

FY2017 Inter-University Exchange Project Kindai University

Support for the Formation of Collaborative Programs with Russian and Indian Universities

【Name of project】(Adopted year: FY2017, (Type A Russia))

Human Resource Program for Monodukuri Engineer in Japan and Russia

【Summary of Project】

This project aims to address industry-university collaborative human resources development to promote interaction and cooperation among Kindai University and its partner universities in Russia to promote student exchange at both undergraduate and postgraduate levels. Kindai University has a unique graduate program in manufacturing, *Monodukuri*. The project is based on our experience and expertise in manufacturing, *Monodukuri* in cooperation with local industries.

Concept of the Project

- Human resources development for *Monodukuri*
- Practical internship in company

industry-university cooperation for manufacturing technology, *Monodukuri*, education

- Career design for Russian students
- Business chance for students and company in Japan and Russia

Spin-off effects

- Overseas industry-university collaborative human resources development model in manufacturing technology, *Monodukuri*
- Human network (alumni association in Russia)

Japan-Russia 1-semester two-way exchanges

- [Inbound]
 - Engineering design
 - Individual study
 - Internship
- [Outbound]
 - Project management

Degree program

Master degree : 2 years
Ph.D. degree : 3 years
(Students can only enroll in manufacturing technology, *Monodukuri*, program)

Student exchange program

Japan-Russia 2-week two-way exchanges

- Personal exchange, mutual understanding and friendship
- Internship, introduction to manufacturing technology, *Monodukuri*



Personnel exchange program (short term)

Kindai university



- Faculty of Science and Engineering (7 departments)
- Graduate School of Science and Engineering Research (*Monodukuri*)

8 partner universities in Russia



【Summary of Exchange program】

We have three education programs: 1) 2-week two-way personnel exchange program, 2) 1-semester two-way student exchange program, and 3) one-way degree program (both in master and Ph.D degrees. All programs have a practical internship system. In Program 2), we plan and manage cooperative education programs with our partner universities in Russia. The plan includes establishment of a cooperative education program committee to discuss the possibilities of credit transfer and Joint Degree systems. In order to smoothly implement the program, we have established two offices in Russia, serving as Kindai hubs to analyze the needs for human resources development, manage internships with Russian companies and obtain information on security and risk management for Japanese exchange students.

【Global Human Resource on the project】

This project aims to foster global human resources for the initiation and implementation of product development in companies doing business between Japan and Russia.

【Feature on the project】

In order to maintain Japan's economic revival and to accelerate Russian economic development, Japan and Russia need to foster global human resources at a practical level through education and to create business opportunities for both students and companies in Japan and Russia. We at Kindai University, with ample experience in education and research, can offer a wide range of expertise in science and engineering, medical science, agriculture, aquaculture, and atomic power. We can offer our *Monodukuri* program to Russian universities and contribute to the expansion of personnel exchanges between Japan and Russia.

【Exchange number】

	2017	2018	2019	2020	2021
Outbound	5	15	20	20	20
Inbound	5	15	20	23	26

1. FY2017 Progress

【Human Resource Program for *Monodukuri* Engineers in Japan and Russia】

(Adopted year: FY2017, (Type A, Country Russia))

■ Exchange Programs



〈The short term exchange program〉

・Implementation of short term exchange program

For two weeks in January, we undertook the reciprocal stage of our program with 5 of our affiliated institutions in Russia. Participants included 10 students and 4 teachers from these institutions. In February, 12 students from Kindai University were dispatched for the purpose of education and training to Moscow State University, State University "Dubna", and 4 Japanese related companies active in Russia. These programs have seen the progress of mutual exchange, and have promoted a deeper understanding of the concept of *Monodukuri*.

Student-Mobility

○ Outbound

14 students dispatched for 1 to 2 weeks to major cities in Russia including Moscow, Dubuna, Tolyatti, and Saint Petersburg.

○ Inbound

We have accepted 10 students from our affiliated universities in Russia (Moscow State University, Saint Petersburg University, State University "Dubna", National Research Nuclear University MEPhI, and the Far Eastern Federal University).

	2017	
	Plan	Results
Outbound	5	14
Inbound	5	10

■ Forming the University Network with Quality Assurance

・Implementation of the Kick Off Symposium - Visit to Japan by representatives from 9 Russian universities with exchange ties with Japanese universities.

