

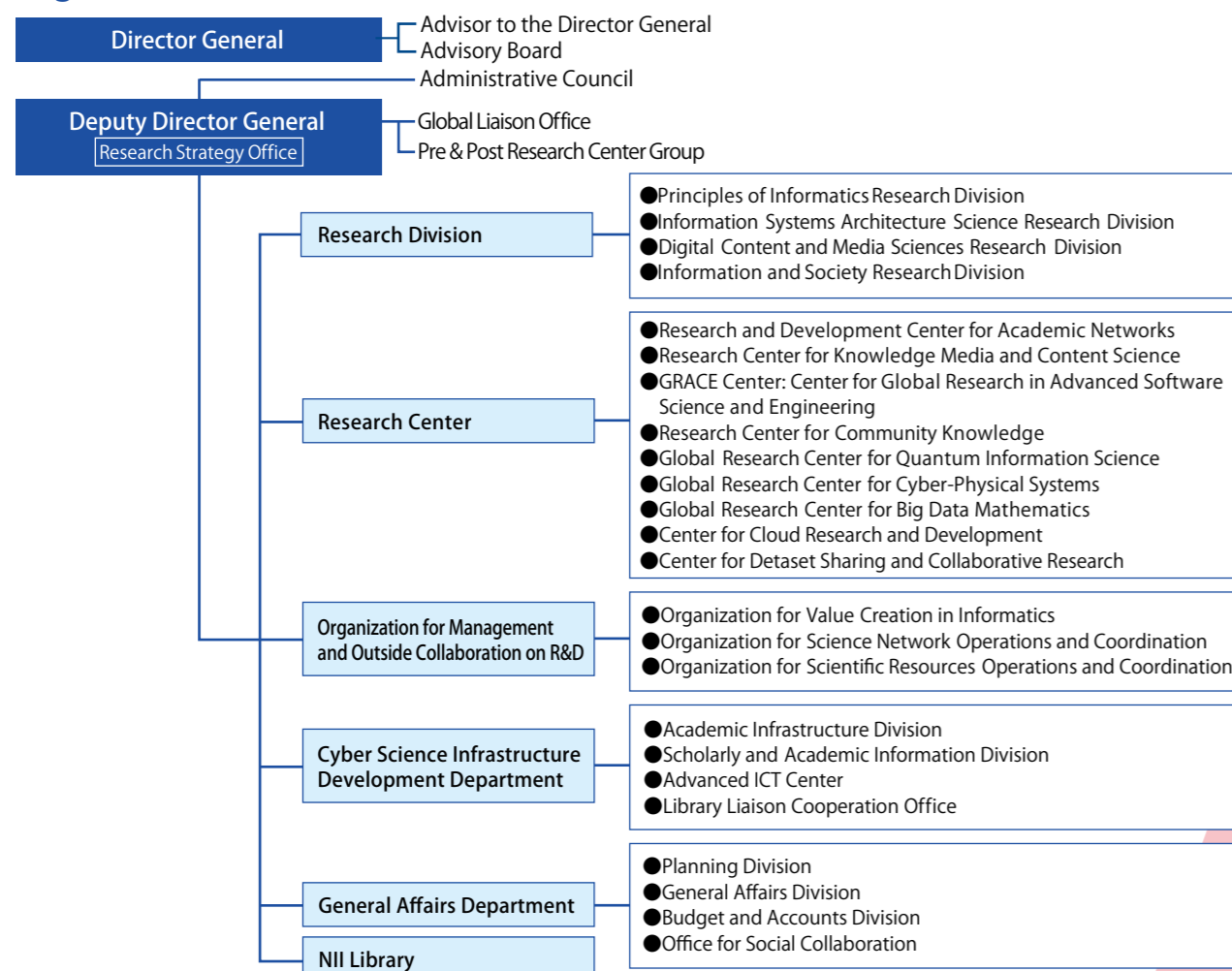
## International Activities

The National Institute of Informatics (NII) actively makes International Exchange Agreements (MOU, memorandum of understanding) with overseas universities and research institutions. Among institutions that have concluded MOUs, NII also holds exchange activities such as international joint research projects and interactions between researchers and students. To ensure the effectiveness of these research exchanges, NII has established systems such as the "MOU Grant" and "NII International Internship Program", and promotes research exchanges with overseas universities and other institutions in a wide range of research fields. NII promotes research exchanges through coordination and cooperation, in particular, through the NII Shonan Meeting in the Asian region, and European-based research institutes such as the Japanese-French Laboratory for Informatics (JFLI), and the German Academic Exchange Service (DAAD) program.

