Open the Door for Manufacturing:

The Origins of Manufacturing Traced Back via 6 Routes

Central Japan leads the manufacturing industry in Japan. For what reasons did the region achieve its strength in manufacturing? Why have a variety of sectors been born in the region?

Water, Soil, Wood, Yarn, Iron and Road.

As far back as more than 400 years ago, traditional crafts were born with rich natural resources, and people made creative efforts for many years to pave the way to manufacturing in the modern times. There were six routes to open the door for manufacturing. The origin of each route is traced back below.





Wood



Screen and wall paintings that decorate Nagoya Castle Hommaru Palace

Yarn

Bamboo Grove, Leopards and Tiger. Set of four sliding screens (Important Cultural Asset) (collection of Nagoya Castle Management Office)

calligraphy by Fusao Murakami



X Journey on Water, and Manufacturing



Tour of sake breweries in Takayama



It is said that good sake can be found in a cold place. Blessed with abundant water and relatively low temperatures throughout the year, Takayama has produced many brands of high-quality sake that we still enjoy. Most of Takayama's famed seven brewers have a history of more than 200 years. It is recommended that you taste the distinctive sake of each brewery while travelling around the quaint old town of Takayama.

Takavama City Tourism Department 2-18 Hanaoka-machi, Takayama-shi, Gifu TEL:0577-32-3333

Sugitama(ball made with cedar leaves) hung under the eaves is a sign that new sake has been made Photo courtesy of Takayama City Tourism Department

U kai: cormorant fishing on the Nagara River

In this traditional style of fishing, each cormorant fishing master on a boat controls 10 to 12 cormorants at the same time by handling the leash ropes attached to the birds to make them partially swallow sweetfish and catch the fish alive. This unique tradition on Nagara River has been passed along for almost 1,300 years. The visionary scenes illuminated by bonfires are fascinating. This event is held almost every day from May 11 to October 15 of each year.

Gifu Convention and Visitors Bureau

The Gifu Chamber of Commerce and Industry Bldg. 1F, 2-2 Kanda-machi, Gifu-shi TEL:058-266-5588 Photo courtesy of Gifu City



A traditional papermaking art has been inherited in Obara, which is located in a mountain area of

Tovota City, Aichi, Broussonetia kazinoki, the raw material of the Japanese paper, is dyed and used as a paint to give patterns to a paper in this art craftwork. Tatsukichi Fujii, a craftsman, looked at

O bara Paper





the good quality of the Japanese paper that had been made since early times and raised the paper to an art form while taking advantage of the raw material.

K amikochi

Kamikochi is a beautiful mountainous spot located in Matsumoto City, Nagano at an altitude of 1,500 meters. Along with Kappa Bridge over the clear Azusa River and the spectacle of mountains, the dreamy view of Mt. Hotaka reflected on the mirror-like water surface of Taisho Pond is a representative landscape of Kamikochi. The nature charms people in a different way in each season, which is protected by restriction of access by private cars.

Kamikochi Information Center

4468 Kamikochi, Azumi Matsumoto-shi, Nagano TEL:0263-95-2433 Contact telephone number during winter: 0263-94-2537 Photo courtesy of Nagano Prefecture Tourism Association



The landscape enjoys timeless popularity.

Obara Paper Art Museum Washi no Furusato 216-1 Hora, Eitaro-cho, Toyota-shi, Aichi TEL:0565-65-2151

Garyu Cherry Tree Noriyuki Kasugai





Rainwater and melted snow seep into the deep underground of Mt. Fuji, and the water flows through lava stones to be naturally purified and springs up near Kakita River Park as extremely transparent fresh water. The daily volume of the spring water is about a million tons, which is the largest in Japan. Kakita River takes its water from the spring water, and is one of the three clear-flowing rivers in Japan along with Nagara River in Gifu and Shimanto River in Kochi.



