



Saitama Prefecture

Powered by Saitama Prefecture

Leading-Edge Industry Design Project



Sai no Kuni
Saitama Prefecture

Strengthening the "Earning Power" of Saitama

Since 2014, Saitama Prefecture has been actively promoting the Leading-Edge Industry Design Project with the goal of building new, world-class industries with high profitability and productivity in Saitama.

By integrating cutting-edge ideas from academic and research organizations with advanced technologies of local businesses, Saitama offers consistent support in the practical application of new technologies and commercialization into products, ultimately aiming to create a concentration of Saitama-based leading-edge industries.

Investing in Five Key Fields with High Growth Potential

Concentrated investment in the five key fields with high growth potential:



- Advanced Materials
- Medicine • Healthcare
- Robotics • AI • IoT
- New Energy
- Air • Space • Mobility

The Project will utilize the latest technologies, such as AI and IoT, in the development of new products and services focused on the five key fields.

Technological Support, Subsidies, Funding, Innovative Ideas-Matching, Networking...

Support programs include:

◆ The Leading-Edge Industry Research Salon

The board of experts in leading edge technologies offers advice and provides verifications and evaluations of development initiatives related to the Project.

◆ The Leading-Edge Industry Development Agreement

Formed in February 2014, this technological support agreement established collaboration between the Saitama Prefecture and two of the foremost research organizations in Japan: the New Energy and Industrial Technology Development Organization (NEDO) and the National Institute of Advanced Industrial Science and Technology (AIST).

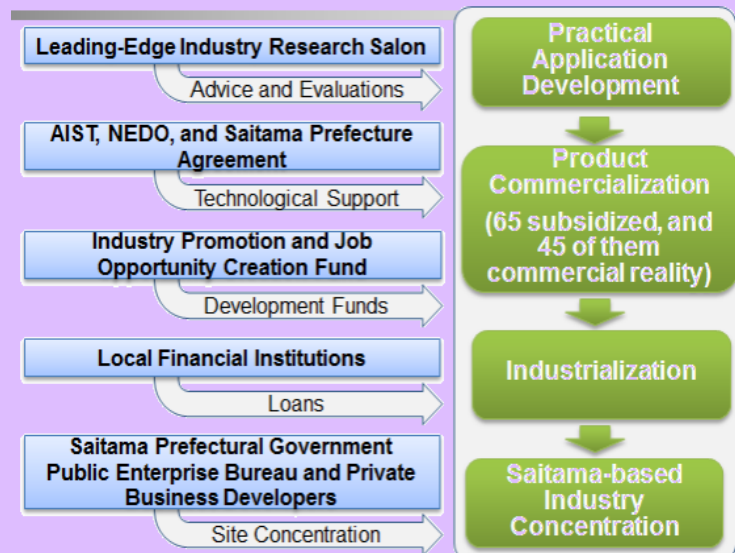
◆ Connections with Saitama-based Financial Organizations

Saitama creates connections with financial organizations to provide trouble-free loans for commercialization of new products and technologies.

Structures for Total Support and How They Work



Check out our new video!





Medicine · Healthcare

With a high concentration of optoelectronic (optical) industries ideal to the production of medical equipment, Saitama Prefecture boasts the highest pharmaceutical and medical equipment production revenue in Japan and high potential for medical-related industry growth. Taking advantage of the prefecture's strengths, Saitama is striving to achieve an even higher concentration of Saitama-based medical-related industries.

Saitama Medical Innovation Network

Saitama Prefecture and Saitama City are jointly operating a support platform for medical-related businesses, universities, research organizations and medical organizations, as well as the business entities aspiring to enter into the medical equipment industry. The Saitama Medical Innovation Network promotes **medical-engineering** and **industry-academia-medicine** collaborations through a variety of initiatives, including hosting seminars and matching the needs of the medical world with relevant institutions and organizations.

Medical Equipment Commercialization Subsidy

Aiming to promote commercialization of medical equipment-related businesses by Saitama-based SME's, this project supports a portion of the costs incurred for clinical or non-clinical tests and any consultation or evaluation processes related to pharmaceutical affairs for product improvement.

- ◆ Costs Covered: Up to 50%
- ◆ Maximum Subsidy Amount: 5,000,000 JPY

Exhibition Participation Support

This project supports participation in trade shows and exhibitions to demonstrate products and prototypes to promote effective matching of medical organizations with manufacturers and sales businesses.



General Meeting of the Japan Society for Endoscopic Surgery



Medtec Japan

Industry-Academia Collaborative R&D Project

This project supports R&D that combines the innovative ideas of research organizations and universities with the technological capabilities of businesses.

