2024 NRF Information Session for International Scholars

National Research Foundation of Korea

KAIST

NRF in 2024

Kwisun Park, Ph.D. in Civil & Environ. Engng.,

Team Head, Office of Planning & Coordination

NRF 한국연구재단
National Research Foundation of Korea

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01

Who I am

NRF : Key Player in Research Eco-system

NRF 한국연구재단

1 **Target Research, Role & Responsibility**

All Fields of Research & Researcher (Basic, Innovative & Challenging)

Efficient and Fair Support for Academic and R&D Activities and Human Resource Training and Utilization

01 Support for academic research and development activities

02 Support for training and utilization of academic and research and development human resources

03 Support for promoting international cooperation in academic and research and development activities

04 Support for investigation, collection, analysis, evaluation, management, and utilization of data and information necessary for conducting academic and research and development projects and policy development

05 Support for research and operation of academic and research and development-related institutions and organizations

06 Support for exchange and cooperation between domestic and foreign academic and research and development-related institutions and organizations

07 Other matters necessary for academic research and development

NRF : Key Player in Research Eco-system

2	Annual Budget	KRW **11.2T** ($8.6B) ※ NSF, USA : $9.5B 36% of Government R&D
3	Num. of Research Projects	**35,000** 46% of Government R&D
4	Graduate School Degree Holders	**23,000** 23~75% of Annual Graduation
5	Num. of Research Papers	**34,600** (46% of SCI) **5,700** (57% of Top 10%)

※ The statistics include the affiliated institution, IITP(Institute of Information & Communications Technology Planning & Evaluation)

※ 1USD = 1,300 KRW

Ultimate Goal of NRF

Mission	Contribution to the creation of knowledge, values & advancement of human society through creative research & the cultivation of future talent
Vision	A global leader driving innovation in the academic and research ecosystem
Core Values	C Creativity · O Openness · R Responsibility · E Excellence

2024~2028 Strategic Goals

Advancement of Academic & Research Innovation Platform	**Leading the National Research Paradigm**	Fostering Innovative Talent for the Future	Sharing Research Outcomes via Public Engagement & Communication	Enhancing ESG Practice & Management Efficiency

※ NRF 2024~2028 Strategic Plan : 5 Strategic goals – 20 Objectives – 59 Action plans – 86 KPIs (Oct. 2023)

02

Organization & Budget

Organization

NRF 한국연구재단

Board of Directors

President (2021~ : Prof. Kwang Bok Lee)

Audit

Office of Audits and Inspections

IITP*

Policy Advisory Committee

Ethics Committee

Secretary General

Information Security team

Advanced Science & Technology Research Agency(ASTRA)

- Directorate — Basic Research in Science & Engineering
- Directorate — National Strategic R&D Programs
- Directorate — International Affairs
- Directorate — Humanities & Social Sciences
- Directorate — Academic Research (University Funding)
- Directorate — Digital Innovation
- Directorate — Management and Operations
- Office of Research Ethics
- Office of Planning & Coordination
- Office of Public Relations

Track : S & T (5th Floor)

Track : H & SS (2nd Floor)

Regional office

USA, Japan, China, Sweden, Belgium, Germany, Russia

- International Cooperation Planning Team
- International Exchange Program Team
- American & Asian Affairs Team
- European & African Affairs Team
- International Development Cooperation Team
- International R&D Collaboration Team

※ **NRF** : The most representative Funding Agency in Korea (Budget : 50% from the Ministry of Science and ICT, 50% from the Ministry of Education)

* **IITP**: Institute of Information & Communications Technology Planning & Evaluation (Affiliated Organization)

Organization

Workforce

Staff	619
PM(full-time)	1,088(22)

Directorate for Basic Research in Science and Engineering

Promotion of basic research projects centered on researchers' creative and challenging ideas (Bottom-up)

Directorate for National Strategic R&D Programs

Promotion of national research projects for timely response to national technology development needs (Top-down, Middle-up)

Advanced Science and Technology Research Agency (ASTRA)

Directorate for International Affairs

Promotion of international exchange and cooperation projects in science and technology and academic research

Directorate for Humanities & Social Sciences

Support for academic & basic research in the field of humanities and social sciences and promote results dissemination projects

Directorate for Academic Research

Academic promotion, human resources training, and industry-academic cooperation project promotion

- Directorate for Digital Innovation
- Directorate for Management and Operations
- Office of Research Ethics
- Office of Planning and Coordination
- Office of Public Relations
- Office of Audits and Inspections

Budget in 2024

KRW 9,624B in total (USD 7.4B in total)

(Unit : KRW 1B, %)

Major Directorates	2023 (A)	2024 (B)	Change (B-A)	Budget Share (2024)
Basic Research in Science & Engineering	2,585	2,591	6.5	27%
National Strategic R&D Programs	2,501	2,356	△145	25%
International Affairs	111	114	3	1%
Humanities & Social Sciences	280	281	0.8	3%
Academic Research	3,881	4,282	401	44%
Total	**9,358**	**9,624**	**266**	**100%**

03

Funding Program

Basic Research Program in Science & Engineering

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Basic Research Program

Promotion of basic research projects centered on creative and challenging ideas of researchers (Bottom-up)

Roles & Responsibilities

- Providing support for basic R&D and human resource development
- Driving qualitative growth of national basic research capabilities
- Serving as a platform of basic research support in science and technology

Major Programs

Growth Stage / Category	Early Stage ····· Research careers steps ····· Mature				
Individual Research 1 (Research capacity)	Next-generation Researchers		Outstanding Grants		
	Research Grants for Ph.D. Student	Post-doctoral Grant Training	Young Researchers	Mid-career Researchers	Leader Grants
Individual Research 2 (Research safety net)	Support for Balanced Development of Studies		Broadening Opportunities Grants		
	Early Career Researcher	Underserved Area / Regional Researcher / Interdisciplinary Convergence	First Research in Lifetime	General Grants	Bridge Grants
Infrastructure-Building Group Research	Building of University Research Infrastructure		Group Research		
	Research Facility Establishment Program	Priority Research Institute Program	Basic Research Laboratory	Centers of Research Excellence	

National Strategic R&D Program

National Strategic R&D — Promotion of national strategic R&D projects for timely response to the demand for technology development at the national level (Top-down, Middle-up)

Roles & Responsibilities

- Securing the national growth engine & improving the quality of life
- Intensive supporting for national strategic technologies (Mission-Oriented Program)
- Supporting for original technologies including bio, nano S&T, materials, high-convergence, space, nuclear energy, etc.

Major Programs

Bio & Medical	Bio & medical technology development, brain Research, development of pharmaceuticals
Nano & Material	Nano & material development, next-generation intelligent semiconductor development
High-tech Convergence Computing	STEAM (Science and Technology Enhanced by liberal Arts and Mission) program, quantum computing technology
Energy & Environment	Advancing carbon recycling technologies, R&D program for climate change research, future hydrogen energy Innovation
Space Technology	Development of satellites, space launch vehicles, space core technologies, lunar exploration program
Nuclear & Radiation	Nuclear energy technology development, radiation technology development, accelerator core technology development program
Social welfare Technology	Development for solving issues in people's lives, disaster response technology development

International Cooperation Program

International Cooperation — Promotion of international exchange and cooperation for science and technology and academic research

Roles & Responsibilities

- Contributing to solving global common issues and supporting researchers' autonomous international cooperation activities
- Enhancing exchange of researchers and knowledge through various international collaboration programs

Major Programs

Exchange Program

- Research exchange of students and researchers
- Joint seminars and workshops
- Other international cooperation activities

Joint Research Program

- Joint research with partner countries
- R&D cooperation activities
- Mid-and-large scale programs for developing cutting-edge technologies

ODA Program

- ODA activities in science and technology
- Leading University Project for International Development Cooperation

Bilateral program process

Program planning → Consultation with a partner country (government, partner institution) → Announcement application → Evaluation → Agreement with a partner country → Final selection

Academic Support Program in Humanities & Social Sciences

Humanities & Social Sciences

Support for academic and basic research in humanities and social sciences & promotion of R&D achievements

Roles & Responsibilities

- Establishing and supporting the academic promotion policy and system in humanities and social sciences (including arts and physical education)
- Korea's only organization dedicated to academic support in humanities and social sciences

Major Programs

Growth Stage / Category	Early Stage ····· Research careers steps ·····▶ Mature					
Individual Research	Next-generation Researchers		Support by growth stage	Individual Research		Masterwork translation
	Academic research professors	Performance management center	Young researchers	Mid-career researchers	Outstanding scholars	
Joint Research	General joint research		Interdisciplinary to convergence research			
Group Research	Humanities & Social Sciences Institute	Humanities Korea (HK/HK+)	Social Sciences Korea (SSK)	Foundation Research		
Performance Management	Popularization of humanities	Designation and operation of institutions dedicated to promoting humanities	Program for academic society	Korean Research Memory (KRM)		

Academic Promotion Program for Education & HR Development

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Academic promotion program

Facilitating academic research, human resource development & university-industry cooperation projects

Roles & Responsibilities

- Improving the fundamentals of universities to respond to the era of the 4th industrial revolution
- Enhancing the research quality and HR development capacity through university assistant programs

Major Programs

University support

- Program for University Innovation, Nurturing national universities
- Regional Innovation Strategy (RIS) programs based on local government-university cooperation, etc.

Industry-university cooperation support

- Leaders in Industry-University Cooperation Program (LINC 3.0)
- Digital Innovation Sharing University Program, etc.

HR development support

- BK21 program, Global Ph.D. Fellowship Program
- KIURI program, nurturing the talents with problem-solving capabilities, etc.

Promotion of academic activities, etc.

- Academic journal evaluation and registration system
- Management of the current status of academic journals

04

Innovation of NRF

Strategic Platform to Leap beyond Today

2021	Launching TF Team	Team Leader : President Why, How, What
2022	Framework Establishment	3 Strategic Pillars – 6 Agenda Research & Human Resources, NRF-wide, Agile Platform
2023	Milestone Check, Implementation	3 Strategic Pillars – 10 Agenda Advanced S&T Research Agency(ASTRA), GCV(Graphical C.V.)
2024	Research → Global, Innovative, Challenging	**Global Top Group Collaboration, Horizon Europe(2025~), young researcher**

Thank you

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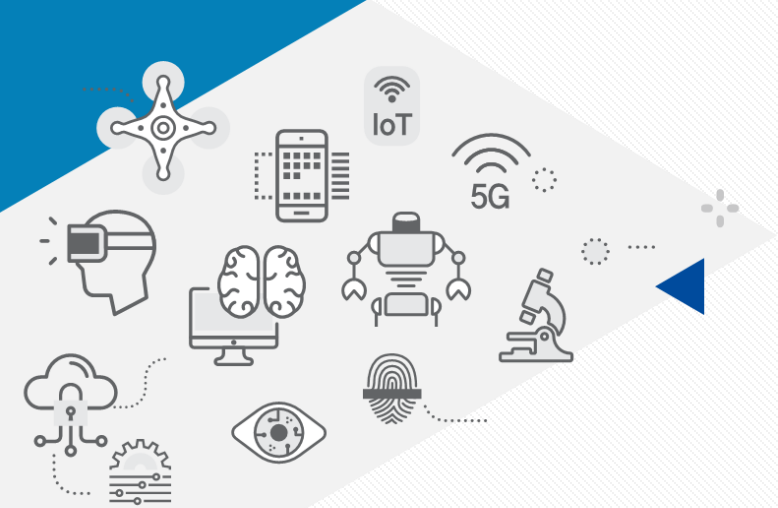

2024 Basic Research Program

In the field of science and technology

NRF 한국연구재단
National Research Foundation of Korea

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Ⅲ. Evaluation Procedure

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01

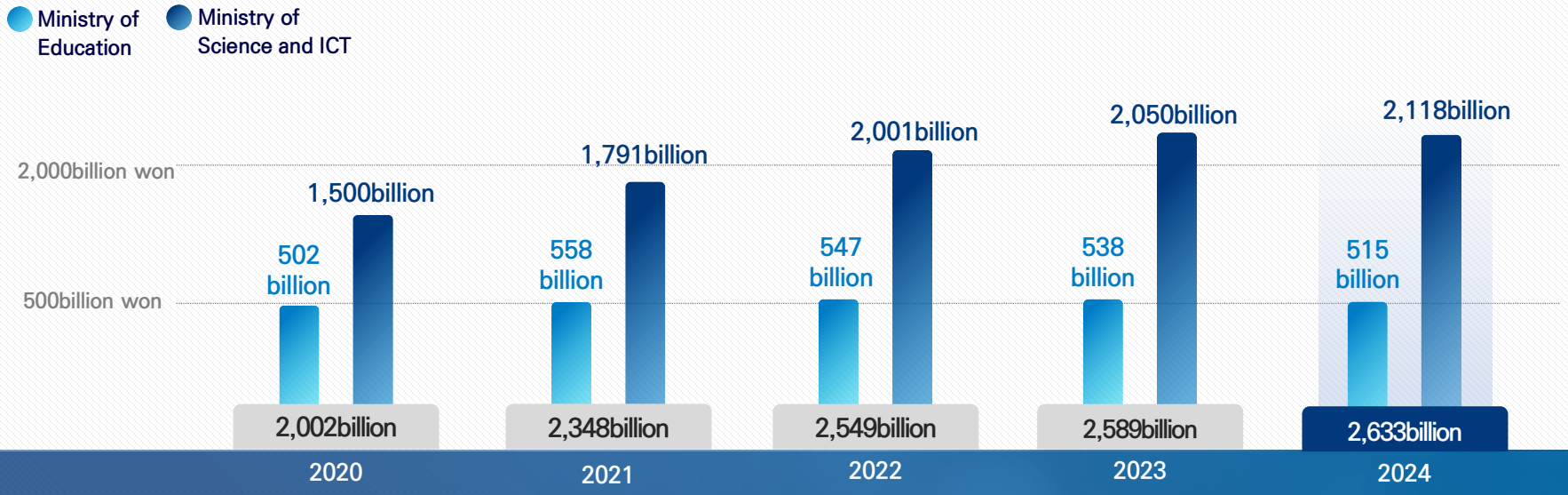
Introduction of Basic Research Program

Overview of Basic Research Program

- **Individual Research** — To foster our country's basic research capabilities by providing research funds to individuals.
- **Group Research** — To support excellent research groups in fostering key research areas to achieve a world-class standard

2024					
Program			Annual research fund budget	Research period(maximum)	'24 budget (million won)
Individual Research	Global Leader Grants		Appx. 800 million won	9 years(3+3+3)	67,244
	Consolidator Grants	Type2(Global Research)	Appx. 400 million won	1~3 years, 4 years(3+1), 5 years(3+2)	179,176
		Type1	Appx. 300 million won	1~3 years, 4 years(3+1), 5 years(3+2)	847,259
		Creative Research program	Appx. 70 million won	1~3 years	9,800
	Young Scientist Grants	Hanwoomul-Phagi Basic Research	Appx. 200 million won	10 years(5+5)	9,000
		Outstanding Young Scientist Grants	Appx. 300 million won	1~3 years, 4 years(3+1), 5years(3+2)	270,178
		Sejong Science Fellowship (Domestic Track, Overseas training Track)	Appx. 70~130 million won	Domestic Track 5 years(3+2), Overseas training Track 1 year	129,860
		Infrastructure supporting Grants of Young Scientist	Appx. 500 million won	1 year	60,000
Group Research	Global Centers of Research excellence		1,400~5,000 million won	7~10 years	232,765
	Global Basic Research Laboratory		Appx. 500 million won	1~3 years	186,933

2 Basic Research Program Budget



The budget of basic research project had been doubled by 2022 compared to 2017 and has been maintained from 2023

2024 Basic Research Budget : 2,633billion won (MSIT + MOE)
MSIT Budget : 2023 2,050 → 2,118billion won (68billion won increase)

2023 Basic Research Program

(Unit : projects, million won)

2023									
Program					New project		Ongoing project		Total	
Individual Research	Outstanding Grants	Global Leader Grants			8	4,365	94	72,495	102	76,860
		Consolidator Grants			1,577	219,289	4,974	772,213	6,551	991,502
		Young Science Grants	Hanwoomul-Phagi Basic Research		15	2,855	-	-	15	2,855
			Outstanding Young Scientist Grants (including First Innovation Laboratory grants)		401	59,518	1,464	166,646	1,865	226,164
			Sejong Science Fellow-ship	Domestic Track	150	17,213	579	66,494	729	83,707
				Overseas training Track	44	3,234	-	-	44	3,234
	Broadening Opportunities Grants	General Grants			923	47,001	3,075	169,623	3,998	216,624
		Starting Grants			203	5,012	992	30,770	1,195	35,782
Group Research	Centers of Research Excellence	SRC			8	9,620	28	41,528	36	51,148
		ERC			8	13,000	31	60,400	39	73,400
		MRC			5	5,250	37	47,701	42	52,951
		CRC			8	1,800	9	12,740	17	14,540
		RLRC			6	6,750	16	24,000	22	30,750
		IRC			3	12,052	-	-	3	12,052
	Global Basic Research Laboratory				133	53,396	255	125,159	388	178,555

2024 Basic Research Program Plan

1st Announcement : 2023.12.29 ~ 2024.2.2, For all Individual Research Program

2nd Announcement : 2024.5.14 ~ 2024.6.13, Only for Consolidator Grants Type 1 and Creative Research program

	Global Leader Grants	Consolidator Grants	Young Scientist Grants	Group Research Program
New Project budget	6,750 milion won	357,300 milion won	241,485 milion won	112,626 milion won
New Project	Appx. 12 projects (including around 3 Follow-up New projects)	Type2 (Global Research) 108 projects Type1 1st : 1,243 projects 2nd : 109~131 projects Creative Research 120~140 projects	Hanwoomul-Phagi 30 projects Outstanding Young Scientist 644 projects Sejong Science Fellowship 485 projects (Domestic 330 projects, Overseas 155 projects) Infrastructure Supporting for Young Scientist Appx. 200 projects	Global Centers of Research excellence 20 projects Global Basic Research Laboratory 155 projects

The number of selected projects and the support budget may vary depending on the budget situation and the results of the application and evaluation.