Spring water from Mt. Fuji

Kakita River Park 71-7 Fushimi, Shimizu-cho. Sunto-gun, Shizuoka TEL:055-981-8224 Photo courtesy of Shimizu-cho



Kamagaki-no-Komichi (Path of Kamagaki, Seto City, Aichi)

Kiseto Rinka Bachi by Tokuro Kato(1898-1985) (Aichi Prefectural Ceramic Museum) Donated by Mr. Otozo Kawasaki

Seto-Hongyo Ware Tile with Floral Design in Underglaze Blue and Iron Bron Japan Meiji Period (19-20c.) Photo courtesy of INAX MUSEUMS (PART OF LIXIL)

> As far back as six million years ago, Central Japan had a lake called Tokai Lake. The huge lake extended from Chita Peninsula in Aichi to the Suzuka Mountain Range in Mie. Rivers flowing into the lake transported earth and sand into it for many years to eventually fill up the lake an estimated 1.2 million years ago.

> The deposition in the lake was potter's clay with good quality. Seto had clay with less iron while Tokoname in Chita Peninsula had iron-rich red clay. Thanks to the soil, it was natural that those places developed pottery and led the pottery industry of Japan. Seto and Tokoname in Aichi and Mino in Gifu still produce traditional pottery as representative cities of pottery production in the country. At the same time, a wide range of ceramic products such as luxury western tableware, insulators, building tiles and sanitary ware are manufactured in the places, which are among Japan's top ceramic producers.

Journey on Soil, and Manufacturing

Seto City, Aichi is one of the major pottery producers in Japan. In its long history, Seto Novelty was born. The delicate lace dress is made of pottery. After Germany,

which had been a major producer of such products, stopped the supply with the outbreak of World War I, Seto started to increase its production. The designs cultivated in the long history of pottery, as well as the painting techniques, receive a high evaluation in other countries as well, and many products are exported to the United States and European countries.

SETO-GURA MUSEUM 1-1. Kurasho-cho. Seto-shi. Aichi TEL:0561-97-1190 Photo courtesy of SETO-GURA MUSEUM

oubeigama

Seto Novelty

This kiln is located in a 200-yearold folk house in a quiet mountainous area. It is a representative pottery producer of Mino ware, which has a history of more than 200 years. Takuo Kato (1917-2005), the sixth generation producer, a Living National Treasure, who restored the techniques of Persian pottery and created works combining tradition with originality

such as lusterware and Persian colored ceramics. There are many attractions on the premises including the Old Pottery Museum, along with the Craft Gallery, which displays works of his ancestors

4-115 Ichinokura-cho, Tajimi-shi, Gifu TEL:0572-22-3821



Koubeigama is placed in a relocated 200-year-old folk house.



okoname: View of an ascending kiln



leries, the adjacent area is popular as a pottery promenade.

Tokoname City, Aichi is the producer of Tokoname ware. The city has "Toeigama," Japan's largest ascending kiln with a total length of 22 meters. Since its creation in the Edo period, the kiln has been continuously used to fire jars and pots in the old days and produce clay pipes essential for urban development in modern times.



Pottery Promenade

Tokoname Sightseeing Association 5-168-2 Koiehonmachi, Tokoname-shi, Aichi TEL:0569-34-8888

The Museum Meiji-mura: of the Imperial Hotel





E arthen pots produced in Yokkaichi

Dishes cooked in pots are essential food for Japanese people in winter. An earthen pot is placed in the center of a dining table, and people put ingredients in it and share the food. Yokkaichi City, Mie is the largest producer of earthen pots in Japan. The development of

thermal-resistant earthen pots made with a mineral called petalite to prevent cracking has led to an increase in the city's share. Various types and designs of earthen pots are now offered, including earthen pot rice cookers and casserole earthen pots.