## Graduate Education

NII joined the Graduate University for Advanced Studies and established the Department of Informatics to provide graduate education (5-year and 3-year Ph.D. programs). The department covers six research areas: Foundations of Informatics, Information Infrastructure Science, Software Science, Multimedia Information Science, Intelligent Systems Science, and Information Environment Science. NII also accepts excellent students from overseas, as we give a large number of lectures in English. In addition, NII cooperates to provide graduate education for students pursuing Master's or Ph.D. degrees at universities in Japan and abroad.

## Organization



## NII National Institute of Informatics

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■ NII Video Channel  
See movies of NII lectures and symposia on NII Video Channel  
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■ NII Today  
Offers an easy-to-understand guide on the details of NII's advanced research.  
<http://www.nii.ac.jp/en/about/publications/today/>

# NII National Institute of Informatics

# 2015

## Weaving Information into Knowledge

As Japan's only general academic research institution seeking to create future value in the new discipline of informatics, National Institute of Informatics (NII) seeks to advance integrated research and development activities in information-related fields, including networking, software, and content. These activities range from theoretical and methodological work through applications. As an inter-university research institute, NII promotes the creation of a state-of-the-art academic-information infrastructure (the Cyber Science Infrastructure, or CSI) that is essential to research and education within the broader academic community, with a focus on partnerships and other joint efforts with universities and research institutions throughout Japan, as well as industries.



[ Research ]  
Seeking to establish a new academic discipline through the promotion and systemization of a wide range of informatics research ranging from natural science to human and social sciences, NII aims to create future value through new theories, methodologies, and application deployment, thereby contributing to the development of informatics.



[ Partnerships between industry, academic and government sectors ]  
NII encourages close partnerships between universities, public research institutions and private institutions to conduct project-based joint studies, as well as human resource development and to promote the utilization of its research results in society.



[ Interdisciplinary information processing ]  
To further the development of new domains through synergistic efforts between cross-functional interdisciplinary research and diverse academic disciplines, NII undertakes cross-functional transdisciplinary integration research at the Transdisciplinary Research Integration Center of the Research Organization of Information and Systems.



[ International exchange ]  
NII strives to further the international contribution of informatics through the active promotion of international exchanges between researchers and students and an approach focused on the formation of an informatics research center through international collaboration, in addition to publishing its research results internationally.



[ Social contribution ]  
NII seeks to achieve harmony between society, culture, and social systems in addition to creating platforms and portals that make effective use of content to disseminate and enliven social and public activities in the field of academic, cultural, education, publishing, environmental, regional, and NPO activities.