Subsidy for Development and Environmental Testing of Medical Equipment Using AI

This project supports development and demonstrative experiment for medical equipment using AI technology carried out by a joint development team of Saitama-based businesses and medical institutions.

Support for Obtaining Overseas Certification

The project offers subsidies to cover a portion of the costs incurred to obtain international certifications such as ISO13485 and CE mark.

- ◆ Costs Covered: Up to 50%
- ◆ Maximum Subsidy Amount: 1,500,000 JPY

3-Way Collaboration Development Model

Manufacturing industries, medical organizations, and manufacturing and sales businesses form a 3-way collaboration to create a marketable product that reflects current medical needs.

Leading-Edge Product Development Subsidy (FY2019)

This subsidy assists businesses' efforts towards the development and commercialization of leading-edge products.

- ◆ Costs Covered: Up to 2/3
- ◆ Maximum Subsidy: 15,000,000 JPY

Satake Chemical Equipment Mfg. Ltd. has developed a device capable of mass-producing uniform and homogeneous iPS cells, that is indispensable in regenerative medicine and drug development.



Check out the video!





Advanced Materials

Nano-carbons, part of a family of microscopic carbon-based materials that include carbon nanotubes, possess high electroconductive and thermal conductive properties while also being light and strong. The emergence of new materials that take advantage of nano-carbons' superior qualities is anticipated to lead to the development of a variety of products across many fields. Saitama Prefecture's initiatives to develop new industries and expand emerging business projects include human resources training programs, technology exchange meetings between businesses and universities, and support for the development of new nano-carbon materials and products.

Nano-Carbons Leading-Edge Technology Exchange Meetings

Through the regular hosting of leading-edge technology exchange meetings, Saitama is actively promoting the concentration of nano-carbon-related technologies, human resources, and information within the prefecture. Furthermore, Saitama is encouraging the establishment of new networks through the organization and hosting of social gatherings that introduce the latest nano-carbon-related technology projects developed by small, medium and large businesses.



Lecture



Exhibition

Nano-Carbons Human Resource Training Program

This project aims to cultivate human resources who can seize business opportunities in the field of nano-carbons by studying the current state of nano-carbon-related business from various perspectives and establishing networks between researchers and businesses.



Facility tour of a leading-edge R&D organization

Industry-Academia Collaborative Development Project

This project supports research and development that combines the innovative ideas of research organizations and universities with the technological capabilities of businesses.

Development of Evaluative Analysis Technology

SAITEC (Kawaguchi City) has resources available for the development of evaluative analysis technology of new materials produced using nano-carbons.



Evaluative analysis of new materials

Exhibition Participation Support

Saitama supports participation in exhibitions to provide opportunities for market expansion, new business, and the promotion of prefecture-based businesses' advanced technology and products.



nano tech 2018

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Nano Summit Co., Ltd. has developed mass production technology of CNT transparent conductive ink by "dispensing," "mixing" and "controlling" CNT.



Check out the video!



Robotics · AI · IoT

Robotics technology has shown an increased presence in industries such as automobile manufacturing, playing a prominent role in the creation of new services. Robotics is also predicted to offer solutions for various social issues such as human resource shortages in a wide range of fields, including medicine and caregiving, infrastructure, agriculture, and housework. Saitama is aiming to increase the concentration of Saitama-based robotics industries by actively supporting the industrialization and development of robotics that are useful at work and in the home.

Robot Business Consortium

The Robot Business Consortium is a collaborative platform for robotics businesses, users, universities and research organizations, and financial institutions, aiming to actively promote an increased concentration of robotics industries in Saitama Prefecture. (Membership is free.)

Main initiatives include:

- Networking events for robotics businesses
- Research meetings on rehabilitation and caregiving robotics
- Research meetings on robotics for agricultural application
- Business-Academia ideas matching
- Drone business support and seminars



Human Resources Training in Robotics Technology

This project assists with the training of engineers to design and develop robots, and provides knowledge necessary for robotics businesses, such as intellectual properties protection and marketing, through seminars.

- ◆ Hands-on seminars for human resources in robotics engineering
- ◆ Lectures on practicalities of robotics businesses

Exhibition Participation Support

Saitama supports participation in exhibitions to provide opportunities for market expansion, new business, and the promotion of prefecture-based businesses' advanced technology and products.

Participation Support Accomplishments:

- ◆ Japan Robot Week 2018
- ◆ Sai-no-Kuni Business Arena 2018

Drone Business Startup Subsidy

This project supports startups and SMEs aiming to create new businesses and improve services utilizing drones.

- ◆ Costs Covered: Up to 50%
- ◆ Maximum Subsidy Amount: 500,000 JPY

Industry-Academia Collaborative R&D Project

This project supports a variety of robotics development initiatives conducted through collaborations between universities and Saitama-based businesses.

