RISTEX

Research Institute of Science and Technology for Society

Co-Production and Co-Utilization of Knowledge with Society: Creating Solutions for Society

2025.1 Japan Science and Technology Agency
Research Institute of Science and Technology for Society

SUSTAINABLE DEVELOPMENT GOALS

CONTENTS

As one of the institutions of the Japan Science and Technology Agency (JST), the Research Institute of Science and Technology for Society (RISTEX) supports a wide range of R&D projects and aims to yield solutions to problems that humans and societies in the 21st century face, such as issues related to aging society, environment and energy, safety and security, and medical care.
By implementing technologies and other outcomes of R&D, RISTEX aims to contribute to happiness and enrichment of people's lives.

Greetings from Director-General

The English name of our organization is Research Institute of Science and Technology for Society.

The expression "science and technology for society" derives from the "Declaration on Science and the Use of Scientific Knowledge (also known as the Budapest Declaration), which was adopted by the World Conference on Science in 1999. The conference was jointly organized by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Council for Science (ICSU) in Budapest, the capital of Hungary. Discussions were held to reconsider the role of science entering into the 21st century at this conference. The resulting declaration summarized these discussions, introducing the phrase "science in society and science for society" alongside the traditional roles of "science for knowledge and science for progress." The message delivered by this expression was manifold: that the use of scientific knowledge should contribute to society, that we should be concerned about the positive and negative aspects of science, that research ethics should be regarded seriously, that equal access to knowledge should be ensured, that science education should be enriched, and that scientists should actively engage in dialogue with society.

All of these are important indications as to how modern science should be, but RISTEX was established with a particular emphasis on that "the use of scientific knowledge should contribute to society." Since its inception, RISTEX has been setting up R&D Focus Areas and Programs after surveying issues of which solutions society seeks, and has been funding R&D to address these challenges. Since 2005, RISTEX has set up more than 15 R&D Focus Areas and Programs.

The R&D conducted by RISTEX to address social issues is focused solely on "mobilization of any scholarship necessary for solutions." In fact, "science" in the Budapest Declaration is used to encompass the natural sciences, technology, the social sciences and humanities (SSH), from the outset. In the same sense, RISTEX has been principally funding R&D not restricted to existing academic classifications such as natural sciences and social sciences and humanities. In addition, in recent years, social issues have become increasingly complex as typified by global environmental problems and the SDGs. This complexity has fostered a global recognition of the need for research involving various stakeholders experiencing the social issues (co-creative or transdisciplinary research), as solutions often require more than the application of research results from specific academic fields. In Japan too, following the revision of the Basic Act on Science and Technology, there has been an increased focus on the importance of "Convergence of Knowledge: Sogo-Chi" that integrates the natural sciences, the social sciences and humanities.

Director-General
KOBAYASHI Tadashi

I believe that the mission of RISTEX is to mobilize necessary scholarship for solving social issues and to develop and apply novel research methods while focusing on the "science contributing to society" that is needed in the 21st century.

History

The Establishment of RISTEX

In the World Conference on Science (jointly sponsored by UNESCO and ICSU) held in Budapest, Hungary, in June 1999, participants from around the world including scientists, government officials and journalists came together, and the Declaration on Science and the Use of Scientific Knowledge (the Budapest Declaration) was issued with regard to how should science and technology be in the 21st century. According to the Declaration, science and technology of the future should not only produce knowledge but broaden its attention to how to apply that knowledge. The previous function of "science for knowledge" was thus augmented by three new functions of "science for peace," "science for development," and "science in society and science for society."

Against this background, in April 2000, the then Science and Technology Agency established the Study Group on R&D of Science and Technology for Society chaired by the then President of the Science Council of Japan, YOSHIKAWA Hiroyuki. This body issued recommendations regarding three areas which should be pursued as the "science and technology for society": "technologies aimed to resolve social problems," "technologies attainable by the integration of natural sciences and humanities and social sciences," and "technologies with which market mechanism do not work easily."

The Science and Technology for Society Research System,* the former RISTEX, was founded in July 2001 as a specialized agency to pursue R&D in "science and technology for society," and it was reorganized into the current RISTEX in 2005.

* The former RISTEX conducted three main activities: 1. the mission-orientated research program, 2. funding programs, and 3. the forum for science and technology for society.

Marking the 20th anniversary of the Budapest Declaration, the Declaration on Science, Ethics and Responsibility was adopted by the participants of the World Science Forum (WSF) held in Budapest in November 2019. "Science for global well-being," one of its major components, states that "science is a global public good with the ability to contribute to sustainable development and global well-being."

Major Reforms After the Establishment

In FY2006, the R&D structure of science and technology for society was reconfigured based on the results of the ex-post evaluation of the mission-orientated program which ended in FY2005, and the system underwent an extensive reform with major emphases on (1) overview of social issues at the stage of planning new Focus Areas/Programs and the enforcement of functions to search/extract potential R&D Focus Areas, (2) full transition to the function as a funding agency, and (3) prioritization of collaboration with stakeholders for R&D and social implementation.

With the completion of the two initial R&D Focus Areas in FY2012, the administrative policy was reviewed and reconfirmed in FY2013 under the new system, and radical improvements in evaluation had been made for a further betterment of the organization. Based on the "General Guideline for the Evaluation of Government Research and Development (R&D) Activities" and the evaluation guideline by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Evaluation Committee was established in February 2015, with a policy to conduct highquality self-evaluations which only requires simplified external evaluation.

New Challenges

(1) Contribution to the Achievement of Sustainable Development Goals (SDGs)

In September 2015, the UN General Assembly adopted "Transforming our world: the 2030 Agenda for Sustainable Development" by unanimous consent, establishing 17 goals and 169 targets under the Sustainable Development Goals (SDGs) as international goals to be achieved by the year 2030.

To make use of the experience and knowledge of R&D in science and technology for society in resolving specific social issues, and to contribute to the achievement of SDGs which are typical examples of social issues, RISTEX has launched a new R&D Program, the "Solution-Driven Co-creative R&D Program for SDGs (SOLVE for SDGs)" in FY2019. In addition, from FY2021, RISTEX has launched R&D Program for prevention of social isolation & loneliness, which is becoming a prominent social issue due to various changes in social structure.

(2) ELSI (ethical, legal and social implications/issues) Initiatives
The Fifth Basic Plan for Science and Technology, councils in the MEXT and other bodies stated the need to respond to ethical, legal, and social implications/issues (ELSI) of science, technology and innovation (STI), such as the delay in provision of sufficient regulatory frameworks and a gap between people's values and adaptability and those imposed by STI, arising from the rapid development of STI. It was also pointed out that the networking of researchers and a sustainable mechanism to secure ELSI experts are important in resolving ELSI.
RISTEX is undertaking R&D related to ELSI of information technology in the "Human Information Technology Ecosystem (HITE)" R&D Focus Area, launched in FY2016. In FY2020, a new R&D program started to fund research on ELSI/RRI of emerging technologies as well as the training of diverse ELSI/RRI researchers and practitioners.
In addition to the promotion of ELSI-related R&D through funding, RISTEX coordinates continuous dialogues among various stakeholders and the establishment of a forum for networking of these stakeholders while also engage in research and practice related to ELSI of technologies of which development JST promotes, by collaborating with relevant R&D departments in JST to maximize the research outputs and promote social implementation of such outputs, thereby fulfilling the responsibility of JST as an R&D agency.

2000	The Science and Technology Agency established the Study Group on R&D of Science and Technology for Society (Chairperson: YOSHIKAWA Hiroyuki, the then President of the Science Council of Japan), and issued recommendations in December under the title of "Promoting Research and Development of Science and Technology for Society."
2001	The Science and Technology for Society Research System was established based on a cooperative partnership between the Japan Atomic Energy Research Institute (JAERI) and the Japan Science Technology Corporation, the former Japan Science and Technology Agency (JST). It set up "Research Areas" based on the recommendations and began research activities.
2003	The research in JAERI was transferred to the Japan Science Technology Corporation, to be promoted by the latter, now JST.
2005	The Science and Technology for Society Research System was reorganized as the Research Institute of Science and Technology for Society (RISTEX).
2006	Extensive reform of the system was conducted with major emphases on (1) overview of social issues at the stage of planning a new Focus Area/Program and the enforcement of functions to search/extract potential R&D Focus Areas, (2) full transition to the function as a funding agency, and (3) prioritization of collaboration with stakeholders for R&D and social implementation.
2007	Implementation-Support Program was launched. It addressed the social implementation process separately from the ordinary R&D process, and thus supported undertakings aimed at diffusion and establishment of R&D outcomes.
2013	Implementation-Support Program (R&D results integrated Type) was launched. It promoted the creation of implementation projects while the Focus Area was still running, and thus supported undertakings that integrate and effectively implement into society the outputs of R&D Focus Areas.
2015	The Evaluation Committee was established to conduct the evaluation of R&D Focus Areas/Programs appropriately and smoothly.
2019	• Solution-Driven Co-creative R&D Program for SDGs (SOLVE for SDGs), which aimed at contributing to the achievement of SDGs, was launched. • ELSI-related activities, such as the establishment of a study group to discuss ELSI of genome-related technologies, were initiated.
2020	Newly established R&D program for dealing with ELSI/RRI.
2023	RISTEX has transferred the initiatives for promoting co-creation (creation of dialogue/collaboration platforms) from the Department for Promotion of 'Science in Society'

Overview of Activities

RISTEX aims to create innovative social/public values not limited to economic values, by solving specific social problems including SDGs and by responding to ethical, legal, and social issues that arise with the social implementation of emerging science and technology. In the pursuit of R&D in science and technology for society, it supports the collaborative networking of researchers and stakeholders who engage in the resolution of social problems, and carries out R&D that employs knowledge from natural sciences as well as humanities and social sciences (HSS).

What is "science and technology for society"? Based on the recommendation ("Promoting R&D of Science and Technology for Society") by the Study Group on R&D of Science and Technology for Society chaired by the then President of the Science Council of Japan, YOSHIKAWA Hiroyuki, organized by the former Science and Technology Agency, compiled in 2000, RISTEX defines science and technology for society as follows:

Definition of Science and Technology for Society

It is the "science and technology for the purpose of building new social systems that integrate the knowledge from multiple areas in natural sciences and humanities/social sciences"* and it regards the society as the object of R&D and seeks to resolve problems that either currently exist in society or that are anticipated to occur in the future.
* From "Regarding the Pursuit of R&D in Science and Technology for Society" (December 2000)

R&D Emphasized by RISTEX

- R&D aimed at solving specific social issues
(e.g., the declining birthrate and the aging population, environment/energy, safety and security, healthcare and welfare)

- Transdisciplinary R&D that deals with problems which cannot be sufficiently addressed in conventional disciplines, and attempts to change the current situation by employing knowledge of humanities, social sciences and natural sciences to develop methodologies and implement solutions to the sites suffering from the problems.
(e.g., strategic downsizing of local communities corresponding to the declining birthrate and the aging population while sustaining the levels of economic/social/environmental states and energy provision)

- R&D based on collaboration not just among researchers but also with stakeholders from various backgrounds who are knowledgeable about on-site circumstances and/or problems, to carry out social experiments at the actual sites. By strictly following the PDCA cycle,* novel outputs useful in resolving social issues are created.
(e.g., participations by local governments, corporations, schools, NPOs and citizens as stakeholders)

- R&D that maintains a firm and conscious commitment to provide and implement specific outputs to society.
(e.g., adaptation of new solution models (social systems) to address social problems)

* PDCA cycle: a management tactic that involves carrying out the sequential process of Planning, Doing, Checking, and Acting while maintaining and improving quality of activities

Characteristics of Challenges in Resolving Specific Social Issues

- Cross-sectoral approach in R&D to issues that lie in systematic bottlenecks not confined by administrative boundaries
- Realization of social innovations through challenging approaches to R&D
- Investigation of backgrounds and diversity of social issues and identification of issues which require solutions; construction of new social systems that are based on the analyses of human decision making, social psychology, and economic perspectives

Characteristics of Engagement in ELSI

- Agile and interactive promotion of integrated advancement of pioneering R&D and ELSI
- Promotion of interactions between R&D and society by taking advantage of JST being an R&D agency, and RISTEX's network of humanities and social sciences researchers
- Analysis and reflection of factors that can affect new social systems, and fostering of acceptance of social systems for new technologies

Organizational Structure

Under the Director-General, RISTEX promotes the implementation of R&D on science and technology for society, and administration related to R&D with the following organizational structure.

The RISTEX Governing Board

The RISTEX Governing Board is composed of Director-General and experts who discuss matters vital to the management of RISTEX such as setting, modifying, and terminating R&D Focus Areas/Programs.

The Evaluation Committee

The Evaluation Committee is composed of experts who conduct mid-term and ex-post evaluations on the achievement of R&D goals and the progress.

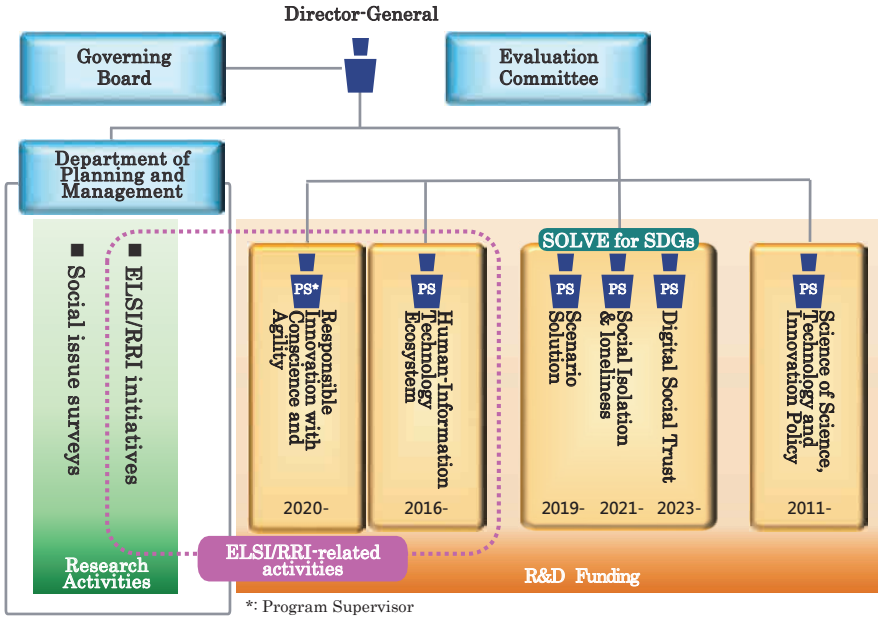
Department of Planning and Management

Under the Director, Department of Planning and Management, RISTEX promotes the establishment, management, and administration of R&D focus areas/programs and carries out support activities, planning, public relations, and other administrative tasks related to R&D. In addition, RISTEX conducts a series of social issue surveys and activities concerning the structure and importance of social issues, and potential issues encountered in the social implementation of emerging technologies (ELSI).

R&D by funding

RISTEX promotes R&D by setting up funding programs (Focus Areas/Programs). Each Focus Area/Program is managed by an administrative team consisting of Program Supervisor, Advisors and RISTEX staff. The team is responsible for a wide range of activities including the selection, administration and management of R&D projects, as well production of Focus Area/Program outputs as such as facilitation of project collaboration, outreach activities and cross-sectorial knowledge production.

RISTEX Organization



*: Program Supervisor

Governing Board

KAMISATO Tatsuhiro	Professor, Graduate School of Global and Transdisciplinary Studies, Chiba University
MARUYA Hiroaki	Professor, International Research Institute of Disaster Science, Tohoku University
ONO Yuri	Deputy General Manager, Digital Innovation Unit, Mitsubishi Research Institute, Inc.
SHIMIZU Keiko	President, Sawayaka Well-being Foundation

Evaluation Committee

* Chairman

HAYASHI Takayuki *	Professor, National Graduate Institute for Policy Studies
HISHIYAMA Yutaka	Professor, Medical Technology Innovation Center, Juntendo University
KAMIO Yoko	Director, Kamio Yoko Clinic
NAKA Makiko	Executive director, RIKEN
NAKAMURA Yasuhide	President, Friends of WHO Japan
SATO Yasushi	Professor, Institute of Humanities and Social Sciences, Niigata University
TAKAHASHI Mariko	journalist
TANIGUCHI Makoto	Professor, Fundamental Research Department, Research Institute for Humanity and Nature

Method for Promotion R&D

RISTEX aims at contributing to the resolution of social problems and creating new social/public values by following the cycle of the five steps described below in order to promote R&D that resolves specific social problems.

Ⅰ Identifying specific social problems that should be addressed

Social problems that either exist in society or that are anticipated to occur in the future are identified, and relevant experts/stakeholders are invited to survey and investigate the respective issues to narrow down specific issues to be addressed.

Ⅱ Establishing R&D Focus Areas/Programs

Based on the specific issues extracted in Ⅰ and government policies, R&D Focus Areas/Programs are established where the R&D activities promoted by RISTEX can contribute to the resolution of problems.

Ⅲ Promoting R&D Focus Areas/Programs

Under the supervision of the Program Supervisors who bear the responsibility for their R&D Focus Areas/Programs, R&D is promoted by clearly defining R&D goals, issuing calls for R&D project proposals, and selecting appropriate projects. Stakeholders are asked to participate at every stage of the process, from identifying issues, conducting R&D, to performing evaluations, so that the outputs of R&D do contribute to the resolution of social problems.

Ⅳ Presenting solution prototypes

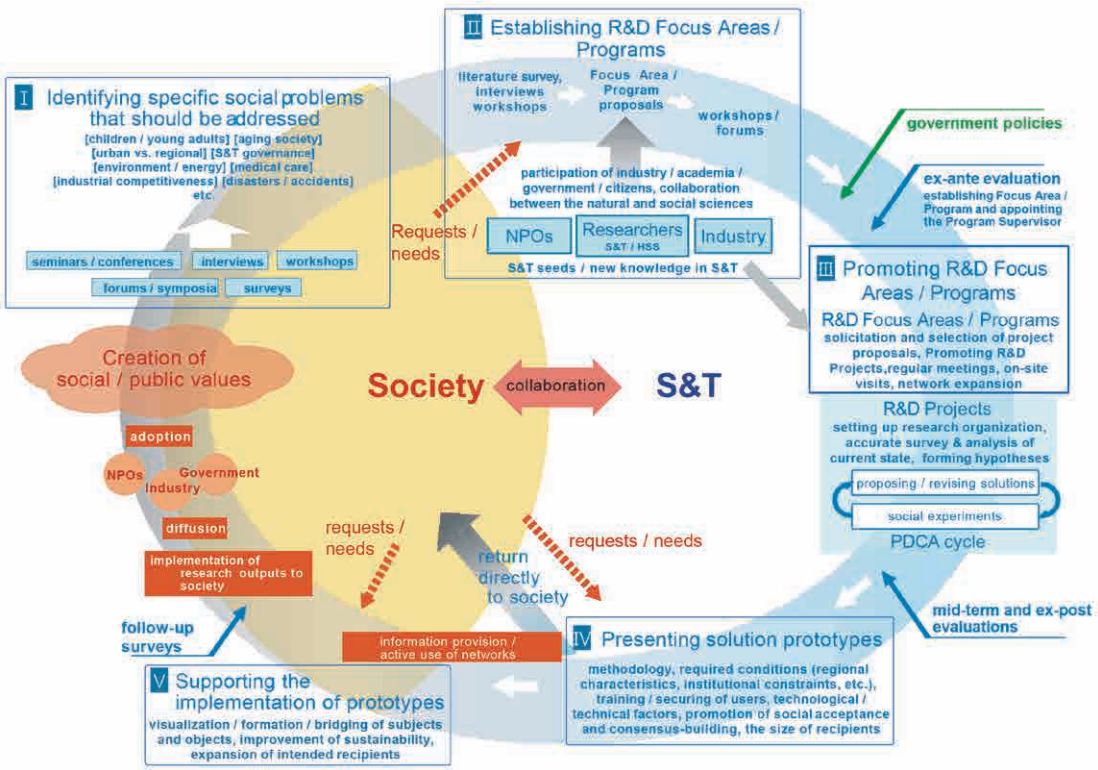
R&D projects aim to return the R&D outputs to society by presenting solution prototypes which clearly show models, methodologies, required conditions such as regional characteristics and institutional constraints, how to train/secure the users of solutions, technological/technical factors, and promotion of social acceptance and consensus-building.

Ⅴ Supporting the implementation of prototypes

The prototypes presented in Ⅳ are attempted to be utilized in wider social settings via various networks.

The following pages will give detailed explanations of activities related to the steps Ⅰ to Ⅴ.

Cycle of R&D Activities

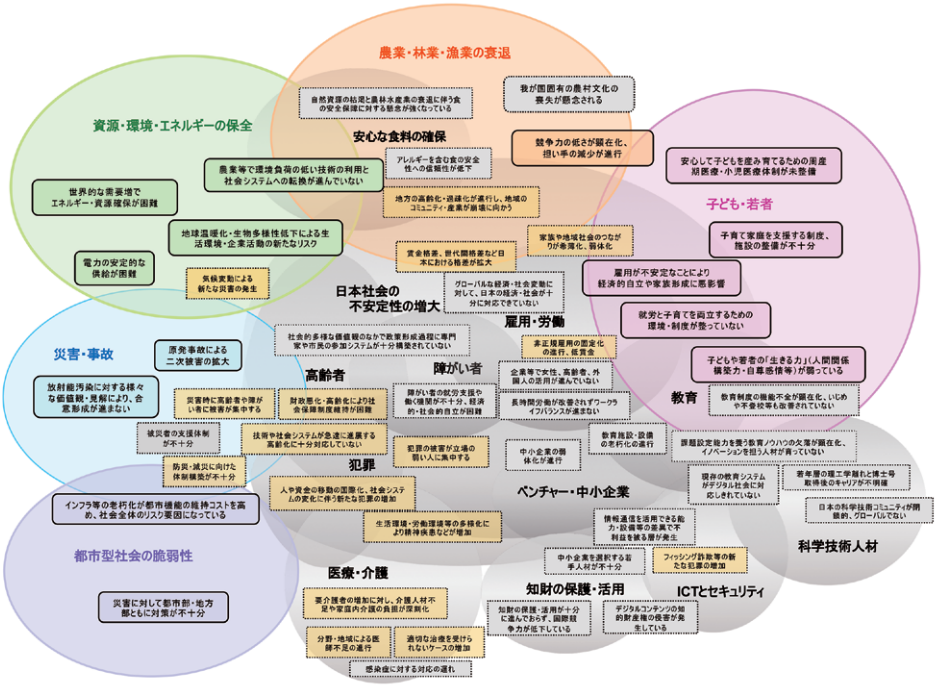


Ⅰ Identifying Specific Social Problems That Should be Addressed

RISTEX establishes R&D Focus Areas/Programs that focus on grave social issues in order to conduct R&D of science and technology for society. New R&D Focus Areas/Programs are normally set up with approximately 1-year-long preparations and investigations.

First, preparatory surveys are carried out to identify a variety of phenomena that can be categorized as social issues. Then experts from various fields are invited to a "social issue workshop" for the purpose of grasping comprehensively the prominent social issues. Participants discuss about "social issues that are anticipated to occur in the near future," "social issues that should be chosen as Focus Area topics," and "how to resolve the social issues," to select issues of particular importance which can be the potential Focus Areas. This is followed by workshops on specific topics, to further discuss the importance and urgency of candidate Focus Areas, and to decide social issues which should be addressed.

Plot diagram for overviewing social issues (available only in Japanese)



Ⅱ Establishing R&D Focus Areas/Programs

Next, stakeholders who are deeply involved with the issues are interviewed for a still deeper understanding of the latest status of the problem. Various opinions of people of diverse backgrounds, including research institutes, corporates, NPOs, local governments, and mass media are gathered, and the current problems as well as problems which are not prominent yet are investigated.

Workshops and working groups are then held with experts and stakeholders based on the opinions and suggestions received from interviewees and from members of the general public, to consider the framework of Focus Area/Program and approaches taken for R&D. The overview of such consideration is widely announced in an "open forum" to share with the general public and to exchange opinions.

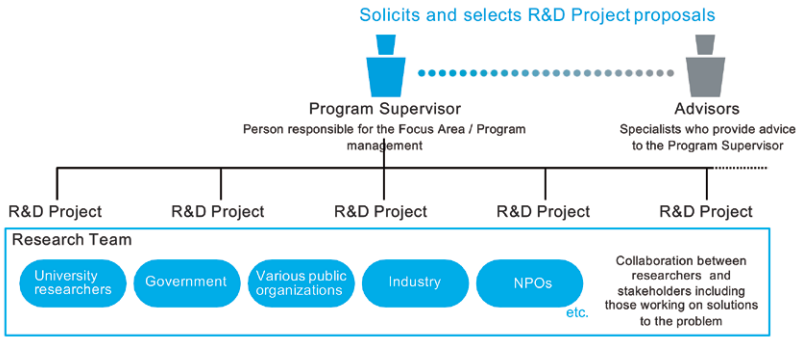
The concept of an R&D Focus Area/Program built up through this series of processes, along with the consideration of government policies, is discussed by the Governing Board, and on its approval, it officially becomes an R&D Focus Area/Program.

Ⅲ Promoting R&D

■ Management Structure

In an R&D Focus Area/Program, a Program Supervisor is appointed as the person responsible for its management. Also, the Advisors who provide the Program Supervisor with expert advice are appointed. They are selected from various sectors including industry, academia, government, and private sectors.
Under the strong leadership of the Program Supervisor, the Advisors and staff in charge at RISTEX perform their specialized roles as they engage in the management of the Focus Area/Program.

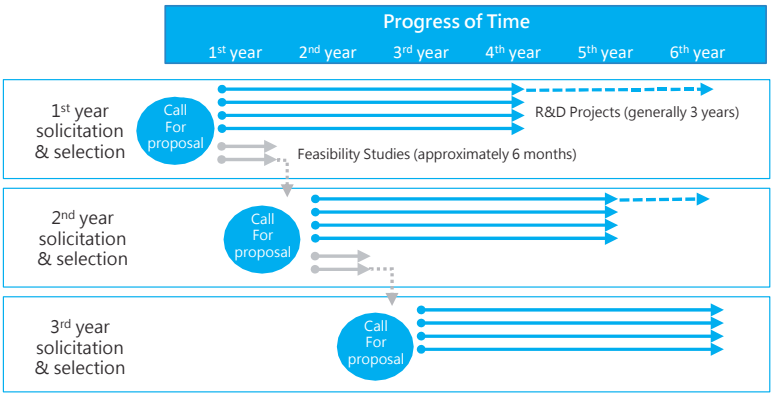
R&D Management Structure (an example of R&D Focus Area)



■ Call for Proposals and Selection of R&D Projects

Each R&D Focus Area/Program calls for R&D proposals in line with its own goals. The Program Supervisor, with the cooperation of the Advisors, conduct the selection procedure to choose several R&D projects from many proposals submitted. R&D projects selected perform R&D generally for 3 years (max. 5 years) on the ground that these are expected to produce outputs that contribute to the accomplishment of R&D Focus Area/Program goals.

Timeline of R&D Project Implementation (the Case of a 6-Year R&D Focus Area)



* Feasibility Studies are designed for R&D project proposals intended to be submitted in the following year, providing opportunities for researchers to elaborate the theoretical framework and improve the feasibility of the research plan. The duration is approximately 6 months.

■ Project Management

After the R&D projects are selected, the Program Supervisors, Advisors and RISTEX staff support the projects in various aspects from the progress of projects to the outreach activities. Some of such activities are described below.

• Focus Area/Program Meetings

Focus Area/Program meetings are held roughly once a month for the Program Supervisor, the Advisors and RISTEX staff to discuss matters related to the management of the Focus Area/Program. These are often held along with other events such as the project reporting, study groups by those involved, and networking events.

A scene from a "Program Salon," a study group organized in the "Science of Science, Technology and Innovation Policy" Program

• Focus Area/Program General Meetings (On-Site Lodging)

Every year, a general meeting is held in a style of on-site lodging, where all the R&D projects active in the Focus Area/Program get together. The Program Supervisor, the Advisors, RISTEX staff and the Principle Investigators of R&D projects, along with a wide variety of stakeholders who are involved in the R&D attend the meeting, and the total number of participants sometimes exceed 100.
During the meeting, the progress of R&D is reported, and R&D promotion/management issues are discussed in order for the participants to share the understanding of the situation, so that the Focus Area/Program goals can be duly achieved. It is also intended to promote exchanges among various project members so that connections can be formed transcending the confinement of projects. Such exchanges of ideas between different R&D projects sometimes result in new collaborative research.

A scene from a general meeting in Dec. 2021.
Members of all 17 projects awarded funding from the beginning of the program till FY2021 assembled to discuss directions of their R&D as well as common issues they faced in the practice of ELSI/RRI, furthering the interaction amongst projects.

• R&D Project Site Visits

As R&D promoted by RISTEX places an emphasis on social implementation, many of the projects conduct R&D in local regions involving the communities and residents. Thus, in RISTEX, site-visits by the Program Supervisors, the Advisors, and RISTEX staff to the fields where the R&D takes place are held actively. During the visits, the progress of R&D is monitored, and advice is given to the researchers where necessary, and by doing so, the project is supported by the management team.

A scene from an event "Summer school 2022: Discovery and scientific experience in local ecological wonders" held in Yaese-cho, Okinawa Pref. where Yasumoto project, SOLVE for SDGs Scenario/Solution, conducts a demonstration experiment. School children are collecting Okinawan natural sea mud "kucha."

• Outreach Activities

When R&D activities of projects progress to a certain stage, the outputs so far and issues regarding the R&D are shared with the public by the publication of booklets and dissemination of information on the web site. Also, symposia and other forms of events are organized to promote exchanges of ideas. Notifications of such events organized by individual projects are also announced on the RISTEX web site.

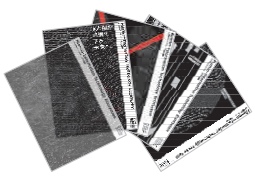
A session in Science Agora 2021: Using a manga, which was developed in Toriumi project as a teaching material, junior and senior high school students across Japan discussed better use of SNS. (Photo provided by SDGs Magazine)

• Project Evaluations

Ex-post evaluations are conducted and made public when projects end, to determine the state of R&D, outputs, and spillovers, which are useful for further development and diffusion of the outputs.
In addition, follow-up surveys are conducted after a certain period of time has passed, regarding the further development, utilization, and spillovers of R&D outputs.

■ Focus Areas/Programs Evaluations

RISTEX also conducts evaluations of Focus Areas/Programs by external experts for the purpose of improving the management of R&D, as well as the management of funding activities. There are mid-term evaluations which determine the progress in terms of achieving the goals of R&D Focus Areas/Programs, and this is useful in improving the management and support systems. When the R&D is ended, ex-post evaluations are conducted and made public, which determine the state of R&D, outputs, and spillovers of Focus Areas/Programs, and these are useful for further development and diffusion of the outputs and improvement of funding activities.



HITE books (Vol.01-05)

Website and books of "Science of Science, Technology and Innovation Policy"

RInCA magazines

Handbook

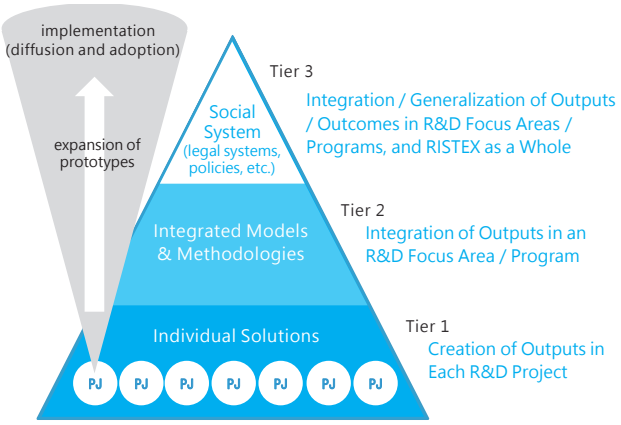
Various outreach efforts using brochures and Websites

Ⅳ Presenting Solution Prototypes

The outputs of R&D activities in the projects (Tier 1 in the figure on the right) are expected to be applied not only in the regions and communities where the social experiment took place, but more widely in various organizations, communities, and regions.

Therefore, individual R&D projects are required to show the details of solution prototypes including the models, methodologies, required conditions such as regional characteristics and institutional constraints, and how to train/secure the users of solutions. This helps the outputs to be implemented more broadly via various networks.

Conceptual Diagram of Prototype Development

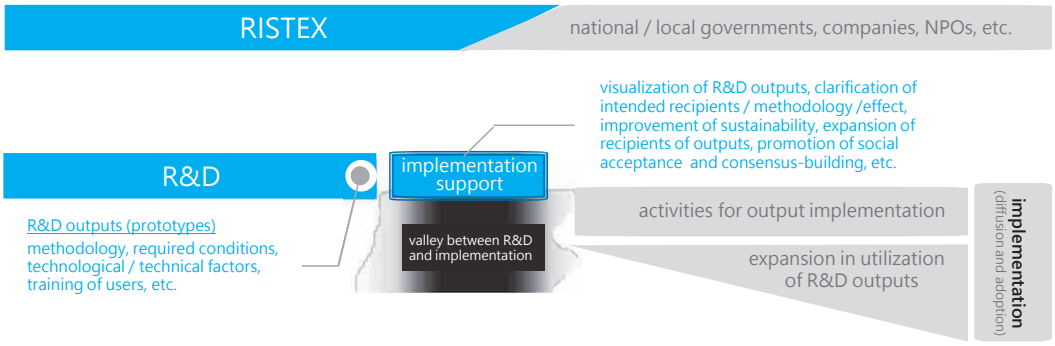


As a Focus Area/Program (Tier 2 in the figure on the right), by overviewing outputs of projects and issues commonly shared across projects, comprehensive models and methodologies which are more normative and universal are attempted to be constructed, and such outputs are to be developed into proposals influencing the public systems of national and local governments (Tier 3 in the figure on the right), such as legal systems and policies.

Ⅴ Prototype Implementation Support

By the Implementation-Support Programs and R&D Focus Areas/Programs, RISTEX supports the utilization of R&D outputs in activities and initiatives of various organizations such as the national and local governments, corporates and NPOs, so that the impact of these outputs expands to various regions and communities, and would become diffused and adopted in the future as "science and technology for society."

Supporting implementation of R&D results



RISTEX Key Terms

Science and Technology for Society: *Shakai-Gijutsu* (literally, social-technology)

This is a special term for RISTEX, which means the 'technology' (or application of scientific knowledge. Or more broadly, S&T) for creating new social systems by integrating knowledges from natural sciences and humanities/social sciences (HSS). As of 2022, it is defined as S&T that regards society itself as the object of R&D and seeks to resolve problems that either currently exist in society or that are anticipated to occur in the future. This expression appears in "Regarding the Pursuit of R&D in Science and Technology for Society" (December 22, 2000) by the Study Group on R&D of Science and Technology for Society.

HSS Integration: *Bunri-Yugo*

HSS integration is a regular theme in high education policy and S&T policy, and RISTEX has been taking a leading role in promoting such a research style for solving social issues. Recently, in dealing with social issues as typified by the SDGs, it is becoming more widely recognized that S&T alone does not suffice and thus the anticipation towards the integration of the humanities and sciences has been rising. In the realm of social sciences, there is a new trend that stems from such an interest, which materialized in new disciplines such as experimental political philosophy, computational social sciences, and experimental social science. Furthermore, as exemplified by behavioral economics, there is a new development in knowledge creation that transcends conventional boundaries of existing disciplines, not limited to the humanities/sciences boundary, to deal with problems in modern society.

Transdisciplinary Research (TDR)

TDR is the research that consists of interdisciplinary collaboration between natural sciences and the HSS and co-creation with various non-academic stakeholders. It is often translated as *cho-gakusai kenkyu* (literally, trans-interdisciplinary research), but it is pointed out that the term *gakusai-kyoso kenkyu* (literally, interdisciplinary co-creation research) is more appropriate as it positions the knowledge users as research stakeholders and implies co-creation with them.*1 The R&D RISTEX promotes can be widely categorized as TDR as we emphasize the importance of cocreation with stakeholders of social issues to be resolved.

