

RS-2023-00274340

(A Study on the Identifying of Technology Trends by research field and
Establishment of Communication System through Korean Academic Societies)



2024. 5. 31

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	RS-2023-00274340		2023. 07. 14 ~ 2024. 05. 13
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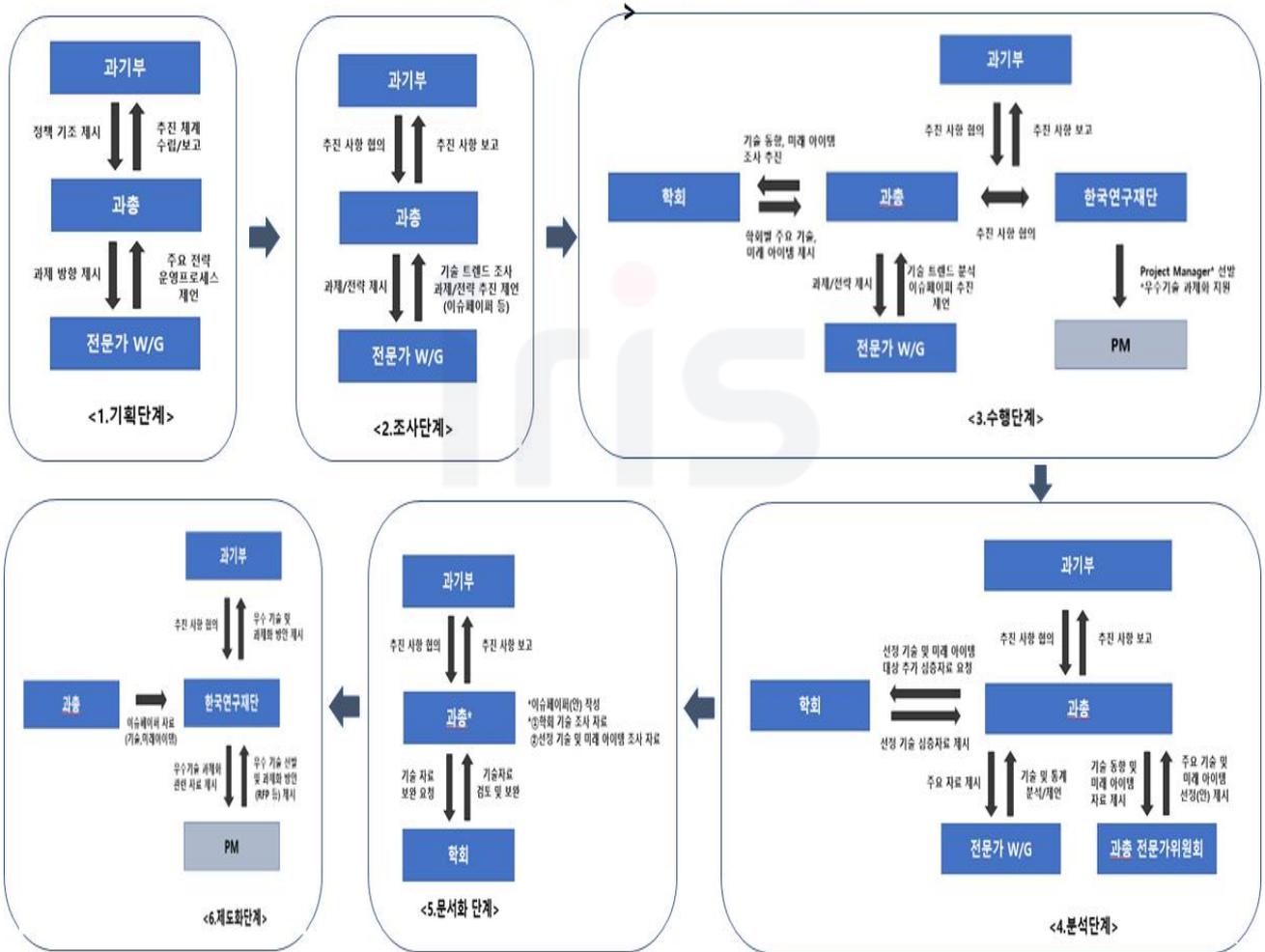
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<기술동향 파악을 위한 단계별 추진 체계도>



