

A Hotspot for Excellent Human Resources and Research Institutions

A Hotspot for Excellent Human Resources and Research Institutions: 2 Key Points

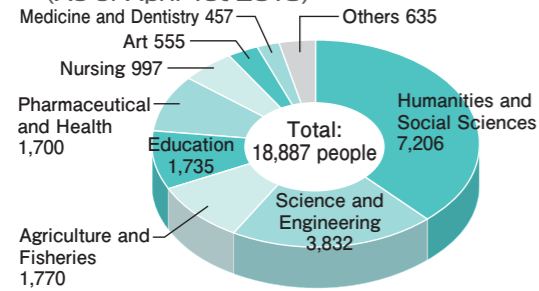
- (1) High-quality Human Resources
- (2) Experimental Institutions Provide Strong Support for Emerging Businesses

Key Point 1 High-quality Human Resources

Easily Attract the Outstanding Human Resources that Hold the Key to the Development of your Business

Hokkaido has an abundance of higher education institutions, with 28 graduate schools, 40 universities, 15 junior colleges, and 4 technical colleges. There are about 84,000 young graduates annually, including those from vocational and high schools. This young and energetic workforce is keen to make its mark in the world.

University student enrollment by specialization (As of April 1st 2018) (Unit: people)



(Source: Private Schools Division, Legal Affairs and Corporations Bureau, Department of General Affairs, Hokkaido Government)

Incentives for Highly Skilled Engineers to Relocate to Hokkaido

To encourage highly skilled engineers who were born in Hokkaido to return from major cities such as Tokyo to their hometowns (known as the "U Turn") and encourage people who were born outside Hokkaido to move here (known as the "I Turn"), a consultation framework has been established in the Hokkaido Government, and information registration and intermediating services between recruiting companies and job seekers are offered. Furthermore, in coordination with the Hokkaido Human Resource Promotion Council, a nation-wide PR strategy has been developed to attract skilled workers to Hokkaido. 2,234 people have found work through the U-I Turn employment program between May 1990, when the consultation service was established, and January 2019.

Consultation Services

"U-I Turn Support Desk" (Employment and Labor Section, Labor Policies Bureau, Department of Economic Affairs, Hokkaido Government)
TEL: 011-251-3896

For details, please visit the website shown below.
<http://www.pref.hokkaido.lg.jp/kz/jzi/ui-turn/index.htm>

Helping Companies Find Personnel

Job Cafe Hokkaido, Hokkaido Government's support service for young job seekers and Young Hello Work Sapporo, a branch of a national service, are offered jointly at the Hokkaido Young Persons' Employment Support Center (nicknamed Miraippo) to provide an all-in-one employment support system. In addition to providing job seekers with career advice, Job Cafe Hokkaido helps companies to find and retain personnel by holding industry seminars, workplace tours and job fairs with multiple companies to deepen job seekers' understanding of industries and workplaces. In addition to Sapporo, Job Cafe Hokkaido has bases in Hakodate, Asahikawa, Kushiro, Obihiro and Kitami. A total of 39,504 people have used the service as of FY 2017, with 6,399 people finding work.