Convergence of Knowledge: *Sogo-Chi*

This is an expression used in the 6th STI Basic Plan*2, and appears in phrases such as "in the future, it becomes increasingly more important to accumulate rich knowledge in the HSS as well as the creation and the use of *sogo-chi* that results from conversion of such knowledges and those of natural sciences which would lead to a comprehensive understanding of people and society as well as to solutions of social issues." However, the term *sogo-chi* itself is not novel as it has been used in descriptions of various research topics. Here, we regard this term as a form of knowledge that represents the process of co-creation/collaboration of various disciplines, rather than the production of knowledge by establishing a new discipline.

*1 JST/CRDS "OECD Science, Technology and Industry Policy Papers No. 88 Addressing Social Challenges Using Transdisciplinary Research" (Japanese translation) CRDS-FY2020-XR-01 (October 2020)
*2 Under the Science and Technology Basic Law enacted in 1995 the government formulates the Science and Technology Basic Plan for implementing systematic and consistent S&T policies from a long-term perspective. This is the 6th Plan.

Research Activities

ELSI Initiatives in Collaboration with R&D Programs in Other Departments

Activities related to ELSI (ethical, legal, and social implications/issues) of emerging science and technology (S&T)
https://www.jst.go.jp/ristex/en/research-activities/elsi/

RISTEX is now engaged in research activities to take appropriate actions to ELSI, which run along with R&D in other departments, as a part of a new collaborative effort by JST as a funding agency promoting R&D of pioneering S&T.
Engagement in ELSI comprises of an effort to identify ethical, legal, and social issues which may arise in the process of advancement and diffusion of S&T in the past, present, and future, and to respond appropriately to these issues as a collective effort by researchers in natural sciences, SSH, and various stakeholders in the society, while accomplishing harmonization of science, technology, and society.
By employing methodologies, knowledge, and networks accumulated in the past R&D of S&T for society, RISTEX is committed to provide knowledge and insight that contribute to resolving social issues by responsible research and innovation (RRI), which is attainable by agile and productive collaboration between our ELSI initiatives and relevant departments within JST.

ELSI Initiative in Genome-Related Technologies (in collaboration with Strategic Basic Research Programs CREST/PRESTO)

Background

With the decoding of human genome and the emergence of CRISPR-Cas9 genome editing technology, we are entering a new era of artificial designing and synthesizing of genome sequences at our will. Not only have we witnessed that genomic technologies contributing to the rapid development of COVID-19 vaccines, these technologies also have a potential to bring about considerable benefits in many ways, such as the designing of eco-friendly microorganisms that require no fertilization, and revival of the scent of extinct flowers. Meanwhile, it could impose a negative impact on life, species, and even the ecosystem as genetic information is the "blueprint of life."

Therefore, promoting R&D of technologies using genome information requires careful considerations of ELSI/RRI, and the establishment of norms and values which should provide the foundation for such a technological advancement.
Under such a circumstance, the strategic objective of "Establishing Technologies for Genome-scale DNA Synthesis and Functional Expression, and Creating Technology Seeds for Material Production and Medical Care" put forth by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in 2018 expresses the need to engage in ethical, legal and social issues (ELSI).

Current Activities

In collaboration with the "Large-Scale Genome Synthesis and Cell Programming" program of the JST Strategic Basic Research Programs (CREST/PRESTO), we have set up and are managing the "Forum on genome ethics", which consists of researchers in humanities and social sciences (HSS), researchers in natural sciences, and various stakeholders from industry and business sectors. The Forum has been surveying national and international trends in ELSI/RRI of genome-related technologies since FY2018. It also started joint-hosting of workshops and seminars with CREST/PRESTO since FY2021, in order to foresee and respond to ELSI concerning R&D in the field of genome synthesis, and to deliberate how to realize RRI. In FY2021 and FY2022, based on the results of past discussions and questionnaire surveys, RISTEX prepared maps showing ELSI-related points, considering the background of each point and the relationship among multiple points. In addition, in FY2023, RISTEX conducted case studies to identify and investigate ELSI-related points of two projects from CREST/PRESTO. In FY2024, we continue to conduct our case studies on a project within the "Genome Synthesis" domain of CREST. In the case study, RISTEX also interviewed groups of citizens to incorporate non-expert opinions. Reports and information about seminar series can be viewed from RISTEX website.

Surveys

- Overseas trend survey
- Social listening survey
- Analysis of ELSI/RRI cases in the past
- Survey to overview Japanese and overseas policies/regulations related to life sciences
- Survey of laboratory studies
- Survey to overview Japanese and overseas open bio-lab centers
- Survey of dual use and biosecurity/safety in genome-related technologies

Reports can be downloaded at: https://www.jst.go.jp/ristex/internal_research/elsi/genome/genome_survey.html
(available only in Japanese)

ELSI Initiative on Cultured Meat (in collaboration with JST-Mirai Program)

Background

With the global food supply and demand tightening, especially in emerging countries where demand for eating meat is increasing, many point out that there is a fear of meat production being unable to keep up with the increasing demand for meat. As one of the solutions to this issue, an emerging technology to produce artificial meat (schmeat) by culturing cells extracted from livestock is attracting attention. While schmeat is said to be a food innovation in terms of environmental issues, animal welfare, hygiene/nutrition, and food culture, many issues must be addressed, including legal systems, safety/security, social receptivity, and ethics related to food and agriculture.

Photo provided by Takeuchi Lab (The University of Tokyo) & NISSIN FOODS HD

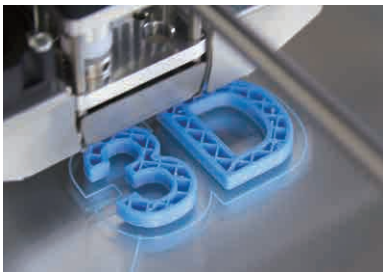
Current activities

In collaboration with the JST-Mirai Program ("Sustainable Society" mission area) "Creation of innovative food production technologies responding to future changes in climate and social demands," RISTEX collected information about trends in the research, technology, and industry related to meat culturing techniques in Japan and abroad. By gathering information about necessary laws and regulations/certification systems, environmental impacts, animal welfare/protection, food safety/security, and social receptivity, RISTEX also conducted survey activities to identify ELSI-related points rooted in Japanese society's food experience and culture. In addition, RISTEX provided dialogues and information provision to researchers and other various stakeholders through forums for dialogue with citizens and international symposiums in collaboration with departments within JST, tasked to support intellectual property rights activities, promote science and technology communication, develop co-creation platforms with stakeholders, etc.

ELSI Initiative in Digital Fabrication Technology (in collaboration with COI Program)

Background

As digital fabrication devices such as 3D printers are becoming more sophisticated and less expensive, it is becoming possible for individuals to manufacture products easily. However, manufacturing in unprofitable activities is subject to the Product Liability Act (PL law) in Japan, and individuals may be held liable for product liability. On the other hand, many PL insurance services available today are designed for manufacturers and, hence, are not suited for individual manufacturing in unprofitable activities. In this case, the risk on the consumer side increases because individual manufacturers cannot fulfill their responsibilities, posing a problem of shrinking innovation using digital fabrication technology.



Current activities

RISTEX has discussed mechanisms of the PL law and insurance in collaboration with the JST Center of Innovation (COI) Program, "Center of Kansei-Oriented Digital Fabrication." Furthermore, RISTEX surveyed the legislative principles and operations of PL laws and PL insurance services in Japan and overseas to collect knowledge needed for discussions with relevant stakeholders (such as manufacturers, consumers, ministries/agencies, and insurance companies).

ELSI initiative in BRAIN-AI Hybrid Technology (in collaboration with ERATO)

Background

Brain-AI hybrid technology, which integrates artificial intelligence, which has made remarkable progress in recent years, and neuroscience research, has the potential to break through the limits of previously restricted brain activity and expand human capabilities. On the other hand, there are issues yet to be studied, such as how to handle the ultimate privacy of information in the human brain, the possibility of widening disparities the technology that enhances human abilities could bring about in the future, and philosophical issues surrounding the identity of who is responsible for decisions made by "Brain-Computer Interface (BCI)," which connects the human brain to computers.

Current activities

Researchers working on brain-AI hybrid technology in the JST Strategic Basic Research Program ERATO and researchers specializing in ELSI and philosophy in the RISTEX-HITE focus area have collaborated and discussed the impact of such technology on humans and society from various perspectives since the early stages of the research. In addition, while maintaining communication with stakeholders, such as workshops for dialogue with citizens, RISTEX has been working to ensure this technology can bring true well-being to human beings. RISTEX compiled and published the knowledge obtained through these activities as ELSI-related points on brain-AI hybrid technology.

Social Issue Surveys

Structurize, visualize and prioritize social issues from multiple perspectives
https://www.jst.go.jp/ristex/en/research-activities/surveys/

Survey purpose

RISTEX promotes R&D to resolve social issues by implementing the outputs of research in S&T. However, the term social issues covers a wide range of areas, including lifestyles, the economy, population, disasters, and the environment, and all social issues are interconnected. In addition, perceptions of these issues vary greatly depending on factors such as the historical context and differences in time period, generation, gender, and place of residence.
The survey results will be utilized to establish the R&D focus areas/programs RISTEX promotes and for extensive utilization by stakeholders in the industry, academia, government, and private sectors.

Survey methods

We first extract keywords of social issues from information sources such as newspapers, publications, policy documents and the Internet. These keywords are then articulated, prioritized and summarized by popularity and importance, and the results are represented in a visual map. In the past, the surveys were conducted mainly by discussions with specialists, but to cover a wider range of social issues and to increase the accuracy of the survey, we have introduced new methods in recent years, such as text mining for the document content analysis and large-scale opinion surveys using the Internet.

Followings show the basic survey flow:

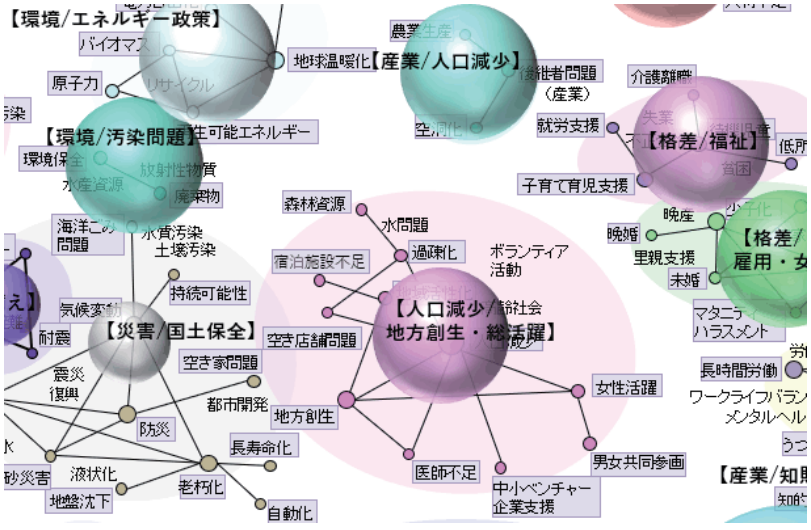
1. Select keywords that express social issues
2. Document search using keywords, classify extracted sentences/articles, visualize and analyze relevance between keywords
3. Discuss with specialists about keywords and conduct public opinion surveys (survey data segmented by age, occupation, and region)
4. Visualize and analyze social issues that stand out from keywords of high degrees of attention and importance

Publication of survey results and provision of data

Overviews of recent social issue surveys' results are available on the RISTEX website. In addition, we provide reports and reference data free of charge so that survey results can be used widely.
The note on how to use the survey results and contact information can be found in the last page of the report. Please feel free to contact us regarding this matter. We hope the data we provide serves to be useful and appreciate your feedback such as specific requests for future surveys.

Recent social issue survey reports:

- Survey on Social Acceptance of Super Smart Society (October 2019)
- Evaluation of Change in Public Awareness on Social Issues during 2020 (March 2021)
- Investigation of Primary Social Issues with/after Coronavirus Disease (March 2021)
- Evaluation of Social Issue Extraction Results Based on Multiple Perspectives (July 2018, March 2020, November 2022, March 2023)

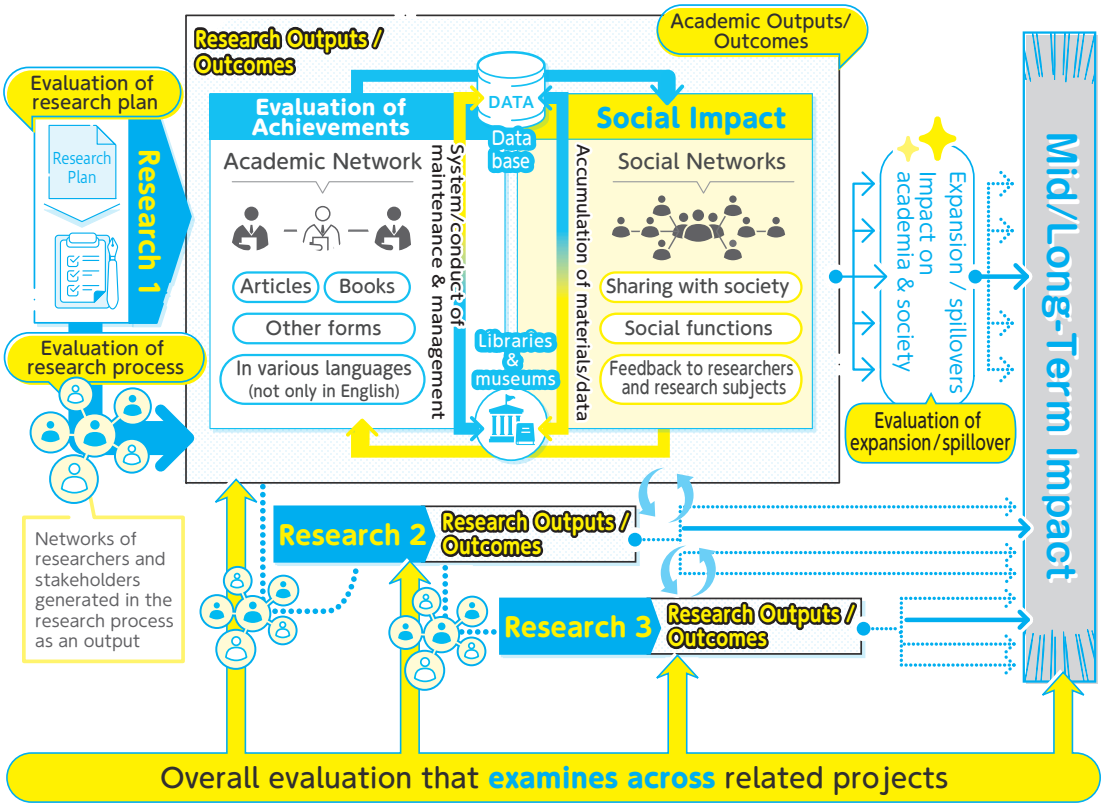


Surveys of Trends in Transdisciplinary Research (TDR)

Creating evidences to promote co-creation between researchers and various stakeholders.
https://www.jst.go.jp/ristex/en/research-activities/td-r/index.html

As part of the Future Earth initiative in Japan, RISTEX set up the “Initiative for the Promotion of Future Earth Concept” in FY2014, and provided funding to transdisciplinary research projects until FY2019 (see “Future Earth” at Initiatives for more information). From FY2020, we have been conducting surveys which are aimed to provide evidences for JST as a funding agency to further promote transdisciplinary research in Japan.

In the initial survey in FY2020, transdisciplinary research projects funded in above Future Earth initiative and Belmont Forum’s international collaborative research projects in which Japanese researchers participated were reviewed and analyzed. Also, the current status of and trends in research activities in Japan which are related to global issues were mapped, from which implications for future promotion of related research were extracted.
In FY2021, based on the findings of the FY2020 survey, we have expanded the survey to include several topics. We placed particular emphasis on summarizing discussions surrounding outcomes and impact of TD research based on its characteristics such as interdisciplinarity and co-creation with stakeholders, which are difficult to grasp with current research assessment frameworks. Then we looked into outputs of TD research RISTEX wants to visualize in order to further promote TD research, namely, the building and expanding of networks between researchers and stakeholders ('productive interactions'). In FY2022 and FY2023, we actually visualized the outcomes of TD research and examined and tested evaluation indicators.



*** Belmont Forum**

The Belmont Forum is a partnership of funding organizations, international science councils, and regional consortia committed to the advancement of transdisciplinary science related to global issues. For international collaborative search, it mobilizes researchers and funding of environmental change research and aims to accelerate its delivery to remove critical barriers to sustainability. (JST’s Belmont Forum website: https://www.jst.go.jp/inter/sicp/country/belmont-forum.html)

Research Integrity Surveys

Provide policy and practice implications to promote autonomous conduct of trustworthy and responsible research

Background and Objectives

Since the enforcement of the 6th Science, Technology and Innovation Basic Plan in FY2021, solving social issues and producing innovations by the use of 'convergence of knowledge' resulting from integration of the HSS and natural sciences is becoming more valued. Thus, expectations are rising towards interdisciplinary research which transcends disciplinary boundaries, and transdisciplinary research which transcends academic boundaries for co-creation with stakeholders. We believe it is important to promptly promote consideration of research integrity in these types of research.

RISTEX has been funding R&D of governance that enables fair and responsible research activities in the funding program "Science of STI Policy." Also, since its establishment, RISTEX has been promoting interdisciplinary and transdisciplinary research for solving social issues and for social implementation of solutions. By collecting, analyzing and sharing basic information on the current state of research equity in transdisciplinary researches, we aim to provide basic data that will contribute to discussions on research equity and activate discussions.

Current activities

It gathers information about current states of research activities and management in on-going interdisciplinary and transdisciplinary research where common rules and norms are yet to be established. The data obtained are analyzed and disseminated as a resource for the consideration of fairness of such research. By doing so, we aim to stimulate discussions and policy recommendations which promote autonomous conduct of Responsible Conduct of Research (RCR). We intend to position such discussions not only in the limited realm of research integrity, but in a wider consideration of responsibility such as Responsible Research and Innovation (RRI) and Corporate/University Social Responsibility (CSR/USR), thereby encouraging research with and for society.

A Study of Research Ethics Reviews

To consider how research ethics reviews should be in the R&D process of emerging technologies

Background

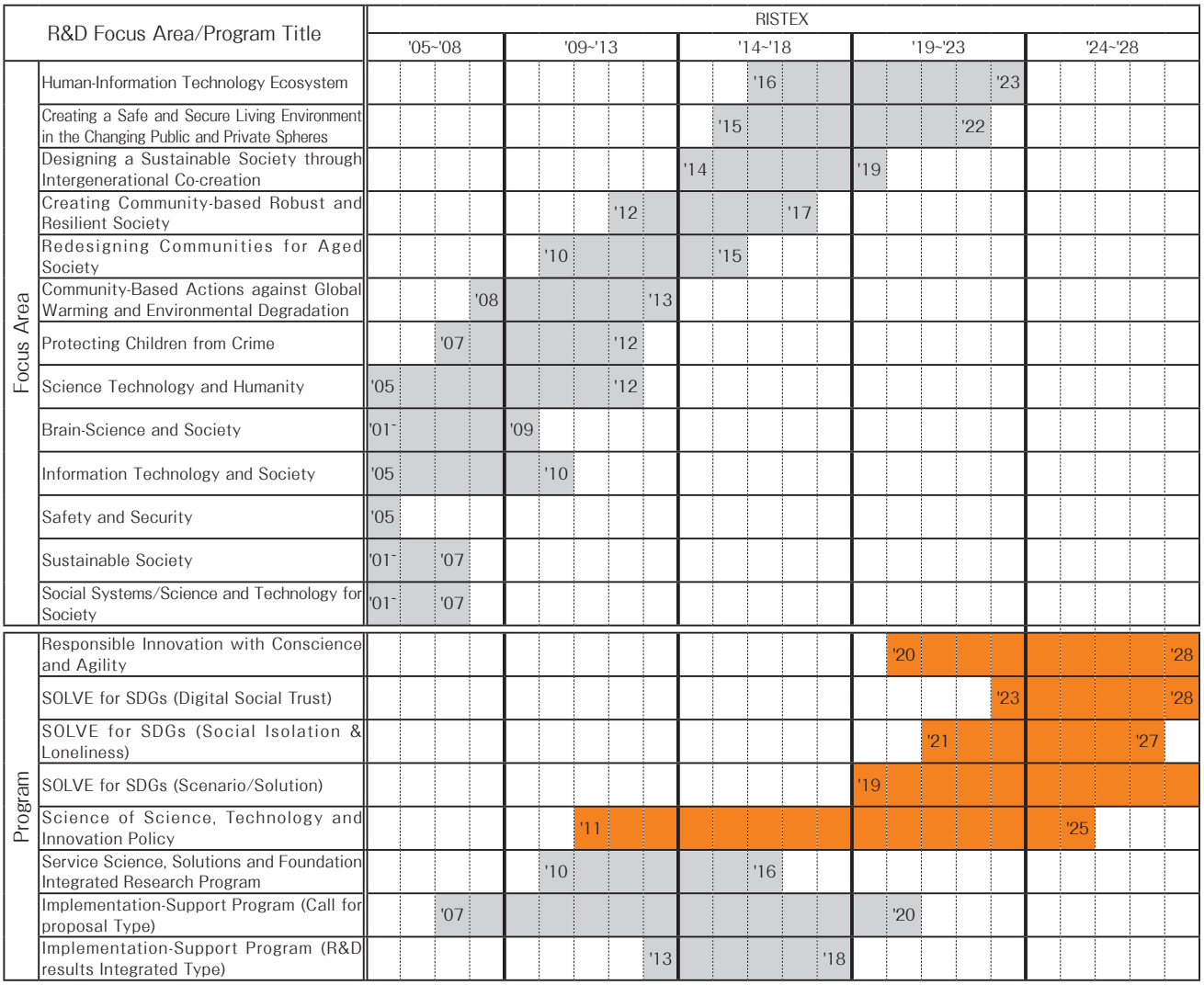
Advancement of emerging technologies, from R&D to social implementation, is very rapid and their impact on people and societies is uncertain, equivocal, and overwhelmingly immense. Thus, the deepening of relationship and interactions between science and technology (S&T) and society is increasingly more important. With emerging technologies in particular, it is important to engage in ELSI/RRI in an anticipatory manner at early stages of R&D, rather than merely attempting to improve social acceptance, in terms of risk management and innovation production.

Current activities

We surveyed those engaged in research activities in academic institutions and corporates, to grasp the trends in how research ethics reviews were conducted in the R&D process of emerging technologies. In FY2020, we surveyed research ethics reviews regarding gene editing/synthesis, meat culture technology, and digital fabrication as case studies. We attempted to describe how such reviews were conducted in Japan and to elucidate important arguments and issues needing to be addressed in future. Accordingly, we compiled a report which describes current situation of research ethics reviews, especially with regard to ethical issues characteristic to corresponding technology and/or discipline.

R&D Funding

The R&D Funded Since the Launch of RISTEX



R&D Currently Funded

R&D Focus Area/Program	Program Supervision	Goals
Responsible Innovation with Conscience and Agility	KARASAWA Kaori Professor, Graduate School of Humanities and Sociology, The University of Tokyo	Promote R&D of ethical, legal and social implications/issues (ELSI), which aims to create practical collaborative models that contribute to the dissemination and establishment of responsible research and innovation (RRI).
SOLVE for SDGs Digital Social Trust	YUASA Harumichi Professor, Graduate School of Governance Studies, Meiji University	Identify issues and develop solutions that will lead to the resolution of essential problems, by viewing social problems such as the anxiety and disadvantage of citizens over the acquisition and use of information created by the advanced information society as a problem of how "trust" should be formed.
SOLVE for SDGs Social Isolation & Loneliness	URA Mitsuhiro Professor, Otemon Gakuin University; Professor Emeritus, Hiroshima University	This program promotes R&D including academic research, such as understanding the causes and mechanisms of social isolation and loneliness and producing a new image of society, as well as the development of visualization and evaluation methods (indicators, etc.) for the risk of the issues, and the development of preventive measures on the issues. These are expected to be conducted in an integrated way up to the Proof of Concept (PoC).
SOLVE for SDGs Scenario/ Solution	KAWAKITA Hideto CEO, International Institute for Human, Organization and the Earth	Contribute to the achievement of SDGs by promoting in an integrated manner from the clarification of social issues and bottlenecks and creation of the scenario to the creation of the solution through collaboration and co-creation with diverse stakeholders while utilizing scientific methods based on expertise from the natural sciences and the humanities and social sciences
Human-Information Technology Ecosystem	KOKURYO Jiro Professor, Faculty of Policy Management, Keio University	Grasp and foresee the changes that information technology may cause, promote R&D for cooperative design of technology and systems with understanding from society, and aim at creating a society where information technology and humanity are in harmony
Science of Science, Technology and Innovation Policy	YAMAGATA Zentaro Deputy Director / Think Tank for Maternal and Child Health, National Center for Child Health and Development Project Professor, The Center for Birth Cohort Studies(CBCS), University of Yamanashi	Aim at establishing grounds that contribute to the formation of science and technology innovation policies based on objective evidence and developing analytical methods, etc. to that end

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Responsible Innovation with Conscience and Agility
(FY2020-)

https://www.jst.go.jp/ristex/en/funding/elsi-pg/index.html

Develop a practical collaborative model to carry out responsible research and innovation while identifying and anticipating ethical, legal and social implications/ issues related to emerging science and technology

Program Supervisor: KARASAWA Kaori
Professor, Graduate School of Humanities and Sociology,
The University of Tokyo

Summary of R&D Program

While the significance of the deepening relationships and interactions between science and technology (S&T) and society has been recognized for some time, these are now becoming increasingly important due to the rapid advancement of emerging technologies. Such technologies, namely, information technology, robotics and biotechnologies expand the very relationships between S&T, society and humanity, provide new knowledge and benefits, and enable us to improve people's lives and societies. On the other hand, they also hold the potential to cause irreversible destruction in human history. Meanwhile, the response to global-scale problems faced by humanity (grand challenges) as exemplified by the Sustainable Development Goals (SDGs) has become identified as a socially important mission. With the rapid expansion of environmental, social and governance (ESG) investment, ideas and mechanisms for reconciling values emphasizing economic rationality with values such as the sustainability of natural environment and consideration of gender and equity are also becoming more pervasive.

Engagement in ELSI/RRI (Responsible Research and Innovation) for reconciling S&T with humans and societies is neither activities subordinate to implementation of technologies, or a hindrance to the progress of R&D. While responding to social needs, ELSI/RRI should function as navigators for the creation of innovation and future societies, and serve as the impetus for us humans to create various options for the future.
The program, which aims to disseminate and establish engagement in ELSI and conduct of responsible research/ innovation of emerging S&T, promotes R&D which attend to ELSI/RRI practically and comprehensively from the early stages of R&D.

Goals for R&D Program

The program, which aims to realize a society in which S&T in a harmonious relationship with humans/societies can create new value in a sustainable manner, supports development of practical collaborative models that contribute to the conduct of responsible research/innovation while discovering and anticipating ethical/legal/social issues (ELSI) of emerging S&T.
R&D projects are designed to start off by dealing with issues facing Japanese society that arise in the interfaces between S&T and humans/societies, or specific emerging technologies, and proceeded by mobilizing diverse knowledge that researchers and stakeholders possess. For example, we anticipate the production of following outputs:

- Creation of tangible responses to ELSI that take into account the nature of S&T
- Mechanisms and methodologies for providing feedback from ELSI perspectives in an agile manner from early stages of R&D
- Method for improving functions and designs of science and technology communication
- Case analysis of trans-science issues and archive-based recommendations for the future
- Presentation of visions of society that are to be realized by the research/innovation, based on the exploration and consideration of fundamental questions each project faces

Engagement in ELSI/RRI is not limited to responses and adaptations to S&T issues in the here and now. In addition to examining influences that transcend generations and space, such efforts inevitably encompass fundamental questions relating to the universally recognized values and improvement of life, people and society. The program challenges to present a vision of society that is to be realized by the research/innovation. It scrutinizes fundamental values that can be derived from the consideration of contexts and characteristics of Japanese society, to extract more universal values shareable with the global society, and attempts to verbalize/represent such values.

■ Projects

＊ Affiliations and positions are those that applied at the completion of the project.

	Project Name	Principal Investigator	Period
FY2024	Research on the ELSI/RRI of the relationship between observational and intervention research	NAGAMI Fuji, Professor, Tohoku Medical Megabank Organization, Tohoku University	2024.10-2027.3
	Practical arrangement of ELSI on occupancy and priority of mixed traffic and creation of measures to deal with it.	HIKASA Takashi, Associate Professor, School of Management & Information Sciences, Tama University	2024.10-2028.3
	Building Responsible Research Eco-System for Engineering Biology	MIKAMI Koichi, Associate Professor, Faculty of Science and Technology, Keio University	2024.10-2028.3
FY2023	Transdisciplinary Study on the ELSI of Building Intimate Relationship between Humans and "Co-Habitant" Robots	INATANI Tatsuhiko, Professor, Graduate School of Law, Kyoto University	2023.10-2027.3
	Addressing ELSI and governance with patient and public involvement regarding research on human stem cell-derived germ cells	KATO Kazuto, Professor, Department of Biomedical Ethics and Public Policy, Graduate School of Medicine, Osaka University	2023.10-2026.3
	ELSI study on utilizing reverse translational research to establish sustainable innovation in regenerative medicine	YASHIRO Yoshimi, Ph.D., Director, The Japanese Society for Regenerative Medicine	2023.10-2027.3
FY2022	Experimental ELSI Research Toward the Future of Brain Modifications	OTA Koji, Associate Professor, Faculty of Humanities and Social Sciences, Tsukuba University	2022.10-2026.3
	Practice on ELSI/RRI of Educational Technology Using Student Educational Data	KANO Kei, Professor, Faculty of Education, Shiga University	2022.10-2026.3
	Historical Analysis of ELSI in Medicine and Healthcare based on the Construction of the Archives	GOTO Motoyuki, Associate Professor, Graduate School of Core Ethics and Frontier Sciences, Ritsumeikan University	2022.10-2026.3
	Building Legal Policy to Close ELSI Lag for Fair Use of Gene Information	SETOYAMA Koichi, Professor, Graduate School of Medical Science, Kyoto Prefectural University of Medicine	2022.10-2026.3
	Practical Examination of ELSI on Smartization of Community Through Four-dimensional Co-creation	DEGUCHI Yasuo, Professor, Graduate School of Letters, Kyoto University	2022.10-2026.3
	ELSI on the Clinical Research for Treating the Fetal-maternal Complex	MATSUI Kenji, Division Chair, Division of Bioethics and Healthcare Law, Institute for Cancer Control, National Cancer Center Japan	2022.10-2026.3
FY2021	Autonomy and Affinity in AI Development and Use	USAMI Makoto, Professor, Graduate School of Global Environmental Studies, Kyoto University	2021.10-2025.3
	Comprehensive Research of the Ethical, Legal and Social Issues as Prerequisites for the Social Acceptance of Urban Air Mobility	KOJIMA Ryu, Professor, Faculty of Law, Kyushu University	2021.10-2025.3
	Archiving the Ethical, Legal and Social Issues in Pandemic Responses towards Building an Infectious-Disease-Resilient Society (R&D related to COVID-19)	KODAMA Satoshi, Professor, Graduate School of Letters, Kyoto University	2021.10-2025.3
	Development of an RRI Practice Model for Molecular Robotics Premised on Researchers Autonomy	KOMIYA Ken, Researcher (II), Institute for Extra-cutting-edge Science and Technology Avant-garde Research, Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	2021.10-2025.3
	Examination of ELSI/RRI in relation to Cellular Agriculture Technologies for Sustainability Transitions	HIBINO Aiko, Professor, Faculty of Humanities and Social Sciences, Hirosaki University	2021.10-2025.3

■ Program Advisors

OHYA Takehiro	Professor, Faculty of Law, Keio University
SHINOMIYA Nariyoshi	Former President, National Defense Medical College / Visiting Scientist, National Institute of Infectious Diseases
NAKAGAWA Hiroshi	Team leader, Artificial Intelligence in Society Research Group, Center for Advanced Intelligence Project, RIKEN
NISHIKAWA Shintaro	Member of the Board of Directors, GLOCALINK Inc./ Director, D-LAB, Japan Tobacco Inc.
NOTOMI Noburu	Professor, Graduate School of Humanities and Sociology, The University of Tokyo
NOGUCHI Kazuhiko	Visiting Professor, IAS Center for Creation of Symbiosis Society with Risk, YOKOHAMA National University
HARAYAMA Yuko	Emeritus Professor, Tohoku University
MIZUNO Tasuku	Lawyer, CITY LIGHTS LAW
YAMAGUCHI Tomiko	Professor, College of Liberal Arts, International Christian University

■ Promotion Advisor

FUJIYAMA Tomohiko	Principal Fellow, Center for Research and Development Strategy, JST/ Former Senior Vice President, former director of Institute of international strategic studies, Mitsubishi Co. Ltd.
TODAYAMA Kazuhisa	Specially Appointed Professor, National Institution for Academic Degrees and Quality Enhancement of Higher Education

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https://www.jst.go.jp/ristex/en/funding/elsi-pg/index.html

Program Activities

Dissemination of program's outputs

Joint workshop with the Japanese Society of Social Psychology

In preparation for the public solicitation of this program, RISTEX, targeting the field of "Social Psychology" to be enhanced in its public relations activities, held these events intending to identify potential proposers and implementers and build networks with them. In this events, RISTEX provided topics including academic trends surrounding ELSI/RRI, trends in the "Government and Industry" sectors, new developments arising from the involvement of social psychology in ELSI/RRI research, issues related to how obtained knowledge and methodologies are used, and the introduction of specific funding under this program. Approximately 260 people participated in the event, including the proposers and task assignees in this program.

Public Event Co-Hosted by AMED/JST-RISTEX on Novel Coronavirus Infections (COVID-19) ELSI

AMED and RISTEX co-hosted a public event as the AMED "Infectious Disease Research and Development ELSI Program," launched at the same time as this program, would complete its surveys in March 2021. This event was held for researchers/institutions, public organizations, groups such as companies, and the media interested in COVID-19/ELSI, providing an opportunity to open the forefront of ELSI discussions related to COVID-19 and the perspectives of researchers widely to society.

The event also aimed to collaborate with AMED's networks of medical, dental, and pharmaceutical researchers and the medical and pharmaceutical industries.

Cross Talk Session of ELSI Program at Venture Café Tokyo

RISTEX held RInCA Cross Talk at Venture Café Tokyo, a community where diverse innovators, such as entrepreneurs, investors, researchers, and students, meet and connect to create innovation in society. At this event, speakers pioneering ELSI initiatives in diverse capacities in the data business field discussed the latest trends and future possibilities. At this event, SHINEHA Ryuma, the Principal Investigator of a project adopted in the first year of this program, took the stage and discussed the project with entrepreneurs.

Exploration of questions regarding the fundamental values of life, people, and society, and engagement in the "articulation of discourse"

Engagement in ELSI/RRI is not limited to responses and adaptations to S&T issues in the here and now, but transcends generations and space, and inevitably encompass fundamental questions relating to the universally recognized values and improvement of life, people and society.

In promoting R&D, this program asks that the team members, including researchers in S&T and HSS, and stakeholders from the society, agree to explore "common issues that question the fundamental values of life, people and society" (the points at issue), and to hold continuous discussion. Such is a challenge to continuously engage in fundamental questions of why we need this particular science/technology, and what values we are trying to realize by its application. It is also a challenge to express in words (production of discourse) the various discussions and considerations surrounding the subject matter.

The program calls such activities "exploration of fundamental values and articulation of discourse" and positions these as the foundation for the grand design of the program. This is because we consider the efforts in co-creation of knowledge/values with various stakeholders while challenging to exploratively consider fundamental questions and expressing such attempts accurately are essential to the practice of ELSI/RRI.