02

Program Details

1 Consolidator Grants

Research Starting on May 1st and September 1st

	Type2(Global Research Program) (1st)	Type1(1st·2nd)	Creative Research Program (2nd)
Eligibility	Faculty members (Tenure/non-tenure track, full-time/ contract) in University, Or Researchers at Public/Private Institution		
Research Period	1~3 years, 4 years(3+1), 5 years(3+2)		1~3 years
Annual budget	Appx. 400 million won/year	Appx. 250 million won/year (For the Global Collaborative Projects, Appx. 300 million won /year)	Appx. 70 million won/year
The number of new projects	108 projects	1st : 1,243 projects 2nd : 109~131 projects	120~140 projects

- Consolidator Grants are announced twice and researchers can apply for the same type only once a year
  - Only one chance of application for Consolidator Grants Type1

- For the Global Collaborative Consolidator Grants Type1, maximum 50 million won will be additionally supported

2 Hanwoomul-Phagi Basic Research

Research Starting on May 1st

Eligibility	Faculty members (Tenure/non-tenure track, full-time/ contract) in University, Or Researchers at Public/Private institution who have received their Ph.D within 15 years
Research Period	10 years(5+5)
Annual budget	Appx. 200 million won/year
The number of new projects	30 projects

3 Outstanding Young Scientist Grants

Research Starting on April 1st

Eligibility	Full time Faculty members or Full time researchers at Public/Private Institution Within 7 years after Ph.D, or 39 years old(younger)
Research Period	1~3 years, 4 years(3+1), 5 years(3+2)
Annual budget	Appx. 250 million won/year(For the Global Collaborative Projects, Appx. 300 million won /year)
The number of new projects	644 projects

- For the Global Collaborative Outstanding Young Scientist Grants, maximum 50 million won will be additionally supported

2024 Basic Research Program Annual Plan

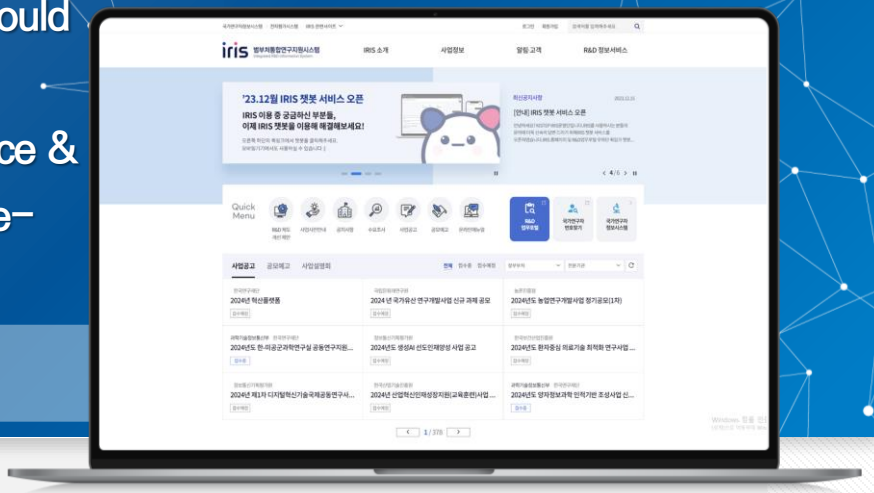
Individual Research & Group Research Program

			Announcement	Application Schedule	Starting Date
Individual Research	Global Leader Grants		’23.12.29.	’24.1.19. ~ 2.2. (Institute Approval ~ 2.7.)	8.1.
	Consolidator Grants	Type2(Global Research)			5.1.
		Type1			
	Young Scientist Grants	Hanwoomul-Phagi Basic Research			
		Outstanding Young Scientist Grants			4.1.
	Consolidator Grants	Type1	’24.5.14.	’24.6.4. ~ 6.13. (Institute Approval ~ 6.18.)	9.1.
		Creative Research			
Group Research	Global Centers of Research Excellence, Global Basic Research Laboratory		’23.12.29.	’24.2.22. ~ 3.6. (Institute Approval ~ 3.11.)	8.1.

5 Application procedure & method

2024 Basic Research Projects, the applications for all projects, should be submitted, evaluated and managed through IRIS(https://www.iris.go.kr) managed by Korea Institute of Science & Technology Evaluation and Planning (KISTEP) instead of existing e-R&D of National Research Foundation of Korea

Integrated R&D Information System
A government-wide integrated research support system



Application method through IRIS

After the principal investigator log in IRIS(https://www.iris.go.kr), fill out online information and upload the research proposal, the institute verify and approve applications.

Requirement before application → **Application** → Application complete

Registration of IRIS(NRI) by (Principal) Investigator, agreement of change to researcher and registration, update of personal information	IRIS institute registration, application for head administrator (authorization of the institute administrator), registration of the institute representative	Fill out online information and upload the research proposal	Verification and approval of the online application by the host institution
Investigator	Host Institute	Principle Investigator	Head of Host institute

※ Before submitting the application, please check with the administrators that manages research processes at the host institute about the possibility for the host research institute's approval

6 English Announcement

Basic Research Program announcement, application guideline, research proposal forms can be found on the National Research Foundation website.

1. NRF Website
   www.nrf.re.kr
2. Click '사업 공지'
3. 'Basic Research Project' or '기초연구사업 신규과제 공모' search

03

Evaluation Process

1 Categorization of Evaluation

	1 Online review	2 Panel review	3 Panel presentation review
Project classification	Same / Similar RB[1)] 5~10 projects	Same / Similar RB or CRB[1)] About 20 projects	Same / Similar RB About 10 projects
Reviewers	About 5 people	About 12 people	About 12 people
Evaluation Results	averaging scores of reviewers excluding Highest and lowest ones	Which project “selected”	Which project “selected”

1) RB(Review Board), CRB is the research area that researchers fill out when applying.
For example, financial mathematics(RB), mathematics(CRB)

2 Evaluation Method

				1st Evaluation	2nd Evaluation
Ministry of Science and ICT	Individual Research	Global Leader Grants		Panel Review	Panel Presentation Review
		Consolidator Grants	Type2(Global Research)	Panel Review	Panel Presentation Review
			Type1	Online Review	-
			Creative Research Program	Online Review	-
		Young Scientist Grants	Hanwoomul-Phagi Basic Research	Panel Review	Panel Presentation Review
			Outstanding Young Scientist Grants	Online Review	-
	Group Research	Global Centers of Research excellence		Panel Review	Panel Presentation Review
		Global Basic Research Laboratory		Panel Review	Panel Presentation Review

It can be changed according to the evaluation plan.
Panel review and Panel presentation evaluation are operated flexibly in a face-to-face/online

3 Evaluation Criteria

For Panel Review or Panel Presentation review, the panel determines which project “selected” or “not selected” based on evaluation criteria and percentage

Consolidator Grants

Evaluation criteria		Type2(Global Research)		Type1	Creative Research Program
		1st Panel Review	2nd Panel Presentation Review	Online Review	Online Review
Creativity and Originality of Research		40%	30%	40 points	50 points
Research Content and Method		20%	20%	20 points	20 points
Research Budget and Duration		10%	–	10 points	–
Excellence of Researchers (Research Team)	Type2, Type1	20%	40%	20 points	–
	Creative Research Program	–	–	–	20 points
Impact of Research Results		10%	10%	10 points	10 points
Total		**100%**	**100%**	**100 points**	**100 points**

3 Evaluation Criteria

Outstanding Young Scientist Grants

Evaluation criteria	Online review
Creativity, Originality and Challenges of Research	50 points
Research Content and Method	20 points
Research Budget and Duration	10 points
Excellence of Researchers(Research Team)	10 points
Impact of Research Results	10 points
Total	**100 points**

Hanwoomul-Phagi Basic Research

Evaluation criteria	1st Panel Evaluation + 2nd Panel Presentation Review
Creativity, Originality and Challenges of Research	40%
Research Content and Method	30%
Impact of Research Results	30%
Total	**100%**

04

FAQ

FAQ

Question 1	I'm currently on going in individual Basic research program. Is it possible to apply for the Individual Basic Research Program this year?
Answer 1	No, it is not possible. However, if an ongoing project would end by December 31 in 2024, you can apply for
Question 2	Can I write the research proposal in English?
Answer 2	Yes, you can write it in English

Question 3 What are the methods for global collaborative research?

Answer 3 Global collaborative research can take various forms, and researchers can choose any of these following options based on their preferences.

Type	Details
Participation of researchers	Participation of researchers from overseas research institutes as co-investigators or researchers
	Recruitments of an overseas researcher(doctoral levels) (an invitation of overseas researchers, etc.)
	Visits by overseas researchers(including students) to a domestic institution and participation in research projects(more than 4 weeks per year)
	Visits by domestic researchers (co-investigators/researchers) to overseas institutions (as visiting professors, etc.)
	Visits by domestic researchers (junior researcher/student and postdoctor, professor) to the overseas research institution and participations of research projects (more than 4 weeks/year)
Visits	Mutual visits of principal investigators to the counterpart institution (more than 2 weeks/year)
Use of research facilities or equipment	Collaborative Use of Research Equipment(Especially specialized or high-cost equipment)
Establishment of global network	International Joint Academic Conferences/Conventions/Symposiums/Seminars/Workshops" held domestically or internationally
Establishment/operation of joint research center	Establishment/operation of base research laboratory at domestic or overseas research institutes
Others	Others (feasible global collaborative research approaches for each research project)

FAQ

Question 4 What does the additional 50 million won support mean for Consolidator Grants and Young Scientist Grants' global collaborations?

Answer 4 The funding for these two programs is 250 million won annually. However, if researchers engage in global collaborative research, as explained earlier, they will receive an additional 50 million won

Question 5 I applied for Consolidator Grants Type1 but failed. Can I apply again in the second announcement?

Answer 5 You cannot apply for the same type again.
However, you can apply for a different type, for example the Creative Research Program if you qualify.

Thank you

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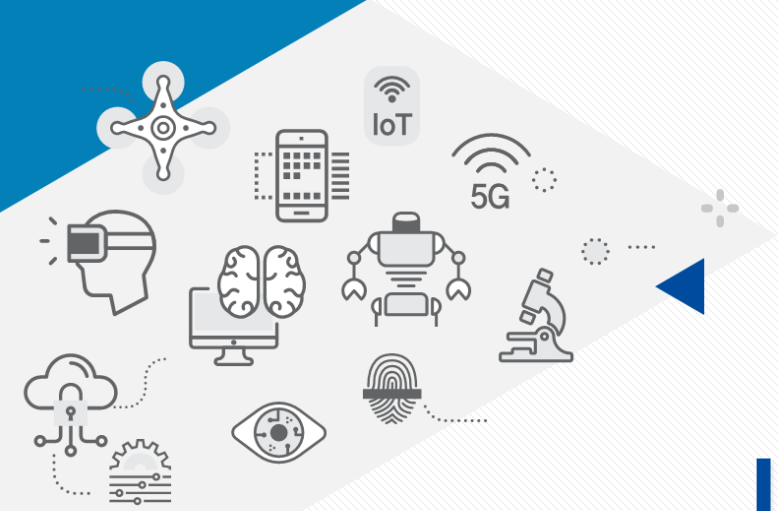

Introduction on National Strategic R&D Programs

September 11th , 2024.

Dr. Min SEOL

National Research Foundation of Korea

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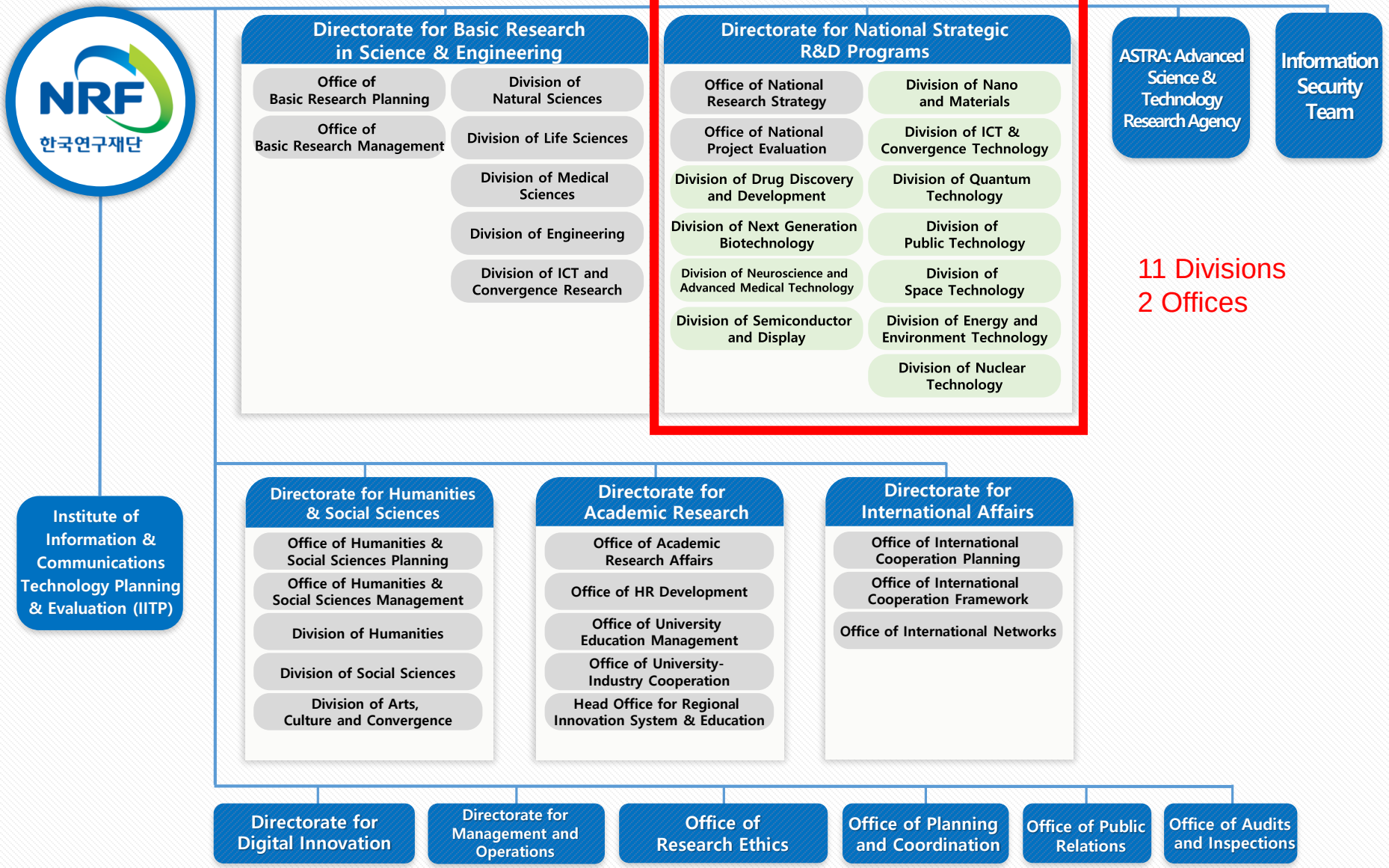
I

Introduction

NRF Organization



Key Features of the National Strategic R&D Programs

Focused on legislation, national strategy, and advanced technology

- **Formulation and implementation of strategic plans (5 to 10-year cycles) to enhance and promote science and technology in alignment with relevant legislation.**

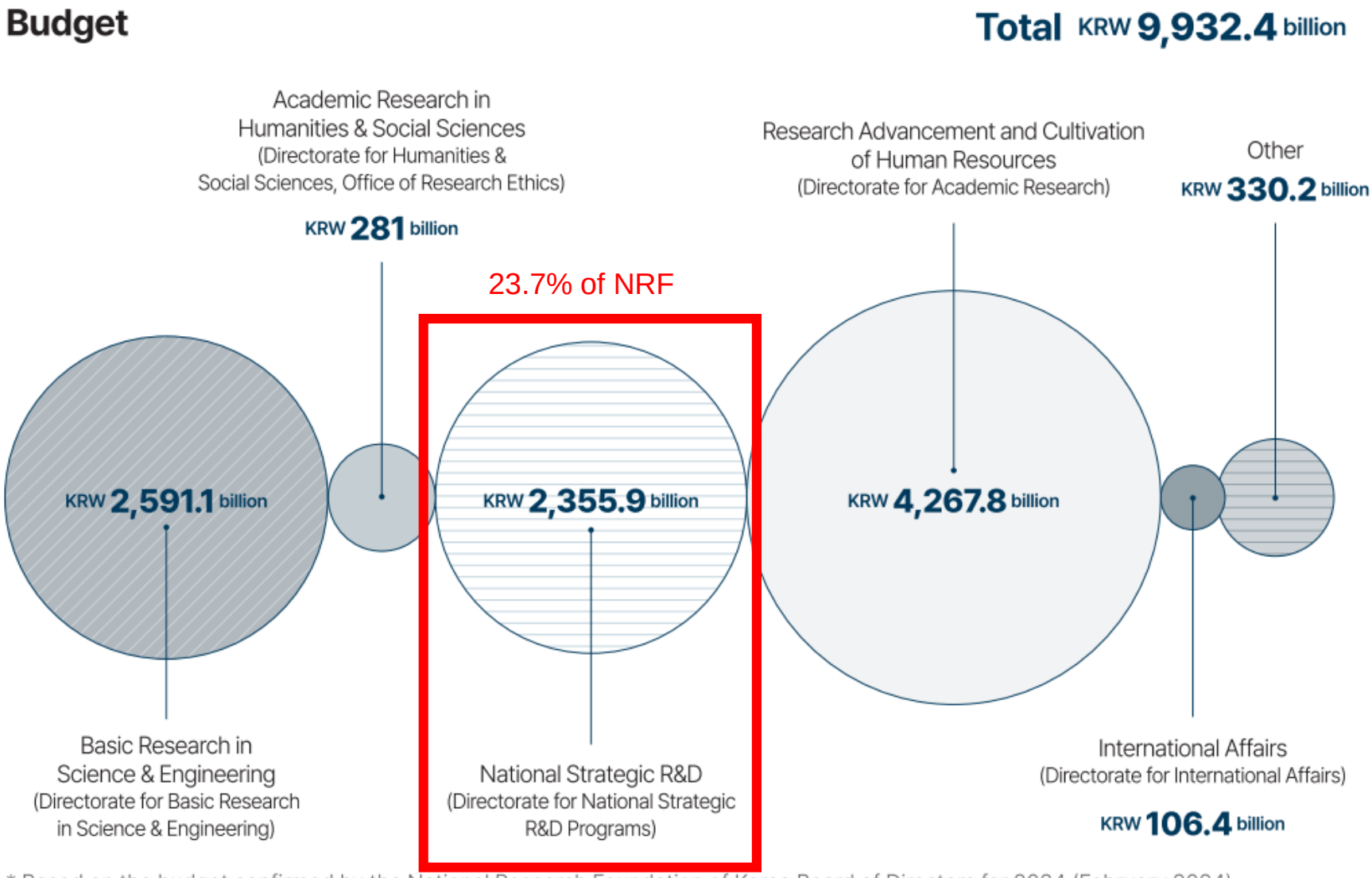
Acts	Basic Plan
Biotechnology promotion act, Bio-Resource act, Brain research promotion act, Nanotechnology development promotion act, Space technology basic act, etc.	Biotechnology promotion basic plan, bio-resource basic plan, brain research promotion basic plan, nanotechnology strategic development plan, mid-to-long-term space development plan, etc.

