GRIPS
政策研究大学院大学
NATIONAL GRADUATE INSTITUTE FOR POLICY STUDIES

Evidence-based Science, Technology and Innovation Policy：SciREX Program - revised version -

（https://scirex.grips.ac.jp/en/）

GRIPS

Graduate Institute for Policy Studies (GRIPS)
GRIPS Science, Technology and Innovation Program (GiST) &
SciREX Center

September 2025

GiST

SciREX Center

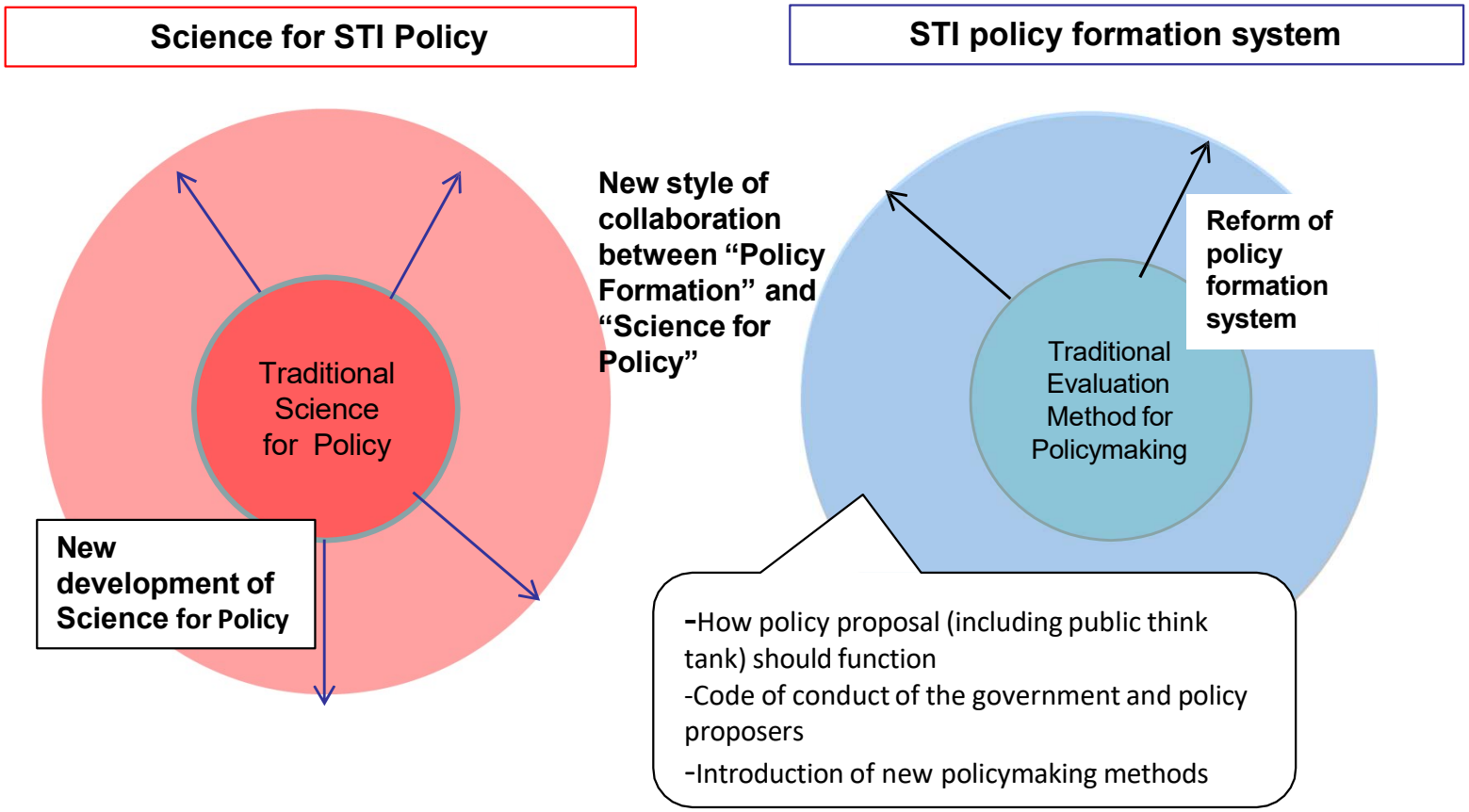
Gateway to Global Leadership

What is the Program for Promoting 'Science for Policy' in Science, Technology and Innovation Policy (SciREX Program)?

- **SciREX:**
  - **Science for RE-designing Science Technology and Innovation Policy**
- A program the Ministry of Education, Culture, Sports, S&T (MEXT) launched in 2011
- **Purpose**
  - To contribute to the promotion of Evidence-based Science, Technology and Innovation (STI) Policy formation through training personnel to be involved in implementing and conducting research on STI policies, promoting research to contribute to STI policy formation, and forming research community
- **3 Activities**
  - Basic Research and Human Resources Development at SciREX Core Center universities
  - Establishment of data and information base at the National Institute of Science and Technology Policy (NISTEP)
  - Competitive R&D Program at the Japan Science and Technology Agency's (JST) Research Institute of Science and Technology Policy (RISTEX)
- **15-year (unprecedentedly long) Government Program**
  - 3 terms of 5 year period

Promoting the Deepening of STI Policy Science and the Evolution (Coevolution) of Policy Formation Systems

Integral Advancement of "STI Policy" and "Science for STI Policy"



Source: CRDS Strategic Proposal "Establishment of 'Science for STI policy' for STI policy formation based on evidence" (2011)

SciREX Chronology

FY	2011 (H23)	2012 (H24)	2013 (H25)	2014 (H26)	2015 (H27)	2016 (H28)	2017 (H29)	2018 (H30)	2019 (R01)	2020 (R02)	2021 (R03)	2022 (R04)	2023 (R05)	2024 (R06)	2025 (R07)
SciREX Medium-Term Plan	Fourth Science and Technology Basic Plan					Fifth Science and Technology Innovation Basic Plan					Sixth Science and Technology Innovation Basic Plan				
	First Medium-Term Plan				△ First Interim Evaluation (August)	Second Medium-Term Plan					△ Second Interim Evaluation (July) Third Medium-Term Plan				
Governance	SciREX Promotion Committee #1(2011.5)～#20(2015.9)					SciREX Advisory Committee #1(2016.2～) SciREX Steering Committee #1(2016.3～)									
Topics	**SciREX Program Launched** Based on the strategy proposed by the JST-CRDS, the SciREX program was launched. Study of such organizations that are carrying related activities in and outside Japan, "Structure Designing Meeting" that designs the details of the program and a competitive program called for by JST-RISTEX have been initiated.	**Human Resources Training** To be prepared for implementing human resources training in 2013, five basic research and human resources training centers were established at: GRIPS, the University of Tokyo, Hitotsubashi University, Osaka/Kyoto Universities, and Kyushu University.	**Human Resources Training Programs** All the SciREX core centers called for participants in their human resources training programs. The Summer Camp 2013 was held with the faculty members and the students from all the core centers.	**SciREX Center Was Established** The SciREX Center was established as the HUB of SciREX activities to collect the results born from various SciREX activities. The human resources training programs at the core centers accepted the 2nd round students. The Summer Camp 2014 was held in Awaji-shima island.	**Training for Incumbent Government Administrators** A training program for the incumbent central government administrators in Japan started. This is one of the SciREX efforts to try to connect the STI policy research and the actual policymaking work. Also highlighted in this year was the MEXT's interim evaluation of the SciREX program.	**SciREX Project Phase 2 started** Based on the results of the interim evaluation, the project's basic policy was formulated, and a new structure was established involving the Steering Committee and Advisory Committee. Research projects based on priority themes have commenced.	**SciREX Open Forum** Highlights: An open forum was held together with the STI policy-concerned government officials where such issues that can be reflected on the policies were discussed.	**International Networks** The GRIPS Center co-hosted the annual conference of the International Network for Scientific Advice to Governments (INGSA), while Kyushu University's CSTIPS participated in the World Social Science Forum (WSSF), among other efforts to build international networks. The training program for government officials was revised to be more practical, with over 40 officials participating.	**Coevolution Projects started** With close collaboration between researchers and government administrators, coevolution projects began to conduct practical research that aims to produce concrete results to contribute to policymaking on critical issues. Nine coevolution projects that started in JFY2016 ended this year.	**The 3rd SciREX Open Forum was held and a Follow-up Survey was made** Follow-up surveys were conducted through inter-office collaboration. An open forum consisting of 10 seminars was also held (online format due to COVID-19 prevention measures).	**SciREX Program's 2nd Term reviewed and the 3rd Term started** The SciREX Program entered into the 3rd term (JFY2021-JFY2025). The evaluation for the 2nd term (JFY2016-JFY2020) was made, based on which the core centers, SciREX Center, and other SciREX member organizations individually established their plans for the 3rd term and beyond.	**Summer Camp: Resuming In-Person** Summer Camp 2022 was held at GRIPS. Following an online event during the pandemic, this marked the first in-person gathering since 2019, featuring lively discussions. For the first time, an organizing committee comprised of current and former participants of the center's educational programs was established.	**Co-evolution Realization Program: From Phase II to Phase III** The Coevolution Realization Program (Phase II) held a report session for all 11 projects in June.The Coevolution Realization Program (Phase III) will commence in October.	**Follow-up Survey2024 was made** Following the 2020 survey, a follow-up survey was conducted targeting SciREX students, faculty, researchers, government officials, and others. Qualitative analysis was performed comparing results with 2020 data and examining network formation with external parties.	**SciREX Project Conclusion and Open Forum** The final open forum was held. The evaluation of SciREX Phase 3 was conducted. The Phase III of the Coevolution Realization Program, which began in fiscal year 2023, has concluded.
Basic Research and Human Resource Development Center Development Project	HUB（GRIPS）/ Six Universities : GRIPS, the University of Tokyo, Hitotsubashi University, Osaka University & Kyoto University, and Kyushu University）														
	Human resource development programs at six universities														
	Research Projects based on key issues: 10 themes（2016～2018）								Coevolution Implementation Program Ⅰ: 9 themes（2019～2020）		Coevolution Implementation Program Ⅱ: 11 themes（2021～2022）; FS 5 themes		Coevolution Implementation Program Ⅲ: 7 themes（2023～2025）		
Data Collection & Analyses （NISTEP）	Developing data-infrastructure（The NISTEP Dictionary of Names of Universities and Public Organizations, NISTEP Dictionary of Corporate Names）, Science and Technology Foresight, The NISTEP TEITEN survey, Japan Doctoral Human Resource Profiling (JD-Pro) Survey														
	Policy-Oriented Research（2011～2015）														
Competition-based Research（RISTEX）	FS 2 themes; 6 themes（2011～2014）; 5 themes（2012～2015）; 4 themes（2013～2016）; 5 themes（2014～2017）						3 themes（2016～2019）; 4 themes（2017～2020）; 4 themes（2018～2021）; 5 themes（2019～2022）					7 themes（2021～2024）; 4 themes（2022～2025）			
Government Officials: Training for Japanese Government Officials					○ (Nov. - Feb.)	○ (Oct. - Mar.)	○ (Oct. - Nov.)	○ (First semester: Jun. – Jul.) (Second semester: Jan.–Feb.)	○ (Jan. - Feb.)	○ (Jan. - Feb.)	○ (Jan. - Feb.)	○ (Jan. - Feb.)	○ (Jan. - Feb.)	○ (Dec. - Feb.)	○ (Dec. - Feb.)
Government Officials: Brown Bag Seminar										○ (Total 3 times)	○ (Total 3 times)	○ (Total 5 times)	○ (Total 5 times)	○ (Total 4 times)	
general: Open Forum						OF2016○ (Jan. • Tokyo)			OF2019○ (Jan. • GRIPS)	OF2020○ (Dec. - Mar. • Online)	OF2021○ (Feb. - Mar. • Online)				OF2025○ (Nov. • Tokyo)
general: SciREX Seminar					○ (Total 16 times)	○ (Total 7 times)	○ (Total 6 times)	○ (Total 5 times)	○ (Total 4 times)	○ (Total 2 times)	○ (Total 7 times)	○ (Total 4 times)	○ (Total 4 times)	○ (Total 3 times)	○
Student: Summer Camp		Faculty Retreat ○ (Aug. • Kyushu University)	Faculty Retreat ○ (Aug. • Tsukuba)	○ (Aug. • Awaji-shima)	○ (Aug. • Inuyama)	○ (Aug. • Matsushima)	○ (Aug. • Tokyo)	○ (Aug. • Tokyo)	○ (Aug. • Tokyo)	○ (Sep. • Online)	○ (Sep. • Online)	○ (Sep. • Tokyo)	○ (Sep. • Tokyo)	○ (Sep. • Tokyo)	○ (Sep. • Tokyo)