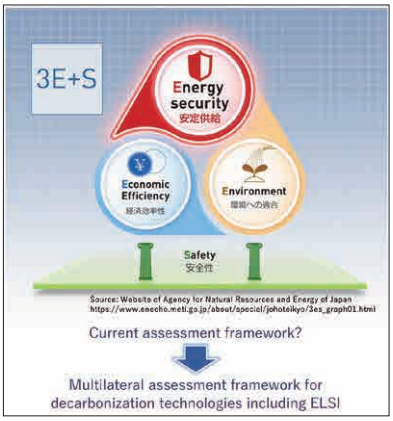
Reports of above activities can be found in the program website and RInCA journals. We look forward to participation of various readers and interested individuals/groups in on-going discussions.

Project Examples

■ **Project name: Establishing ELSI for Strategies of Developing and Promoting Decarbonization Technologies in Japan**
■ **Principal investigator: EMORI Seita, Deputy Director, Earth System Division, National Institute for Environmental Studies**

Keywords
Decarbonization technologies, Climate change policy, R&D policy, Technology assessment

Overview of the R&D
To combat climate change, the international community has adopted the Paris Agreement, and aims to achieve 'decarbonization' - net-zero anthropogenic carbon dioxide emissions - by the middle to the latter half of this century. Japan has also set forth a government policy to achieve decarbonization by 2050, and Japan's energy and industrial policies are developing rapidly.
The objective of this project was to devise and propose an assessment framework from multiple viewpoints, including ELSI, for various decarbonization technologies (emerging and existing). The assessment framework applies to the technologies that have been developed and promoted in Japan's R&D strategies and climate change strategies, as well as to the development and promotion strategies themselves.
We formulated and conducted a technology assessment for decarbonization technologies involving a wide range of actors, and made qualitative and quantitative analyses of the past policy processes of Japanese climate change strategies. Based on these findings, we proposed a new principle, a "multilateral assessment framework for decarbonization technologies," by reconsidering the existing assessment focused on technological and economic aspects from multiple perspectives including the consideration of ELSI.

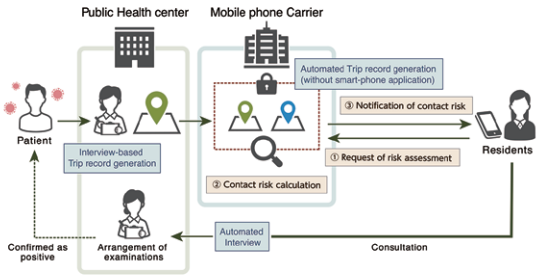


Participating Institutions
National Institute for Environmental Studies, Kyoto University, The University of Tokyo, Hokkaido University, Osaka University, Meiji University, Aoyama Gakuin University, Hitotsubashi University, National Diet Library, etc.

■ **Project name: A Comprehensive Study of Infectious Disease Control Using Mobile Phone-related Technologies**
■ **Principal investigator: YONEMURA Shigeto, Professor, Graduate Schools for Law and Politics, The University of Tokyo**

Keywords
Mobile phone technologies, Infectious disease prevention, Medical law, Personal information protection, Privacy

Overview of the R&D
While effective infectious disease measures are necessary due to the spread of COVID-19, restricting the movement of residents and the operation of commercial facilities such as restaurants are difficult to implement continuously. Under such circumstances, the possibility of using mobile phones (smartphones) to collect and analyze personal data such as the location, movement history and contact information of individuals as a countermeasure against infectious diseases is gaining international attention. However, many point out privacy concerns regarding the use of such personal information, and no clear rules have been established not only in Japan but in various initiatives in other countries about the kind of information use that is allowed.



This project examined the desirable use of mobile phone-related technologies, especially location information and Bluetooth, which could be technically implemented, for the control of infectious diseases. The objective of this project was to provide a framework for the appropriate use of technology and policymaking through multifaceted and interdisciplinary studies from the perspective of information engineering and ELSI, including the protection of privacy and human rights. We made legislative proposals and developed guidelines that could be used to formulate evidence-based policies. We also promoted social dialogue in areas where consensus building was difficult, and contributed to international rulemaking.

Participating Institutions
The University of Tokyo, Kitami Institute of Technology, National Hospital Organization Tokyo Medical Center, RIKEN Center for Advanced Intelligence Project, Keio University, World Economic Forum Centre for the Fourth Industrial Revolution Japan, Japan Institute for Promotion of Digital Economy and Community, Code for Japan, Groovenauts, Data Trading Alliance, Japan Medical Venture Association, etc.

SOLVE for SDGs: Digital Social Trust

(FY2023-)

Solution-Driven Co-creative R&D Program for SDGs (Trust Formation from Social Aspects in the Information Society)

https://www.jst.go.jp/ristex/en/funding/solve-digist/index.html

Identify issues and develop solutions that will lead to the resolution of essential problems, by viewing social problems such as the anxiety and disadvantage of citizens over the acquisition and use of information created by the advanced information society as a problem of how "trust" should be formed.

Program Supervisor: YUASA Harumichi
Professor, Graduate School of Governance Studies, Meiji University

Summary of Research and Development Program

Backed by rapid developments in artificial intelligence (AI) and information and communication technology (ICT), the digitalization of society is permeating everywhere on a global scale. The digitization of society has brought about significant changes and benefits to people's lives, and the convenience of society is expected to continue to increase. However, we must also look at the negative aspects of digitization.

It is challenging to address the negative aspects that this digitization in society brings about only through technological development. For this reason, RISTEX launched the "Solution-Driven Co-creative R&D Program for SDGs (Trust Formation from Social Aspects in the Information Society)" in FY2023, as an initiative to create problem-solving solutions, including social aspects.

With changes in how information is utilized and transmitted, it is becoming increasingly difficult for information providers and information itself to gain the trust of information recipients and society. In light of the current situation, this program takes approaches in the following two frameworks to deal with the issues of how to form and maintain the "Trust" between the receivers of information and the senders of information/information itself, as well as the "Trust" to people, organizations, and information services that intervene between the receivers and senders of information: "R&D that leads to problem-solving on the sites (problem-solving type)" and "R&D to identify problems on the sites (problem-identifying type)."

The program as a whole emphasizes the integration of R&D phases, including understanding the mechanisms of social issues related to "Trust," problem identification, and countermeasure development, as well as initiatives for social implementation to solve the problems, interdisciplinary research across natural sciences, humanities, and social sciences, and the integration of such research knowledge and on-site knowledge based on specific problems. In addition, implementing solutions in society would require considerations of institutional design and social receptivity from the R&D stage. In the process, there may be multifaceted approaches, such as forming social rules like regulations and disciplines, the impact on the economy, and education to improve literacy. Therefore, RISTEX will promote R&D while seeking collaboration with diverse entities that can deal with such approaches.

Goals for the R&D Program

- Concerning social issues such as anxiety and disadvantage on the citizens' side over the acquisition and use of information the progress of advanced information society has brought about, this program regards them as the issues of how to form the "Trust" between the receivers of information and the senders of information/information itself, as well as the "Trust" to people, organizations, and information technology and services that intervene there. Through this approach, RISTEX will identify problems and develop solutions that lead to more substantive problem-solving.
- To this end, RISTEX aims to create a society in which both the receivers and senders can interact with each other and enjoy the benefits of the development of information technology by taking a multifaceted approach from the viewpoints of regulations, economy, technology utilization, and education, promoting proposing and verification activities for research through social implementation through the utilization of "Convergence of Knowledge" in related academic fields and the sites, and forming sound "Trust."

■ Projects

(a) Problem-solving projects

	Project Name	Principal Investigator	Period
FY2024	Trust in Science in the Digital Media Society	TANAKA Mikihito, Professor, Faculty of Political Science and Economics, Waseda University	2024.10-2028.3
	Study of Establishment of Trustworthy Generative AI and Legal Systems and AI Governance Frameworks	TERADA Mayu, Professor, Graduate School of Social Data Science, Hitotsubashi University	2024.10-2028.3
FY2023	Trust formation via visualization: Literacy education in personalized digital infosphere	TORIUMI Fujio, Professor, Department of Systems Innovation, School of Engineering, The University of Tokyo	2023.11-2027.3
	Towards the development of "Trust" between news outlets and audiences	FUJISHIRO Hiroyuki, Professor, Department of Media and Communication Studies, Faculty of Social Sciences, Hosei University	2023.11-2027.3

(b) Problem-identification projects

	Project Name	Principal Investigator	Period
FY2024	Identification of barriers against forming trust to conversational systems and development of control technology for them	KOYAMA Tora, Associate Professor, Research Institute for Time Studies, Yamaguchi University	2024.10-2028.3
	Trust Formation and Consensus Building in the AI Generation of the Deceased's Persona	ORITA Akiko, Professor, College of Interhuman Symbiotic Studies, Kanto Gakuin University	2024.10-2028.3
FY2023	Cognitive studies on trust formation mechanism toward local echo chamber steering	MORITA Junya, Professor, Department of Behavior Informatics, Faculty of Informatics, Shizuoka University	2023.11-2027.3
	Mapping Entry Channels into Conspiracy Theory and Developing a Framework for Preventing People's Acceptance	MURAYAMA Taichi, Specially Appointed Assistant Professor (Full time), The Institute of Scientific and Industrial Research, Osaka University	2023.11-2027.3

■ Program Advisors

ITO Hiroshi	Principal Researcher, National Institute of Information and Communications Technology (NICT)
OGASAHARA Morihiro	Professor, Department of Media and Communications, Toyo University
KANEKO Keiko	Visiting Researcher, JIPDEC
KOMATSU Ayako	Professor, Notre Dame Seishin University / Professor Emeritus, Nagasaki University
KONDO Noriko	Secretariat, Routeku (Geriatric Technology) study group
SAKURA Osamu	Professor, Interfaculty Initiative in Information Studies, The University of Tokyo / Team Leader, Center for Advanced Intelligence Project (AIP), RIKEN
TAIRA Kazuhiro	Professor, College of Arts and Sciences, J. F. Oberlin University
HAMAGUCHI Narichika	Executive Officer, Corporate Planning Department, Japan Broadcasting Corporation
MATSUMOTO Yasushi	Fellow, NPO Japan Network Security Association
MURAKAMI Yuko	Professor, Graduate School of Artificial Intelligence and Science Artificial Intelligence and Science, Rikkyo University
YAMAMOTO Tatsuhiko	Professor, Law School, Keio University

Program Activities

The program aims to conduct R&D and achieve social implementation to address various challenges related to "trust" in today's information society.

■ Discovery/identification of societal challenges and development/social implementation of solutions

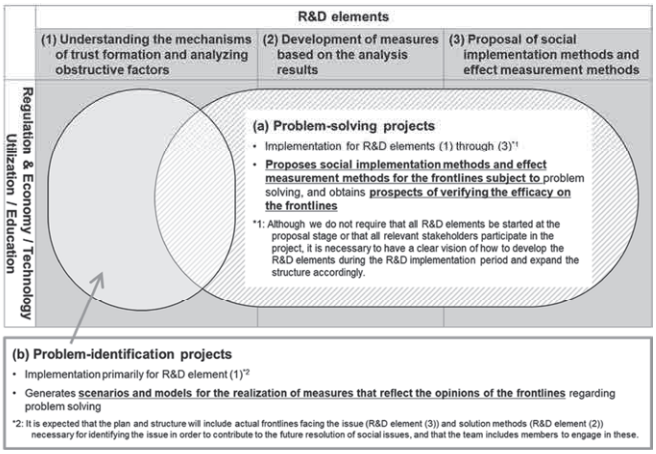
- Three R&D elements and framework of two R&D projects

In response to societal challenges arising from the expansion of the information society, the team has focused on issues related to trust with respect to information, such as false or misleading information and infodemics, to promote problem-solving initiatives on the ground through a multidimensional approach that goes beyond R&D and technological aspects.

<Three R&D elements>
(1) Understanding the mechanisms of trust formation and analyzing the inhibiting factors
(2) Developing measures based on the analysis results
(3) Proposing techniques for social implementation and effect measurement

<Framework of two R&D projects>
(a) Problem solving project
(b) Problem identifying project

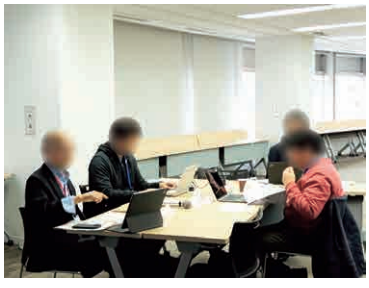
The program launches research projects in various fields, including "regulation/economy", "technology utilization", and "education," and promote them in an integrated manner with a view to solving societal challenges.



Hands-on management in tandem with research representatives and others

- The program activities provide accompanied support for the nurturing of projects with the help of specialized advisors with expertise in a wide range of fields. This includes supporting the formulation of concepts to realize the vision of a new digital society, the promotion of system construction to connect with the field implementing the measures, and the matching of research and field sites to offer advice on concept formulation and system strengthening.

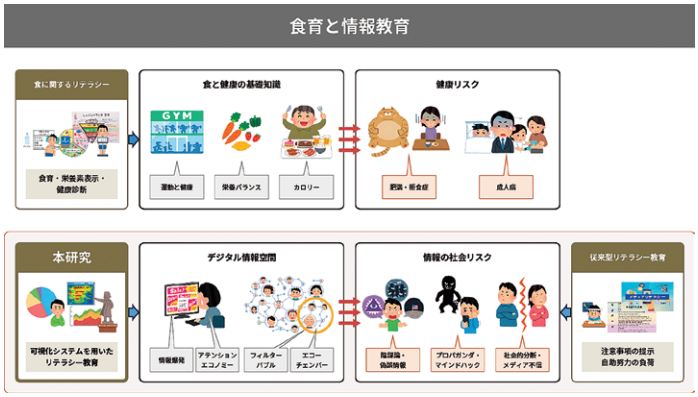
- The program supports the creation of mechanisms that expand R&D activities by linking them to the field involved in the implementation of social measures and fostering dynamic interaction between projects.



Project Examples

■ Project name: Trust formation via visualization: Literacy education in personalized digital infosphere
■ Principal investigator: TORIUMI Fujio, Professor, Department of Systems Innovation, School of Engineering, The University of Tokyo

Social issues to resolve



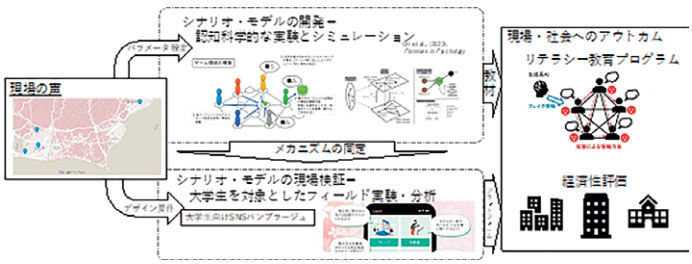
In today's information society, choosing which information to view is dependent on AI-based recommendation systems. While this creates a comfortable environment, it also means that the right to select and discard information is delegated to AI. However, some recommendations are made without evaluating the authenticity or usefulness of the information, focusing only on the interests of the user, and this can be a social risk factor that can lead to false or misleading information and online backlash. On the other hand, there is little social awareness of the fact that information is being personalized by AI, and this gap between the current reality and the public's understanding poses a significant risk in the information society.

Overview of R&D

This project seeks to explore people's receptivity to information by examining differences in how general users and experts perceive terms commonly used in discussions among experts regarding basic perceptions and behaviors in the information space. Next, in order to enhance the effectiveness of literacy education in the digital space, the team will develop visualization technology by referring to the methods used in food literacy education. This will involve adapting indicator items to focus on issues relevant to the information space, such as information bias, false or misleading information, filter bubbles, echo chambers, and attention economies. Finally, to ensure the continued use and dissemination of the developed visualization tool in the real world, the team aims to achieve sustainable social implementation by identifying the responsibilities for sharing the acceptable system costs and system maintenance costs with individuals in mind.

■ Project name: Cognitive studies on trust formation mechanism toward local echo chamber steering
■ Principal investigator: MORITA Junya, Professor, Department of Behavior Informatics, Faculty of Informatics, Shizuoka University

Social issues to resolve



The wavering of trust in modern society stems from the gap between the real world and the online space, which manifests itself as distrust of the media that bridges the two. In particular, local social media closely connects the real world with the online space, making it easier for problems to arise, but also providing a potential key to solving them. This project will examine the mechanisms for steering local social media based on the actual situation in the region, while to some extent allowing for the emergence of value and attitude polarization (local echo chambers) that typically occurs in closely connected communities.

Overview of R&D

The project team will understand the mechanisms behind the phenomena that occur in the local information environment and identify factors that can be steered. For this purpose, behavioral experiments and simulations will be conducted in a micro-world that replicates local social media in the real world. The model developed through these simulations will then be applied to social media used by university students in Shizuoka Prefecture for field experiments. A key feature of this media is that users have the ability to connect with each other in real life if they choose to do so.
The project's goal is to explore technologies and system intervention methods that will make the developed model sustainable as a service and to present and propose it to society, integrating literacy education and a system that incorporates economic efficiency.

SOLVE for SDGs: Social Isolation & Loneliness

(FY2021-)

Solution-Driven Co-creative R&D Program for SDGs (Preventing Social Isolation & Loneliness and Creating Diversified Social Networks)

https://www.jst.go.jp/ristex/en/funding/solve-koritsu/index.html

Transform society and realize a resilient, inclusive, and sustainable society that leaves no one behind through co-creative activities

Program Supervisor: URA Mitsuhiro
Professor, Otemon Gakuin University;
Professor Emeritus, Hiroshima University

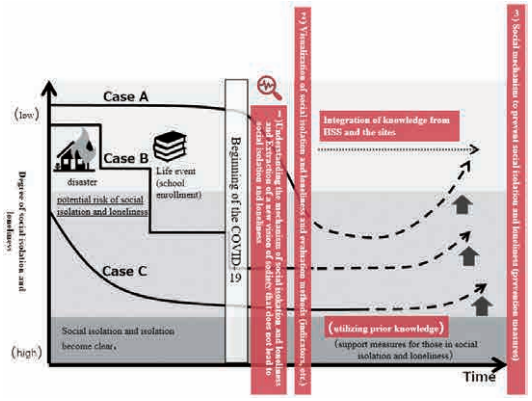
Summary of Research and Development Program

"Transforming our world: the 2030 Agenda for Sustainable Development" ("2030 Agenda" for short) that was adopted by the United Nations established 17 Sustainable Development Goals (SDGs) and 169 targets under the basic ideal of "No one will be left behind." Since social isolation and loneliness is one of the essential perspectives of the SDGs, RISTEX has launched the "Solution-Driven Co-creative R&D Program for SDGs (Preventing Social Isolation & Loneliness and Creating Diversified Social Networks" (Social Isolation Framework) in FY2021.

This program promotes R&D including academic research using knowledge from in HSS, such as understanding the causes and mechanisms of social isolation and loneliness and producing a new image of society, as well as the development of visualization and evaluation methods (indicators, etc.) for the risk of social isolation and loneliness, and the development of preventive measures on the issues. These are expected to be conducted in an integrated way up to Proof of Concept (PoC) in collaboration with the actual sites where the measures are implemented such as specific regions, schools, workplaces, or communities, etc. in Japan.

Goals for the R&D Program

This program promotes clarification of the mechanisms of social isolation and loneliness based on various changes in the social structure, such as declining population, low birthrate, aging society, economic changes, and the impact of emerging infectious diseases such as COVID-19, while producing the vision of a society that does not lead to social isolation and loneliness. The program furthermore promotes R&D on visualization and evaluation methods (indicators, etc.) for the risk of social isolation and loneliness in people and groups, as well as social schemes to prevent social isolation and loneliness. The program expects such R&D to be conducted in an integrated way up to Proof of Concept (POC), including the verification of the effectiveness of preventative measures against social isolation and loneliness by using the evaluation methods (indicators, etc.) developed in each project. This program aims for a society that does not lead to social isolation and loneliness by creating diversified social connections and networks among people, organizations, and communities.



Case A: Irrelevant to social isolation and loneliness, but increased the risk of isolation and loneliness after COVID-19
Case B: Gradual increased risk of social isolation and loneliness due to disasters/life events, even worse after COVID-19
Case C: High risk of social isolation and loneliness from an early age due to a given environment or disability

Ministry of Health, Labour and Welfare, The Process of Social Exclusion: An Overview of the Exclusion Process in Case Studies of Youth . Overview
(Documents submitted by the Cabinet Secretariat/Cabinet Office) (September 28, 2012) Created by RISTEX with reference to special information on the 8th Council of social security How to support people in need

■ Projects

	Project Name	Principal Investigator	Period
FY2024	Establishment of an Academic System Based on Comprehensive Knowledge to Support On-site Knowledge of Measures against Isolation and Loneliness of Government and NPOs	OKA Mayumi, Project Associate Professor, Research Center for Medical and Health Data Science, Institute of Statistical Mathematics	2024.10-2028.3
	Establishing a Holistic Support System to Prevent Social Isolation and Loneliness for Carers Including Caring Conflicts	SAITO Mao, Professor, College of Social Sciences, Ritsumeikan University	2024.10-2028.3
	Co-producing Loneliness Prevention Strategies with Young People: Understanding and Developing Prevention for Youth Loneliness	YAMASAKI Syudo, Investigator, Research Center for Social Science & Medicine, Tokyo Metropolitan Institute of Medical Science	2024.10-2028.3
FY2023	Strategic Placemaking through Visualization of the Diversity of the Neighborhood Social Environment that Contributes to the Prevention of Isolation and Loneliness	UCHIHIRA Takayuki, Professor, School of Human Science and Environment, University of Hyogo	2023.10-2027.3
	Development of Network Intervention that Integrates Physical Space and Cyber Space for Preemptively Primary Prevention of Isolation and Loneliness in Adolescents and Young Adults with Cancer	FUJIMORI Maiko, Section Head, Division of Supportive Care, Survivorship and Translational Research, Institute for Cancer Control, National Cancer Center	2023.10-2027.3
	A Model for Preventing Social Isolation and Loneliness through Service Mobility and Multiform Community Connections	YONEZAWA Takuro, Associate Professor, Graduate School of Engineering, Nagoya University	2023.10-2027.3
FY2022	Citizen Support Project for Preventing Social Isolation and Loneliness	ITO Ayahito, Senior Assistant Professor, Graduate School of Education, Tohoku University	2022.10-2027.3
	The All-Minorities Project: Social Networking Using Cognitive Behavioral Therapy to Prevent Social Isolation and Loneliness among Minorities	OSHIMA Fumiyo, Professor, Research Center for Child Mental Development, Chiba University	2022.10-2027.3
	Sustainable Community to Prevent Social Isolation of the Elderly in Urban Housing Complex	KATAGIRI Keiko, Professor, Advanced Research Center for Well-being, Kobe University	2022.10-2027.3
	The Connected Workplace for Worker Well-being: Social Implementation of Inclusive Organizations to Prevent Social Isolation and Loneliness	KAWAKAMI Norito, Project Professor, Graduate School of Medicine, The University of Tokyo	2022.10-2027.3
	Sustainable Prevention of Social Isolation and Loneliness through the Establishment of the IKIGAI Volunteer System	SHIMADA Hiroyuki, Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology	2022.10-2027.3
	Prevent Social Isolation of Care Leavers and Create a System to Support Their Independence while Connecting Them with Support	MIYACHI Naoko, Associate Professor, Faculty of Social Welfare, Doho University	2022.10-2027.3
FY2021	Tackling Loneliness and Social Isolation Using Crisis Chat and Text Services	UEDA Michiko, Visiting Researcher, Center for Brain Science, RIKEN	2021.11-2023.3
	Building Community-based "Anywhere Door" -type Hybrid Care Networks	KONDO Naoki, Professor, Graduate School of Medicine and School of Public Health, Kyoto University	2021.11-2026.3
	Clarification of Generation Process of Social Isolation and Developing the Intervention Program for Social Isolation Towards Healthy "Personal Independence"	TACHIKAWA Hirokazu, Professor, Faculty of Medicine, University of Tsukuba	2021.11-2026.3
	Analysis of the Process of Loneliness and Isolation in the Workplace: Toward the Development of a Comprehensive Prevention Program	MATSUI Yutaka, Investigator, R&D Center for Working Persons' Psychological Support, University of Tsukuba	2021.11-2026.3
	Prevention of Isolation and Loneliness through Fostering Compassionate Community Using Theatrical Methods	MUSHIAKE Hajime, Research Fellow, Graduate School of Medicine, Tohoku University	2021.11-2026.3
	Loneliness in New Life: Visualization of Risks and Primary Prevention	YANAGISAWA Kuniaki, Associate Professor, Graduate School of Humanities, Kobe University	2021.11-2026.3
	Developing a School-centered System to Prevent Social Isolation, Loneliness and Exclusion of All Children	YAMANO Noriko, Professor, Graduate School of Sustainable System Sciences, Osaka Metropolitan University	2021.11-2026.3

■ Program Advisors

ARISUE Ken	Professor Emeritus, Keio University
FUJIWARA Yoshinori	Vice-president, Tokyo Metropolitan Institute for Geriatrics and Gerontology
HIRATA Oriza	President, Professional College of Arts and Tourism
INABA Yoji	Former Professor, College of Law, Nihon University
ISHII Kota	Writer
KISHI Emiko	Dean and Professor, Graduate School of Nursing, Toho University
KUDO Kei	Chairperson, Certified Specified Nonprofit Organization Sodateage Net
SATO Yoshimichi	Dean and Professor, Faculty of Humanities, Kyoto University of Advanced Science
USAGAWA Kuniko	Manager, JOBS Research Center, Recruit Co., Ltd.
YUMA Kazuko	Chief Fellow, Research Division, Institute for International Socio-Economic Studies

Program Activities

Repeat dialogues to develop consideration of drastic primary prevention to create social systems which do not lead to social isolation & loneliness

Primary prevention of social isolation & loneliness the program focuses on

This program focuses on the primary prevention of social isolation and loneliness as a drastic measure, that is, the creation of social systems which do not lead to social isolation and loneliness, by utilizing existing knowledge about supporting people in a state of apparent isolation and loneliness, and by aiming to improve the social aspects of social isolation and loneliness targeting all members of society. In the medium to long term, the program also envisions primordial prevention, where the social mechanisms that have been developed are introduced and widely adopted to ensure that individuals can avoid falling into social isolation or loneliness even without conscious effort.

Provision of various opportunities for dialogues

The program requires R&D for social implementation that fills the gap between research and the frontline work, proceeds research and practice simultaneously, and feeds various knowledge obtained in the frontline work to the institutional/social design. To promote formulation of concepts towards realization of a new vision for society, and establishment of R&D structure that bridge research and the frontline work, we provide opportunities for people from various sectors who engaged in prevention of social isolation and loneliness to meet and propose R&D projects.

Archived videos of seminars and workshops

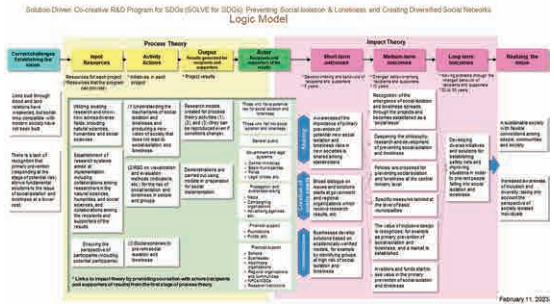
- April 23, 2024. Online seminar for the call for proposals for FY 2024: "Initiatives to prevent isolation and loneliness at the social level"
https://www.jst.go.jp/ristex/info/event/20240423_01.html
- March 29, 2023. Workshop on call for proposals in FY2023: "When Do People Become Isolated and Lonely? Considering its Primary Prevention Mechanisms."
- March 29, 2022. Open information session on call for proposals in FY2022: "What's problematic about 'social isolation & loneliness'? - let's change how the society is regarding 'social isolation & loneliness' that need to be addressed"
- November 5, 2021. Science Agora International Session: "The Future We Want to Create: Reconsidering the Roots of Social Anxiety"
- July 1, 2021. Open online seminar/information session on call for proposals in FY2021

Workshop on March 29, 2023. Discussed on 2 themes "What are the circumstances that lead to social isolation and loneliness?" "What are the social mechanisms that lead to primary prevention?", using both webinar and venue.

Cross-sectional/comprehensive summary of outputs that contribute to achieving the program goal

Collaborative efforts among R&D projects

While each R&D project funded by the program focuses on specific subject and issues of social isolation and loneliness, and accordingly, possesses various methods, approaches and the field of PoC (proof of concept), in order to achieve the program objective which is the drastic primary prevention of social isolation and loneliness, and to maximize the effect of outputs, communication, collaboration and interactions among projects are essential.



Logic model of the program
https://www.jst.go.jp/ristex/koritsu/en/program/images/outline/img-gai01.png

Cross-sectional/comprehensive discussions for the program

We produce a logic model for the program as a whole, and throughout the duration of funding, cross-sectional/comprehensive discussions are held among the Program Supervisor, Advisors, projects, external experts and those who benefit from or who take charge of research outputs, to elaborate the roadmap for the primary prevention of social isolation and loneliness.

FY2023 Program Plenary Meeting. The main members of all selected projects, as well as their supervisor and advisors, gathered to share awareness and build a network to create better results through collaboration across projects and from a bird's eye view, with the aim of creating a society that does not create social isolation and loneliness.

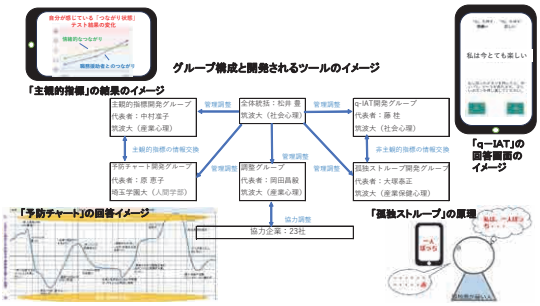
Project Examples

■ **Project name: Analysis of the Process of Loneliness and Isolation in the Workplace: Toward the Development of a Comprehensive Prevention Program**
■ **Principal Investigator: MATSUI Yutaka, Investigator, R&D Center for Working Persons' Psychological Support, University of Tsukuba**

Social issues to resolve

Social withdrawal among middle-aged and older individuals can be prevented by reducing loneliness and isolation in the workplace.

Research on middle-aged and elderly individuals who withdraw from society has found that the primary cause is maladjustment to the workplace, not missteps in life prior to employment (such as school absenteeism). Conventional research on social isolation has focused primarily on the isolation of the elderly. However, we expect that premature retirement and social isolation in old age can be prevented by identifying early signs of growing loneliness and isolation in the workplace before they lead to complete social withdrawal, such as social isolation among the elderly and social withdrawal of middle-aged and older individuals, and by implementing appropriate care and interventions.



Overview of R&D

An app that measures the level of loneliness and isolation of corporate employees will be developed and tested.

The project team will examine the process by which company employees become more isolated and lonelier at the workplace and develop a prevention-focused measurement tool (smartphone app). The measurement tool will include four components: a subjective indicator to track the state of loneliness and isolation over time through survey questions; a prevention chart to help users reflect on their own processes of loneliness and isolation; a questionnaire-based Implicit Association Test (q-IAT) to assess implicit attitudes toward loneliness through survey questions; and a loneliness Stroop test to measure the Stroop effect related to loneliness. By measuring both conscious and unconscious levels of loneliness and isolation, the project aims to create a social mechanism through inhouse testing.

<Participating and cooperating organizations>
University of Tsukuba, Meisei University, Tokyo Seitoku University, Saitama Gakuen University, Advanced Institute of Industrial Technology and other cooperating companies

■ **Project name: Developing a School-centered System to Prevent Social Isolation, Loneliness and Exclusion of All Children**
■ **Principal Investigator: YAMANO Noriko, Professor, Graduate School of Sustainable System Sciences, Osaka Metropolitan University**

Social issues to resolve

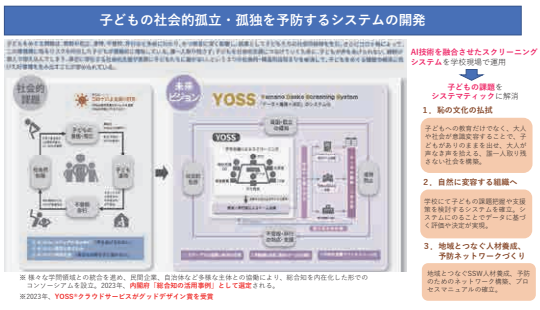
Three underlying issues behind children's social isolation and loneliness

Social isolation and loneliness among children can result from several issues: (1) children are unable to express their concerns or seek help, making it difficult for others to notice their problems, (2) teachers face challenges in connecting children with appropriate local resources and often keep the information to themselves, and (3) children in need of support are not identified by those who manage local resources, preventing support from reaching them.

Overview of R&D

The Yamano Osaka Screening System (YOSS) can be used to identify unnoticed poverty and stress in children, encourage teachers to share information rather than keep it to themselves, and facilitate the effective use of local resources.

The project team will promote the development of the Yamano Osaka Screening System (YOSS), an AI-powered screening system designed to detect early signs of problems in children, such as frequent tardiness or failure to comply with treatment recommendations from school health check-ups, before they escalate into abuse or delinquency, and to provide guidance on the broad direction of support strategies. As part of this process, evaluation methods will be developed to visualize issues that tend to lead to social isolation, loneliness or exclusion among children. In addition, the project focuses on building a network of stakeholders to effectively utilize local resources to support children, with the ultimate goal of creating a warm and inclusive community focused on nurturing connections with the children at the heart.



<Participating and cooperating organizations>
Osaka Metropolitan University, Tohoku Fukushi University, Otsuma Women's University, Aichi University of Education, Nihon University, Osaka Office of The Life Insurance Association of Japan, Japanese Association for Social Work Education, Sakai Social Welfare Council , Nationwide Children's Cafeteria Support Center Musubie, Osaka Prefectural Government, Nose Town, Osaka, City of Kobe, Okinawa Prefecture, and others

SOLVE for SDGs: Scenario Creation, Solution Creation (FY2019-)

Solution-Driven Co-creative R&D Program for SDGs (Scenario creation phase/Solution creation phase)

https://www.jst.go.jp/ristex/en/funding/solve/index.html

Transform society and realize a resilient, inclusive, and sustainable society that leaves no one behind through co-creative activities.

Program Supervisor: KAWAKITA Hideto
CEO, International Institute for Human, Organization and the Earth

Summary of Research and Development Program

Under the basic principle of "No one will be left behind," the United Nations 2030 Agenda set forth 17 Sustainable Development Goals (SDGs) and 169 Targets, anticipating Science, Technology, and Innovation (STI) to play a significant role in achieving these goals.

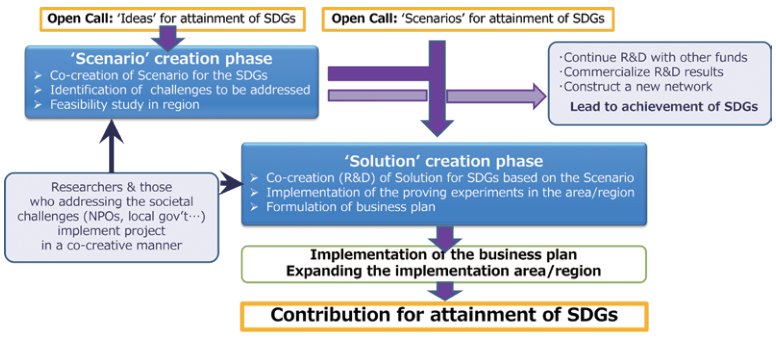
The "Solution-Driven Co-creative R&D Program for SDGs (Scenario Creation Phase/Solution Creation Phase)" aims to solve social issues in specific regions utilizing STI. At the same time, it sets the goal of compiling the results to produce business visions (scenarios) and presenting them as solutions (business plans) applicable to other regions and overseas. In carrying out the program, the Principal Investigator and the Collaborator who actually engage in the problem solution pursue R&D in pairs, which is characteristic of this program, and they aim to generate outputs that contribute to the realization of SDGs in two creation phases, the “scenario creation phase” and “solution creation phase.”

