

Ota City Industry Guide



E n g l i s h



Industrial Promotion Section,
Ota City Department of Industry and Economy

Ota City Industrial Promotion Organization
(Public Interest Incorporated Foundation)

Regarding the Publication of the Ota City Industry Guide

Ota City is a manufacturing city and one of the few locations in Japan that has a concentration of small- to mid-size companies possessing high-level processing technologies. It takes advantage of the strengths of its accumulation of a broad range of processing technologies and has formed the framework for the outlook of the entire industry in Japan since the country's post-war period of high economic growth and supports the development of leading-edge technology.

Small- to mid-size companies in the city have been able to overcome the collapse of the "Bubble Economy" in 1989, the economic downturn precipitated by the Lehman Brothers bankruptcy in 2008, the 2015 plunge of stock prices due to devaluation of the Chinese yuan (China Shock), and the many other crises they faced, and have survived due to their high-level technological prowess.

In order to stop the decreasing number of plants and secure a solid footing for the manufacturing activities in Ota City in the future, Ota City and the Ota City Industrial Promotion Organization conduct a variety of projects to realize concrete solutions, including support for maintaining and developing the accumulated industries, backing technological and economic reform, and support for securing and cultivating human resources for manufacturing.

In addition, by utilizing the power of the processing technologies and developmental capabilities of the companies in the city, it is involved in the development of unique products and implementation of smooth technological succession of young human resources. In recent years, companies have emerged that have entered the "next-generation" growth industries, such as medical care and nursing, aerospace, and robotics. Ota City is now at a new turning point.

Through our Ota City Industry Guide, we hope to be able to enhance the understanding and interest in the industries in Ota City among its residents, workers, and other people both within the country and outside.

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1. Location and Special Features of Ota City



The southernmost of Tokyo's 23 major cities, Ota City has the largest land area of them all. In terms of population, it is in the top three, behind Setagaya City and Nerima City. One notable characteristic is that the population of the city hardly varies between day and night. The city has industrial, commercial, and residential zones, each with their own characteristics. Corporate activities and daily life activities coexist throughout the entire city.

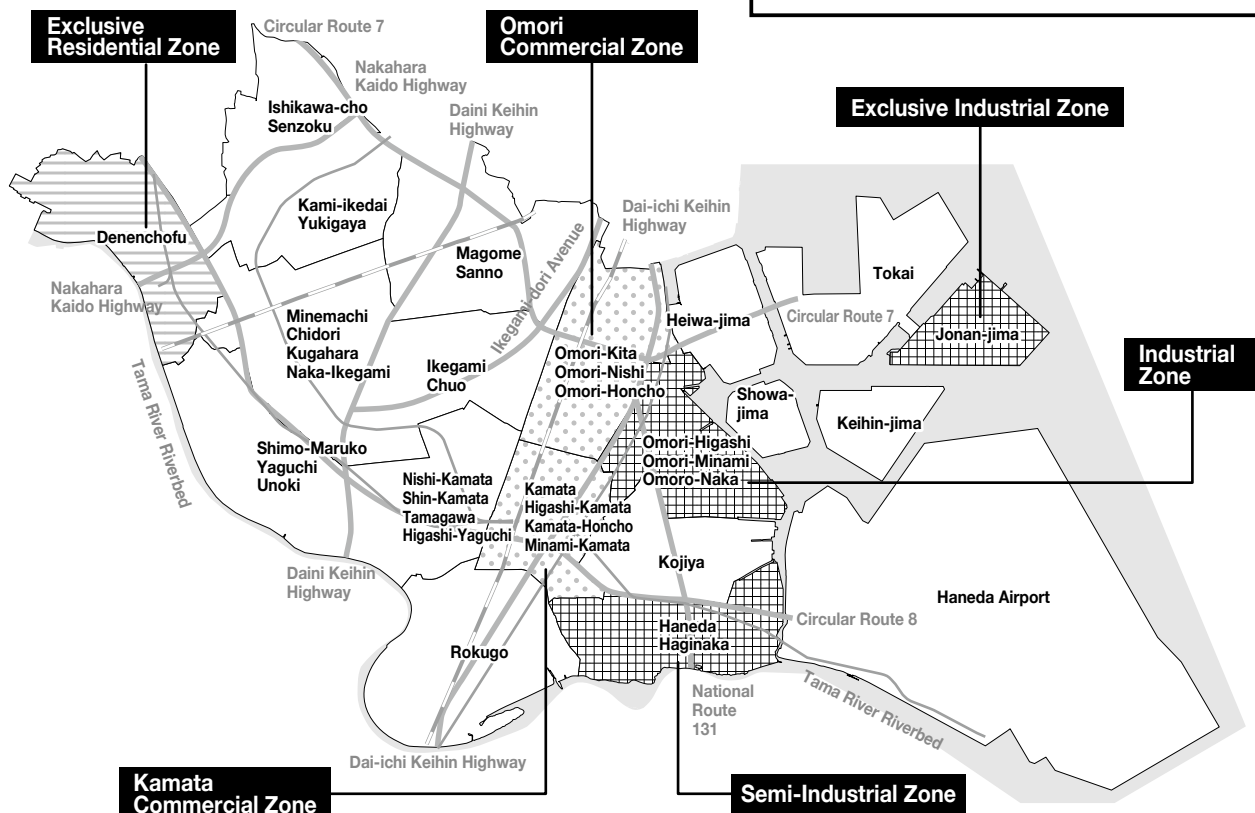
In addition, Ota City has a comprehensive transportation system, with national roads, loop lines, and other major thoroughfares, as well as a railway network that includes JR, Keihin Kyuko line, and Tokyu lines. Furthermore, Haneda Airport continues to grow more international at an accelerated pace, and plays a major role as the gateway to the world, as well as strategically important in transportation.