- **Support focused on the nation's strategic priority areas: Task identification through a Top-Down/Middle-Up approach.**

	Basic Research Program	National Strategic Program
Project Structuring Methods	Primarily Bottom-Up	**Top-Down / Middle-Up**
Phases of Project Execution	Basic research, Mission-oriented basic research	Mission-oriented basic research + Applied research = **Strategic research**
Research Objectives (TRL)	Primarily at stages 2 to 4 (experimental phase)	**Primarily at stages 3 to 5 (prototype phase)**
Types of Results Achieved	Scientific outcomes (such as publications)	**Technological (patents), economic (technology transfer), and infrastructural outcomes.**

- **Advanced technologies (e.g., BT, NT, ET, and converging technologies) and systemic integration (e.g., nuclear energy, space, etc.)**

2024 Budget



* Based on the budget confirmed by the National Research Foundation of Korea Board of Directors for 2024 (February 2024)

Objective and Support Areas

Vision of the 5th Basic Plan for Science and Technology (2023–2027)

A Progressive Future Driven by Scientific and Technological Innovation

☑ **Advancing the National Science and Technology Policy Vision**

by Identifying and Funding Strategic National Areas through Government-Funded Research Projects

Major Areas for Funding & Programs

Life Science / Biomedical Science	Development in Bio- and medical technologies, Pioneering fundamental research in neuroscience, National drug development programs, etc.
Nanotechnology / Materials	Advancements in nanotechnology and material sciences, Enhancement of material discovery initiatives, Development of next-generation intelligent semiconductor technologies, etc.
Advanced Convergence and Computing	STEAM research projects, Quantum computing technology development, Advanced utilization of high-performance computing, etc.
Energy / Environment	Development of fundamental technologies for marine and polar regions, Advancing technologies to minimize climate change impact, Energy cloud technology, etc.
Promotion of Space Development	Artificial satellite development, Space launch vehicle development, Core space technology development initiative, etc.
Nuclear Power / Radiation	Nuclear Energy research and development initiatives, Advancement in technologies for radiation application, Support for heavy ion accelerator construction, etc.
Public Technology	Research aimed at addressing social challenges (including the development and demonstration of innovative products based on public demand, etc.), Development of disaster and emergency response technologies, etc.

※ Number of Projects Funded in 2024: 2,374 (New: 483 projects, Ongoing: 1,891 projects)

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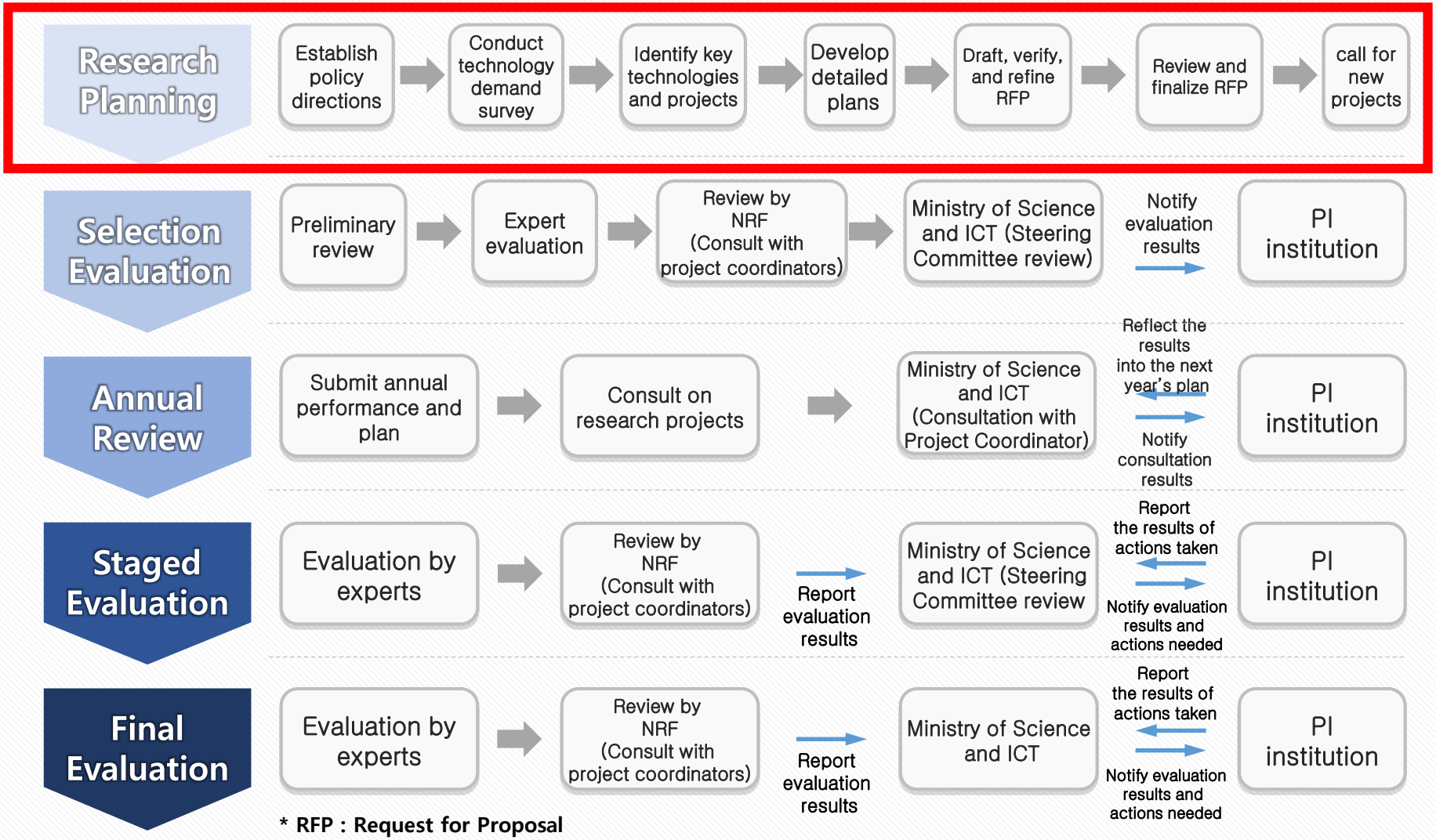
Program process

Planning and Review Process



* RFP : Request for Proposal

How to Participate in the Technology Demand Survey

STEP 1

① Access "Planning Maru(기획마루)" at https://plan.nrf.re.kr/kor/index

※ The website is available in English by using the Chrome browser

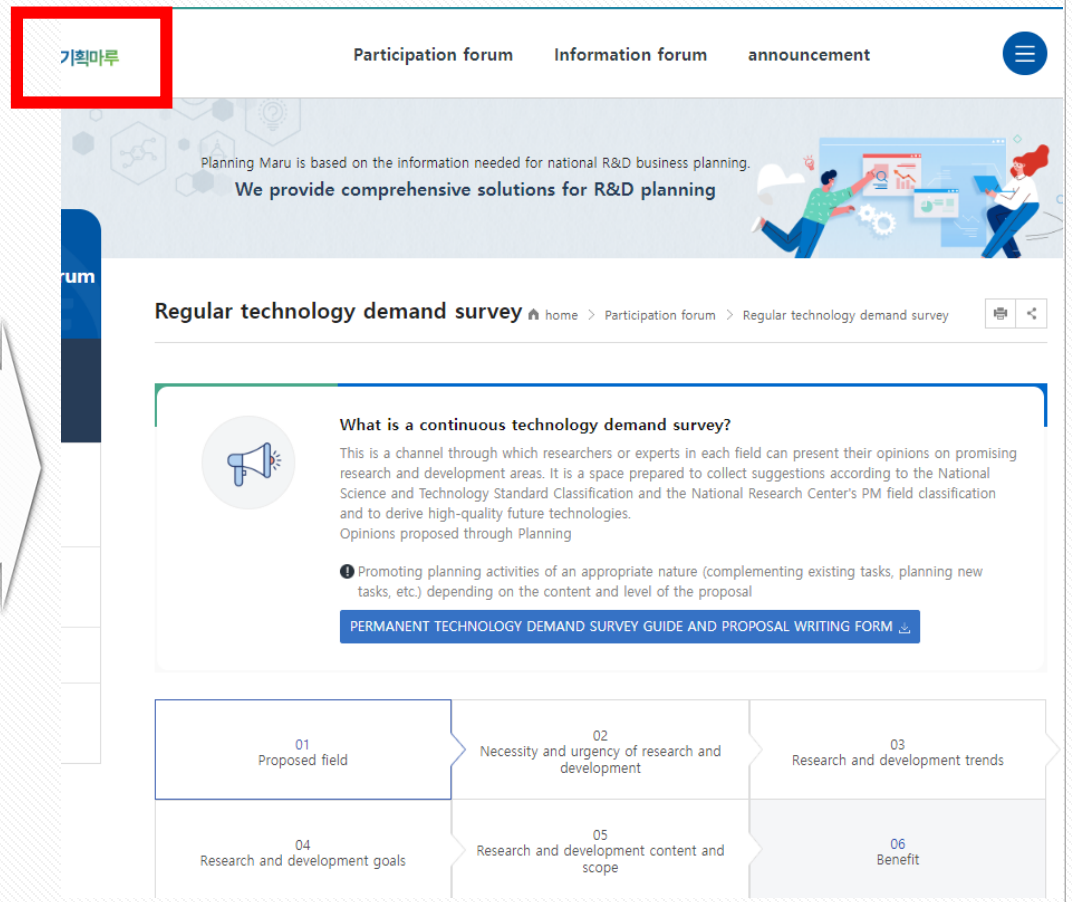
STEP 2

② Download the "Regular Technology Demand Survey Guides and Proposal Form"

STEP 3

③ Complete and submit the survey proposal

⇒ The submitted proposal is classified into the PM category of the Directorate for National Strategic R&D Programs and reviewed by experts. If selected, the proposal is reflected in the program planning.



Key characteristics of National Strategic R&D programs

Key characteristics of national strategic R&D projects – from the perspective of project evaluation

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Program Overview

List of Programs

1. Biotechnology Development Program
2. Nano-Materials Technology Development Program
3. ICT Fundamental R&D Program
4. Quantum Science and Technology R&D Program
5. Convergence Technology Development Program
6. Climate Environment R&D Program
7. Nuclear R&D Program

1. Biotechnology Development Program

Overview

Program Overview

(Purpose) To support the acquisition and practical application of core and advanced biotechnologies directly related to public life and health, including new drugs, medical devices, precision medicine, and neuroscience

(2024 Budget) 542.1 billion KRW

(Key Area) New drugs, regenerative medicine, infectious diseases, gene editing, neuroscience, and medical devices

2024 Focus Areas

Accelerate biotechnology innovations through focused support for the acquisition of advanced biotechnologies and promising future technologies, the convergence between bio and digital technologies, and the creation of an ecosystem for biotechnology innovations

※ (National Agenda 75-3) Promote bio-transformation and digital biotechnology

(Advanced Biotechnologies with enabling technology) Promote advanced biotechnologies underpinning the creation of new future industries and markets and the advancement of biomedical engineering, including engineering biology, gene and regenerative therapy, and innovative new drugs

(Digital Bio) Support convergence research between biotechnologies and advanced digital technologies to overcome the limitations of high-risk and high-cost biotechnology R&D

(Biotechnology Innovation Ecosystem) Build a robust R&D foundation for biotechnology innovations by developing multidisciplinary talents and establishing advanced infrastructure, while fostering an ecosystem that encourages both domestic and international cooperation

2. Nano-Materials Technology Development Program

Overview

Program Overview

(Purpose) To identify and support **emerging fields in nanomaterials** and establish a strong research foundation. This includes providing comprehensive research and development support, from fundamental technology development to commercialization in the **nanomaterials** sector

(2024 budget) 235.3 billion KRW

(Key Area) Nanomaterials, material data, and nano infrastructure

2024 Focus Areas

Strengthen the strategic alignment of research and development policies and projects within the fields of nanomaterials, materials, and infrastructure to enhance the project's strategic value and outcomes through robust project management

(Materials) Enhance support for future materials R&D and provide robust backing for young researchers, in alignment with the 12 national strategic technologies; Secure next-generation fundamental technologies to address technical challenges and spearhead future advancements

(Nanotechnology) Allocate resources to acquire core technologies that maximize nanotechnology R&D capabilities, leveraging the excellent research outcomes accumulated based on the 4th Nanotechnology Roadmap

(Research Infrastructure) Develop a data-driven research innovation strategy and system (to be established In early 2024) to accelerate R&D; Establish research infrastructure for extreme materials essential for securing cutting-edge technologies

3. ICT Fundamental R&D Program

Overview

Program Overview

(Purpose) To secure technological superiority in the fields of semiconductors, displays, secondary batteries, ultra-high-performance computing, and superconductors, and to expand investment in promising fundamental technologies to create future growth opportunities

(2024 Budget) 36.1 billion KRW

(Key Area) Semiconductors, displays, secondary batteries, ultra-high-performance computing, and superconductors

2024 Focus Areas

(Semiconductors) **Continue supporting the development of** next-generation fundamental technologies in promising areas such as intelligent semiconductors, PIM semiconductors, and compound semiconductors; **Engage in long-term, in-depth R&D and train master's and doctoral-level experts in system semiconductors**

(Displays) Support strategic research labs to develop **future display** fundamental technologies, including ultra-realistic (ultra-high resolution, holograms, etc.), **next-generation free-form, and convergence technologies; Launch new projects for developing core technologies for ultra-high-resolution displays on silicon wafer substrates (on-silicon displays)**

(Secondary Batteries) Promote new projects for the development of **next-generation core fundamental technologies for secondary batteries**, focusing on materials independence (sodium-ion batteries) and safety assurance (aqueous zinc batteries); Engage in **international cooperation** through joint research with institutions such as the **U.S. Argonne National Laboratory**, and **train master's and doctoral-level experts in next-generation secondary batteries** to meet increasing private sector demand

(Ultra-High-Performance Computing) Accelerate the introduction of national ultra-high-performance computing infrastructure to reach the level of global top ten countries; Maximize the utilization of ultra-high-performance computing in strategic areas and provide phased support for software development in preparation for the exascale era

(Superconductors) Promote the acquisition of core technologies for non-insulated high-temperature superconductors and the design and production of prototypes for magnets in four key shapes*

* Four key shapes of magnets (promising application areas) include Solenoid (MRI), D-shaped toroidal (environment and energy), racetrack (electric vehicles and railways), and saddle-shaped (cancer treatment accelerators).

4. Quantum Science and Technology R&D Program

Overview

Program Overview

(Purpose) To strengthen technological competitiveness through the development of core and fundamental technologies in the quantum science and technology and system implementation

('24 Budget) 128.5 billion KRW

(Key Area) Quantum computing, quantum communication, and quantum sensors

2024 Focus Areas

(Technology Development) Accelerate technological advancement through the promotion of interdisciplinary research in science and engineering

(Infrastructure Expansion) Enhance R&D efficiency and strengthen the ecosystem in the quantum field by developing quantum materials and components, and establishing a central hub for international cooperation in Asia

(Expansion of Technology Application) Promote the technology application in quantum computing by advancing the development of quantum simulators for materials innovation and expanding support for advanced quantum research

5. Convergence Technology Development Program

Overview

Program Overview

(Purpose) To secure global-level fundamental technologies for convergence to lead future technological revolutions and create new national growth engines, while promoting the commercialization of outstanding outcomes

(2024 Budget) 100.1 billion KRW

(Key Area) Convergence research and training of technology convergence experts

2024 Focus Areas

(Collaborative Planning based on Openness) Identify emerging fundamental technologies in the field of technology convergence through a continuous communication system with over 50 academic federations*, and expand research creativity through problem-solving and goal-oriented planning

* Major technological fields under the Ministry of Science and ICT: General, electronics and information, biotechnology, materials/convergence technology, large-scale/public technology, quantum technology and basic research

(Future-Oriented Portfolio Projects) Enhance the efficiency of R&D investment in convergence technologies by promoting portfolio-type convergence projects that provide various options in a rapidly changing environment

6. Climate Environment R&D Program

Overview

Program Overview

(Purpose) To address the climate change crisis by securing world-leading fundamental technologies and supporting the creation of innovative growth engines in technology fields with significant greenhouse gas reduction effects

(2024 Budget) 10.9 billion KRW

(Key Area) Solar cells, fuel cells, and bioenergy

2024 Focus Areas

(Solar Cells) Develop climate industry models suitable for commercialization, such as urban and mobile solar cells, and support the advancement of next-generation solar cell fundamental technologies based on these models

(Fuel Cells) Develop climate industry models suitable for high energy consumption areas, such as solid oxide fuel cells (SOFC), and support the advancement of next-generation fuel cell fundamental technologies

(Bioenergy) Facilitate the acquisition of unused and new biomass and the development of complex conversion and utilization technologies to transform biomass into fuel, thereby overcoming the limitations of existing technologies

(C1 Gas Refinery) Support the development of core fundamental technologies for bio-catalysts and chemical catalysts for the conversion of C1 gases (CO, CH4) and the development of refinery technologies

7. Nuclear R&D Program

Overview

Program Overview

(Purpose) To promote nuclear and radiation research and development that prioritizes public safety while driving future innovative growth

(2024 Budget) 256 billion KRW

(Key Area) Core nuclear technologies and radiation utilization technologies

2024 Focus Areas

(Core Nuclear Technologies) Support the development of reactors emphasizing safety, economic efficiency, and flexibility, including the development of innovative small modular reactors (e.g., i-SMR), key technologies for enhancing the safety of operating nuclear power plants, and core technologies focused on public safety and life

(Radiation Utilization Technologies) Leverage radiation capabilities to validate medical and industrial technologies and pursue the acquisition of convergence and fundamental technologies for creating new industries

(Research Infrastructure Development) Strengthen the nuclear research infrastructure through basic research, human resource development, facility construction, and international cooperation to secure innovative momentum in nuclear R&D

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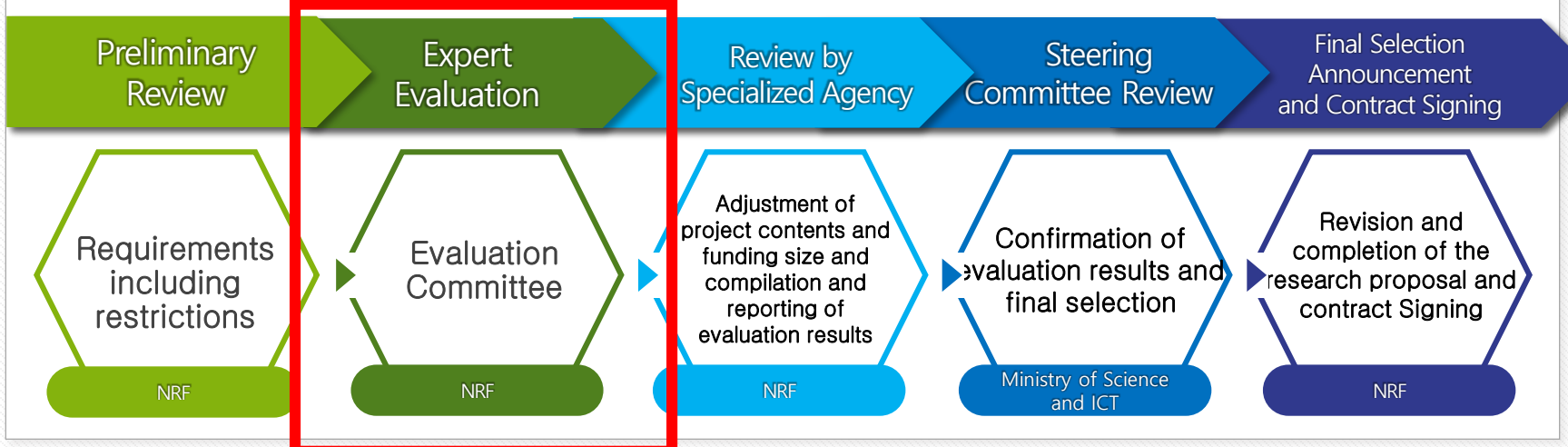
Evaluation Procedure

Evaluation Procedure

Evaluation Procedure



Expert Evaluation

- Evaluation committee is made up about 10members who are chosen from a NRF database(pool of reviewers) through a process conducted fairly and impartially by the RB/PM (ad-hoc base)
  - Only persons with appropriate expertise and without disqualifying conflict of interest can be appointed
- The evaluation is to be conducted by Oral presentation In Person
  - Applicants are informed of the details of the evaluation method after the evaluation plan is established based on the project scale and the number of applications received

Key Evaluation Criteria

Evaluation Criteria	Details	Score
Research Plan (35)	Creativity and innovativeness of the R&D projects based on their suitability to the social and industrial needs - Assessment of the differentiation from the existing National R&D Projects	20
	Feasibility of the research plan - Compliance with the call for the project including the RFP and research topic guides) - Clarity of research objectives - Adequacy of research contents and implementation framework	15
Research Capability (25)	Research experience and achievements of applicants from the lead and collaborative research institutes - Suitability for the research contents - Capability to smoothly implement the project	25
Application of research findings (40)	Possibility of securing originative source technologies and expected impacts - Specificity and feasibility of the plan to secure originative source technologies - Applicability of research outcomes and their impacts on the scientific community, the public, and the industry sector	20
	Appropriateness of a strategy to produce tangible outcomes - A strategy for securing intellectual property rights and a roadmap for technology transfer and commercialization	20
Total		100

V

Yearly Schedule

Yearly Schedule

Yearly Schedule

1. New Project Planning and RFP Announcement (January - February)

- The RFP announcements are uploaded on the National R&D Project Integrated Information System (IRIS) or the NRF website for a duration of 30 days or more.
- The RFPs include the project objectives, funding details and durations, eligibility criteria, selection evaluation criteria and procedures, confidentiality, and other matters as determined by the minister.