During the “scenario creation phase” social issues in the target regions are analyzed through dialogue and collaboration, to clarify bottlenecks and to envision a new social system that resolves the social issues by incorporating science and technology. Such solutions are tested for feasibility to obtain evidence, and the vision (scenario) to achieve SDGs is created. In addition, during the “solution creation phase” R&D is conducted based on the scenario, and the effectiveness of the problem solutions is verified by test applications in the regions, while the applicable conditions and environment settings of the solutions are articulated in order for the application of these to be expanded to other regions. Furthermore, business plans for autonomous management after the completion of the R&D project are formulated, and the preparation for the execution is proceeded.

We promote R&D for the transformation of society in these two creation phases, with the production of knowledge that is innovative and lively through co-creative R&D with stakeholders to solve increasingly more complex regional issues.

Goals for the R&D Program

This program aims to resolve social issues in specific regions by applying STI and to produce business plans (solutions) which is applicable to other regions in Japan and overseas. The actual conduct of R&D in this program utilizes the knowledge and technologies of natural sciences, humanities and social sciences, as well as “on-site / local knowledge” obtained through dialogue and collaboration with stakeholders, and based on such co-creative activities we aim to transform the current society to realize a resilient, inclusive and sustainable society that leaves no one behind, thereby achieving the SDGs.



■ Projects

(Scenario creation phase)

＊For completed projects, see the list of past projects in "Completed projects"
＊Affiliations and positions are those that applied at the completion of the project.

	Project Name	Principal Investigator	Collaborator	Period
FY2024	Creation of Scenarios for Animal Damage Control in Collaboration with Residents and Local Government Officials Utilizing Wild Animal Monitoring Environment Based on High-risk Location Forecasts	SAITO Hiroshi, Professor, School of Computer Science and Engineering, The University of Aizu	SUWA Shinya, Deputy Director General and Director, Citizens and Environmental Affairs Department, Aizu Development Bureau, Fukushima Prefectural Government	2024.10-2026.9
	Building Scenarios for Voter-Friendly Voting Accessible to Everyone	MURAOKA Shiori, Lecturer, Faculty of Regional Policy, The University of Shimane	HIRABAYASHI Koichi, Deputy Mayor of Komae City	2024.10-2026.9
	Scenario Creation on promoting a whole family approach aimed at reducing young carers' burden to zero	MONDEN Yukifumi, Associate Professor of Pediatrics, School of Medicine, Jichi Medical University	ISO Natsuru, President of Apple Base, General Incorporated Association	2024.10-2026.9
FY2023	Development and Implementation of PPP/PFI Road Infrastructure Management Methods Based on Scientific Evidence	KAITO Kiyoyuki, Professor, GraduateSchool of Engineering, Osaka University	KAWAI Seiji, Chief Senior Manager, Maeda Corporation, Management Innovation Division	2023.10-2025.09
	Development of a simulator to support co-creation for public transportation services including multiple modes	KANAMORI Ryo, Designated Professor, Institutes of Innovation for Future Society, Global Research Institute for Mobility in Society, Nagoya University	IMAEDA Shujiro, Researcher, Nikken Sekkei Research Institute	2023.10-2025.09
	Scenarios of public space management DX platform that realizes migration, interaction, and social participation of people with mobility difficulties	TAKATORI Chika, Associate Professor, Graduate School of Design, Kyushu University	SHIMIZU Kuniyuki, Chairman, Fukuoka City Physically Disabled Welfare Association	2023.10-2025.09
FY2022	Development of Museum-based Scenario to Promote Behavioral Changes of Citizens toward Achieving the SDGs	SASAKI Toru, Professor, Faculty of Humanities and Human Sciences, Hokkaido University	SAKUMA Daisuke, Head Curator, Curatorial Department, Osaka Museum of Natural History	2022.10-2024.09
	Scenario generation for a new community-based health promotion model using high-speed data communication and artificial intelligence in mountainous areas with heavy snowfall	SHOBUGAWA Yugo, Project Professor, Niigata University Graduate School of Medical and Dental Sciences, Department of Active Ageing	KOBAYASHI Yoshihisa, Head of Division, Division of Community Care Promotion, Department of Civic Welfare, Tokamachi City Center	2022.10-2024.09
	The construction of hospital-based CAC (Children's Advocacy Center) model that leads to physical and mental recovery for children victims of sexual abuse	TANOUE Koji, Director, Clinical Research, Kanagawa Children's Medical Center	MIZOGUCHI Fumitake, Vice Chief Director, Pediatrics, Japanese Red Cross Maebashi Hospital	2022.10-2024.09
	Construction of the supporting system for utilizing avatar robots for children with developmental disorder/disability on remote islands	NAGATA Yasuhiro, Professor, Nagasaki University	KUMAZAKI Hirokazu, Medical Director, Nagasaki University Hospital	2022.10-2024.09

(Solution creation phase)

	Project Name	Principal Investigator	Collaborator	Period
FY2024	Creating Shared Value Through Peer Support: A New Socio-Medical Model	KITAHARA Shuji, Associate Professor, Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University	SHUKUNOBE Takeshi, Representative Director, PPeCC, Inc.	2024.10-2028.3
	Creating a Community-Driven, Future-Oriented Health Society Through Social Prescriptions in Collaboration with Diverse Link Workers and Technology-Enabled Solutions	SHOBUGAWA Yugo, Project Professor, Department of Active Ageing, Graduate School of Medical and Dental Sciences, Niigata University	NAKAMURA Yoshin, Director-General, Department of Health and Social Welfare, Niigata Prefectural Government	2024.10-2028.3
	The Construction and Expand of Hospital-Based CAC (Children's Advocacy Center) Model That Leads to Physical and Mental Recovery for Children Victims of Sexual Abuse	TANOUE Koji, Director, Clinical Research, Kanagawa Children's Medical Center	MOTOYAMA Keiichi, Deputy Director, Children's General Medicine, Ibaraki Children's Hospital	2024.10-2028.3
	Social Implementation of Inclusive Eyecare System Through the Creation and Collaboration of Diverse Stakeholders	NAKAYAMA Shintaro, Chief Operating Officer, OUI Inc.	SHIMIZU Eisuke, Project Assistant Professor, Department of Ophthalmology, School of Medicine, Keio University	2024.10-2028.3
FY2023	Multi-facility field trial towards social implementation of information technology for infectious disease control	OKUMURA Takashi, Professor, Faculty of Engineering, Kitami Institute of Technology	HITOMI Yoshiaki, Assistant Director General for Technical Affairs, Department of Health and Welfare, Hokkaido Government	2023.10-2027.03
	Jet Peers - Development of a micro hydropower module and multi-regional collaboration platform to support the proactive local residences in community development entities	MURAKAWA Tomomi, CEO, River Village Ltd.	SHIMATANI Yukihiro, Special Professor, Laboratory for Watershed Disaster Resilience, Prefectural University of Kumamoto	2023.10-2027.03
	Adaptive natural capital management through locally-driven governance: Fostering collaborative support across regions and sectors	MORI Akira, Professor, Research Center for Advanced Science and Technology, The University of Tokyo	NAKANISHI Masanao, Assistant Manager of Wildlife Management, Shiretoko Nature Foundation	2023.10-2027.03
FY2022	Development for the co-design method of the dynamic operation rule to contribute the river basin management	OKI Taikan, Professor, Graduate School of Engineering, the University of Tokyo	OKIMURA Hajime, Director, River Project Division, Department of Construction, Toyama City Hall	2022.10-2025.09
	Establishment and development of self-sustaining, decarbonized smart farmland using solar sharing	KURASAKA Hidefumi, Professor, Graduate School of Social Sciences, Chiba University	MAGAMI Takeshi, Representative Director, Chiba Ecological Energy Inc.	2022.10-2026.03
	Creation of a regional collaboration model and expansion to other targets and many regions for chatbot based on neurodiversity	SASAKI Ginga, Associate Professor, Faculty of Human Sciences, University of Tsukuba	TAKEDA Kazunori, Deputy Director, Bureau of Human Empowerment, University of Tsukuba	2022.10-2026.03
	Research for the solutions of developing the social systems which supports children and adolescents at risk of suicides, with collaboration of hospitals, public health services, social welfare, education, and citizens	TACHIBANA Yoshiyuki, Director, Department of Psychosocial Medicine, National Center for Child Health and Development	KAWANISHI Chiaki, Professor, Department of Neuropsychiatry, Sapporo Medical University School of Medicine	2022.10-2023.10
FY2021	Model development and implementation of a community alert system to save the last person from disasters	ONO Yuichi, Professor, 2030 Global DRR Agenda Office,International Research Institute of Disaster Science,Tohoku University	HASHIMOTO Hisashi, Group leader, Public ICT Consulting Group, FUJITSU RESEARCH INSTITUTE	2021.10-2025.03
	Developing the Social System to Eliminate Sexual Violence and Building the Framework for Nationwide Implementation: Human Resource for Early Response to Victims and Timely PTSD Care	NAGAE Miyoko, Research Fellow, Faculty of International Welfare Development, Nihon Fukushi University	KATAOKA Emiko, President,Nihon Forensic Human Care Center	2021.10-2025.03
	Development of a model for increasing social benefits based on introduction of small water service and mutual-assistance network	NISHIDA Kei, Professor, Interdisciplinary Center for River Basin Environment, University of Yamanashi	SOMANO Sakae, Section chief, Water and sewer section, Koshu City	2021.10-2025.03
	Development and realization of a system to provide 3D models for the creation of "a society that everyone can freely obtain and touch what they want"	MINATANI Kazunori, Professor, Research and Development Department, The National Center for University Entrance Examinations	WATANABE Tetsuya, Professor, Department of Biocybernetics, Faculty of Engineering, Niigata University	2021.10-2025.3

Program Activities

Project members and the management team work together to achieve the SDGs

NAGATA Project (Scenario creation phase)

Robot-assisted technology equipped with an autonomous movement system, focused on continuous medical support for children with a developmental disability on remote islands, is designed for those children to receive treatment comfortably. With an avatar robot attending regular medical treatment on-site, this technology will create an environment in which patients, families, and doctors receive/provide medical treatment at ease, even without a specialist on-site.

OKI Project (Solution creation phase)

A public symposium for the broader community was held in the concourse of Toyama Station on the theme “What is a river basin?” Many people, including regular station users, attended the symposium that day.

Dissemination of program's outputs and collaborative efforts among projects

■ Program Website https://www.jst.go.jp/ristex/solve/index.html (Available only in Japanese)

Event Information about the Program's and projects' details, activities, outputs, and events are found in the Program’s website and also shared on X (Formerly Twitter). Also, we organize online inter-project networking events for sharing tips for common difficulties such as know-how useful for project activities, and information about organizational/creative efforts for lasting engagement. This helps the building of new inter-project connections that encourage further interactions among projects.

A program-wide plenary meeting was also held, providing a platform for program stakeholders to come together and share creative ideas and know-how that can be applied to project activities and address common challenges in building sustainable systems, resulting in the establishment of new horizontal linkages and strengthened collaboration and exchange among projects.

A scene from the panel discussions during the reporting session

The profile screen of our X (Formerly Twitter) account

A scene from the program-wide plenary meeting

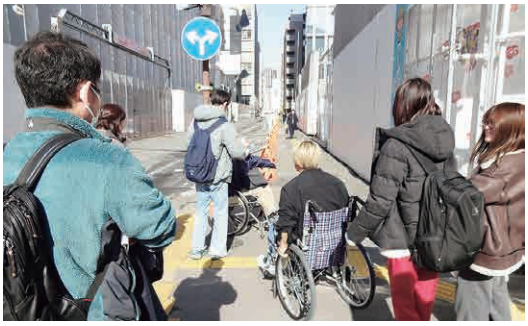
Project Examples

Scenario Creation Phase

■ **Project name: Scenarios of public space management DX platform that realizes migration, interaction, and social participation of people with mobility difficulties**
■ **Principal Investigator: TAKATORI Chika, Associate Professor, Graduate School of Design, Kyushu University**
■ **Collaborator: SHIMIZU Kuniyuki, Chairman, Fukuoka City Physically Disabled Welfare Association**

Social issues to resolve

The number of physically disabled people in Japan exceeds 4 million. As the nation has become a super-aging society, it is crucial to create spatial and social environments that enable people with physical disabilities and the elderly, who often have mobility problems, to move freely, interact with others, and actively participate in social activities. Key challenges in public spaces include: (1) inadequate physical support that accommodates individual differences in the type and degree of disability; (2) lack of support systems and mutual understanding among citizens, communities, and local businesses; (3) inadequate access to information about services necessary for social engagement and participation by persons with mobility challenges; and (4) increased risks during a disaster due to insufficient interaction.



Overview of R&D

This project will leverage the following technological innovations to develop scenarios for creating a DX platform that can be integrated into the data collaboration infrastructure of local governments and other organizations: (1) technology to visualize mobility barriers and recommend optimal routes tailored to an individual's specific disability level and circumstances; (2) AI-based crowd flow prediction technology; (3) technology to match individuals with mobility challenges with supporters; and (4) community participation-type DX tools.

Solution Creation Phase

■ **Project name: Development of a model for increasing social benefits based on introduction of small water service and mutual-assistance network**
■ **Principal Investigator: NISHIDA Kei, Professor, Interdisciplinary Center for River Basin Environment, University of Yamanashi**
■ **Collaborator: SOMANO Sakae, Section chief, Water and sewer section, Koshu City**

Social issues to resolve

In a super-aging society with a declining birthrate, securing infrastructure maintenance costs is becoming difficult in depopulated and urban areas. On the other hand, with the added impact of recent natural disasters and the spread of infectious diseases, there is an increasing desire for urban-to-rural migration and leisure/dual lifestyles. Water is the basis of life, and both rural and urban areas in Japan are required to have a sustainable water supply and treatment systems to meet the needs of such "Decentralized" lifestyles.

Overview of R&D

- On-demand provision technology of information on the safety, security, and stability of water sources using technology based on high-resolution data to search for small-scale water sources
- Water purification systems using hydrogen and water reclamation technology using artificial wetlands
- Development of simple water filtration system (Mobaroka), and Demonstration test of small-scale water system in areas affected by the Noto Peninsula Earthquake
- Development of a social utility creation model (co-creation platforms) that combines functions and enjoyment by shaping the demand for small-scale water services and the shared experience of water use, play, and learning through cooperation between residents and concerned parties
- Multi-regional deployment in Japan and overseas of the developed model

Activities (Mobaroka) in areas affected by the Noto Peninsula Earthquake (Wajima City)

Science of Science, Technology and Innovation Policy
(FY2011-)

https://www.jst.go.jp/ristex/en/funding/stipolicy/index.html

Creating Policies that Inspire Innovation and Solve Social Issues

Program Supervisor: YAMAGATA Zentaro
Deputy Director / Think Tank for Maternal and Child Health,
National Center for Child Health and Development
Project Professor, The Center for Birth Cohort Studies(CBCS),
University of Yamanashi

Program Outline

In recent years, we are faced with wide-ranging and complex social issues, such as global warming, energy management, pandemics, and an aging society. Science and technology that has significantly improved the convenience of the society we live in is giving rise to policy issues of how to respond to new threats. In order to resolve these issues, it is essential to manage the issues based on scientific knowledge and to devise measures to reach specific solutions.
Science, technology and innovation (STI) policy is highly anticipated as a governmental response to such complex issues, as well as unexpected and extensive changes in social environment, of which typical examples include large-scale natural disasters and epidemics of emerging infectious diseases. It is expected to direct and adjust the society to a more desirable state via creation of new values based on scientific knowledge and provision of measures against above issues.
Meanwhile, STI policy is not necessarily considered satisfactory in terms of institutional design such as incentives to the implementation of development outputs based on an accurate understanding of needs for scientific knowledge and technologies, and systems to mediate/promote such inputs. Also, a careful consideration is required for practical means to bridge modality of policy and scientific knowledge.
Aware of above background and issues, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) launched the "Science for RE-designing Science, Technology and Innovation Policy (SciREX)" program, and has been promoting "mission-orientated surveys and research," "R&D funding program," "development of basic research and training centers," and "construction of data/information infrastructure."
As its R&D funding program, RISTEX has set up "Science of Science, Technology and Innovation Policy" R&D Program, and has been promoting R&D for construction of rational policy-making processes based on objective evidences, in order to realize STI policy that contributes to resolving social problems. In accordance with SciREX program's recent emphasis on "coevolution" of policy and science, the program has also set up a new framework that promotes R&D for resolving specific policy issues that are raised from within the governmental bodies, while the program continues to encourage curiosity-driven R&D suggested by individual researchers. By offering these two approaches to R&D, we aim to realize more desirable "science for policy."

Targeted Projects of RISTEX "Science of STI Policy" funding program

RISTEX supports R&D projects aimed at:
- Developing methodologies in measurement and analysis that can be utilized in actual policy-making processes
- Expanding community networks by team science in broad, interdisciplinary fields and stakeholders, and by their outreach activities

*Objective basis (evidence)
Facts & phenomena that have a scientific basis, that is, facts & phenomena defined as being objectively observed and based on a logical system. The range includes not only quantitative but also qualitative observations.
Evidence needed for the formulation of science, technology and innovation policy includes, for example, economic and social structures and dynamism, actual and potential social issues, social expectations for science and technology and the current state and potential of science and technology.

■Projects Phase 3

＊ Affiliations and positions are those that applied at the completion of the project.

	Project Name	Principal Investigator	Period
FY2022	The Potential of "Cross Boarder Talents" for Maximizing the Use of Scientific Evidence in the Policy Making Process: Analysis from the Case in the field of Child and Maternal Health and Child Development	SENSAKI Sonoko, Deputy Director, Think Tank for Children and Parents/ Paediatrician, Department of Psychosocial Medicine, National Center for Child Health and Development	2022.10-2026.3
	Rationalization and optimization of behavioral change and science communication for public health and social measures against emerging infectious diseases	NISHIURA Hiroshi, Professor, Graduate School of Medicine, Kyoto University	2022.10-2026.3
	Deliberative Approach to Public Acceptance of Nuclear Fuel Cycle Policy: The Role of Emotion and Technology in the Formation of Policy Attitude	HAYASHI Reona, Professor, Faculty of Political Science, Hosei University	2022.10-2026.3
	Exploration of Factors Promoting Sports Participation and Evaluation of Support Policies - Multilayered Approach at the National, Municipal, and Individual Levels	KONDO Katsunori, Specially Appointed Professor, Center for Preventive Medical Sciences, Chiba University	2022.10-2026.3
FY2021	Development of Digital Twin city system and its application to the policy making under risk management environment	SASAKI Kuniaki, Professor, School of Creative Science and Engineering, Department of Civil and Environmental Engineering, Waseda University	2021.10-2025.3
	Policy Proposal for Environmental Circulation and Social Symbiosis through the Use of Woody Thermal Energy and Community Currency	TOYOTA Tomoyo, Associate Professor, Faculty of Regional Policy Studies, The University of Shimane	2021.10-2025.3
	An Integrated Analysis on Infection Control and Economic Activity	NAKATA Taisuke, Associate Professor, Department of Economics, University of Tokyo	2021.10-2025.3
	The effect of the quality of preschool education on children's cognitive- and noncognitive skills	NAKAMURO Makiko, Professor, Faculty of Policy Management, Keio University	2021.10-2025.3
	Development and Deployment of a Value Chain Assessment Tools for the Commercialization of University Technologies	SAKAI Takayuki, Professor, Value School, Kobe University	2021.10-2025.3
	Establishment of the Guidelines for the Common Understanding of Research Integrity in Life Science	TANAKA Satoshi, Professor, Department of Pharmacology, Division of Pathological Sciences, Kyoto Pharmaceutical University	2021.10-2025.3
	Clarification of research integrity norms in diverse research disciplines	NAKAMURA Masaki, Professor, Center for Education in Liberal Arts and Sciences, Osaka University	2021.10-2025.3

＊ Co-Evolution Framework: a framework for promoting R&D for solving specific policy issues recognized by administrative organizations.

■Projects Phase 2

	Project Name	Principal Investigator	Period
FY2020	Good Governance Practice for Research Integrity Policies through Electric Laboratory Notebook Implementation Guidelines	IIMURO Satoshi, Vice Director & Professor, Innovation and Research Support Center, International University of Health and Welfare	2020.10-2024.3
	Study on the past failure of healthcare IT policies in Japan and the foundation of policy guidelines toward 2020s	OKUMURA Takashi , Professor, School of Regional Innovation and Social Design Engineering, Kitami Institute of Technology	2020.10-2024.3
	Development and Implementation of Consensus Building Method for Policies on Balanced Conservation, Agriculture and Forestry	KOHSAKA Ryo, Professor, Graduate School of Agricultural and Life Sciences, The University of Tokyo	2020.10-2024.3
	Feasibility Assessment and Contribution to the Policy Making of Participatory Systems by Visualizing Ecosystem Services	NODA Keigo, Associate Professor, Graduate School of Agricultural and Life Sciences, The University of Tokyo	2020.10-2024.3
	Development of Online consensus building methodology and implementation in policy process with encouraging a sense of ownership over climate change by Civic Tech	BABA Kenshi, Professor, Faculty of Environmental Studies, Tokyo City University	2020.10-2024.3
FY2019	Research on scientific evidence based policy making process for infrastructure management	KAITO Kiyoyuki, Associate Professor, Graduate School of Engineering, Department of Global Architecture, Osaka University	2019.10-2023.3
	Co-procurement of clinical knowledge in support of developmental disabilities based on citizen science and personal data	KUMA Hitomi, Co-founder, Human Resource Development Division, NPO ADDS	2019.10-2023.3
	Forecasting of Social Impact by 'Atsumi' Analysis of Research Capability and Development of Policy Assessment Methods	KOIZUMI Amane, Project Professor, Center for Novel Science Initiatives (CNSI), National Institutes of Natural Sciences	2019.10-2023.3
	An Evaluation of Social Acceptance and Value Creation for Science, Technology, and Innovation	TAKASHIMA Ryuta, Professor, Department of Industrial Administration, Faculty of Science and Technology, Tokyo University of Science	2019.10-2023.3
	Developing data ethics standards for responsible innovation	YOKONO Megumu, Associate Professor, School of Social Sciences, Faculty of Social Sciences, WASEDA University	2019.10-2023.3
FY2018	Research on Constructing Open Data for Policies to Reduce Child Poverty	ABE Aya, Professor, School of Humanities & Social Sciences, Tokyo Metropolitan University	2018.10-2022.3
	Healthcare Innovation driven by Effective Hospital-bed Reductions and Urban Planning	ITO Yukiko, Professor, College of Policy Studies, Tsuda University	2018.10-2022.3
	The construction of a commons utilizing ICT to generate evidence for medical policy	KATO Kazuto, Professor, Graduate School of Medicine, Osaka University	2018.10-2022.3
	Biology-informed, family-friendly policies against declining birth rate in Japan	KURODA Kumi, Principal Investigator, Laboratory for Affiliative Social Behavior, RIKEN Center for Brain Science	2018.10-2022.3
FY2017	System design to introduce energy-saving equipment for reinforcement of resilience	UEMICHI Akane, Associate Professor, Graduate School of Engineering, The University of Tokyo	2017.10-2022.3
	A Metasystem Approach to Regulatory Rule Making on Advanced Medicine	KANO Shingo, Professor, Graduate School of Frontier Sciences, The University of Tokyo	2017.10-2021.9
	Star Scientists and Innovation in Japan	MAKI Kanetaka, Professor, Waseda Business School	2017.10-2021.3
	An analysis of the factors that influence women and girls to pursue physics and mathematics	YOKOYAMA Hiromi M., Professor, Kavli IPMU, The University of Tokyo	2017.10-2021.3
FY2016	Research on description and interpretation of evidence in policy process	KAJIKAWA Yuya, Professor, School of Environment and Society, Tokyo Institute of Technology	2016.12-2020.3
	Proactionary approach for ELSI in emerging biomedical research	MINARI Jusaku, Project Associate Professor, Center for iPS Cell Research and Application, Kyoto University	2016.12-2020.3
	Assessing Regenerative Medicine in Japan : an interdisciplinary approach	YASHIRO Yoshimi, Professor, Kanagawa University of Human Services	2016.12-2020.3

＊ For the Phase 1 projects, see the list of past projects in "Completed projects"

Program Activities

Practice of new methods of management, calls for proposals, and selection

Following the vision of the “Science for RE-designing Science, Technology and Innovation Policy (SciREX)” program, with a focus on how to connect various scientific knowledge produced via R&D for problem solutions to the actual policy-making (how to ensure the acceptance of such knowledge among policy authorities and practitioners), we engage in promotion and methodological systematization of acceptance of scientific knowledge in policy-related processes.
In FY2021 and FY2022, the final year of public solicitation, RISTEX established a new framework for public solicitation (co-evolution framework) and selected proposers to promote needs-oriented R&D, in which the government presents "Policy Issues" within the government organization before the government and researchers collaborating to solve those issues. This co-evolution framework also promotes collaboration with government organizations in the aspect of information provision, such as through seminars in collaboration with the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Promote diffusion of results with aim of utilizing R&D results "POLICYDOOR: Media that connects research, policy and society"

URL: https://www.jst.go.jp/ristex/stipolicy/policy-door/ (Japanese only)

Overview

POLICYDOOR aims to use research results and implement them in actual policy formation by widely disseminating R&D results to stakeholders involved in policy formation, including government agencies. Rather than simply introducing the academic significance of results, we are attempting to convey what social issues can be solved by our research results to people in policy-making areas and general citizens in society, using such formats as magazines or newspapers.

Contents (as of September 2024)

- **[Seminar report] “Review of EBPM during COVID-19 (1)(2)” - Scientific advice and the role of experts in preparation for the next pandemic -**
- **“Seeking to establish ‘practice-based evidence” - Using digital technology to visualize and share practical knowledge about supporting people with developmental disabilities -**
  Hitomi Kuma (Co-representative, ADDS, a specified nonprofit corporation), Ginga Sasaki (Associate Professor, Institute of Human Sciences, University of Tsukuba)
- **[Part 1: Interview] - “Creating a system to connect the government and citizens” - Two projects based on evidence sharing**
  [Part 2: Panel discussion] - “Contribution of researchers to consensus building” - "Viewing an issue as a personal problem" or as "someone else's problem"
  Kenshi Baba (Professor, Faculty of Environmental Studies, Tokyo City University), Keigo Noda (Associate Professor, Graduate School of Agricultural and Life Sciences, The University of Tokyo)
- **[Interview]"Conflict between "Policy and Science" Seen on Sites in Coronavirus Disease Pandemic (Part 2)" – Amid a crisis, even scientific information is in the state of "Let a hundred schools of thought contend with each other" –**
  [Interview]"Conflict between “Policy and Science” Seen on Sites in Coronavirus Disease Pandemic (Part 1)" – The conflict is now in the phase of searching for an equilibrium point between scientific judgment and the wishes of the Japanese public –
  NISHIURA Hiroshi (Professor, Graduate School of Medicine, Kyoto University)
  MORITA Akira (Next Generation Fundamental Policy Research Institute (NFI) Representative Director/The University of Tokyo, Professor emeritus)
- **"Scientific Data Protects Agriculture, Forestry, and Land in a Shrinking Society" – The current situation looks different if you draw pictures ten years ahead, not just looking at the immediate future –**
  KOHSAKA Ryo (Professor, Graduate School of Agricultural and Life Sciences, The University of Tokyo)
- **"Improving Policy Accuracy by Conditional Forecasting" – Infection control and economic activity, short-term and long-term tradeoffs –**
  NAKATA Taisuke (Associate Professor, Graduate School of Economics, The University of Tokyo)
- **"Human Parenting from a Brain's Perspective" – Biological impossibility will not improve policy effectiveness –**
  KURODA Kumi (Principal Investigator, Laboratory for Affiliative Social Behavior, RIKEN Center for Brain Science)
- **[Interview] Going Across the River of Expertise - Attempt for Collaboration Among Projects -**
  ITO Yukiko (Professor, College of Policy Studies, Tsuda University)
  UEMICHI Akane (Associate Professor, Graduate School of Engineering, WASEDA University)
- **Predict the Timing for Repair/Renewal of Bridges and Roads by Big Data - the Era of Considerable Extension of Infrastructure Realized with a Model of Statistical Prediction of Deterioration -**
  KAITO Kiyoyuki (Associate Professor, Graduate School of Engineering, Department of Global Architecture, Osaka University)
- **What Are the Desirable Hospitals in a “Society With Half the Current Population”? - Restructuring and Radical Reform Prodded by the COVID-19 Pandemic -**
  ITO Yukiko (Professor, College of Policy Studies, Tsuda University)
- **To Eliminate Child Poverty - Making Open Data into Evidence by In-Depth Analysis -**
  ABE Aya (Professor, School of Humanities & Social Sciences, Tokyo Metropolitan University)

and 13 more pieces

Future development

By producing/editing/publishing the contents of "POLICY DOOR," we continue to actively promote activities that link research outputs to policy-making.

Project Examples

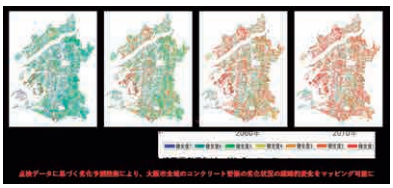
■ Project name: Research on scientific evidence based policy making process for infrastructure management
■ Principal Investigator: KAITO Kiyoyuki, Associate Professor, Graduate School of Engineering, Department of Global Architecture, Osaka University

Social issues

As the problems of aging infrastructure - represented by roads, bridges, tunnels, and water and wastewater systems - emerge as a pressing societal issue, current management strategies for infrastructure repairs and upgrades rely heavily on the accumulated experience, intuition, and expertise of experienced engineers. However, limitations in financial and human resources present significant challenges in effectively allocating resources for these necessary repairs and upgrades. It is important to establish a methodology for policy making based on scientific evidence to ensure the safety of infrastructure users while pursuing economic rationalization.

Overview of R&D

- The project used data science techniques based on the big data on inspections accumulated by veteran engineers to develop a methodology for predicting the timing of repair and renewal of aging infrastructure such as bridges, pavements, sewers, slopes, and embankments.
- The methodology used the results of the deterioration prediction and the life cycle cost evaluation based on these results to establish a process for formulating strategies to manage the aging infrastructure.



Outputs

Working with Osaka City to develop a plan for replacing concrete sewer pipes, a statistical prediction of deterioration was made for all 115,050 concrete pipes in the city based on big data from visual inspections of about 50,000 locations. The prediction revealed the expected lifespan of concrete pipes and the significant differences in their lifespan. It was also found that the degree of pipe deterioration was higher in areas closer to the sea, indicating that the current functionality can be maintained by starting repairs from these areas.
In addition, the project developed mapping technology to predict the deterioration of concrete pipes throughout Osaka City over time, providing objective evidence for policy decisions by Osaka City and contributing to policy formation based on scientific evidence.
In collaboration with the Kinki Regional Development Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, the project team used a vehicle-mounted laser scanner to collect point cloud data of slopes and embankments facing roads in mountainous areas where inadequate prediction has led to many accidents. The team used the results as big data along with AI technology to develop a method for detecting localized anomalies in slopes and embankments, and verified its effectiveness. The team created a manual for the social implementation of the method.

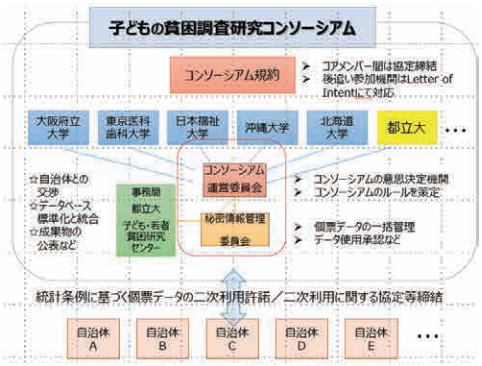
■ Project name: Research on Constructing Open Data for Policies to Reduce Child Poverty
■ Principal Investigator: ABE Aya, Professor, School of Humanities & Social Sciences, Tokyo Metropolitan University

Social issues

While administrative organizations conduct numerous surveys and thus have a large amount of data, most of these are not utilized effectively. It is necessary to make these data open and to popularize the use of these data as effective evidence that can lead to relevant policy.

Overview of R&D

- Built a database related to child poverty by compiling social surveys conducted by multiple local governments, and integrated them after standardizing the data.
- Analyzed the database by an interdisciplinary team, extracted policy evidences, and after discussing with policy-makers of local govermnets, made policy recommendations concerning child poverty.
- Delivered these policy recommendations to local governments which co-worked with this project, and also provided officers of local governments with training for opening up the data of social surveys they conducted.



Outputs

While opening up national statistical data is persuaded for promoting evidence-based policy making (EBPM) and “statistics as social infrastructure,” local governments which conduct plenty of statistical surveys just as the national government are hardly making the survey data openly available due to various administrative barriers.
This project has elucidated administrative restrictions and bottlenecks in local governments' provision of information regarding questionnaires of their statistical surveys, and developed a method of conducting a secondary analysis of such data. By using this method, we realized a secondary use of survey data on child poverty in 13 municipalities. There are other significant outcomes of this project such as delivering the analysis results and policy recommendations based on these to the local governments which provided the data, resulting in a new method that can contribute to a tangible improvement in policymaking, and contributing to training highly skilled personnel who have statistical literacy and are knowledgeable about child poverty.

Completed

Human-Information Technology Ecosystem

(FY2016-2023 Activities ended as of March 2024)

https://www.jst.go.jp/ristex/en/funding/hite/index.html

Specifying the merits and risks of information technology, we form an interaction to reflect them continually in technologies and systems.

Program Supervisor: KOKURYO Jiro
Professor, Faculty of Policy Management, Keio University
(as of the completion of the R&D Focus Area)

The rapid advancement of information technology including artificial intelligence, robotics, and the IoT driven by big data, has raised expectations for a more prosperous and efficient society. On the other hand, however, it has also been noted that information technology can cause various problems.

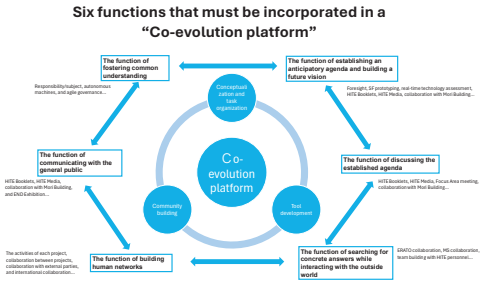
To appropriately address these challenges, 24 R&D projects were advanced (completed in March 2024) in this Focus Area to encourage R&D on the coordinated design of technologies and systems with an understanding of society, and to build a society that fosters a familiar relationship between information technology and humanity.

Summary of Outputs of the R&D Focus Area

The goals of this Focus Area were to: 1) create ways to respond to change by identifying and anticipating the changes (both positive and negative) that can occur with information technology and translating them into agendas; 2) examine values, ethics, and current systems in the light of advancing information technology and various measures, and present a diverse set of alternatives regarding desired directions and requirements; and 3) build a co-creative platform (co-evolution platform) to serve as both an opportunity and a mechanism for promoting the desirable co-evolution of society and technology as outlined above. The outputs of each project and various activities within the entire Focus Area contributed to identification of the elements that constitute the co-evolution platform and the six functions that it must incorporate. (see <Figure>) The construction of a co-evolution platform that incorporates these functions, along with the ongoing discussions it facilitates, is expected to create a state in which technology and society evolve together 'in harmony.'

Six functions that must be incorporated in a co-evolution platform

(1) The function of establishing an anticipatory agenda and building a future vision: The function of anticipating issues that have not yet materialized and incorporating them into the agenda.
(2) The function of fostering common understanding: The function of facilitating discussion of newly established agendas by defining or redefining common concepts and terms.
(3) The function of discussing the established agenda: The function of providing a forum for discussion by experts from different fields and cultures, through the fostering of common understanding and other means, with the aim of making the forum (media) an intermediary (mediator) for dialogue and co-creation.
(4) The function of communicating with the general public: The function of linking the message that needs to be sent with matters of concern in society to realize communication with society.
(5) The function of searching for concrete answers while interacting with the outside world: The function of creating solutions through actual collaboration to solve external issues, using the human networks, tools, methods, concepts, and words accumulated on the platform. This is both the functionality of the platform, as well as its efficiency and effectiveness.
(6) The function of building human networks: In addition to all actions in (1) to (5), the function of building a network by taking advantage of every opportunity, including the action of each project, collaboration between projects, and international collaboration.