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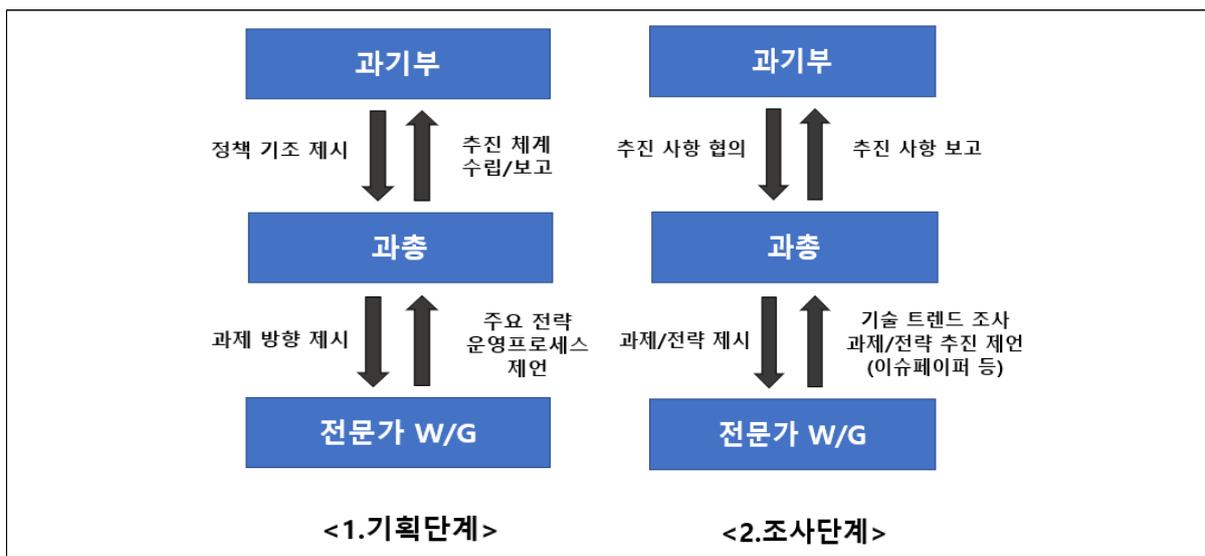
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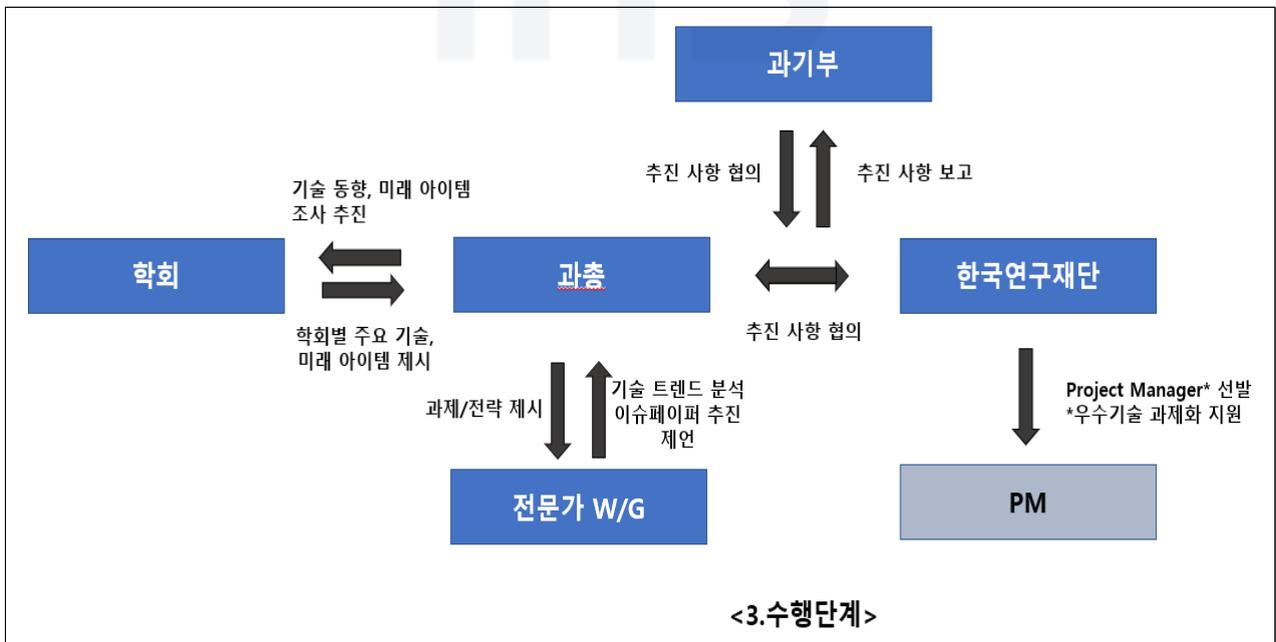
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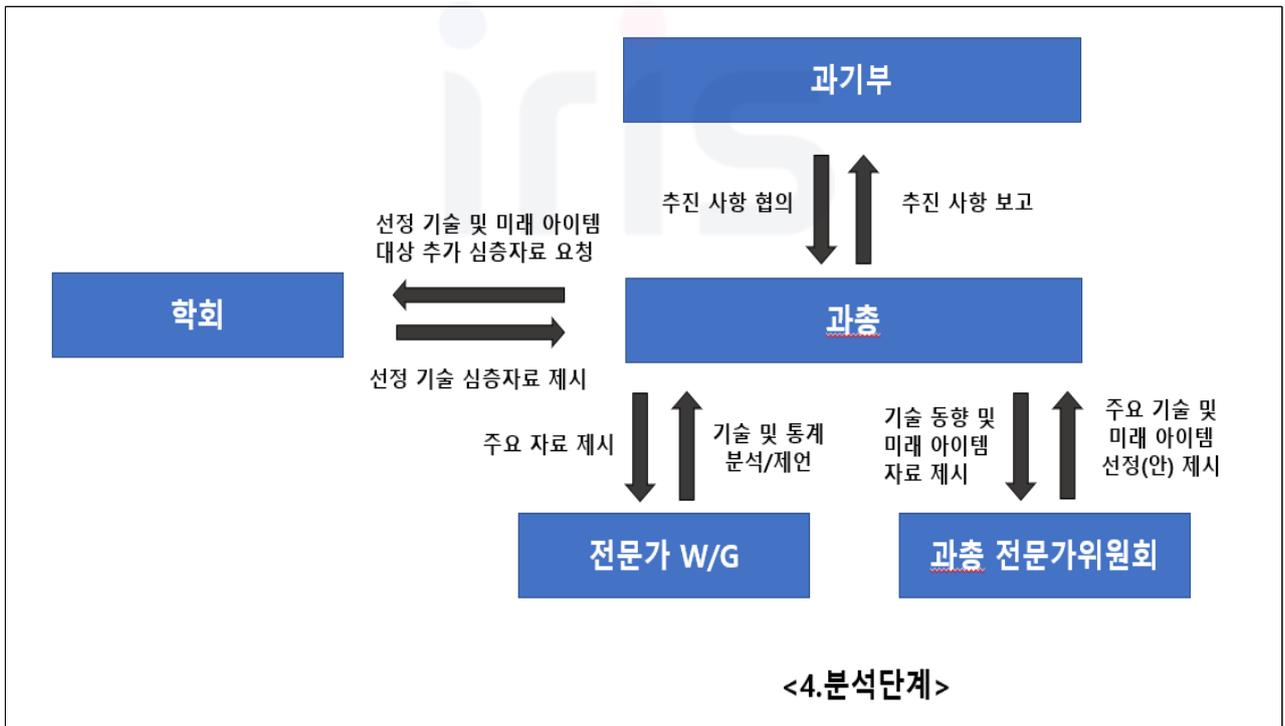
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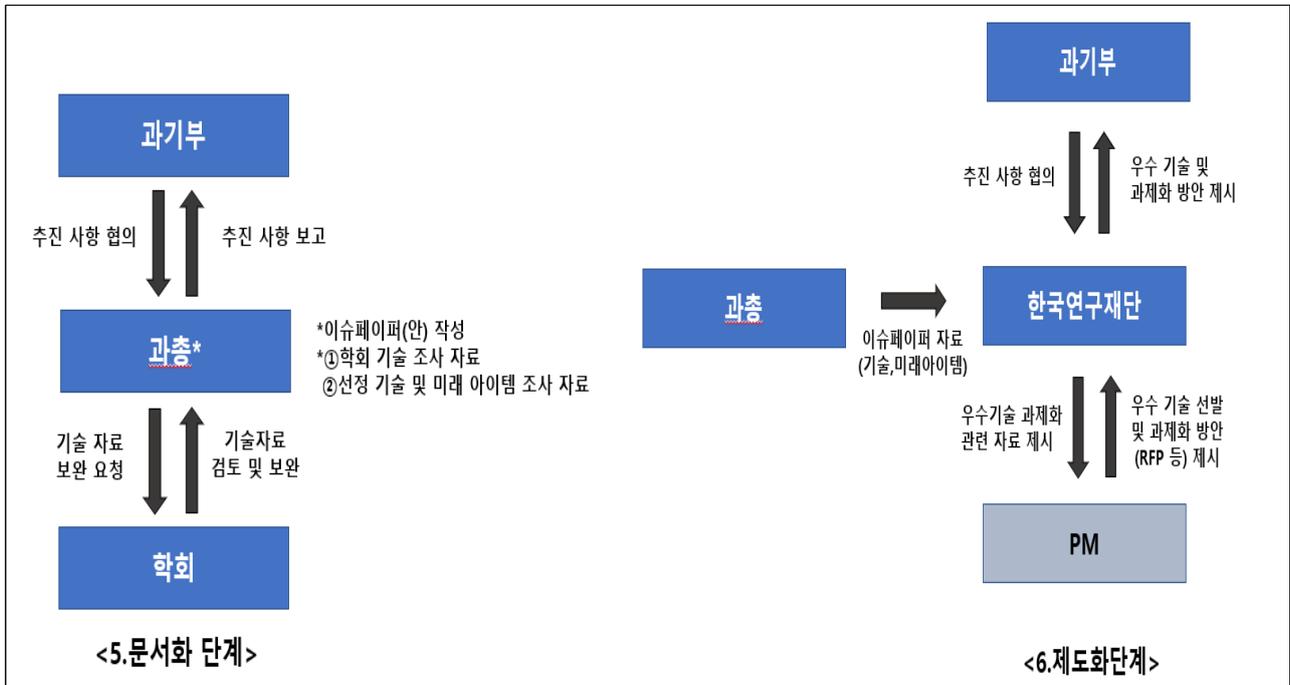
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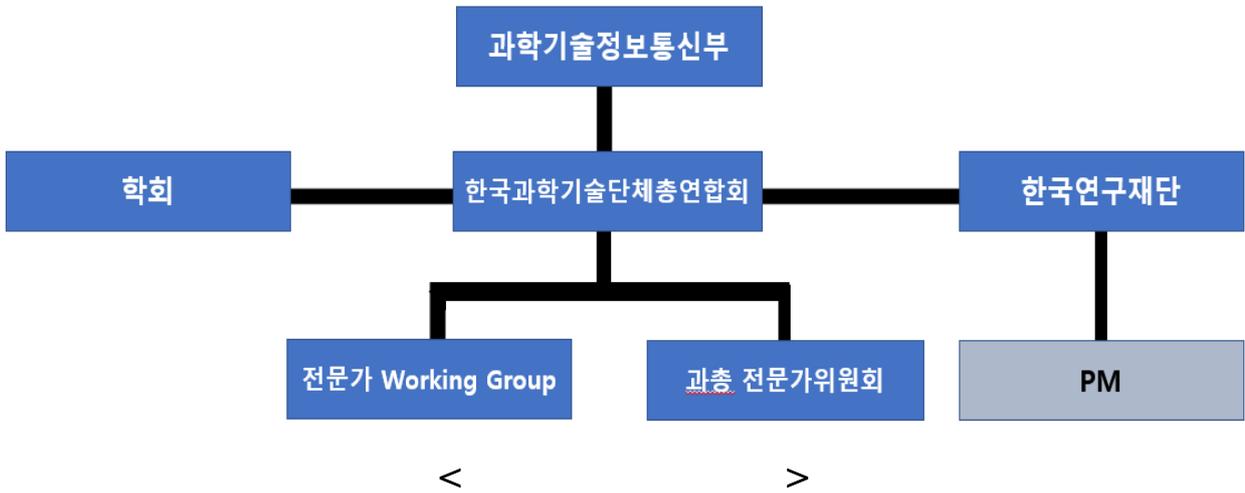
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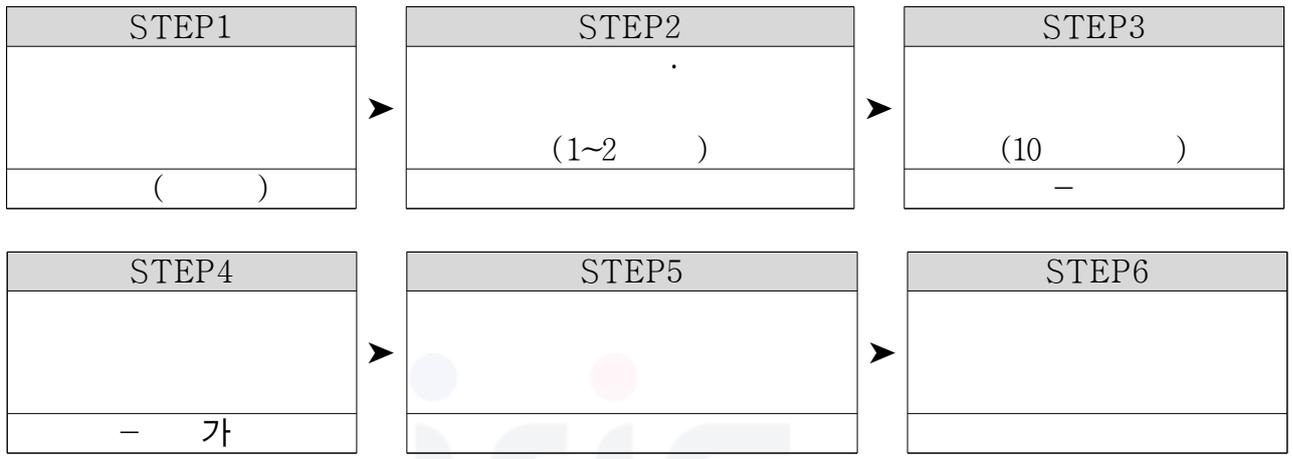
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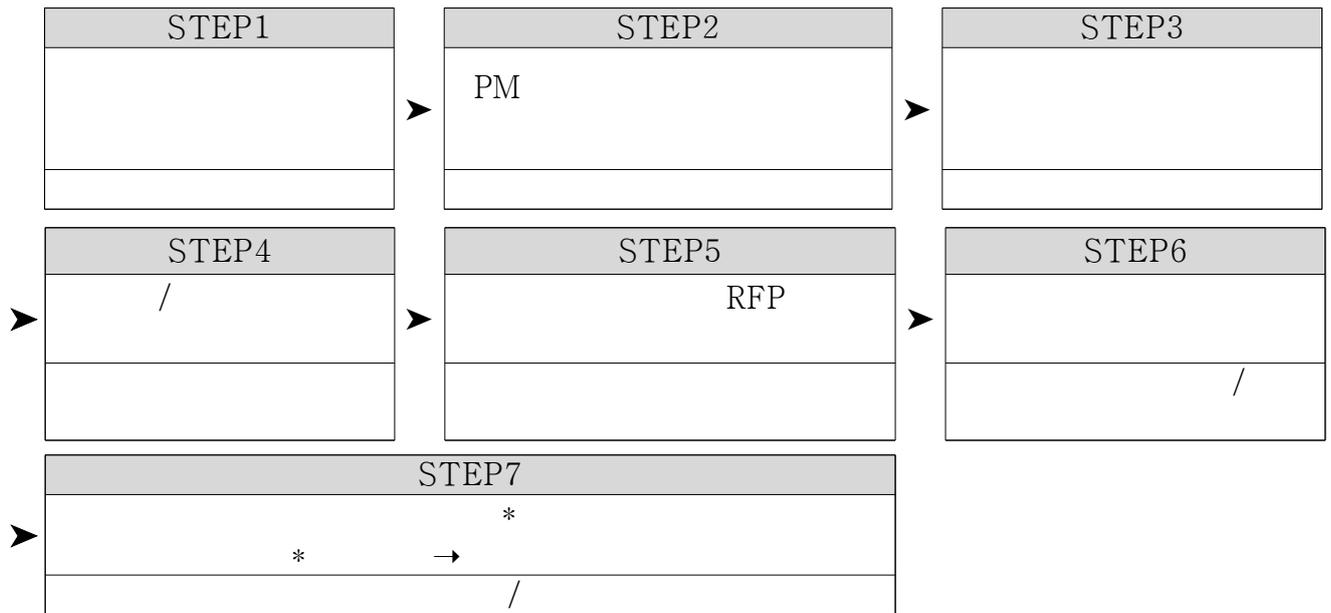
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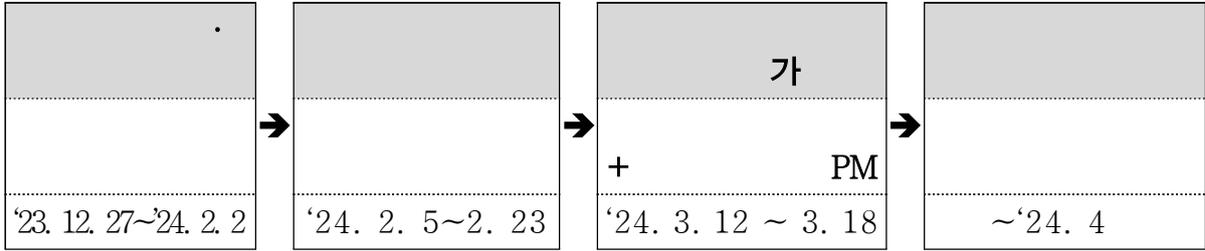
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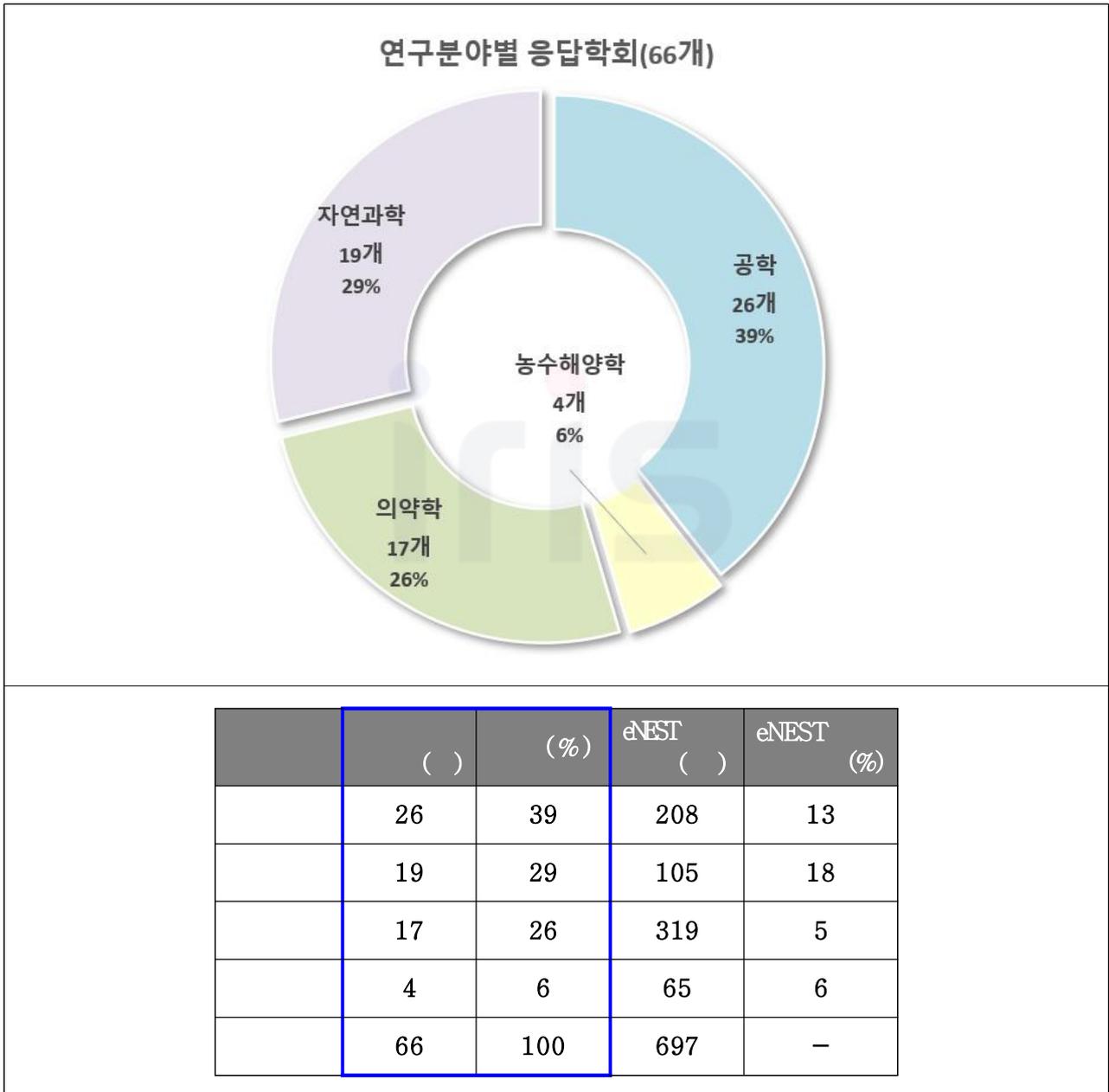
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1	European healthcare design	European healthcare design congress	
2	Healthcare design	healthcare design conference & expo	
3	JiHa(Japan Institute of Healthcare Architecture)	The Symposium on Healthcare Architecture in Asia	