Background for Launching SciREX Program

- S&T-based innovation is essential for economic growth and social reform.
- Efficient development of Science, Technology and Innovation (STI) under limited resources has required multifacetedly understanding and analyzing the country's economic and social circumstances, their issues, and logically forming evidence-based policies.
- In 2007 Dr. John Marburger, the then U.S. Science Advisor to the President and Director of the Office of S&T Policy, proposed the idea of promoting Science of Science and Innovation Policy (SciSIP) program.
- The Science and Technology Agency's (JST) Center for R&D Strategy (CRDS) presented a Strategy Proposal "Establishing 'Science for STI Policy' for Evidence-based Policy Formation"
- Japanese Government's 4th Science and Technology Basic Plan (JFY2011-2015) included the importance of promoting "Science for STI Policies."

Three Pillars of the SciREX Program

- Formation of Core Centers for Basic Research and Human Resources Development
  - Establishment of world-class centers for human resources Development and research to scientifically promote evidence-based STI policies
  - Research projects that would contribute to policy formation
  - Formation of academic communities in science policy fields that are involved in STI policymaking
- Establishment of data and information base at the National Institute of Science and Technology Policy (NISTEP)
  - Systematic and continuous accumulation of such data and information that can be used for survey, analyses and research on policy formation
- Competitive R&D Program at the Japan Science and Technology Agency's (JST) Research Institute of S&T for Policy (RISTEX)
  - Promotion of index development, resulting to contribute to policy formation through a competitive R&D program

Basic Research and Human Resources Development Centers

- MEXT solicited "HUB" and "Core Centers" for the SciREX Program in 2011
  - "HUB": carries education program and basic research. Also, leads and coordinates several basic research and human resources Development centers
  - "Core Centers": carry education programs, making good use of the unique feature of each university and also conduct basic research
- The GRIPS Innovation, Science and Technology Program (GiST) proposed by GRIPS was chosen as the HUB.
- "Core Centers": University of Tokyo, Hitotsubashi University, Osaka/Kyoto Universities, and Kyushu University

Building Data and Information Base @National Institute of S&T Policy (NISTEP)

- To be managed by the MEXT's National Institute of S&T Policy (NISTEP)
- Systematic and continuous accumulation of the data and information usable for policy formation, survey, analyses and research
- The 2nd term of the SciREX Program focused on the following
- Database for consolidating, connecting, and sharing various data and information
  - (1) Data for universities and public research institutions
  - (2) Basic data on industrial R&D
  - (3) Establishment of a base to contribute to policy formation and comprehensive use of the base
- Database for new data and information
  - (4) S&T Foresight Survey
  - (5) Ph.D. Personnel Follow-up Survey
  - (6) NISTEP Periodical Survey on comprehensive S&T
- The 1st term of the SciREX Program (2022-2015) covered such research subjects that were to solve policy issues, in addition to establishing data and information base
  - Comprehensive survey and analyses on the economic and social effects of R&D investment

Competitive R&D Program @JST/RISTEX

- To be managed by the Japan Science and Technology Agency's (JST) Research Institute of S&T for Policy (RISTEX)
- To be promoted as one of the RISTEX's Competitive R&D Programs and aim to develop indexes to bear such results that contribute to policy formation
- Purpose:
  - To make a medium- and long-term contribution to form evidence-based STI policies and promote R&D on new analyzing methods and model analyses, data systematizing tools, and indexes that can be used for practical policy formation
  - To expand the range of researchers in wider and interdisciplinary fields
  - To disseminate the activities wide to the public, offer opportunities for the concerned to discuss, and expand the community network
- Fields to be covered;
  - (1) Designing and implementation of strategic policy formation framework
  - (2) Measurement and visualization of R&D investments' social and economic effects
  - (3) Establishment of STI promotion system
  - (4) Designing and implementation of the dialogue with society in policy formation

SciREX Program: "Science for Policy" in STI Policy

JFY2025 budget
Yen 450 million

Core Centers for promoting basic research and human resources training

JFY2025 budget: Yen 416 million

- **Education programs to train human resources to be involved in STI policymaking at the following institutions**
- **Research by close collaboration between researchers and government officials to actually contribute to policies**

588 people completed the programs by March 2024.
They were employed by the central and local governments and universities.

Graduate Institute for Policy Studies (GRIPS)

SciREX Center (2014-present)

SciREX Center

Director : KUROSAWA Masako

- Lead the development of the academic fields of "Science for Policy" and formation of networks as the **HUB of the SciREX network**
- Research on developing indexes and methods to implement evidence-based policy formation
- Coordination, wrap-up and outreach of the projects between core centers based on the critical issues
- Dissemination of the Program results and provision of the opportunities for the related to discuss

HUB Center

STI Policy Program

GiST

Director: HAYASHI Takayuki

- Trains human resources to be involved in planning, drafting, implementing, evaluating, and improving policies.
- Master's and Ph.D. programs for Science for Policy
- Coordinate all the core centers

U. of Tokyo

STIG Science, Technology, and Innovation Governance

Director: SHIROYAMA Hideaki

- Trains human resources for policy formation and STI policy research mainly in the fields of public policy and engineering
- Interdisciplinary or integrated inter-departmental education program at the University of Tokyo

Osaka U. (Kyoto U.)

STIPS

Director: HIRAKAWA Hideyuki

- Trains human resources who can work in the interdisciplinary fields or bridge academic fields and policy & social issues, focusing on Ethical, Legal, and Social Issues (ELSI) of S&T
- Included in the already existing Master's program; the two universities cooperate to reflect regional strengths.

Core Centers

Hitotsubashi U.

iMPP Innovation Management Policy Program

Director: AOSHIMA Yaichi

- Trains human resources to be involved in cross-disciplinary innovation research based on management and economics, yet including natural sciences and engineering
- Established a Ph.D. –level program

Kyushu U.

CSTIPS

Director: YASUDA Satoko

- Trains human resources to bridge expert field and science for policy, focusing on East Asian region and Innovation.
- Established the program as the university's key education subject.