Area: 60.66 km²

largest of the 23 major cities, as of March 12, 2015,

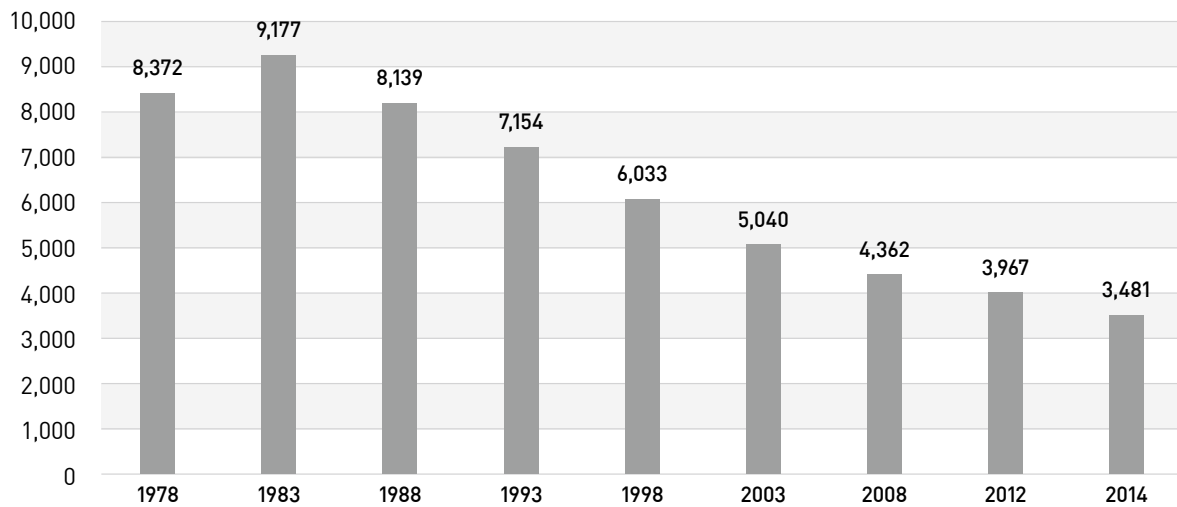
Population: 712,058

including foreign residents, as of January 1, 2016



2. Trends in Number of Plants in Ota City

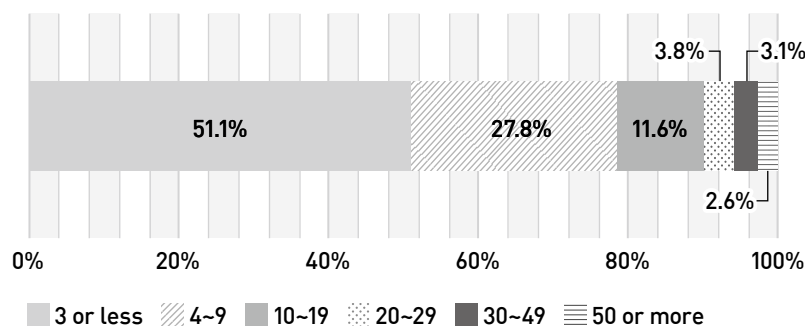
■ Trends in Number of Business Locations (No. of Plants) in Manufacturing Industry In Ota City