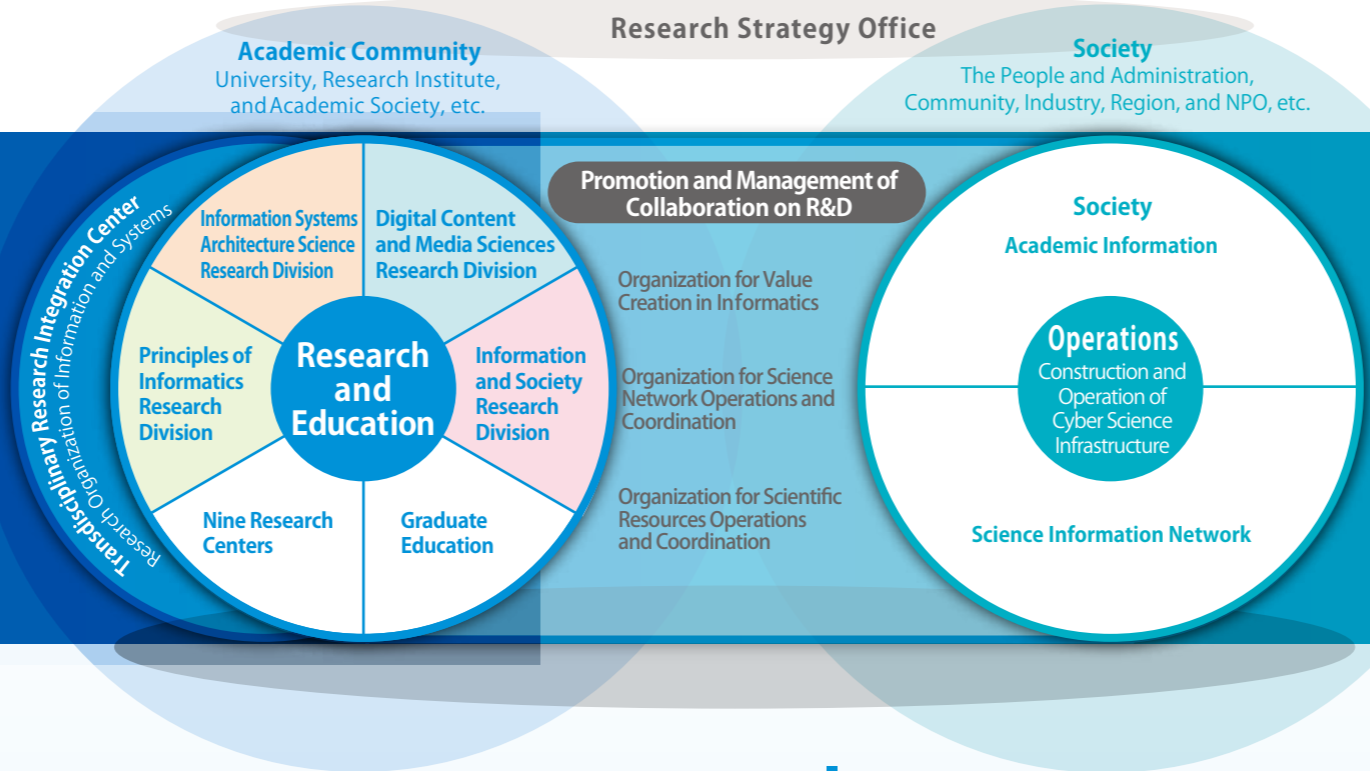


[ Graduate education and human resource development ]  
In the Ph.D. program for informatics in the School of Multidisciplinary Sciences at the Graduate University for Advanced Studies, NII aims to nurture world-class researchers in the field of informatics. We seek also to establish a base for the development of engineers with the skills to link industry with academia as we develop professionals with high-level skills.

# Future Value Creation through Informatics by Advancing Research and Operations in Tandem

## Advancing integrated research and education in the field of informatics

Informatics is a new academic discipline based not just only on computer science and information technology, but on the human, social, and life sciences. NII advances informatics research with the goals of creating future value; furthering social and public contributions; promoting interdisciplinary approaches to information processing; forming partnerships among industry, government, and academic organizations; and pursuing international research activities and operations. NII has established four research divisions, nine research centers, the Organization for Management and Outside Collaboration on R&D.



## Promoting the Cyber Science Infrastructure (CSI)

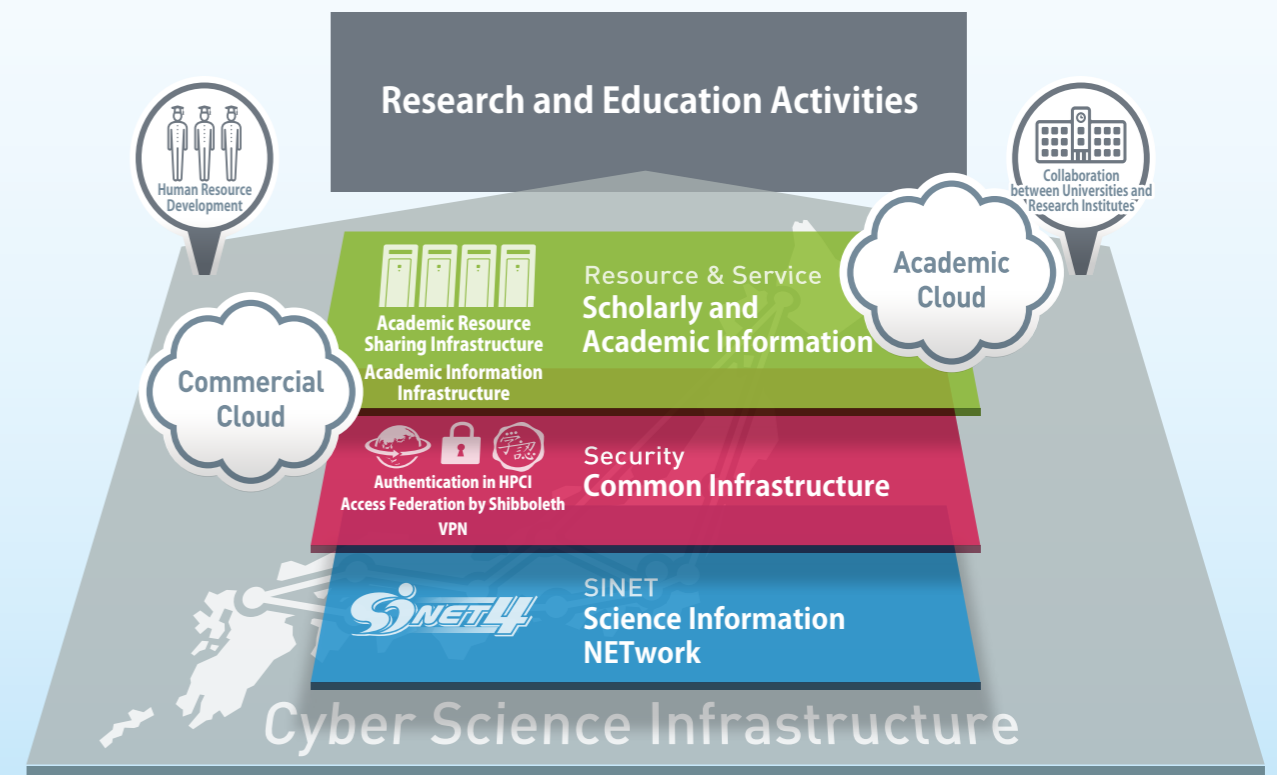
NII advances the formation and operation of the CSI, a state-of-the-art academic information infrastructure. Through these efforts, the entire research organization comprising the Organization for Scientific Network Operations and Coordination and the Organization for Scientific Resources Operations and Coordination, that which plan and manage partnerships and cooperation with universities and other institutions throughout Japan; the Cyber Science Infrastructure development Department, that which handles development and operation of information systems; and the research centers that promote researcher participation and incorporation of the results of research contributes to the academic community and the society.

