

niponica

Discovering
Japan

にほにか

no. 27

Special Feature

The Olympics Are Coming to Tokyo





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The guiding rope that links the athlete and the guide

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Special Feature

The Olympics Are Coming to Tokyo

In July 2020, Japan will host the Olympic and Paralympic Games Tokyo 2020. This issue of *niponica* explores the true essence of this innovative sports festival, whose vision, while firmly based on the legacy of the Tokyo 1964 Games, extends far into the future.

Interior image of the Olympic Stadium (rendering): Design Works and Construction Works of Taisei Corporation, Azusa Sekkei Co., Ltd., and Kengo Kuma and Associates JV / Courtesy of JSC
Note: The rendering is intended to show a conceptual image at completion and may be subject to change.



空手

Karate

Gaining Recognition in Global Sports

Japanese Martial Arts

Karate will appear for the first time as an official Olympic sport at the Olympic Games Tokyo 2020. Meanwhile, judo has become immensely popular around the world since its debut at the Olympic Games Tokyo 1964. This article explores the appeal of traditional Japanese martial arts as they open to outside influences and continue to evolve as competitive sports.

Martial art refined into beautiful *kata* forms

Karate evolved as a martial art practiced with bare hands. Originating in an indigenous Okinawan martial art called *te* (“hand,” pronounced “*tii*” in Okinawan), karate was born through a fusion with various Chinese techniques. Over time, it gradually developed and became more sophisticated

in its birthplace, Okinawa. Around the 1920s, karate spread throughout Japan. Japanese emigrants are credited with bringing it to the global stage. Today, karate has become the common language of an international community with more than 2 million practitioners in Japan and 130 million practitioners around the world.

Karate consists of offensive techniques that use the entire body, such as punching and striking with the fist as well as kicking, and guarding techniques to counter the offensive techniques. The purpose of these techniques is not to bring

down the opponent, but mainly to defend oneself against enemies. That is why karate techniques and training envision situations in which one has to defeat opponents who attack from all directions while protecting oneself.

As a sport newly added to the Olympic program for Tokyo 2020, karate will feature two events. One of them is *kata*, which literally means “forms” and refers to the detailed patterns of movement of the sport. In this event, competitors will take the mat alone and demonstrate their *kata*. They will be judged on the expressive power of their techniques in terms of degree of training and proficiency. The outcome of the competition will be determined based on points assigned by the judges. In addition to precision of technique, points will be awarded for spirit and attitude, power, and speed fluctuation—in other words, how real the competitor’s performance appears, as if facing an opponent in a real life situation.

Kata are considered accumulations of the physical techniques used in karate. They are refined by preceding generations of *karateka* (karate practitioners). It is necessary to understand the meaning of the techniques that compose each *kata*—the offensive techniques such as *tsuki* (punching) and *keri* (kicking), as well as the defensive techniques such as *uke* (blocking)—in order to convey the true meaning of a *kata*. *Karateka* learn to perform powerful *kata* by engaging in practice with an earnest mindset as

if confronting real opponents, and training with persistence on a daily basis without neglecting a single aspect of the technique.

The second event, *kumite* (sparring), is a real combat-style competition in which two opponents will face each other in the competition area. They will be awarded points for applying, with a correct form and in appropriate manner, techniques to determined places on the opponent’s body. *Kumite* is distinguished by dynamic offense and defense that use *tsuki* and *keri*. Speedy and energetic, *kumite* has a different appeal than the performance-like beauty of *kata*.

Left page: Shimizu Kiyou, a two-time winner of the Female *Kata* title at the Karate World Championships (Photo: Mutsu Kawamori / Afla)
Right page: Kiyuna Ryo, a three-time winner of the Male *Kata* title at the Karate World Championships (Photo: Abaca / Afla)

How to get the most out of watching karate: beginners guide

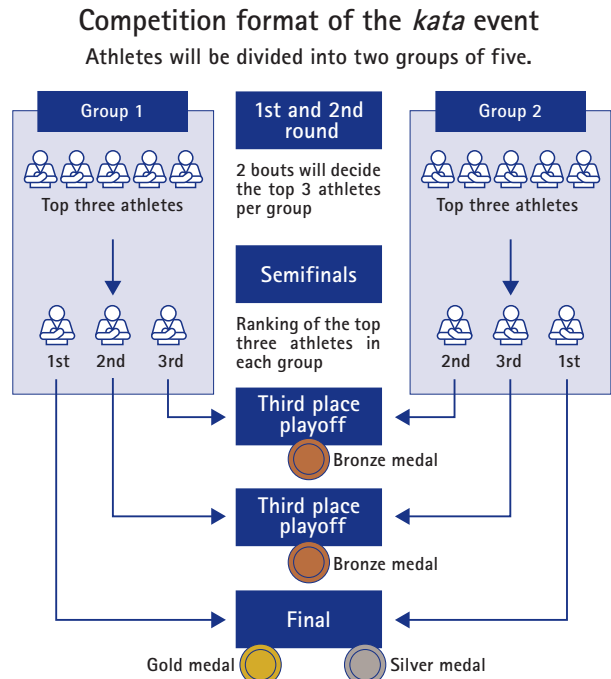
Highlights of *kata*

Learn more about the format of the Olympic karate competition

Ten representatives of countries and regions will compete in the *kata* event at the Olympic Games Tokyo 2020. The athletes who advance to the finals will perform four times in total.