2. Selection Evaluation (February - March)

- Procedure: Preliminary Review by specialized agencies → Expert Evaluation → Main Review by specialized agencies
- During the expert evaluation, applicants present their research plans and participate in Q&A sessions.

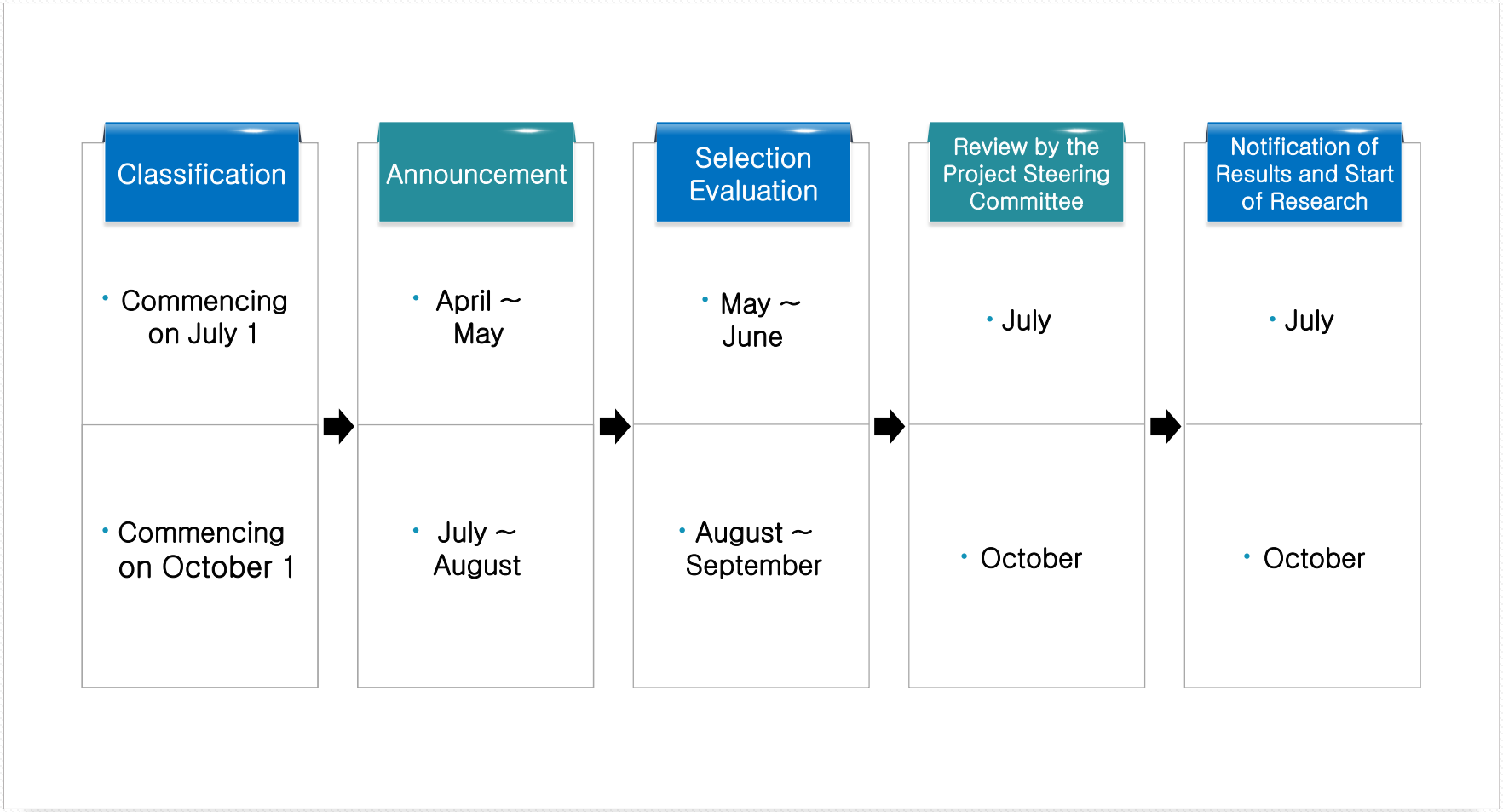
3. Project Steering Committee Review (April)

- The committee adjusts the selected projects and their funding size by examining the review results (including the overall evaluation comments) submitted by the specialized agencies.

4. Notification of Evaluation Results and Project Kick-off (April)

- Evaluation results, including the overall evaluation comments and the list of evaluators, are communicated to the applicants' institutions and PMs.

Reference: Timeline for Projects Starting in July and October



Thank you

NRF National Research Foundation of Korea

VI

Appendix

- Part of Projects
- Global Cooperation projects
- Part of RFP list

1. Biotechnology Development Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget	Project Name	Purpose of the Project	'24 Budget
Bio-medical Technology Development	Acquisition and practical application support of core and advanced medical technologies directly related to public life and health, such as new drugs and stem cells	3,043	**Korean Medicine Digital Convergence Technology Development Projectlood Cells and Platelets)**	Creating innovative fundamental technologies unique to our country through the convergence of Korean medicine with various knowledge and technologies to solve national challenges and modern medical issues and respond to future diseases	9
Future Brain Convergence Technology Development	Development of future core brain convergence technologies through the fusion of ultra-convergence and ultra-connectivity technologies, which are key element technologies of the 4th Industrial Revolution, with neuroscience	9	**Technology Development Project for Cell-based Artificial Blood (Red Blood Cells and Platelets) Manufacturing and Demonstration Platform**	Securing cell-based artificial blood production technologies, establishing artificial blood manufacturing process platforms, developing evaluation standards for artificial blood products, and funding clinical research	18
Omics-based Precision Medicine Technology Development	Development of technologies for identifying and predicting biomarkers related to intractable diseases by performing large-scale analysis of bio-information (omics) such as genomes and proteomes	45	**Core Technology Development for Next-Generation Microbiome-based Therapeutics**	Developing core technologies for microbiome-based treatment of intractable diseases and cancer to overcome the limitations and problems of existing treatments	50
Core Technology Development for New and Re-emerging Infectious Diseases Response Platform	Development of platform and core gap technologies in major areas (prediction-diagnosis-treatment-prevention) for responding to new and re-emerging infectious diseases	27	**Technology Development for Gene Editing, Control, and Restoration**	Advancing gene editing, control, and restoration technologies and developing delivery technologies to create next-generation core and fundamental gene therapy technologies	90
Core Technology Development Project for Next-Generation Infectious Disease Vaccines	Securing next-generation vaccine base technologies to proactively respond to infectious diseases	18			

1. Biotechnology Development Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget	Project Name	Purpose of the Project	'24 Budget
National New Drug Development Project	Generating global commercialization outcomes and public health benefits through full-cycle support for new drug development	388	Bio-Risk Assessment Team Innovation	Advancing R&D to enter and guide risk assessment reviews for developed genetically modified organisms (LMOs)	10
Pan-Ministerial Regenerative Medicine Technology Development Project	Funding full-cycle research and development from core fundamental technologies like cell differentiation to clinical stages of advanced biopharmaceuticals and other therapeutic technologies	353	Accelerated New Drug Development Project Based on Federated Learning	Building the Korean-style federated learning-based AI drug development platform (K-MELLODDY, Machine Learning Orchestration for Drug Discovery) and presenting application cases to activate the AI-based new drug development ecosystem in the domestic pharmaceutical industry	12
Multi-Ministerial National Bio-Resource Advancement Project	Systematically securing physical material resources and research data necessary for bio-research and industrial activities and providing them to industry, academia, research institutes, and hospitals through inter-agency cooperation	403			
Pan-Ministerial Full-Cycle Medical Device Development	Fostering the medical device industry, which has high job creation and added value effects, to secure new growth engines and respond to aging populations and soaring medical costs	572	Technology Development Project for Regenerative Therapy Based on Artificial Cartilage Cells	Securing core technologies for regenerative therapy based on artificial blastema cells and confirming the feasibility of new regenerative therapies through advanced regenerative medical clinical research	27
Dementia Research and Development Project	Overcoming dementia and reducing the social and economic burden on citizens by identifying the causes of dementia, developing early prediction and diagnosis technologies, and developing prevention and treatment	136	National Integrated Bio Big Data Construction Project	Building a large-scale bio big data for 1 million Koreans to realize precision medicine, activate data-driven research, and foster new bio-health industries	108
Total					5,421

1. Biotechnology Development Program

2024 Global Cooperation New Project Call for Proposals

Sub-Project (or Detailed-Project)	Project Overview	Number of new projects	Duration (Year)	Annual Research Budget (KRW 100 million, 12 months)	Starting Date
GloPID-R International Cooperation	Enhancement of the International Infectious Disease Cooperation Network based on GloPID-R and Strengthening Research Foundations for Overcoming Unresolved Future Infectious Diseases -Conduct international collaborative research in areas such as basic/mechanistic studies, diagnostics, therapeutics/vaccine development, surveillance/prediction, control measures, and policy development to respond to emerging and re-emerging infectious diseases	11	0.8	1.3 ~2	March
Strengthening Global Competence in Advanced Bio	ㅇEstablishment of a Sustainable Research Platform in Key Advanced Bio Technologies and Digital Bio Technologies : Use-Inspired Research Addressing Global Challenges through the Bioeconomy (NSF Lead Agency Model) ㅇ(Support for Inter-country Collaboration) Assistance in collaboration within the advanced bio sector across nations	Approxi mately 21	2 ~5	8 ~12	October
Digital Bio Promotion	Support for Boston-Korea Joint Research(Fostering technologies in advanced bio fields relevant to national strategic technologies through globally leading and pi oneering international joint research between Korea and the United States, jointly b y the Ministry of Science and ICT and the Ministry of Health and Welfare)	17	4	Type I : 30 Type II :20	July
Bio-Innovation Infrastructure Development	Support for Technology and Personnel Exchanges in Advanced Bio: Planning and operation of global cooperation programs -Overseas outreach (10 exchange research teams, approximately 60 participants) and domestic invitations (hosting distinguished international researchers)	1	7	55	April (Varies by Program)
Core Technology Development for Synthetic Biology	International Cooperation to Secure Leading Technologies in Biofoundries (International joint research, personnel exchanges, and hosting international conferences)	1	6	7.5	April

1. Biotechnology Development Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
Development of Core Synthetic Biology Technologies	[Protein (Enzyme)] Development of Core Fundamental Technology for Next-Generation Enzyme Design (Field 1: Development of de novo Artificial Enzyme Design Fundamental Technology)	1	2024-04-01~ 2028-12-31	9
Development of Core Synthetic Biology Technologies	[Circuit] Development of a Versatile Genetic Logic Circuit Device for Non-Model Useful Strains (Field 1: Development of a Versatile Genetic Logic Circuit Design/Manufacturing Platform for Non-Model Strains)	1	2024-04-01~ 2028-12-31	9
Development of Core Synthetic Biology Technologies	[Microbe] Development of Core Synthetic Biology Technology for the Advancement of Microbial Cell Factories (Field 1: Development and Advancement of Core Synthetic Biology Technology for Advanced Microbial Cell Factories, and Establishment of High-Level Chassis)	1	2024-04-01~ 2028-12-31	9
International Cooperation for Leading Synthetic Biology Technology Globally	International Cooperation for Securing Leading Bio-Foundry Technologies	1	2024-04-01~ 2028-12-31	5.62
Advanced GW Bio	Development of Retro-Biosynthesis Core Technology for Microbe/Plant-Derived Therapeutic Candidate Substances	1	2024-04-01~ 2028-12-31	15

1. Biotechnology Development Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
Establishing a Bio-Innovation Foundation	Funding for Advanced Bio Technology and Talent Exchange	1	2024-04-01~ 2031-12-31	41.25
Next-Generation Bio	Establishment of Cloud AI Antibody Bank	1	2024-04-01~ 2026-12-31	50
Next-Generation Bio	Development of Core Fundamental Technology for Advanced Peptide New Drugs and Platform Construction	1	2024-04-01~ 2028-12-31	14
Development of Future Medical Innovation Response Technologies	Construction of a New Drug Design Platform Utilizing Large-Scale Facilities and Equipment	1	2024-04-01~ 2028-12-31	40

2. Nano-Materials Technology Development Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget
Nano and Material Technology Development	Securing global-level fundamental technologies to create new markets and industries of the future and to upgrade key industries. Expanding related research infrastructure and promoting the commercialization of excellent outcomes	2,230
Funding for Future Material Discovery	Overcoming external dependence through the acquisition of future materials based on novel research methodologies and demonstration of core fundamental technologies in materials and components	109
Training of Professionals in the Nano-material Field	Cultivating specialized personnel in advanced nano-technology fields by utilizing experts from industry, academia, and research institutions as well as national nano-infrastructure	7
Establishment of a Verification Research Base for Extreme Materials	Establishing a one-stop demonstration foundation for extreme materials and funding demonstration research and development to secure national strategic sovereignty and technological leadership in extreme materials	8
Total		2,354

2. Nano-Materials Technology Development Program

2024 Global Cooperation New Project Call for Proposals

Sub-Project (or Detailed-Project)	Project Overview	Number of new projects	Duration (Year)	Annual Research Budget (KRW 100 million, 12 months)	Starting Date
Global Young Connect for Materials	Support emerging researchers in national strategic technology areas of future materials to overcome technological challenges, develop leadership, and form global networks	16	4 (2+2)	Phase I 7.5, Phase II 15	April, July

2. Nano-Materials Technology Development Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
National Strategic Technology Material Development	Development of Conductive Material Technology for Semiconductor High Directivity Wiring and Heterogeneous Integration/2.5, 3D IC	1	2024.04.01 ~2028.12.31	71.25
	Graded Functional Materials for Integrated Regeneration of Hard-Soft Tissue Interfaces	1	2024.04.01 ~2028.12.31	71.25
	Development of Stretchable Backplane Fundamental Materials and Process Technology with Intrinsic Stretchability under 30% or More Biaxial Tension for Stretchable Displays	1	2024.04.01 ~2028.12.31	71.25
	High-Energy-Density Lithium-Ion Battery Electrode Material for Low-Carbon Dry Process	1	2024.04.01 ~2028.12.31	71.25
	Single-Crystal Cathode Material for Electric Vehicles Based on Direct Recycling Technology of Spent Batteries	1	2024.04.01 ~2028.12.31	71.25

2. Nano-Materials Technology Development Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
Development of Core Technology for Nano-Future Materials	High-Precision Large-Area Terahertz Nano-Sensor Technology Overcoming Wavelength Limits	2	2024.04.01 ~2028.12.31	38.75
	Development of High-Stretchability Sensing In-Memory Devices and Artificial Neural Systems for Robotics Applications	2	2024.04.01 ~2028.12.31	38.75
	Development of Natural-Based High-Functionality Lignocellulosic Nano-Materials and Commercialization Process Technology	2	2024.04.01 ~2028.12.31	38.75
Technology Development	Development of Ultra-Sensitive Nano-Optical Materials for Non-Destructive Structural Analysis of Multidimensional Proteins	1	2024.04.01 ~2028.12.31	95.00
	Development of Ultra-Lightweight, Low-Cost Metal-Polymer Hybrid Mobility Materials and Component Technology Based on Covalent Bonding	1	2024.04.01 ~2028.12.31	95.00
	Development of Multifunctional Mat and Tubular Therapeutic	1	2024.04.01	95.00

3. ICT Fundamental R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget	Project Name	Purpose of the Project	'24 Budget
Core Technology Development for PIM Artificial Intelligence Semiconductors	Securing technological superiority in new concept PIM artificial intelligence semiconductors and establishing an industrial ecosystem to achieve global technological and market dominance	113	Training of Convergence Experts in System Semiconductors	Training high-level convergence experts * Cultivating talent to pioneer future markets and enhance industrial competitiveness * 'T-shaped professionals' who possess a comprehensive understanding of the entire semiconductor domain, including devices, circuits, systems, design, and manufacturing (↑ expertise), and who can creatively integrate knowledge in interdisciplinary fields such as AI and bio-technology where semiconductors are utilized (↑ convergence skills).	95
	Supporting the development of fundamental technologies for next-generation compound semiconductor epi-materials and devices to foster a research ecosystem and stimulate industry	79			
Core Technology Development for Supporting National Semiconductor Research Labs	Enhancing the capabilities of university semiconductor labs, which are the basic units of research and development and human resource training, to respond to the intensifying global competition for semiconductor technological supremacy	89			
Activation of Semiconductor Design and Verification Infrastructure	Providing MyChip services using public fabs to undergraduate and graduate students in the semiconductor design field, and promoting equipment advancement and fab linkage	60	Fab Advancement (Detailed Project under Nano-Material Technology Development)	Supporting the expansion of national nano-infrastructure facilities, equipment, and services, including nano-fabs	175

3. ICT Fundamental R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget	Project Name	Purpose of the Project	'24 Budget
Core Technology Development for Advanced Semiconductor Packaging	Enhancing the competitiveness of foundries and OSAT by training master's and doctoral-level experts in advanced packaging, following the advancement of semiconductor back-end processes	64	International Cooperation for Fundamental Technology Development (Semiconductors)	Identifying and supporting cooperation projects for fundamental technology development to secure technological superiority in the three key areas (semiconductors, displays, secondary batteries) and establishing a global cooperation network	44
Development of Micro-Substrate Technologies for Next-Generation Semiconductors	Securing core technologies for next-generation advanced substrates to expand the market share and technological dominance of domestic companies in semiconductor package substrates	64	Training of Specialized Personnel in Advanced Semiconductor Packaging	Supporting the training of master's and doctoral-level experts in advanced packaging following the enhancement of semiconductor back-end processes to strengthen the competitiveness of foundries and OSAT	6
Core Technology Development for Next-Generation Semiconductor Equipment	Strengthening research and industrial competitiveness by developing fundamental technologies for next-generation semiconductor equipment through innovative processes in advanced semiconductor manufacturing	25	Support for Strategic Research Labs in Future Displays	Supporting fundamental research by mid-career researchers in strategic areas for future display technological superiority, based on private sector demand, to produce research outcomes	31
Utilization Projects Linked to Global Advanced Semiconductor Fabs	Promoting international joint research and development through collaboration between domestic and international research institutions possessing leading nano-semiconductor and application technologies and advanced semiconductor infrastructure institutions	25	Development of Core Future Technologies for On-Silicon Displays	Preemptively securing on-silicon* display technology utilizing semiconductor+display convergence infrastructure to maintain technological superiority in the display field * Development of core fundamental technology for implementing ultra-high-resolution self-emissive displays of 6,000 ppi or more on silicon wafer substrates (on-silicon)	33