<Figure> Six functions that must be incorporated in a co-evolution platform

Transmission of agenda

Various agendas identified through actions in this Focus Area have been compiled in the "HITE Booklets" in order to enable all members of society to discuss and deepen their understanding of societal and human perspectives in the age of AI. The Booklets are published on the website.

https://www.jst.go.jp/ristex/hite/topics/474.html (Available in Japanese only)

Completed

Creating a Safe and Secure Living Environment in the Changing Public and Private Spheres
(FY2015-2022 Activities ended as of March 2023)

Completed

https://www.jst.go.jp/ristex/en/funding/public-and-private-spheres/index.html

Reducing and preventing harms in hard-to-discover spaces through public-private collaboration

Program Supervisor: YAMADA Hajime
Emeritus Professor, Toyo University;
Chair of the Board, Information Communication Policy Forum
(as of the completion of the Program)

Harm in "Private Space and Relationships" is increasing against the backdrop of structural changes in society, such as the progress in smaller households and aging society with a declining birthrate, the isolation of individuals from the community, and the spread of social media, and the transformation of "Intimate Sphere" and "Public Sphere" that is brought about by these changes.

This focus area promoted 13 R&D projects that contribute to the reduction and prevention of harm that is difficult to detect and step in from the outside (completed in March 2023).

Management of the Focus Area and R&D Results

This focus area adopted R&D projects by taking cross-sectional views of events such as abuse, domestic violence, and fraudulent practice, which are difficult to detect from the outside, setting up the focus area, and considering the portfolios. In addition, this focus area managed such projects from a broad perspective without being confined to any specific event or specialty of researchers. Furthermore, this focus area specified "Four Common Issues" across the projects and worked on them through all projects.

Common Issue 1: Use of Personal Information

This focus area established a panel in this focus area to realize a society that uses personal information and studied support and social inclusion for target individuals. Notably, the panel organized points of contention regarding the consent of persons with impaired judgment and the operation of exceptions to information provision to third parties, indicating the direction for developing laws and other regulatory requirements.

Common Issue 2: Public-Private Collaboration in the Region

This focus area worked on the development of best practices to strengthen the collaboration between various public and private organizations with different jurisdictions and functions. For example, the R&D projects obtained R&D results such as the "ENTAKU (Round Table)" system, in which persons with an addiction and concerned parties join forces, and multi-disciplinary collaboration forensic interview methods and training programs for fact-finding purposes.

Common Issue 3: Human Rights Education and Enhanced Capability of Human Service Professionals

Many R&D projects developed educational materials for schools, specialized materials for human service professionals, and even educational materials for the general public. Many of those educational materials are available to anyone, with parties concerned and interested citizens having begun to use them.

Common Issue 4: Dissemination and Deployment of the R&D Results

This focus area established the "Support for Delivering R&D Results to Society" to disseminate and deploy the R&D results in this focus area nationwide based on regional characteristics. In order to get the R&D results entrenched in society, the targeted R&D projects secured the operators of these results in various forms, including the use of existing private organizations, the establishment of new private organizations, and the business continuation by universities.

Completed

Implementation-Support Program(Call for proposal Type)

(FY2007-2020 Activities ended as of March 2021)

https://www.jst.go.jp/ristex/en/funding/implementation-proposal-type/index.html

Use and Deployment of R&D Achievements in Society to Create Richer, More Convenient Lives

Program Supervisor: TOMIURA Azusa
Former Auditor, Tokyo Institute of Technology
(as of the completion of the Program)

This program was established in 2007 with the aim of grasping the outlook of social implementation by applying existing R&D outputs to real social issues. In accordance with this aim, projects were promoted with social implementation as the clear goal. (Ended in March 2021)

Program Objective

The objective of the Implementation Support Program (Call for proposal Type) is to verify the effectiveness of R&D outputs in solving issues, and to grasp the outlook of diffusion and adoption. This program has promoted 58 projects in the 14-year period from FY2007 to FY2020, and ended in March 2021 after accomplishing sufficient achievements.

Summary of Outputs

The target fields of the projects were nearly equally divided among the four fields of children, safety and security, the elderly and vulnerable, and natural and human environments.

Regarding the areas of expertise, half of the projects were in science and technology (S&T), and the remainder were in medical sciences and humanities & social sciences (HSS). When the program was launched, the majority of applicants were in S&T, but as the program objective became better understood, the number of applicants from HSS increased.

While the R&D of technologies for industry focuses on tangibles, the focus of R&D for society is on the intangibles. The program selected both approximately equally but R&D of intangibles increased in the latter half of the program.

Nearly 90% of the projects have reached their goals, and thus the program has accomplished sufficient achievements. Most cases of partial achievements resulted from the changes in the given conditions. This indicates that it is indispensable to hold sufficient preliminary discussions to obtain certain consensus with the recipient of the solution. Approximately 90% of the total projects succeeded in involving stakeholders as their members.

More than 60% of the projects succeeded in having their solutions diffused, and more than 90% had their solutions put into practical use when cases of limited diffusions are included. The reasons for the cases of solutions which were hardly diffused lie in the changes in the given conditions.

Regarding the target of transfer, about 60% of solutions were transferred to national institutions and municipalities, and 25% to the private sector and NPOs, with almost 90% put into practical use.

Based on the findings of this program, the how-tos of social implementation were compiled and published as “The Social Implementation Handbook.”

Summary of Outputs						
Target Field	Children	Safety and Security	Elderly and Vulnerable	Natural and Human Environments		
	23%	29%	24%	24%		
Area of Expertise	S&T	Medical Sciences	HSS			
	49%	26%	25%			
Outputs to be Implemented	Tangible	Intangible				
	46%	54%				
Status of Achievement	Achieved	Partially Achieved				
	89%	11%				
Stakeholders	Involved	Not Involved				
	88%	12%				
Status of Diffusion	Diffused	Limited	Hardly Diffused			
	63%	30%	7%			
Target of Transfer	National institution	Municipality	Private	NPO	Continued	Discontinued
	5%	54%	23%	2%	5%	11%

Roles of Researchers

The environment we find ourselves in is constantly changing. We risk adverse effects if we fail to gain an insight into how this will affect our lives and take relevant actions. Researchers must take on the roles of warning the general public about the consequences of these changes and setting standards and guidelines to avoid harm.

A Blueprint for What Must Be Solved

When various factors of issues that comprise social problems are categorized and analyzed, the structure of the problems becomes distinct. Drawing out such a structure enables us to foresee the existence of currently unknown issues that should be explored. It is essential to create such a blueprint, or a research matrix, to confirm the standpoint of each research topic and to search for new ones.

Completed

Implementation-Support Program(R&D results Integrated Type)

(FY2013-2018 Activities ended as of March 2019)

Completed

https://www.jst.go.jp/ristex/en/funding/implementation-integrate-type/index.html

Extending Outcomes and Networks to Ensure Sustainable Deployment

Program Supervisor: ARIMOTO Tateo
Visiting Professor, The National Graduate Institute for Policy Studies (GRIPS)
(as of the completion of the Program)

This Program was established in 2013 with the aim of consolidating and updating ("packaging") the outputs of RISTEX's R&D Focus Areas / Programs, and implementing these packages to comprehensively address the needs of sites where social issues were prominent. In accordance with this aim, 4 integrated-type projects were funded. (Completed in March 2019)

Program Outline and Summary Outputs

The Research Institute of Science and Technology for Society (RISTEX) conducts and promotes R&D with the aim of creating outcomes that contribute to solving grave problems that humanity and society in the 21st century face (environment and energy, green innovation, the falling birthrate and aging of the population, safety and security, life innovation, etc.). In R&D Focus Areas and Programs, RISTEX has been strategically calling for proposals and selecting projects with the prospect of social implementation, and with the Focus Area / Program management which promotes collaboration among projects from the R&D phase, it has been accumulating R&D outputs which are to be used in solving social issues as well as producing comprehensive outputs of the Focus Areas / Programs as a whole. By integrating (packaging) R&D outputs of individual projects as well as the theories, concepts and networks that have been developed in the Focus Areas and Programs, instead of letting these to disperse, it becomes possible to further increase the effectiveness of solutions, and to improve the quality and the speed of diffusion / adoption in society. While the Implementation-Support Program (Call for proposal type) promoted implementation of individual solutions like "points" in geometrical terms, the Implementation-Support Program (R&D results integrated type) aimed to implement solutions like "planes," and pursued activities for 6 years from FY2013 till FY2018.

Over these 6 years, 4 projects had been selected, and implementation activities were enthusiastically carried out in 3 of these projects for approximately 3 years (1 project was discontinued after a 1-year initial implementation period). Before the R&D outputs become available to the public and the market, a series of R&D stages, namely research, development, demonstration and diffusion, needs to take place. The knowledge and technologies are applied to the actual sites of social problems and their effects are verified, and if there are issues that need to be addressed, these outputs undergo further R&D. Such is the activity of social implementation which refines the outputs by repeating this cycle. To create outputs that help solve the issues society faces, and for those outputs to be continuously utilized in society, it is essential that a diversity of people, institutions and systems interact, and that dialogues are held and collaborations realized between government, industry, academia, and citizens. All of the 3 completed projects achieved to build networks of diverse stakeholders, and pursued enthusiastic implementation activities based on their collaboration. Furthermore, even after the end of the implementation support period, autonomous activities for social implementation, in the form of the cycle of research, development, demonstration, and diffusion, are continued by institutions such as general incorporated associations.

Community Design Partners for Children's Safety

Emerging and Collaborative Regional Innovation Center (ECORIC)

Co-Creation Center for Active Aging
(current Co-Creation Center for Future Initiatives)

Completed

Designing a Sustainable Society through Intergenerational Co-creation

(FY2014-2019 Activities ended as of March 2020)

https://www.jst.go.jp/ristex/en/funding/i-gene/index.html

Towards Sustainability by All Generations

Program Supervisor: OMORI Takashi
Former Chair of Economic Committee, Asia-Pacific Economic Cooperation
and Former Professor of Osaka University
(as of the completion of the R&D Focus Area)

Today, as Japan approaches maturity as a society, it faces complex issues such as depopulation, an aging society with a declining birth rate, fiscal deficit, and climate change. As such, various aspects of "sustainability," including environmental, social and economic sustainability, are becoming major issues. In addition to the consideration of society as a whole, the improvement of quality of life and the realization of richness in mind of each individual, from the young to the elderly, need to be addressed.
With the aim of realizing a sustainable society, this Focus Area promoted R&D for co-designing cities and rural communities, where people of various generations and backgrounds played active roles while taking future generations into account (Completed in March 2020).

Summary of Outputs of the R&D Focus Area

The goals of this Focus Area were: (1) to clarify how intergenerational co-creation is effective in achieving sustainability in cities and regions, (2) to propose mechanisms to promote, put into practice and improve intergenerational co-creation in the areas where it is expected to be effective, and (3) to make efforts to implement these mechanisms in our society while building a network for exchanging experiences and know-how.

Intergenerational co-creation is important in the following three aspects. Firstly, from a chronological perspective, it helps to firmly establish the philosophy and policy of passing on or bridging resources (stock) inherited from the past to the future by appropriate governance. Secondly, from a perspective of local communities, cross-sectoral and comprehensive approaches are required in dealing with many of the problems related to sustainability, while communities are becoming less functional and more people opt for homogeneous connections with those of the same generation. Thirdly, it is important in generating a new notion of "wealth," which is related to the vision of social progress we should seek in place of economic growth, that is approaching saturation.

Intergenerational approaches were found to have the following advantages.
(1) It encourages the elderly to be active and young to be motivated.
(2) It provides a base for mutual aid in local communities.
(3) It promotes renewal and inheritance of local traditional arts, crafts and industries.
(4) It reminds people of the course of history, leading them to think of local history and nature, as well as future generations.
(5) It addresses problems caused by segmented society. Youths not yet part of a group, elderly who have already left their group
(6) It lowers psychological barrier to participation and promotes sustainability.
"Could you help us make our activities more inclusive of all ages?"
(7) It introduces the "healing power" of children.
More effective than animal or robot therapy?

Dissemination of Outputs of the Focus Area / Projects

Research questions for the Focus Area created had been discussed regularly in general meetings for all projects and the management group (on-site lodging) and other opportunities, while individual projects were asked to respond to these questions in their reports, and to update their answers based on the knowledge that accumulates as the projects progressed. These were compiled into cross-sectorial outputs of this Focus Area.

< Research Questions for the Focus Area >
- What is the significance / effectiveness of intergenerational co-creation?
- What are the incentives for intergenerational co-creation? (particularly for the young)
- What are the impacts and implications of new technologies?
- What is required for intergenerational co-creation to diffuse and be adopted?
- What are the indicators for evaluating intergenerational co-creation?
- What is the significance of the local natural environment in intergenerational co-creation?

In addition, for the people who want to engage in intergenerational co-creation in the future, a handbook was produced which summarized the experiences of various projects and provided simple explanations, with actual examples, of what to keep in mind when implementing an intergenerational co-creation approach.

Furthermore, a collection of keywords (e.g.,"co-creation melting point," "parkification,"etc.) was produced which helped to identify the core concepts and issues regarding intergenerational co-creation.

* These outputs are shown on the Focus Area's website.

Completed

Creating Community-based Robust and Resilient Society

(FY2012-2017 Activities ended as of March 2018)

Completed

https://www.jst.go.jp/ristex/en/funding/robust-and-resilient-society/index.html

Resilience is the Quality that will Determine the Society for Anticipated Large-scale Disaster

Program Supervisor: HAYASHI Haruo
President, National Research Institute for Earth Science and Disaster Prevention
(as of the completion of the R&D Focus Area)

The Tohoku earthquake and tsunami that occurred in 2011 caused enormous damage to various parts of Japan, but at the same time it highlighted earthquake and tsunami measures, crisis management, information communications, logistics, disaster medical care and many more issues involving complex disasters across a wide area.
We have scientifically examined the issues and lessons learned from these disasters and have promoted research and development aimed at implementing disaster countermeasures to make our society stronger and more resilient against large-scale disasters that are expected in the future. (Activities ended as of March 2018)

Public Needs:

The Great East Japan Earthquake in 2011 caused extensive damage across many regions, but it also highlighted a number of issues relating to complex, widespread disasters, including earthquake and tsunami response, crisis management, information and communications, logistics, and emergency medical treatment.
RISTEX scientifically examines such issues and lessons gleaned from disasters with a view to implementing responses that will make our society more resilient to future large-scale disasters.

Goals:

1. To scientifically collate and analyze existing R&D relating to disaster mitigation and preparedness as well as information on front-line measures, initiatives, and systems; to take a unified and systematic approach to examining various crises and disasters that could compliacate with each other; and to develop new knowledge and methodologies required to respond effectively in emergencies.

2. To provide realistic policy advice and demonstrate workable measures aimed at building safe and secure cities and regions and reassuring citizens by identifying and analyzing current circumstances and issues in crisis and disaster response at the city and regional level, and effectively interlinking knowledge and skills related to safety and security, social systems, and the efforts of all stakeholders (governments, residents, schools, industries, NPOs, NGOs, etc.)

3. To build stakeholder networks in order to share information, exchange views, and facilitate partnership and cooperation so that R&D efforts and outcomes are utilized beyond the bounds of the originally studied region or research field, spreading and becoming established over a much broader area.

R&D Projects Elements:

1. R&D that utilizes community characteristics to enhance disater resilience
2. R&D that encourages effective networks and redesign of self-help, mutual aid, and public assistance schemes
3. R&D that builds mechanisms linking individual skills and knowledge to resolve issues relating to safety and security
4. R&D that promotes implementation of social mechanisms linking communities (Analysis of legislation, regulations, and systems, and creation of mechanisms for new initiatives)

Completed

Service Science, Solutions and Foundation Integrated Research Program

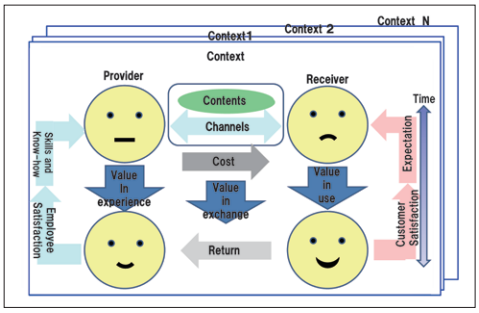
(FY2010-2016 Activities ended as of March 2017)

https://www.jst.go.jp/ristex/en/funding/servicescience/index.html

"Service Science," Bridging Services and Academia to Create New Value

Program Supervisor: DOI Norihisa
Professor Emeritus, Keio University
(as of the completion of the Program)

We developed (improve quality/efficiency and augment new values) problem-solving technology/methodology, etc. with an interdisciplinary (natural science and cultural/social science, etc.) approach by grasping society's specific or latent needs and utilizing real data or case examples as well as, furthermore, promoting research and development for establishing a research foundation for "service science". (Activities ended in March 2017)



In this program, we addressed, since its inauguration in 2010, establishment of a research and development foundation for service science and creation of methodology/technology for solving various programs relating to service. As a result, service supply utilizing the research outcomes was achieved or systematic theoretical research outcomes, etc. were created. We also presented the "Service Value Co-Creation Framework (named the Smile Chart)", which is a common framework for understanding the positioning of service science research. Additionally, participants in this program were stakeholders in founding the Academic Society of Services.
While promoting these activities, the social situation relating to services changed largely; it has come to be expected that, in the future, a "Super Smart Society" will emerge, in which creation of services to supply new values utilizing ICT is accelerated. Under such circumstances, to review what research and development is necessary for creating new services, the "Service Science's Future Review Meeting", which consists of young service researchers and designers, etc., was set up under this program; after over 1 year of investigations and discussions, the review results were summarized in a report "Aiming at a Service Science to Co-Create the Future" (October 2015). In FY2016, based on the report above, an open call for proposals for possibility surveys on research and development program schemes to address creation of new services and establishment of service design methodology was launched and 8 projects were adopted.

In March 2017, a workshop to report the results of these possibility surveys as well was held to brush up the proposals for deployment of the schemes.

A book that summarizes mainly the research outputs of this program "Invitation to Serviceology: Service Innovation by Value Co-Creation" was published in June 2017. The projects promoted under this program, from the background to/how and why of the birth of "serviceology" to aim at realizing innovations by a comprehensive and scientific approach to services to social implementation and up to future prospects, are introduced, intertwining the newest case examples of research. The content will attract not only beginners in, or researchers of, services, but also corporate directors and planners as well as business managers.

Edited and authorized by: MURAKAMI Teruyasu / ARAI Tamio / JST Research Institute of Science and Technology for Society
University of Tokyo Press Price (3900 yen + tax) Published on June 21, 2017

Completed

Redesigning Communities for Aged Society

(FY2010-2015 Activities ended as of March 2016)

Completed

https://www.jst.go.jp/ristex/en/funding/aged-society/index.html

Challenging the Issue of Aged Society Unprecedented in the World

Program Supervisor: AKIYAMA Hiroko
Professor, Institute of Gerontology, The University of Tokyo
(as of the completion of the R&D Focus Area)

It is estimated that, in our country, in 2025, the population of people aged 65 or older will exceed 30% of the total population, which is an increase of over 7 million people nationwide from in 2010. The population increase in urban areas in particular is significant, creating large regional disparities. For solving hardly predictable and complex regional problems due to the advent of an aged society unprecedented in the world, we have been promoting research and development based on trans-disciplinary and multi-stakeholder Collaboration. (Activities ended in March 2016)

Visions Based on the R&D Focus Area Outcomes

The issue of aging becomes evident in the "community," which is a place of living. In this program, 15 projects yielded various outcomes concerning specific problems associated with aging in diverse communities with different characteristics of culture/climate/resource, etc. The created various methods, actions and images of community are, while being connected with each other, arranged as follows together with the image of aged society to be aimed at.
At present, we are deploying activities in the "Implementation-Support Program (R&D results Integrated Type)" for further dissemination and establishment of these outcomes in society. (Activities ended in March 2019)

1. A society in which you can play active roles
   ...Draw a picture of being active for lifetime through activities from work to social contribution.
2. A society in which you can stay healthy as long as possible
   ...Develop know-how of health promotion rooted in the community.
3. A society in which you can live with peace of mind even when you get weak
   ...Realize an area in which you can live "with peace of mind" and "in your own manner" for ever.

Bird's-Eye View of the Outcomes of Science and Technology for Society of This R&D Focus Area Based on 3 Visions

Possible results that can be used for community-making in general

- ·Intermediate support organization and regional coordinator, collaborative know-how (All projects)
- ·Action research in community, format for information Sorting (committee within R&D Focus Area)
- ·Visualization Method (Community living environment inspection, village inspection, etc.)
- ·Support methods of Workshops (multiple projects
- ·Process review system using video archive
- ·Indicators (JST Version Activity Capability Index, Simple Version of Weakness Indicator)

Vigorous and attractive aged society

A society in which you can play active roles	A society in which you can stay healthy as long as possible	A society in which you can live with peace of mind even when you get weak
Second Life Support Study group on walking community Laughter and health delivery corps Easy farming method Electric agricultural tools / electric tricycles, etc. Ease of use verification laboratory Enhancement of Silver Human Resource Center Resident participation type manufacturing	Weakness prevention or dementia prevention program - Operational model according to regional characteristics Developing a town that makes you want to walk Environment that facilitates learning about health and housing Health promotion tool · Walking aid car · Various manuals, notebooks · Dementia screening method	Life support type community Watching over portal site Temporary Community Movement support: new GURURINKO Comprehensive support for life Decision makin support tool · Kokorozumori Note, games · Guidebooks for people with dementia Home medical zone diagnostic tool

Dissemination of the Program/ Project Outcomes

The outcomes of this R&D Focus Area's projects and records of the program activities are disclosed on the program website (https://www.jst.go.jp/ristex/korei/en/) (photo at left). In the program, also, community action research was promoted/discussed, and the results were summarized in the book "Aged Society Action Research" (photo at right).

Completed

Community-Based Actions against Global Warming and Environmental Degradation

(FY2008-2013 Activities ended as of March 2014)

https://www.jst.go.jp/ristex/en/funding/environment/index.html

Realistic Climate Change Policy through Flexible and Laterally-integrated Approaches

Program Supervisor: HORIO Masayuki
Professor, Ryukoku Univ. /
Professor Emeritus, Tokyo University of Agriculture and Technology
(as of the completion of the R&D Focus Area)

Global environmental issues essentially raise a fundamental skepticism to the present "modern" condition that was brought about by the rapid and mineral fuel-dependent economic development of the 20th century. To address global warming, this R&D Focus Area has set a scenario of reducing greenhouse gas emissions by 60-80% by the year 2050, and aimed to create new pathways to drastically reform the "modern," working from local communities and business fields. This R&D Focus Area has developed realistic reforming scenarios and local implementation models. The idea of 'de-carbonization that activates regional life' was also disseminated widely as an R&D area activity. (Activities ended in March 2014)

Recommendation from R&D Focus Area Achievement

To promote the idea of 'de-carbonization that activates regional life,' we summarized the outcome of the 16 individual projects of our 5-year activities and made a recommendation and a set of guidelines for local authorities and people.

To achieve a low carbon society that can bring local co-evolution and empowerment:

Let us develop a truly sustainable low carbon society as a redesign of the modern: by rewarding and empowering local communities and low carbon businesses; by adopting fair and locally effective appropriate technologies; by organizing a fresh start for the co-evolution of stakeholders; and by sharing the recognition that environmental issues have resulted from the centuries of linear and high carbon modernization.

Guideline 1

Developing foundations for achieving a society of local resource utilization that rewards the local community

- 1-1 Developing rules to utilize local resources in the local area
- 1-2 Developing foundations to support implementations of fair and locally effective appropriate technologies
- 1-3 Developing inter-local networks and human resources which underpin the achievement of a society of renewable energy and energy saving

Guideline 2

Aiming for creation of new values and systems in the era of de-carbonization and utilization of renewable energy

- 2-1 Pursuing a paradigm shift that promotes population re-migration as well as temporal exchange between urban areas and rural areas by utilizing renewable energy and creating multiple jobs as a local survival strategy
- 2-2 Re-constructing a relationship among consumer, distributer, and producer for achieving low carbon value chain innovation

R&D Focus Area and project achievement

The following priority social issues were set to be tackled by the R&D Focus Area: (a) rural regeneration, (b) middle-sized city revitalization, (c) low carbon value chain innovation, and (d) human resource development.

Program outcome report (Japanese only)

Special session organized at ICAE2014 in Taipei to present and discuss outcomes from the R&D Focus Area.

Completed

Protecting Children from Crime

(FY2007-2012 Activities ended as of March 2013)

Completed

https://www.jst.go.jp/ristex/en/funding/protecting-children/index.html

Effective and Sustainable Efforts to Protect Children from Crime

Program Supervisor: KATAYAMA Tsuneo
Professor, Tokyo Denki University
(as of the completion of the R&D Focus Area)

As is evident from social problems such as suicides caused by abuse and bullying, protecting children from crime is an urgent issue in today's Japan. It is not an issue only for guardians and the police any more. We believe the following are important to protect children from crime : a) children should be protected and nurtured by all of society; b) various initiatives should be linked to prevent children becoming the victims of crime; and c) the problem should be considered from the standpoint of human, material, and social systems. (Activities ended in March 2013)

Summary of R&D Focus Area - Outcomes and recommendations

In order to recognize and disseminate crime prevention initiatives in Japan based on scientific evidence, to reduce the risk of crime against children, and to take proactive measures so that children would not become crime victims, we promoted thirteen projects over a period of six years, establishing the following three objectives: to develop scientific knowledge and methods; to produce specific results that would match the local circumstances; and, to that end, to build networks of people and researchers dealing with practical issues in regions, schools, and government authorities. We held a number of symposiums to raise and clarify problems extending beyond the initiatives and results of individual projects. Finally, we summarized what cannot be solved through the efforts of individual researchers and a single funding agency in the form of "Seven Recommendations." We are confident that they will serve as guidelines when proposing and designing new initiatives and policies.

Seven recommendations for protecting children from crime are:

1. Protect and nurture children through the collaboration of all stakeholders,
2. Aim for sustained initiatives based on actual circumstances and evidence,
3. Capture the voices of children, turn them into data, and use for prevention,
4. Share data and create frameworks to be used by individual initiatives,
5. Understand criminal phenomena and foster capabilities that help in crime prevention,
6. Promote R&D and implementation that contributes to crime prevention, and
7. Understand local needs and communicate research outcomes with society.

R&D Focus Area and project achievement

The outcomes are disclosed on the website.

Program activities ended at the end of FY2012, but not all problems have been resolved. It is no exaggeration to say that it has just begun to return the project outcomes to society and to deploy them further.

Also, new problems will surely show up now and in the future. To let you know our initiatives and outcomes so far, therefore, we renewed the "Children's Safety from Crime" website.

The program's outcomes, e.g. the entire text of the "7 Suggestions on Protecting Children from Crime," and the outcomes of 13 projects, are summarized in an easy-to-understand manner. In addition to the specific outcomes of each project, voices of the co-workers who kindly actually utilized the outcomes and the idea of crime prevention, etc., as well, are introduced. Also, there is a link to the project's own website for your perusal.

Website

Logics for crime prevention

Completed

Science Technology and Humanity

(FY2005-2012 Activities ended as of March 2013)

https://www.jst.go.jp/ristex/en/funding/science-and-humanity/index.html

Uncovering Issues between Science, Technology and Society, and Pursuing a Better Relationship

Program Supervisor: MURAKAMI Yoichiro
President, Toyo Eiwa University
(as of the completion of the R&D Focus Area)

Over an eight-year period, from FY2005 to FY2012, we were engaged in two R&D programs in the R&D Focus Area Science Technology and Humanity that relate to issues involving science, technology and society, namely "Science and Technology, Literacy in the 21st Century" (FY2005 to FY2009) and "Interaction between Science, Technology and Society." (Activities ended in March 2013)

Summary of R&D Focus Area outcomes and recommendations

The achievements of science and technology now have a large influence daily life, being widely utilized throughout society. 'Trans-science' defines fields where scientific questions can be raised, but science cannot provide a full answer on its own. In order to resolve trans-scientific issues, they must be considered by the various relevant parties affected by the issues, not just researchers.

All 12 projects in this program address a variety of trans-scientific issues including nanotechnology, ICT, medicine, food safety, and global environment. Based upon the results of those 12 projects, we can summarize this program's outcome and recommendations as follows.

1. Making the Connection Between Science and Technology and Everyday Life
Given the rising complexity and uncertainty in science, technology and society, it is important to involve more concerned people, and link expert knowledge on science and technology with "common sense = knowledge in life" in local environments, to ensure our decisions are more effective and open.

2. Encouraging Experts to Take a Step Forward
There is a need for experts who are able to collaborate with a variety of people by finding solutions to complex and uncertain issues, not staying in their area of expertise but rather taking a small step forward while duly keeping the limitation of their discipline in mind.

3. Learning from Pilot Projects on Social Challenges
It is necessary to carry out various pilot projects to address social challenges, in particular, we should constantly provide spaces for collaboration between these new experts who have taken a step forward and diverse stakeholders, as well as anyone concerned with practical issues in our society. We need to embark on social challenges, with a long-term perspective so that we can keep learning from our experiences, including possible failures.

4. Building up Trust Through Continuous Response
Especially following the 2011 Great East Japan Earthquake (earthquake, tsunami, and nuclear accident.), success of social challenges largely depends on how trust is created. Trust is never obtained solely from expert knowledge. Taking into account the complexity and uncertainty associated with social issues, continuous dialogue among a wide range of stakeholders and those people concerned is essential.

R&D Focus Area and project achievement

The outcomes are disclosed in the report and on the website.
You can see, in detail, the outcomes of the R&D program "Interaction between Science, Technology and Society" in the report (photo at left) as well as on the program website (photo at right;).
The report "Augmentation of Stakeholders and New Roles of Experts" is available for downloading from the website (in Japanese/English).

Initiatives

Promotion of Co-creation

https://www.jst.go.jp/ristex/en/initiatives/co-creation/index.html

Promotion of co-creation that deepens the relationship between science and society

RISTEX set up platforms for dialogue and collaboration (co-creation) with diverse entities, promoting R&D activities through the creation and integration of knowledge, and making efforts for improved science and technology literacy in society.

Science Agora

RISTEX is hosting Japan's largest open forum "Science Agora" which connects science and society. It connects stakeholders across different fields, sectors, ages, and nationalities, where various people proactively promote activities in various locations. People who gather through this platform will strive to realize "Science with Society" and "Society with Science" in the future through dialogue and collaboration while recognizing the diverse values of others.
RISTEX is working to accelerate R&D on science and technology for society, as exemplified by Science Agora 2023, at which the participants of a project named "Comprehensive Research of ELSI to Be Overcome in Social Implementation of Flying Cars" (Principal Investigator: KOJIMA Ryu (Professor, Faculty of Law, Kyushu University)) under the RInCA (Responsible Innovation with Conscience and Agility) program of RISTEX, consider how to explain the impact on society when implementing the flying cars to society, by listening to the citizens' opinions in various methods concerning the ethical, legal and social issues (ELSI) in science and technology.

Science Agora Collaborative Projects

Aiming to contribute to developing an autonomous, sustainable local society through dialogue, RISTEX is co-hosting the Science Agora Collaborative Projects with universities and other organizations nationwide.
In FY2023, RISTEX held "Science Agora in Kobe," as the first citizen outreach event under Moon Shot Goal 8: "Realization of a society safe from the threat of extreme winds and rains by controlling and modifying the weather by 2050." Discussions were held on the main topics of ELSI/RRI that are being tackled by RISTEX.

Creation of Platforms for Co-creation Where a Wide Range of Knowledge is Integrated

In collaboration with its supporting organizations, RISTEX is promoting the "CHAllenge driveN Convergence Engine (CHANCE)" initiative, a co-creation network that brings together a wide range of knowledge from various sectors.
RISTEX aims to maximize R&D results, promote the implementation, and contribute to solving social issues by leading social expectations and issues obtained from co-creation to strategy formulation and R&D.

'STI for SDGs' Awards

The 'STI for SDGs' Awards is an annual award for outstanding initiatives originating in Japan for solving social issues with the help of Science, Technology and Innovation (STI).
The awards aim to contribute to the achievement of SDGs by further developing the awarded initiatives and promoting their use in other regions facing similar challenges.

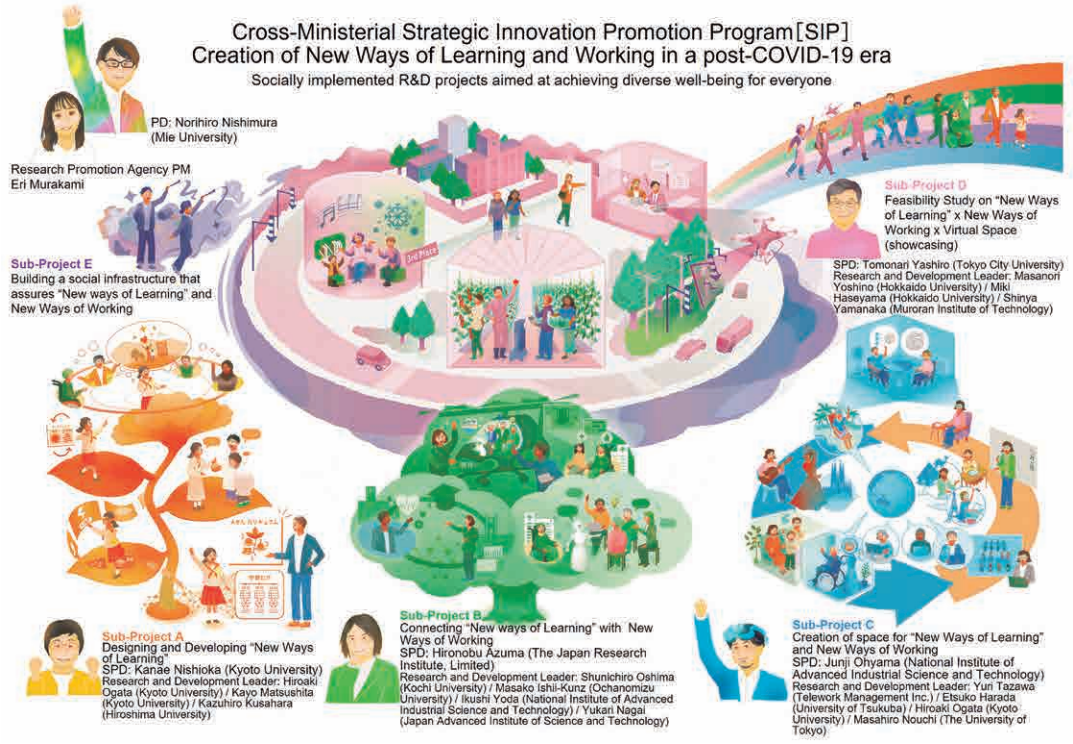
Cross-ministerial Strategic Innovation Promotion Program (SIP)

https://www.jst.go.jp/sip/pos/

Creation of New Ways of Learning and Working in a post-COVID-19 era

Program Director (PD)
NISHIMURA Norihiro
Professor, Graduate School of Regional Innovation Studies, Mie University

The Cabinet Office's Cross-ministerial Strategic Innovation Promotion Program (SIP) is a national project that tackles social challenges, which must be solved for the public good, and world-leading issues that can contribute to revitalizing the Japanese economy crossing the bounds of ministries, agencies, and fields under the control tower function of the Council for Science, Technology and Innovation (CSTI).
The Third Phase of SIP (FY2023 to FY2027) has 14 projects, and JST is responsible for managing two of these projects as a research promotion corporation. One of the two projects is the "Creation of New Ways of Learning and Working in a post-COVID-19 era".
Based on the Cabinet Office's "Social Implementation Strategy and R&D Plan (approved on March 16, 2023)", this project aims to realize a society in which individuals can choose or take on challenges to learn/work as they wish anytime and anywhere, with such an environment assured regardless of their characteristics, values, and regional conditions. In other words, the project aims to achieve a society where individuals living in Society 5.0 can enjoy diverse well-being.
In order to realize this future vision, R&D themes under this project sets up sub-project A through E. Sub-Project D aims to implement a feasibility study on the “Platform” of "New Ways of Learning" x New Ways of Working x Virtual Space in regional areas. Sub-Project A through C will be effectively connected, integrated, and examined so that the project will be able to present a showcase that anticipates the future vision.
In addition, Sub-Project E identifies institutional, economic, and psychological issues visualized through R&D themes and demonstrations in Sub-Project A through D. By providing feedback on considerations of solutions to these issues, Sub-Project E aims to build a social foundation that assures "New Ways of Learning" and New Ways of Working.