What to watch for

Contestants may use each *kata* only once in the course of the competition. Make sure to pay attention to the strategy and tactics of the contestants as they determine when to perform their best *kata*.



Based on the ranking after the semifinals, third place playoffs will be held between the 2nd-ranked athlete of Group 1 and the 3rd ranked athlete of Group 2, and between the 3rd ranked athlete of Group 1 and the 2nd ranked athlete of Group 2. Then the final match between the 1st rank will be held.

Don't miss the timing of *kiai*

In *kata* competitions, the athlete utters a shout of power called *kiai* in the moment the imaginary opponent is defeated. The timing of *kiai* differs depending on the *kata*, but usually it is the peak moment of the *kata*, when the contestant utters a shout while executing a major technique, such as punching or kicking.



Kiai in punching



Kiai in kicking

The athlete jumps from a blocking position and performs the *kata* in mid-air.

What to watch for

The *kiai* serves to punctuate the delivery of several successive techniques. For the contestants, it is a strenuous moment. Make sure to applaud and cheer them on the successful delivery of a technique.

Enjoy diversity in styles

There are 98 types of *kata* that can be used in the competition. They are classified in the four main karate styles of Shito-ryu, Goju-ryu, Shotokan-ryu, and Wado-ryu. Today, most of the performed *kata* are from Shito-ryu and Goju-ryu. The differences in the movements depending on the style are another enjoyable aspect to watch for in the *kata* performances.



Shito-ryu
"Chatanyara Kushanku"

This *kata* is distinguished by swift straight movements that envision an opponent at a slight distance. The *kata* is known for the speed and sharpness of movement.



Goju-ryu "Suparimpei"

Curved movements performed while dodging the attacks of an imaginary opponent in close combat are the main feature of this technique, which is known for dynamic flashes amid lithe movements.

Kawasaki Emiko
Winner of the Female *Kata* title at the 59th All Japan Student Karate Championship and the title at the 10th Asian Junior & Cadet Karate Championship (Photo: Osaka Satoshi)

What to watch for

Imagine a virtual opponent with the contestant's movements to enjoy the performance even more. Watching the performance from behind the contestant will give you the feeling of fighting together.

Highlights of *kumite*

The *kumite* competition will be conducted in a tournament format, with two contestants facing each other and the winner advancing to the next stage. The goal is to score points by applying three attack techniques (punching, kicking, and striking) to determined places on the opponent's body. Unlike full-contact combat, however, the contestants will not actually deliver blows to each other, but will execute their techniques by terminating them just before impact (a practice known as *sundome*).

One of the highlights of *kumite* is the practice of strategically using distance and time. *Maai* is a term that refers to the distance maintained between opponents when they do not attack each other or during attack so that they can protect themselves. When the combat enters into a *maai*, things can change in an instant, so make sure not to miss that instant.



Uekusa Ayumi (right) engages in *kumite* combat with Eleni Chatzilliadou of Greece
Photo courtesy of Karatedo Magazine, JKFan

柔道

Judo



Mukai Shoichiro (left) won the title in the men's -90kg division at the 2018 Osaka Grand Slam (an international judo competition) in a match against Ushangi Margiani of Georgia. (Photo: Matsuo/Aflo Sports)

Successful evolution to an international sport

Judo is a combat sport born from the ancient Japanese martial art *jujutsu*. It is composed of a variety of techniques such as *nage-waza* (throwing techniques) and *katame-waza* (grappling techniques), and their most prominent feature is the skillful use of the opponent's strength as a weapon against them.

As a competitive sport, judo is conducted as a match between two athletes on an 8 x 8-meter to 10 x 10-meter mat. A contestant is declared the winner upon achieving a judgement of *ippon*. *Ippon* is awarded for a *nage-waza* that brings the opponent almost entirely flat on their back, or for a *katame-waza* that pins the opponent down for a determined period of time. When the executed *waza* is successful but does not fully satisfy the above requirements, the contestant is awarded a judgement of *waza-ari*. When a contestant achieves *waza-ari* twice, they are awarded *awase waza ippon* and are declared the winner. If neither

contestant scores an *ippon*, the number of *waza-ari* serves to determine the winner by the judges' decision.

Men's judo became an official Olympic sport at the Olympic Games Tokyo 1964, and women's judo became an official event at the Olympic Games Barcelona 1992. Today, more than 200 countries and regions are members of the International Judo Federation, and there are strong judo athletes in countries around the world—particularly in France, where the population of registered judo athletes exceeds that of Japan. As judo continues to reach beyond the boundaries of its birthplace, Japan, its interactions with other cultures will undoubtedly lead to unique new styles, which in turn will stimulate judo's continued development as an international sport.

Para judo for visually challenged athletes

Judo for people with visual challenges has been an official event since the Seoul 1988 Paralympic Games. Just like at the Olympic event, athletes are divided by gender and category, regardless of their level of visual impairment.

Unlike judo, Para judo athletes grip each other and hold still before a match start. Once the match begins, the athletes engage in a full-force battle of techniques, and the one who breaks down the opponent is declared the winner. A major feature of Para judo is the speedy development of the match, which keeps spectators on the edge of their seats.