JST's Research Institute of S&T for Policy (RISTEX)

- Implements a competitive program, promotes research that will lead to implement policy formation, and bears results
- Contributes to expand human resources network through implementing a competitive program

・R&D period: Normally 3 years
・R&D budget: Yen 4-6million/year (non-coevolution)
Yen 6-8 million/year (coevolution)
・Grants: 5 (non-coevolution); Several (coevolution)

National Institute of S&T Policy (NISTEP)

- Compilation and sharing of data and information (Ph.D. personnel data base, list of universities & public institutions, and NISTEP 's comprehensive survey on S&T) to any concerned

JST's Center for R&D Strategy (CRDS)

- Overview of SciREX Program and Provision of overseas information on "Science for STI Policy"

Source: MEXT

SciREX Center

- The activities carried at each SciREX core center and SciREX member organizations during 2011–2013 convinced the MEXT SciREX Program Promotion Committee the need of consolidating and directing them.
  - At the same time 3 points emerged as important issues: ① many issues require time and experience to be solved, including systematic evidence accumulation and establishment of methodologies, ② the STI policy formation process is complex from identification of policy issues through selection of policy measures, policymaking, and implementation, ③ the results of the information and technology development need to be reflected on the STI policies.
- Under such circumstances, it was essential to consolidate the centers for education and basic research, develop indexes and methods to implement evidence– based policies, and accumulate data, knowledge, and experiences accumulated medium– and long–term.
- As the basic research and education centers have the potential for cooperating with the universities and research institutions outside the SciREX network, they function as Core Centers.
- With such background, the SciREX Center was established in August 2014.

Development of Core Center Activities

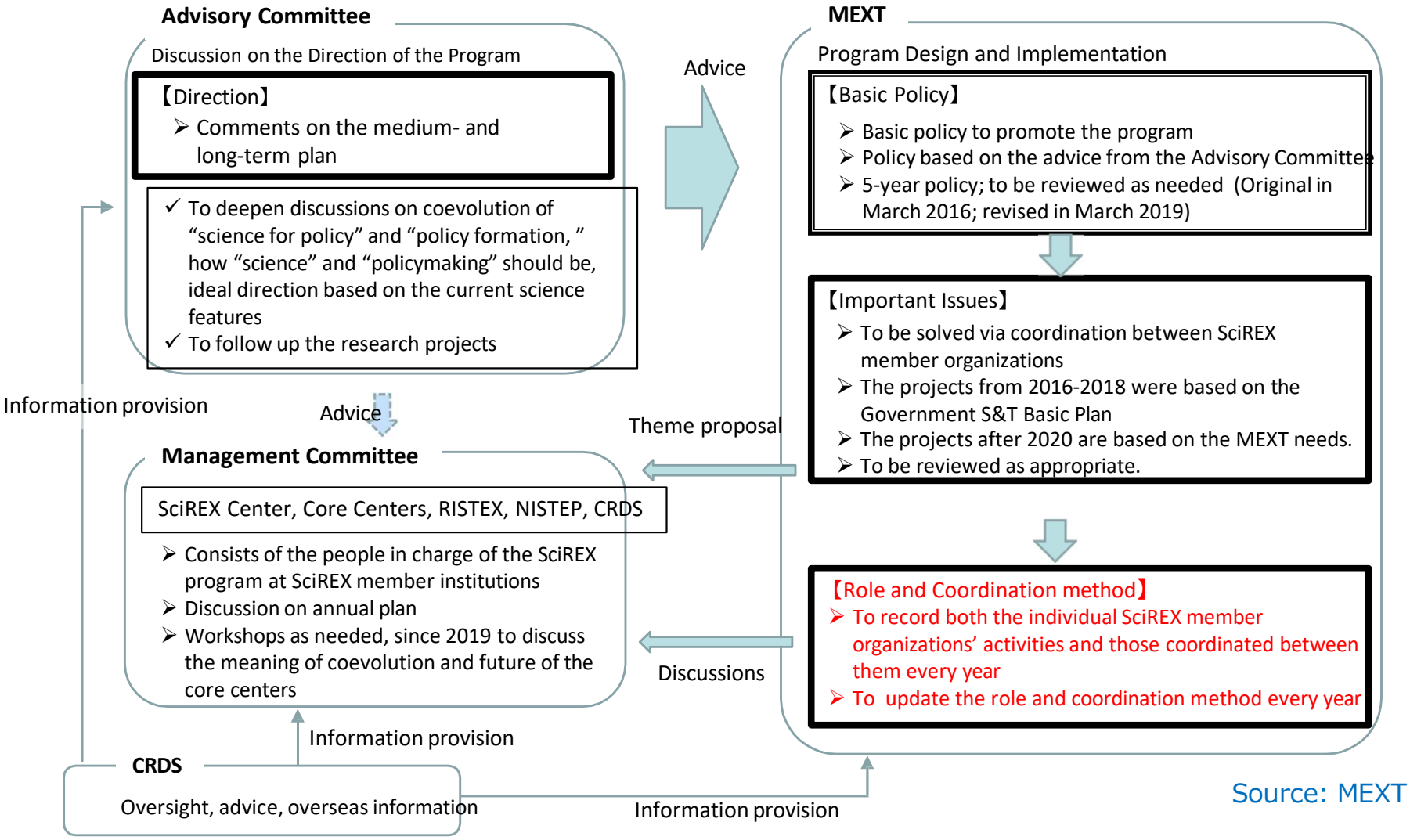
- The SciREX Center was established in 2014 based on the review of the SciREX program.
- The 1st term (2011-2015) of the SciREX program was reviewed in 2015, which extracted the themes in the future.
- The review above drew "Basic Policy for promoting "Science for Policy" in STI policy" (hereinafter "Basic Policy").
- For 3 years from 2016 the Core Centers and the SciREX member institutions set up the important issues they share based on the Government Basic Plan, and promoted the research projects ("research projects based on the important issues").
- For 2 years from 2019 promoted were the research projects on new important issues ("coevolution projects") (the "important issues" were decided based on the MEXT policy needs).
  - During the 3 years from 2016, it was difficult for the researchers and the government officials to continuously work together and establish such relationship between them that leads to solve the issues and produce policies
- From 2021 several 2-year "Coevolution program (2nd phase)" started.
- In July 2021 the SciREX program's 2nd term evaluation was made public. Based on that, a basic policy, revising the previous one, was made public in September 2021.

SciREX Program Governance

- MEXT decides the ”Basic Policy” of the SciREX Program
- Management of the Program:
  - MEXT’s in-house Advisory Committee advises.
  - SciREX Program Promotion Management Committee
    - Consists of the members of the SciREX member organizations and related organizations who are in charge of implementing the program
    - Coordinates the functions of the core centers and member organizations and share information
    - Both the MEXT and the SciREX Center work as the secretariat of the committee.
- （The “SciREX Program Promotion Committee” established within MEXT originally promoted the program. However, the 1st evaluation of the SciREX Program in 2015 reviewed the SciREX program promotion system and changed the governance to the current one.）

(Reference)

SciREX Program Governance Structure



Source: MEXT

Goals of the SciREX Program

- The “Basic Policy” lists up the following goals
  - ①【Human Resources Development】Training of the researchers and government officials involved in “Science for Policy” in STI policies and others who can form policies and connect these people and keep them active
  - ②【Research and Database】Development and deepening of a new interdisciplinary area of “Science for STI Policies” and accumulation of the data and information that support the new area
  - ③【Coevolution】Policymakers, including government officials, and researchers implement policy formation together.
  - ④【Networking】 Establishment of continuous networks and expansion of communities that connect policymakers, including researchers and government officials, and those who connect these people

How EBPM has developed in Japan?

June 2016	"The Basic Policies for Economic and Fiscal Management and Structural Reform 2016" was cabinet-approved. It stipulated that the basic policies in education, science and technology fields should adopt "Evidence-based PDCA Cycle."
October 2016	The Cabinet Secretariat launched a "Study Meeting on Various Issues concerning economic statistics to cope with EBPM needs."
December 2016	The Basic Plan based on the "Basic Law for Promoting Active Use of Government-Industry Data" included promotion of EBPM, which made all the ministries and agencies to integrate statistical data and manage them.
February 2017	A "Meeting for Promoting Statistical Reform" was launched as a policy meeting in the Prime Minister's Office. Its aim was to discuss how the government without borders between ministries and agencies promotes a total statistical reform and establish an integrated statistical system to nail down the "EBPM-based policymaking."
May 2017	The 3rd Statistical Reform Promotion Meeting included a reference to "the policymaking has often been episode-based," and made clear to pursue the promotion of EBPM and the database building at the same time.
June 2017	"The Basic Policies for Economic and Fiscal Management and Structural Reform 2017" was cabinet-approved, which clarified the importance of promoting EBPM.
2018-	A new system of assigning some government officials in charge of promoting EBPM was established. This has made the ministries and agencies to start active use of the data in the ministries and agencies, promotion of the use of the data, and experimental introduction to prove the effectiveness of the efforts.
July 2020	"The declaration of establishing a world-class digital nation and the basic plan for promoting active use of the governmental and industrial data" was cabinet-approved. It clarified the establishment of an EBPM promotion system.

GiST Program

GiST Program

- GiST stands for **G**RIPS **I**nnovation, **S**cience and **T**echnology Policy Program.
- Only this program provides Master's and Ph.D. degrees in STI policies in Japan.
- Trains high-level professionals who can plan, design, implement, and evaluate STI policies and strategies by use of scientific approach and such researchers of advanced STI policy research capabilities.
- In 2020 evening and Saturday classes were launched, which enables the enrolled to study while working.
- A certificate program named "Short-term STI Policy Management Training Program" was newly established.