3. ICT Fundamental R&D Program

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Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget	Project Name	Purpose of the Project	'24 Budget
International Cooperation for Fundamental Technology Development (Secondary Batteries)	Identifying and supporting cooperation projects for fundamental technology development to secure technological superiority in the three key areas (semiconductors, displays, secondary batteries) and establishing a global cooperation network	24	Advancement of Ultra-High-Performance Computing Utilization	Supporting large-scale and collective research based on ultra-large data and simulations using ultra-high-performance computing to solve scientific challenges and create innovative technologies	36
Training of Specialized Personnel in Next-Generation Secondary Batteries	Supporting the training of master's and doctoral-level experts to secure leadership in the next-generation secondary battery field and respond to increasing private sector demand	10	Creation of Ultra-High-Performance Computing Software Ecosystem	Securing software fundamental technologies for exascale ultra-high-performance computing to enhance competitiveness in national strategic areas	20
Leading Supercomputer Development	Leading the development and construction of globally competitive supercomputers to drive advancements in data-based industrial and service technologies and enhance data utilization	42	Advancement of National Flagship Ultra-High-Performance Computing Infrastructure	Preemptively securing and operating ultra-high-performance computing infrastructure at the top 10 global level through the introduction of Supercomputer No. 6 to solve domestic scientific challenges and support the growth of new AI-based industries	182
			Development of High-Temperature Superconducting Magnet Technology	Developing core technologies for four representative magnet types (Solenoid, Toroidal, Racetrack, Saddle) as platforms (standard models) for various applications of non-insulated high-temperature	72
Total					1,324

3. ICT Fundamental R&D Program

2024 Global Cooperation New Project Call for Proposals

Sub-Project (or Detailed-Project)	Project Overview		Number of new projects	Duration (Year)	Annual Research Budget (KRW 100 million, 12 months)	Starting Date
International Cooperation in Fundamental Technology	Identifying and supporting cooperative projects for the development of fundamental technologies to secure a competitive edge in key technologies, and establishing a global cooperation network.	Korea-US (NSF) Semiconductor Joint Research	6	3	3	July
		Korea-EU Semiconductor Joint Research	4	3	7	July
		Flexible Type Semiconductor and Display Joint Research	8	2	2.5	July
		Semiconductor R&D Cooperation Center (Korea-US/Korea-EU)	2	5	10	July

3. ICT Fundamental R&D Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
High-Efficiency/Fine-Pitch Packaging Manufacturing Technology	Development of Core Technology for High-Efficiency Fine-Pitch Packaging Manufacturing	1	2024-05-01 ~2029-01-31	14.22
	Development of Core Technology for Ultra-High-Density Hybrid Bonding in High-Performance Semiconductors	1	2024-04-01 ~2028-12-31	14.22
High-Thermal-Conductivity Packaging Design and Reliability Technology	Reliability Diagnosis and Thermal Design Technology for Next-Generation Semiconductor Packaging	1	2024-04-01 ~2028-12-31	8.5
Development of Micro-Substrate Technology for Next-Generation Semiconductors	Development of Core Technologies for Polymer Interposer Materials and Processes for Advanced 2.xD Packaging	1	2024-05-01 ~2029-01-31	12.00
	Development of Vertical Stacking Micro-Substrates (2μm x 2μm) for Next-Generation 2.1D Semiconductor Packaging	1	2024-04-01 ~2028-12-31	12.00
Development of Core Front-Plane Technology for On-Silicon Displays	Self-Emissive Front-Plane Technology Capable of 6,000 ppi Resolution	1	2024-04-01 ~2028-12-31	15

3. ICT Fundamental R&D Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
Development of Core Front-Plane Technology for On-Silicon Displays	Self-Emissive Front-Plane Technology Capable of 6,000 ppi Resolution	1	2024-04-01 ~2028-12-31	18
Development of Core Technology for Next-Generation Semiconductor Equipment	Development of Core Technology for Large-Area High-Depth MI-SEM Metrology and Inspection Equipment (2024-Semiconductor-13)	1	2024-05-01 ~2029-01-31	25

4. Quantum Science and Technology R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget	Project Name	Purpose of the Project	'24 Budget
Quantum Computing Technology Development	Strengthening technological competitiveness through the development of core and fundamental technologies in the field of quantum computing, which is being recognized as the technology of dreams	16	Quantum Computing-Driven Quantum Advantage Research	Supporting the entire process from technology development to demonstration based on the demand for quantum computing applications in industry, defense, public, and social sectors to build a quantum ecosystem and secure market leadership	65
Leading Research and Development in Quantum Technology (Quantum Computing)	Enhancing key technologies in quantum computing and developing next-generation innovative technologies through leading-edge research to strengthen technological competitiveness	83	Advancing Quantum Cryptography Communication Integration and Transmission Technology	Securing key fundamental technologies for quantum cryptographic communication, including the integration of communication chips, improvement of transmission efficiency, and guarantee of interoperability	67
Establishing Quantum Computing Research Infrastructure	Building and operating a globally competitive quantum computing system to foster domestic quantum computing research	150	Developing Core Technologies for Quantum Internet		86
Developing Quantum Simulators for Material Innovation	Developing a quantum simulator platform specialized in the research of new materials for the production, storage, and utilization of hydrogen to innovate material development and expand the use of quantum computing	93	Expanding Quantum Cryptography Communication Industry and Developing Next-Generation Technologies	Promoting the industrial dissemination of quantum cryptographic communication and securing global technological competitiveness through the development of next-generation quantum cryptographic communication technologies	49

4. Quantum Science and Technology R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget
Establishing Quantum Testbed (Non-R&D)	Supporting the construction of testbeds and the testing and verification of quantum technologies to overcome the limitations of existing ICT technologies, promote the industrialization of quantum technologies, and support the development of commercial technologies	100
Developing Core Technologies for Quantum Sensors	Securing national strategic technologies and contributing to the leadership in advanced industries through the development of core fundamental technologies for quantum sensors, securing next-generation ICT growth engines	30
Developing Commercialization Technologies for Quantum Sensors	Leading the development of quantum sensor technology by securing core fundamental technologies and developing industrial application technologies that surpass existing limits	77
Developing Common Quantum Foundation Technologies	Establishing an independent supply chain and fundamental technologies for quantum components and materials	24
Strengthening International Cooperation in Quantum Technology	Enhancing our nation's technological competitiveness significantly by rapidly securing key technologies and capabilities through strategic international cooperation with leading countries in quantum technology	78
Cultivating Talent for Scientific and Technological Innovation (Building Human Resources in Quantum Information Science)	Establishing growth paths and expanding the research base to attract and nurture outstanding talent in the field of quantum information science, which has explosive potential	158
Establishing Quantum Information Science Research and Development Ecosystem	Expanding research infrastructure, including human resources training and infrastructure development, to activate domestic research and development in the emerging field of quantum information science, a future strategic technology	115
Building Infrastructure for Advanced Quantum Fabrication Process Technology	Accelerating quantum device research by establishing region-based open quantum infrastructure and quantum platforms to strengthen the scientific and technological capabilities of quantum researchers	60
Expanding Digital Convergence Security Infrastructure (Establishing Foundation for Commercializing	Laying the foundation for a convergence industry ecosystem by identifying and fostering businesses and commercializing quantum technologies to enhance domestic technological capabilities and	34
Total		1,285

4. Quantum Science and Technology R&D Program

2024 Global Cooperation New Project Call for Proposals

Sub-Project (or Detailed-Project)	Project Overview		Number of new projects	Duration (Year)	Annual Research Budget (KRW 100 million, 12 months)	Starting Date
Enhancing International Cooperation in Quantum Technology (Building International Cooperation Base)	Enhance our nation's technological competitiveness through international cooperation with leading countries in quantum technology by establishing and operating domestic and international cooperation hubs as bridges for international cooperation in quantum technology, and support the creation of government-to-government cooperation frameworks		1	3	10	October
Enhancing International Cooperation in Quantum Technology (Global Open Innovation Research)	Support outcome-oriented international joint research led by our research institutions and researchers through cooperation with leading countries in quantum technology to enhance our nation's technological competitiveness		1	5	10	October
Nurturing Science and Technology Innovation Talent (Developing Quantum Information Science Human Resources – Strengthening Research Capabilities of Leaders)	Support new professors entering the field of quantum information science in identifying future research topics and building global networks through joint research and personnel exchanges with leading international research institutes and universities	(Research Innovation Type)Support international joint research with leading countries in quantum information science to strengthen the capabilities of domestic researchers at the professor level	3	4	2.5	July
		(Strategic Technology Type) Support joint research in quantum science and technology with world-renowned quantum research institutions such as ETH Zurich	2	5	20	

4. Quantum Science and Technology R&D Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
Establishing Human Resources for Quantum Information Science	(2024-Quantum Ecosystem-01) Operation of Quantum Science and Technology Cooperation Network (Academic Field)	1	2024.04.01 ~2027.12.31	9.38
	(2024-Quantum Ecosystem-03) Operation of Quantum Graduate Schools	1	2024.04.01 ~2032.12.31	242.00
Developing Innovative Fundamental Technologies	Technology for Solving Applied Problems	1	2024.04.01 ~2026.12.31	7.87
	Development of a Quantum Computing Platform Based on Bipolar Molecular Qubits	1	2024.04.01 ~2026.12.31	10.00
	Technology for Enhancing Quantum System Performance	2	2024.05.01 ~2026.12.31	7.87
	Provable Quantum Advantage Algorithms	2	2024.05.01 ~2026.12.31	7.87
	Quantum Error Correction Protocols	1	2024.05.01 ~2026.12.31	7.87

4. Quantum Science and Technology R&D Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
Quantum Computing-Based Quantum Advantage Challenge Research	Quantum Computing-Based Quantum Advantage Challenge Research	2	2024.04.01 ~2026.12.31	27.50
Developing Common Quantum Fundamental Technologies	Development of Cryogenic Refrigerators for Quantum Devices	1	2024.05.01 ~2029.01.31	80.00
	Development of Semiconductor Laser Light Sources and Modules for Quantum Technology	1	2024.05.01 ~2029.01.31	80.00

5. Convergence Technology Development Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget
STEAM Research	Creating new growth engines based on convergence technologies that will lead the 21st-century technological revolution, and promoting utilization and development in various sectors through the convergence of science and ICT technologies	882
Training Convergence Experts in Data Science	Training convergence experts by integrating the core of data science with various promising fields of science, technology, and humanities and social sciences (selection and support of educational institutions)	106
Human Plus Convergence R&D Challenge	Developing basic fundamental technologies and securing convergence platform technologies through the cultivation of small and medium-sized convergence research groups focused on human augmentation for the development of advanced convergence fundamental technologies and the creation of high-profit new industries	6
Traditional Culture Innovation and Growth Convergence Research	Developing and establishing a support system for fundamental technologies to enhance and popularize traditional cultural products	6
Total		1,001

5. Convergence Technology Development Program

2024 Global Cooperation New Project Call for Proposals

Sub-Project (or Detailed-Project)	Project Overview	Number of new projects	Duration (Year)	Annual Research Budget (KRW 100 million, 12 months)	Starting Date
STEAM Research Project (Global Convergence Research)	Plan and promote interdisciplinary convergent research with leading global research institutions and researchers to address complex challenges and future societal missions that are difficult to achieve with domestic research capabilities and resources alone, thereby securing pioneering technologies	Pre-planning :28 Main Research :12, Support Center :1	5	Research Team : 12 Support Center: 5	Pre-planning : April Main Research : July, Support Center : April

5. Convergence Technology Development Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
BRIDGE Convergence Research and Development	RFP1 Development of diagnostic and therapeutic technologies for various physical diseases such as neurological and cardiovascular diseases, and technologies to rehabilitate and enhance impaired human performance	1	2024.04.01 ~ 2027.12.31	30.00
BRIDGE Convergence Research and Development	RFP2 Development of platform technologies for the development of therapeutics for intractable diseases using a multi-organ linkage culture system or non-invasive early diagnosis platform technologies for human pathogens	1	2024.04.01 ~ 2027.12.31	30.00
BRIDGE Convergence Research and Development	RFP3 Development of large-scale multimodal-based production technologies for immersive content generation in mixed reality environments and mobility technologies for autonomous driving in unstructured environments	1	2024.04.01 ~ 2027.12.31	30.00
Future Promising Convergence Technology Pioneer (Challenge Type)	Challenge Type 1. Investigating the mathematical principles of artificial intelligence, etc	2	2024.04.01 ~ 2029.12.31	47.00
	Challenge Type 2. Clean energy for carbon neutrality	2	2024.04.01 ~ 2029.12.31	47.00
	Challenge Type 3. Bio-computing	2	2024.04.01 ~ 2029.12.31	47.00

5. Convergence Technology Development Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
Global Convergence Research Funding	Global RFP-1. Development of flexible nanomesh neuroprosthetic technology based on brain-machine interfaces for long-term post-transplant use (Humanity)	1	2024.04.01 ~ 2024.06.30	0.50
	Global RFP-2. Research on AI-based digital healthcare systems to overcome hearing loss and cognitive impairment	2	2024.04.01 ~ 2024.06.30	0.50
	Global RFP-3. Development of a humanoid avatar robot with a multisensory sensing system and remote operation interface	2	2024.04.01 ~ 2024.06.30	0.50

6. Climate Environment R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget
Solar Cells	Supporting the acquisition of innovative fundamental technologies and the creation of future growth engines in the fields of greenhouse gas reduction, resource utilization, and climate change adaptation in response to the climate change crisis	20
Fuel Cells	Supporting the acquisition of innovative fundamental technologies and the creation of future growth engines in the fields of greenhouse gas reduction, resource utilization, and climate change adaptation in response to the climate change crisis	40
Bioenergy	Supporting the acquisition of innovative fundamental technologies and the creation of future growth engines in the fields of greenhouse gas reduction, resource utilization, and climate change adaptation in response to the climate change crisis	35
C1 Gas Refinery	Supporting the acquisition of innovative fundamental technologies and the creation of future growth engines in the fields of greenhouse gas reduction, resource utilization, and climate change adaptation in response to the climate change crisis	14
Total		109

6. Climate Environment R&D Program

2024 Global Cooperation New Project Call for Proposals

Sub-Project (or Detailed-Project)		Project Overview	Number of new projects	Duration (Year)	Annual Research Budget (KRW 100 million, 12 months)	Starting Date
Climate Technology	Facilitating International Cooperation in Climate Technology (CTCN Technology Support)	As the national focal point for the UNFCCC technology support system, strengthen the cooperation base for climate technology, promote climate technology development, and facilitate overseas expansion through international cooperation	1	1	1.6	April
Secondary Batteries	International Cooperation in Fundamental Technology (Joint Research on Secondary Batteries)	Identify and support foundational technology development cooperation projects to secure an overwhelming lead in the three major technologies (semiconductors, displays, secondary batteries), and establish a global cooperation network	4	5	12	July

6. Climate Environment R&D Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
CTCN Technical Support	CTCN Technical Support	1	2024-03-01 ~2025-02-28	1.6
Development of Core Fundamental Technologies for Breakthrough Next-Generation Secondary Batteries (R&D)	Development of Fundamental Technology for High-Performance Next-Generation Aqueous Zinc Batteries (120Wh/kg)	1	2024-04-01 ~2028-12-31	15.5
	Development of High-Performance Core Materials and Cell Technology for Sodium-Ion Batteries (220Wh/kg)	1	2024-04-01 ~2028-12-31	19.5
International Joint Research on Secondary Batteries	International Joint Research on Secondary Batteries	4	2024-05-01 ~2028-12-31	6

7. Nuclear R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget
Nuclear Safety Research Professional Manpower Development Project	Training next-generation safety research professionals to address issues and meet the technological development needs in nuclear safety fields such as nuclear safety technology, nuclear decommissioning technology, and nuclear fuel cycle element technology	39
Basic Nuclear Research Support Project	Establishing a stable research environment by identifying and supporting creative and challenging ideas, and building a research foundation that can solve various societal issues and pave the way for next-generation technological breakthroughs using fundamental nuclear technologies	59
Core Element Technology Development Project for Advanced Future Reactors	Developing core element technologies for non-light water advanced reactors based on 4th generation reactors that can be utilized in various future energy sources (distributed power, heat supply, hydrogen production, etc.)	66
Research Reactor System Export Support and Enhancement Project	Developing unacquired element technologies and enhancing core technologies necessary for strengthening the export competitiveness of research reactor systems	4
Future Nuclear Technology Facility Equipment Construction and Utilization Project	Supporting the construction and advancement of nuclear research facilities and advanced educational/research equipment, and fostering research personnel in future nuclear technology fields to strengthen research and development capabilities	30
Core Technology Development Project for Ensuring the Safety of Spent Nuclear Fuel Storage and Disposal	Securing core solutions for the storage and disposal of spent nuclear fuel before the demonstration phase in underground research facilities (URL*) and establishing a management foundation * Underground Research Laboratory (URL): A research facility that demonstrates the safe performance of disposal systems in a subterranean environment similar to actual disposal conditions	194
Custom Verification Technology Development Project for Future Advanced Reactors for Overseas Markets	Building a technical foundation and enhancing technical capabilities to enter new markets with innovative nuclear systems based on 4th generation small modular reactors	60
Next-Generation Innovative Technology Development Project for High-Level Waste Management	Developing innovative and eco-friendly next-generation high-level waste management technologies that can reduce disposal areas and enhance disposal safety	65

7. Nuclear R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget
Nuclear Safety Technology Demonstration Project Utilizing Equipment/Facilities from Gori Unit 1	Demonstrating and advancing nuclear safety technologies using equipment and facilities from Gori Unit 1, which has been operational for 40 years	20
Core Technology Development and Demonstration Project for Exporting Research Reactor Plate-Type Fuel	Securing a foundation for exporting research reactor fuels overseas by developing and internationally verifying core technologies for high-density plate-type nuclear fuel using world-class centrifugal spray powder technology	37
Core Technology Development Project for Enhancing the Safety of Operating Nuclear Power Plants	Ensuring long-term operational safety at a level that reassures the public by integrating advanced technologies and safety innovations to address increasing risks such as climate change	286
Fusion Core Technology Development Project for Enhancing Nuclear Decommissioning Safety	Securing superior technologies that can compete with foreign companies in the domestic and international nuclear decommissioning markets, and obtaining advanced fundamental technologies focused on human and environmental safety that can significantly improve safety compared to existing commercial nuclear decommissioning technologies	10
Heavy Water Reactor Safety Management Technology Development Project	Securing safety solutions applicable during the operational period of heavy water reactors (safety diagnostics, fault prevention) and enhancing safety management technologies for spent fuel storage pools after permanent shutdown	3
Advanced R&D Project for Spent Nuclear Fuel Processing Technology	Securing and advancing gap fundamental technologies to ensure long-term consent and establish a demonstration foundation for spent nuclear fuel processing technologies (pyro-SFR)	68
Innovative Small Modular Reactor (i-SMR) Technology Development Project	Developing core technologies for innovative SMRs with the safety, economic efficiency, and flexibility required in the global SMR* market in the 2030s, and completing standard design and technical verification by 2028	274
Technology Development Project for Strengthening Nuclear Decommissioning Competitiveness	Securing practical and verification technologies and infrastructure necessary for domestic nuclear decommissioning applications, and developing leading nuclear decommissioning technologies considering the latest unresolved issues from previous projects	30