Hirose Junko (left) won the bronze medal in the up to 57.00kg division at the Rio 2016 Paralympic Games in a match against Sabina Abdullayeva of Azerbaijan. (Photo: Aflo Sports)

A Para judo match begins after the contestants grip each other. (Photo: Aflo Sports)



Ikeda Daisuke demonstrates a fancy trick.
(©FISE Hiroshima 2018/Cedric de Rodot - Hurricane Group - FISE)

Street Sports Debut on the Olympic Stage

The program of the Olympic Games Tokyo 2020 will feature, for the first time in the history of the Games, the new category of “urban sports.” The vibrant ambience of these sports, which blend athletics with music and fashion, is becoming popular, especially among young people. They bring a previously unheard-of style of enjoying the Olympic Games, inviting athletes and audience to come together to make the events more exciting and fun—both to compete in and to watch.

Skateboarding: Street and Park

Skateboarding is the sport that best represents youth street culture. Ever since it debuted in extreme sports competitions in Europe and the US, skateboarding has taken hold as a point-based competitive sport. There will be two skateboarding events at Tokyo 2020: Street, which will be held on a straight course featuring stairs, handrails, etc.; and Park, which will be held in a bowl-shaped arena. Dynamic and unique tricks (mid-air moves, flips, and other techniques) will surely receive not only high scores but also mighty cheers from the crowd.



BMX (Bicycle Motocross) Freestyle Park

BMX Freestyle Park is a new event in the Olympic cycling program, in which the contestants will compete not with speed, but with the level of difficulty and aesthetics of their tricks. The riders will be given one minute to perform a series of tricks in an arena featuring a complex combination of various curved surfaces from small to large. Top-class riders will fascinate the audience with combinations of complicated tricks, such as jumping twice the height of the ramps, rotating horizontally and vertically while on their bikes, or flipping their bikes in mid-air. Originality of composition will also be among the criteria for evaluating contestants' performance.

Top: Nakamura Rimu (©JCF 2018)
Bottom: Suzuki Keita (No. 7) executes a shot.
(©3x3.EXE PREMIER 2017)

3x3 Basketball

As a sport that has long been played in streets around the world, street basketball finally got standardized global rules in 2007. It is played by teams of three on a half-court with one basket. The winner is the team that scores more points in 10 minutes or scores 21 points first. The time limit to shoot (also known as “shot clock”) is only 12 seconds, an original rule that significantly speeds up the game. Another distinctive feature of 3x3 basketball is its high entertainment value, thanks to the colorful commentary of the players and the energetic music often heard on the court.



In lead climbing, contestants compete to see how high they can climb. The climber in this photo is Dohi Keita, winner of the sports climbing men's combined competition at the 2018 Youth Olympic Games.
(Photo: LUKAS SCHULZE/OIS/IOC/AFP/Aflo)



Of the three categories, only bouldering is conducted without a safety rope. Narasaki Tomoa, featured in this photo, won the IFSC Climbing World Cup twice (in 2016 and in 2019).
(Photo: Aflo Sports)

Sport Climbing

Sport climbing is a variation of rock climbing in nature that evolved into a competitive sport. Climbers use brightly-colored holds to work their way up to a set goal without any equipment. In recent years, Japan has witnessed a boom in the number of facilities where people can enjoy sport climbing. This has expanded the population of climbing enthusiasts, creating favorable conditions for the emergence of strong climbing athletes.

Sport climbing will make its Olympic debut at Tokyo 2020 as an event that combines three different categories: speed climbing, bouldering, and lead climbing. Each contestant will compete in all three categories, with the finishing places based on combined scores. Who will win, a climber who is strong in one particular category, or a well-rounded climber? The competition will keep you on the edge of your seat.



Noguchi Akiyo (left) and Sa Sol of South Korea compete in speed climbing.
(Photo: JMSA / Aflo)

Sport climbing categories

Speed climbing

Two athletes compete to see who can most quickly climb two identical routes set on a 15m-high wall overhanging at 95 degrees. The athletes secure ropes to themselves for safety purposes. Winning times are five to six seconds in the men's events, while women's events are won in seven to eight seconds. The instantaneous nature of the competition is what makes speed climbing so interesting to watch.

Bouldering

In bouldering, climbers scale a number of fixed courses on a 4 to 5m-high wall, and the winner is the climber who scales the largest number of courses within the time limit. If multiple climbers complete the same number of courses, the winner is the athlete who has reached the largest number of "zone" holds (holds high up on the wall), or the athlete who has completed a climb with the least attempts.

Lead climbing

In lead climbing, athletes climb fixed routes on a wall measuring more than 12m in height, within a limited period of time. The winner is the athlete who climbs to the highest point. The athletes secure ropes to themselves for safety purposes.



Enjoy climbing anytime, anywhere: Japan's climbing spots

Today, there are more than 600 climbing gyms throughout Japan, and climbing is gaining popularity as a sport that can be enjoyed by everyone, regardless of gender or age.

(Photo: B-PUMP Tokyo Akihabara)



Together for the Paralympics

The Paralympics rely on multifaceted support provided by a large number of parties. This article introduces some of the parties that stand by athletes to support them, such as a guide who will run together with a visually challenged athlete in the Paralympic marathon, and a company that further enhances the abilities of athletes by developing implements and aids.

Photos: Obara Takahiro

Two athletes competing as one

Contestant: **Inouchi Natsumi**

Guide: **Hino Minako**

Above: Inouchi Natsumi (left) and her guide Hino Minako holding the guiding rope

Right: There are also many opportunities to train with athletes from university track-and-field teams.



“Our job is not simply to run together with the contestant,” explains guide Hino Minako. An important part of the guide’s duty is to help the athlete in various aspects outside the actual competition, such as transportation and changing of clothes, etc. Often, the guides train together with the athletes, and sometimes even advise them in the manner of coaches. “Our job is to create an environment that makes it easier for the athlete to run. When giving advice, I make sure to use words that put the athlete in a positive state of mind.”