Inquiries

Job Cafe Hokkaido
TEL: 011-209-4510



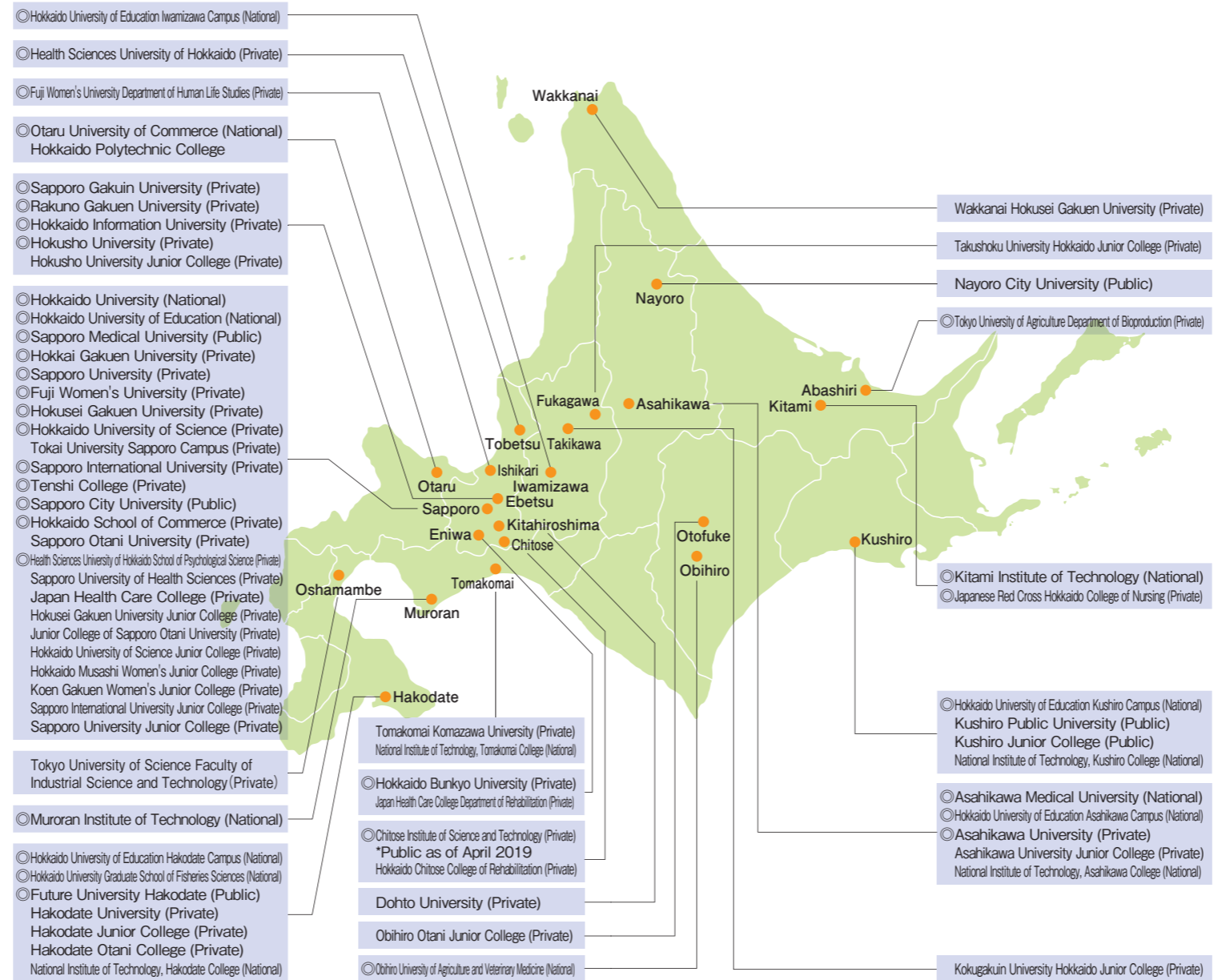
Implementation of Business Matching Schemes

Joint company briefings and interview meetings are now held in numerous venues throughout Hokkaido with the aim of increasing the opportunities for job seekers to meet with potential employers.

For details, please visit the website shown below.

<http://www.pref.hokkaido.lg.jp/kz/rkr/index.htm>

Higher Education Institutions throughout Hokkaido (As of April 2018)



Note: ◎ indicates universities with a graduate school.

(Source: Private Schools Division, Legal Affairs and Corporations Bureau, Department of General Affairs, Hokkaido Government)

Strong Tendency Toward Working Locally

The job market is very locally oriented, with 80% of young graduates finding work in Hokkaido.

Employment of New Graduates (Graduating March 2018)

(Unit: people, () indicates the percentage)