<p><b>Principles of Informatics Research Division</b></p> <p>Seek to discover new principles and theories in informatics, as well as the development of technology and new domains that will support the future society.</p>	<p><b>Information Systems Architecture Science Research Division</b></p> <p>Conduct research in to the architecture and systemization of software and hard ware for computers and networks.</p>	<p><b>Digital Content and Media Sciences Research Division</b></p> <p>Conduct research spanning theories on the analysis, generation, accumulation, use and processing methods regarding diverse content and media, such as texts and video images , to their systemization.</p>	<p><b>Information and Society Research Division</b></p> <p>Conduct interdisciplinary research on information and system technology and issues in the human and social sciences in a society in which the information society and the real world are integrated.</p>
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## Nine Research Centers

<p><b>Research and Development Center for Academic Networks</b></p> <p>Develops and offers new services and functions for increasing the operational efficiency of the Science Information NETWORK 4 (SINET4), which constitutes part of the Cyber Science Infrastructure (CSI).</p>	<p><b>Research Center for Knowledge Media and Content Science</b></p> <p>Promote cutting-edge research on the analysis and use of knowledge content in academic fields.</p>	<p><b>GRACE Center: Center for Global Research in Advanced Software Science and Engineering</b></p> <p>Develop top software engineers and top researchers by integrating research, practical application, and education in advanced software engineering.</p>
<p><b>Research Center for Community Knowledge</b></p> <p>Develop next-generation information and communications technology and information sharing platform system by creating "Net Commons" and "ReaD&amp;Researchmap".</p>	<p><b>Global Research Center for Quantum Information Science</b></p> <p>Promote activities such as cutting-edge research and personnel development to establish NII as a world-class international hub for quantum information.</p>	<p><b>Global Research Center for Cyber-Physical Systems</b></p> <p>Promote researches on cyber and physical(real) world collaboration aiming at solving social issues and creating new values through the research.</p>
<p><b>Global Research Center for Big Data Mathematics</b></p> <p>Engaged in cutting-edge research and human capital development to establish NII as a world-class hub for Big Data Mathematics with a central focus on developing high-speed algorithms.</p>	<p><b>Center for Cloud Research and Development</b></p> <p>Upon the updating of the Science Information NETWORK (SINET), we established a cloud-based cutting-edge science information platform to promote research and education, and support university reform.</p>	<p><b>Center for Dataset Sharing and Collaborative Research</b></p> <p>Establish and provide datasets useful for informatics research, research and develop platforms for using datasets, and conduct research on joint use in informatics.</p>

## Cyber Science Infrastructure



<p><b>Creation of future value through informatics</b> — Opening up new frontiers</p> <p>Kawarabayashi Large Graph Project</p> <p>Artificial Intelligence project</p>	<p><b>Social contribution</b> — Adding new colors to society through the wisdom of informatics</p> <p>NetCommons, an information sharing infrastructure system that can be used by everyone</p> <p>"So (thought) – IMAGINE," An associative search that reels cultural memories from diverse sources of information</p>	<p><b>A place to connect the theories of the university with the actions of the industry</b></p> <p>サイエンスによる 知的ものづくり教育プログラム <b>トップエスイー</b> EDUCATION PROGRAM FOR TOP SOFTWARE ENGINEERS</p> <p>An intellectual monozukuri (manufacturing) education program based on science Nurturing outstanding software engineers by the TOPSE Project</p>	<p><b>Supporting academic research and educational activities</b> — Promotion of the Cyber Science Infrastructure (CSI)</p> <p>SINET4 Science Information NETWORK</p> <p>JAIR Cloud, a SaaS type IR cloud service</p> <p>The Academic Access Management Federation in Japan</p> <p>Indispensable Tool for Researchers and Students</p>
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