Banko no Sato Kaikan 4-8 Toei-cho, Yokkaichi-shi, Mie TEL:059-330-2020 Photo courtesy of Yokkaichi City

The former main building design of Frank Lloyd Wright, an

The former main building of the Imperial Hotel was built with the American architect, in 1923 Wright wanted to use bricks with a light color, instead of red bricks, for the exterior walls. Then, he selected soil in Chita Peninsula in Aichi, Bricks made of the soil were baked in Tokoname and delivered to Tokyo by ship. As many as four million bricks made in Tokoname decorated the gorgeous exterior view. The former main building of the Imperial Hotel was regrettably demolished in 1967, and the main entrance hall and lobby are now stored and exhibited in the Museum Meiji-mura.

1 Uchiyama, Inuyama-shi, Aichi TEL:0568-67-0314 Photo courtesy of Museum Meiji-mura



mechanical dolls, were invented in the Edo period

When a teacup is placed on the tray, the doll delivers the cup to a guest while nodding its head up and doll, driven by a spring ma is comprised of about 40 wo

> When Tokugawa Yoshinao, the first lord of the Owari Domain, got married in 1615, he received a mountain forest in Kiso from Tokugawa Ieyasu, who built the foundation of the Edo Shogunate, as a generous wedding gift with an area of about 200,000 hectares. The Owari Domain owned and protected the forest in a strict manner and banned unauthorized felling. The timber resources from the forest improved the domain's financial status. They also enabled the development of skills for woodworking and the production of hardware for drawers and Buddhist alter fittings in the area, which led to the creation of karakuri ningyo (automated puppets), and later, the establishment of a wide range of mechanical sectors including the watch, railroad car, automobile and aerospace industries.

> While karakuri ningyo were actively produced in the Edo period, it was essential to have woods nearby because different wood species were used for the heads, bodies and gears. Karakuri ningyo were used to decorate festivals as "dashi karakuri" (a festival float with karakuri ningyo on it) in the region, mainly near the castle town of Owari. It is said that more than 200 units of dashi karakuri still exist in Japan and the number of karakuri ningyo on the floats is about 600, most of which are stored in the areas that had a connection with the Owari Domain. The forest that was owned by the Owari Domain is still one of Japan's representative beautiful forests and honored as the producer of Kiso hinoki cypress, and designated as a Jingubirin, which supplies timber necessary for Jingu Shikinen Sengu (periodical rebuilding of a shrine at the Ise-Jingu Shrine) conducted every 20 years.



Takayama Festival

The Takayama Festival is the collective name of the Sanno Matsuri (Sanno festival) held in spring and the Hachiman Matsuri held in autumn. The main attraction is gorgeously decorated festival floats with lively carvings, beautifully embroidered fabrics and karakuri ningyo showing exciting actions with elaborate devices. The spring and autumn festivals have a parade of 12 and 11 floats, respectively, which is accompanied by hundreds of people who march through the town. The night festival is also visionary with a parade of the floats lit up with lanterns.

Takayama City Tourism
Department2-18 Hanaoka-machi,
Takayama-shi, Gifu
TEL:0577-32-3333Photo courtesy of Takayama City
Tourism Department







M atsumoto furniture

Furniture production started in Matsumoto, Nagano in the latter half of the 16th century. Traditional drawers and tea cabinets produced by craftspeople in the area around Matsumoto Castle were sold in various parts of Japan. Matsumoto grew as a furniture producer, and had the largest market share in Japan in the production of Japanese furniture until the outbreak of World War II. Matsumoto furniture produced with inherited skills takes advantage of the warmth of wood and is popular among many people.

Matsumoto Mingei Kagu (folk-craft furniture) 3-2-12 Chuo, Matsumoto-shi, Nagano TEL: 0263-33-5760

Nagoya Castle Hommaru Palace

Nagoya Castle used to have Hommaru Palace to the south of the tower. Although the palace was the first early modern castle building designated as a National Treasure and recognized as a masterpiece, it was burnt down along with the donjon in an air raid during World War II. The reconstruction of the Hommaru Palace is currently in progress with the target of completing it by 2018.