Selected Themes (FY2018)

- ◆ Development of a robot that processes the clay modeling of automobiles. (National Institute of Advanced Industrial Science and Technology)
- ◆ Development of a robotic system to detect stumbles equipped with privacy protection functionality. (Saitama Prefectural University)

Robotics Testing Fields

The robotics testing fields contribute to the development of the robotics industry by providing a site for businesses, universities, and research organizations to test and experiment with robots and drones. (Former Moroyama Senior High School and other locations.)



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- ◆ Costs Covered: Up to 2/3
- ◆ Maximum Subsidy: 15,000,000 JPY

RTC Co., Ltd. has developed a system that sends an alert when a patient or a person who is being monitored gets out of bed. The system can be used on a standard bed, with monitoring robots watching over bedridden persons.



Check out the video!





New Energy

Increased demand for energy and efforts to decrease fossil fuel dependence have emphasized the importance of renewable energy and an energy-saving perspective in modern society. Saitama is actively supporting the research and development of smart houses, storage batteries, hydrogen energy, and other technologies in the high growth potential field of new energy. The prefecture is also promoting new energy-related industries through new technologies produced by Saitama-supported R&D.

Saitama Next-Generation Housing Industry Project

◆ Development of energy-saving, energy-creating smart housing (Saitama Industrial Promotion Public Corporation)

[The Second-stage Next-Generation Housing Project] (2017-2018)

◆ Hybrid power generation panel

Development of a power generating panel that integrates a solar (photovoltaic) power generator and a solar heat collector.

◆ Energy-saving device that interlocks with natural energy management technology

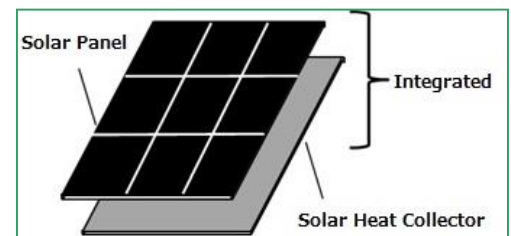
Development of a device that automatically operates at an energy-saving mode by learning the patterns of the residents' lifestyle and daily activities.

◆ High-efficiency, multi-output power supply device

Development of an electricity storage system which actively controls input and output of electric power according to consumption.

◆ High-efficiency floor heating system

Development of a high-speed, high-efficiency floor heating system with precise heat control capability by following the position and movement of people.



Development of a solar light - solar heat hybrid-type power generator panel

[The First-stage Next-Generation Housing Project] (2014-2016)

- ◆ Development of Geothermal Heat Pump Technology
- ◆ Development of High Insulation Glass Film Technology

- ◆ Development of Wood-based Insulation Material Technology
- ◆ EMS (Energy Management Solutions) Technology

Industry-Academia Collaborative R&D Project

Through collaboration among universities, research organizations, and SMEs within Saitama Prefecture, this project supports joint R&D conducive to the use of new energy.

Battery Technology

◆ Development of Next-Generation Storage Battery Technology (SAITEC)

Saitama Industrial Technology Center has made the world's first prototype of a magnesium rechargeable battery that works at room temperature. It is anticipated for use in various small consumer products.



Coin type



Laminate type

New Technologies and Industrialization Development Costs Subsidy (FY2018)

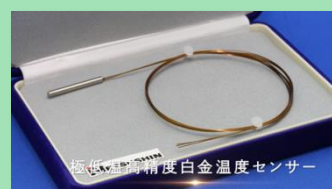
This subsidy assists with the independent product industrialization and practical application development efforts of businesses.

- ◆ Costs Covered: Up to 100%
- ◆ Maximum Subsidy: 20,000,000 JPY

Selected Theme (FY2018)

- ◆ Development of a high-strength plate heat exchanger with strong resistance to large temperature differences.

NETSUSHIN Co., Ltd. has developed a high precision ultra-low temperature platinum thermal sensor that is capable of measuring temperature at an ultra-low temperature of -253 C° (temperature of liquid hydrogen) with precision.



Check out the video!



Air - Space - Mobility

The rapidly growing aircraft industry is expected to double its presence in the marketplace over the next twenty years. Consisting of approximately 3,000,000 parts, about 100 times the amount of parts used in automobiles, aircrafts represent a concentrated body of leading-edge technology, and growth in the aircraft industry is anticipated to bring multiplied effects to supporting industries. Saitama Prefecture is implementing various support measures for Saitama-based SMEs that have cultivated advanced technological expertise through the automobile and electronics industries and those who are now looking to enter the air and space industry.