Hino Minako’s current partner is Inouchi Natsumi, the Japanese 1,500m and 5,000m record-holder.* She has trust in her guide, and is convinced that running with Ms. Hino will help her improve her records. They train together every day with the motto, “Never use a disability as an excuse not to do your best.”

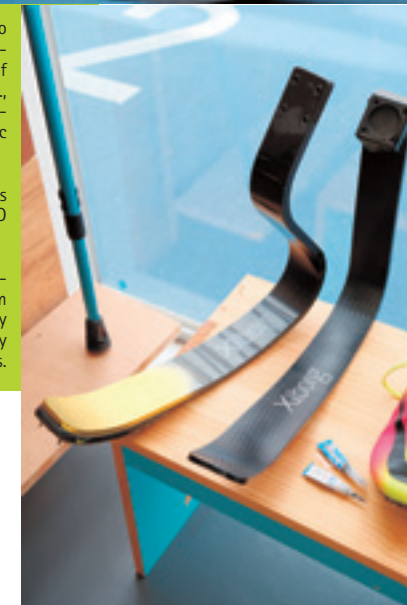
* T11 class, as of June 2019



Above: Sato Keita (left) and Endo Ken at Shin-toyosu Brillia Running Stadium, the location of the headquarters of Xiborg Inc., the company behind the development of the running-specific prostheses

Right: The sports prostheses developed by Xiborg Inc. (CEO Endo Ken)

Below: The NPO-run Blade Library located inside the stadium as an annex to the company gives everyone the opportunity to experience sports prostheses.



Pursuing the potential of sports prostheses

Athlete: **Sato Keita**

Engineer: **Endo Ken**

For many years, Endo Ken has been engaged in development of prostheses for walking that take advantage of robotic technologies. He decided to create sports prostheses because he thought if runners with prostheses could break the records of intact athletes, it would inspire and encourage people with disabilities.

The first athlete who volunteered to participate in this challenge was Sato Keita. He was the only short-distance runner who competed in the Rio 2016 Paralympic Games using a Japanese prosthesis. He says that the perfect prosthesis for him is one that would bounce as if receiving energy from the ground. According to Mr. Endo, “It would be best if the rebound from kicking the ground would come above the center of gravity, but it is difficult to adjust the prostheses to match the sense of each athlete.” Despite these difficulties, he persisted with the development in close cooperation with the athletes. At the upcoming Tokyo 2020 Paralympic Games, they will capitalize on the strengths of their collaboration to face the challenges.



1964

The Revival of a Stage of Passion and Excitement

The Olympic Stadium

Left: The spectacular opening ceremony for the Games of the XVIII Olympiad held on October 10, 1964, in front of approximately 75,000 spectators. The stadium in this photo was the main Olympic venue. It hosted the opening and closing ceremonies, as well as athletics, football, and equestrian events.

(Photo: Aflo)

Below: The new Olympic Stadium projects the warm ambience associated with wooden structures, and uses updraft natural ventilation to create a comfortable environment for spectators. Universal design is applied to the stadium, from the seating arranged with consideration of a diverse range of users, to the easy accessibility with no differences in floor heights. At Tokyo 2020, the stadium will host the opening and closing ceremonies, as well as athletics and football events, and after the games, it will be used as a venue for sports events.



The Flagship of Modern Architectural Design in Japan

Yoyogi National Stadium

A symbol of modernism built for the Tokyo 1964 Olympic Games, Yoyogi National Stadium was designed by the master of modern Japanese architecture, Tange Kenzo (1913–2005). The dynamic structure featuring a tensile tent-like suspended roof, a design that is very rare even on a global scale, attracted a lot of attention back in 1964. The 1st Gymnasium (upper left) hosted the swimming events, and the 2nd Gymnasium (lower right) hosted the basketball

events. For the Olympic and Paralympic Games Tokyo 2020, however, the Gymnasium will serve as a venue for the Olympic handball events and the Paralympic wheelchair rugby matches and para-badminton events. The Gymnasium underwent refurbishment to improve earthquake resistance, and after the Games it will return to use as a venue for sports events and concerts.

(Photo: PIXTA)



A Sacred Place in Martial Arts and a Legendary Concert Venue

Nippon Budokan

Judo made its debut as an Olympic sport at the Olympic Games Tokyo 1964, and Nippon Budokan was built to host the judo events. Two years after the Olympic Games, Nippon Budokan became the venue for the first concerts in Japan by the Beatles, the world-famous rock band, throwing the entire nation into intense fan frenzy. Since then, Nippon Budokan has gained recognition not only as the spiritual home of martial arts but also as a sacred place for musical concerts. Performing there has been the dream of both Japanese and foreign musicians. For Tokyo 2020 Games, Nippon Budokan will serve as the venue for the judo and para judo events, and the karate events. Currently, it is undergoing renovation work to improve earthquake resistance and secure accessibility.

(Photo: Nippon Budokan)

The Changing Face of the Olympic Legacy

How has the tangible and intangible legacy of the Olympic Games Tokyo 1964 been passed down to the upcoming Olympic and Paralympic Games Tokyo 2020, and how will it be put to use after the Games are over?

2020

©Design Works and Construction Works of Taisei Corporation, Azusa Sekkei Co., Ltd., and Kengo Kuma and Associates JV / Courtesy of JSC
Note: The renderings are intended to show a conceptual image at completion and may be subject to change. The greenery is a projection of approximately ten years after completion.