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1	GRC(Gordon Research Conference)	Gordon Conference on Biomaterials and Tissue Engineering	
2	TERMIS(Tissue Engineering and Regenerative Medicine)	TERMIS World Conferences	
3	TERMIS-AP (Tissue Engineering and Regenerative Medicine Asia Pacific Chapter)	TERMIS-AP Conferences	

1	()	ACMD(Asian Conference on Multibody Dynamics)	
2	()	ICTAM(International congress of Theoretical and applied mechanics)	
3	()	ISFV(International Symposium on Flow Visualization)	
4	()	ISPIV(INTERNATIONAL SYMPOSIUM ON PARTICLE IMAGE VELOCIMETRY)	
5	AIAA(American Institute of Aeronautics and Astronautics)	AIAA Fluid Dynamics Conference	
6	ASME(The American Society of Mechanical Engineers)	ASME Annual Meeting	
7		FEDSM(Fluids Engineering Division Summer Meeting)	
8		MSEC(Manufacturing Science and Engineering Conference)	
9		IMECE(International Mechanical Engineering Congress & Exposition)	
10	CMES(The Chinese Mechanical Engineering Society)	International Symposium on Structures and Materials	
11	CSTAM(The Chinese Society of Theoretical and Applied Mechanics)	CCTAM(The Chinese Congress of Theoretical and Applied Mechanics)	
12	Faculty of Advanced Technology and Multidiscipline, Universitas Airlangga	ICATAM(International Conference of Advanced Technology and Multidiscipline)	
13	IEEE(Institute of Electrical and Electronics Engineers)	AMC(international conference on Advanced Motion Control)	
14		ECTC(Electronic Components and Technology Conference)	
15		ETME(International Conference on Emerging Technologies in Mechanical Engineering)	
16	IUTAM(The International Union of Theoretical and Applied Mechanics)	ICTAM(International Congress of Theoretical & Applied Mechanics)	
17	JSME(Japanese Society of Mechanical Engineering)	ICM&P(International Conference on Materials & Processing)	

1	ifip(ADVANCES IN PRODUCTION MANAGEMENT SYSTEMS)	APMS(International Conference on Advances in Production Management System)	