7. Nuclear R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget
Core Technology Development for Reducing Spent Nuclear Fuel Generation in Small Modular Reactors	Developing core technologies for core design, nuclear fuel/metal reflector materials and components, and producing and testing prototypes, and developing performance and safety evaluation technologies to reduce spent nuclear fuel generation in light water small modular reactors	10
Korea Research Foundation Planning, Evaluation, and Management Costs (Basic Fund)	Project management costs	45
Radiation Research Infrastructure Expansion Project	Expanding and activating the national research foundation for radiation utilization by establishing related equipment such as test and performance evaluation facilities in the radiation field, linking technical information networks, and fostering professional manpower	64
Next-Generation Non-Destructive Inspection Technology Development Project Based on Data Science	Building a non-destructive testing infrastructure and developing essential technologies for solution development using data-based intelligent inspection solutions	5
Industrial Promotion and Advanced Technology Support Project for Radioisotopes	Providing technical support and establishing an industrial promotion system for the production, utilization, and commercialization of radioisotopes	33
Future Innovation Fundamental Technology Research Utilizing Radiation	Supporting goal-oriented research that tackles technological challenges in various fields such as space, nano, and life sciences using radiation technologies (analysis/irradiation)	6
Core Technology Development Project for Responding to Rare and Intractable Diseases Using Radiation	Supporting the development of core technologies (diagnosis, treatment, prevention, evaluation) that can overcome unresolved rare and intractable diseases using radiation	22
Technology Development Project for Reducing Waste Plastics Using Radiation	Developing raw materials for biodegradable plastics and securing technologies for biodegradation and risk assessment of waste plastics using radiation technologies (decomposition/conversion)	4
Quality Management and Advanced Verification System Project for Radiation Devices	Developing performance evaluation technology standards and precision measurement/standardization technologies for radiation medical devices that comply with international standards, and developing specialized educational programs utilizing established radiation infrastructure	11
Molten Salt Reactor (MSR) Fundamental Technology Development Project	Securing core fundamental technologies for molten salt reactors suitable for carbon marine systems (ship propulsion, floating nuclear power plants, offshore plants, etc.)	68

7. Nuclear R&D Program

Detailed Project Status

(Unit: Billion KRW)

Project Name	Purpose of the Project	'24 Budget	Project Name	Purpose of the Project	'24 Budget
Commercialization Technology Development Project for Isotopes Produced by New Export Research Reactors	Achieving stable domestic supply and export industrialization by developing commercialization and mass production technologies for high-demand medical and industrial isotopes produced by new export research reactors	11	**SMART Innovation Technology Development Project**	Securing leading technologies and strengthening global market competitiveness by developing innovative technologies to enhance the economic efficiency and safety capabilities of small modular reactors (SMART)	18
Public-Private Partnership Next-Generation Reactor Development Project	Developing basic and comprehensive plant designs for high-temperature gas reactors for process heat supply and supporting technology transfer to the private sector through public-private partnerships	60	**International Joint Research Funding Project for Nuclear Energy**	Acquiring advanced nuclear technologies and establishing a foundation for domestic nuclear export through international joint research with advanced and emerging nuclear countries	118
Funding for Radiation Convergence Industries	Creating new markets and promoting overseas expansion by supporting the entire cycle of commercialization (advancement, certification, productization) of outstanding and promising technologies using key national radiation investment resources (R&D outcomes, infrastructure, etc.)	15	**IAEA Technical Cooperation Contribution**	Paying special contributions to the IAEA (International Atomic Energy Agency) for technical cooperation, including human resource training and technology development support for developing countries	15
Next-Generation Nuclear Professional Manpower Development Project (Details)	Fostering next-generation nuclear and convergence professionals to meet private sector demand through the influx of outstanding talent into the nuclear field	9	**Development and Demonstration Project for New Export Research Reactors**	Strengthening research reactor export capabilities and meeting domestic demand for medical and industrial radioisotopes through the domestic demonstration of new research reactor technologies	632
Nuclear International Cooperation Foundation Project	Strengthening strategic bilateral/multilateral international cooperation to secure core future nuclear technologies and establish a foundation for the overseas expansion of nuclear technology	69	**Heavy Ion Accelerator Construction Support Project**	Improving the survival rate of patients with intractable cancers by constructing a medical heavy ion accelerator	100
Total					2,560

7. Nuclear R&D Program

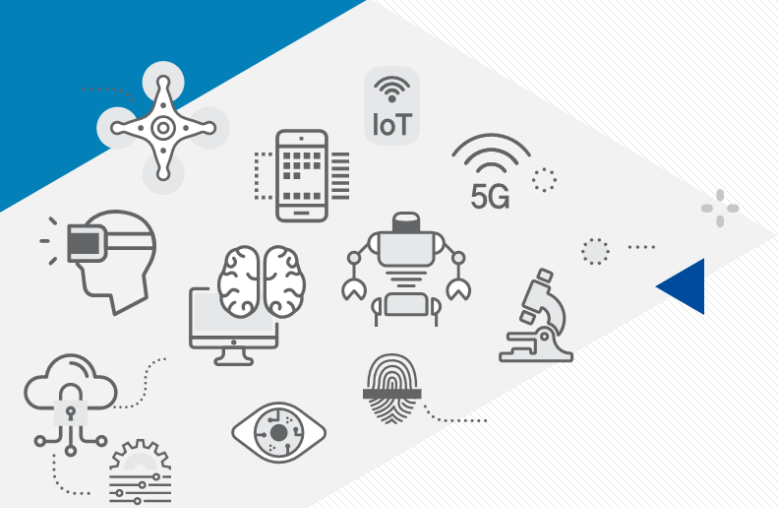
2024 Global Cooperation New Project Call for Proposals

Sub-Project (or Detailed-Project)	Project Overview	Number of new projects	Duration (Year)	Annual Research Budget (KRW 100 million, 12 months)	Starting Date
Support for International Joint Research in Nuclear Technology (Strategic International Joint Research)	(Support joint nuclear research between Korea and the Asia-Pacific region) Promote strategic international cooperative joint research with member countries of the Regional Cooperative Agreement for Research, Development, and Training Related to Nuclear Science and Technology (RCA)	2	4 (2+2)	2	September Scheduled

7. Nuclear R&D Program

New Call for Projects in the First Half of 2024 (part of RFP list)

Detailed Project Name	Research Topic Name	Number of Selected Projects (Units)	Total Funding Duration	Total Research Funding per Project (Billion KRW)
Next-Generation Nuclear Professional Manpower Development Project	Next-Generation Nuclear Professional Manpower Development Center	1	2024.05.01~ 2028.12.31	65.00
Facility and Equipment Construction and Modernization	Establishment of VEST Modernization and Joint Utilization System	1	2024.04.01~ 2026.12.31	13.00
Human Resource Development and Joint Utilization System Establishment	Establishment of Joint Utilization System for Single Crystal Quantum Material Measurement Using Radiation Measurement Technology	1	2024.04.01~ 2026.12.31	13.00
Next-Generation Nuclear Policy Center	Next-Generation Nuclear Policy Center	1	2024.04.01~ 2027.12.31	40.00
Development of Core Technologies for Reducing Spent Nuclear Fuel Generation in Small Modular Reactors	Development of Advanced Analysis and Core Evaluation Fundamental Technologies for LEU+/ATF Loaded SMR Nuclear Fuel	1	2024.04.01~ 2028.12.31	70.00
	Development of Core Technologies for LEU+/ATF Nuclear Fuel and Core Application	1	2024.04.01~ 2028.12.31	170.00
Development of Leading Technologies for Enhanced Safety in Nuclear Decommissioning	Development of Physical and Chemical Separation, Volume Reduction, and Stabilization Technologies for Special Waste from Heavy Water Reactor Decommissioning	1	2024.04.01~ 2029.12.31	70.00



International Cooperation Programs

Dr. Jong-Deok Kim, Education Director,
International Exchange Programs

NRF 한국연구재단
National Research Foundation of Korea

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01

Introduction of Directorate

Introduction of Directorate for International Affairs(DIA)

DIA aims to strengthen international cooperation with overseas partners by failitating joint research, academic meetings, and researcher exchanges, as well as supporting sustainable and mutually beneficial collaboration programs.

NRF Overseas Office

- U.S.A(Washington, D.C.)
- Japan(Tokyo)
- China(Beijing)
- Sweden(Stockholm)

Korea Innovation Center

- U.S.A(Washington, D.C.)
- U.S.A(Sillycon Valley)
- Germany(Berlin)
- China(Beijing)

S&T Cooperation Center

- U.S.A(Washington, D.C.)
- China(Beijing)
- EU(Brussels)
- Russia(Moscow)

Objectives of International Cooperation

- **Enhance the quality research through global S&T cooperation network**
- **Conduct bi/multi-lateral cooperation for mutual benefits**
- **Join the global efforts to address global challenges and improve knowledge transfer through ODA programs**
- **Contribute to Science diplomacy and support the global market activities of SMEs & start-ups**

Category of International Cooperation Programs

Category	Programs
Joint Research & Mobility Programs	- Global Research Development Center - Strategic Joint Research Program - Brain Pool - Cooperation with International Organizations, etc
Bi/multi-lateral Cooperation Programs	- Joint Research Projects - Conference/forum - Exchange of researchers - Oversea S&T Cooperation Centers, etc
ODA Programs	- Global Education Support Programs - Techno Peace Corps Program, etc
Support SMEs & Start-ups	Korea Innovation Centers, etc

Programs by Collaboration Stages

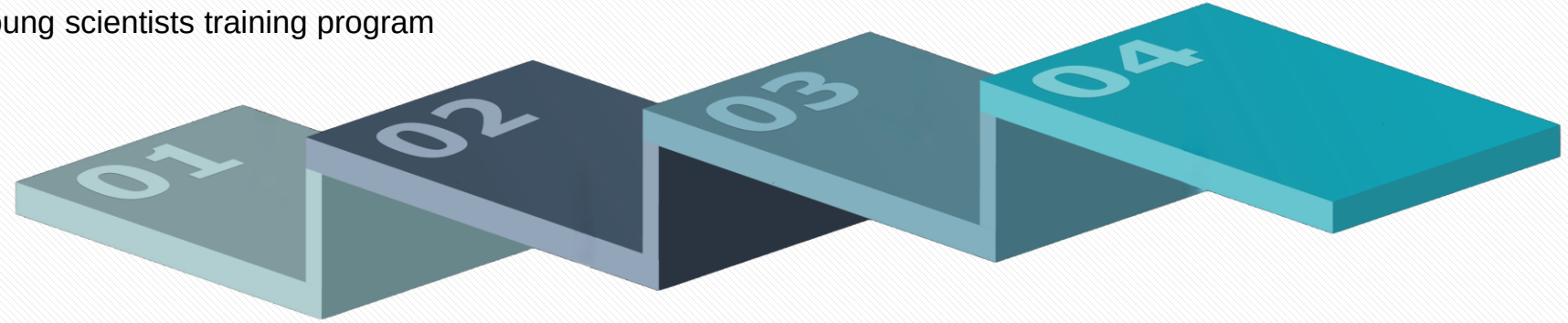
The NRF offers a variety of international programs in different funding levels.

Beginning

- Short Research Visits Overseas
- Summer Program for Graduate Students
- Post-doc training abroad program
- Young scientists training program

Developing

- Bi/multi-lateral Joint Research Programs
- Global research network
- Cooperative development programs



Networking

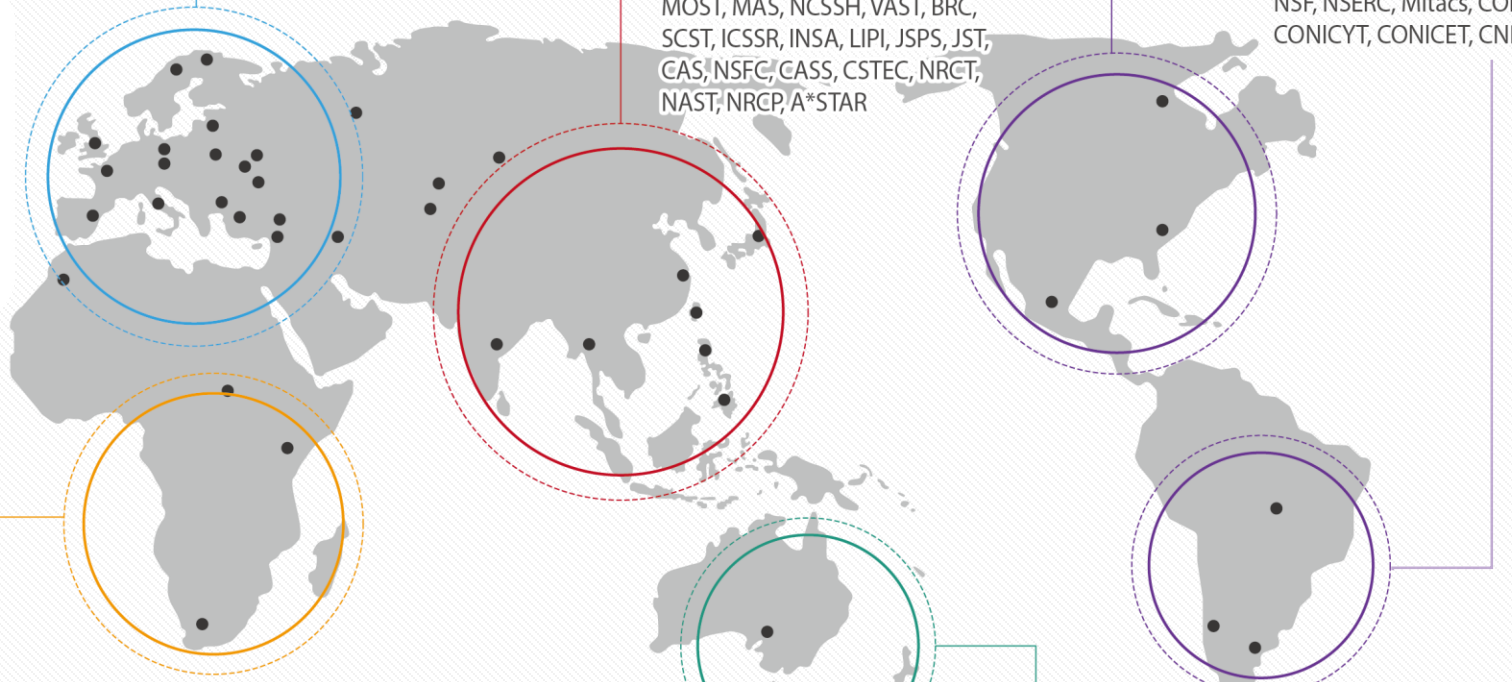
- NRF joint seminars/workshops
- R&D Network program
- NRF International Mobility

Maturing

- Global Top-tier Joint Research Program
- Global Research Development Center
- Key Joint Research Program (China)
- A3 foresight program

International Partnership of NRF

NRF has exchanged MOU with 83 agencies in 51 countries.



Europe
(44 agencies in 24 countries)

AF, AHRC, ANR, AvH, BBSRC, BC, BRFFR, CAS, CNR, CNRS, CSIS, DAAD, DFG, ESRC, FNRS, FORTH, FWF, FWO-Vlaanderen, GACR, HAE, HAS, IFD, IVA, MPG, MRC, NASU, NKFIH, NOW, PAN, RA, RAS, RCN, RFBR, RS, SAS, SINTEF, SKOLKOVO, SNSF, SSF, STINT, TUBITAK, UKRI, VR

Asia
(19 agencies in 12 countries)

MOST, MAS, NCSSH, VAST, BRC, SCST, ICSSR, INSA, LIPI, JSPS, JST, CAS, NSFC, CASS, CSTEC, NRCT, NAST, NRCP, A*STAR

America
(8 agencies in 6 countries)

NSF, NSERC, Mitacs, CONACYT CONICYT, CONICET, CNPq , FAPESP

Middle East and Africa
(8 agencies in 7 countries)

ASRT, STDF, UNCST, ScienceFund, COSTECH, CNRST, NRF, QNRF

Oceania
(4 agencies in 2 countries)

AAS, ARC, ATSE, RSNZ

02

Major Programs

Global Matching Joint Research Program - Germany(New)

To strengthen bilateral research collaborations with a win-win aproach, supporting sustainable and mutually beneficial partnerships among outstanding scientists between Korea and Germany

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

※ PIs in basic research programs of NRF are allowed to take part in the program

❍ Research Fields : Natural, Life and Engineering Sciences

❍ Funding : 3 years / KRW 150 million per year / 20 projects

❍ Funding Category : Manpower costs, consumables, research expenses, contingency, project-related visits of researchers to the counterpart country, and overhead.

※ Large expensive equipment does not qualify as an eligible cost

❍ Evaluation Criteria : Scientific Excellence, Quality of project managemen and methodology, Quality of consortium, Division of roles and complementarity among partners, Expected Impact and Contributions to Science and Society

❍ Announcement of New Projects : January~March 2025(TBD)

❍ Contact Point : Jong-Deok Kim, 02)3460-5681 / jdkim@nrf.re.kr

Global Matching Joint Research Program - Sweden(New)

To develop collatorative and strategic research projects with internationally highly qualified researchers to secure and create innovative research results in strategic research technologies

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

※ PIs in basic research programs of NRF are allowed to take part in the program

❍ Research Fields : 12 strategic research technology fields : Semiconductor and display; Secondary battery cell; Leading-edge mobility; Next generation nuclear energy; Leading edge bio; Aerospace and marine; Hydrogen; Cybersecurity; AI; Next generation communications; Leading edge robotics and manufacture; and quantum

❍ Funding : 3 years / KRW 200 million per year / 10 projects

❍ Evaluation Criteria : Scientific Excellence, Quality of project management and methodology, Quality of consortium, Division of roles and complementarity among partners, Expected Impact and Contributions to Science and Society

❍ Funding Category : Joint seminars, conferences, workshops, Exchanges of individuals, Cost for relevant consumables up to a small fraction of the grant, etc.