1964
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2020

International Swimming Venue Launches a New Era in the Tokyo Bay Area

Tokyo Aquatics Centre

Tokyo Aquatics Centre was newly built to replace Yoyogi National Stadium as the venue for the Tokyo 2020 aquatics events. The Centre will host the Olympic swimming, diving, and artistic swimming events, as well as the Paralympic swimming events. The seating capacity of up to 15,000 spectators will be reduced to 5,000 after the games, and

the Tokyo Aquatics Centre will be used as an international swimming venue and a swimming center for the people of Tokyo.

Artist's rendition of the venue during the Games (as of January 2019)
Image courtesy of the Tokyo Metropolitan Government

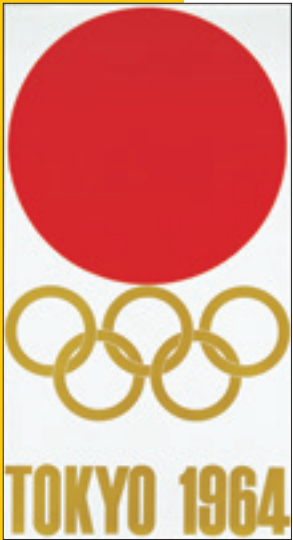


Olympic Designs

Emblem, Olympic relay torch, sports pictograms.
Their designs, which bring color and creativity to past and future Olympics, embody the hope for communication beyond words.

Emblem

The Olympic emblem is the face of the Games. The official emblem for the Olympic Games Tokyo 1964 featured a bold combination of the five Olympic rings depicted in gold and the Japanese flag, “The Circle of the Sun.” It expressed the pure and powerful passion of sports competitions. The emblem for the Tokyo 2020 Games, on the other hand, features a traditional Japanese design of an indigo-blue checkered pattern (*ichimatsu moyo* in Japanese) composed of three varieties of rectangular shapes linked together to convey the aspiration to transcend differences and aim for “unity in diversity.”



An official poster featuring the emblem for the Olympic Games Tokyo 1964
Artistic Director: Kamekura Yusaku, Property of The Niigata Prefectural Museum of Modern Art, The Niigata Bandaijima Art Museum



The emblems for the Tokyo 2020 Games
©Tokyo 2020



Torch

The torch that will adorn the Tokyo 2020 Games Olympic Torch Relay is designed to resemble a cherry blossom. It was made using an aluminum extrusion technology that enables shaping of complex surfaces from a single sheet of aluminum; this technology has been used for bullet trains. The five flower petals of the torch produce flames that rise and come together as one in the center of the torch to shed light on to the “Path of Hope.” The materials used in the making of the torch contain recycled aluminum from temporary housing units built as part of the reconstruction efforts after the Great East Japan Earthquake. This was a way to convey to the world the extent to which the affected areas are recovering. The Olympic torch will be ignited in March 2020 to coincide with the beginning of the cherry blossom season in Japan, and it will travel to all of Japan’s 47 prefectures over a period of 121 days.

©Tokyo 2020

History of Sports Pictograms

As pictorial symbols used to convey information visually and in an easy-to-understand manner, pictograms spread across the world after the Olympic Games Tokyo 1964. Back then, fewer Japanese people and participants in the games understood English, so pictograms were created to represent the 20 Olympic sports at the time, as well as for various facilities at the Olympic venues and the Olympic Village. In fact, the restroom mark that was created as a pictogram for the 1964 games is now used all over the world. In preparation for Tokyo 2020 Games, sports pictograms that depict in a more refined manner athletes’ movements and the sports equipment were announced — 33 sports and 50 designs for the Olympic Games, and 22 sports and 23 designs for the Paralympic Games. The pictograms created for the Tokyo 2020 Games not only adhere to the original objective of communicating information, but also are designed to depict athletes’ vibrant movement in the most attractive way. It should be fun to see how your favorite sports have been conveyed through pictograms.

©IOC ©Tokyo 2020

	Olympic Games Tokyo 1964		Tokyo 2020 Games Olympic	Paralympic
Athletics		▶		
Fencing		▶		
Judo		▶		
Volleyball		▶		
Basketball		▶		
Shooting		▶		

Technologies to Support the Tokyo 2020 Games

This article presents various Japanese technologies that will welcome, entertain, and assist athletes, spectators, organizing staff and everyone else involved with the Olympic and Paralympic Games Tokyo 2020.



The name of the official mascot of the Olympic Games Tokyo 2020, Miraitowa (left), is a combination of the Japanese words *mirai* (future) and *towa* (eternity). The mascot for the Tokyo 2020 Paralympic Games, Someity (right), is named after *Somei yoshino*, Japan's most popular variety of cherry blossom, and the name also echoes the English phrase "so mighty."
©Tokyo 2020



(Photo: Toyota Motor Corporation)
©Tokyo 2020

Tokyo 2020 mascot robots welcome athletes and guests to the venues

A robot equipped with a camera mounted on its head will recognize people approaching, then will use the expression of its eyes and the natural movements produced by its miniature joint units to communicate while expressing a variety of "emotions." Engineers are exploring ways to link it with other robots in a remote location.



(Photo: NEC Corporation)

Precise and swift Face recognition system

The Tokyo 2020 Games will be the first in history to use a face recognition system to conduct identity verification. An accredited person just stands in front of the camera and holds an ID card with an embedded IC up to the machine at the gate. The system then links the face and card data with the pre-registered face image to complete identity verification.