A target in the approach adopted for the reconstruction is to use traditional materials and construction methods wherever possible based on the documents prepared in the Edo period that survived the war in addition to survey maps and photos. Precious timber such as hinoki cypress is used in various parts such as pillars, floor boards and even frames of paper screens, and decorative metal fit-



tings and paintings on the walls and sliding doors are produced with the devotion of craftspeople and painters. The entrance and Omote-shoin (main drawing room) are now open to the public.

1-1 Hommaru, Naka-ku, Nagoyashi, Aichi TEL:052-231-1700 Photo courtesy of Nagoya Castle Management Office

P lastic models in Shizuoka

Tamiya's Mini 4WD car, AERO AVANTE Plastic model of Tamiya, Inc., a worldclass model/plastic model manufacturer based in Shizuoka City





The plastic model industry in Shizuoka leads Japan in production. Its origin was wood; the industry started with the wood processing that had been active since ancient times. Many companies that used to manufacture wooden model airplanes and ships shifted the material from wood to celluloid and plastic. Japan's first plastic model was born in Shizuoka in 1958. Since then, the prefecture has created a series of hit products, including supercars, Gundam and Mini 4WD cars, attracting global attention.

Shizuoka Hobby Square SouthSpot Shizuoka, 18-1 Minami-cho, Suruga-ku, Shizuoka-shi, Shizuoka TEL: 054-289-3033



From the Edo period to the Meiji period, Central Japan was a major region of cotton and silk textile production with the Mikawa area, a major cotton textile producer, as well as the Okaya area, which had an active silk industry. Under the policy of the central government to encourage new industries, the region grew to play a pioneering role in Japan's textile manufacturing while the country was developing to be a modern state.

In the field of spinning yarns, a spinning machine invented by Tacchi Gaun (1842-1900) from Nagano Prefecture in 1873 played a key part. This machine was used most positively in the areas along the Yahagi River in Aichi. As the power source to operate he machine, a rapid stream was used in the mour tainous areas of Okazaki and Toyota, which were located upstream of the river, and water wheels

were attached to both sides of a boat in the downstream areas where the flow was slow. With the introduction of the spinning machine, which was called "garabo" after its characteristic rattling sound during operation, yarn spinning developed to be an indigenous industry.

Textiles were produced by female farmers. One of them was the mother of Sakichi Toyoda, the founder of the Toyota Group. He grew with the sight of his mother working on the farm in the daytime and weaving at night. He was called a master inventor, and improved weaving machines in different ways. His creative efforts were the origin of the manufacturing of Toyota.

Journey on Yarn, and Manufacturing



Matsusaka cotton features sophisticated stripes called "shima watari" and indigo dveing in depth. It enjoyed a boom among people of Edo in the Edo period, and it is said that Edo had many kimono shops of Matsusaka merchants.

Matsusaka Momen Teori Center Matsusaka City Industrial Promotion Center, 2176 Hon-machi. Matsusaka-shi. Mie

TEL:0598-26-6355



S akichi Toyoda **Memorial House**



Toyoda power loom invented by Sakichi



In this house, Sakichi Toyoda

(1867-1930), the founder of the

Toyota Group, was born and

raised, and Kiichiro Toyoda

(1894-1952), who established Toy-

ota Motors, was also born. The

house is located in Kosai City, Shi-

zuoka, overlooking Lake Hamana. Thanks to the achievements made by Sakichi, who devoted himself to the study of automatic looms in the 1900s, most of the imported looms in Japan were replaced by domestic products, and the production even grew to the point where they exported the looms. "Open the window. It's a big world out there!" His phrase which symbolizes the heart of manufacturing has been passed along until now.