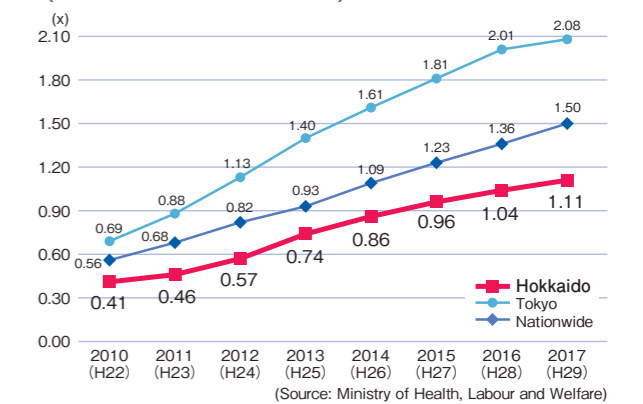
Category	Graduates	Job seekers	Newly employed	Within Hokkaido	Outside Hokkaido
High schools	49,576	7,634	7,509	6,896 (91.8)	613 (8.2)
Vocational schools	9,689	8,539	8,199	6,922 (84.4)	1,277 (15.6)
Technical colleges	702	434	434	149 (34.3)	285 (65.7)
Junior colleges	2,399	1,996	1,919	1,800 (93.8)	119 (6.2)
Universities	18,986	14,978	14,206	8,578 (60.4)	5,628 (39.6)
Total	81,352	33,581	32,267	24,345 (75.4)	7,922 (24.6)

Total at the end of March 2018 (Source: Hokkaido Labor Bureau)
*The figure for high school graduates is the number of graduates expected as of May 15, 2017.



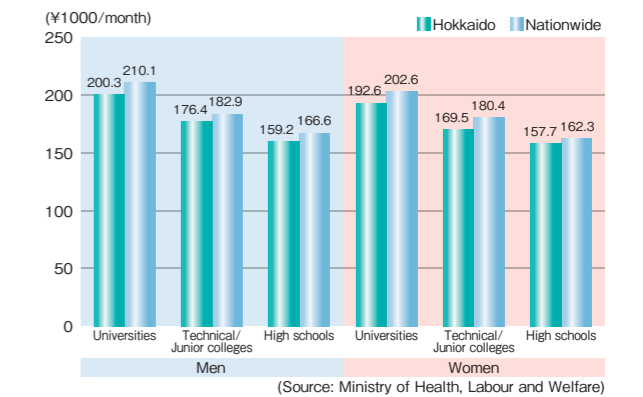
Hokkaido University (Sapporo)

Active Opening Rate (All Industries/Raw Data)



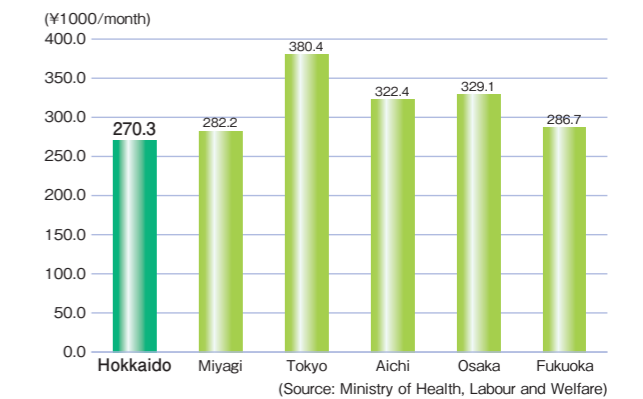
(Source: Ministry of Health, Labour and Welfare)

Average Graduate Starting Salary (2018)



(Source: Ministry of Health, Labour and Welfare)

General Workers' Basic Salary (2018)