The manufacturer has implemented more than 1,000 systems with biometric authentication techniques including facial images, iris scans, finger prints, palm patterns, finger veins, voice and otoacoustics (identification using sounds that cannot be distinguished by the human ear) in over 70 countries and regions around the globe. The system's world-class precision will secure faster and more accurate identity verification.

Fuel cell buses bringing the future to Tokyo

Fuel cell buses

These eco-friendly buses are powered by fuel cells, which generate electricity via a chemical reaction between the hydrogen in the tank and oxygen in the atmosphere. They do not emit carbon dioxide or air pollutants. They also offer smooth acceleration and quiet operation for maximum passenger comfort. More than 100 fuel cell buses will be introduced by 2020, mainly in Tokyo, and the plan is to have them operating in the area of Haneda Airport during the games. Thanks to Tokyo 2020, the vehicles of the future will soon be part of everyday life in Japan.

(Information current as of July 2019)



SORA
(Photo: Toyota Motor Corporation)

A racing wheelchair that forms a perfect connection with the athlete and runs like an F1 car

CARBON GPX is a racing wheelchair for the track-and-field events designed and manufactured by a company that originally specialized in motorcycle

engineering. Manually customized with attention to detail by skilled engineers using their extensive racing experience to respond to requests and match the physical condition of each athlete, CARBON GPX wheelchairs have captured the hearts of Paralympic athletes all over the world. The frame of the wheelchair is made of a carbon fiber and resin composite to achieve optimum weight reduction, enabling top athletes to reach maximum speeds of over 35km per hour.



(Photo: OX ENGINEERING Co., Ltd.)

Power-assisting suit reduces heavy labor load during Tokyo 2020

Equipped with an angle sensor, a motor, and other outstanding Japanese robotic technologies, this suit is easy to put on and reduces the burden on the wearer's lower back during work by up to approximately 40%. It is expected to assist event officials and staff in their tasks of carrying food or bags of waste, as well as loading luggage onto buses. The suit has already been utilized in construction work and nursing care, and its functions have been tested and verified.



ATOUN MODEL Y
(Photo: Panasonic Corporation)



HSR, DSR
(Photos: Toyota Motor Corporation)

Assistive robots serve wheelchair users in the audience

One of Japan's most prominent auto-makers, which has developed a diverse line of companion robots, announced a robot designed to provide assistance to wheelchair users at Tokyo 2020. The robot can extend an arm from its compact body to carry food or pick up items from the ground. Wheelchair users can also order drinks from their seats and have the robot deliver them. The abilities of this robot will enable spectators in wheelchairs to enjoy the games to their heart's content.

Yokan

A Traditional Japanese Sweet Winning New Acclaim for Its Sports Benefits

Photography: Koyama Sachihiko (STUH) Photo: photolibrary



Standard *neri-yokan*

Yokan is a well-known traditional Japanese confectionery made by mixing red bean paste with sugar and agar, boiling down the mixture and pouring it into molds to solidify. Typically, *yokan* is rectangular in shape, very dark reddish-brown (nearly black) in color, and dense. The lustrous translucent beauty of sliced *yokan* arranged on a dish once made renowned writer Tanizaki Junichiro (1886–1965) praise its “meditative” quality. Its strong sweet taste perfectly complements the bitterness of green tea.

Yokan was said to be introduced to Japan around the 15th century as part of the culture of Zen Buddhism. Initially, it was prepared by kneading *azuki* bean paste and *kuzu* root starch and steaming the mixture to make *mushi-yokan* (“steamed *yokan*”). The 19th century saw the arrival of a new type of *yokan* made with agar, called *neri-yokan*, and it remains the

most popular type of *yokan* today. A variety of *yokan* confectionery can be seen throughout Japan—made not only with *azuki* bean paste but also with white kidney bean paste, sweet potato, chestnuts, and Japanese persimmon. *Yokan* also comes in various forms, such as in the shape of Mt. Fuji, a unique design made with the *nagashi-komi* (pouring-in) technique.

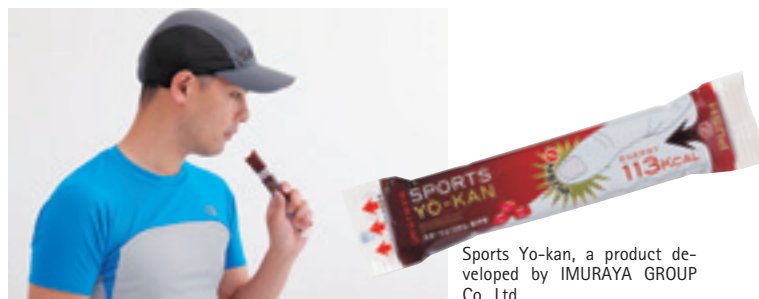
Made with large amounts of sugar and little water, *neri-yokan* keeps very well, which makes it a perfect refreshment to store and preserve. Moreover, *neri-yokan* is an easily-accessible source of nutrition beloved by mountaineers and sports enthusiasts. In recent years, a new type of *yokan* appropriately dubbed “sports *yokan*” was developed specifically to meet the needs of people who engage in sports. For instance, a product launched in 2012 by a well-established major confectionery manufacturer is made with seaweed salt containing minerals that

athletes lose as they perspire when exercising over extended periods of time. Also, intake of sugar during workout may result in rapid fluctuations in blood sugar levels and eventually cause hypoglycemia. Sports *yokan*, on the other hand, reduces the risk of hypoglycemia because the sugar it contains is absorbed slowly by the body.