The number of plants in Ota City increased with many setting up operations during the period of high economic growth. But after peaking at 9,177 in 1983, the number declined continuously. Among the reasons are believed to be companies changing their business fields and shutting down due to a shortage of workers to take over positions. This was brought about by the collapse of the “Bubble Economy,” the economic downturn precipitated by the Lehman Brothers bankruptcy in 2008, and the decreasing birthrate and aging population. Today, there are a number of small factories which have survived these harsh times by taking advantage of their unique processing technologies.

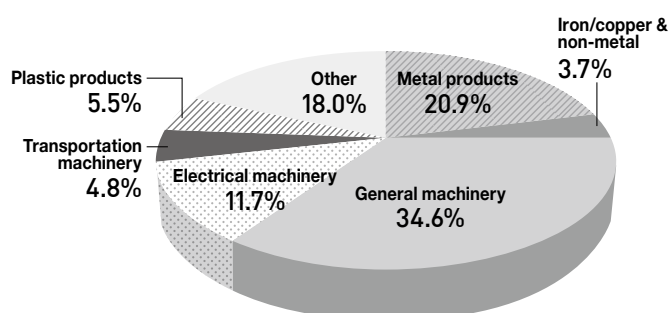
3. Breakdown of Plant Worker Population in Ota City and Industry Categories

■ Breakdown of Plant Worker Population in Ota City



A basic breakdown of the population of plant workers in Ota City shows that groups of 3 or less make up about half of the population. When groups of 4 to 9 are added, groups of 9 or less make up 80% of the worker population. Thus, the prominent characteristic of the plant worker population in Ota City is that it is concentrated in small factories.

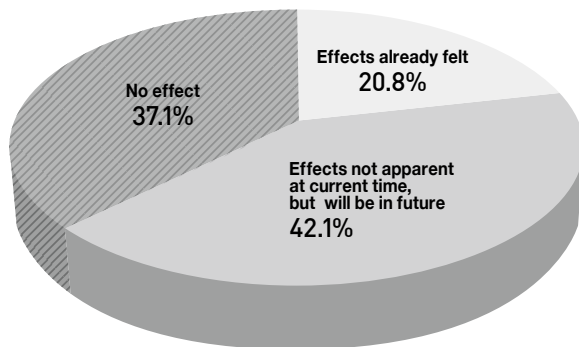
■ Main Industry Categories of Plants in Ota City



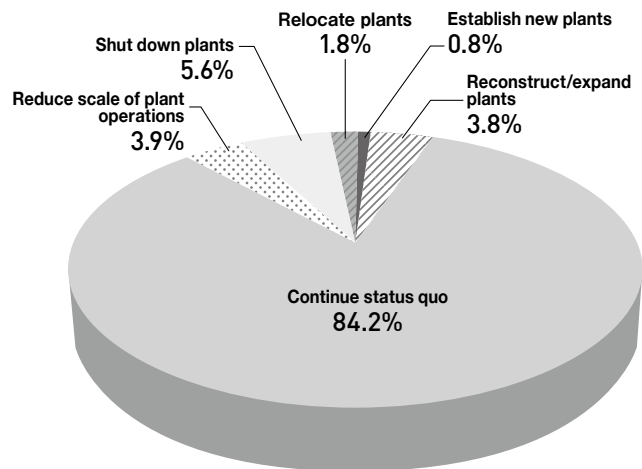
In terms of the categories of industries, the plants in Ota City represent, “metal products” and “general machinery” make up more than half. When “electronic machinery” and “machinery for transportation” are added, then the “machinery, metal processing-related” category accounts for over 80%. Therefore, the fact that there are many plants producing high added value prototype products and dies, jigs, tools, and gauges in “small lots of multiple types” as specialized processing technology for cutting, grinding, and polishing is a distinct characteristic of the plants in Ota City.