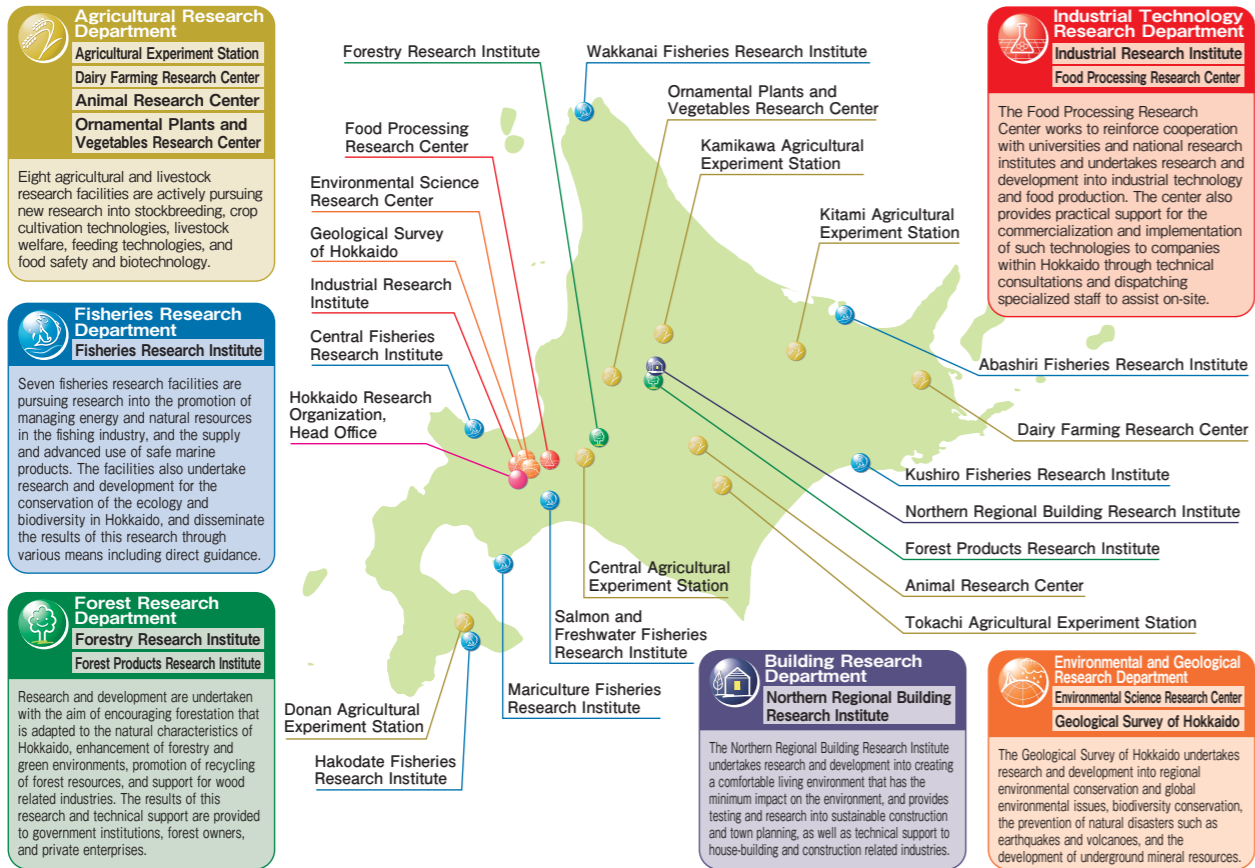


(Source: Ministry of Health, Labour and Welfare)

Experimental Institutions Provide Strong Support for Emerging Businesses

The Hokkaido Research Organization Supports Many Companies through Research and Technical Guidance

The Hokkaido Research Organization is an integrated research institute formed in 2010 by merging 22 Hokkaido testing and research institutes. Involved in a wide range of industrial fields, the institute uses its collective strength to carry out multidisciplinary research and technical support in order to meet your various needs.



Public Testing and Research Institutes and Industrial Support Institutes Provide Strong Support for Emerging Businesses

A system to support collaboration between businesses and Hokkaido's main universities has resulted in an increase in joint research projects in recent years. In addition, public testing and research institutions are continuing research and development in a broad range of areas. Hokkaido is well-equipped for industry-academia cooperation, with a proven track record. Collaborations between companies and national and public universities here have produced Japan's fifth-highest number of rights such as patents resulting from industry-academia cooperation. Hokkaido also has the seventh highest number of joint studies and the sixth highest number of consigned studies.

Main National and Public Universities, Public Testing and Research Institutes and Industrial Support Institutes *Excluding Hokkaido Research Organization