GiST GRIPS Innovation, Science and Technology Policy Program

Who is trained at GiST Program

- Central government administrators involved in the Government STI policies
- Those involved in planning, designing, and evaluating R&D implementing or funding programs at various organizations
- Local government administrators involved in STI-related policies in local areas
- Faculty members and university research administrators (URA) involved in R&D management at universities
- People involved in research management and innovation creation at companies and non-profit organizations
- Those who aim to be engaged in research and education on STI policies at universities and public research institutions
- Others who are interested in STI policies and aim to be engaged in the administrative or research activities of STI policies

Through GiST Program

- To have academic knowledge on STI and STI policies and be able to apply the knowledge to respond to the policy issues
- To have knowledge on public policies and be able to deal with and analyze STI policies in its context
- To be able to identify the themes of STI policy issues, set up hypotheses, analyze the issue by use of quantitative and qualitative data, make policy proposals, and communicate them to the policymakers
- To have understanding of how to practice STI policy formation and implementation and be able to make practical policy proposals by bridging theory and practice
- To respect different values and systems in a global society, be able to communicate by understanding STI policies and function either as a leader or a follower, knowing his/her role

STI Policy Ph.D Program - Overview 1

- Period required to complete: 3 years
- Conditions to complete: Obtain 14 credits out of the curriculum (refer to the next page), pass the Qualifying Examination, and pass the defending review.

Research on theme (Mandatory)	Course Work (Mandatory & Selective)	
4 credits	More than 10 credits	More than 14 credits in total

- Degree: Doctor of Policy Studies or Ph.D. in Public Policy
- Model schedule

1st year				2nd year				3rd year			
Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer
Course Work (10 credits or more from recommended and elective classes)											
Thematic research 1 credit		Thematic research 1 credit		Thematic research 1 credit		Thematic research 1 credit		Thematic research 1 credit		Thematic research 1 credit	
				★ Qualifying Examination (QE) (conducted around the end of the first year, after completion of 10 credits or more)						★Dissertation Defense	

STI Policy Ph.D. Program Ph.D. – Overview 2

- It is possible to have enough credits bv taking only those classes in the evening and on Saturdays. This makes it possible to obtain the degree while working.

- The number of credits required for completing the program changed in 2021 from 20 to 14. However, it is recommended to have 20 credits, if the student did not take STI policy classes in such classes as for the GRIPS' STI Policy Master's Program.

- 【Basic Classes】
  - ・Overview of STI Policy, Innovation Creation from Public Organizations, Innovation and Economy, STI Policymaking Exercise, and others
- 【Application Classes】
  - Historical Comparison of STI Policies, S&T Diplomacy, Higher Education and industry-university collaborative policies, STI Policy and Evaluation, Quantiative Analyses Exercise, Bibliometrics and its application, S&T and Entrepreneurship, Intellectual Property Management, Science, Technology and Innovation Policy in Developing Country Context, and others

STI Policy Master's Program　Overview 1

- Period required to complete: 2 years
- Conditions: To obtain 30 credits or more from the classes in the curriculum, and pass the review on the research results

Research	Course work	
4 credits	26 credits or more	30 credits or more in total

- Degree: Master's Degree (Public Policy)
- Model Schedule

		1st year				2nd year			
		Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter
Course work (Selective & Mandatory)	26 credits or more	8 credits	2 credits	7 credits		8 credits	1 credit		
Thematic research (Mandatory)	4 credits			Research method	Research plan presentation	Progress presentation		Progress presentation	Defense

STI Policy Master's Program　Overview 2

Possible to complete the program while working, as it is possible to obtain the credits required for completion of the program by attending only those classes held in the evening or on Saturdays.

【Basic subjects】
STI policy Overview, Innovation Creation from Public Institutions, Innovation and Economy, STI Policymaking Exercise, and others

【Application subjects】
STI Policy History, S&T Diplomacy, Historical Comparison of STI policies, STI Policies and Evaluation, Quantitative Analysis Exercise, Bibliometrics and its Application, S&T and Entrepreneurship, Intellectual Property Management, and others

Public Policy Program
STI Policy Course (Master's Program)

One-year Public Policy program with full time commitment

- Period required to complete: 1 year
- Conditions to complete：To obtain 30 credits from the classes in the curriculum, and pass the review of the Master's thesis or outcome of the individual theme
- Degree: Master's Degree (Public Policy)
- The curriculum consists of (1) those classes mandatory to obtain credits to have global view and basic education, (2) the classes that can be selected to learn basic theory and method on public and STI policies, and (3) those that can be selected to learn wide range of contents and expertise in specific fields.

Certificate Program (Short-term) Overview

- This program is for working people; it enables the students to learn the basic knowledge and methods required for analyzing, planning, designing, managing and evaluating STI policies and R&D strategies.

- The program consists of the classes essential to take in Master's and Ph.D. courses. A certificate for credits is issued when the students successfully obtain the credits. The credits earned can be carried over to the Master's or Ph.D. courses at the students' request.

- Possible subjects (6 credits)

  STI Policy Overview

  Innovation Creation from Public Institutions

  STI Policymaking Exercise

- Schedule

  Saturdays in June-July and 3 days in August every year

Certificate Program: "Short-term STI Policy Management Training Program"

STI Policy Overview	Innovation Creation from Public Organizations	STI Policymaking Exercise
Introduction of the recent STI trends and basic theory necessary to understand STI and reflect them practice	**Theory and case study of commercialization of university-born research results and method of how to support them, and exercise for developing business models for the supporting policy**	**Exercise-type learning of methods needed for evidence-based policy formation and to measure the effects, including Foresight-based vision formation and logic model-based evaluation**
➢STI Policy Theory, Industry- innovation policy, demand- side policy and others ➢Japan's S&T Basic Plan ➢STI policies overseas ➢By-field policies and research trends ➢Social governance of S&T ➢S&T and security & diplomacy	➢Technology seeds: formation and transfer ➢Entrepreneurship, VC, accelerator ➢Open innovation ➢Social innovation ➢Theory and exercise of business model development, strategy for supporting commercialization	➢Overview of evidence- based STI policymaking ➢Foresight exercise: horizon scanning method, scenario analysis method, back cast method ➢Evaluation exercise: evaluation design & method, logic model, and others

GiST: Theses Titles and How the Graduates Developed

Examples of the Ph.D. Theses Titles

- An Inquiry of Government's Extending the Role of State-owned Enterprises for the Interest of Science, Technology, and Innovation Policy : Case Studies from Indonesia
- Optimizing International Science & Technology Collaboration through Scientometric Studies
- Promoting Scientodiversity through Research Grants
- Impacts of research team diversity and top management on research commercialization of a public research institute in Thailand
- The Societal Impact of Open Access to Research
- View on the change in the system for using nuclear energy with focus on the Fukushima Nuclear Accident

The graduates are active in STI policy-related fields in various sectors

Master's Degree in 2016

- Comparison of Kaken-hi and NSF's system; currently involved in policymaking at MEXT S&T Policy Bureau

Ph.D.in 2017

Research on Open Access; Currently in consulting business in Cairo, Egypt after working as a lecturer at Hitotsubashi U.

Ph.D.in 2018

- Analysis on the funding program's effects on diversity; currently JST's CRDS fellow

Master's Degree in 2020

- Research on the impact by introduction of robot in distribution system; Currently involved in Organization reform tax system and venture support tax system at METI

Master's Degree in 2020

- Research on introduction of innovation by CSR policy in developing countries; Currently involved in digital trading support at JETRO, after exieriencing an internship at UNIDO

SciREX Center

SciREX Center

- Established in the Graduate Institute for Policy Studies (GRIPS) in August **2014.**
- Provides **opportunities** for presenting SciREX activities and their results and for the relevant people to discuss to make detailed contributions to forming SciREX program networks and establishing policies based on the SciREX program results (basic policy of the SciREX Program).
- Functions as the **HUB** of SciREX Program:
  - Holds activities together with the human resources Development centers, NISTEP, RISTEX, CRDS, and MEXT.
  - Provides government officials' training seminar with MEXT.
  - Publishes "Core Contents" and serves as the Secretariat for the Core Curriculum Editing Committee.
  - Plans and manages the annual summer camp with GiST .
- **Research**
  - Implements research projects.
- **Public Relations, Outreach and Networking**
  - Holds SciREX seminars.
  - Holds Open Forums with other related institutions.
  - Provides Information through the homepage at https://scirex.grips.ac.jp/en/

SciREX Center Members

- KUROSAWA Masako, Director, GRIPS Vice President & Professor
- ARIMOTO Takeo, Deputy Director & GRIPS Visiting Professor
- HAYASHI Takayuki, Deputy Director & GRIPS Professor
- SUMIKURA Koichi, GRIPS Professor
- IIZUKA Michiko, GRIPS Professor
- NORO Takaki, GRIPS Associate Professor
- SHIMODA Ryuji, SciREX Center Admin. Director & GRIPS Visiting Professor
- TOMIZAWA Hiroyuki, GRIPS Visiting Professor
- WATANABE Makiko, Program Specialist
- YAGI Akiko, Program Specialist
- MIYATA Noriko, Program Specialist
- HARADA Hiroaki, Program Fellow
- Advisors, General Service staff

SciREX Program Major Activities
Led by GiST & SciREX Center

SciREX Program Major Activities: Core Curriculum & Core Contents (1)