4. Plant Succession and New Orders/Outsourcing

■ Effect/No Effect on Succession of Technology & Skills



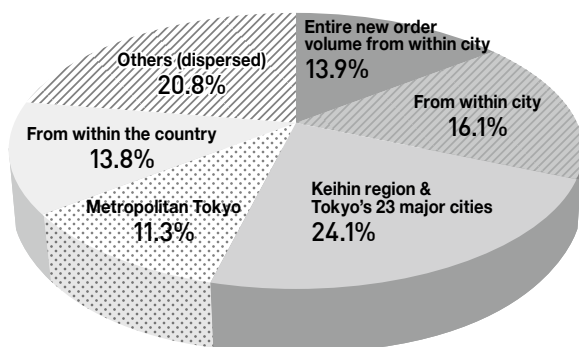
■ Intention of Plants on How to Address Succession



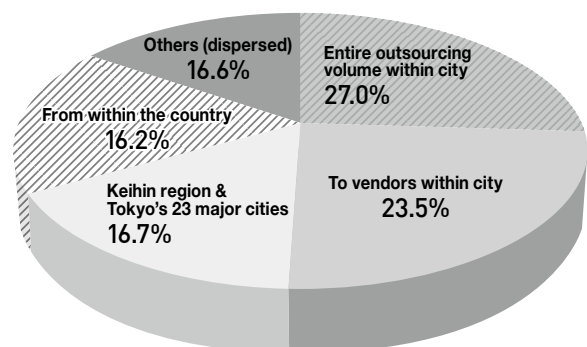
When surveyed, about 20% of the plants responded that “effects already felt” with regard to the impact of workers quitting and leaving due to aging on the succession of technology and skills.

When “effects will be felt in future” is added, succession of technology and skills is at risk in over 60% of the plants. In addition, over 80% of the plants responded that they will “continue the status quo” of the current approach for succession when asked about their intentions on how to address the issue of succession in their plants.

■ Main Sources of New Orders by Region



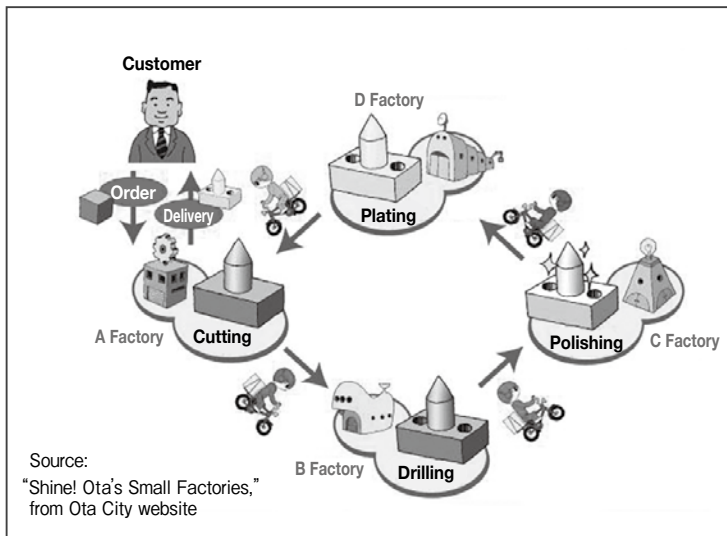
■ Main Destinations of Outsourcing by Region



From the above graph, it can be determined that there are many plants which receive new orders from within the city and outsource to vendors in the city. Plants that receive new orders from or outsource only to a specific group of companies comprise the minority, while the majority receive new orders from or outsource to multiple companies within the city. In particular, over half of the outsourcing percentage is mainly to vendors in Ota City. Because these customer and vendor locations comprise a business network located within a very close distance, there is a practice referred to as “giving business to colleagues.” Furthermore, in recent years, there has been an increase in the number of plants that do business with companies outside Ota City due to the development of transportation networks and the spread of the internet environment.

► The following page presents an example of a “giving business to colleagues” network.

5. “Giving business to colleagues” Network, One of the Strengths of Plants in Ota CityNetwork



The plants inside Ota City have their own specialized fields, have developed a high degree of specialization in those fields, and have acquired high-level processing technologies. As a result, plants possessing various processing technologies have accumulated in the city and a system of mutual cooperation has come into being known as “giving business to colleagues.” In addition, a major advantage of this is the compact business scale of the plants having their own high-level processing technologies has made possible the production of **“small lots of multiple types of products”** with **“short delivery periods.”** The following are examples of these processing technologies.