113-2 Yamaguchi, Kosai-shi, Shizuoka TEL:053-576-0064



Katazome (stencil dyeing) is one of Japan's traditional dyeing techniques. It was used to dye hakama (skirts) for samurais in the Edo period. As the technique was developed, Ise Katagami (pattern paper) became widespread throughout Japan under the patronage of the Kishu Domain. The skills of stencil makers are excellent, and the elaborate patterns and designs are also highly valued not just as pattern papers but also as interiors and artworks.



ou Kaikan 3-10-1 Jike, Suzuka-shi, Mie TEL: 059-386-7511



A rimatsu tie-dyeing

Arimatsu, Nagoya is located along the old Tokaido Road, and still has the townscape of tie-dyeing wholesalers, warehouses and houses with lattice doors that have been retained since the Edo period, which can be seen in the works of Utagawa Hiroshige, an ukiyo-e painter. Arimatsu tie-dveing was developed as an indigenous industry under the patronage of the Owari Domain, and became popular as a souvenir among travellers on the Tokaido Road. Various tiedyeing techniques have been

handed down from mothers to daughters.

Tie-Dyeing Museum 3008 Arimatsu, Midori-ku, Nagoya-shi, Aichi TEL:052-621-0111





Iron

Foreign settlers from the continent in ancient Japan brought iron-making technology to the country. Primitive iron-making was started with iron ore and iron sand as raw materials. The technology evolved into "tatara" iron-making. This unique method was used to produce Japanese swords with both hardness and flexibility. Japan also cultivated other unique iron cultures such as kettles for the tea ceremony. In Nirayama in Izu, Shizuoka Prefecture, reverberatory furnaces built by the shogunate in preparation for the arrival of black ships sent by the US at the end of the Edo period have been conserved, and are now known as part of Japan's industrial heritage.

As Japan was modernized in the Meiji period, the steel industry was launched in this area with electric furnaces. At the same time, the railroad cars and parts such as gears that used to be made of wood were replaced by iron products in turns. The traditional manufacturing skills cultivated through the production of karakuri ningyo and Japanesestyle clocks were combined with iron to establish the machine industry and also develop new sectors such as the machine tool industry that supports various industries.

Journey on Iron, and Manufacturing



M useums in the town of cutlery



Demonstration by a swordsmith. Spectators can closely feel the heat of fire and the smell of iron.

Seki City, Gifu is known as the town of cutlery, and has facilities that symbolize it. Kasuga Shrine worships the guardian god of swordsmiths in Seki and possesses Noh costumes that are designated as a national important cultural property. Seki Kaji Denshokan Museum introduces the history of sword masters and exhibits swords. The Feather Museum introduces the history and culture of razors in Japan and various other countries.

Seki Kaji Denshokan Museum 9-1 Minamikasuga-cho Seki-shi, Gifu TEL: 0575-23-3825 Photo courtesy of Gifu Prefecture



Manhole designed with the motif of landscape in Kuwana.



Izunokuni City, Shizuoka has the only reverberatory furnaces for practical use that still exist in Japan. They were built in 1857 to cast iron cannons with the aim of having military power to use against the United States and European countries. Hundreds of cannons of various sizes were cast

until the use was ended in 1964. In 2015, the furnaces were registered as a World Heritage site as part of the "Sites of Japan's Meiji Industrial Revolution."

268 Aza Narutakiiri, Naka, Izunokuni-shi. Shizuoka TEL: 055-949-3450





Kuwana City, Mie used to be one of the two largest casting producers in Japan, and still has a row of casting factories. While the products include automobile parts and lighting fixtures, casting kitchenware produced in the city attracts particular attention. Popular products are developed with the skills

of craftspeople and ideas, including frying pans and rice cookers regularly used by top chefs. You can witness various casting products such as the torii of a shrine and manholes when you walk around the town.