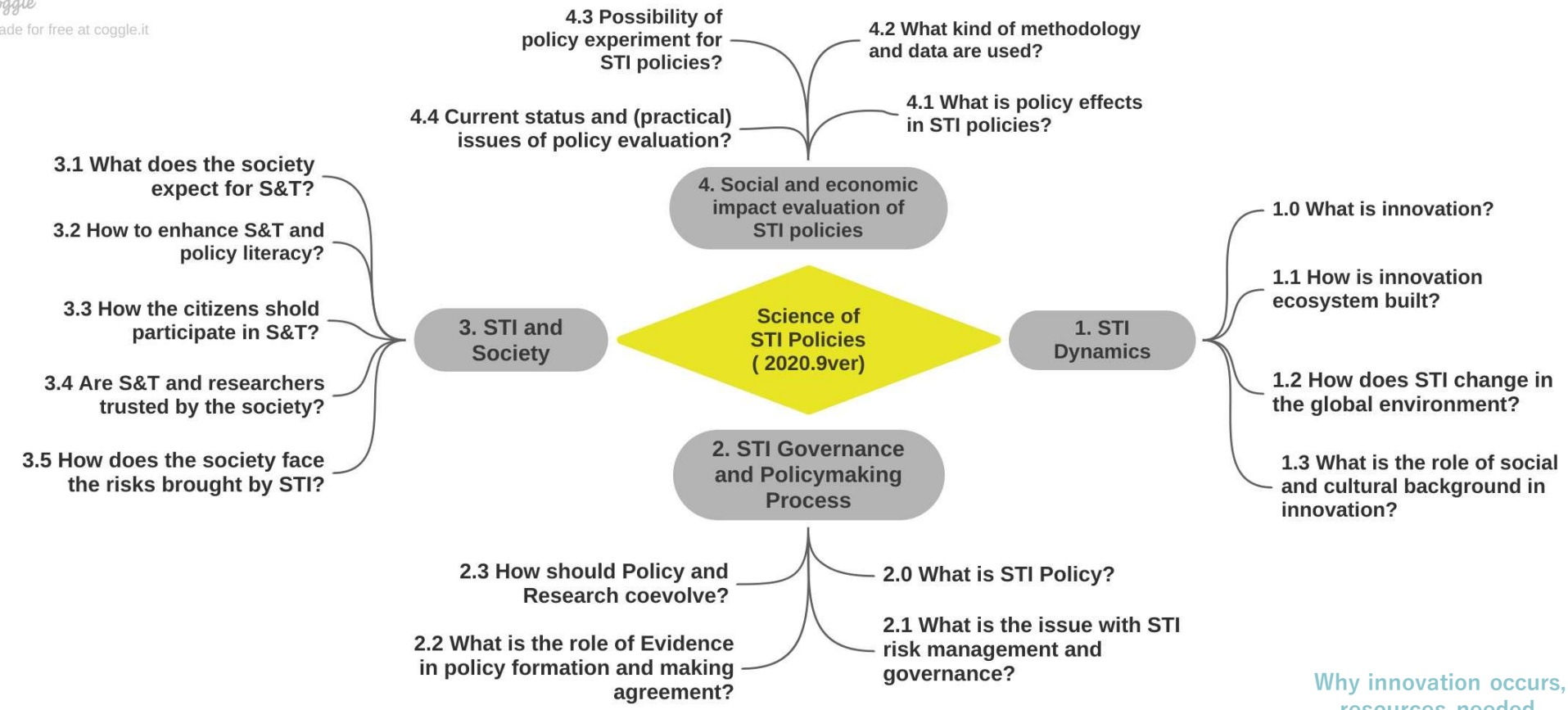
- History
  - The evaluation of the program made in 2015 pointed that it is necessary to establish an academic field of "Science of Policy in STI Policy" and Core Curriculum.
  - Based on the above, the GiST and the SciREX Center in cooperation with the core centers decided to establish them.
  - The 1st Core Curriculum Editorial Committee (CCEC) was held in December 2016.
  - CCEC tries to identify the policymaking authorities' human resources Development needs.
  - CCEC decided to compile the outline (Core Contents) that constitutes the "Science for STI Policy" based on its maturity at the time it is compiled, and share it with the relevant people.
- Core Contents
  - The elements (core contents) that are essential for learning "Science for STI Policy" are identified and the outline of the core contents is systematically compiled and visualized.

SciREX Program Major Activities: Core Curriculum & Core Contents (2)

- **Core Contents (continued from the previous slide）**
  - The main readers are the students studying “Science for STI Policy” at the core center universities, young and middle-aged policymakers involved in STI policies, practitioners at funding agencies and universities.
  - Also, to be read by the policymakers and researchers who have longer experience of being involved in policymaking as the birds-eye-view of “Science of STI Policy.”
- **Compilation and WEBSITE**
  - The SciREX Center plans and coordinates the contents, holds discussions at 4 Core Curriculum Editorial Committee meetings per year, prepares the draft based on the writing by the people from the core center universities and related organizations, discusses and confirms the contents at the Core Curriculum Editorial Committee meetings, and have them reviewed by researchers and policymakers.
  - The core contents were introduced to the participants at the Summer Camp-2018 and shared within the community. The contents were posted on the WEBSITE in April 2019（https://scirex-core.grips.ac.jp/）.
- The core contents are used as the base for the lectures at the Development for the MEXT government officials. They are also the base for future discussions on deciding the discipline areas for the “Science for STI policy.”

What is the point of “Science for Policy”?

SciREX Sciene Questions



Why innovation occurs, resources needed, inhibitors, dissemination and acceptance, STI & security

Policy tool, relation with other fields of policies, actors, stakeholders, policymaking process, scientific advisor, value judgment, legitimacy

DX、Zero carbon emission, and others

SciREX Program Major Activities: Training for Government Officials

- "Training of STI Policymaking" for young and mid-career MEXT officials is planned and managed by close cooperation between the MEXT division in charge of SciREX program, MEXT Human Resources division, and SciREX Center.
- The lectures in the training are based on the Core Contents and the exercise is based on a policymaking exercise that is the combination of business development frameworks or data analysis exercise, using the SciREX research results.
- Opportunities for dialogue between researchers and government administrators by sitting-type lectures based on Core Contents and exercise are set up, where the scientific knowledge, and administrators' issues and needs are shared.
- Through the training, the MEXT officials obtain knowledge about and learn methodologies for "Science for STI Policy."

SciREX Program Major Activities: Training for Government Officials (in detail)

- In 2016, 2 sessions (in November-December) of MEXT-sponsored training for young administrators were held in cooperation with NISTEP. The first was participated by 21 officials and the second by 15. The training for mid-career administrators (4 sessions in February-March) was participated by 25 people.
- Since 2017, the training was co-sponsored by MEXT and SciREX Center in cooperation with SciREX core centers and SciREX-related organizations
  - The 2017 training focused on learning knowledge about and methodology of "Science for STI Policy." It held 4 sessions in October-November (Phase I: 2 times) and February 2018 (Phase II: 2 times), being participated by 23 young MEXT administrators.
  - The 2018 version was "STI Policymaking Training" for young administrators. It consisted of 2-day Phase I and exercise-type Phase II (2 days plus field work) and was held 2 times from January through March 2019, being participated by 24 people for the first session and 22 for the latter session.
  - The 2019 training focused on "STI policy research" with lectures on January 24 and 31 and exercise on February 2 and 6, being participated by 15 people.
  - The 2020 version was held online being affected by the pandemic with lectures on January 19 and 26 and exercise for 8 hours in February. It was participated by 18 people.

SciREX Program Major Activities: Summer Camp

- It is participated by all the SciREX core center universities' students and faculty and staff members to strengthen the SciREX network.
- It has been held annually since 2012. The universities served as the Secretariat of the year in rotation, but GiST in cooperation with SciREX Center has been serving the Secretariat since 2017.

Group work

- The event contains keynote lectures under the theme of the year, other lectures and panel sessions, STI policy-related site visits and interviews, by-group discussions based on the theme, evidence-based STI policy proposal from each team that consists of students from various backgrounds, and the final presentations to be made to the incumbent policymakers including MEXT.
  - The 2020 version was held as One-day Summer School (webinar by the faculty members of the core center universities) due to the pandemic.
  - The 2021 camp was held for 3 days online.
  - The 2022-25 camps were held for 3 days in person at GRIPS.
- It is a good opportunity for the SciREX Core Centers to understood their activities each other, to promote exchange of students, and to establish networks.

SciREX Program Major Activities: Liaison

- The SciREX Center has some SciREX Center-contracted government administrators named ”Policy Liaison” who have sufficient knowledge of SciREX activities.
- The Policy Liaison system allows the incumbent administrators to participate in SciREX activities through birds-eye-view as follows:
  - Presentation of policy needs from the policymakers to researchers
  - Advise to the research projects from an administrator’s view point
  - Participation in the research meetings and seminars hosted by the SciREX-related organizations
  - When the personnel reshuffle moves the administrator in charge of the coevolution projects to another division, the administrator, if appropriate, is assigned as the “Policy Liaison.”
- The Policy Liaison system connects science and policy and is expected to eventually promotes coevolution.
- The SciREX Center occasionally holds meetings with the Liaison to improve the program.