1	()	BIOTRANS(International Symposium on Biocatalysis and Biotransformations)	
2	AICHE(The Global Home of Chemical Engineers)	SEED(Synthetic Biology: Engineering, Evolution & Design)	
3	ASBA(Asian Synthetic Biology Association)	Asian Synthetic Biology Association (ASBA) Annual Meeting	
4	ECI(Engineering Conferences International)	Enzyme Engineering Conference	
5	GRC(Gordon Research Conference)	Biocatalysis Gordon Research Conference	
6	SIMB(Society for Industrial Microbiology and Biotechnology)	SIMB Annual Meeting and Exhibition	

1	AESJ(Atomic Energy Society of Japan)	NUTHOS(International Topical Meeting on Nuclear Reactor Thermal-Hydraulics, Operation, and Safety)	
	ANS(American Nuclear Society)		
	ENS(European Nuclear Society)		
	CNS(Chinese Nuclear Society)		

1	ECS(The Electrochemical Society)	ECS Meeting	
2		SOFC-XVII(International Symposium on Solid Oxide Fuel Cells)	
3	EFCF(European Fuel Cell Forum)	EFCF(European Fuel Cell Forum)	
4	FCHEA(Fuel Cell & Hydrogen Energy Association)	Hydrogen Fuel Cell Seminar	
5	Geochemical Society	Goldschmidt Conference	
6	ISRM(International Society for Rock Mechanics and Rock Engineering)	ISRM International Symposium	
7	SEG(Society of Exploration Geophysicist), AAPG(American Association of Petroleum Geologists)	IMAGE(International Meeting for Applied Geoscience & Energy)	
8	SME(Society for Mining, Metallurgy & Exploration)	SME Annual Conference & Expo	

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1	MRS(Materials Research Society), European MRS	GCIM(Global Congress on Innovative Materials)	

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1	()	ICNS(International Conference on Nitride Semiconductors)	LED
2	()	IWN(International Workshop on Nitride Semiconductors)	LED

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1	ACM	SIGCOMM Conference	
2	IEEE(Institute of Electrical and Electronics Engineers)	AICAS(International Conference on Artificial Intelligence and Computer Applications)	
3		ICC(International Conference on Communication)	
4		IEDM(International Electron Devices Meeting)	
5		ISCAS(International Symposium on Circuits and Systems)	
6		ISSCC(International Solid-State Circuits Conference)	
7		SYMPOSIUM ON VLSI TECHNOLOGY & CIRCUITS	
8		INFOCOM(International Conference on Computer Communications)	
9		GLOBECOM(Global Communications Conference)	
10		International display workshops General Incorporated association	IDW(International Display Workshop)
11	MRS(Materials Research Society)	DRC(Device Research Conference)	
12	SID(Society for Information Display)	SID DIisplay Week	
13	USENIX(The advanced computing systems association)	USENIX Symposium on Networked Systems Design and Implementation	

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1	ICROS(Institute of Control, Robotics, and Systems)	ICCAS(International Conference on Control, Automation, and Systems)	
2	IEEE(Institute of Electrical and Electronics Engineers)	ICRA(International Conference on Robotics and Automation)	
3	IEEE(Institute of Electrical and Electronics Engineers), RSJ(The Robotics Society of Japan)	IROS(IEEE/RSJ International Conference on Intelligent Robots and Systems)	

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1	ACECC(the Asian Civil Engineering Coordinating Council)	CECAR(Civil Engineering Conference in the Asian Region)	
2	AWRA(American Water Resources Association)	AWRA Conference	
3	IAHR(International Association for Hydro-Environment Engineering and Research)	IAHR Asia & Pacific Regional Congress	

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1	()	AJCPP(Asian Joint Congress on Propulsion and Power)	
2	AIAA(American Institute of Aeronautics and Astronautics)	AIAA AVIATION Forum and Exposition	
3		AIAA Defense & Security Forum	
4		AIAA Fluid Dynamics Conference	
5		AIAA Propulsion and Power	
6		AIAA SciTech Forum and Exposition	
7		CNES(Centre National d'Etudes Spatiales)	Ground-Based Space Facilities Symposium
8	CSA(Cryogenic Society of America)	Space Cryogenics Workshop	
9	FAA(the Federal Aviation Administration), Eurocontrol	ATM R&D Seminar	
10		ICRAT(International Conference on Research in Air Transportation)	
11	IAF(International Astronautical Federation)	IAC(International Astronautical Congress)	
12	ICAS(International Council of the Aeronautical Sciences)	ETF(Emerging Technology Forum)	
13		ICAS Congress	
14	IEEE(Institute of Electrical and Electronics Engineers), AIAA(American Institute of Aeronautics and Astronautics)	DASC(Digital Avionics Systems Conference)	

15	ION(Institute of Navigation)	IEEE/ION Position Location and Navigation Symposium	
16		ION GNSS+	
17		Pacific PNT	
18		ITM(International Technical Meeting)	
19	ISABE(The International Society for Air Breathing Engines)	ISABE(International Symposium on Air Breeding Engine)	
20	Japanese, Chinese, and Korean Societies for aerospace	Asian Joint Conference on Propulsion and Power	
21	JSASS(Japan Society of Aeronautical and Space Science)	APISAT(Asia-Pacific International Symposium on Aerospace Technology)	
	CSAA(Chinese Society of Aeronautical and Space Science)		
	RAS(Royal Aeronautical Society)		
	KSAS(Korean Society of Aeronautical and space sciences)		
22	VFS(The Vertical Flight Society)	Annual Forum & Technology Display	
23		Transformative Vertical Flight	

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1	()	AWTEC(Asian Offshore Wind, Wave and Tidal Energy Conference)	
2	ISOPE(The International Society of Offshore and Polar Engineers)	European Offshore Mechanics Symposium	
3		ISOPE Conference	
4		ISOPE Ocean Mining & Gas Hydrates Symposium	
5		ISOPE Pacific Asia Offshore Mechanics Symposium	

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1	()	ICOM(International Congress on Membranes and Membrane Processes)	
2	AIChE(The Global Home of Chemical Engineers)	AIChE Annual Meeting	
3	AMS(Aseanian Membrane Society)	Conference of Aseanian Membrane Society	
4	IUPAC(International Union of Pure and Applied Chemistry)	IUPAC MACRO(World Polymer Congress)	
5	Pacific Polymer Federation	DRC(Device Research Conference)	
6	SCEJ(The Society of Chemical Engineers, Japan)	International Chemical Engineering Symposia	

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1	ACS(American Chemical Society)	ACS meeting & exhibition	
2	AGU(Advancing Earth and space science)	AGU Annual Meeting	
3	IWA(International Water Association)	Leading Edge Conference on Water and Wastewater Technologies	
4	IWA(International Water Association)	Water and Development Congress & Exhibition	

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1	()	WCPEC(World Conference on Photovoltaic Energy Conversion)	
2	IEEE(Institute of Electrical and Electronics Engineers)	PVSC(Photovoltaic Specialists Conference)	
3	The European Commission Joint Research Centre	EU PVSEC(European Photovoltaic Solar Energy Conference and Exhibition)	



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1	AAAR(American Association for Aerosol Research)	American Association for Aerosol Research Annual Conference	
2	AGU(American Geophysical Union)	AGU Annual Meeting	
3	EAA(European Aerosol Assembly)	European Aerosol Conference	
4	IFMS(International Forum of Meteorological Societies)	IFMS(International Forum of Meteorological Societies)	
5	IUAPPA(International Union of Air Pollution Prevention and Environmental Protection Associations)	World Clean Air Congress	
6	IUGG(International Union of Geodesy and Geophysics)	IUGG General Assemblies	
7	Japan Society of Atmospheric Environment Chinese Society for Environmental Sciences		
8	MSJ(Meteorological Society of Japan)	ACM(Asian Conference on Meteorology)	
	CMS(Chinese Meteorological Society)		
	KMS(Korean Meteorological Society)		

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1	()	CSW(compound semiconductor week)	
2	()	QD(International Conference on Quantum Dots)	
3	AAPPS(Association of Asia Pacific Physical Societies)	AAPPS Meeting	
4	APS(American Physical Society)	APS Meeting	
5	AsCA(Asian Crystallographic Association)	AsCA conferences	
6	DPG(German Physical Society)	DPG Meeting	
7	EPS(European Physical Society)	EPS Meeting	
8	ICO(International Commission for Optics)	ICO Meeting	
9	IUCr(International Union of Crystallography)	IUCr Congress	

10	IUPAP(International Union of Pure and Applied Physics)	IUPAP Meeting	
11	JPS(The Physical Society of Japan)	JPS Meeting	
12	MPS(Max Planck Society)	Max Planck Symposium	
13	MRS(Materials Research Society)	MRS Meeting	
14	ÖPG(Austrian Physical Society)	ÖPG Meeting	
15	Optica(formerly OSA)	CLEO(Conference on Lasers and Electro-Optics)	
16	Perimeter Institute	Perimeter Institute conferences	
17	SPIE(The international society for optics and photonics)	SPIE Photonics West	
18	SPS(Swiss Physical Society)	SPS Meeting	

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1	()	IPMB(International Congress on Plant Molecular Biology)	
2	()	ICAR(International Conference on Arabidopsis Research)	
3	ASHG(American Society of Human Genetics)	ASHG Annual Meeting	
4	ASM(American Society for Microbiology)	ASM Microbe	
5	ASPB(American Society of Plant Biologists)	The Annual Plant Biology Meeting	
6	ESHG(European Society of Human Genetics)	ESHG conference	
7	GRC(Gordon Research Conference)	Gordon Research Conference on Plant Molecular Biology	
8	HGO(Human Genome Organization)	Human Genome Meeting	
9	IGF(International Genetics Federation)	International Seminar Series	
	SBG(the Brazilian Genetics Society)		
	ALAG(the Latin American Association of Genetics)		
	GSA(the Genetics Society of America)		
10	IPC(International Phycological Society)	IPC(International Phycological Congress)	Iphycology
11	ISA(International Seaweed Association)	ISS(International Seaweed Symposium)	Iphycology