Another distinctive feature of sports *yokan* is its packaging. Each manufacturer is racing to come up with packaging that is easy to open even with one hand and keeps the hands clean, so as to distinguish their products as a convenient source of nutrition during exercise.

A traditional Japanese confectionery, *yokan* today has gained a reputation as a highly nutritious food, and is expected to diversify and expand its presence.

The contents of the package can be easily squeezed out using only the fingers of one hand, making the product a quickly accessible source of nutrition during sports activities.



Sports Yo-kan, a product developed by IMURAYA GROUP Co., Ltd.



Amanohara is a confectionery made from bean paste molded in the shape of Mount Fuji and agar that represents the sky. It was created using the elaborate techniques of the new YUI brand developed by Ryoguchiya-Korekiyo, a venerable confectionery manufacturer established 380 years ago.



1. The futuristic water bus (cruise vessel) *Himiko* produced by the master of the Japanese manga world Matsumoto Reiji (best known for the manga *Galaxy Express 999* and other works). The vessel links Odaiba and Toyosu with the famous sightseeing spot Asakusa.
2. A life-sized 20m-tall Gundam statue featured in the popular Japanese anime *Mobile Suit Gundam* rises over DiverCity Tokyo Plaza in Odaiba. The Gundam Base Tokyo store offers a diverse line of Gundam-related products, including some limited items. ©Sotsu/Sunrise *The photo of the Gundam statue was taken June 2019.
3. Toyosu Market is Tokyo's food distribution hub. Some tours start at 5am, and by that time, the market is already bustling.



The Tokyo Bay Area: An Intersection of Future Trends and Traditions

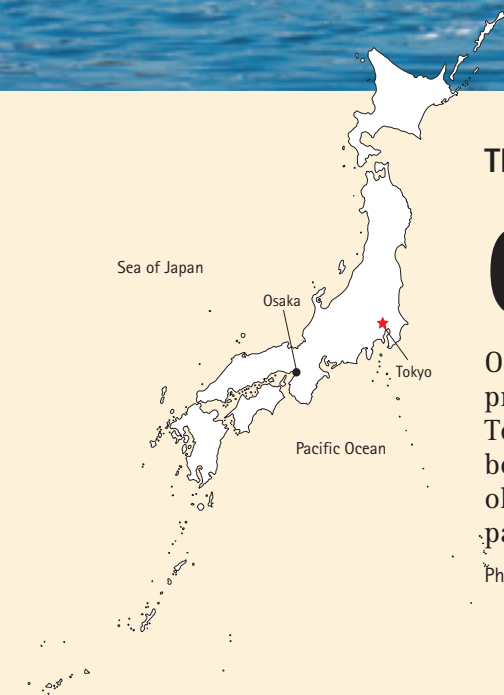
Odaiba and Toyosu

Odaiba and Toyosu are two man-made islands in Tokyo Bay that are in the process of redevelopment in preparation for the Olympic and Paralympic Games Tokyo 2020. These areas are constantly evolving and ultra-modern, yet they border the city's historic downtown districts where the nostalgic ambience of old Tokyo can still be felt. On Odaiba and Toyosu, appealing old traditions cross paths with fascinating contemporary trends.

Photos: Osaka Satoshi

The first reclaimed land in the Tokyo Bay area was built in the late 16th century. For approximately 400 years after that, the reclaimed area kept expanding, and new neighborhoods were built on it. Today, Odaiba and Toyosu are about to become an important hub for the Olympic and Paralympic Games Tokyo 2020, as they will host some of the main sports venues and the Olympic village. The vibrant and energetic spirit of the transformation taking place here is part of the appeal of Odaiba and Toyosu.

As for access to Odaiba and Toyosu, we recommend the traditional and more atmospheric water route. The trip takes approximately one hour by water bus from one of Tokyo's iconic tourist spots, Asakusa. The water bus glides on the surface of the sea, first to Toyosu, then to Odaiba, accompanied by the cries of waterfowl and the gentle sound of the waves.





4. A skateboard park "H.L.N.A Sky Garden" that opened in 2013 in the DiverCity mall in Odaiba. The park offers lessons for children and adults, in which everyone can participate, regardless of age and experience.



5. Daiba Koen Park is surrounded by beautiful stone walls and boasts breathtaking views of the high-rise buildings in Odaiba.
6. Some of the world's largest luxury liners are expected to call at this cruise terminal, which will commence operations in July 2020 in Odaiba.



Tenyasu Honten, a historic *tsukudani* store established in 1837. *Tsukudani* is a preserve made of shellfish, seaweed, small fish, and other ingredients simmered in soy sauce and sugar.



Left: *Monjayaki* is a concoction of watery batter, meat, vegetables, and seafood, grilled on an iron plate. *Monkichi* is a well-known restaurant, famous for batter made using its secret broth.
Above: Ingredients for making *monjayaki*

The name "Odaiba" comes from the cannon batteries (*daiba* in Japanese) built in Tokyo Bay in the mid-19th century for the purposes of maritime defense. Today, the beautifully landscaped lawns of Daiba Koen Park, which is open to the public, spread across the areas where cannon batteries once stood. Since there are no buildings in the vicinity of the park, the sky feels truly vast, creating a relaxed ambience for those who wish to enjoy the waterfront scenery.