SciREX Program Major Activities: SciREX Seminar

- The SciREX Seminars have been held since April 2015 sponsored by the SciREX Center and co-sponsored by MEXT Science Policy Office.
- The seminars provide opportunities for candid discussions among policymakers, researchers and related people based on their project results and progress, multifacetedly understanding the policy issues, promoting evolution of policy formation and policy research, and expanding networks.
- The venues are the conference rooms around Kasumigaseki and Toranomon area that make easy access to the government administrators (recently, however, online due to the pandemic), and the time is set in the evening after the government administrators finish their daily work.
- The planning is made by the SciREX Center in discussion with liaison, researchers, and related people. The presenter's talk is kept simple, allowing sufficient time for Q&A.
  - Mid-career and young government administrators and researchers are most encouraged to talk.
  - The Policy Liaison serves as the facilitator, as they are versed with the SciREX program.

SciREX Program Major Activities: Open Forum

- The Forum aims to make public the SciREX program activities and research results as well as to openly discuss the issues of STI policies, advance the understanding of the issues, and learn the STI policy needs together with policymakers, natural, human literature, and social scientists, staff at universities and research-related organizations, private companies, and media.

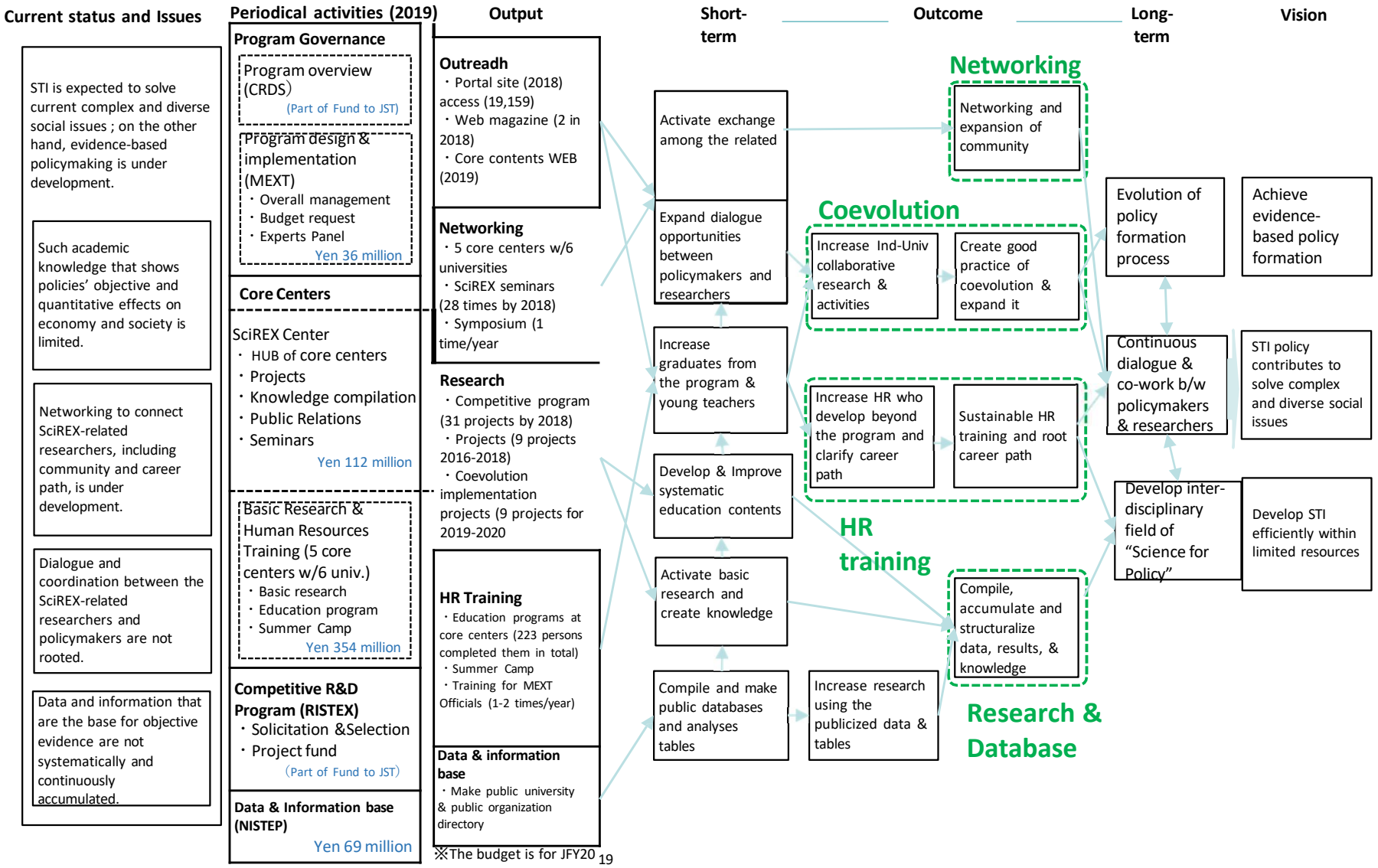
- Held 4 times as follows:
  - The 1st Forum's theme was "Evidence-based Strategy and Scenario for a Future Society" and held at Iino Conference Center on January 24-25, 2017, being sponsored by the SciREX Center and co-sponsored by the SciREX Core Centers and other related organizations.
  - The theme of the 2nd was "Science Challenge to Policy Issues: Continuing Co-creation and Co-working" at GRIPS on January 15, 2020, being sponsored by MEXT and co-sponsored by the SciREX Center in cooperation with the SciREX core centers and related organizations.
  - The theme of the 3rd was "New Development of STI Policy" held online during December 2020 through March 2021, being sponsored by the SciREX Center and co-sponsored by MEXT, SciREX Core Centers and related organizations.
  - The theme of the 4th was ""New Challenges in Policy Science - Toward Ensuring the Effectiveness of the 6th Science, Technology and Innovation Basic Plan -" held online during February through March 2022
  - The Fifth Forum is sheduled on 21, October 2025 focusing on " Challenges and Achievements of the SciREX Program."

SciREX Major Activities: SciREX Logic Model

- With the start of the coevolution projects in 2019, SciREX Center has held dialogue with MEXT and JST's CRDS two times to create the 1st version of the SciREX Program Logic Model, and discussed it with the related people at the Faculty session during the Summer Camp.
- The SciREX Program was selected as one of the programs for the MEXT to establish a Logic Model among various MEXT's EBPM-based activities. MEXT updated the 1st version above and made the 2nd version. Various SciREX Program activities that aim coevolution of administrators and researchers are wrapped up in a chart on the next slide.
- This logic model was used as the base for evaluating the SciREX Program for the period of 2015-2020.

Reference: SciREX Program Logic Model

(Overview of the Program based on its Basic Policy)



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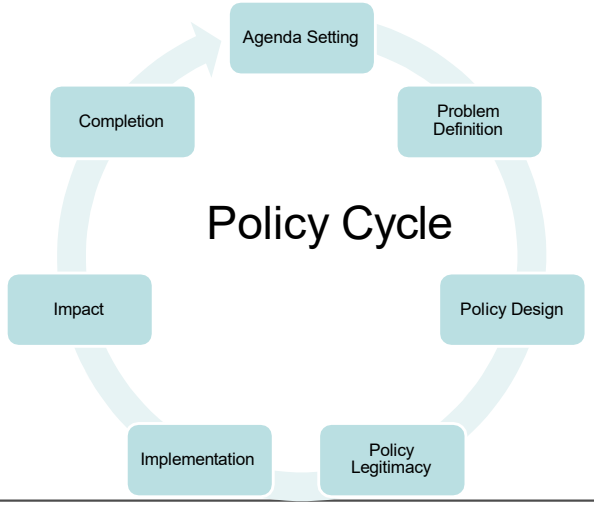
Cases the SciREX Program affected Policy Formation

Projects for developing SciREX Center Policy Design projects, strategic policy scenario for nationally important issues, and their formation method

Agenda setting and provision of discussion opportunities for creating new system to cope with the issues across the ministries

- Outline: To identify the issues in detail that have potential to be solved as national issues and need to be solved without borderlines between the ministries, compile policy scenario and options, and work with ministries for implementation
- Methods: To flexibly set up the policy needs; to understand the current status of the theme within a limited period of time (6-12 months) and identify the themes; to hold discussions with stakeholders at related ministries and agencies and decide the direction and scenario for the related ministries and agencies; to contribute to forming policy community

Activities	Details of contribution to policy formation
S&T diplomacy policy	⇨ MOFA's Council for S&T Diplomacy, S&T Advisor system
Japan's comprehensive strategy for Arctic issues	⇨ Policy proposal "Challenges and policies Japan should address on Arctic issues —Elements to be considered in establishing the 3rd Marine Basic Plan"
R&D of dual-use technologies	⇨ Contribution for designing the Cabinet Office's "ImPACT Program"
Accelerator	⇨ Establishment of the Cabinet Office's Science & Innovation Integration Council



- To provide information and analyses at every phase of the Policy Cycle (see the chart on the left) to the stakeholders involved in policy cycle through various opportunities including study meetings, and discuss them with the stakeholders
- To make evidence-based translation of information and analyses to meet Japanese political system, as each country has its own political system, and put them in the policy cycle

The phases the SciREX program contributed:
- S&T Diplomacy: ①Agenda setting → ③Policy design
- Arctic issues：①Agenda setting
- Dual use：①Agenda setting → ②Problem definition
- Accelerator：①Agenda setting

SciREX Human Resources Development Centers and SciREX Center's Research Projects

SciREX Human Resources Development Centers & SciREX Center Research Projects and Programs