The Kick Off Symposium was undertaken over 2 days in March. This project involved representatives from 7 Russian universities already undertaking exchanges along with representatives from 2 other Russian universities who are interested in the concept of *Monodukuri*. Discussions focused on the structure of university exchange programs and issues pertaining to this project.



〈The Kick Off Symposium〉

■ Promotion of Student-Mobility Environment

・University affiliation agreements formed with 6 Russian universities

Six new affiliation agreements were formed with Saint Petersburg University, ITMO University, State University "Dubna", Financial University under the Government of the Russian Federation, Far Eastern Federal University, and National Research Nuclear University (MEPhI). Agreements with these renowned universities forms favorable environments for reciprocal exchange programs.



〈The Kick Off Symposium〉

■ Internationalization of the university, Information disclosure and Publication of outcome

・Participation from 4 departments of the Faculty of Science and Engineering and 1 department of the Faculty of International Studies.

Cooperation and coordination from the whole school saw not only the science and engineering students, but students from other faculties presented with the opportunity of overseas training programs. Visits to Russian universities mutually benefitted the students involved in the Russian-Japanese exchange, forwarding them all with a wider view of the world. In addition, those students interested in 'Monodukuri' had the perfect opportunity to increase their international exposure and gain valuable experience by undergoing training at 4 Japanese related companies presently active in Russia. The outcomes of this program will be disseminated both within and outside of the university.

■ Good Practices

・The domestic and international promotion of the「Inter-University Exchange Project (Russia)」

Around 600 participants from both inside and outside of Japan participated in the Kick Off Symposium held in March of this year. Of note from Japan was the Minister for Economy, Trade, and Industry and Minister for Economic Cooperation with Russia, Mr. Hiroshige Seko, and from Russia, Deputy Prime-Minister and Department Chief of Educational Issues, Ms. Olga Golodets, and Minister for Economic Development, Mr. Maxim Oreshkin. Lectures were presented and panel discussions took place at this event. The presence of cabinet ministers from both countries not only supported our school's program, but raised awareness both domestically and internationally in relation to the Inter-University Exchange Project (Russia).

2. FY2018 Progress

【Kindai University】

【Human Resource Program for *Monodukuri* Engineers in Japan and Russia】

(Adopted year: FY2017, (Type A, Country Russia))

■ Exchange Programs



〈The short term exchange program〉

■ Commencement of semester-long exchange program

Continuing from 2017, we undertook our short-term (two week) reciprocal personnel exchange program. Students and educators from 8 of our affiliated institutions in Russia participated in training programs at our university, and students and educators from our university undertook training programs at Moscow State University, Moscow Engineering Physics Institute, ITMO University (St. Petersburg), and Japanese related companies active in Russia. In addition, we undertook our first semester-long exchange program and received 8 students from Russia while dispatching 4 of our students to affiliated Russian institutions. This has seen the development of core *Monodukuri* human resources in specialized fields proceed at full tilt.

Student-Mobility

○ Outbound

4 Japanese students dispatched for a 1 semester exchange to Moscow, Dubna, and St. Petersburg. **21 students** dispatched on our short-term personnel exchange program to various Russian cities including Moscow, St. Petersburg, and Vladivostok.

○ Inbound

We accepted **8 students for our semester-long exchange program**. **24 students** attracted by the key word *Monodukuri* were accepted in our short-term personnel exchange program

	2018	
	Plan	Results
Outbound	15	25
Inbound	16	32

■ Forming the University Network with Quality Assurance

■ Implementation of the Russian exchange student *Monodukuri* internship

With the cooperation of 11 *Monodukuri* companies we arranged an internship for the Russian students participating in our semester-long exchange program.

■ Began accredited courses for exchange students to ensure quality assurance

To develop the exchange program we created accredited courses totaling 17 credits in the Faculty of Science & Engineering for incoming students: 'Engineering Design Practicum' (12 Credits), 'Basic Seminar1/2'(2 credits each), 'Graduation Research Seminar' (1credit). For outbound students we created in the Faculty of Science & Engineering new courses such as, 'Project Management Practicum' (12 credits) and 'Russian Language 1/2' (1 credit each).



〈Forming Agreements with Russian Industries〉

■ Promotion of Student-Mobility Environment

■ University affiliation agreements formed with 2 Russian universities and 1 industry group

In addition to signing two new inter-university exchange agreements with Skolkovo Institute of Science and Technology and Moscow City University, we signed a cooperation agreement with a Russian industry group. These agreements have fostered exchange and developed an environment of strengthened cooperation.

