this *yukata*.

Tokyo Basics

Population

Total Population of Tokyo (2019)

13,953,972

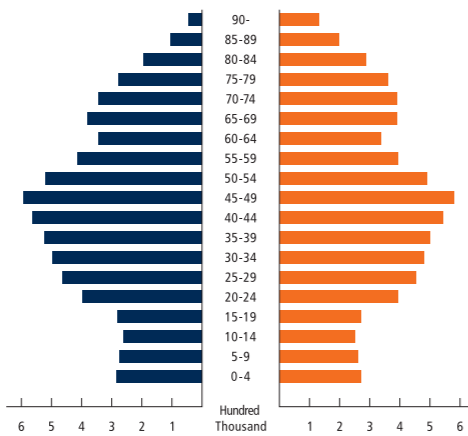
Population Age Structure by Gender (2019)

Men (2019)

6,860,527

Average Life Expectancy (2015)

81.07



Women (2019)

7,093,445

Average Life Expectancy (2015)

87.26

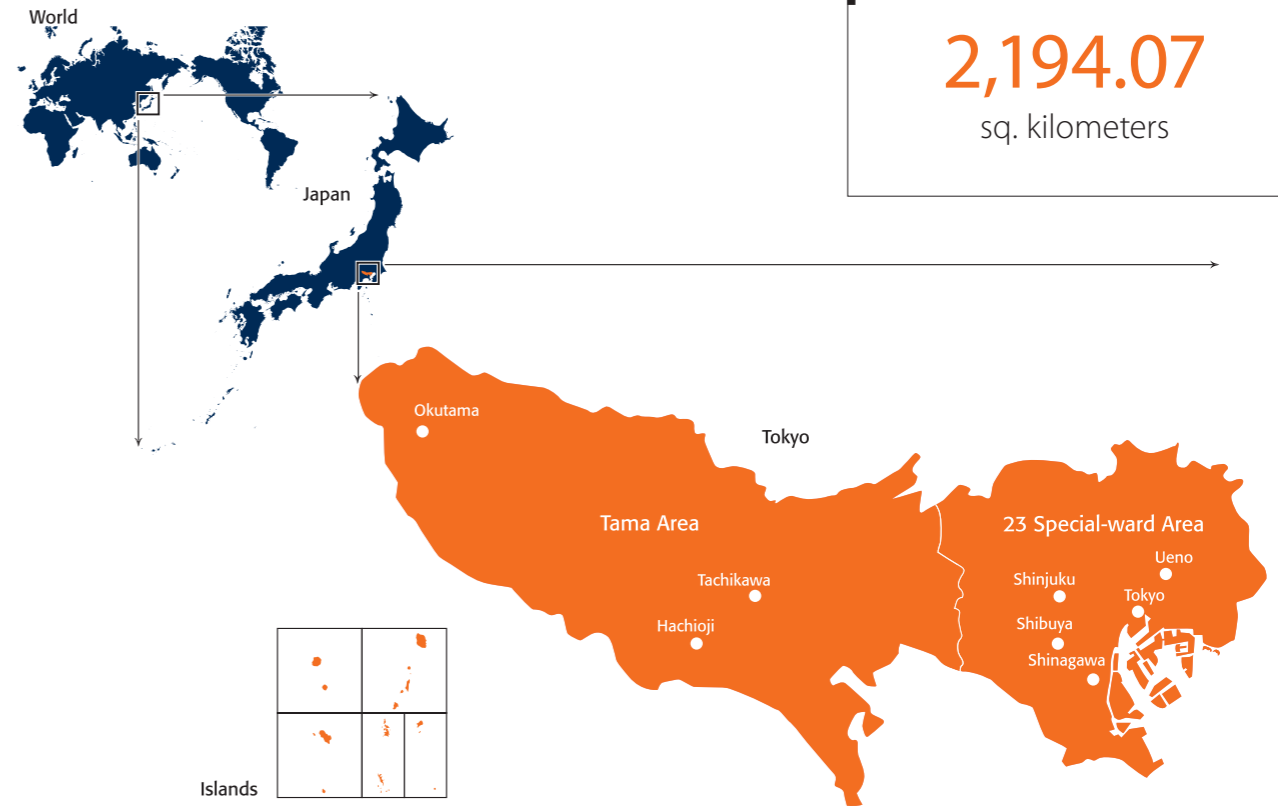
Foreign Residents (2019)

569,822

People Over 100 Years Old (2019)

5,892

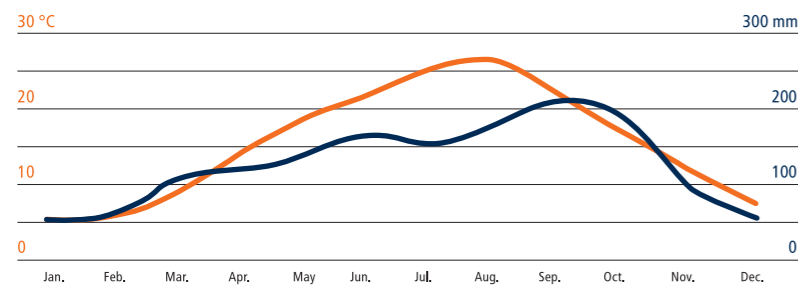
Location



Area

2,194.07
sq. kilometers

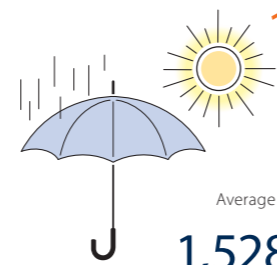
Average Monthly Temperature and Rainfall



Source: Japan Meteorological Agency, 1981-2010. ● = Average temperature, ● = Average rainfall

Average Annual Temperature

15.4 °C
(59.7 °F)



Average Annual Rainfall

1,528.8 mm

Sister and Friendship Cities/States*

- ① New York (USA)
- ② Beijing (China)
- ③ Paris (France)
- ④ New South Wales* (Australia)
- ⑤ Seoul (South Korea)
- ⑥ Jakarta (Indonesia)
- ⑦ São Paulo* (Brazil)
- ⑧ Cairo (Egypt)
- ⑨ Moscow (Russia)
- ⑩ Berlin (Germany)
- ⑪ Rome (Italy)
- ⑫ London (UK)



Annual Foreign Tourists (2018)



14.2
million

A 3.4% increase over 2017

Tokyo's GMP¹ (Nominal) as a Share of Japan's GDP (FY2017)

Japan ¥547.4 trillion



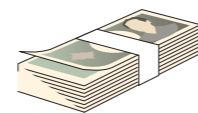
19.4% of
Japan's GDP

¹ GMP: Gross Metropolitan Product

² \$958.8 billion

2017 annual average conversion rate ¥1 = \$0.0090

Tokyo's Budget (Initial FY2018)

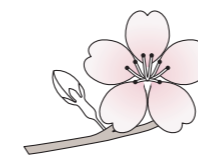


¥14,959
billion*

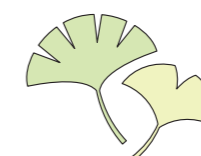
* \$136 billion

¥1 = \$0.0091 (Bloomberg, January 10, 2020)

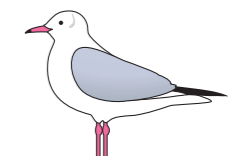
Symbols



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 the 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 vermilion 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 *miyakadori* (bird of the capital).