- **Research Projects on Important Issues（2016-2018)**
  - The SciREX core centers and related organizations set up the important common issues they share and pursued the projects. The important issues were decided between the government administrators and researchers based on the important issues stipulated in the government 5th STI Basic Plan and also by taking the researchers' seeds in consideration.
- **Research Projects on Important Issues (Coevolution Program: 2019-2020)**
  - Under the close cooperation between the researchers and the government administrators, such practical research is expected that brings detailed research results and contributes to policy formation on the important issues.
  - The project issues are decided based on the government administrators' detailed needs and sufficient discussions between the government administrators and researchers
  - The government administrators conduct the 2-year research projects together with the researchers and commit in the research as the task for their division.
  - To promote the research projects, the knowledge is shared with the people in and outside of the SciREX community; opportunities for periodical further discussions be set up; and researchers and government administrators commit in the research together with the researchers.
- **Coevolution Program (2nd Phase: 2021-2022)**
- **Coevolution Program (3rd Phase: 2023-2025)**

Projects on Important Issues (JFY 2016-2018) @GiST/SciREX Center

Government Issue	Project	Objective	PI
1.Evaluation of Policies	Developmet of Measurement Index for STI Policy's Economic and Social Effects	To develop simulation models to evaluate the societal and economic effects of STI policies; to establish scenarios and economic models that can measure the policy effects and use them in the S&T White Paper and the Government STI Basic Plans	KURODA, Masahiro SciREX Center Program Manager
2.Policy Management System	Index for Monitoring and Improving Policies	To develop index and technique to evaluate the STI policies for medium- and long-term management systems to be improved; To systematically review the related policies and objectives to evaluate the evidence-based index as well as the methods for collecting/linking/analyzing the base data	ARIMOTO, Tateo SciREX Center Deputy Director
3.Innovation System in Public Sector	Identification and Improvement of the Systems at the Public Research Institutions that Promote Innovation	To establish a "management score board" for universities and public research institutions that are main players for promoting STI; To analyze strategic plans at foreign universities and data for Japanese universities management	HAYASHI, Takayuki GRIPS Professor
4.Immediate and Strategic Response to the Nationally Critical Issues	Strategic Policy Scenario to Respond to the Nationally Critical Issues and Developoment of the Scenario-making Method	To identify the issues that Japan should cope with in the context of international STI policy trends, and those that require to be solved without barriers between ministries and agencies	SUNAMI, Atsushi SciREX Center Director
5.Improvement of Policy Formation	Development of the Method for Improving Policy Formation Process	To identify the barriers in the decision making process for STI policies, and to discuss how to solve them; to analyze the policies for medical ICT use, talk with the stakeholders, and establish evidence-based policy-making process	MORITA, Akira SciREX Center Project Manager

Projects on Important Issues (JFY 2016-2018) @SciREX Core Centers

Government Issue	Project	Objective	PI
1.Super-Smart City and STI Policy	Establishment of policy-making support system to deal with social issues derived from newly developed sciene and technology	When new S&T tools like 'super smart city' emerge in a society, they are accompanied by new societal issues. This project identifies these issues, finds the solution, and develops a system that helps in making policies.	HIRAKAWA, Hideyuki (Osaka U) Osaka University
2.Demography (Aging and Low Birth Rate) and STI Policy	Visualization of local governments' school physical exam Information and establishment of the database to make use of the information	To establish a database based on the information from the school physical exam supported by the local governments; to analyze the visualized data and see if they can be used for making government policies, in academic fields and industries	KAWAKAMI, Koji (Kyoto U) Kyoto University
3.Local Area Revitalization and STI Policy	Case study to contribute to the local area innovation and development of policy support system	To analyze the innovations in local areas to establish and implement STI policies in local areas; to store the data in the RESIDENTS, local- area STI policy support system developed by Kyushu University, and use the data in training local area policy-making officials	NAGATA, Akiya (Kyushu U) Kyushu & Hitotsubashi Universities
4.Open Innovation Policy and Industry-University Collaboration	Industry-University-Government Collaboration to create innovation; knowledge management and system design	What kind of organizations and systems are required for a university to create new knowledge with industries and public organizations in causing innovations? This project views this based on risk management and open science, and discusses the current issues and future possibilities	SHIROYAMA, Hideaki (U of Tokyo) University of Tokyo

Coevolution Projects : JFY2018-2019 @SciREX Core Centers

Project	Objective	PI
1.Examination of "Foresight and Impact Analysis Method" in Emerging and Interdisciplinary Science Fields and Formation of Networks	Identifying the emerging and interdisciplinary fields, predicting economic and social impact, and establishing strategies will help us to be ready with uncertainties in the future. To implement these, it is necessary to systematize various methods and establish policy and research capabilities by nurturing policy and research communities ranging from social, natural and engineering scientists, industrial sector, and citizens. As this required long-term efforts, this project will focus on establishing the base for forming long-term network. Also, it will be promoted from a view of how the various methods and activities can be connected to have a valuable output.	Tateo ARIMOTO, GRIPS Hideyuki HIRAKAWA, Osaka University
2.Analyses on Effective Use of Disaster Prevention and Mitigation Research Results and Implementation methods in society	A long-term evaluation and a map of the earthquake prediction are made public, but they are not fully recognized by the local governments, private sector and citizens. Even if they are recognized, it might be difficult to use them in view of social effects. This project will make it clear what the administration can do and cannot, and what are needed for earthquake and disaster prevention research based on interviews and surveys to the relevant people. The project will also hold workshops and make proposals on the issue.	So MORIKAWA, GRIPS
3.Analyses of mechanisms for strengthening the base for creating innovation by use of SciREX Policymaking Intelligent Assistance System (SPIAS)	The factors that affect the researchers' research capabilities such as international brain circulation and researchers' mobility and diversity, and the mechanism for knowledge transfer process are not yet comprehensively analyzed. Based on this understanding, it is necessary to establish a system that examines policy effectiveness for advancing research capability and a policy analysis that uses the system.	Kenta IKEUCHI, GRIPS
4.Study on the Establishment of Innovation Ecosystem that Meets the Basic, Applied, and Commercialization Research in Medical Field	The point of the R&D in medical field is whether the products and technologies are connected with diagnosis and treatment. It also depends on whether each of the basic, applied, and commercialization phases can be effectively "translated." The environment surrounding the development of new drugs and medicine has recently drastically changed, including the establishment of the Japan Agency for Medical Research and Development (AMED). However, it is not clear whether the series of the administrative reforms has contributed to the barrier for the life cycle of basic research through commercialization (Devil River, Valley of Death, and Darwinian Sea). The project will try to make the above translation more effective, elucidate the reason why "the translation in the industry-based R&D is delayed," and develop a method to re-design the policies to include the way to solve the gap during the translation. More concretely, the project will find out the reasons for the industries to be inactive in making an effective translation and newly design incentives to change their evaluation methods of research seeds.	Koichi SUMIKURA, GRIPS
5.Development of New Measurement Index for Research Capability: By-field index for individual research culture and functional index for organizations and networks	They key of this project is how to measure a university's "research capability." It will focus on: (1) What is an appropriate index for measuring quantity, quality and impact (beyond academia)? Does the index make it possible to measure the characteristics of the research results, in a different way from the already-existing index for the number of papers and references, and by-field research capabilities? And (2) What kind of index is it that shows the functions of the universities and research institutions within the by-field research community? Would it be possible to have a result that is based on each organization's missions and unique features, rather than a conventional result that includes the number of papers?	Takayuki HAYASHI, GRIPS
6.Quantitative analyses on the factors of research capabilities and mechanisms: Analyses on competitive funds for paper production index and effects by organization-specific features	The research at the Japanese universities are carried out by various funds, ranging from competitive funds, non-competitive funds, and external funds from industries. In the midst of a call for advancing research productivity, it is necessary to understand and analyze what kind of research funds should be invested in what kind of research environments to contribute to the advancement of research productivity including production of papers.	Manabu ETO, Hitotsubashi University
7.Study and analyses of the factors that lead to innovation ecosystem	Japanese universities and research institutions have established "innovation ecosystem" to create innovations independently and consecutively, without establishing the evaluation method of the system. Based on this understanding, it is necessary to develop evaluation index and analyzing method for the successful project cases, especially for the Center of Innovation (COI) program.	Akiya NAGATA, Kyushu University
8.Study and Analyses on the Japanese system for Training Human Resources at Japanese universities to ultimately contribute to the developing countries in using space technologies	The human resources training activities at Japanese universities to develop and use space technologies contributes to the international cooperation and human resources training in space developing countries. It further supports the Japanese space technologies to be exported overseas. To enhance such activities, however, it is important to view them in the context of the university education and research activities and also university management. Moreover, it requires an incentive to urge inclusion of medium- and small-sized universities. A comprehensive Japanese system is necessary.	Hideaki SHIROYAMA, University of Tokyo
9.Study on the past, present and future of the Japan Aerospace Exploration Agency (JAXA), focusing on the relationship between the government and the citizen	Japan's Space Basic Plan aims to spend Yen 5 trillion in 10 years by industry-government fund. Other countries are seeing emerging industries play an important role in the space R&D, in addition to the already-existing industries. Japan also needs analyses and discussions on restructuring of the roles and relationships between the government and industries and what are expected for the Japan Aerospace Exploration Agency (JAXA) in the future.	Hirotaka WATANABE, Osaka University