12	IS-MPMI(International Society for Molecular Plant-microbe Interaction)	International Conference in Molecular Plant-Microbe Interaction	
13	ISVM(International Society for Viruses of Microbes)	Viruses of Microbes	
14	JSB(Japanese society for Bacteriology)	Annual Meeting of Japanese Society for Bacteriology	
15	Microbiology Society	ANNUAL CONFERENCE	
16	PSA(Phycological Society of America)	Annual meeting for Phycological Society of America	Iphycology
17	SIMB(Society for Industrial Microbiology and Biotechnology)	SIMB Annual Meeting and Exhibition	

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1	IMU(International Mathematical Union)	ICM(International Congress of Mathematicians)	

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1	AGU(American Geophysical Union)	AGU Fall Meeting	
2	EGU(European Geophysical Union)	EGU annual meeting	
3	GSA(Geological Society of America)	GSA annual meeting	

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1	AAS(American Astronomical Society)	AAS Meeting	
2		DPS MEETING	
3	AGU(American Geophysical Union)	AGU Fall Meeting	
4	AOGS(Asia Oceania Geosciences Society)	AOGS Annual meeting	
5	COSPAR(Committee on Space Research)	COSPAR Scientific Assemblies	
6	IAF(International Astronautical Federation)	IAC(International Astronautical Congress)	
7	IAU(International Astronomical Union)	IAU Meetings	
8	ISECG(International Space Exploration Coordination Group)	ISECG Forum	
9	LPI(Lunar and Planetary Institute)	LPSC(Lunar and Planetary Science Conference)	

10	SPIE(The international society for optics and photonics)	SPIE AI(Astronomical Telescopes & Instrumentation)	
11		SPIE Mirror Tech	
12		SPIE Optics + Photonics	

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1	ACS(American Chemical Society)	ACS meeting & exhibition	

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1	FAOBMB(Federation of Asian and Oceanian Biochemists and Molecular Biologists)	FAOBMB Congress & Conference	
2	IUBMB(International Union of Biochemistry and Molecular Biology)	IUBMB Congress & Conference	

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1	EAFONS(East Asian Forum of Nursing Scholars)	EAFONS conference	
2	ICN(International Council of Nursing)	International Conference on Nursing	
3	Sigma	International Nursing Research Congress	
4	WANS(World Academy of Nursing Science)	International Nursing Research Conference	

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1	AAAAI(American Academy of Allergy, Asthma, and Immunology)	AAAAI Annual Meeting	
2	ACR(American College of Rheumatology)	ACR Convergence	
3	AGA(American Gastroenterological Association)	DDW(Digestive Disease Week)	
4	APLAR(Asia-Pacific League of Association for Rheumatology)	Asia-Pacific League of Association for Rheumatology Congress	

5	EAACI(European Academy of Allergy and Clinical Immunology)	European Academy of Allergy and Clinical Immunology Congress	
6	ECCO(European Congress of Crohn's and Colitis)	Congress of ECCO	
7	EULAR(European Alliance of Associations for Rheumatology)	European Congress of Rheumatology	

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1	EANM(European Society of Nuclear Medicine)	Annual Congress of European Society of Nuclear Medicine	
2	SNMMI(Society of Nuclear Medicine and Molecular Imaging)	Annual Congress of Society of Nuclear Medicine	

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1	FASEB(Federation of American Societies for Experimental Biology)	SCIENCE RESEARCH CONFERENCES	

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1	HUPO(Human Proteome Organization)	HUPO WORLD CONGRESS	

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1	APPSPGHAN(Asian Pan-Pacific Society for Pediatric Gastroenterology, Hepatology and Nutrition)	World Congress of Pediatric Gastroenterology, Hepatology and Nutrition	
2	Japan Society of Gastroenterology	Hepatology and Nutrition	
3	Taiwan Society of Gastroenterology	Hepatology and Nutrition	

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1	IBRO(International Brain Research Organization)	World Congress of Neuroscience IBRO	
2	ISN(International Society for Neurochemistry)	ISN Biennial Meeting	
3	OHBM(Organization for Human Brain Mapping)	Human Brain Mapping Conference	

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1	IFEM(International Federation for Emergency Medicine)	ICEM(International Conference on Emergency Medicine)	

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1	BMES(Biomedical Engineering Society)	BMES(Biomedical Engineering Society) Annual Meeting	
2	IEEE(Institute of Electrical and Electronics Engineers)	Annual International Conference of the IEEE EMBS	
3	INTERNATIONAL ASET INC(International Academy of Science, Engineering and Technology Inc.)	IBEC(International Biomedical Engineering Conference)	

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1	ASHG(American Society of Human Genetics)	ASHG Annual Meeting	
2	HCA(Human Cell Atlas)	HCA meeting	
3	ISCB(International Society for Computational Biology)	GIW(Genome Informatics Workshop)	
4		GIW/ISCB Asia	
5		ISMB (Intelligent Systems For Molecular Biology)	
6	ISPG(International Society of Psychiatric Genetics)	WCPG(World Congress of Psychiatric Genetics)	
7	RECOMB (Research in Computational Molecular Biology)	Annual International Conference on Research in Computational Molecular Biology	

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1	ADHA(American dental hygienists' association)	ADHA annual conference	

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1	SAR(Society of Acupuncture Research)	SAR International Research Conference	

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1	ACS(American Chemical Society)	ACS meeting & exhibition	
2	IAPB(International Association for Plant Biotechnology)	IAPB congress	
3	IS-MPMI(The International Society for Molecular Plant-Microbe Interactions)	International Society for Plant-Microbe Interactions	

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1	ACS(American Chemical Society)	ACS meeting & exhibition	
2	IFT(Institute of Food Technologists)	IFT Annual Meeting and Expo	

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- GRC(Gordon Research Conference) : (,), ()
- IEEE(Institute of Electrical and Electronics Engineers) : (, / , ,)
- MRS(Materials Research Society) : (/), ()
- SPIE(The international society for optics and photonics) : (,)

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3			<ul style="list-style-type: none"> • AI
4			<ul style="list-style-type: none"> • Smart Manufacturing <ul style="list-style-type: none"> - AI, Big Data and IoT in Mechanical Engineering and Manufacturing - Intelligent Robotics, Sensors, Embedded Machines and Automation - Cloud for machinery industry - Physics-based AI-assisted Design and Control in Flexible Manufacturing • Cyber-Physical Systems • Future biomedical applications using medical robots and microrobots, Industrializing • Wi-fi based indoor localization under 1cm - () - 3D • HIR(Hetrogeneous Integration Roadmap) • Chiplet technology
5			<ul style="list-style-type: none"> • Industrial AI (AI), • (Human-Machine Collaboration)
6			<ul style="list-style-type: none"> • Biochemical Carbon Capture and Transformation • Recent Advances of Biomass Utilization Technology to Achieve Net-Zero Carbon Emissions by 2050 • CRISPR therapeutics • Biofoundry
7			<ul style="list-style-type: none"> • Small Modular Reactor, Micro Reactor • Operation and Diagnosis by using AI, 3D Printing, Robotics • Net Zero Technology, Mission and Cooperation as Carbon Free Energy

8			<ul style="list-style-type: none"> • – , PEM , SOEC • • • • • • •
9			<ul style="list-style-type: none"> • Digital oil field • Drone geophysics • Machine learning technology for resource engineering • Critical mineral exploration and utilization • Critical mineral recycling
10		LED	<ul style="list-style-type: none"> • • / LED •
11	/		<ul style="list-style-type: none"> • Multi-Bridge channel Gate-all-around (MBC GAA) Transistors • NegativeCap.Transistors • PMOS Neuromorphic Chips(Intel) • AI • PIM • • • • , 6G
12	/		<ul style="list-style-type: none"> • • AR/VR/MR, • AI •
13	/		<ul style="list-style-type: none"> • 6G, WiFi 8 • AI native communications/networks, AI augmented communications/networks • Semantic communications • Integrated sensing and communications (ISA) • Holographic MIMO • Reconfigurable intelligence surface (RIS) • Edge computing and processing • Test bed for advanced wireless edge cloud research • Distributed computing and learning • Digital twin • Quantum communications • Large Language Models for Intelligent Wireless Communication Systems • ML for Networks • Sky computing • Mid-Scale Experimental Infrastructures for Networking Research
14			<ul style="list-style-type: none"> •
15			<ul style="list-style-type: none"> • (Disaster preparedness) • (Mitigation and Rehabilitation)

24			<ul style="list-style-type: none"> • • • • • • • AI • , • • • SDGs (Sustainable Development Goals) • • smart metering

○ ()

			()
1			<ul style="list-style-type: none"> • climate change detection and attribution • weather and climate risk • predictability of climate extremes • climate technology
2			<ul style="list-style-type: none"> • (AI) • (, ,) • •
3			<ul style="list-style-type: none"> • In-situ • •
4			<ul style="list-style-type: none"> • (,) - - • 가 - , , • IC / - • - 가 • • • • (, SWIR, LWIR, MWIR),
5			<ul style="list-style-type: none"> • () • • • •