Research Meetings about Entry into the Aircraft Industry

Saitama-based businesses seeking to enter the aircraft industry can take advantage of marketplace entry and technology development support initiatives such as seminars and factory observation tours of major aircraft parts construction companies.



Observation Tour of Japan Airlines Maintenance Center (Narita Airport)



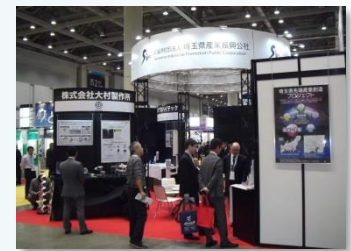
Seminar

Assistance with Participation in Domestic and International Product Exhibitions

Saitama supports participation in both domestic and international airshows in order to provide business matching opportunities for market expansion, new business, and the promotion of prefecture-based businesses' advanced technologies and products.

Participation Support Achievements

- ◆ Aeromart Seattle
- ◆ Japan International Aerospace Exhibition
- ◆ Sai-no-Kuni Business Arena
- ◆ Aeromart Toulouse
- ◆ Aeromart Nagoya
- ... and more!



Japan International Aerospace Exhibition

Supporting the Construction of an Integrated Production System

Saitama supports the construction of a framework managed by collaborating SME's conducting machining, surface processing, nondestructive inspection, etc. to provide a one-stop service for orders from trade partners.

Prototype Examples

- ◆ Flap track rail (framing material to support movable vanes of aircrafts)
- ◆ Bushes for landing gears (parts used in landing gears of aircrafts)

Subsidy for Obtaining QC Certification

Subsidy to support part of the cost to obtain necessary trade certificates in aircraft trading, such as JISQ9100 and Nadcap.

- ◆ Costs Covered: Up to 50%
- ◆ Maximum Subsidy: 1,500,000 JPY

Subsidy to Support Entry and Expansion into Air and Space Industry (FY2018)

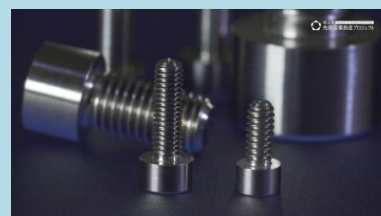
This subsidy supports the independent development efforts of businesses towards projection expansion and entry into the air and space industry.

- ◆ Costs Covered: Up to 50%
- ◆ Maximum Subsidy: 10,000,000 JPY

Selected Theme (FY2018)

- ◆ Flying Cars
"Development of light-weight frames for flying cars"

KIT SEIKO Corporation has developed processing technology for mass production of large-sized titanium alloy and heat-resistant alloy stud bolts for aircrafts used in the air and space industry.

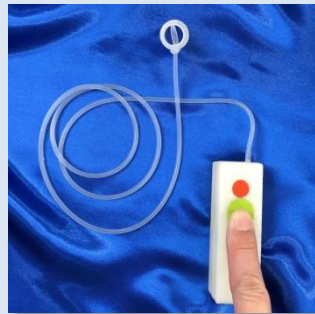


Check out the video!

Medical Equipment Prototype Contest 2018 Prize-Winning Prototypes

Grand Prix
Award

Vocal support device for patients who have undergone tracheotomies



Winner:
Senko Medical Instrument Mfg. Co., Ltd.

Second
Prize

Laparoscopic surgery training system



Winner:
Kotobuki Giken Inc.

Incentive
Award

A device for the removal of dialysis injection needles



Winner:
KSK Co., Ltd.

Rehabilitation device for forearm pronation and supination therapy



Winner:
YASKAWA Electric Corporation

Barrier-free megaphone for people with hearing impairments



Winner:
SoundFun Inc.

Leading-Edge Industry Consultation Services

Saitama Leading-Edge Industry Support Center

The Saitama Leading-Edge Industry Support Center offers support services to businesses working on initiatives in leading-edge fields, particularly nano-carbons, medical innovation, robotics, new energy, and air and space. Please feel free to inquire about our comprehensive services!

I. Comprehensive Consultation Services

Free advice from experienced professionals (technological guidance, business matching, legal regulations, market entry, etc.)

- Open: Mon thru Fri 9:00-17:00
- TEL: +81-(0)48-711-6870
- FAX: +81-(0)48-857-3921

* Please direct all consultations related to the field of Air and Space to the Saitama Industrial Promotion Public Corporation (SIPC) Trade Support Group (Tel: 048-647-4086)

II. Introduction of Development Strategies

Various programs and development strategies of the Leading-Edge Industry Design Project are displayed in our first floor exhibition space.

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Visit our website!



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Saitama Prefectural Mascots
Kobaton and Saitamatch