Coevolution Projects : JFY2021-2022 @SciREX Core Centers

Project	PI	MEXT Office	Brief Outline
1. Evidence for developing and evaluating R&D programs	HAYASHI, Takayuki Graduate Institute for Policy Studies (GRIPS)	R&D Corporation Support Office, Planning & Evaluation Div., S&T Policy Bureau	Evidence-based designing and evaluation of programs are not sufficiently carried out in making STI policies in Japan. We will try to identify evidence for designing and evaluating by-field programs and national R&D corporations' activities to prove effectiveness of policy formation.
2. Collection and analyses of evidence for resilient ind.-univ. collaboration and innovation systems	SUMIKURA, Koichi Graduate Institute for Policy Studies (GRIPS)	Univ.-Ind. Collaboration & Regional Development Div., S&T Policy Bureau	Ind.-univ. collaboration creates new technologies and economic value. We collect and analyze evidence for resilient ind.-univ. collaboration and innovation systems.
3.Implementation of the analyses of STI policies' economic and societal effects on policy formation processes	IKEUCHI Kenta Graduate Institute for Policy Studies (GRIPS)	Planning & Evaluation Div., S&T Policy Bureau	We review the STI policies' economic and societal effects from both policy and research viewpoints, and establish a protocol to calculate the economic and societal effects of STI policies at each level of policymaking, policy implementation, program making, and project selection
4. Japanese framework for university-led space technology development & utilization capacity building in emerging countries in the post/with COVID-19 era and its development potential	Verspieren QUENTIN Univ. of Tokyo	Space Development & Utilization Div., R&D Bureau	We focus on the role of the Japanese universities in training human resources for developing and utilizing space technologies, compare and analyze it with other countries, and investigate how the coordination between the Japanese universities and related government organizations and its development should be.
5. Public-private partnership for international rule formation and standardization that contributes to the overseas expansion of Japanese space debris-related technologies	SUZUKI Kazuto University of Tokyo	Space Development & Utilization Div., R&D Bureau	We identify the technologies & services Japan is superior in space debris removal services, list up the risks, and decide Japan's approach for establishing & promoting international disciplines to support implementation of the services, rules and standards.
6. Gov.-Univ. collaboration to establish R&D strategies based on "Future Society"	HIRAKAWA Hideyuki Osaka University	Newly Emerging & Interdisciplinary R&D Strategy Office, S&T Policy Bureau	To establish mission-oriented R&D strategies, we co-work on research and development of theoretical & methodological base to secure the legitimacy of the mission and maximize the research results, and ultimately have it reflected in implementing the government strategies.
7. Active use of health data for preserving and enhancing mental & physical health of school children	KAWAKAMI Koji Kyoto University	Health & Food Education Div., Elementary & Secondary Education Bureau	Using the data obtained from the school health check and children's stress check, we analyze the school performance such as attendance, physical strength, and academic performance, to identify the factors between the data and performance. This exemplifies active use of school health data.
8. Conditions to enable independency and sustainability of innovation ecosystem hubs	NAGAGTA Akiya Kyushu University	Industrial collaboration & Local Area Support Div., S&T Policy Bureau	We identify the factors that enables independency and sustainability of the government-funded innovation ecosystem hubs after the funding ends. This will contribute to future funding policies.
9. Case studies to substantiate and strengthen the data base for Ph.D. personnel, human resources policies, and graduate university reforms	HOSHINO Toshihiko National Institute of S&T Policy (NISTEP)	Human Resources Policy Div., S&T Policy Bureau	To accommodate the Ph.D. holders with an environment where they can have regular staff positions in a variety of fields, including academia, industry, and government, we provide such data that contribute to the evidence that is the base for making strategic personnel policy package and the evaluation of various policies. This will make the PDCA cycle work properly, i.e., review the policies if they meet the investment, examine the need for an alternative policy, and ultimately maximize the investment in human resources policies.

Coevolution Feasibility Study Projects - JFY2021 (April 2021-March 2022) @SciREX Core Centers

	Project	PI	MEXT Office	Brief Outline
10	Basic research on analyzing dynamic characteristics of fund distribution based on performance-based evaluation	OYAMA Tatsuo National Institute for Policy Studies (GRIPS)	Policy Promotion Office, Policy Div., Minister's Secretariat	We extract the issues in the ongoing research performance evaluation, propose a new performance evaluation method, and examine its appropriateness. We will establish a concept design or a pilot model for a mathematical model to enable policy design and operation on dynamic process of research performance evaluation and fund distribution
11	To identify various collaborations between natural sciences, art, human literature/social sciences, and visualize the incentives and outcomes	SHIROYAMA Hideaki University of Tokyo	Policy Promotion Office, Policy Div., Minister's Secretariat	We will collect and analyze various collaborations between art, natural science, human literature/social sciences, to come up with the participants' incentives, outcomes, and frameworks. Based on the analysis-based suggestions, we will involve relevant MEXT bureaus and divisions to make clear the process for coming up with detailed trial actions.
12	Visualization of the collaborative activities, incentives, and outcomes between human literature/social sciences and natural sciences - Survey to the researchers at Kyushu University and the University of Tokyo	KOBAYASHI, Toshiya Kyushu University	Policy Promotion Office, Policy Div., Minister's Secretariat	To make clear the environments for implementing various collaborations between natural sciences and human literature/social sciences, we will investigate the awareness of the researchers at Kyushu University and the University of Tokyo (as they house multiple disciplines) involved in such collaborations through paper and interview surveys.
13	Structure of incentives of the researchers proactively involved in ind.-univ. and local area collaborations	SUZUKI Chika Kyushu University	Policy Promotion Office, Policy Div., Minister's Secretariat	We will make clear the structure of the researchers' incentives who are proactively involved in ind.-univ. and local area collaborations by comparing them with the educational and research activities. Based on that we will come up with such knowledge that contributes to improving the management through policy- and management-level university evaluation.
14	Empirical analyses of the effects of the new corona virus diseases on daily life	MOROGA Kana Kyushu University	Planning & Evaluation Div., S&T Policy Bureau	We will study how the state of emergency on the new corona virus disease has affected people's daily life and its social and cultural backgrounds from the viewpoints of ontology engineering and economics. Our study aims to apply the analyses results for appropriate measures when confronting a new nation-wide crisis.

Coevolution Projects : JFY2023-2025 @SciREX Core Centers

	Project	PI	MEXT Office	Brief Outline
1	Research for Construction of an Infrastructure for Research Administration and Assistance	SUMIKURA Koichi, National Graduate Institute for Policy Studies (GRIPS)	Scientific Research Institutes Div., Research Promotion Bureau / Univ.-Ind. Collaboration & Regional Development Div., S&T Policy Bureau / Human Resources Policy Div., S&T Policy Bureau / Research Environment Div., S&T Policy Bureau	In pursuit of deriving policy and managerial insights for university research management and administration, this study investigates the impact of inter-university joint-use of research facilities and equipment, as well as the effective management of human resources within the realm of research managers and administrators.
2	Promotion of bio-manufacturing that enables bioeconomy: Visualization of policy challenges and institutional design	MATSUO Makiko, The University of Tokyo	Research Promotion Bureau, Life Sciences Division	The project aims to identify policy challenges in seamlessly connecting policy from upstream R&D to downstream social implementation in "enabling bioeconomy society by promoting bio-manufacturing", and explore institutional design, with the collaboration/cooperation among relevant ministries, including the MEXT, the Cabinet Office and the METI, and academia, thereby contributing to solving social challenges
3	Japan's policy for space situational awareness to ensure the sustainable use of outer space	SUZUKI Kazuto, University of Tokyo	Space Development & Utilization Div., R&D Bureau	In order to ensure the long-term sustainability of Japan's space activities, we will identify policy approaches that can ensure both maintaining Japan's autonomy and contributing to build an international framework of space situational awareness(SSA) activities by reviewing Japan's SSA capabilities and its potential for international cooperation.
4	Survey and analysis of monitoring indicators on international research outcomes in the humanities and social sciences in Japan	KARUBE Masaru, Hitotsubashi University	Office for Science Policy Planning, Research Promotion Bureau	Based on the common understanding among universities and the government that "visualization of the international nature of research activities in the humanities and social sciences is critical for evidence-based management of higher education in Japan, we conduct feasibility study and survey analysis by exploring the possibility of constructing quantitative indicators related to international refereed journal articles.
5	Development of objective methodologies for planning mission-inspired STI policies and R&D strategies	HIRAKAWA Hideyuki, Osaka University	Strategic Planning, Research and Development Division, S&T Policy Bureau	Our project aims to develop the methods of large-scale data analysis and transdisciplinary engagement for generating objective evidence with explanatory, verifiable, and inclusive properties that can be widely used in decision processes of mission-inspired R&D strategies in emerging and converging research areas. The development of methods and the evaluation and verification of their effectiveness will be carried out in collaboration and co-evolutionary relationships with the relevant divisions within the MEXT and with research funding agencies.
6	Research to more effectively use government officers with PhDs in the S&T policy field	YUNO Megumi, Kyoto University	Minister's Secretariat, Personnel Division	By focusing on the abilities of hypothesis verification and mastery of specialized knowledge earned through doctoral studies, we clarify factors contributing to the value of employing PhDs in policy-making. This has three aims, viz.: (1) to provide information useful in the evaluation of candidates for hire; (2) to provide evidence of the value of new PhDs; (3) to analyze factors including skills and OJT in the government workplace, with an aim to connect them to the characteristics of graduate education.
7	Careers for academic researchers: Qualitative and quantitative approaches exploring the best mix of stability and mobility	YASUDA Satoko, Kyushu University	Human Resources Policy Div., S&T Policy Bureau	Based on evidence, this study explores a "career path for academic researchers," by seeking to create the best mix of stability and mobility. The research is approached from two angles: 1) reasons for and solutions to obstacles to mobility, and 2) research into specific mechanisms.