Kuwana City Commerce and **Tourism Division**

2-37 Chuo-cho Kuwana-shi, Mie TEL:0594-24-1231 Photo courtesy of Kuwana City

The development of a castle town in Nagoya in Owari Province is said to be the "largest town planning in history" because it was a big project to move the entire existing town with a population of 60,000 to 70,000. After the period of warring states ended, the castle turned from a military fortress into a symbol of the town. The crooked streets designed to make it difficult for enemies to attack the castle were transformed into straight lines like the grid of a go board. The town plan designed by Tokugawa Ieyasu 400 years ago is the foundation of the current city of Nagoya. Roads including Tokaido, Nakasendo and Ise-kaido were developed to connect main cities including Edo, Kyoto and Osaka, which increased the traffic of people, goods and information and made post towns bustle.

From ports on the Chita Peninsula, freight ships hoisting sails transported rice, salt, pottery and various other items. Chita Peninsula had high productive power in the brewing, pottery and cotton industries in addition to agriculture, as well as well-developed transportation means including ships that travelled to remote areas and ships that cruised in Ise Bay. Merchants in the area aggressively marketed products at Edo, taking advantage of the proximity in comparison with Osaka. Longestablished breweries and food manufacturers that date back to those days still operate.

In addition, the "Salt Road" (also called Sanshu-kaido, Iida-kaido or Ina-kaido) was developed to transport goods in both directions, including salt and seafood from the Mikawa area in Aichi, which faces the Pacific Ocean. and food and timber collected from mountains in inland Nagano Prefecture. Thus, the network has been established not only in the east-west direction but also in the north-south direction since early times.

The old roads and ports underlie the current expressway and railway networks as well as the Port of Nagoya and the Chubu Centrair International Airport, Nagoya. The development of such old-time roads resulted in the establishment of various bases for exchange.

Journey on Road, and Manufacturing

Extensive sightseeing excursion route: **S** HORYUDO

This excursion route connects tourist spots in the nine prefectures in Chubu and Hokuriku (Aichi, Gifu, Mie, Shizuoka, Nagano, Ishikawa, Fukui, Toyama and Shiga) from south to north. The name comes from the shape of the area which looks like a mystical dragon climbing to the sky with

Noto Peninsula serving as the head. The area is full of attractions including remaining traditions. history and culture, as well as beautiful natural landscape for all four seasons, various foods from mountains and the sea and hot spring sites where people can recover from daily fatigue.



Kanazawa Kenrokuen Fuku

Mie

anda Canal

Handa Canal served as a port developed in Handa, which was crowded with many people in the brewing industry that produced sake, vinegar, shochu (distilled liquor), etc., to be marketed at Edo and the shipping industry that transported such products. While the canal does not function as a port now, a row of brewery buildings enclosed by black boards stand on both sides of the canal to create a unique landscape. The brewery buildings are still in use, and the smell of vinegar is in the

Handa Tourist Association

sumago-juku

Tsumago-juku, which still has the townscape developed in the Edo period, was established as a rest station in Nakasendo Road connecting Edo and Kyoto. While this Ina-kaido Road, Tsumago-juku actually living in it. continued to decline with changes of the times as railways and roads were constructed and it lost functions as a rest station. In the period of rapid growth in Japan, however, the townscape where the

atmosphere of a rest station in the Edo period is remarkably conserved drew a fresh look, and preservation movements were launched ahead of similar places important point for transportation in the other parts of Japan. The bustled with travellers as an inter- townscape is now protected as a section of Nakasendo Road and precious asset while citizens are

Tsumago Tourism

Association Tourist office 2159-2 Azuma, Nagiso-machi, Kiso-gun, Nagano TEL:0264-57-3123

Topics



SHORYUDO (Chubu & Hokuriku) Food and Tourism fair



Chubu Economic Federation, a representative economic organization in Central Japan, has organized an exhibition in Bangkok, Thailand to promote agricultural, forestry and fishery products and processed foods produced in the areas of the Dragon Route since 2014, which is well received by local people. Fruits, beef and Japanese confectionery enjoy especially high popularity.