In recent years, Odaiba has developed as an entertainment city, becoming a popular area bustling with

large-scale shopping establishments and a rich variety of leisure facilities. The Tokyo International Cruise Terminal will commence operations in July 2020, establishing a new sea gateway to the city that will welcome some of the world's largest luxury liners, such as the *MS Queen Elizabeth* and the *Spectrum of the Seas*. It has also been decided that the Odaiba Marine Park will be used as venue for the triathlon and other Tokyo 2020 competitions.

Toyosu, on the other hand, is an area that was reclaimed from the sea as part of the efforts to dispose of the rubble from the 1923 Great Kanto Earthquake. Initially, it was an

industrial zone occupied mainly by shipbuilding yards. A tour of the streets of Toyosu will give visitors the chance to see numerous industrial remains, such as the old Harumi Railway Bridge, which carried the line that linked the docks with the freight station. Art monument installations featuring repurposed ship anchors and screws are displayed at 57 locations throughout Toyosu, making the island a popular recreational spot for couples and families with children alike.

In recent years, residences have also been developed on Toyosu. Clusters of high-rise condominiums are turning it into one of Tokyo's booming neighborhoods. Theaters and sports facilities are being built as part of the urban development inspired by the concept of "Sports x Art." For instance, Toyosu Gururi Park, a U-shaped park with a total length of approximately 4.5km along Toyosu Warf, is gaining popularity as one of Tokyo's best places to jog. Another unmissable attraction is the Toyosu Market, which opened in 2018. Tourists from all over the world are warmly welcomed there and can enjoy the market action at the

various observation spots.

Visitors with enough time to spare would do well to consider extending their trip to the nearby islands of Tsukishima and Tsukuda. Charming traditional neighborhoods are preserved at the foot of high-rise condominiums, giving visitors the opportunity to soak in the atmosphere of Tokyo's olden days. In Tsukishima, there is a street lined with restaurants that offer the famous local dish *monjayaki*, a delicious concoction of batter, meat and vegetables. Tsukuda is known for the time-honored shops that continue to make *tsukudani* (literary "Tsukuda-simmered"), a preserve made of seafood, vegetables, seaweed, etc., simmered in soy sauce and sugar, and named after the island where the food originated. There, visitors can sample the traditional flavors of Tokyo.

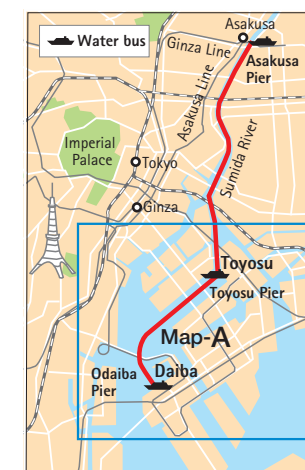
Odaiba and Toyosu continue to evolve as the new face of Tokyo, and at the same time they preserve ubiquitous mementos of local history. Compare the rich and expressive faces of the city—one traditional and one modern—as you enjoy a stroll through these areas.



7,8 The Shin-toyosu Brillia Running Stadium embodies Toyosu's future urban development theme, "SPORTS x ART."



9,10 Toyosu is home to numerous industrial artifacts, such as art monuments featuring repurposed ship anchors (left), and the old Harumi Railway Bridge (below). These symbolize Toyosu's history as a once flourishing shipbuilding area.



Map of the Odaiba and Toyosu Area

- ① Industrial artifacts
- ② Shin-toyosu Brillia Running Stadium
- ③ Toyosu Metropolitan Central Wholesale Market
- ④ Daiba Koen Park
- ⑤ H.L.N.A Sky Garden
- ⑥ The Gundam Base Tokyo
- ⑦ Tokyo International Cruise Terminal

•Access
Approx. 60 minutes from Narita Airport to Asakusa by the Access Express on the Keisei Narita Sky Access Line. The cruise times from Asakusa are approx. 50 minutes to Odaiba Marine Park and approx. 70 minutes to Toyosu.

•Contact information
Tokyo Cruise (Water Bus)
<https://www.suijobus.co.jp/>
The Official Tokyo Travel Guide GO TOKYO
<https://www.gotokyo.org>



Jika-tabi running shoes: MUTEKI (center) and Toe-Bi (above right). (Photos courtesy of Kineya)
Top left: *Jika-tabi* are very useful at construction sites.
Bottom right: Conventional white *tabi* socks worn with Japanese-style clothing.

Keep your feet firmly on the ground

Tabi-style Shoes for Running

Photos: Osaka Satoshi

Tabi are traditional Japanese socks made with a split separating the big toe from the others. This unique design provides a sense of snug fit and comfort of movement. Originally, *tabi* were made of leather, but silk and cotton later became the more popular materials. In the late 19th century, a new type of *tabi* called *jika-tabi* (lit. “*tabi* that touch the ground”) arrived. These had rubber soles and could be worn outdoors without shoes. Even today, *jika-tabi* are the footwear of choice among construction and forestry workers. With *jika-tabi*, they can feel the ground beneath their feet, which helps to prevent slips.

Most Japanese people wear western-style clothing, and less wear *tabi* and *jika-tabi* nowadays. In recent years, however, concerns have arisen that the over-protective function of running shoes may lead to injuries, and this has once again brought *tabi* into the spotlight. A growing number of runners choose *jika-tabi* shoes equipped with running features. They especially like the thin soles that give them a feeling of running almost barefoot. Why not try this new take on ancient, much-loved footwear and enjoy a more comfortable jogging experience?

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