■ Internationalization of the university, Information disclosure, and Dissemination of results

■ Summary report sessions given by program participants

We undertook 4 summary report sessions for students returning from foreign training and foreign exchange programs in Russia, and for Russian exchange students who reported on their research activities in Japan. Many students and educators participated and this created a deeper understanding of our program.

■ Internal and external dissemination of the contents and composition of the program through seminars

Information was disseminated internally and externally on the composition and results of the affiliations between Kindai University and Russian universities and organizations through the Japan-Russian Inter-University Seminar: *Japan-Russian Efforts Towards the Development of Core Monodukuri Human Resources* (St. Petersburg); and the *Kindai University Research Group Seeds Presentations*.

■ Good Practices

■ The hosting of the Japan Russian Youth Forum 2018

The 2018 Japan Russian Youth Forum was hosted by Kindai University in affiliation with the Japan Russian Youth Exchange Center and Russian Youth Personnel Center. This was attended by 95 people (18 Kindai Students; 29 Students from universities around Japan; 48 students from Russia). *Japan and Russian Cooperation into the Future* was the theme of the 2018 event, and students discussed 4 sub-themes including the radical expansion and cooperation SME's. This event was a certified event of the *Japan Russia Year*.

3. FY2019 Progress

【Human Resource Program for *Monodukuri* Engineers in Japan and Russia】

(Adopted year: FY2017, (Type A, Country Russia))

■ Exchange Programs



-Semester-long exchange program and short-term program executed

Continuing from 2018, we undertook our short-term (two week) and semester-long reciprocal personnel exchange programs. We sent 26 students in total to our affiliated institutions and accepted 25 students from our partner universities. The numbers of core Monoinbound and outbound students who participated in semester-long program were the highest on record dukuri human resources at full tilt from the point of both quality and quantity. Japanese students sent to Russia under the exchange program conducted "Project Management Practicums" with the assistance of Japanese affiliated companies.

Russian students accepted at Kindai University took part in internship programs at 11 Monodukuri companies. This has seen the establishment of educational programs linked with the industrial sector progressing smoothly.

〈Inspection tour at a Monodukuri company for Russian students〉

Student-Mobility

○ Outbound

5 Japanese students dispatched for a 1 semester exchange to St. Petersburg and Kazan. **21 students** dispatched on our short-term personnel exchange program to various Russian cities including Moscow and Kazan.

○ Inbound

We accepted **10 students** from universities located at various cities throughout Russia for our semester-long exchange program, and **15 students** for our short-term personnel exchange program.

	2019	
	Plan	Results
Outbound	26	26
Inbound	26	25

■ Forming the University Network with Quality Assurance

-The launch of new program-related subjects

The faculty of science and engineering has initiated 3 program-related subjects, "Experience for Engineering Design", "Practice for Global Project Management" and "Global Seminar in Science and Engineering". These quality-certified courses have enabled us to develop our educational activities while adding a valuable practical component to the curriculum.



〈Exchange activities with Russian students (outbound)〉

■ Promotion of the Student-Mobility Environment

-Commencement of exchange program with 3 Russian universities

Don State University, Kazan Federal University and Skolkovo Institute of Science and Technology joined us as partner universities, and we have commenced academic and educational exchange. Don State University and Kazan Federal University are playing leading roles as major universities for education and research in the Rostov region and Republic of Tatarstan where industrial production is flourishing. These brand-new agreements have created the possibility to foster and develop collaboration with Russia in relation to the nurturing of Monodukuri Engineers in a wider array of fields and regions.



〈Participating in the lecture conducted in English (outbound)〉

■ Internationalization of the University, Information Disclosure, and Dissemination of Results

-Seminars, summary report sessions given by program participants, and study abroad consultation

We undertook seminars by professors from partner universities, summary report sessions by program participants and a "Study in Russia" consultation seminar. These initiatives created ideal opportunities for our students and educators to deepen their understanding of internationalization and exchange with Russia.

-Contribution to the Association of Institutions of Higher Education of the Russian Federation and Japan

As one of the member universities of the Association of Institutions of Higher Education of the Russian Federation and Japan, we have provided the results of this program to major universities in both Russia and Japan at symposiums and other opportunities.