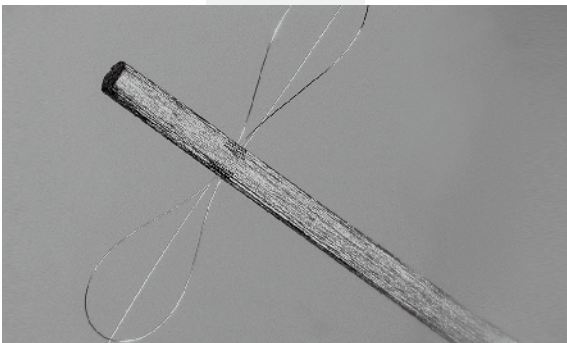
1. Cutting



Process where materials are cut. Some factories specialize in high-precision processing of special metal materials such as tungsten.



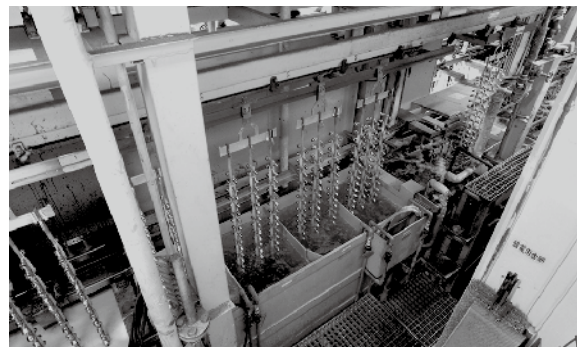
2. Drilling



Example of opening a hyperfine hole working in micron units (1/1,000). Opening of a 0.5mm hole for the lead of a mechanical pencil is possible.



4. Plating



Process to lay a covering or coating over the surface of metal and other materials. It is done to prevent corrosion of the material and to impart an appearance of quality to the surface.



3. Polishing



Process to polish and smoothen the surface of metal, glass and similar types of surfaces. It is performed by hand, not machine.

6. History of Ota City Industries and Shitamachi Bobsleighs from an Economic Perspective

Oil Shock — Bubble Economy (around 1973-1990)

- There was a shift from reliance during the high economic growth period on one company for receiving orders to multiple companies receiving orders.
- Specialization in processing technologies.
- Formation of the “giving business to colleagues” practice.

Collapse of Bubble Economy — Lost 20 Years (around 1991-2011)

- Spread of numerically-controlled machine tools, as a result of the move toward digitization and adoption of IT.
- No. of plants decreased due to stagnation of Japanese economy.
- Actualization of problems of aging of business owners, managers, and technicians, and a shortage of workers to take over.

Abenomics (around 2012-)

- Stepping up from commissioned processing to research and development.
- Entry into aerospace, medical care, nursing, and other industries.
- Formation of new networks.

After the collapse of the Bubble Economy, as large companies placing orders started to move their production bases overseas and domestic orders decreased, research- and development-type companies which took the concept of “developing one’s own products” to higher levels and fabless companies began to appear. Amid this, the “Shitamachi Bobsleigh” project appealed for “planning and development prowess” in addition to the “giving business to colleagues” networks and the original strengths of high-level processing technologies and short delivery periods. It also strived to get orders from domestic and overseas customers for work related to aerospace industries, medical care and nursing equipment.

Fabless company:

plans, designs and develops products, but does not own their own manufacturing and production facilities. Instead, subcontracts this out to other companies and sells the finished products as their own.



Shitamachi Bobsleigh 1 (rear) and 2 (front), the first ones developed and built.

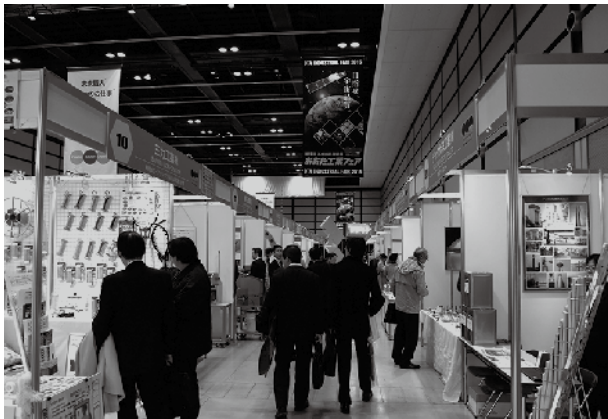


Shitamachi Bobsleigh production meeting

7. Using Exhibitions and Business Meetings to Expand Business Opportunities and Enter New Industries

In order to promote the spread of high-level processing technologies and create new business opportunities, the Ota City Industrial Promotion Organization holds a variety of independent project exhibitions and business meetings for different objectives. We present some examples here.