			()
6			<ul style="list-style-type: none"> • CRISPR • • - rebooting • FDA • Luminescence • •
7			<ul style="list-style-type: none"> • Plant Immunity • Plant Immune receptor • Pathogen effector biology
8			<ul style="list-style-type: none"> • • • • CRISPR
9			<ul style="list-style-type: none"> • • / • genome perturbation • • allelic bias • (traditional/ non-traditional) • • RNA
10		Phycology	<ul style="list-style-type: none"> •
11			<ul style="list-style-type: none"> •
12			<ul style="list-style-type: none"> • • • • CCS •
13			<ul style="list-style-type: none"> • - 6m • - • - • - • - • - , , , • • •
14			<ul style="list-style-type: none"> • • •
15			<ul style="list-style-type: none"> • • • • • AI

			()
			<ul style="list-style-type: none"> • • • • <p>2</p>

○ ()

			()
1			<ul style="list-style-type: none"> • VR & AR , •
2			<ul style="list-style-type: none"> • ICT • • • • VR • 360 VR • •
3			<ul style="list-style-type: none"> • Microbiome • Multiomics • Spatial transcriptomics • Intestinal Orgnoids • AI
4			<ul style="list-style-type: none"> • • •
5			<ul style="list-style-type: none"> • Biology of Cilia and Flagella • Nuclear Bodies: Hubs of Genomic Activity • Trace Elements in Biology and Medicine • Ubiquitin and Ub-like Proteins • Genome Engineering: Research and Applications • Retinal Neurobiology and Visual Processing • Channels and Transporters in Immunity • Immunoreceptors and Immunotherapy • Cell Signaling in Cancer: From Mechanisms to Therapy
6			<ul style="list-style-type: none"> • Immunopeptidome (Precision Medicine) • DIA 1 uL • PTM •
7			<ul style="list-style-type: none"> • 가 , ,
8			<ul style="list-style-type: none"> •
9			<ul style="list-style-type: none"> • New developments in understanding memory and emotion brain systems in humans • Neuroimmune interactions shaping social behavior • A synaptic energy crisis entangled in neurodegeneration • Optical Tools for Seeing and Controlling the Brain

			()
			<ul style="list-style-type: none"> • Neuronal logistics: supplying synapses with proteins • Aging, Alzheimer's disease and genome instability • Hypothalamus at crossroads of neuroscience in studying aging
10			<ul style="list-style-type: none"> • AI-revolutionized Healthcare Devices • Wearable healthcare devices • Digital healthcare devices
11			<ul style="list-style-type: none"> • Multimodal • DNA • post-transcriptional
12			<ul style="list-style-type: none"> • 가
13			<ul style="list-style-type: none"> • 가 • 가

○

()

			()
1			<ul style="list-style-type: none"> • Synthetic Community • Microbiome • AI-assisted phytobiome
2			<ul style="list-style-type: none"> • CRISPR/CAS system
3			<ul style="list-style-type: none"> • Genome-edited yeast strains to modulate the tastes and flavors of fermented foods • EpCAM : Eco-friendly, Polymer-based nanozyme integrated with colorimetric sensing platform for agricultural biomolecule detection • Phage-based nanobots to recognize, separate, and concentrate bacteria for food and water safety • web-based, spatial modeling tool for nutrient and pesticide related environmental assessment
4			<ul style="list-style-type: none"> •

□

가 가

가

6

	1	K-defense		
	2			
	3			
	4			
	5	UAM(Urban Air Mobility)/AAM(Advanced Air Mobility)		
	1	()		
	2			
	3			
	4	Human Organ Atlas		
	5			
	1			
	2	Biodegradation ON controllable transient biomedical electronics and implantable biodegradable materials including drug delivery systems		
	3			
	4			
	5	& Multi-modal Interactive Skill		
	1	AI		
	2	, 3D		
	3			

□

66

3

()

- / / / AAM	- /
- / /	- CRISPR /

□ 가

가 (Gartner, Inc. :

*) 2001 가 (The Gartner Group) . 가 IT , . 1979 5,700 , 1,435 . 85 12,400 . 가 .

○ 가 Gartner Top 10 Strategic Technology Trends

IT 가 , 2022 2024 .

	2022	2023	2024
10	1. 2. 3. 4. 5. (Anywhere operations) 6. (Cybersecurity mesh) 7. 8. 9. 10.	1. 2. 가 3.AI , 4. 5. ▶ 6. 가 7. 8. AI 9. 10. 가	1. AI , (AI TRiSM) 2. 3. 가 4. 5. AI ▶ 6. 7. 8. AI 9. 10.

○ 2024 가 10 (2023 10) AI , (AI TRiSM) AI , AI , AI (TRiSM)

- 가 AI 가
AI가

- AI TRiSM (ModelOps), , AI
,

- 가 2026 AI TRiSM
80%

o (CTEM)

- , 가

- CTEM 가 가 가

- 가 2026 CTEM
2/3

o 가 (Sustainable Technology)

- ESG
AI, , , 가

- 가 IT 가

- 가 2027 25% CIO 가

○ (Platform Engineering)

- .
;

-
가 가

○ AI (AI-Augmented Development)

- 가 , ,
AI, AI . AI

- 가

- AI



○ 2023 15% ICP(Industry Cloud Platform)

2027 70% 가 ICP

- 가

- ICP , (PaaS)

(IaaS) 가 ,

- , . ICP

가

○ (Intelligent Applications)

— ‘ ’

—

가

— 가 26% CEO 가

CEO

, AI 3 가

○ AI

— ,

AI가

— 가 2026 80% AI

(API)

AI

(GenAI-enabled application)

2023 5% 가

○ (Augmented-Connected Workforce)

— 가 , 가

—

,

— 2027 CIO 25%가

50% 가

○

– ‘ (Custobot)’ 가

– 가 2028 150 ,

– 2030 ,

가



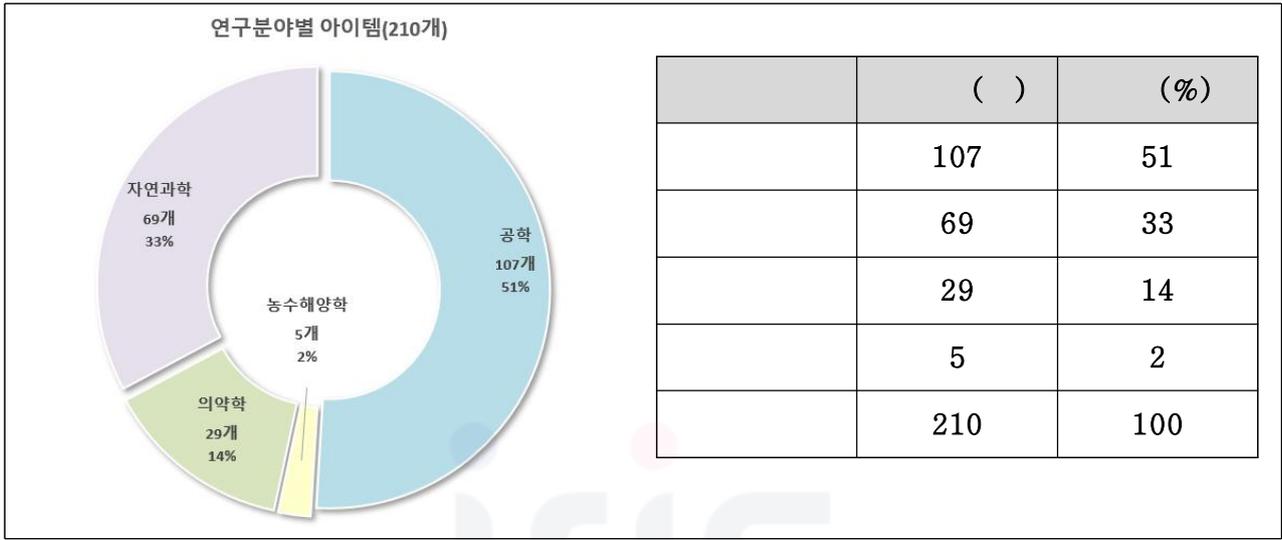
4



○ : 210

○ *

- (107) > (69) > (29) > (5)