❍ Announcement of new projects : February~April 2027(TBD)

❍ Contact Point : Jong-Deok Kim, 02)3460-5681 / jdkim@nrf.re.kr

Global Matching Joint Research Program - UK(New)

To improve research capability and create innovative basic research results by collaborating the outstanding researchers overseas

❍ Eligibility : Full-time faculty or researchers in universities or in GRIs within 7 years of obtaining a Ph.D. or less than 39-year old or five years of being appointed to the position of the assistant professor or higher

※ PIs in basic research programs of NRF are allowed to take part in the program

❍ Research Fields : All Science and Technology Fields

❍ Funding : 3 years / KRW 120 M per year / 5 projects

❍ Funding Category : labor costs, consumables, research expenses, project-related travel expenses of researchers to the counterpart country, and overhead costs

❍ Evaluation Criteria : Scientific Excellence, Quality and Efficiency of project implementation, Capacity and role of each participant, Complementarity with partners, Expected Outcomes and Impacts

❍ Announcement of New Projects : February to April 2025(TBD)

❍ Contact Point : Seonghui Seo, 02)3460-5723 / seonghui@nrf.re.kr

Global R/D Center(GRDC) Cooperation Hub

To perform bilateral and multilateral cooperation research with strategic purpose in the globally important research areas and establish virtuous cycle of talented researchers with overseas research institutions

❍ Eligibility : Full-time faculty or researchers in universities or in GRIs, etc.

❍ Research Fields : To solve public problem such as infectious diseases, material/part research in renewable energy fields for climate change, environment pollution, etc.

❍ Funding Duration : Type 1 - up to 6 years(GRDC Group Research)

Type 2 - up to 3 years(Extension of Global Research Network)

❍ Funding Amount : Type 1 - KRW 600 M/year, Type 2 - KRW 300 M/year

❍ Supporting Details : Type 1- Secure basic and core original technology and talented human resources

Type 2- Extension of domestic and international network

❍ No. of Projects : 5 projects

❍ Announcement : Feb. ~ Apr., 2025(TBD)

❍ Contact Point : Jeong Hong Jo, 02)3460-5745/ jhj99@nrf.re.kr

Korea-EU Joint Research Program (matching fund)

To promote involvement of Korean researchers in Horizon Europe to build multilateral international research networks

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

- Researchers who joined the EU consortium and got an approval from EU commission

❍ Research Fields : All Horizon Europe fields

❍ Funding Amount

- (Joint research) 2~4 years, KRW 150 M/year per project
- (Mobility) 2~4 years / KRW 50 M/year per project

❍ Funding Category : Expenses for Joint research, overseas business trip and seminars

❍ Announcement of new projects : May to July 2025(TBD)

❍ Contact Point : Youngok Kang, 02)3460-5722 / yokang@nrf.re.kr

NRF Bilateral Exchange Program

To establish global R&D network by supporting researcher exchanges between Korean researchers and their overseas partners

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

❍ Research Fields : All academic fields(Limited to S&T for some countries)

❍ Funding Duration : 2 years

❍ Funding Amount : KRW 10~30 M/year

❍ Eligible countries : Brazil, Taiwan, Vietnam, Thailand, Belgium, Switzerland, Türkiye, Italy, Czech Republic, France

❍ Supporting Details : Expenses for short-term visits, organization of seminars/workshops

❍ No. of Projects : about 40 projects

❍ Announcement : April~June, 2025(TBD)

❍ Contact point : HONG Jihee, 02-3460-5683 / hong625@nrf.re.kr
Taesung Lee, 02-3460-5684 / taesunglee@nrf.re.kr

NRF International Mobility Program

To support the exchange of researchers, organization of seminars or work-shops which can lead to further cooperation of joint research activities

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

❍ Research Fields : All academic fields

❍ Funding Duration : 1 year

❍ Funding Amount : KRW 20 M/year

❍ Exception countries : Brazil, China, Japan, Taiwan, Vietnam, Thailand, Germany, Belgium, Switzerland, Sweden, Spain, Austria, Italy, Czech Republic,Türkiye, France

❍ Supporting Details : Expenses for short-term visits, organization of seminars/workshops

❍ No. of Projects : 56 projects

❍ Announcement : March, 2025(TBD)

❍ Contact point : Hong Jihee, 02-3460-5683 / hong625@nrf.re.kr

NRF-JSPS Cooperation Programs

To exchange up-to-date science knowledge and information and promote the development into large scale research projects by supporting organization of seminars and joint research between Korea and Japan

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

❍ Research Fields : All academic fields

❍ Funding Duration : (Joint research) - 2 years, (Seminar) - One time

❍ Funding Amount : (Joint research) - KRW 15 M/project, (Seminar) - KRW 8M/seminar

❍ Supporting Details : Expenses for short-term visits, organization of seminars/workshops

❍ No. of Projects : (Joint research) 15 projects (Seminar) 5 projects

❍ Announcement : June, 2025(TBD)

❍ Contact point : Hong Jihee, 02-3460-5683 / hong625@nrf.re.kr

Korea-China Joint Research Program

To promote the joint research activities and mutual S&T development between Korea and China

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

❍ Research Fields : BT, ICT, Renewable Energy, Medical Science, Aerospace, Climate Change

❍ Funding Duration : 3 years

❍ Funding Amount : KRW 60 M / year / 6 projects

❍ Funding Category : Expenses for Joint research, research visits, seminars/workshops

❍ Announcement of new projects : September to December, 2025(TBD)

❍ Contact Point : Sungbeen Park, 02)3460-5701 / sbpark725@nrf.re.kr

Korea-China Large I-U-R* Joint Research Program

*Industry-University-Research Institute

To serve as a comprehensive platform for SW&T cooperation and joint research between Korea and China

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

❍ Research Fields : BT, ICT, Renewable Energy

❍ Funding Duration : 3 years

❍ Funding Amount : KRW 500 million per year / 2 Projects

❍ Funding Category : Expenses for Joint research, research visits, seminars/workshops

❍ Announcement of new projects : September to December, 2025(TBD)

❍ Contact Point : Sungbeen Park, 02)3460-5701 / sbpark725@nrf.re.kr

Korea-US AFOSR* Joint Research Program

To promote the joint research activities with US researchers in the emerging technologies

- ❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.
- ❍ Research Fields : Quantum Materials
- ❍ Funding Duration : 3 years / 3 projects
- ❍ Funding Amount : KRW 110 million per year
- ❍ Funding Category : Expenses for Joint research, research visits, seminars/workshops
- ❍ Announcement of new projects : January ~ March, 2025(TBD)
- ❍ Contact Point : Ji-Won Yoon, 02)3460-5703 / jw9356@nrf.re.kr

R&D Network(DFG)/GEnKO(DAAD) Programs with Germany

To promote the organization of seminars/workshops and short term research visits with German researchers

- ❍ Eligibility : Faculty members in universities, researchers in GRIs, etc
- ❍ Research Fields : All academic disciplines
- ❍ Funding Duration : R&D Network -1 year, GEnKO-2~3 years
- ❍ Funding Amount : R&D Network - KRW 20 million, GEnKO - 30 million per year
- ❍ Funding Category : Expenses for Joint research, research visits, seminars/workshops
- ❍ Announcement of new projects : February ~ June, 2025(TBD)
- ❍ Contact Point : Jong-Deok Kim, 02)3460-5681 / jdkim@nrf.re.kr

Korea-France Coopertive Development Program(STAR)

To strengthen the S&T partnership by creating opportunities to explore and expand the networking activities between Korea and France

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc

❍ Research Fields : All S&T fields

❍ Funding Duration / No. of Projects : 2 years / 15 projects

❍ Funding Amount : KRW 15 M per year

❍ Funding Category : Expenses for Joint research, research visits, seminars

❍ Announcement of new projects : February to April 2025(TBD)

❍ Contact Point : Seonghui Seo, 02)3460-5723 / seonghui@nrf.re.kr

Korea-Italy Cooperative Development Program

To contribute to the enhancement of research capabilities and promote scientific and technological cooperation between Korea and Italy

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

❍ Research Fields : Environmental sciences and energy transition, Physics and astrophysics, Biomedicine and technologies to face new infectious diseases, Agriculture and Foods, Prevention of natural disasters, Marine Resources for biotechnology, Advanced materials and nano-technology, New materials, Basic Research, S&T applied to cultural heritage

❍ Funding Duration / No. of Projects : 3 years(2022~2025) / 8 projects (TBD)

❍ Funding Amount : KRW 30 million per year (TBD)

❍ Funding Category : Expenses for Joint research, research visits, seminars/workshops

❍ Announcement of new projects : 2025(TBD)

❍ Contact Point : Seonghui Seo, 02)3460-5723 / seonghui@nrf.re.kr

Korea-Switzerland Young Researchers' Exchange Program

NRF 한국연구재단

To enhance research achievements and strengthen the S&T cooperation networks through reciprocal visits of young researchers between Korea and Switzerland

- ❍ Eligibility : PhD students, Post-Doc. researchers
- ❍ Research Fields : All S&T fields
- ❍ Funding Duration / No. of Projects : Up to 3 months, 9 projects (TBD)
- ❍ Funding Amount : KRW 10 M per year (TBD)
- ❍ Funding Category : Research visits
- ❍ Announcement of new projects : April 2025(TBD)
- ❍ Contact Point : Seonghui Seo, 02)3460-5723 / seonghui@nrf.re.kr

Korea-India Joint Research Program

To strengthen the basis for S&T cooperation and expand the joint research activities in high-tech manufacturing, energy, healthcare and IT fields by building collaboration networks between Korea and India

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

❍ Research Fields : S&T fields agreed by Korea-India Joint Committee Meeting
e.g. NT, IT, BT, CT

❍ Funding Duration : 2 - 3 years

❍ Funding Amount : KRW 40 M / per year / 12 projects

❍ Funding Category : Expenses for Joint research, research visits, seminars/workshops

❍ Announcement of new projects : March to April 2025(TBD)

❍ Contact Point : Sungbeen Park, 02)3460-5701 / sbpark725@nrf.re.kr

Korea-Vietnam Joint Research Program

To promote the S&T innovation and competitiveness through supporting S&T cooperation between Korea and Vietnam

❍ Eligibility : Faculty members in universities, researchers in GRIs, etc.

❍ Research Fields : S&T areas agreed upon e.g. NT.IT. BT, CT

❍ Funding Duration : 3 years

❍ Funding Amount : KRW 40 M / year / 10 projects

❍ Funding Category : Expenses for Joint research, research visits, seminars/workshops

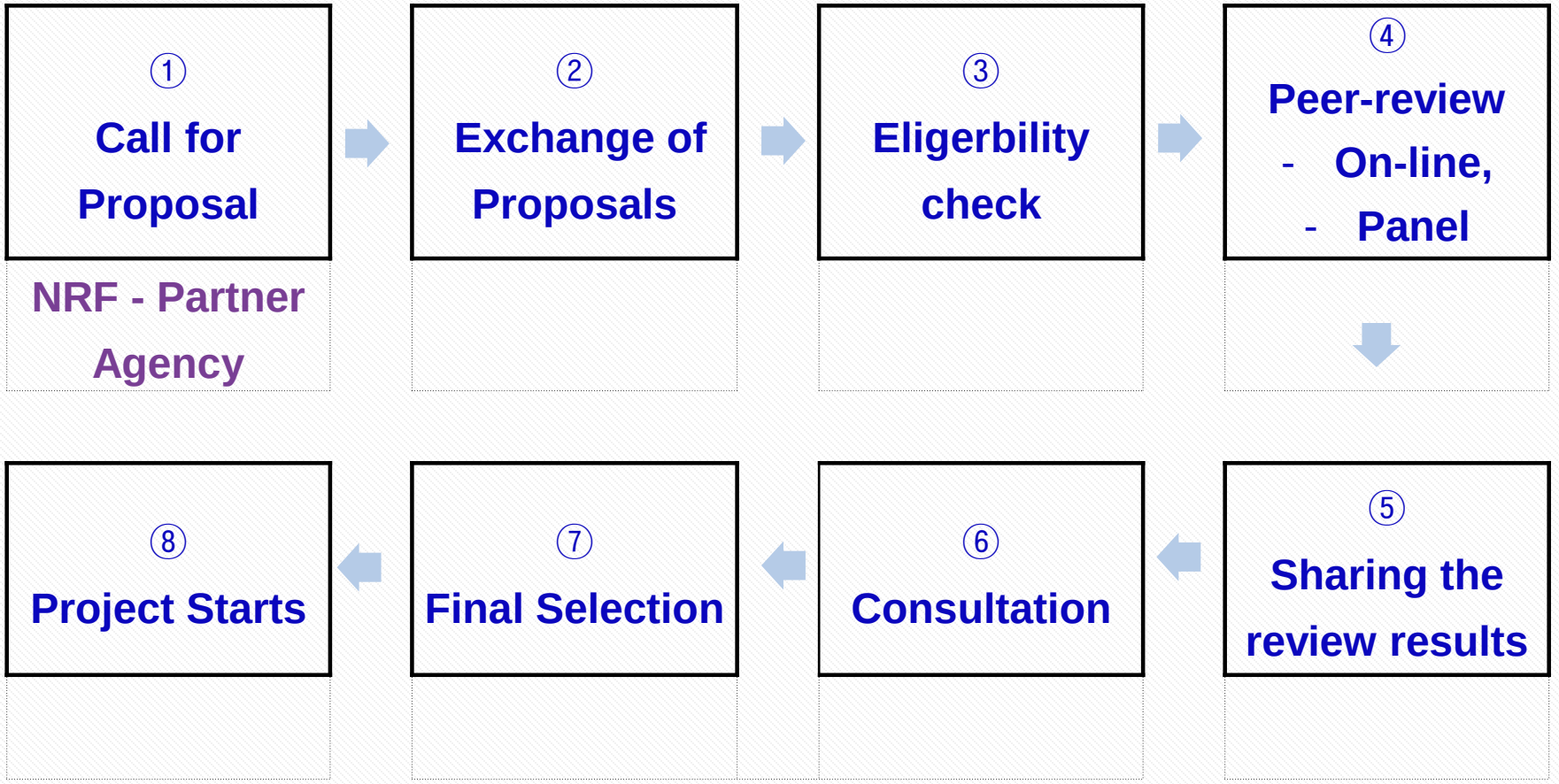
❍ Announcement of new projects : March to April 2025(TBD)

❍ Contact Point : Sungbeen Park, 02)3460-5701 / sbpark725@nrf.re.kr

03

Review Process

Review Process



Types of Review

Online Written Review

- Each proposal is reviewed by 5(five) reviewers in related fields
- The result will be monitored by Panel Review Committee which is made of CRB(RB)
- Blind review is used for some programs

Panel Review

- Each panel is made up of 4~15 members for 5~30 applications
- Exchange views from a broad perspective, decide the recommendation for funding
- Discussion only/ Presentation & Discussion

Selection of Reviewers

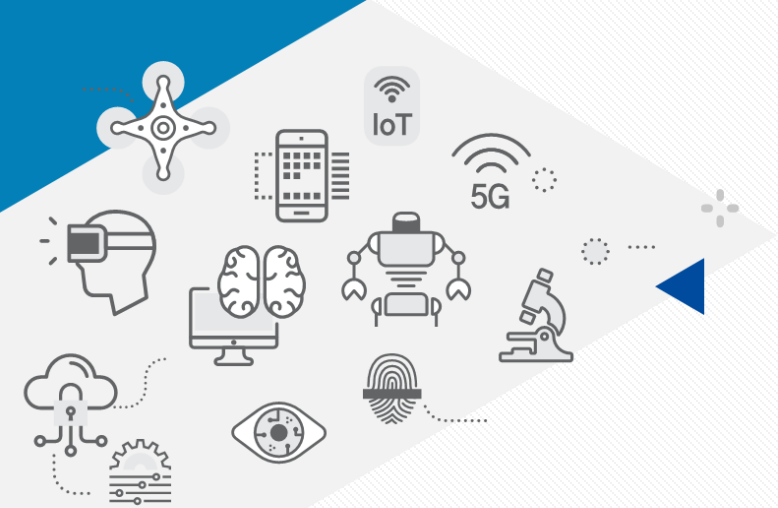
- Reviewers are chosen from a NRF database(pool of reviewers) through a process conducted fairly and impartially by the RB/CRB/PM (ad-hoc base)
- Only persons with appropriate expertise and without disqualifying conflict of interest can be appointed

Review Criteria

- Scientific Excellence of the Project
- Quality of Project Management and Methodology
- Research Capability of Participating Researchers
- Division of Roles and Complementarity among Partners
- Added Value from the International Cooperation
- Expected Impact and Contributions to Science and Society

Thank you

NRF National Research Foundation of Korea



2024 Humanities & Social Sciences Research Programs

NRF 한국연구재단
National Research Foundation of Korea

Contents

Ⅰ. Overview

Ⅱ. Major Program

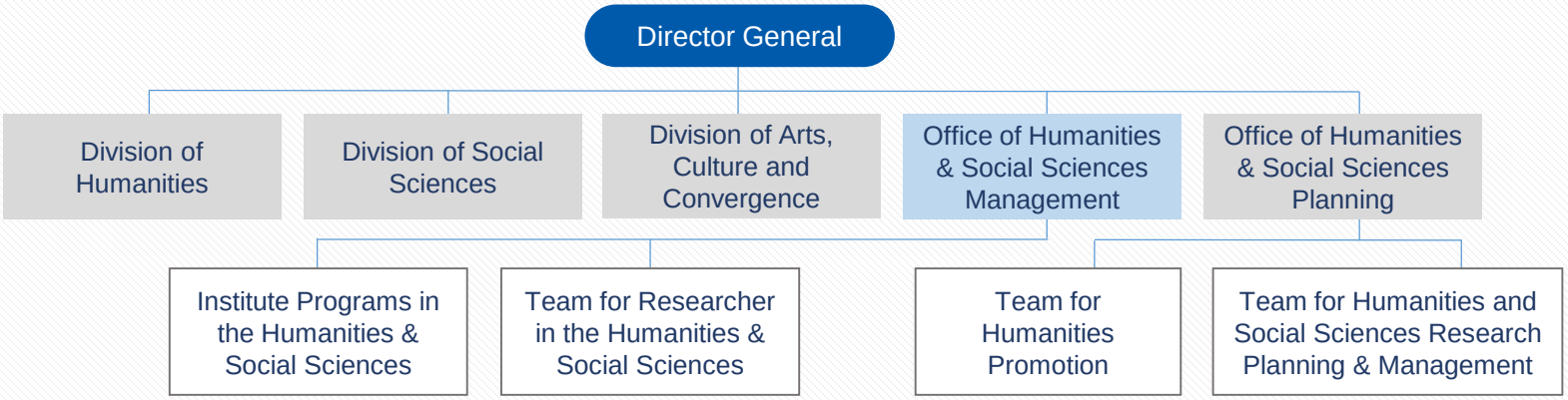
Ⅲ. Project Management

01

Overview

Directorate for Humanities & Social Sciences

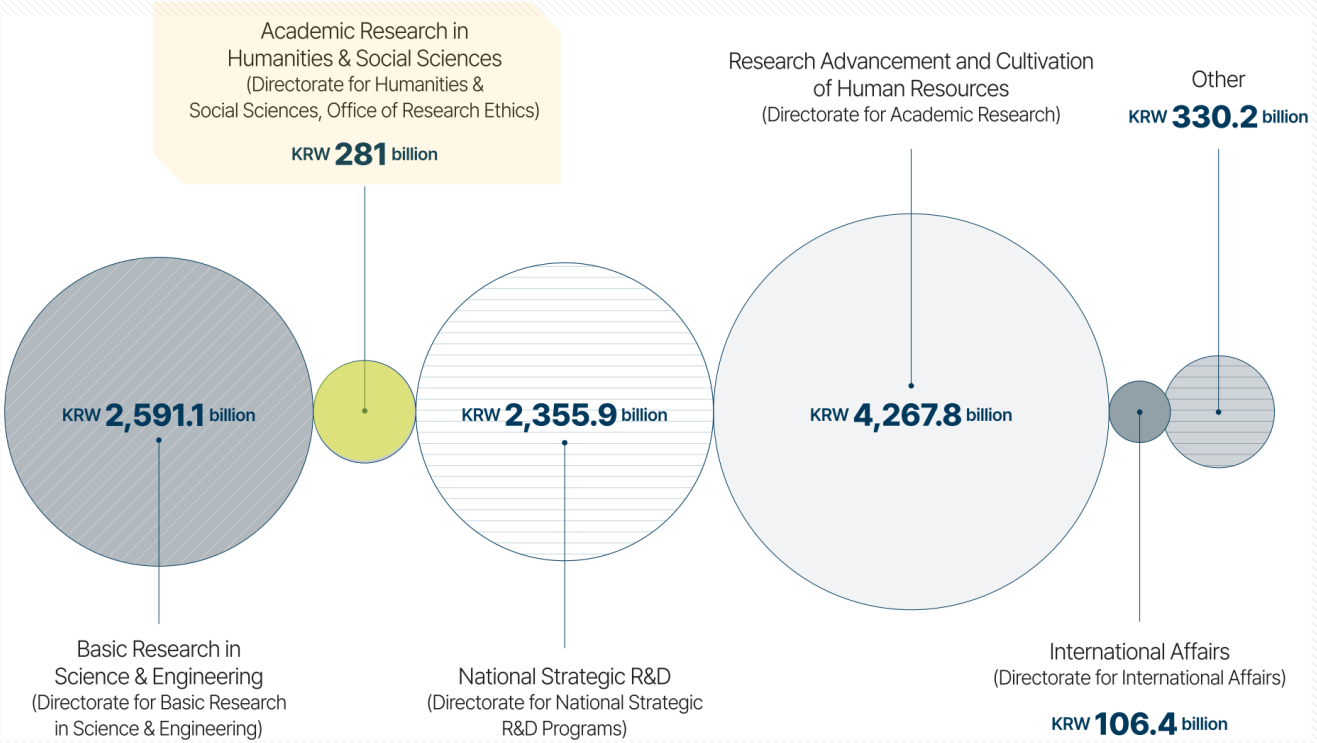
Organizaiton



Budget (FY2024)