■ Ota Industrial Fair



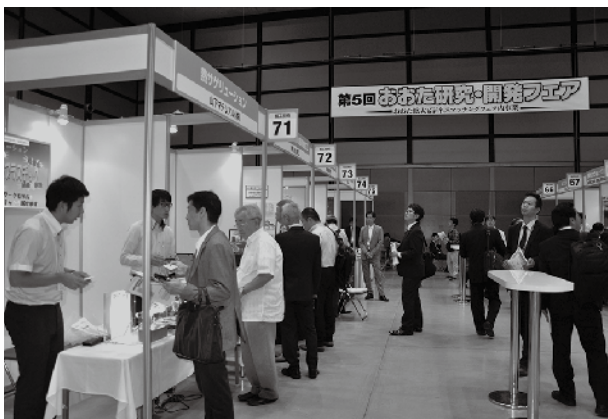
For three days in February every year, an industrial fair is held, the largest event showcasing manufacturing companies in Ota City.

■ Processing Technology Exhibition and Business Meetings



A one-day exhibition focusing on Ota industrial processing technologies which enable plants with 10 workers or less to easily present displays.

■ Ota R&D Fair



The Ota R&D Fair focuses on the theme of “Industry-Academia Collaboration.” Universities, colleges, research institutions, and similar organizations from all over the country exhibit their leading-edge technology and products.

■ Manufacturing Order Placing and Receiving Business Meeting in Ota

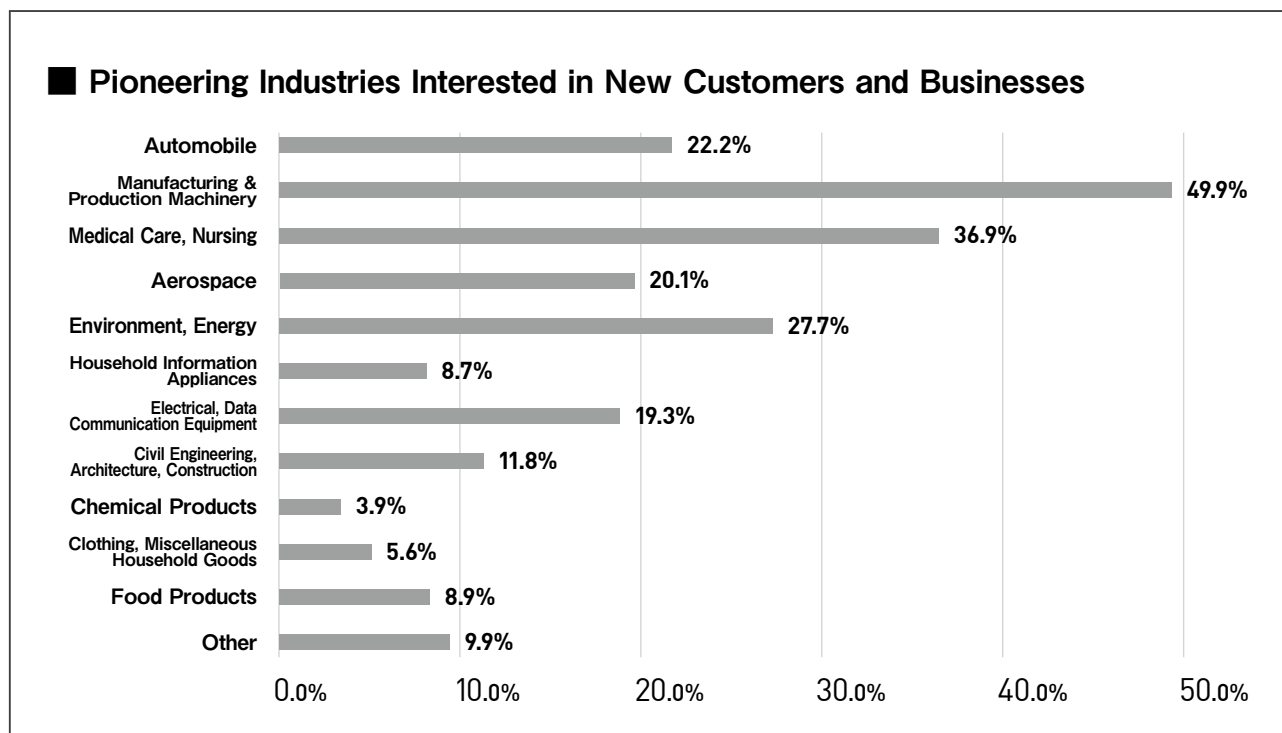


A business meeting highlighting Ota City where companies from all over the country gather in one location to prospect for new manufacturing customers and collect information.