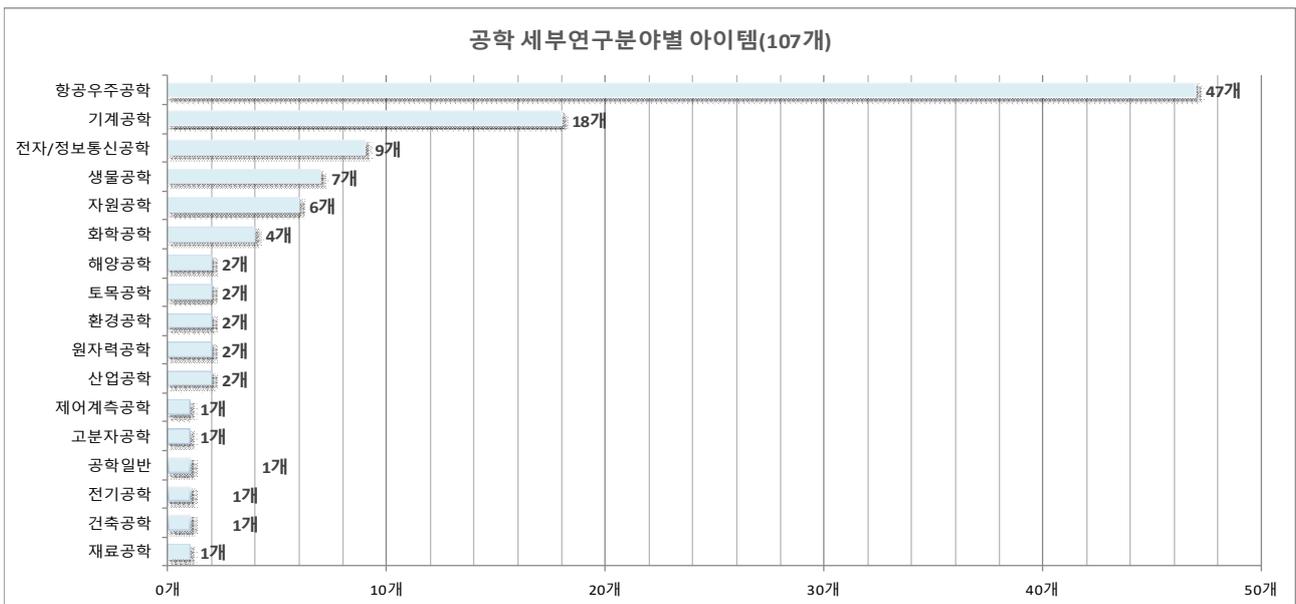
○

- : 107 , 17

· 3

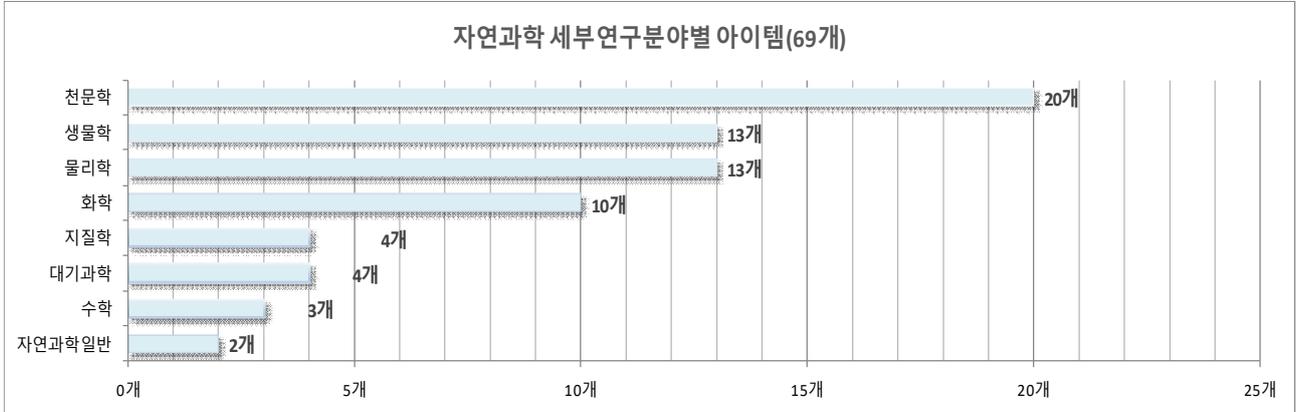
(47) > (18) >

/ (9) 69%



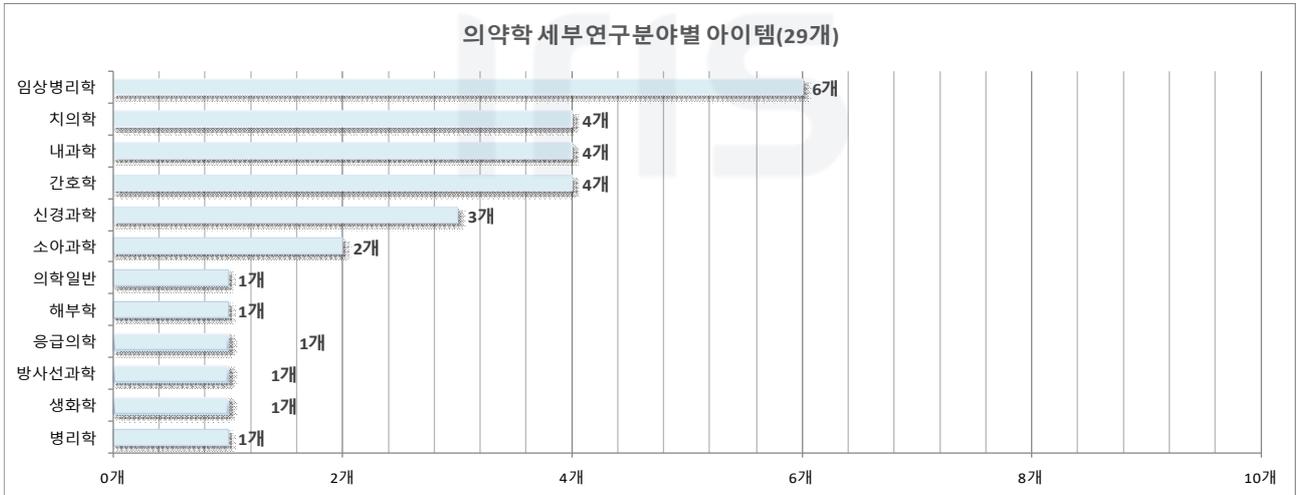
— : 69 , 8

- (20) > , (13) > (10) > ,
(4) > (3) > (2)



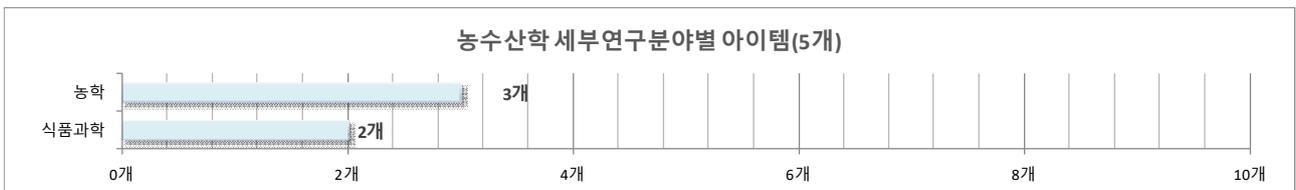
— : 29 , 12

- 4 (6) > , ,
(4) 62%



— : 5 , 2

- (3) > (2)



□ 12 가

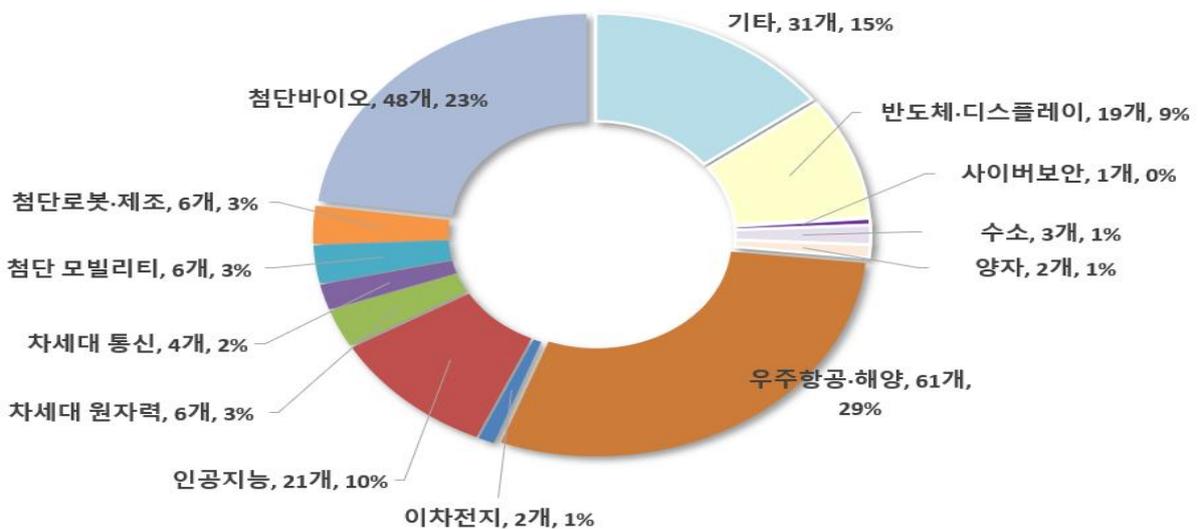
○ : 210

○ 12 가

- (61) > (48) > (21) > (19) > (6) > (6) > (6) > (4) > (3) > (2) > (2) > (1) , (31)

	()	(%)
·	61	29
	48	23
	21	10
·	19	9
	6	3
	6	3
·	6	3
	4	2
	3	1
	2	1
	2	1
	1	0
	31	15
	210	100

12대 국가전략기술별 아이템(210개)



○

- : 61

1		ADR
2		L4
3		
4		(lunar robots)
5		
6		
7		
8		
9		
10		
11		
12		
13		/
14		
15		
16		
17		, ,
18		
19		- AI
20		
21		
22		
23		
24		가
25		AI-
26		eVTOL
27		
28		/
29		
30		
31		
32		500MD
33		WMD
34		
35		/
36		(AAV)
37		, embedding, .
38		(Part 25)
39		
40		

41		
42		
43		
44		
45		
46		
47		
48		
49		- /
50		
51		
52		
53		
54		
55		(In-Space)
56		
57		L4
58		
59		()
60		
61		

- : 48

1		AI-powered DNA-
2		
3		,
4		
5		
6		Biodegradation ON controllable transient biomedical electronics and implantable biodegradable materials including drug delivery systems
7		Microbiome-based personalized medicine
8		
9		()
10		Human Organ Atlas
11		Healthy Aging: Integrative Approaches to Cellular and Systemic Rejuvenation) (Advancing
12		-
13		in-situ
14		
15		AI-powered DNA-

1		가 (VR, AR)
2		Digital Transformation
3		가
4		
5		(Autonomous things)
6		
7		(Industrial AI)
8		AI
9		
10		
11		AI-resilience (Environmental plant as a chip)
12		& Multi-modal Interactive Skill
13		(AI)
14		AI (ALL-IN-ONE) (가)
15		AI
16		
17		AI
18		
19		
20		AI
21		가