Future Earth

https://www.jst.go.jp/ristex/en/initiatives/future-earth/index.html

Realize a Globally Sustainable Society through R&D in Tackling Global Environmental Changes (FY2014-)

The existing global environmental problems are universal issues today, and collaboration among nations is essential for their solution. New efforts will also be required, through collaborative engagements with various stakeholders such as those in the fields of science, industry, administration, and civil society.
The "Future Earth" initiative was proposed based on this recognition, at the RIO+20 conference in 2012, led by the International Council for Science (ICSU), and became fully operational in 2015. Derived from two streams of international environmental challenges, the integration of Global Environmental Change Programs (GEC) and the Sustainable Development Goals (SDGs), Future Earth was set up as a 10-year-schemed international research program to counter the various risks arising from global environmental changes, aiming to build a sustainable society around the globe. Future Earth clearly states the importance of a strong partnership between the natural sciences and the humanities and social sciences (HSS); as well as the importance of knowledge co-creation, or "transdisciplinary research," achieved through co-design, co-production, and co-delivery of research that are based on collaborative engagement of direct/indirect stakeholders (e.g. international organizations, central and local governments, funding agencies, NPOs/NGOs, industries, civil society, and media) for the research outputs.
The government also stated that R&D in environmental S&T should be promoted as initiatives that co-design solutions with stakeholders and that are led to social implementation, and to achieve this, it would consider the possibility of constructing a foundation of necessary scientific knowledge, technology, human resources and systems.
As part of the Future Earth initiative in Japan, RISTEX has set up the "Initiative for the Promotion of Future Earth Concept" in FY2014, and funded R&D projects till FY2019. In this scheme which aimed to promote transdisciplinary research, researchers and various stakeholders engaged in R&D to find solutions to issues they needed to challenge together. The outputs of these projects were then applied to other regions, and made commonly available by dissemination of information, contributing to the development of transdisciplinary research.
From FY2020, we have been conducting surveys which are aimed to provide evidences for JST as a funding agency to further promote transdisciplinary research in Japan (For more information, see the page on Surveys of Trends in Transdisciplinary (TD) Research in Research Activities section.) Also, in FY2022, we have organized a reunion event in metaverse (using oVice) for the first time.

The cover of JSRA 2016

Research and study on selection of globally prioritized themes for Japan to be engaged in and on R&D designs for such themes

The project worked on developing methodologies which benefit the design of transdisciplinary research for a sustainable global society. As one of the outputs of the studies, the project produced a booklet titled "Japan Strategic Research Agenda (JSRA) 2016" (above photo). It presents globally prioritized topics and themes in which Japan can take initiatives in Asia, and around the world, with Japan's R&D strength.
TANIGUCHI Makoto [Deputy Director-Generals, Research Institute for Humanity and Nature (RIHN)] (FY2014-FY2016)

Transdisciplinary research for problem solutions

In FY2014 and FY2015, feasibility studies for R&D to be promoted as transdisciplinary research were conducted. Among these projects, of which research agendas were clearly set and the research team structure constructed, full-scale projects were selected and promoted as transdisciplinary research that realized the co-production of solutions.

FY2016-FY2019
A transdisciplinary research by networking solution-oriented interdisciplinary sciences of environment, disaster, health, governance and human cooperation
YAHARA Tetsukazu [Professor/Director, the Institute of Decision Science for a Sustainable Society, Kyushu University]

FY2017-FY2019
Transdisciplinary Study of Natural Resource Management under Poverty Conditions Collaborating with Vulnerable Sectors
SATO Tetsu [Professor, Faculty of Collaborative Regional Innovation, Ehime University]

Past Major R&D Results Funded by RISTEX

Including the outputs of projects introduced herein, outputs of many other projects are shown in the RISTEX website.
* Affiliations and positions are those that applied at the completion of the R&D project.
https://www.jst.go.jp/ristex/en/e-example/index.html

Legal being: electronic personhoods of artificial intelligence and robots in NAJIMI society, based on a reconsideration of the concept of autonomy

Human-Information Technology Ecosystem
Principal Investigator: ASADA Minoru (Professor, Institute for Open and Transdisciplinary Research Initiatives, Osaka University)

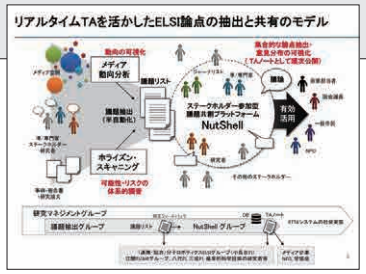
This project examined the legal implications in the event of an accident caused by artificial intelligence, highlighted the limitations of the current legal system and devised a new institutional model that would not impede technological advances such as mandating the improvement of companies and developers instead of punishment. By hosting workshops on cooperation with the technology development side and dialogue with the general public and ascertaining and making improvements to the effectiveness of the proposed model, This project proposed solutions to the relationship between artificial intelligence and the law and that we believe will held realize a society that can coexist with technology.

Co-Creation and Communication for Real-Time Technology Assessment (CoRTTA) on Information Technology and Molecular Robotics

Human-Information Technology Ecosystem
Principal Investigator: SHINEHA Ryuuma (Associate Professor, Research Center on Ethical, Legal, and Social Issues (ELSI), Osaka University)

Co-creation of Molecular Robot ELSI and Real-time Technology Assessment Research

Human-Information Technology Ecosystem
Principal Investigator: KONAGAYA Akihiko, (Visiting Professor, Faculty of Humanities, Keisen University)



ELSI and RRI issues that may involve molecular robots in the future have been organized based on past case studies of similar technologies and compiled as TA (Technology Assessment) notes. Through collaboration between the Molecular Robot Ethics Study Group and the Molecular Robotics Annual Meeting, This project promote mutual understanding between humanities and social sciences researchers and molecular robotics researchers and obtain feedback on the activities of both. This project is continually discussing the formulation of molecular robotics guidelines, and these efforts are expected to create a society where molecular robot technology and humans are familiarized.

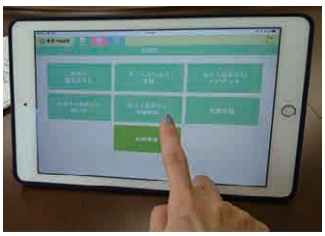
Reducing online risks for minors with the help of a system that detects users who commit premeditated online grooming

Creating a Safe and Secure Living Environment in the Changing Public and Private Spheres
Principal Investigator: TORIUMI Fujio (Professor, School of Engineering, The University of Tokyo)

To reduce online risks for minors, the R&D project developed an online risk detection system using an algorithm based on non-linguistic information while considering the secrecy of personal information and communications, enabling the detection of users who commit premeditated online grooming. Introducing this system to social networking services (SNS) used among minors prevented this type of risk, with SNS providers having already applied it to their systems. In addition, the R&D project produced worksheets, cartoons, and other educational materials to make minors aware of this online risk and manuals for use by teachers. With this system covered by newspapers and other media, we are spreading its R&D results and further field utilization.

The development of an application named "Sodatsu WA" helps prevent child abuse and domestic violence (DV) even during pregnancy

Creating a Safe and Secure Living Environment in the Changing Public and Private Spheres
Principal Investigator: FUJIWARA Takeo (Professor, Global Health Promotion, Tokyo Medical and Dental University (TMDU))



Aiming to prevent child abuse and DV, the R&D project developed "Sodatsu WA," an application to support public health nurses by utilizing pregnancy notifications. The system is provided with convenient support content and functions needed when a public health nurse visits the homes of pregnant women, with the demonstration field (the health center in Adachi-ku, Tokyo) continuing the use of this system today. In addition, the application also provides a set of learning materials (text and audio) describing how to approach pregnant women reluctant to receive support or how to support pregnant women who suffer from mental health problems. For this reason, this system is spreading to educate public health nurses and at midwife outpatient clinics of maternity hospitals too.

Past Major R&D Results Funded by RISTEX

The "Disaster Victim's Life Recovery Support System" aims at support without omissions of disaster victims of earthquake or flood/fire.

"Information and Society" R&D Focus Area/ Implementation-Support Program (Call for proposal Type)
Principal Investigator: HAYASHI Haruo, Professor, Research Center for Disaster Reduction Systems, Disaster Prevention Research Institute, Kyoto University

This system, part of the development and implementation of which was borne by RISTEX, has a mechanism to enable the issuance of disaster victim certificates fairly and smoothly by correctly certifying the degree of building damage. Moreover, it aims at speedy support without omissions by, digitalizing the ledger, the city approaching the disaster victims to apply for life support. This system has already been introduced in 12 Tokyo Metropolitan special wards and elsewhere; in FY2016, it was utilized in 15 municipalities in Kumamoto Prefecture as well as after the Great Fire of Itoigawa.

* Regarding the implementation activities, Ms. TAMURA Keiko (Professor, Crisis Management Room, Niigata University) replaced the former Principal Investigator in April 2012.

Practice at issuing Disaster Victim Certificates at Tokyo Metropolitan Government's comprehensive disaster drill facility in September 2012

The community resilience theory was corroborated through the support of collective relocation from the disaster-stricken area.

"Creating Community-based Robust and Resilient Society" R&D Focus Area
Principal Investigator: ISHIKAWA Mikiko, Professor, Human General Science and Engineering Section, Faculty of Science and Engineering, Chuo University

The Sennan Alluvial Plain including the Tamaura District of Iwanuma City, Miyagi Prefecture sustained great damage from the Great East Japan Earthquake. We corroborated to develop a method concerning the path of reconstruction or formulation of urban/local plans while supporting the collective relocation therefrom. Our addressing of the revitalization of the "Coastal Region to Protect Life" that proceeded, while carefully gathering each of the resident's opinions, was broadcast in several instalments of the NHK Special program and produced a great sensation. Also, our "Suggestions" submitted to the Science Council of Japan went through profound discussion and were disclosed to greatly affect how the reconstruction should be.

Urban development plan as a workshop output

An early identification system for children who require development support was developed and was incorporated into the Maternal and Child Health Handbook.

"Brain Science and Society" R&D Focus Area/ Implementation-Support Program (Call for proposal Type)
Principal Investigator: KAMIO Yoko, Director of Department of Child and Adolescent Mental Health, National Institute of Mental Health, National Center of Neurology and Psychiatry

In this R&D project, we conducted a cohort study over a 5-year period in collaboration with a local government's medical checkup of infants; we developed a system (M-CHAT) to identify/support at an early stage for children who require development support, and successfully put it on a business basis. Furthermore, we developed a learning tool for the health nurses and pediatricians in the area closest to the children who need support, and tried to disseminate it. In 2012, 1 item of M-CHAT was adopted in the 1-year-old child column of the Maternal and Child Health Handbook and, in 2014-2015, in the health guidance text for medical checkups of infants as well. Additionally, M-CHAT is utilized in a priority issue of the Secondary Plan (FY2015-2024) of "Healthy Parent and Child 21", as well as an index of establishment of understanding of early development of sociability.

Learning tool for professionals deployed using e-learning

A joystick system to enable people with disabled limbs to drive a car

Implementation-Support Program (Call for proposal Type)
Principal Investigator: WADA Masayoshi, Associate Professor, Institute of Engineering, Graduate School, Tokyo University of Agriculture and Technology

We, together with the Nissin Motor Company, Ltd. (the present Mikuni Life & Auto), which has over 40 years of experience in the development and manufacture of automobile driving gear for people with disabilities, developed a joystick-type automobile driving system to enable people with severe disabilities, who can hardly move their limbs, to drive a car. Our research and development won the FY2015 Culture, Sports, Science and Technology Minister-Commended Scientific Technology Prize. For the driver to acquire a driver's license with the modified car, incidentally, we realized a support system model with the cooperation of driving schools and rehabilitation centers. We will continue our dissemination activities so that many people can utilize this system now and in the future.

A driving system of a 2-joystick type. It is possible to operate the blinker, horn, brake lock switch, etc. to accompany steering wheel operation in the vicinity of the joystick.

Construction of an “easy” and “pleasant” agricultural management style to suit each locality

”Redesigning Communities for Aged Society” R&D Focus Area
Principal Investigator: TERAOKA Shingo, Professor, Cultural and Social Science School, Faculty of Letters, Nara Women's University

Winning of the Platinum Excellence Award

We addressed research and development in Shimoichi-Chou, Nara Prefecture, where persimmon agriculture is thriving, for heightening the sustainability of mountainous regions by reviewing how agriculture should be to allow the elderly people to continue working “easily and pleasantly.” We gained outputs from various viewpoints such as the “village inspection method” to sociologically clarify the problems in the locality, method used in persimmon agriculture not to be burdensome to the farmer's bodies, development of electric farm equipment easy for the elderly people to use, body exercises to eliminate the physical problems peculiar to persimmon agriculture, etc. These activities won the 2014 2nd Platinum Award Excellence Award. Also, we were invited to Turkey, a major agricultural country; thus our outcomes are gathering attention widely in Japan and overseas.

The ”Easy-to-Handle Electric Wheelbarrow“ we developed. Being safe and yet powerful, it is easy and pleasant to operate.

For “ease of use”, elderly people/companies/researchers collaborate in the “Everybody Lab”.

”Redesigning Communities for Aged Society” R&D Focus Area
Principal Investigator: HARADA Etsuko, Professor, Human-Related Psychological Area, University of Tsukuba

Under the theme “elderly people’s ‘ease of use’,” we started up the “Everybody’s Ease of Use Lab (named the Everybody Lab)” as a place of dialogue between elderly people, companies, and researchers. Here elderly people participate in tests and discuss the things or services that companies have brought in through the coordinator. For the elderly people, it is a place of activities where they can make social contributions to thing-making or local networking while, for the companies and researchers, it is a place for deepening their discernment of “ease of use” through dialogue with the elderly people. The Everybody Lab activities are gathering attention abroad as well, e.g., winning the Gold Prize in the IAUD’s (International Association for Universal Design) 2014 Award, Social Design Sector.

Ease of use of the life support robot system “PaPeRo”, which is under development in the strategic innovation creation promotion program, is being verified in the “Everybody Lab”.

A system to watch over elderly people by “telephone” was developed and disseminated; to be featured in elementary school textbooks as well.

”Redesigning Communities for Aged Society” R&D Focus Area
Principal Investigator: OGAWA Akiko, Professor, Department of Social Welfare, Iwate Prefectural University

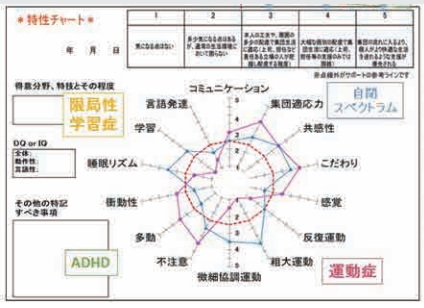
We developed and disseminated a system to enable an old person living alone to communicate when in trouble, etc. casually to the supporter by household telephone, as well as making a community which utilizes the system. The supporter can provide life support in shopping areas, etc. by gently watching over the elderly people in the area in collaboration with the social welfare council or the people in the area, and rush to an old person as alerted in an emergency. The system was introduced to (the then) Takizawa Village, Iwate Prefecture or otherwise utilized in temporary housing after the Great East Japan Earthquake as well. Scenes from these activities have been introduced in textbooks on society for the 5th grade of elementary school since FY2015.

Initiative implemented by Kawamae District, Takizawa City
Various community groups have linked up to create a network for watching over elderly people living on their own.

Practical Utilization of Multi-dimensional Scale for PDD and ADHD (MSPA) across the Medical, Education and Social field

Principal Investigator: FUNABIKI Yasuko, Associate Professor, Graduate School of Human and Environmental Studies, Kyoto University

There are various symptoms associated with developmental disabilities, and these can vary tremendously between individuals. Thus, we put into practical use an assessment scale (MSPA: Multi-dimensional Scale for PDD and ADHD) that assesses in details the level of support required and displays the results with a radar chart for individuals with developmental disabilities and their supporters to grasp easily. We formulated a manual to support the assessment for each life stage of people with developmental disabilities, developed a program for the training of evaluators, and engaged in the training of experts by regularly holding training sessions. In addition, our activities related to the proposal of this assessment method to be included in medical insurance bore fruit, and it became insurance-covered in April 2016, which leads to the social implementation of a comprehensive support system.



Ensuring Sustainability at Local Government Level through Promoting Implementation of Multigenerational Participatory Stock Management Methods

Principal Investigator: KURASAKA Hidefumi, Professor, Graduate School of Social Sciences, Chiba University

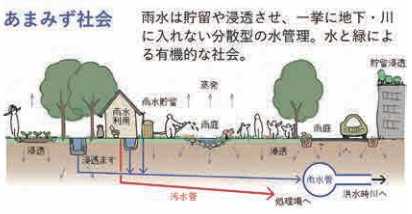
With local municipalities facing declining populations and shrinking finances, we developed the “Future Chart” that simulates approximately 10 areas of local administrations including changes in the industrial structure and the prospect of maintenance and management of public facilities, roadways and farmland, and displays those transitions every five years with a graph, based on various statistical data for each of the 1,741 municipalities in Japan. In addition, we developed methods such as the “Future Workshop” to create scenarios that should be considered based on future forecasts with multi-generational participation. The Future Chart issuing program, which was released for free in October 2017, was well received and downloaded more than 20,000 times. The Future Workshop was also widely utilized in communities other than those collaborated in this project, and as a part of integrated study activities at junior high and high schools.

Past Major R&D Results Funded by RISTEX

Distributed Rainwater Management for a Sustainable Well-being Society

Principal Investigator: SHIMATANI Yukihiro, Professor, Faculty of Engineering, Kyushu University

To solve the issues of the current centralized water management system, we proposed an urban vision under the name of "Amamizu Society" (Rainfall Society) by focusing on the Hii River area basin in Fukuoka City, which has experienced frequent flooding in recent years, and developed a method for a decentralized water management system that uses intergenerational co-creation to store and penetrate water in all areas of the basin while creating higher-quality greenery. This method was deployed at Tokyo's Zenpukuji River area and other locations, and is gaining international attention not only for its effectiveness in terms of disaster prevention, but also because it enriches the local ecosystem, increases cultural value, and helps to revitalize communities. We have already collaborated with JICA projects, the World Bank and Ramsar Center Japan, and expect that this method will spread both in Japan and abroad in a self-directed manner.



Restoring a Beautiful and Rich Inner Bay through "Fish Local, Eat Local"

Principal Investigator: OTSUKA Koji,Professor, Graduate School of Humanities and Sustainable System Sciences, Osaka Prefecture University

In Osaka Bay's Hannan City, the sustainability of the fishing industry is threatened by declining fish hauls, a declining habit of fish-eating among young people, and the aging and decreasing number of fishers. We chose the city as a model area, and created a sustainable model that covers a series of processes including production, fish haul, distribution and consumption as a whole and developed a comprehensive evaluation method that integrated environmental, economic and social aspects. Obtaining the participation of various stakeholders from multiple generations, the project implemented multifaceted initiatives such as improving fishing ground environments using recycled fish scraps, achieving oyster farming through co-creation with fishing cooperatives, developing new distribution methods for fisheries products using information technology, holding events for children to promote fish-eating, and conducting trial internet sales. We expect the project to expand throughout the entire Osaka Bay area in the future.

Transdisciplinary Study of Natural Resource Management under Poverty Conditions Collaborating with Vulnerable Sectors

Principal Investigator: SATO Tetsu, Professor, Ehime University Faculty of Collaborative Regional Innovation

In the total of 9 regions across 6 countries, including Indonesia and Malawi, while working together with resident researchers and local NGOs, we developed and demonstrated a mechanism that leads to the improvement of life in poverty and welfare by extracting and visualizing the wisdom (intrinsic innovation) of people living in poverty based on the challenges they face and the knowledge they possess, and applying it to sustainable management and effective utilization of natural resources. Because this method is a common approach to people with disabilities, those facing economic hardship and others with various issues, we expect it to be applied to similar situations in other communities and areas.

Co-creating Communities for Aged Society

Principal Investigator: TSUJI Tetsuo, Professor, Institute of Gerontology, The University of Tokyo

The complexity of the challenges posed by an aging society means that they cannot be solved by a one-size-fits-all approach. Rather, such challenges require a response tailored to the characteristics of each local community. This implementation project targeted two neighborhoods with different local characteristics in Kashiwa City, Chiba Prefecture, and was aimed at creating a framework for local residents to take the initiative in addressing local issues. Based on the results of these activities, we proposed two implementation approach models for solving such issues: the "policy collaboration model" and the "local accumulation model." Furthermore, during the project period, the Co-creation Center for Active Aging (now the Co-creation Center for Future Society) was established as a general incorporated association. The Center continues to present case studies, encourage networking and conduct other implementation activities across Japan that will contribute to addressing the challenges of an aging society.

Completed Projects List

***Affiliations and positions are those that applied at the completion of the R&D project**

● "Social System & Social Technology Theory" R&D Focus Area (FY 2001-2007)

Program Supervisor: MURAKAMI Yoichiro, Professor, Graduate School, International Christian University

R&D Project Name	Principal Investigator	Period
Chaos (crisis) and its control in automated social systems	SHIMIZU Hiroshi, Director, Ba Research Center, Kanazawa Institute of Technology	2002.1-2004.12
Socio-technological approach to global warming	TAKEUCHI Kei, Professor, Department of International Studies, Meiji Gakuin University	2002.1-2004.12
Public technology governance : Towards the construction of social technology theory	FUJIGAKI Yuko, Assistant Professor, Graduate School of Arts and Sciences, The University of Tokyo	2002.1-2004.12
Development of an open science and technology policy formation support system	WAKAMATSU Yukio, Professor, School of Science and Engineering, Tokyo Denki University	2002.1-2004.12
International comparison of social governance for new environmental and technological risks	IKEDA Saburo, Visiting Researcher, Comprehensive Disaster Prevention Research Division, National Research Institute for Earth Science and Disaster Resilience	2002.11-2005.10
Social decision-making process for introductions of energy technology	SUZUKI Tatsujiro, Senior Researcher, Socio-Economic Research Center, Central Research Institute of Electric Power Industry; Professor, Keio University Graduate School	2002.11-2005.10
Study on application of manufacturing safety methods to medical accident prevention	NOGUCHI Hiroshi, Assistant Professor, Faculty of Engineering, Kyushu University	2002.11-2005.10
Study of crisis management system for oil spills	GOTO Shintaro, Professor, Faculty of Geo-Environmental Science, Rissho University	2003.10-2006.9
Creation of a language observatory tasked with eliminating the interlanguage digital divide	MIKAMI Yoshiki, Professor, Management & Information Department, Nagaoka University of Technology	2003.10-2006.9
Towards building a pharmaceutical safety information community	YAMAUCHI Aiko, Assistant Professor, Institute of Health Biosciences, Graduate School of Tokushima University	2003.10-2006.9
Editing and practical application of scientific knowledge derived from consumer viewpoints	UEDA Masafumi, Representative, Citizen's Science Initiative Japan (NPO)	2004.12-2007.11
Research and development of social systems for realizing environment creation-type agriculture	TANIGUCHI Yoshimitsu, Professor, Science and Technology Integration Center, Akita Prefectural University	2004.12-2007.11
Formation of Ethics Crossroads and creation of science and technology ethics	FUDANO Jun, Director, Applied Ethics Center for Engineering and Science, Kanazawa Institute of Technology	2004.12-2007.11
Creating safe logistics in an import-dependent society	WATANABE Yutaka, Professor, Faculty of Marine Technology, Tokyo University of Marine Science and Technology	2004.12-2007.11

● "Sustainable Society" R&D Focus Area (FY2001-2007)

Program Supervisor: YAMAMOTO Ryoichi, Professor, Institute of Industrial Science, the University of Tokyo

R&D Project Name	Principal Investigator	Period
Regeneration of Organic Recycling Systems by Collaboration of Urban and Rural Areas	UETA Kazuhiro, Professor, Graduate School of Economics, Kyoto University	2002.1-2004.12
Integrated Research for the Construction of Material-Leasing System in the Society	HARADA Kohmei, Director-General, National Institute for Materials Science Ecomaterials Center	2002.1-2004.12
Development of indicator, methodology and information disclosure of environmental rating	FUKUSHIMA Tetsuro, Advisor, Japan Audit and Certification Organization for Environment and Quality(JACO)	2002.1-2004.12
Development of Civic Model on Materials Technology for Recycling-Based Society	UMEZAWA Osamu, Assistant professor, Faculty of Engineering, Yokohama National University	2002.11-2005.10
Environment-Compatible Treatment of Problematic Substances and Associated Social Solutions in the Sustainable Society	MAEDA Masafumi, Professor, Institute of Industrial Science, the University of Tokyo	2002.11-2005.10
A Study for Realization of Environmentally Sound Material-Cycle Society Based on Citizen's Participation	YAGISHITA Masaharu, Professor, Graduate School of Global Environmental Studies, Sophia University	2002.11-2005.10
Osaka Model of Circulation Oriented Society Through Case Study of Existing City & Neighborhood Nature	IKEGAMI Toshiroh, Vice Chairman, NPO ECODESIGN NET WORK	2003.10-2006.9
Material/Substance Flow as A Sustainability Indicator	NAGASAKA Tetsuya, Professor, Graduate School of Environmental Studies, Tohoku University	2003.10-2006.9
Research on the Establishment of Iwate Recycling Basin Economic Area	MOROZUMI Kazuo, Professor, Graduate School of Agricultural Science, Tohoku University	2003.10-2006.9
Application of the Proposed Eco-Efficiency Indicator Based on Value Added	INABA Atsushi, Director, Research Center for Life Cycle Assessment of National Institute of Advanced Industrial Science and Technology	2004.12-2007.11
A Study of Underlying Technology for the Realization of Sustainable/Ubiquitous Society	TAKAOKA Mika, Associate professor, College of Economics, Rikkyo University	2004.12-2007.11
Research on Inverse Distribution in Borderless Supply Chain	HAYASHI Hidetaka, Director, NPO Eco Design Promotion Network	2004.12-2007.11

● "Safety and Security" R&D Focus Area (- FY 2006)

Program Supervisor: HORII Hideyuki, Professor, School of Engineering, The University of Tokyo

○ Mission Program I: "Building a knowledge system for solving social issues related to safety"

Research Group	Group Leader	
Integrated research	HORII Hideyuki, Professor, School of Engineering, The University of Tokyo	2001-2005
Food safety	KAMISATO Tatsuhiro, Full-time Researcher, Research Institute of Science and Technology (RISTEX)	
Conversational-type knowledge processes	NISHIDA Toshiaki, Professor, Graduate School of Informatics, Kyoto University	
Failure studies	NAKAO Masayuki, Professor, Faculty of Engineering, The University of Tokyo	
Social psychology	OKAMOTO Koichi, Professor, Department of Human Sciences, Toyo Eiwa University	
Legal system	SHIROYAMA Hideaki, Assistant Professor, Graduate School for Law and Politics, The University of Tokyo	
Risk management	HORII Hideyuki, Professor, School of Engineering, The University of Tokyo	
Nuclear safety Ⅰ	FURUTA Kazuo, Professor, School of Engineering, The University of Tokyo	
Earthquake disaster prevention	KIYONO Junji, Assistant Professor, Graduate School of Engineering, Kyoto University	
Chemical processes safety	MATSUDA Koji, Former Advisor, Kashima Oil Company, Ltd.; Part-time researcher, Research Institute of Science and Technology for Society (RISTEX)	
Traffic safety	[from FY2005] TAKAHASHI Kiyoshi, Assistant Professor, Faculty of Engineering, Kitami Institute of Technology	
	[until FY2005] KATO Hironori, Professor, Faculty of Engineering, The University of Tokyo	
Medical safety	NAGAI Ryozo, Professor, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo; Director, The University of Tokyo Hospital	

● "Information Technology and Society" R&D Focus Area (- FY 2010)

Program Supervisor: DOI Norihisa, Professor Emeritus, Keio University

○ Planning-type R&D

R&D Project Name	Program Supervisor	Period
Elucidation and resolution of vulnerabilities in the advanced information society	DOI Norihisa, Professor Emeritus, Keio University	2003-2007
Research Group	**Group Leader**	
Multiple risk communicator working group	SASAKI Ryoichi, Professor, Engineering Department, Tokyo Denki University	
Cryptographic risk working group	OKAMOTO Eiji, Professor, Graduate School of Systems and Information Engineering, University of Tsukuba	
DRM working group	YAMAGUCHI Suguru, Professor, Graduate School of Information Science, Nara Institute of Science and Technology	
Emergency information communication system working group	OHNO Hiroyuki, Professor, Information Media Center, Kanazawa University	
Investigation of the most effective investment method for information security	MATSUURA Kanta, Assistant Professor, Institute of Industrial Science, The University of Tokyo	

○ R&D Program: Governance in Ubiquitous Society

R&D Project Name	Principal Investigator	Period
Study of Information Trust Mechanisms in a Ubiquitous Society	SONEHARA Noboru, Professor, Information and Society Research Division, National Institute of Informatics	2006.1-2009.3
Research for Social Governance in the Gap between Skillful/Non-skillful Users of Cellular Phones in Japan	TAMAI Katsuya, Professor, Intellectual Property Division, Research Center for Advanced Science & Technology, University of Tokyo	2006.1-2009.3
Effective Information Security Governance Systems in Corporations	HAYASHI Koichiro, President, Institute of Information Security	2006.12-2009.12
Development of Problem-Solving Capacity for Crisis Management Using GIS	HAYASHI Haruo, Director&Professor, Research Center for Disaster Reduction Systems, Disaster Prevention Research Institute, Kyoto University	2006.12-2009.12
Country Domain Governance Project	MIKAMI Yoshiki, Professor, System Safety Department, Nagaoka University of Technology	2007.10-2010.10

Completed Projects List

● "Brain Science and Society" R&D Focus Area (- FY2009)

Program Supervisor: KOIZUMI Hideaki, Fellow with director status, Hitachi, Ltd.

○ Programming-type R&D

R&D Project Name	Program Supervisor	Period
Elucidation of factors affecting children's cognitive and behavioral development in Japan	[from 2006.10] YAMAGATA Zentaro, Professor, Interdisciplinary Graduate School of Medicine and Engineering, Yamanashi University	2004-2008
	[until 2006.9] KOIZUMI Hideaki, Fellow with director status, Hitachi, Ltd.	
Research Group	**Group Leader**	
Osaka Research Group	TOWA Kiyotaka, Professor, Graduate School of Medicine, Kyoto University	
Mie Research Group	YAMAMOTO Hatsumi, Director, Clinical Research Department, Mie Chuo Medical Center	
Tottori Research Group	KOEDA Tatsuya, Professor, Faculty of Regional Sciences, Tottori University	
Neurobehavior Observation Group	SAKAKIBARA Youichi, Professor, Research Center for Child and Adolescent Development and Education, Ochanomizu University	
Developmental Psychology Group	KAWAI Masatoshi, Professor, Mukogawa Women's University Institute for Education	
Cognitive Testing Group	ITAKURA Shoji, Associate Professor, Graduate School of Letters, Kyoto University	
Neuro-imaging Group	SADATO Norihiro, Professor, National Institute for Physiological Sciences, National Institutes of Natural Sciences	
Indicator Development Group	ANME Tokie, Professor, Graduate School of Comprehensive Human Sciences, University of Tsukuba	
Sleep Team	MATSUISHI Toyojiro, Professor, School of Medicine, Kurume University	
Behavior Measurement Group	KAWAGUCHI Hideo, Senior Researcher, Basic Research Laboratory, Hitachi, Ltd.	
Information Statistics Group	MAEDA Tadahiko, Associate Professor, The Institute of Statistical Mathematics, Inter-University Research Institute Corporation Research Organization of Information and Systems(ROIS)	
Neuroethics Research Group	SAKURA Osamu, Professor, III Faculty, The University of Tokyo	

○ "Brain Science and Education" R&D Program

	R&D Project Name	Principal Investigator	Period
Ⅰ	R&D in development of prefrontal cortex functions development and improvement systems	KAWASHIMA Ryuta, Professor, New Industry Creation Hatchery Center, Tohoku University	2002.1-2004.12
	Study of human communication functions development process	SADATO Norihiro, Professor, Division of Cerebral Integration, Department of Cerebral Research, Institute of Physiology, National Institutes Physiological Sciences	2002.1-2004.12
	Study of the critical age of child care and education from the viewpoint of neural circuit development	SEGAWA Masaya, Director, Segawa Neurological Clinic for Children	2002.1-2004.12
	Brain imaging research related to establishment and evaluation of intelligent learning	NIKI Kazuhisa, Senior Researcher, Cranial Nerve Information Research Group, National Institute of Advanced Industrial Science and Technology (AIST)	2002.11-2005.10
	Elucidation and application of the molecular basis of postnatal development of learning mechanisms	MANABE Toshiya, Professor, The Institute of Medical Science, The University of Tokyo	2002.11-2005.10
	Foundations of learning, memory, cognition and motivation and school non-attendance	MIIKE Teruhisa, Professor, School of Medicine, Kumamoto University	2002.11-2005.10
	Effects of environmental stimuli such as media on the development of frontal lobe functions*	SAWAGUCHI Toshiyuki, Professor, Faculty of Medicine, Hokkaido University	2003.10-2006.11
	Elucidation of brain mechanisms of learning difficulties and development and evaluation of educational support programs	MASATAKA Nobuo, Professor, Primate Research Institute, Kyoto University	2003.10-2006.9
	Study on the interaction between genetic and environmental factors in developmental disorders	MOMOI Mariko, Professor, School of Medicine, Jichi Medical University	2003.10-2006.9
	Mechanisms of face recognition: elucidation of its functional development and learning effects	KAKIKI Ryusuke, Professor, National Institute for Physiological Sciences, National Institutes of Natural Sciences	2004.12-2007.11
	Elucidation of spoken language perception mechanisms and applications to English education	KOYAMA Sachiko, Assistant Professor, Research Institute for Electronic Science, Hokkaido University	2004.12-2007.11
	Non-invasive analysis of non-verbal communication between mother and child	SHINOHARA Kazuyuki, Professor, Graduate School of Biomedical Sciences, Nagasaki University	2004.12-2007.11
Ⅱ	Infant and infant growth longitudinal study using the twin method	ANDO Toshiyasu, Professor, Faculty of Letters, Keio University	2004.12-2009.11
	Elucidation of social development mechanisms: A cohort study of the autism spectrum and typical development	KAMIO Yoko, Director, Department of Child and Adolescent Mental Health, National Institute of Mental Health, National Center of Neurology and Psychiatry	2004.12-2009.11
	Cohort study to improve brain functions of the elderly and learning disabilities	KAWASHIMA Ryuta, Professor, Institute of Development, Aging and Cancer, Tohoku University	2004.12-2009.11
	Integrated study of language development, brain growth and language education	HAGIWARA Yuko, Professor, Graduate School of Humanities, Tokyo Metropolitan University	2004.12-2009.11
	Development of biomental technology for education support	ROKUTAN Kazuhito, Professor, Graduate School of Health Biosciences, Tokushima University	2004.12-2009.11
	Cohort study of brain mechanisms of motivation and learning efficiency using non-invasive brain function measurements	WATANABE Yasuyoshi, Director, RIKEN Center for Molecular Imaging Science; Professor, Graduate School of Medicine, Osaka City University	2004.12-2009.11

*Mid-project termination due to an inability to continue the research set-up

Ⅰ: Proposals of options to solve social problems.