Category	Name	Location	Main Support for Private Companies
National and Public Universities	Institute for the Promotion of Business-Regional Collaboration, Hokkaido University	Sapporo	Joint research with companies and promotion of use of intellectual property in academia (Research fields: Life sciences, information and communications, environment, nanotechnology, materials, etc.)
	Center for Cooperative Research and Development, Muroran Institute of Technology	Muroran	Joint research with companies (Research fields: Materials, environment, energy, construction, social infrastructure, information, sensitivity, production systems, device engineering, measurement, control, aeronautics, electricity, electronics, communication, biotechnology, etc.)
	Center for Regional Community, Kitami Institute of Technology	Kitami	Joint research with companies (Research fields: Measurement, agricultural machinery, biotechnology, civil engineering, information and communications, electricity, electronics, materials, etc.)
	Center for Industry-University Collaboration, Obihiro University of Agriculture and Veterinary Medicine	Obihiro	Joint research with companies (Research fields: Livestock farming, crop farming, food, veterinary fields, biotechnology, agricultural machinery, agricultural civil engineering, agricultural economics, environment, etc.)
	Industry-Academia-Government Collaboration Department, Center for Global Strategy, Otaru University of Commerce	Otaru	Joint research base for industry-academia-government cooperation (construction of "knowledge cycle structure" through industrial promotion projects, active business support, open research seminars, etc.)
	Center for Advanced Research and Education, Asahikawa Medical University	Asahikawa	Provision of information on academic intellectual property to companies, support for industry-academia-government cooperation, etc.
	Collaboration Center for Community and Industry, Sapporo Medical University	Sapporo	Joint research between industry, academia and government (joint research using academic resources, transfer of intellectual property, etc.)
	Collaborative Research Center, Sapporo City University	Sapporo	Cooperation and joint research with companies and the local community
	Northern Hokkaido Regional Research Institute, Nayoro City University	Nayoro	Joint research between industry, academia and government (joint research using academic resources, transfer of intellectual property, etc.)
	Center for University-Society Relations and Collaboration, Future University Hakodate	Hakodate	Joint research, technology transfer and promotion of intellectual property activities between industry, academia and government
National Research and Development Agency	Research Center for Regional Economics, Kushiro Public University	Kushiro	Center for joint research between industry, academia and government (enlightenment plans, etc. to resolve local issues and promote future improvements to communities)
	Civil Engineering Research Institute for Cold Regions	Sapporo	Research and technical consultation on civil engineering technologies for cold regions
	National Institute of Advanced Industrial Science and Technology (AIST) Hokkaido Center	Sapporo	Joint research between industry, academia and government (Research fields: Biotechnology, energy, etc.)
	National Agriculture and Food Research Organization (NARO) Hokkaido Agricultural Research Center	Sapporo	On-site instruction for joint research and dissemination of technology with farmers, companies, etc.
Hokkaido prefectural	Hokkaido Industrial Technology Center	Hakodate	Testing, research, and technological training into seafood processing, biotechnology, industrial materials, and mechatronics
	Hokkaido Okhotsk Area Regional Food Processing Technology Center	Kitami	Testing, research and technical training for food processing that corresponds to local needs
	Hokkaido Tokachi Area Regional Food Processing Technology Center	Obihiro	Testing, research and technical training for food processing that corresponds to local needs
	Hokkaido Institute of Public Health	Sapporo	Safety evaluation of drinking water, food, etc., measurement of radioactive substances, analysis of bacteria, viruses, etc., collection and analysis of information on infections for anti-infection measures
Municipal	Asahikawa Industrial Technology Center	Asahikawa	Research, development, and technical training for machinery and metals
	Kitami Industrial Technology Center	Kitami	Technical training and product development training for machinery and metals, furniture, joinery, and woodcrafts
	Tomakomai Industrial Technology Center	Tomakomai	Technical training and Research and Development support for materials, processing and mechatronics
	Kushiro Industrial Technology Center	Kushiro	Technical support for machinery, metals, woodcrafts, environmental energy, chemicals, electronics, information and communications, etc.
Others	Muroran Advancement Center of Industrial Technology and Management	Muroran	Technical development and training for machinery and metals, electronic control, and software
	TOKACHI REGIONAL INDUSTRIAL DEVELOPMENT CENTER	Obihiro	Technical support for machinery, metals and woodcrafts
	Hokkaido Branch, Organization for Small & Medium Enterprises and Regional Innovation, Japan	Sapporo	Support for expansion of sales routes of small and medium enterprises, overseas expansion, business continuity, human resource development, business expansion, development of new products, business revitalization, strengthening of management foundations, etc.
	Hokkaido Small and Medium Enterprise Promotion Fund Support Center	Sapporo	Support for expansion of sales routes of small and medium enterprises, overseas expansion, business continuity, human resource development, business expansion, development of new products, business revitalization, strengthening of management foundations, etc.
	Northern Advanced Center for Science and Technology	Sapporo	Support through coordination of commercialization activities by companies
	Asahikawa Industry Research Center	Asahikawa	Various forms of support for companies involved in development of new products or technologies or expansion into new fields in northern Hokkaido (Kamikawa, Rumoi and Soya areas)
	Asahikawa Food Industry Support Center	Asahikawa	Support for development of new products, testing and analysis for companies in Asahikawa and surrounding area
	Hokkaido Intelligent Network Terminal	Sapporo	Consultation for product development, technology development and research and development by companies