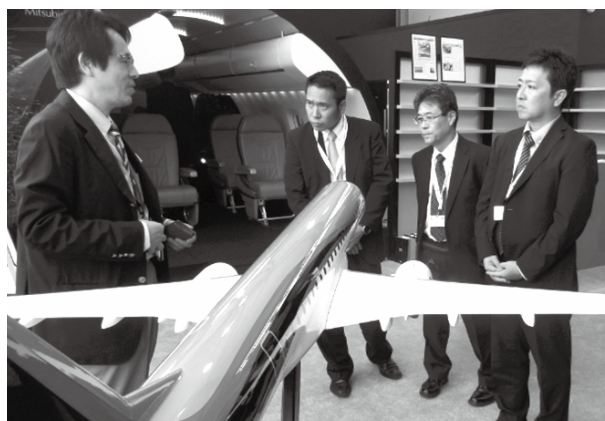
Entering New Industries

Using the economic downturn precipitated by the Lehman Brothers bankruptcy in 2008 as an opportunity to acquire new business opportunities, plants started to appear which utilized their sophisticated processing technologies cultivated over many years to enter new industries.

The following graph shows that after “Manufacturing, Production Machinery” which plants have been involved in up to now, they have intentions for new business development in Next Generation Industries with high expectations for growth, specifically “Medical Care, Nursing,” “Environment, Energy,” and “Aerospace.”



Product samples on display at a medical care-related exhibition. The prowess of processing technology was presented to people in medical care institutions and medical care equipment manufacturers.



Shitamachi Bobsleigh members visit the Farnborough International Airshow in England. They were exploring opportunities to enter the aircraft industry, taking advantage of the national project that supports the cultivation of the “Japan Brand.”

8. Policies and Outlook for Ota City and Ota City Industrial Promotion Organization

In order to maintain and promote the industrial resources accumulated in the city, Ota City is involved in projects to establish policies for promoting industry and formulate related plans, conduct various surveys and studies, encourage locating industries in the city, develop locations for industry, and foster the development of human resources.

Based on the Act on the Promotion of Establishment of Enterprises, in 2014 the city formulated the “Basic Plan to Promote Development of Ota City as a Business Location” (Stage 2) to create high added value for the manufacturing companies in the city and related businesses.

As far as its efforts to induce companies to locate in Ota City are concerned, the city has set up leased industrial apartments and maintains various industrial support facilities to promote the establishment of new businesses, research and development and development, and other activities, all with the aim of encouraging the expansion of plants in the city and promoting the city as a new location for businesses. In addition, it is involved in attracting powerful companies to its area, along with offering aid to cover costs to expand manufacturing facilities for plants and relocate to the city, as well as aid to fledgling companies, research and development-type companies, and other entities to help maintain a base of operations in the city, specifically those which are expected to place orders for work to small- to mid-size companies in the city.

In terms of developing human resources, the city commissions the Ota Industrial Federation, conducts management technology leadership lectures and seminars, implements projects to cultivate human resources for the next generation of manufacturing, and other activities. It also promotes the advancement of the technological prowess of small- to mid-size companies in the city and the upgrading of businesses.

The Ota City Industrial Promotion Organization develops projects and businesses based on the policies and other measures the city has established. First, we conduct projects to respond to the changing age, such as holding exhibitions and business meetings focused on specific fields and themes, in order to foster the growth of next-generation industries, including medical care, nursing and welfare, aerospace, robot-based manufacturing, and other growth industries.

In addition, we contribute to the expansion of the business territories of small- to mid-size businesses in the city by promoting involvement in other sectors of industry and support of new and new technology research and development, as well as involvement in forming and supporting networks among companies. To make conducting business in Ota City easy, we are also involved in securing and developing human resources that support business owners and industry.

With regard to promoting business both domestically and internationally, our organization conducts projects to coordinate the placing and receiving of orders with the aim of stimulating the business of small- mid-size companies in the city and encourage participation in exhibitions. Our efforts to open up foreign markets focus on expanding ordering placing and receiving from overseas companies,

● Note: The statistical data appearing on pages 2, 3 and 7 are quoted from the “Report on Studies of Actual Conditions for the Manufacturing and Other Industries in Ota City for FY2014.” (published March 2015)





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