Ⅱ: Research until validation into specific technologies and methods that contribute to solving social problems.

● "Science Technology and Humanity" R&D Focus Area (FY2005-2012)

Program Supervisor: MURAKAMI Yoichiro, President, Toyo Eiwa University

○ R&D Program: Science and Technology, Literacy in the 21st Century (FY2005-2009)

R&D Project Name	Principal Investigator	Period
A Study for Public Understanding and Response to Climate Change Issues	AOYAGI-USUI Midori, Senior Researcher, Social and Environment Systems Division, National Institute for Environmental Studies	2005.12-2008.11
Expanding Literacy for Citizen-based Nature Revitalization and Local Community Revitalization Using Satellite Image Information	KAMIBAYASHI Norihisa, Senior Research Scientist, Research Department, Remote Sensing Technology Center of Japan	2005.12-2008.11
A Study of Basic Terminology as Citizen's Science and Technology Literacy	SAMAKI Takeo, Professor, Faculty of Bioscience and Applied Chemistry, Hosei University	2005.12-2008.11
Basic Research for Improving and Maintaining the Science and Technology Literacy of Citizens	TAKIKAWA Yoji, The Chairman of the NPO : Galileo Science Workshop	2005.12-2008.3
The Formation of Citizen Patronage for Science	TODAYAMA Kazuhisa, Professor, Graduate School of Information Science, Nagoya University	2005.12-2008.11
Interactive Enhancement of Researchers' Social Literacy and Laypeople's Science Literacy	MATSUI Hirokazu, Professor, Research Faculty of Agriculture, Hokkaido University	2005.12-2008.11
Improvement of Science and Technology Literacy Among Young Generations by Researchers Engaged in Cutting-edge Technology	OSHIMA Mari, Professor, Interfaculty Initiative in Information Studies, University of Tokyo	2006.12-2009.11
Learning Science for Science Learning	OTSUKA Hiroko, Researcher, Computational linguistics Division,The Institute of Behavioral Sciences	2006.12-2009.11
Scientific literacy surveys to identify various literacy characteristics within the public, and development of educational programmes matched to those characteristics	SAIJO Miki, Professor, Integrated Research Institute, Tokyo Institute of Technology	2006.12-2009.11
Enhancing Neuroscience Literacy through the Use of a Textbook Designed for both Humanities and Science Students	NOBUHARA Yukihiro, Professor, Graduate School of Arts and Sciences, University of Tokyo	2006.12-2009.11

○ R&D Program: Interaction between Science, Technology and Society (FY2007-2012)

R&D Project Name	Principal Investigator	Period
Innovation and Institutionalization of Technology Assessment in Japan: Dealing with Nanotechnologies	SHIROYAMA Hideaki, Professor, Graduate School of Public Policy, The University of Tokyo	2007.10-2011.3
Development of a Sustainable Community Management System Introducing Energy Conversion Technology for Forest Resources	NASU Seigo, Professor, Kochi University of Technology / Director of Research Center for Social Management Systems/ Director of School of Management	2007.10-2011.3
Development of Medical Care Based on Convinced Validities from Multiple Viewpoints - Clinical Assessment through Integrated Application of Ubiquitous Vision and Conversation Analysis in a Field of Tertiary Acute Care -	YUKIOKA Tetsuo, Professor and Chairman, Department of Emergency and Critical Care Medicine, Tokyo Medical University	2007.10-2012.3
Research Project on the Deliberation and Cooperation between Citizens and Scientists (DeCoCiS)	HIRAKAWA Hideyuki, Associate Professor, Center for the Study of Communication-Design (CSCD), Osaka University	2007.10-2012.3
The Nagahama Rules for Genome Epidemiology Studies Open to the Community	AKASHI Keiko, Section sub-leader, Nagahama City Health and Welfare Division Health Promotion Section	2007.10-2012.9
Promotion of Dialogue for Policy Making: Case of the Long-term Significant Reduction in Green House Gases Emissions	YAGISHITA Masaharu, Professor, Graduate School of Global Environmental Studies, Sophia University	2008.10-2012.3
Construction of a Pragmatic Scientist Community Contributing to the Stakeholder-driven Management of the Local Environment	SATO Tetsu, Professor, Faculty of Tourism and Environmental Studies, Nagano University	2008.10-2012.9
Establishment of the Social System for the Healthy Coastal Sea Environment (Creation of "Sato-umi")	YANAGI Tetsuo, Professor, Research Institute for Applied Mechanics, Kyushu University	2008.10-2012.9
Remodeling Interactive Risk Communication based on Actor' s Spontaneous Cooperation (RIRiC)	IIZAWA Riichiro, Professor, Research Faculty of Agriculture, Hokkaido University	2009.10-2012.9
Autism-friendly Society : A Search for Reconciling Coexistence with and Cure of Autism	OI Manabu, Professor, School of Teacher Education, Kanazawa University	2009.10-2012.9
Establishment of the "Science Media Centre of Japan" as an Information Hub for Science and Technology	SEGAWA Shiro, Professor, Faculty of Political Science and Economics, Waseda University	2009.10-2012.9
Legal Decision-making under Scientific Uncertainty	NAKAMURA Tamiko, Lawyer, Lybra Law Office	2009.10-2012.9

● "Protecting Children from Crime" R&D Focus Area (FY2007-2012)

Program Supervisor: KATAYAMA Tsuneo, Professor, Tokyo Denki University

R&D Project Name	Principal Investigator	Period
Proposal of "Agencies Linkage" Model for Protecting Children against Crimes	ISHIKAWA Masaoki, Professor, Faculty of Law, Waseda University	2009.10-2012.3
An Educational Program to Promote Children's Interpersonal-relationship Competence for Crime Prevention	KOIZUMI Reizo, Professor, Graduate School, Fukuoka University of Education	2009.10-2012.9
Establishment of Supporting Regional Systems for Children: Prevention of Victimization and Criminal Offenses	TSUJII Masatsugu, Visiting Professor, Research Center for Child Mental Development, Hamamatsu University of Medicine/ Professor, Faculty of Sociology, Chukyo University	2009.10-2012.9
A Study on the Extraction and Monitoring Methods of Harmful Information for Children on the Bulletin Board System	NAKAMURA Kenji, Research Assistant, Department of Computer Science College of Information Science and Engineering, Ritsumeikan University	2009.10-2011.3
Research on the Construction of a Crime Prevention Network in the Local Community through Theatre Workshop	HIRATA Oriza, Professor, Center for the Study of communication-Design, Osaka University	2009.10-2012.9
Development of Civil Instructor Support System for Website Use by Children	SHIMODA Taichi, Chairperson of the Board of Directors, Association of Media Study (nonprofit organization)	2008.10-2012.9
Training Program for Video Recorded Interview with Children in Forensic Contest	NAKA Makiko, Professor of Graduate School of Letters, Hokkaido University	2008.10-2012.9

Completed Projects List

R&D Project Name	Principal Investigator	Period
Development of Advanced Information Technology and Applications for Intentional Injury Prevention	YAMANAKA Tatsuhiro, Director, Injury Prevention Engineering Research Team (IPERT), Digital Human Research Center, National Institute of Advanced Industrial Science and Technology / Director, Ryokuen Children's Clinic	2008.10-2012.9
Development of Support Systems for Community Safety Planning	YAMAMOTO Toshiya, Professor, Department of Science and Technology, Meiji University	2008.10-2012.9
HEART RENAISSANCE: Development of Safety Networks for Children in Our Society through Technology and Human Relationships	IKEZAKI Mamoru, Director, Sakai Hill-Front Forum (nonprofit organization)	2007.10-2011.3
Research and Development (R&D) Project for Learning Systems in Crime Prevention	SAKAMOTO Takashi, President, Japan Association for Promotion of Educational Technology (JAPET)	2007.10-2011.3
Establishing an Empirical Basis to Measure and Prevent Crimes against Children	HARADA Yutaka, Director, Department of Criminology and Behavioral Sciences, National Research Institute of Police Science (NRIPS)	2007.10-2011.9
Development of e-Learning System for the Safety of Children against Crimes	FUJITA Daisuke, Professor, National Mental Support Center for School Crisis, Osaka Kyoiku University	2007.10-2012.9

● "Community-Based Actions against Global Warming and Environmental Degradation" R&D Focus Area (FY2008-2013)

Program Supervisor: HORIO Masayuki, Professor Emeritus, Tokyo University of Agriculture and Technology/ Professor, Ryukoku University

	R&D Project Name	Principal Investigator	Period
Ⅰ	Sustainable Rural Development : Green Transportation for Mountainous Villages	OBINATA Toshio, The Chief Director of NPO Mamettee KINASA	2010.10-2013.9
	Proof study of the eco-service business model in the area that cooperated with an urban area	KAMEYAMA Hideo, Professor, Graduate School of Technology Management, Tokyo University of Agriculture and Technology	2010.10-2012.9
	Model Study toward Local Carbon Society in Existing Urban Districts of Environment Model City	MIYAZAKI Akira, Professor, Graduate School of Business and Environment, Kyushu International University	2010.10-2013.9
Ⅱ	Development of Social Structure Promoting I/U-turn and Nurturing New Industries All Those Involved	SHIMATANI Yukihiro, Professor, Department of Urban and Environmental Engineering Faculty of Engineering, Kyushu University	2010.10-2013.9
	Style B : Social Life in Circulation of Local Resources	TANOUCHI Hiroyuki, Visiting Researcher, Forestry and Forest Products Research Institute	2010.10-2013.9
	Formation of Regional System for Local Public Human Resources Development and Renewable Energy Use	SHIRAISHI Katsutaka, Professor, Faculty of Policy Science, Ryukoku University	2010.10-2013.9
	Formation of Low-carbon Bunkyo City by Inducing Voluntary Actions	HANAKI Keisuke, Professor, School of Engineering, The University of Tokyo	2010.10-2013.9
Ⅰ	Study on Integrated Policy to Promote Local Renewable Energy & Its Financial Scheme for Realization by Strategic Alliance with Metropolitan Government and Rural Area Government	FUNABASHI Harutoshi, Professor, Faculty of Social Sciences, Hosei University	2009.10-2012.9
Ⅱ	From Forests to Houses : Co-realization of Carbon Abatement and Comfortable Life to 2050	TANAKA Yu, Director of Tennenjyutaku	2009.10-2013.9
Ⅰ	Development of the Method of Evidence-based Analysis for Regional Sustainability in Economy and Environment (DEMARS)	KURODA Masahiro, President, Tohoku University of Community Service and Science(～2012/3/31), Principal Fellow, CRDS, JST, Professor Emeritus, Keio University	2008.10-2012.3
	Development of Techniques and Theories for the Integrated Restoration and Revitalization of Local Commons	KUWAKO Toshio, Professor, Graduate School of Decision Science and Technology, Tokyo Institute of Technology	2008.10-2013.9
	Proposing a Scenario and Road Map to Realize a Nature Friendly Society Model for the Sustainable Shiga	NAITO Masaaki, Director, Lake Biwa Environmental Research Institute	2008.10-2012.3
	Feasibility study of the eco-service business model using eco-point system	KAMEYAMA Hideo, Professor, Tokyo University of Agriculture and Technology	2008.10-2010.9
Ⅱ	To Establish Regional Community System that Exits from Inducing Global Warming through Introducing Micro Hydro Power	KOMAMIYA Hiroo, Chairman of the NPO Renaissance Agency	2008.10-2013.9
	Construction of the Town of Kiryu for the Future with Anti-Global-Warming through the Regional Power	TAKARADA Takayuki, Professor, Graduate School of Engineering, Gunma University	2008.10-2013.9
	Creating a Low-carbon Production, Retail & Shopping System for Nagoya	NAGATA Junko, Associate Professor, Graduate School for Creative Cities, Osaka City University	2008.10-2013.9
	"Sato-model" Escaping from Global Warming in Mountainous Region - A Challenge of a Small Village to Share Nature-based Community among a Wide-range of People	FUJIYAMA Ko, Research Producer, Mountainous Region Research Center	2008.10-2013.9
	Distributed Local Energy System for Realization of Sustainable Society in Rural Areas in Tohoku Region, Japan	MOROZUMI Kazuo, Professor, Graduate School of Agricultural Science, Tohoku University	2008.10-2010.3

Ⅰ: Project that conducts survey and research necessary to solve the above-mentioned problems and provides options as well as policy recommendations
Ⅱ: Project that aims to develop and demonstrate technologies (systems) and techniques necessary to solve the above-mentioned problems using the PDCA cycle for self-assessment, at least once during the research period

● "Redesigning Communities for Aged Society" R&D Focus Area (FY2010-2015)

Program Supervisor: AKIYAMA Hiroko, Professor, Institute of Gerontology, University of Tokyo

	R&D Project Name	Principal Investigator	Period
Ⅰ	Promoting Public Consciousness of Decision-making on Elderly Care	SHIMIZU Tetsuro, Professor, Graduate School of Humanities and Sociology,The University of Tokyo	2012.10-2015.9
	Health Care Decision-making Support for People with Dementia in Japan	NARUMOTO Jin, Associate Professor, Kyoto Prefectural University of Medicine	2012.10-2015.9
Ⅱ	Housing and Healthy Aging	IKAGA Toshiharu, Professor,Keio University	2012.10-2015.9
	Network Community for Refugees Dispersed in a Wide Area	SATOH Shigeru, Professor, Waseda University	2012.10-2015.9
	Community Design for Preventing Dementia	SHIMADA Hiroyuki, Chief, Department of Preventive Gerontology, National Center for Geriatrics and Gerontology	2012.10-2015.9
	Community design by functional integration for 2030	OGAWA Takeo, President, Specified Nonprofit Corporation Asian Aging Business Center	2012.10-2015.9
Ⅱ	Expanding Social Capital in a Community by Utilizing Assistive Technology for Walking	NAKABAYASHI Minako, Associate Professor, Graduate school of Medical and Pharmaceutical Sciences for Research, Toyama University	2011.10-2014.9
	Community Design for Temporal Housing Sites in the Tsunami Stricken Area	OKATA Junichiro, Professor, School of Engineering, The University of Tokyo	2011.10-2014.9
	Development of a Community-based Comprehensive System for Prevention of Frailty in Late Life	SHINKAI Shoji, Leader,Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology	2011.10-2014.9
	Innovations in Age-friendly Farming	TERAOKA Shingo, Professor, NARA Women's University	2011.10-2014.9
	Founding the Center for Usability and Aging Research (CUAR) with senior citizens	T. HARADA Etsuko, Professor, Institute of Psychology, University of Tsukuba	2011.10-2014.9
Ⅰ	Development of an Area Diagnosis Tool for Promoting Home Medical Care	OTA Hideki, Chief Director, Medical Corporation ASMss	2010.10-2013.9
	Development of a New "Index of Competence" Reflecting Improved Health Status of the Elderly	SUZUKI Takao, Director, Research Institute National Center for Geriatrics and Gerontology	2010.10-2013.9
Ⅱ	Aging in Place with ICT	OGAWA Akiko, Professor, Iwate Prefectural University	2010.10-2013.9
	Senior Citizens' New Career Model in the Community	TSUJI Tetsuo, Professor, Institute of Gerontology, The University of Tokyo	2010.10-2013.9

Ⅰ : Projects whose goal is to provide options for resolving social problems (the approach to R&D, organization of indicators, etc. for scientific evaluation)
Ⅱ : Projects whose goal is to go all the way to experimental proof of specific technologies, methods etc. to help resolve social problems

● Service Science, Solutions and Foundation Integrated Program (FY2010-2016)

Program Supervisor: DOI Norihisa, Professor Emeritus, Keio University

	R&D Project Name	Principal Investigator	Period
A	Empirical Research on Co-creative Skill E-learning Service with Visualization of Experience Value	ASAMA Hajime, Professor, Department of Precision Engineering, School of Engineering, The University of Tokyo	2013.10-2016.9
	Construction of foundation for smart social service systems, creating secure and safe community through the advancement of emergency medical care	HAMAGAMI Tomoki, Professor, Faculty of Engineering, Yokohama National University	2013.10-2014.3
B	A method for value co-creation in higher education by enhancing provider's competency and receiver's literacy	SHIMOMURA Yoshiki, Professor, Department of System Design, Tokyo Metropolitan University	2013.10-2016.9
	Service System Categorization based on Value Creation Models and Design Theory of Service Mechanism	NISHINO Nariaki, Associate Professor, School of Engineering, The University of Tokyo	2013.10-2016.9
A	Development of Adaptive Service Model with Co-creative Design under Dynamic Environment - Application into Restaurant service -	KAIHARA Toshiya, Professor, Graduate School of System Informatics, Kobe University	2012.10-2015.9
	Museum Experiences and Service Science	NAKAKOJI Kumiyo, Professor, Unit of Design Center for the Promotion of Interdisciplinary Education and Research, Kyoto University	2012.10-2015.9
	IT-enabled Novel Societal Service Design	NAKASHIMA Hideyuki, Professor Emeritus, Future University Hakodate	2012.10-2015.9
	Development and Practical Application of a "Human Resource Development and Evaluation Service" based on On-site Evaluation of Quality of Care by Using IT Platform	MURAI Jun, Dean/ Professor, Faculty of Environment and Information Studies, Keio University	2012.10-2015.9
B	A Co-creation Measurement for Financial Services: Scale Development and Validation	TOYA Keiko, Professor, Graduate School of Global Business, Meiji University	2012.10-2015.9
A	Quantitative Valuation and Demand-oriented Provision of Irrigation Service	IIDA Toshiaki, Associate Professor, Graduate School of Agricultural and Life Sciences, The University of Tokyo	2011.10-2014.9
	Realizing Multilingual Communication Environments based on Service-Oriented Collective Intelligence	ISHIDA Toru, Professor, Graduate School of Informatics, Kyoto University	2011.10-2014.9
B	Analyzing Fundamentals of Japanese Creative Services and Its Application to Global Service Enhancement	KOBAYASHI Kiyoshi, Professor and Director, Center for Research of Business Administration, Graduate School of Management, Kyoto University	2011.10-2014.9
	Research on the Service Science of actualizing Altruism-driven Society; focusing on the suicide prevention activities	TATEOKA Yasuo, Professor, Graduate School of Engineering, Shizuoka University	2011.10-2013.7
	Research on Patient Satisfaction with Medical Care Services in Consideration of 'Benefit Delay' Effect	FUJIMURA Kazuhiro, Professor, Faculty of Economics, Kagawa University	2011.10-2014.9
A	Innovation for Service Space Communication by Voice Tweets in Nursing and Caring	UCHIHIRA Naoshi, Professor, School of Knowledge Science, Japan Advanced Institute of Science and Technology	2010.10-2013.9
	Visualization and Support of Value Co-creation at Industrial Clusters by Service Systems Modeling	KIJIMA Kyoichi, Professor, Department of Value and Decision Science, Graduate School of Decision Science and Technology, Tokyo Institute of Technology	2010.11-2013.3

Completed Projects List

	R&D Project Name	Principal Investigator	Period
B	Architecting Service with Customer Participation Based on the Analysis of Customer Experience and Design Processes: Sophisticating Tour Design Processes as a Case Study	HARA Tatsunori, Associate Professor, Research into Artifacts, Center for Engineering, The University of Tokyo	2010.10-2013.9
	Context Management Approach to Service Value Co-Creation Model	FUJIKAWA Yoshinori, Associate Professor, Graduate School of International Corporate Strategy, Hitotsubashi University	2010.10-2013.9

A: Solution-oriented "Service Science" Research, in which the research starts with the resolution of specific service-related problems
B: Foundation-oriented "Service Science" Research, in which the research starts from "Service Science" research element

● "Creating Community-based Robust and Resilient Society" R&D Focus Area (FY2012-2017)

Program Supervisor: HAYASHI Haruo, Professor, Research Institute for Disaster Reduction Systems, Disaster Prevention Research Institute, Kyoto University

	R&D Project Name	Principal Investigator	Period
Ⅰ	Producing Explicit　Knowledge of Community Resilience for Disaster Management in Remote Islands	OKAMURA Jun, Professor, Faculty of Nursing, Japanese Red Cross Kyushu International College of Nursing	2014.10-2017.9
	Development of LODE Method for Improving Self Protection and Resilience against Large-scale Disasters in Modern Communities	KURAHARA Munetaka, Professor, Department of Policy Studies, Iwate Prefectural University	2014.10-2017.9
	Creating a Community to Secure the Coexistence of Human and Animal by Improving Disaster Animal Resilience	HAYAMA Shin-ichi, Professor, School of Veterinary Medicine, Nippon Veterinary and Life Science University	2014.10-2017.9
	Construction of Peer Support Communities for Disaster Workers	MATSUI Yutaka, Professor, Faculty of Human Sciences, University of Tsukuba	2014.10-2017.9
	Development of a Healthcare Area Disaster Resilience Management System Model	MUNECHIKA Masahiko, Professor, Faculty of Science & Engineering, Waseda University	2014.10-2017.9
Ⅱ	Intergenerational and Interregional Risk Communication through Disaster Evacuation Map	KINOSHITA Isami, Professor, Graduate School of Horticulture, Chiba University	2014.10-2017.9
Ⅰ	A Proposal of Planning Methods for Creating Resilient Metropolitan Areas	HIROI U, Associate Professor, School of Engineering The University of Tokyo	2013.10-2016.9
	Planning Process of Land Use Models for Sustainable Tsunami Resilience and "Regional Inheritance"	YAMANAKA Hideo, Professor, Institute of Technology and Science, The University of Tokushima	2013.10-2016.9
Ⅱ	Disaster Medical Outreach for Urban Communities: An Integrated Approach	OHTA Shoichi, Affiliate Professor, Department of Emergency and Critical Care Medicine, Tokyo Medical University	2013.10-2016.9
	Optimal Life Recovery Assistance for Publicly Rented Temporary Housing Dwellers in Wide Dispersed Areas	TATSUKI Shigeo, Professor, Department of Sociology, Doshisha University	2013.10-2016.9
	Creating Community-Based Disaster Reduction System in the Catastrophic Disaster Area by Protecting the Member of Local Voluntary Organizations	MATSUO Ichiro, Deputy Director, Research Institute for Disaster Mitigation and Environmental Studies	2013.10-2016.9
Ⅰ	Development of Support Model for Agriculture and Forestry Land Conservation and Resilience after Flooding Disaster in Hilly and Mountainous Areas	ASAHIRO Kazuo, Associate Professor, Environment and Heritage Design, Faculty of Design, Kyushu University	2012.11-2015.10
Ⅱ	Redevelopment of Tsunami Impacted Coastal Region to Save Life and to Implement Disaster Resilient Community	ISHIKAWA Mikiko, Professor, Faculty of Science and Engineering, Chuo University	2012.11-2015.10
	Development of a Disaster Management Support System Based on Computer-assisted Structuring of Disaster Information	INUI Kentaro, Professor, Research Organization of Electrical Communication, Tohoku University	2012.11-2015.10
	Development of Comprehensive Disaster Mitigation Project of "Preservation Districts for Groups of Traditional Buildings"	YOKOUCHI Hajime, Associate Professor, National Institute of Technology, Oyama College	2012.11-2015.10
The Kumamoto Earthquakes	Agricultural Aid and Farmland Restoration Volunteer System Install Support to the Kumamoto Earthquake Site	ASAHIRO Kazuo, Associate Professor, Environment and Heritage Design, Faculty of Design, Kyushu University	2016.9-2017.3
	Earthquake Recovery in Community-Dependent Historic Towns	YOKOUCHI Hajime, Associate Professor, National Institute of Technology, Oyama College	2016.9-2017.3
	Community-Based Reconstruction and Recovery of Cultural Landscape After the Kumamoto Earthquakes	ISHIKAWA Mikiko, Professor, Faculty of Science and Engineering, Chuo University	2017.7-2018.3

Ⅰ: Projects whose goal is to provide options for resolving social problems (the approach to R&D, organization of indicators, etc. for scientific evaluation)
Ⅱ: Projects whose goal is to go all the way to experimental proof of specific technologies, methods etc. to help resolve social problems
※ The Kumamoto Earthquakes: Promotion of Social Implementations of Solutions Related to the Kumamoto Earthquakes

● Implementation-Support Program (Call for proposal Type) (FY2007-2020)

Program Supervisor: TOMIURA Azusa, Former Auditor, Tokyo Institute of Technology

Project Name	Principal Investigator	Period
An implementation of a universal prevention program for mental health in elementary school	ISHIKAWA Shin-ichi, Professor, Faculty of Psychology, Doshisha University	2017.10-2021.3
Implementation of disaster animal management assistance system	HAYAMA Shin-ichi, Professor, School of Veterinary Medicine, Nippon Veterinary and Life Science University	2017.10-2021.3
Implementation of a disaster medical assistant drill program with citizens	YODA Ikushi, Senior Research Scientist, Human Informatics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST)	2017.10-2020.3
Implementation of the early intervention model based on evidence for children with developmental disabilities tackled with parents	KUMA Hitomi, Joint representative, Human Resource Development Division, ADDS	2016.10-2020.3
Implementing systems for promoting the introduction and the utilization of low energy-consuming products and people's energy conservation behaviors	YOSHIDA Yoshikuni, Professor, Graduate School of Frontier Sciences, The University of Tokyo	2016.10-2020.3
Implementation of integrated care system of Behavior analysis data of the elderly and Information obtained from doctors, public health nurses, and life support counselors for Elderly people living in temporary housing in the affected areas of the Kumamoto earthquake	SHIROUZU Mako, Associate Professor, Faculty of Administration, Prefectural of University of Kumamoto	2016.10-2018.9
The implementation of the Kizkey system to assist high-quality nursing care services	SHINJO Atsushi, Professor, Faculty of Environment and Information Studies, Keio University	2016.10-2019.9
Implementation of wide-area cooperated information utilization support mechanism for recovery from Kumamoto earthquake	SUZUKI Shingo, Deputy Manager Research Fellow, Disaster Resilience Research Division, National Research Institute for Earth Science and Disaster Resilience	2016.10-2018.9

Project Name	Principal Investigator	Period
Implementation of Irrigation Information Service Systems for Large-scale Rice Farmers	IIDA Toshiaki, Associate Professor, Graduate School of Agricultural and Life Sciences , The University of Tokyo	2015.10-2018.3
Advanced Medical Image Diagnosis Support System Implementation	KIN Taichi, Assistant Professor, Department of Neurosurgery, The University of Tokyo	2015.10-2018.9
Implementation of a Disaster Warning System for Landslide and Avalanche using Thinned Wood	SHIMOI Nobuhiro, Professor, Department of Machine Intelligence and Systems Engineering, Akita Prefectural University	2015.10-2018.9
Implementation of ADHD Children Support System using functional NIRS	DAN Ippeita, Professor, Faculty of Science and Engineering, Chuo University	2015.10-2019.3
Social Implementation of Dementia Prevention Program using Neuronal Activity Topography	TANAKA Mieko, Senior Researcher, Brain Functions Laboratory, Inc.	2014.10-2016.3
Lecture Assistance for Deaf High School Students by Remote Texting using Personal Computer	TAMADA Masami, Chairman, Bilingual and Bicultural Education Center of Deaf Children	2014.10-2017.9
Platform Foundation and Social Implementation of Computer-aided Tour Planning Technologies That Contribute to Both Tourists and Local Communities	HARA Tatsunori, Associate Professor, RACE(Research into Artifacts, Center for Engineering), The University of Tokyo	2014.10-2017.9
Practical Utilization of Multi-dimensional Scale for PDD and ADHD (MSPA) across the Medical, Education and Social Field	FUNABIKI Yasuko, Associate Professor, Graduate School of Human and Environmental Studies, Kyoto University	2014.10-2017.9
Social Implementation of Evidence Based School Social Working Model	YAMANO Noriko, Professor and Director, Research Institute for Evaluation Support of School Social Work, Osaka Prefecture University	2014.10-2017.9
Social Implementation of Screening for Sleep Apnea to prevent Traffic Accidents by Drowsy Driving	TANIGAWA Takeshi, Professor and Chairman, Graduate School of Medicine Department of Public Health, Juntendo University	2013.10-2016.9
Senior Citizens' New Career Model in the Community	TSUJI Tetsuo, Professor, Institute of Gerontology, the University of Tokyo	2013.10-2016.9
Implementation of Shelter Guidance System for Commuters who are unable to return home based on Structural Health Monitoring of tall buildings after large-scale earthquake	MITA Akira, Professor, Department of System Design Engineering, Keio University	2013.10-2016.9
Social Implementation of Powered Glove for People with Hand Disability	MOROMUGI Shunji, Associate Professor, Department of Electrical, Electronic, and Communication Engineering, Faculty of Science and Engineering, Chuo University	2013.10-2016.9
A Widespread Use of an Easy-to-use Eye-gaze-tracking Device to Detect Earliest Signs of Developmental Disorder Will Help More Children to be Diagnosed Correctly, Providing Them Opportunities of an Appropriate Clinical Intervention Earliest Possible.	KATAYAMA Taiichi, Dean, United Graduate School of Child Development, Osaka University, Kanazawa University, Hamamatsu University school of medicine, Chiba University and University of Fukui	2012.10-2015.9
Implementation of School-based Social and Emotional Learning Programs for Crime Prevention	KOIZUMI Reizo, Professor, Division of Professional Practice in Education, Graduate School of Education, Fukuoka University of Education	2012.10-2015.9
Improved Breeding and Saturation Level of Guide Dog for the Blind	SUZUKI Hiroshi, Professor, Director General, National Research Center for Protozoan Diseases, Obihiro University of Agriculture and Veterinary Medicine	2012.10-2015.9
Risk Assessment of Coastal Area by Geochemical Discrimination of Tsunami Sediments and its Social Influence	TSUCHIYA Noriyoshi, Professor, Graduate School of Environmental Studies, Tohoku University	2012.10-2015.9
The Sustainable Agricultural Production System for Reducing Environmental Load	HAYASHI Masahiro, Professor, Organization for Innovation and Social Collaboration, National University Corporation Shizuoka University,	2012.10-2015.9
Promoting Decentralized Energy Use and Creating Environmental Business in Rural Areas	MOROZUMI Kazuo, Professor, Nodai Research Institute, Tokyo University of Agriculture	2012.10-2015.9
Clinical Application of Dielectrophoretic Cell-identification Facilitating Early Diagnostics for Acute Leukemia	IMASATO Hiroko, Senior Researcher, Fuzzy Logic Systems Institute	2011.10-2014.9
Social Implementation of Support Underwear for Prevention and Improvement of Women's Urinary Incontinence	OKAYAMA Hisayo, Associate Professor of Maternity Nursing and Midwifery,Faculty of Nursing, Shiga University of Medical Science	2011.10-2014.9
Social Implementation of Self-supporting Digital Glass for Visual Field Defect	SHIMOMURA Yuko, Professor, Vice Chief of Education & Research Promotion Center, Kinjo University	2011.10-2014.9
Social Implementation of a Car-driving Assist System for Handicapped Persons	WADA Masayoshi, Associate Professor, Institute of Engineering, Tokyo University of Agriculture and Technology	2011.10-2014.9
Web-based Support System for Child Care	ANME Tokie, Professor, Faculty of Medicine, University of Tsukuba	2010.10-2013.9
Development of Life Recovery Support System for a Possible Tokyo Metropolitan Earthquake	HAYASHI Haruo, Professor, National Research Institute for Earth Science and Disaster Prevention	2010.10-2012.5
	TAMURA Keiko, Professor, Risk Management Office, Headquarters for Risk Management, Niigata University	2012.6-2013.9
Ambulatory Voiding in the Elderly Based on Functional Assessment	HOMMA Yukio, Professor, Department of Urology, Graduate School of Medicine, The University of Tokyo	2010.10-2013.9
School Zone Lighting for Prevention of Light Pollution in Agricultural Products	YAMAMOTO Haruhiko, Professor, Faculty of Agriculture, Yamaguchi University	2010.10-2013.9
Social Implementation of an Early Intervention System for Children with Developmental Disorders and Their Families	KAMIO Yoko, Director of Department of Child and Adolescent Mental Health, National Institute of Mental Health, National Center of Neurology and Psychiatry	2009.10-2012.9
Organization of a Tidal Flat Restoration System with Citizen Participation to Restore the Natural Environment of Ago Bay	KOKUBU Hideki, Researcher, Mie Prefecture Fisheries Research Institute	2009.10-2012.9
Implementation of a System for the Evaluation of Ambulatory Ability within Local Government Bodies to Prevent the Stumbling of Elderly People	SHIOZAWA Naruhiro, Associate Professor, College of Business Administration, Ritsumeikan University	2009.10-2012.9
Implementation of the Building Damage Evaluation and Household Recovery Support Systems for Local Governmental Post-Disaster Operations	TANAKA Satoshi, Associate Professor, Graduate School of Environment and Disaster Research, Fuji Tokoha University	2009.10-2012.9
The Social Setting of New Human Services to Prevent Child Abuse in Collaboration with Local Child Guidance Centers	NAKAMURA Tadashi, Professor, Graduate School of Science for Human Services, Ritsumeikan University	2009.10-2012.9
Diffusion of Ubiquitous IT Based Logistic Management System for Sustainable Utilization of Regional Timber Resources	YASHIRO Tomonari, Professor, Institute of Industrial Science, University of Tokyo	2008.10-2011.9
Construction of Oil Spill Response System by Collaborating Stakeholders Preparing Sakhalin Oil and Gas Development	GOTO Shintaro, Professor, Dept. of Environmental Systems, Faculty of GEO-Environmental Science, Rissho University	2008.10-2011.9
Rollover Prevention System of Trailer Truck for Contributing to Safer Logistics and Secure Society	WATANABE Yutaka, Professor, Faculty of Marine Technology, Tokyo University of Marine Science and Technology	2008.10-2011.9
Social Implementation of Sustainable Support System that Enables Safe Driving by Elderly Persons over a Long Period	ITO Yasumi, Chief, Section of Assisted Living Technology, Department of Gerontechnology, National Center for Geriatrics and Gerontology, National Institute for Longevity Sciences	2008.10-2011.9

Completed Projects List

	Project Name	Principal Investigator	Period
FY2007	Development of an Efficient and Effective Regional Emergency Medical System	OHSHIGE Kenji, Associate Professor, Department of Public Health, Yokohama City University School of Medicine	2008.4-2011.3
	Establishing a Foothold for Nationwide Expansion of Tsunami Education Using a Comprehensive Tsunami Disaster Scenario Simulator	KATADA Toshitaka, Professor, Department of Civil and Environmental Engineering, Gunma University	2008.4-2012.3
	Diffusion and Popularization of Biodegradation Disposal System for Oil Spill Recovery	[until 2011.3] SAITO Masaki, Chief Researcher, Regional Resources Division, Oita Industrial Research Institute	2008.4-2012.3
		[from 2011.4] KOTANI Kimito, Chief Researcher, Regional Resources Division, Oita Industrial Research Institute	
	Pragmatic Application of an Educational Information-Sharing System for Medical Staff to Prevent Drug-Related Malpractice	SAWADA Yasufumi, Director, Drug Lifetime Management Center	2008.4-2011.3
	Organizing Community Networks which Support Children with Learning Difficulties Through E-learning	MASATAKA Nobuo, Professor, Primate Research Institute, Kyoto University	2008.4-2011.3
The Kumamoto Earthquakes	Implementation of "A Life Recovery Support System" Using the Victim Database for Kumamoto Earthquake Victims	TAMURA Keiko, Professor, Risk Management Office, Headquarters for Risk Management, Niigata University	2016.4-2017.3
	Emergency Implementation for Recovery of Victims' Residence and Life after the 2016 Kumamoto Earthquake	TAMBA Fuminori, Associate Professor, Faculty of Administration and Social Sciences, Fukushima University	2016.6-2017.3
The Great East Japan Earthquake	Program for Integrated Implementation Activities to Improve the Living Environment of Temporary Housing	TAMBA Fuminori, Associate Professor, Faculty of Administration and Social Sciences, Fukushima University	2011.5-2012.3
	Rapeseed (Nanohana) Project for Restoring Tsunami-Salt Damaged Farmland	NAKAI Yutaka, Professor, Graduate School of Agricultural Science, Tohoku University	2011.5-2012.3
	Evaluation of Heavy Metals-Contaminated Soils in the Disaster-Stricken Area	TSUCHIYA Noriyoshi, Professor, Graduate School of Environmental Sciences, Tohoku University	2011.5-2012.3
	Water Purification in Closed Water Area and Recovery of Aquaculture by the Use of Large-Scale Microbubble Generators	OONARI Hirohumi, Professor, National Institute of Technology, Tokuyama College	2011.5-2012.3
	Objective Assessment of Fatigue in Victims of the Great East Japan Earthquake and Their Supporters and Disease Prevention Support	YOSHIDA Toshiko, Professor, School of Nursing, Miyagi University	2011.5-2012.3
	Improvement in Sanitary Conditions in the Areas Affected by the Disaster and Preparation of Resilient City Infrastructure Against Disasters With the Introduction of Portable Urine Diversion Toilets	SHIMIZU Yoshihisa, Professor, Graduate School of Engineering, Kyoto University	2011.5-2012.3