■ Good Practices

-The acceptance of regular degree-seeking students into our Graduate School Degree Program. (Presently, four students have been accepted.)

As the next step in our program, beyond the exchange program at the undergraduate level, we have completed preparation for the acceptance of Russian students into the graduate-level Monodukuri Major course. Four students will enter the course from the 2020 academic year. In the graduate school Monodukuri Major course, the students undertake research activities linked with internships at Monodukuri companies and can pursue a master's or doctorate degree.

4. FY2020 Initiatives and Progress

【Human Resource Program for *Monodukuri* Engineers in Japan and Russia】

(Adopted year: FY2017, (Type A, Country Russia))

■ Degree program and online exchange programs executed

As a result of the COVID-19 pandemic, travel between Russia and Japan in 2020 was made difficult. In order to continue our students' exchange under this hardship, we launched online exchange programs. At the “Kindai University Monodukuri Students Forum” held in February 2021, 49 students from Kindai University and Russian partner universities attended a pre-forum online lecture and then met together online presenting their product ideas and entering into discussion. In the 2020 academic year, the Graduate School of Science and Engineering's “Monodukuri Major” course commenced. 4 Russian students were admitted to this course which sees students undertake research along with an internship in the Monodukuri industry.

■ Exchange Programs



〈Internship at a Monodukuri company〉

Student Mobility under the Exchange Programs

○ Outbound

COVID-19 prevented us sending students overseas. Therefore as a substitute for exchange visitations, online studies and online exchange programs were executed.

○ Inbound

We accepted two students for degree-seeking programs. Unfortunately, the COVID-19 pandemic prevented us from accepting any more students from Russia. As an alternative, Russian partner university students were accepted in online exchange programs.

	2020	
	Plan	Results
Outbound	26	26
Inbound	29	27

■ Initiatives for Quality Assured Inter-Institutional Frameworks

■ New subject launch decided

We initiated the launch of a new subject, “Overseas Language Studies (Russian)” and this subject has officially been approved to start from the 2021 academic year. Incorporating this subject into the curriculum should enable us to more smoothly transfer the language related credits that students earn at the partner university during their exchange program study.

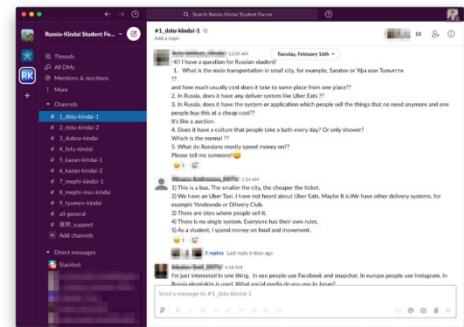
■ Maintenance of the Environment for Receiving International Students and Dispatching Japanese Students

■ Concluded an agreement of cooperation with the Agency for Strategic Initiatives (ASI), Russia

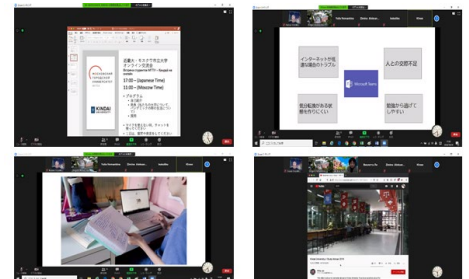
We concluded an agreement of cooperation with the Agency for Strategic Initiatives (ASI) who promote industrial innovation in Russia. ASI has links with universities throughout Russia, and this agreement has created an environment to conduct smoother exchanges with academic-industrial alliances.

■ Preparation of online classes system

Throughout the COVID-19 pandemic, we have prepared an online learning system where students can study and participate in virtual exchange activities. Creating asynchronous visual study materials and implementing the chat collaboration tool, “Slack”, has seen exchange opportunities between students of different time zones become possible.



〈 Online exchange on Slack 〉



〈 Online exchange on Zoom 〉

■ Internationalization of the University, Information Disclosure, and Dissemination of Results

■ Implementation of the online *Science & Engineering Student Forum* by the Faculty of Science and Engineering

This online forum was mainly intended for students at the faculty of science and engineering. Students who participated in the programs and returned from Russia presented their reports, and special lectures on present-day Russia were also held. Both students and professors gained deeper understanding of exchange with Russia and globalization.

■ Sharing best practices at the Association of Institutions of Higher Education of the Russian Federation and Japan

At an event of the abovementioned association which comprises of universities from Russia and Japan, we presented our tips and know-how on the methods of executing exchange projects in the ongoing digitalization environment.