1		3
2		
3		2
4		(/)
5		
6		MBC GAA Transistor
7		Negative Cap. Transistor
8		
9	LED	/ LED
10		Si
11		
12		
13		
14		

15		Meta lens ()
16		
17		()
18		()
19		()

— : 6

1		SMR()
2		
3		Small Modular Reactor
4		(ATF, Accident Tolerant Fuel)
5		
6		-

— : 6

1		
2		
3		
4		UAM(Urban Air Mobility)/AAM(Advanced Air Mobility)
5		
6		(UAM)

— . : 6

1		K-defense
2		wiif based location & SLAM
3		
4		
5		(Lunar Lava Tubes)
6		

– : 4

1		indoor localization
2		6G
3		Integrated sensing and communication
4		

– : 2

1		
2		
3		

– : 2

1		
2		

– : 2

1		(SOFC)
2		–

– : 1

1		

– : 31

1		
2		
3		
4		
5		
6		(Machine Learning & Partial Differential Equations)
7		(Combinatorics and Algebraic Geometry)

8		(Probability and Its Applications)
9		
10		,
11		
12		
13		
14		
15		Untact Intervention Model
16		,
17		climate and environment interaction
18		(Interaction between climate and environment)
19		
20		
21		
22		
23		
24		, EBD
25		
26	Iphycology	가가
27		가 -
28		
29		
30		
31		()

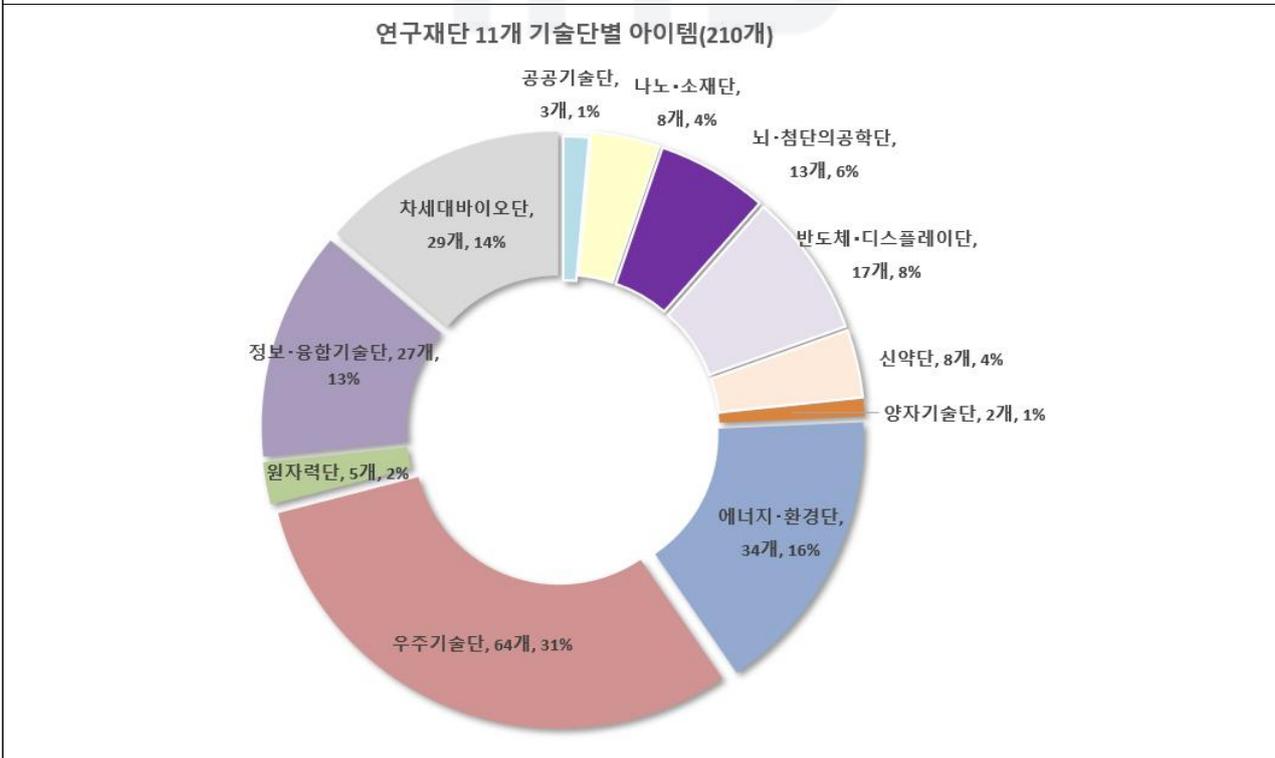
□

○ : 210

○

- (64) > . (34) > (29) > . (27) > . (17) > . (13) > . (8) > (8) > (5) > (3) > (2)

	()	(%)
	64	31
.	34	16
	29	14
.	27	13
.	17	8
.	13	6
.	8	4
	8	4
	5	2
	3	1
	2	1
	210	100



○

-

: 64

1		ADR
2		L4
3		
4		(lunar robots)
5		
6		
7		
8		
9		
10		
11		
12		
13		/
14		
15		
16		
17		
18		
19		(Lunar Lava Tubes)
20		
21		
22		
23		가
24		AI-
25		eVTOL
26		
27		/
28		
29		
30		
31		500MD
32		
33		WMD
34		
35		/
36		(AAV)
37		, embedding, .
38		
39		(Part 25)

40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50	-	/
51		
52		
53		
54		
55		
56		UAM(Urban Air Mobility)/AAM(Advanced Air Mobility)
57		
58		(UAM)
59		(In-Space)
60		
61		L4

- . : 34

1		
2		(SOFC)
3		
4		
5		
6		
7		
8		
9		
10		
11		,
12		climate and environment interaction
13		(Interaction between climate and environment)

14		
15		(AI)
16		
17		
18		
19		
20		
21		(Synthetic Biology)
22		
23		
24		AI
25		
26		
27	Iphycology	가가
28		가 -
29		
30		
31		-
32		
33		
34		()

- : 29

1		
2		
3		,
4		
5		Microbiome-based personalized medicine
6		
7		Human Organ Atlas
8		(Advancing Healthy Aging: Integrative Approaches to Cellular and Systemic Rejuvenation)
9		
10		& Multi-modal Interactive Skill
11	AI	(ALL-IN-ONE) (가)
12		

13		
14		AI
15		Multimodal bio data integration
16		RNA
17		
18		가
19		
20		DNA
21		(red biotechnology)
22		-
23		AI
24		(, Polygenic Risk Score)
25		()
26		
27		
28		(CRISPR-Cas9) 가
29		

- . : 27

1		가 (VR, AR)
2		Digital Transformation
3		indoor localization
4		K-defense
5		wiif based location & SLAM
6		가
7		
8		
9		(Autonomous things)
10		
11		(Industrial AI)
12		(Machine Learning & Partial Differential Equations)
13		(Combinatorics and Algebraic Geometry)
14		(Probability and Its Applications)
15		AI-resilience (Environmental plant as a chip)
16		-
17		Untact Intervention Model
18		
19		

20		- AI
21		가
22		
23		
24		6G
25		Integrated sensing and communication
26		
27		

- . : 17

1		3
2		
3		2
4		
5		MBC GAA Transistor
6		Negative Cap. Transistor
7		
8	LED	/ LED
9		Si
10		
11		
12		
13		
14		Meta lens ()
15		()
16		()
17		()

- . : 13

1		
2		
3		
4		
5		AI
6		
7		
8		
9		DNA

10		
11		
12		, 3D
13		

— . : 8

1		AI-powered DNA-
2		
3		(/)
4		-
5		AI-powered DNA-
6		DNA
7		DNA
8		DNA -

— : 8

1		Biodegradation ON controllable transient biomedical electronics and implantable biodegradable materials including drug delivery systems
2		()
3		in-situ
4		
5		mRNA /
6		
7		(white biotechnology)
8		가

— : 5

1		SMR()
2		
3		Small Modular Reactor
4		(ATF, Accident Tolerant Fuel)
5		

— : 3

1		,
2		
3		, EBD

— : 2

1		
2		



4

1

□

○

○

⑤ , ⑥

① , ② , ③ , ④ ,

○

(.) , (.)
, () , () , ()

가 Woriking Group
Manager



. Project

□

○

714
'23 12 '24 2 ①
() , ② 3
, ③

○

66 64 (97%)가
() (,
, , ,)

○

가

*

*ACS(American Chemical Society), GRC(Gordon Research Conference), IEEE(Institute of Electrical and Electronics Engineers), MRS(Materials Research Society), SPIE(The international society for optics and photonics)

○

(210) (107 , 51%),
(69 , 33%), (29 , 14%), (5 , 2%)

○

12 가 (210) · (61 , 29%),
(48 , 23%), (21 , 10%), · (19 ,
9%), (6 , 3%), (6 , 3%) , ·
(6 , 3%), (4 , 2%), (3 , 1%), (2 , 1%),
(2 , 1%), (1 , 1%) ,
(31 , 15%)

○

(210) (64 , 31%) ,
· (34 , 16%), (29 , 14%), ·
(27 , 13%), · (17 , 8%), · (13 ,
6%), · (8 , 4%), (8 , 4%), (5 , 2%) ,
(3 , 1%) , (2 , 1%)

2

□

R&D

○

66 (9.24%)

Pool

714

○

Pool

가

* 210

3

가 77

31.64%

○

12 가

가
가

61%

□

-

○

1

가

○

-

가

□

가

가

3

□

○ 가

()

○

가

iris