* The Kumamoto Earthquakes: Promotion of Social Implementation of Solutions Related to the Kumamoto Earthquakes
* The Great East Japan Earthquake: Promotion of Social Implementation of Solutions Related to the Great East Japan Earthquake

● Implementation-Support Program (R&D results Integrated Type) (FY2013-2018)

Program Supervisor: ARIMOTO Tateo, Visiting Professor, The National Graduate Institute for Policy Studies (GRIPS)

Project Name	Principal Investigator	Period
Co-creating Communities for Aged Society	TSUJI Tetsuo, Professor, Institute of Gerontology, The University of Tokyo	2016.7-2019.3
Local Co-Innovation approach for against Climate Change	TAKARADA Takayuki, Professor, the Graduate School of Science and Technology, Gunma University	2014.5-2017.3
Collaborative Activity Support for Safe School and Community Based on International Standards	YAMAMOTO Toshiya, Representative Director, Community Design Partners for Children's Safety/ Professor, Faculty of Science and Technology, Meiji University	2013.5-2016.3
Investigation into an alternative process for agenda building in science & technology issues	TANAKA Mikihito, Associate Professor, Graduate School of Political Science, Waseda University / Research Manager, Science Media Centre of Japan	2013.5-2014.3

● "Designing a Sustainable Society through Intergenerational Co-creation" R&D Focus Area (FY2014-2019)

Program Supervisor: OMORI Takashi, Former Chair of Economic Committee, Asia-Pacific Economic Cooperation and Former Professor of Osaka University

Project Name	Principal Investigator	Period
Restoring a Beautiful and Rich Inner Bay through "Fish Local, Eat Local"	OTSUKA Koji, Professor, Graduate School of Humanities and Sustainable System Sciences, Osaka Prefecture University	2016.10-2020.3
Restructuring Local Livelihoods and Fostering Diverse Lifescape through Cooperative Ateliers in Rural Communities	ONUMA Masahiro, Professor, Graduate School of Life Design, Tohoku Institute of Technology	2016.10-2019.9
Revitalizing Streetscapes by Utilization of Vacant Houses and Neighborhood Medical Care	GOTO Haruhiko, Professor, Graduate School of Creative Science and Engineering, Waseda University	2016.10-2020.3
Building a Support System to Public Facility Management for a Sustainable Region	TSUTSUMI Hiroki, Associate Professor, Faculty of Engineering, Maebashi Institute of Technology	2016.10-2020.3
Development of an Intergenerationally Co-creative Community Model of Work-Life Integration	YANAKA Shigeru, Professor, Faculty of Regional Sciences, Tottori University	2016.10-2020.3
Proposals on Intergenerationally Co-creative Models through Donation*	KISHIMOTO Sachiko, Executive Director, Public Resources Foundation	2016.10-2017.9
Regional Revitalization Education by Intergenerational Philosophical Dialogue and Project Learning*	KONO Tetsuya, Professor, College of Arts, Rikkyo University	2016.10-2017.9
An Investigation regarding the Mechanism of Intergenerational Inheritance of Social Capital*	YODO Masato, Associate Professor, Research Center for Advanced Policy Studies, Institute of Economic Research, Kyoto University	2016.10-2017.9
Practical Feedback for the Measurement of Various Aspects of Happiness in Local Areas and the Sustainability of Intergenerational Societies	UCHIDA Yukiko, Professor, Kokoro Research Center, Kyoto University	2015.10-2020.3
Creating an Intergenerational Platform for Utilizing Regional Resources through Sheep Farming	KANETOU Katsuya, Representative Director, Satoumi Farm	2015.10-2018.9

Project Name	Principal Investigator	Period
Distributed Rainwater Management for a Sustainable Well-being Society	SHIMATANI Yukihiro, Professor, Faculty of Engineering, Kyushu University	2015.10-2020.3
Developing a Multi-layered and Intergenerational System of Cooperation in Community	FUJIWARA Yoshinori, Team Leader, Research Team for Social Participation and Community Health, Tokyo Metropolitan Institute of Gerontology	2015.10-2019.3
Creating a Fountain of Future Lifestyle Ideas	FURUKAWA Ryuzo, Professor, Faculty of Environmental Studies, Tokyo City University	2015.10-2019.3
Ensuring Sustainability at Local Government Level through Promoting Implementation of Multigenerational Participatory Stock Management Methods	KURASAKA Hidefumi, Professor, Graduate School of Social Sciences, Chiba University	2014.11-2020.3
Development of Mobility Assist System for the People with Visual Impairment by Collaborative Creation of Multiple Generations	SEKI Yoshikazu, Chief Senior Researcher, Department of Information Technology and Human Factors, National Institute of Advanced Industrial Science and Technology (AIST)	2014.11-2017.11
Evaluation of Effectiveness of Intergenerational Co-creative Community on ME-BYO	WATANABE Kenji, Professor, Faculty of Environment and Information Studies/ School of Medicine, Keio University	2014.11-2018.3

* Comprehensive and horizontal type: To obtain results as a whole area, study the effectiveness of intergenerational co-creation and systems to realize social implementation of research outcomes, with a broad perspective, instead of being limited to a specific geographical area.

● Future Earth Concept Promotion Project (FY2014-2019)

○ Research and study on selection of globally prioritized themes for Japan to be engaged in and on R&D designs for such themes (FY2014.9-2017.3)
TANIGUCHI Makoto, Head of Future Earth Unit, Center for Research Development, Research Institute for Humanity and Nature(RIHN)
○ Transdisciplinary research for solving problems

	R&D Project Name	Principal Investigator	Period
Ⅰ	Building a Sustainable Governance of Smallholders' Oil Palm Plantations in Indonesia	OKAMOTO Masaaki, Associate Professor, Kyoto University	2015.2-2015.8
	Feasibility research on sustainability development in rural areas considering nexus among water, food and energy	OKI Taikan, Professor, Institute of Industrial Science, the University of Tokyo	2015.3-2015.8
	Transdisciplinary Research towards Implementation of the Sustainable Development Goals (SDGs)	KANIE Norichika, Associate Professor, Tokyo Institute of Technology, Graduate School of Decision Science and Technology	2015.2-2015.8
	Future scenarios and governance of social-ecological systems in Asia-Pacific region through enhancing synergy between indigenous and local knowledge and scientific knowledge	SAITO Osamu, Academic Programme Officer, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)	2015.2-2015.7
	Feasibility study on a comprehensive research program toward climate engineering governance	SUGIYAMA Masahiro, Lecturer, Policy Alternatives Research Institute, The University of Tokyo	2015.2-2015.7
	Development of an innovation framework for climate and social changes adaptation	FUKUSHI Kensuke, Professor, Integrated Research System for Sustainability Science, Institutes for Advanced Studies, The University of Tokyo	2015.2-2015.7
	Accomplishment of Megacities Sustainability through the Development of City Sustainability Index	MORI Koichiro, Professor, International Center, Shiga University	2015.3-2015.7
	A feasibility study on a trans-disciplinary science by integrating sciences of environment, disaster, health, governance and human cooperation	YAHARA Tetsukazu, Director, the Institute of Decision Science for a Sustainable Society	2015.2-2015.6
	Feasibility Study of Transdisciplinary Research for Integrated Policy Design: Building Resilience of Rural Areas in Semi-arid Tropics Against Climatic Variability	UMETSU Chieko, Professor, Graduate School of Fisheries and Environmental Sciences, Nagasaki University	2015.10-2016.3
	Implementing Water-Related Disaster Risk Management through Inter-disciplinary Approaches	KOIKE Toshio, Director, International Centre for Water Hazard and Risk Management (ICHARM), Public Works Research Institute (PWRI)	2015.10-2016.3
	Transdisciplinary Study of Natural Resource Management under Poverty Conditions Collaborating with Vulnerable Sectors	SATO Tetsu, Professor, Research Institute for Humanity and Nature	2015.10-2016.3
	Design and Reform of Social Systems Enabling Transformation to Sustainable Society	SAIJO Tatsuyoshi, Professor, Institute of Economic Research, Hitotsubashi University	2015.10-2016.3
	Feasibility study of Green Infrastructure for Sustainable National Land Formation	SHIMATANI Yukihiro, Professor, Faculty of Engineering, Kyushu University	2015.10-2016.3
	Feasibility study on the value-based co-creation of technology and lifestyle for a society based on a virtuous materials cycle	YOSHIOKA Toshiaki, Professor, Graduate School of Environmental Studies, Tohoku University	2015.10-2016.3
Ⅱ	Building a Sustainable Governance of Smallholders' Oil Palm Plantations in Indonesia	OKAMOTO Masaaki, Associate Professor, Kyoto University	2015.10-2016.3
	Feasibility study on a comprehensive research program toward climate engineering governance	SUGIYAMA Masahiro, Assistant Professor, Policy Alternatives Research Institute, the University of Tokyo	2015.10-2016.3
	A feasibility study on transdisciplinary research by networking solution-oriented interdisciplinary sciences of environment, disaster, health, governance and human cooperation	YAHARA Tetsukazu, Director, Institute of Decision Science for a Sustainable Society, Kyushu University	2015.10-2016.3
	Design and Reform of Social Systems Enabling Transformation to Sustainable Society	SAIJO Tatsuyoshi, Professor, Research Center for Future Design, Kochi University of Technology	2016.9-2017.3
	Transdisciplinary Study of Natural Resource Management under Poverty Conditions Collaborating with Vulnerable Sectors	SATO Tetsu, Professor, Research Institute for Humanity and Nature	2016.9-2017.3
Ⅲ	A transdisciplinary research by networking solution-oriented interdisciplinary sciences of environment, disaster, health, governance and human cooperation	YAHARA Tetsukazu, Director, the Institute of Decision Science for a Sustainable Society, Kyushu University	2016.9-2019.8
	Transdisciplinary Study of Natural Resource Management under Poverty Conditions Collaborating with Vulnerable Sectors	SATO Tetsu, Professor, Ehime University	2017.4-2020.3

Ⅰ: FS (Phase 1). Implement co-design of R&D issues to be addressed as TD research.
Ⅱ: Full-scale research (trial)/FS (Phase 2). Conduct TD research co-production trials at FS (Phase 1) implementing institutions.
Ⅲ: Full-scale research. Conduct TD research co-production at FS (Phase 1 and Phase 2) implementing institutions.

Completed Projects List

● Creating a Safe and Secure Living Environment in the Changing Public and Private Spheres (FY2015-2022)

Program Supervisor: YAMADA Hajime, Emeritus Professor, Toyo University; Chair of the Board, Information Communication Policy Forum

Project Name	Principal Investigator	Period
Building a support system based on "people - community - society" to raise awareness of trauma	OOKA Yuuka, Associate Professor, Department of psychology and social welfare, Mukogawa Women' s University	2017.10-2023.3
Establishing the support models for adolescents and adults with developmental disorders using application softwares	TSUJII Masatsugu, Professor, Faculty of Sociology, Chukyo University	2017.10-2023.3
Social Development of Online-Risk Reduction Systems for Minors	TORIUMI Fujio, Professor, School of Engineering, The University of Tokyo	2017.10-2021.6
Activation of community patrol by fostering coordinators of watching over elderly people	MURAI Yuichi, Professor, Department of Social Welfare, DEN-EN CHOFU University	2017.10-2021.3
Research and Development of a Flexible Community Cooperation Model Preventing the Elderly from Becoming Involved in Fraud Cases	WATANABE Satoshi, Professor, Research and Education Center for Comprehensive Science, Akita Prefectural University	2017.10-2021.3
Implementation of Recovery Circle in Japanese Society for a variety of Addiction Behaviors	ISHIZUKA Shinichi, Professor, Faculty of Law, Ryukoku University	2016.10-2022.3
Research and Development of Public-Private Connected Caring Model Respond to Multiple Help-Longing in Urban Environment	SHIMAZONO Susumu, Director, Institute of Grief Care, Sophia University	2016.10-2020.3
Development of supporting system for pregnant women to prevent child abuse and domestic violence	FUJIWARA Takeo, Professor, Global Health Promotion, Tokyo Medical and Dental University (TMDU)	2016.10-2020.3
Research and policy of parental support systems to prevent child maltreatment	KURODA Kumi, Team Leader, Laboratory for Affiliative Social Behavior, RIKEN Center for Brain Science	2015.11-2018.12
	TOMODA Akemi, Professor, Research Center for Child Mental Development, University of Fukui	2018.12-2021.3
Promotion of Multi - Agency Cooperation by Visualization of the Police Intervention Process in Criminal Cases in Homes and Schools	TAMURA Masahiro, Director, Institute for Criminal Justice, Kyoto Sangyo University	2015.11-2019.3
Development and Provision of a Training Program to Foster the Use of Forensic Interviews by Multidisciplinary Team	NAKA Makiko, Professor, College of Comprehensive Psychology, Ritsumeikan University	2015.11-2020.3
Developing social network for safe and autonomous economic activities of older people	OGANO Shoichi, Professor, Faculty of Law, Chuo University	2015.11-2019.3
Development of prevention and early-intervention system for child maltreatment using the database of nationwide survey	MORITA Nobuaki, Associate professor, Faculty of Medicine, University of Tsukuba	2015.11-2019.3

● Human-Information Technology Ecosystem (FY2016-2023)

Program Supervisor: KOKURYO Jiro, Professor, Faculty of Policy Management, Keio University

Project Name	Principal Investigator	Period
Ensuring the Benefits of AI in Healthcare for All : Designing a Sustainable Platform for Public and Professional Stakeholder Engagement	YAMAMOTO Beverley Anne, Executive Vice President of International Affairs (Education), Osaka University	2020.1-2023.12
The Future of Unpaid Work : AI's Potential to Transform Unpaid Domestic Work in the UK and Japan	NAGASE Nobuko, Professor, Faculty of Core Research Human Science Division, Ochanomizu University	2020.1-2023.12
Legal Systems and Artificial Intelligence	SUMIDA Mihoko, Professor, Hitotsubashi Institute for Advanced Study	2020.1-2023.12
PATH-AI : Mapping an Intercultural Path to Privacy, Agency, and Trust in Human-AI Ecosystems	NAKAGAWA Hiroshi, Team Leader, Center for Advanced Intelligence Project, RIKEN	2020.1-2023.3
Rule of Law in the Age of AI : Distributive Principles of Legal Liability for Multi-Species Societies	INATANI Tatsuhiko, Professor, Graduate School of Law, Kyoto University	2020.1-2023.9
Emotional AI in Cities : Cross Cultural Lessons from UK and Japan on Designing for An Ethical Life	Peter Mantello, Professor, School of Asia Pacific Studies, Ritsumeikan Asia Pacific University	2020.1-2023.9
Study on the platform to support wise use of personal information in the data portability era	SHIBASAKI Ryosuke, Professor, Center for Spatial Information Science, University of Tokyo	2018.10-2022.3
Study on Social Receptivity of Personal-Data Ecosystem	HASHIDA Koiti, Professor, Social ICT Research Center, Graduate School of Information Science and Technology, The University of Tokyo	2018.10-2022.3
Constructing Philosophy of Artificial Intelligence 2.0 for the Coexistence of Human Being with Information Technology	SUZUKI Takayuki, Associate Professor, Graduate School of Arts and Sciences, The University of Tokyo	2018.10-2022.3
Updating Power of Imagination : Artificial Intelligence with Design Fiction	OSAWA Hirotaka, Assistant Professor, Faculty of Engineering, Information and Systems, University of Tsukuba	2018.10-2022.3
Development of platform and media for dialogues between technology and society through utilizing knowledge of humanities social science	SHOJI Masahiko, Executive Research Fellow, Center for Global Communications, International University of Japan	2018.10-2024.3
Supporting co-evolution between AI based monitoring technology and nursing home based on process analysis of overestimate and underestimate	KITAMURA Koji, Senior Researcher, Artificial Intelligence Research Center, National Institute of Advanced Industrial Science and Technology	2018.10-2022.3
Research on the task models to cooperate with the human and new technology : Evaluating the impacts on labor market	YAMAMOTO Isamu, Professor, Faculty of Business and Commerce, Keio University	2018.10-2022.3
Which controls which? Sense of agency when humans and semi-automated systems co-operate	YOSHIDA Takako, Associate Professor, School of Engineering, Tokyo Institute of Technology	2017.10-2021.3
Consideration on the concept of "responsibility" between autonomous machines and citizenries	MATSUURA Kazuya, Associate Professor, Faculty of Letters, Toyo University	2017.10-2021.3
Legal being : electronic personhoods of artificial intelligence and robots in NAJIMI society, based on a reconsideration of the concept of autonomy	ASADA Minoru, Professor, Institute for Open and Transdisciplinary Research Initiatives, Osaka University	2017.10-2021.3
Co-Creation and Communication for Real-Time Technology Assessment (CoRTTA) on Information Technology and Molecular Robotics	SHINEHA Ryuuma, Associate Professor, Research Center on Ethical, Legal, and Social Issues (ELSI), Osaka University	2017.10-2021.3
Co-creation of Molecular Robot ELSI and Real-time Technology Assessment Research	KONAGAYA Akihiko, Visiting Professor, Faculty of Humanities, Keisen University	2017.10-2021.3
A coevolutionary study on society with respect to power laws : - Can AI replicate the behavior of a non-equilibrium complex system? -	TANAKA-ISHII Kumiko, Professor, Faculty of Science and Engineering, School of Fundamental Science and Engineering , Waseda University	2017.10-2021.3

Project Name	Principal Investigator	Period
Acceptable Intelligence with Responsibility - Values Awareness Support (AIR-VAS)	EMA Arisa, Associate Professor, Tokyo College, University of Tokyo	2016.11-2020.3
Development and Dissemination of Information Technology Guidelines for Promoting Japanese-style Wellbeing	ANDO Hideyuki, Associate professor, Graduate school of Information Science & Technology, Osaka University	2016.11-2020.3
Proposals from health care on "transition of self through introspection and dialogue"	BITO Seiji, Director, Division of Clinical Epidemiology, National Hospital Organization Tokyo Medical Center Clinical Research Center	2016.11-2020.3
Scenario generation of socio-technology problems in the information technology area by using the foresight method	WASHIDA Yuichi, Professor, Graduate School of Business Administration, Hitotsubashi University	2016.11-2020.3
Trans-disciplinary Research Project on Co-designing Social Systems (Law, Economics and Management) and AI/Robot Technologies	SHIMPO Fumio, Professor, Faculty of Policy Management, Keio University	2016.11-2020.3

● Science of Science, Technology and Innovation Policy (FY2011-)

Program Supervisor: YAMAGATA Zentaro, Deputy Director / Think Tank for Maternal and Child Health, National Center for Child Health and Development
Project Professor, The Center for Birth Cohort Studies(CBCS), University of Yamanashi

	R&D Project Name	Principal Investigator	Period
Ⅰ	Development of Benchmarks of the Quality of Prior Art Search in International Patent Prosecution Processes	WADA Tetsuo, Professor, Faculty of Economics, Gakushuin University	2014.10-2017.9
Ⅱ	Establishment of Methodology and Database for Life Cycle-Based Environmental Assessment and Installation to the Society for the Promotion of Green Procurement	ITSUBO Norihiro, Professor, Faculty of Environmental Management, Tokyo City University	2014.10-2017.9
Ⅱ	Innovation in Evidence-Informed Policy Making: Through Visualizing and Redesigning Social Systems for Countermeasures against Regional Disparity in Healthcare Quality	IMANAKA Yuichi, Professor, Graduate School of Medicine, Kyoto University	2014.10-2017.9
Ⅱ	Realizing Policymaking Process of Infectious Disease Control using Mathematical Modeling Techniques	NISHIURA Hiroshi, Professor, Graduate School of Medicine, Hokkaido University	2014.10-2017.9
Ⅱ	Development of the Evidence-Base for Advanced Risk Management of Living Spaces	MIKAMI Yoshiki, Professor/Director, Research Center of Safe and Secure Society, Nagaoka University of Technology	2014.10-2017.9
Ⅱ	A Study on Methods for Objective/Quantitative Assessment of the Impact of Satellite Observations on Environmental Policy	KASAI Yasuko, Executive Researcher, National Institute of Information and Communications Technology (NICT)	2013.10-2016.9
Ⅰ	Action Research for Realizing Innovation with Infometric Approach	KAJIKAWA Yuya, Associate Professor, School of Environment and Society, Tokyo Institute of Technology	2013.10-2016.9
Ⅱ	Scenario Planning for Making Regulatory Policies and Technical Standards in Advanced Medicine	KANO Shingo, Associate Professor, Graduate School of Frontier Sciences, The University of Tokyo	2013.10-2016.9
Ⅱ	Resilience Analysis for Social Safety Policy	FURUTA Kazuo, Professor/Director, Resilience Engineering Research Center, Graduate School of Engineering, The University of Tokyo	2013.10-2016.9
Ⅰ	Framework for Broad Public Engagement in STI Policy (PESTI)	KANO Kei, Associate Professor, Faculty of education, Shiga University / Science Communication Group, WPI-iCeMS, Kyoto University	2012.10-2015.9
	Development of the Case-Based Reasoning System for Regional Science and Technology Policy	NAGATA Akiya, Director/Professor, Center for Science, Technology and Innovation Policy Studies, Kyushu University	2012.10-2015.9
	Economic Growth Analysis of Science, Technology, and Innovation Policies	NIREI Makoto, Associate Professor, Institute of Innovation Research, Hitotsubashi University	2012.10-2015.9
	Resource Logistics as a Support Tool of Science, Technology and Innovation Policy Decision	MATSUBAE Kazuyo, Associate Professor, Graduate School of Engineering, Tohoku University	2012.10-2015.9
	Conservation and Energy Utilization of Water as Common Resources for Leading Innovation	AMANO Yoshihiko, Professor, Faculty of Engineering, Shinshu University	2012.10-2015.9
	Development of Methods for Impact Assessment of Electric Power Innovation and R&D Network Evaluation	AKIYAMA Taro, Professor, Center for Economics Growth Strategy, Yokohama National University	2011.11-2014.10
	Scientometrics Conducive to Management of Funding Programs	SHIRABE Masashi, Associate Professor, Graduate School of Engineering, Tokyo Institute of Technology	2011.11-2014.10
	Methodology Development for Visualization and Quantification of Social Expectation to Science Technology	TAMAMURA Masatoshi, Associate Professor, Faculty of Policy Management, Keio University	2011.11-2014.10
	Research on Scientific Sources of Innovations and Economic Impacts of Science	NAGAOKA Sadao, Professor, Institute of Innovation Research, Hitotsubashi University	2011.11-2014.10
	Integrating Joint Fact-Finding into Policy-Making Processes (IJFF)	MATSUURA Masahiro, Graduate School of Public Policy, The University of Tokyo	2011.11-2014.10
	Study of Innovation Strategies Conducive to Creating Future Industries	YAMAGUCHI Eiichi, Professor, Graduate School of Advanced Integrated Studies in Human Survivability, Kyoto University	2011.11-2014.10

Ⅰ: Supply more useful evidence for ST&I policy-making/Originality and uniqueness
Ⅱ: Targeting to solution for specific social issues/Containing of varied phases from S&T research to discussion on institution setting in order to realize innovation

● SOLVE for SDGs: Scenario Creation, Solution Creation (FY2019-)

Program Supervisor: (-2023.8) SEKI Masao, Visiting Professor, The Open University of Japan/ Senior Advisor, Sustainability Department, Sompo Japan Insurance Inc.
(2023.9-) KAWAKITA Hideto, CEO, International Institute for Human, Organization and the Earth

(Scenario creation phase)

Project Name	Principal Investigator	Collaborator	Period
Developing a scenario with peer support systems to build a inclusive medical and social model using digital transformation	KITAHARA Shuji, Associate Professor, Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University	SHUKUNOBE Takeshi, CEO, PPeCC, Inc.	2021.10-2024.03
Development of digital transformation collaboration platform and creation of scenarios for social implementation that contribute to improving employment potential of people with disabilities using artificial intelligence	TSUKADA Yoshinori, Associate Professor, Faculty of Business Administration, Setsunan University	SOGAWA Minoru, Japan Sun Industries, ICT Project Department	2021.10-2023.09
Co-creation Scenario on Inclusion and Diversity in Beach Cleanup Volunteering with People and Technologies	HAYASHI Eiji, Professor, Computer Science and Systems Engineering, Department of Intelligent and Control Systems, Kyushu Institute of Technology	SEINO Satoquo, Associate Professor, Graduate School of Engineering, Department of Urban and Environmental Engineering, Kyushu University	2021.10-2023.09
Scenario development for future-oriented adaptive management of forest ecosystems based on local science-practice governance	MORI Akira, Professor, Research Center for Advanced Science and Technology, The University of Tokyo	NAKANISHI Masanao, Assistant Manager of Wildlife Management, Shiretoko Nature Foundation	2021.10-2023.09

Completed Projects List

Scenario development of co-creation with multi-stakeholders towards a dementia-inclusive society	UCHIDA Naoki, Director, Medical Corporation Suzurankai TARO Clinic	KASAI Koichi, Director, Dementia Care Support Section, Elderly Affairs Department, Public Health & Welfare Bureau, Fukuoka City	2020.10-2023.03
Formulation of Sustainable Scenario to realize Ultra Distributed Energy Society in Hot Spring Areas	SASAKI Soichi, Assistant Professor, Graduate school of Engineering, Nagasaki University	MORI Tomohiro, Assistant Secretary, Division of Environment and Waterworks, Unzen City	2020.10-2023.03
Development of a method for forming a subject for sustainable village development during disaster recovery using small hydropower energy	SHIMATANI Yukihiro, Chairman, Kyushu Open University	MURAKAWA Tomomi, President, River Village Ltd.	2020.10-2023.03
Assessment of value creation of local forest resources and development of safe forestry work environment by building LPWA platform	MORIBE Junji, Associate Professor, Co-Design Research Center, Gifu University	KOIKE Tatsuya, Director, Yodakas Research Institute	2020.10-2023.03
Scenario development to enable dynamic prediction of disaster chains in disaster-sensitive urban areas	WATANABE Kenji, Professor, Graduate School of Social Engineering, Nagoya Institute of Technology	NAGAMATSU Shingo, Manager, Disaster Resilience Research Division, National Research Institute for Earth Science and Disaster Resilience	2020.10-2023.03
Development for the co-design method the dynamic operation rule to contribute the river basin management at Jinzu River system where is suitable for hydropower project	OKI Taikan, Professor, Institute for Future Initiatives, The University of Tokyo	TEBAKARI Taichi, Professor, Faculty of Science and Engineering, Chuo University	2020.10-2022.09
Feasibility Study of an Information Delivery Service that Automatically Proposes Coping Strategies Related to the Characteristics of Developmental Disabilities for Neurodivergent	SASAKI Ginga, Associate Professor, Faculty of Human Sciences, University of Tsukuba	SUZUKI Keita, President, Kaien Inc.	2020.10-2022.09
Research for developing scenario of social system to prevent child and adolescent suicides in which medical, health, welfare, and education institutes collaborate with	TACHIBANA Yoshiyuki, Director, Division of Infant and Toddler Mental Health, Department of Psychosocial Medicine, National Center for Child Health and Development	KAWANISHI Chiaki, Professor and Director, Department of Neuropsychiatry, Graduate School of Medicine, Sapporo Medical University	2020.10-2022.09
E-Inclusion: Creating Accessible Local/Social Services for People with Disabilities	IWABUCHI Mamoru, Professor, School of Human Sciences, Waseda University	MOTOHASHI Eizo, President, Tokorozawa City Council of Social Welfare	2019.11-2021.10
Development of Clean Energy Prosumer Model Aiming at Community Participation by Utilizing Hydrogen Technology	USHIFUSA Yoshiaki, Professor, Faculty of Economics and Business Administration, The University of Kitakyushu	KUDOU Rie, Director, Green Growth Promotion Division, Green Growth Promotion Department, Environment Bureau, City of Kitakyushu	2019.11-2022.03
Inclusive Disaster Risk Reduction Through Developing an Innovative Alert System Aligned with Comprehensive Risk Assessment at the Local Level	ONO Yuichi, Professor, International Research Institute of Disaster Science, Tohoku University	HASHIMOTO Hisashi, Group leader, Public ICT Consulting Group, Fujitsu Research Institute	2019.11-2021.10
Development of the Social System and Human Resources to prevent Sexual Violences and Early Intervention for PTSD	NAGAE Miyoko, Professor, Faculty of Nursing, Nihon Fukushi University	KATAOKA Emiko, President, Nihon Forensic Human Care Center	2019.11-2021.10
For the Society without People Struggling with Water:Development of Compact and Decentralised Water Supply and Treatment Service and Its Feasibility Assessment	NISHIDA Kei, Director, Interdisciplinary Center for River Basin Environment, University of Yamanashi	SOMANO Sakae, Manager, Water and Sewer Division, Koshu City	2019.11-2021.10
Construction of a Support Model for Remote Islands and Rural Medicine	MAEDA Takahiro, Professor, Graduate School of Biomedical Sciences, Nagasaki University	KAWAKAMI Toshihiro, Manager, National Health Insurance healthy Policy Planning and Evaluation Division, Goto City	2019.11-2021.10
Development of the 3D Model Production and Dissemination Ecosystem for Blind and Visually Impaired People Promoting Co-Creative Assistance	MINATANI Kazunori, Professor, Research and Development Department, The National Center for University Entrance Examinations	WATANABE Tetsuya, Professor, Faculty of Engineering, Niigata University	2019.11-2021.10

(Solution creation phase)

Project Name	Principal Investigator	Collaborator	Period
Development of mental health programs and human resources to foster resilience in children and adolescents from preschool to high school	ISHIKAWA Shin-ichi, Professor, Faculty of Psychology, Doshisha University	KISHIDA Kohei, Contract Researcher, School of Humanities, Kwansei Gakuin University / Japan Institute for Child and Adolescent Psychotherapy	2020.10-2024.03
Demonstration Project for the Human Development System on Disaster Managements in Diverse Communities and its Nationwide Expansion	MITAMURA Muneki, Vice Director, Urban Resilience Research Center (UReC), Osaka Metropolitan University	SUEMURA Yuko, Director General of Suminoe Ward, City of Osaka	2020.10-2024.03
Building a Model for Healthy Life Expectancy Based on Personalized Data ～Designing Future Society for Our Lives～	MIYATA Hiroaki, Professor, Department of Health Policy and Management, School of Medicine, Keio University	SATO Kenji, Director, Sado General Hospital	2020.10-2024.03
Promotion of Gesture Interface & Human Resource Development to Support Employment and Education among People with Motor Dysfunction within Local Communities	YODA Ikushi, Senior Researcher, Human Informatics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST)	MIZUNO Katsuhiro, Department of Physical Rehabilitation Medicine, National Center Hospital of Neurology and Psychiatry	2020.10-2024.03
Research, Development and Nation Wide Utilization of Inclusive Disaster Risk Reduction with Professional Social Workers	TATSUKI Shigeo, Professor, Department of Sociology, Doshisha University	MURANO Junko, Co-creation Office Disaster Prevention and Crisis Management Division, Beppu city	2019.11-2023.03
Project for Prevention of Serious Condition in Newborns and Infants Through Extension of a Clinical Decision Support System	HOKUTO Isamu, Professor, Division of Neonatology, Department of Pediatrics, St. Marianna University School of Medicine	YAHAGI Naohisa, Professor, Graduate School of Media and Governance/ Faculty of Environment and Information Studies, Keio University	2019.11-2023.03
Development of a Public Involvement and Consensus-Based Watershed Governance Towards a Sustainable Use of Water Resources in Subtropical Island Environments	YASUMOTO Jun, Assistant Professor, Regional Agricultural Engineering, Faculty of Agriculture, University of the Ryukyus	KINJO Seikatsu, Manager, Civil Engineering Construction Division, Economy Construction Department, Yaese-cho Office	2019.11-2023.03

● Responsible Innovation with Conscience and Agility (FY2020-)

Program Supervisor: KARASAWA Kaori, Professor, Department of Social Psychology, Graduate School of Humanities and Sociology, The University of Tokyo

Project Name	Principal Investigator	Period
Establishing ELSI for strategies of developing and promoting decarbonization technologies in Japan	EMORI Seita, Senior Principal Researcher, Earth System Division, National Institute for Environmental Studies, Professor, Institute for Future Initiatives, the University of Tokyo	2020.9-2024.3
Implementation and systematization of RRI assessment model on emerging science and technology	SHINEHA Ryuma, Associate Professor, Research Center on Ethical, Legal, and Social Issues (ELSI), Osaka University	2020.9-2024.3
The construction of ELSI and intervention of expert knowledge in the contemporary media environment (R&D related to COVID-19)	TANAKA Mikihito, Professor, Faculty of Political Science and Economics, Waseda University	2020.9-2024.3
Building the method for social implementation of automated driving technology complying with actual state based on ELSI	NAKANO Kimihiko, Professor, Institute of Industrial Science, The University of Tokyo	2020.9-2024.3
A Comprehensive Study of Infectious Disease Control Using Mobile Phone-Related Technologies (R&D related to COVID-19)	YONEMURA Shigeto, Professor, Graduate Schools for Law and Politics, The University of Tokyo	2020.9-2024.3
Overcoming Vulnerability and Restoring Social Justice in Community and Re-designing Cities by Introducing Social Distancing Principle (R&D related to COVID-19)	HAYASHI Yoshitsugu, Distinguished Professor, Center for Sustainable Development and Global Smart Cities, Chubu University	2020.9-2022.3

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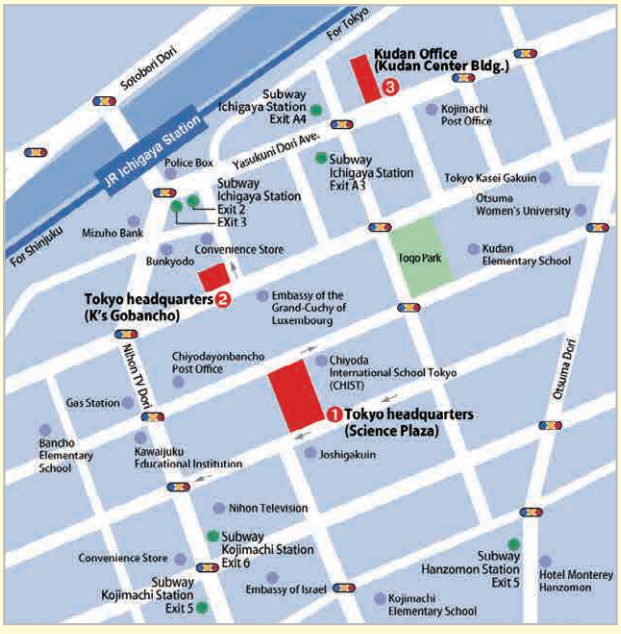
Access
●Subway Ichigaya Station No.A3 Exit: 10 minutes
●JR Ichigaya Station : 10minutes
●Subway Kojimachi Station No.6 Exit: 5 minutes
●Subway Hanzomon Station No.5 Exit: 10 minutes



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