■ Good Practices

■ The acceptance of second-term intake regular degree-seeking students into our graduate school degree program and implementation of an online entrance examination

Two first-term intake students and two second-term intake students entered the “Monodukuri Major” course at the graduate school. The students undertake research activities linked with internships at Monodukuri companies and can pursue a master's or doctorate degree. In order to select third-term intake students, we successfully conducted the first ever online entrance examination for this course.

5. FY2021 Initiatives and Progress

[Kindai University]

【Human Resource Program for *Monodukuri* Engineers in Japan and Russia】

(Year adopted: FY2017 (Type A, Country Russia))

■ Exchange programs



(At our partner university in Russia)

•Exchange program, degree program, and online exchange programs

•The continuing spread of the COVID-19 made travel between Russia and Japan difficult, but this year three students from Kindai University went on an exchange program. The Innovative Engineering course of the Graduate School of Science and Engineering accepted six Russian students, who carried out research in coordination with internship at Monodukuri companies, and participated in a program aiming to obtain a Master's degree. Instead of the short-term human resource exchange program which involves travel, online exchange programs were implemented. In August 2021 and February 2022, the Russia-Kindai "Monodukuri" Student Forum was held where students from our university and partner universities in Russia participated in group work on Monodukuri and technology after listening to an online lecture.

Student Mobility under the Exchange Programs

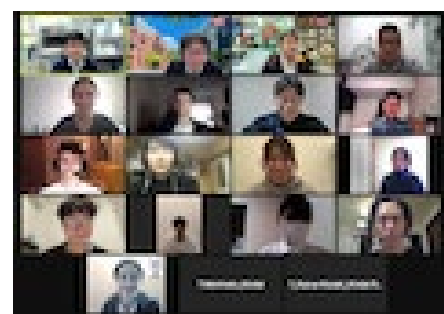
○ Outbound

Taking maximum precautions regarding health and safety, three students went on an exchange program for one semester with our Russian partner university. In addition, instead of the short-term human resource exchange program which involves travel, we executed online programs.

○ Inbound

We accepted six students for degree programs. Four of the students entered Japan after border restrictions were eased. With continuing immigration restrictions, students for other exchange programs have been unable to enter Japan. As an alternative, we executed an online exchange program and accepted applicants.

	2021	
	Plan	Result
Outbound	26	21
Inbound	32	16



(View of the online program)

■ Initiatives for Quality Assured Inter-Institutional Frameworks

•Consolidation of a credit transfer list

We created a credit transfer list which consolidated previous credit transfers. The list provides increased assurance for students since they now have a criterion for the number of credits which they can gain while studying abroad.

■ Maintenance of an Environment for Receiving International Students and Sending Japanese Students Overseas

•Development of a COVID-19 response system

With the continuing spread of COVID-19, we developed a system for outbound and inbound students. For outbound students, upon their arrival we monitor with our partner universities the COVID-19 situation and initial response. During the student's stay, we communicate using Slack so that the student can always communicate and seek our advice online. When returning, we arrange the student's accommodation and transport. For inbound students, when entering Japan, we arrange accommodation/transport and on-campus antigen/PCR tests.



(Lecture at the Science and Engineering Student Forum)

■ Internationalization of the University, Information Disclosure and Dissemination of Results

•Implementation of the online Science and Engineering Student Forum

This online forum was mainly intended for students of the Faculty of Science and Engineering. In addition to a lecture by a specialist on Russia, we invited a Japanese and Russian folk duo as lecturers which helped participants familiarize themselves with Russian society and culture. This forum was attended by approximately 700 students and faculty from our university.

•Sharing best practices at the Association of Institutions of Higher Education of the Russian Federation and Japan and holding a report session

We presented our knowledge on exchange projects and disseminated the results with the above-mentioned association, comprised of universities from Russia and Japan. We also held a report session to communicate the results of our activities within and outside the university.

■ Good Practices

•Decision to accept a third intake of students for the Graduate School degree program and the graduation of the first intake

Two Russian students entered the Innovative Engineering course of the Graduate School of Science and Engineering to become the third intake of students. The two students of the first intake completed the program and obtained their Master's degree. The course provides research activities linked with internships at Monodukuri companies with the aim of obtaining a Master's or Doctorate degree.