Number of Patents, etc.

(as of March 31, 2018)

	Number of rights*1	Number of licensing agreements*2	Main items
Patents	134	72	Lactobacillus plantarum HOKKAIDO (new lactobacillus) <sole ownership> Air filtered house (Sumi no ie) <private joint ownership> Scallop shell chalk <private joint ownership>
Utility models	3	2	Automatic pumpkin chopper <private joint ownership>
Designs	5	4	Business card case, wooden card case <private joint ownership>
Trademarks	2	6	Lactobacillus plantarum HOKKAIDO Reafu processed fruit products
Species	132	300	Wheat: Kitahonami Taisetsu Hana no Mai 1 Go Hen of the Woods Mushrooms

*1 The number of rights includes those pending.
 *2 The number of licensing agreements includes cases in which a right is licensed to multiple companies.

Main Results

Crop development field



Emimaru has more transparent grains than Hoshimaru, with less white clouding (indicating excellent quality in unpolished rice)

Development of Emimaru, a New Species of Wet-Field Rice for Cultivation by Direct Seeding

Direct seeding of rice is now possible across a wider area of Hokkaido thanks to the development of a new species called Emimaru. In addition to withstanding seeding in lower temperatures than Hoshimaru, Emimaru is resistant to rice blast disease and grows high-quality unpolished rice.

Product technology field



Development of technology for automatic removal of eyes from potatoes

To combat worker shortages in food processing, image processing and robotics technology has been developed to arrange and position potatoes and detect and remove unusable areas such as eyes and bruises.

Processed field



Development of Technology to Reduce Odor in Ichiya-boshi (fish salted and dried overnight)

New technology has been developed to produce ichiya-boshi, fish that is salted and dried overnight, with less odor. The production process uses soybean whey and adzuki bean soup. The odor of fish is one reason why consumers are eating less of it, so companies are working on producing processed seafood products to expand their consumer base.

Industry-academia Cooperations, etc. with National and Public Universities (by Prefecture) (FY2017)

	Number of patents (number)	Joint studies (number)	Consigned studies (number)
No. 1 Tokyo	4,655	Tokyo 3,973	Tokyo 2,973
No. 2 Kyoto	1,382	Osaka 1,895	Osaka 1,383
No. 3 Osaka	850	Kyoto 1,423	Kyoto 1,239
No. 4 Aichi	775	Miyagi 1,209	Fukuoka 1,018
No. 5 Hokkaido	703	Aichi 1,140	Aichi 1,005
No. 6 Fukuoka	691	Fukuoka 1,129	Hokkaido 928
No. 7 Miyagi	566	Hokkaido 1,043	Miyagi 756
National average	276	National average 474	National average 373

*Number of patents, etc.: Number of licensed or transferred patents
 Source: Industry-academic Cooperations, etc. by Universities, etc. in 2017, Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Northern Manufacturing Network: One-Stop Support for Technical Concerns Faced by Manufacturers

The Hokkaido Government established the Northern Manufacturing Network to provide a one-stop support service with effective solutions for technical issues and consultations on new product development from manufacturers. The service is provided through cooperations with industrial support institutes and manufacturing-related industrial organizations throughout Hokkaido.

<<Feel free to contact the organizations below for the following concerns and issues>>

- Consultations to solve technical issues ⇒ Contact your nearest industrial support institute
- Consultations about joint development through inter-industry cooperations ⇒ Contact an industrial organization in this network

*See the website below for details such as the contact details of the industrial support institutes.

<http://www.pref.hokkaido.lg.jp/kz/ssg/monodukuri/kitanomonodukuriNW.htm>