Total KRW 9,932.4 billion

* Based on the budget confirmed by the National Research Foundation of Korea Board of Directors for 2024 (Feb. 2024)



Overview of Funding Scheme

NRF 한국연구재단

1. **Establishment of program plan**
   Establishment of a program plan for the current year
2. **Pre-announcement**
   Pre-announcement of basic program information
3. **Announcement**
   Announcement of programs including purpose, grants, timeline, and research area via the NRF website
4. **Call for proposals**
   Proposals submitted
5. **Make a plan of evaluation and selection**
   Draw up a plan of evaluation and selection tailored to each program
6. **Assessment: Review, evaluation and selection**
   Evaluate proposals by preliminary review and peer group review
7. **Release of selection results, Agreements**
   Notification of selected project proposals, Signing procedure of project agreement
8. **Follow-up management**
   (Evaluations by stages, final evaluations)

Programs structure

Individual Research

Support for Next-generation Researchers	Support for Individual Researchers	
Academic Research Professors, Research Subsidies for Ph.D Candidates	Young researchers/ Mid-career researchers, Excellent Scholars	Masterpieces translation, Book writing for publication

Group Research

Group Research Support				
Joint Research	Global Humanities and Social Sciences Convergence Research	Humanities & Social Sciences Institute Program	Social Sciences Korea Program (SSK)	Humanities Korea Program (HK^{+})

Infrastructure Building and Performance Diffusion

Infrastructure Building and Performance Diffusion Support			
Humanities and Social Sciences Convergence Talent Training Universities	Support for Diffusion of Basic Studies (Popularization of Humanities, Support for Academic Organizations, Excellent Academic Books)	Joint Academic Resources Management System	Research Ethics

02

Major Programs

Individual Research Programs

NRF 한국연구재단

Contact: Team for Researcher in the Humanities & Social Sciences

Young Researchers Program

Purpose

To drive for creative research conducted by young researchers and encourage them to grow into outstanding scholars in the future

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Humanities and social sciences (including the arts and physical education)	• Currently affiliated to a domestic university • University faculty employed at the level of assistant professor or higher not more than 5 years of appointment, OR who obtained a doctoral degree within the last 10 years • Must have 3 or more publications in the past 5 years	Up to KRW 20 million/yr	1~3 years

Evaluation	
Criteria	Excellence and creativity of research proposal, research capacity, expected outcome, etc. ** depends on different types*
Process	1st Eligibility Review → 2nd Field Evaluation (online review) → 3rd Comprehensive Review

Schedule *(tentative)*

- **January** — Announcement of new projects
- **February to March** — Proposals submitted
- **April to May** — Evaluation & Selection
- **June** — Project commencement

** Proposals can be written in Korean or English.*

Individual Research Programs

NRF 한국연구재단

Contact: Team for Researcher in the Humanities & Social Sciences

Mid-Career Researchers Program

Purpose

To strengthen mid-career researchers' academic capacity and encourage the balanced development of various studies based on research diversity

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Humanities and social sciences (including the arts and physical education)	• Currently affiliated to a domestic university • University faculty employed at the level of assistant professor or higher for more than 5 years, OR who obtained a doctoral degree more than 10 years ago • Must have 5 or more publications in the past 5 years	Up to KRW 20 million/yr or KRW 10 million/yr ** depends on different types*	1~3 years or 10 years (5+5) ** depends on different types*

Evaluation	
Criteria	Excellence and creativity of research proposal, research capacity, expected outcome, etc. ** depends on different types*
Process	1st Eligibility Review → 2nd Field Evaluation (online review) → 3rd Comprehensive Review

Schedule *(tentative)*

- **January** — Announcement of new projects
- **February to March** — Proposals submitted
- **April to May** — Evaluation & Selection
- **June** — Project commencement

** Proposals can be written in Korean or English.*

Individual Research Programs

NRF 한국연구재단

Contact: Team for Researcher in the Humanities & Social Sciences

Excellent Scholars Program

Purpose

To support outstanding scholars in the humanities and social sciences, disseminate research outcomes throughout society and promote them to foster younger generation in their fields

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Humanities and Social Sciences (including the arts and physical education)	• Currently affiliated to a domestic university • Who obtained a doctoral degree more than 10 years ago OR who have 10+ years of experience as an assistant professor or higher • Must have 12 or more publications including books in the past 10 years • Recommended by 3+ eligible researchers or by a board of domestic academic journals	KRW 50 million/yr	5 years (3+2)

Evaluation	
Criteria	Excellence of research proposal, research capacity, expected outcome
Process	1st Eligibility Review → 2nd Field Evaluation (panel review in two phases) → 3rd Comprehensive Review

Schedule *(tentative)*

- **January** — Announcement of new projects
- **February to March** — Proposals submitted
- **April to May** — Evaluation & Selection
- **June** — Project commencement

** Proposals can be written in Korean or English.*

Individual Research Programs

NRF 한국연구재단

Contact: Team for Researcher in the Humanities & Social Sciences

Joint Research Program

Purpose

To increase synergy in research activities and enhance research capabilities by supporting domestic and international joint research

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Humanities and social sciences (including the arts and physical education)	• Currently affiliated to a domestic university • The PI must have 5 or more publications in the past 5 years. • Each of teams must consist of 2 or more eligible collaborators.	Up to KRW 50 million/yr or KRW 80 million/yr or KRW 100 million/yr ** Depends on different types*	1~3 years ** Depends on different types*

Evaluation	
Criteria	Excellence and creativity of research proposal, research capacity, expected outcome, appropriateness of research period and research fund, etc. ** depends on different types*
Process	1st Eligibility Review → 2nd Field Evaluation (panel review) → 3rd Comprehensive Review

Schedule *(tentative)*

- **January** — Announcement of new projects
- **February to March** — Proposals submitted
- **April to May** — Evaluation & Selection
- **June** — Project commencement

** Proposals can be written in Korean or English.*

Individual Research Programs

Contact: Team for Researcher in the Humanities & Social Sciences

Global Humanities and Social Sciences Convergence Research Program (Research Group Type)

Purpose

To enhance global research capabilities and establish a robust infrastructure for humanities and social science research by collaborating with world-leading researchers

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Interdisciplinary research in the humanities and social sciences and STEM fields*	• The PI must have 5 or more publications in the past 5 years, while currently being affiliated in domestic universities or research institutions. • Each of teams must have 5 or more eligible collaborators.	Up to KRW 150 million/yr for domestic research groups, KRW 220 million/yr for international research groups	3 years

* science, technology, engineering, and mathematics

Evaluation		
	Criteria	Research capacity and excellence of research proposal, necessity of the projects, expected outcomes, etc. ** depends on different types*
	Process	1st Eligibility Review → 2nd Field Evaluation (panel review) → 3rd Comprehensive Review

Schedule *(tentative)*

- **January** — Announcement of new projects
- **February to March** — Proposals submitted
- **April to May** — Evaluation & Selection
- **June** — Project commencement

** Proposals can be written in Korean or English.*

Group Research Programs

Contact: Team for Institute Programs in the Humanities & Social Sciences

Global Humanities and Social Sciences Convergence Research Program (Research Institutes Type)

Purpose

To support collaborative research with excellent research groups and research institutes abroad, aiming to produce preeminent convergence research results In the fields of humanities and social sciences

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Interdisciplinary research in the humanities and social sciences and STEM fields*	• University-affiliated research institutes and domestic research institutions • The PI should be a director of the research institutes/institutions. • Each of teams must have 5 or more eligible collaborators.	Up to KRW 520 million/yr for domestic research groups, KRW 650 million/yr for international research groups	3 years for domestic research groups, 6 years(3+3) for international research groups

* science, technology, engineering, and mathematics

Evaluation	
Criteria	Research capacity and excellence of research proposal, necessity of the projects, expected outcomes, etc. ** depends on different types*
Process	1st Eligibility Review → 2nd Field Evaluation (panel review + presentation) → 3rd Comprehensive Review

Schedule *(tentative)*

- **May** — Announcement of new projects
- **May to June** — Proposals submitted
- **June to August** — Evaluation & Selection
- **September** — Project commencement

** Proposals can be written in Korean or English.*

Group Research Programs

Contact: Team for Institute Programs in the Humanities & Social Sciences

Humanities & Social Sciences Institute Program

Purpose

To foster research hubs and produce outstanding research outcomes through specialized research institutes in the humanities and social sciences

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Humanities and social sciences (including the arts and physical education)	• University-affiliated research institutes and domestic research institutions • The PI must have 3 or more publications in the past 5 years, currently being affiliated in domestic universities. • Each of teams must have 3 or more collaborators and 3 or more full-time researchers.	Up to KRW 260 million/yr	6 years (3+3)

Evaluation	
Criteria	Development plan for institutes, research plan, training plan for younger researchers, etc. ** depends on different types*
Process	1st Eligibility Review → 2nd Field Evaluation (panel review + presentation) → 3rd Comprehensive Review

Schedule *(tentative)*

- **May** — Announcement of new projects
- **May to June** — Proposals submitted
- **June to August** — Evaluation & Selection
- **September** — Project commencement

** Proposals can be written in Korean or English.*

Contact: Team for Institute Programs in the Humanities & Social Sciences

Social Science Korea – Global Agenda Research (International)

Purpose

To support collaborative research with leading international researchers in order to strengthen global research capacity and generate practical outcomes on global agendas

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Social Sciences (including humanities-social science interdisciplinary fields)	• University-affiliated research institutes and domestic research institutions • The PI must have 3 or more publications in the past 5 years, being a full-time faculty in the social science field at universities. • Each team must have 6 or more collaborators.	Up to KRW 320 million/yr	3 years

Evaluation	
Criteria	Agenda compatibility, research plan, research team organization and framework, etc.
Process	1st Eligibility Review → 2nd Field Evaluation (panel review + presentation) → 3rd Comprehensive Review

Schedule *(tentative)*

- **May** — Announcement of new projects
- **May to June** — Proposals submitted
- **June to August** — Evaluation & Selection
- **September** — Project commencement

** Global agendas will be announced before the application period begins*

** Proposals can be written in Korean or English.*

Group Research Programs

Contact: Team for Institute Programs in the Humanities & Social Sciences

Humanities Korea Plus (HK+)

Purpose

To build humanities research infrastructure and produce world-class humanities research outcomes by intensively fostering humanities research institutes within universities

Summary

Research Areas	Eligibility	Funding Amount	Funding Duration
Humanities	University-affiliated research institutes	(Type1) 1.7billion/yr (Type2) 300milion/yr	7 years (3+4)

Evaluation		
	Criteria	Research agenda, research team organization and framework, local humanities, etc.
	Process	1st Eligibility Review → 2nd Field Evaluation (panel review + presentation) → 3rd Comprehensive Review

Schedule

** Not determined yet*

NRF 한국연구재단
National Research Foundation of Korea

03

Project Management

Rules and Regulations

- Most of programs are subject to “NATIONAL RESEARCH AND DEVELOPMENT INNOVATION ACT(국가연구개발혁신법)” and “SCIENCES PROMOTION ACT(학술진흥법)”.

NATIONAL RESEARCH AND DEVELOPMENT INNOVATION ACT

[Enforcement Date 22. Sep. 2023.] [Act No.19235, 21. Mar. 2023., Partial Amendment]

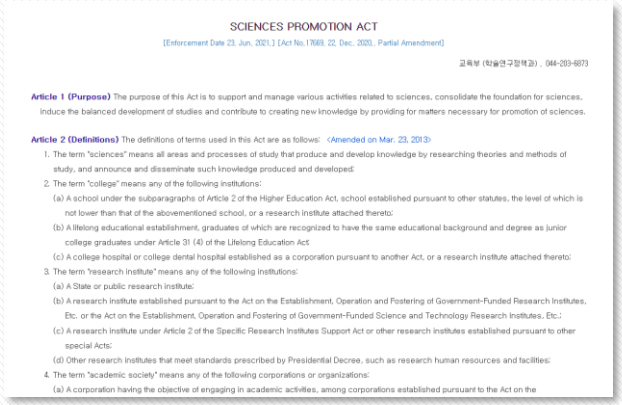
과학기술정보통신부 (성과평가정책과-성과관리) , 044-202-6921
과학기술정보통신부 (성과평가정책과-기술료) , 044-202-6925
과학기술정보통신부 (연구평가혁신과-과제평가) , 044-202-6936
과학기술정보통신부 (연구평가혁신과-연구지원체계평가) , 044-202-6933
과학기술정보통신부 (연구윤리권익보호과-제재처분) , 044-202-6974
과학기술정보통신부 (연구제도혁신과-연구계획비, 간접비) , 044-202-6956, 6957
과학기술정보통신부 (연구제도혁신과-동시수행) , 044-202-6951
과학기술정보통신부 (연구제도혁신과-연구보안) , 044-202-6954
과학기술정보통신부 (연구제도혁신과-기타) , 044-202-6953

CHAPTER I GENERAL PROVISIONS

Article 1 (Purpose) The purpose of this Act is to innovate the implementation system of national research and development programs and to create an autonomous and responsible research environment, thereby enhancing national innovation capabilities and contributing to the development of the national economy and the improvement of citizens' quality of life.

Article 2 (Definitions) The terms used in this Act are defined as follows: <Amended on Jan. 6, 2022>

1. The term "national research and development program" means a program for which a central administrative agency provides a budget or funds for research and development pursuant to statutes and regulations;
2. The term "research and development project" means a project determined by the head of the competent central administrative agency in order to promote a national research and development program;
3. The term "research and development institute" means an institution or organization that conducts a national research and development program, among the following:
   (a) A research institute directly established and operated by the State or a local government;
   (b) A school under Article 2 of the Higher Education Act (hereinafter referred to as "university");



SCIENCES PROMOTION ACT

[Enforcement Date 23. Jun. 2021.] [Act No.17689, 22. Dec. 2020., Partial Amendment]

교육부 (학술연구정책과) , 044-203-6873

Article 1 (Purpose) The purpose of this Act is to support and manage various activities related to sciences, consolidate the foundation for sciences, induce the balanced development of studies and contribute to creating new knowledge by providing for matters necessary for promotion of sciences.

Article 2 (Definitions) The definitions of terms used in this Act are as follows: <Amended on Mar. 23, 2013>

1. The term "sciences" means all areas and processes of study that produce and develop knowledge by researching theories and methods of study, and announce and disseminate such knowledge produced and developed;
2. The term "college" means any of the following institutions:
   (a) A school under the subparagraphs of Article 2 of the Higher Education Act, school established pursuant to other statutes, the level of which is not lower than that of the abovementioned school, or a research institute attached thereto;
   (b) A lifelong educational establishment, graduates of which are recognized to have the same educational background and degree as junior college graduates under Article 31 (4) of the Lifelong Education Act;
   (c) A college hospital or college dental hospital established as a corporation pursuant to another Act, or a research institute attached thereto;
3. The term "research institute" means any of the following institutions:
   (a) A State or public research institute;
   (b) A research institute established pursuant to the Act on the Establishment, Operation and Fostering of Government-Funded Research Institutes, Etc. or the Act on the Establishment, Operation and Fostering of Government-Funded Science and Technology Research Institutes, Etc.;
   (c) A research institute under Article 2 of the Specific Research Institutes Support Act or other research institutes established pursuant to other special Acts;
   (d) Other research institutes that meet standards prescribed by Presidential Decree, such as research human resources and facilities;
4. The term "academic society" means any of the following corporations or organizations:
   (a) A corporation having the objective of engaging in academic activities, among corporations established pursuant to the Act on the

** You can visit the website of Korean law information center(https://www.law.go.kr/LSW/eng/engMain.do) to find more.*

- Research funds should be used and managed according to the “Guidelines on the Use of Funds for Humanities and Social Sciences Research Programs(인문사회분야 학술연구지원사업 가이드라인)”.

- Researchers can carry out 5 or less projects at the same time, and he/she can perform up to 3 projects as a PI at the same time.
  - ✓ Researchers can carry out 3 or less projects in Humanities and Social Sciences at the same time, and he/she can perform up to 2 projects as a PI at the same time.

- Every beneficiary needs to take a course of Research ethics for research manager/participants researchers(Humanities & Social Sciences) within 3 months from the start of the projects.

Publication Report

- *Every beneficiary is obliged to report their publications resulting from funded project.*

Deadline

- Within two years* of end of research period

** You would be requested to maintain your affiliations in Korea for at least 2 years longer than your project period.*

Method

- Online submission (https://ernd.nrf.re.kr/)

Requested Volumes

- Minimum of 1 or 2 publications per year of support

** May differ to different programs*

Recognition Criteria

- Papers: Each paper published in journals indexed or indexed candidates by the NRF or indexed by SCI(E), A&HCI, SSCI, SCOPUS, with the researcher as the first or corresponding author, will be counted as one achievement.
- Books/Translations: Each individually-authored or translated book counts as three achievements, while each co-authored or co-translated book count as two.

Thank you

NRF National Research Foundation of Korea