



KANSAI SCIENCE CITY

KEIHANNA SCIENCE CITY

2020

KYOTO

OSAKA

NARA

Comprehensive Brochure

A Wisdom-Creating City That Pioneers the Future

Outline of the City

The Keihanna Science City (officially known as the Kansai Science City) is nestled in the green Keihanna hills stretching over Kyoto, Osaka, and Nara prefectures in western Japan. The city, which has been constructed and maintained under the Kansai Science City Construction Act, is one of Japan's national projects – much like the Tsukuba Science City in the east of Japan. Twelve cultural and scientific research districts (about 3,600 ha) scatter the 15,000 ha of land that makes up the Keihanna Science City. The city is about 30 km from the center of both Kyoto and Osaka cities, and about 10 km from the center of Nara City. More than 150 research facilities, including universities and cultural facilities with a total workforce (researchers and other staff) close to 10,000 has accomplished remarkable successes in the fields of cultural and scientific research.

Significance and Philosophy of the City's Construction

1. Creating a base for new developments in culture, science and research
2. Contributing to the development of culture, science and research in Japan and across the world, as well as to the development of the national economy
3. Foundation of a wisdom-creating city that pioneers the future

As various issues surrounding global human survival begin to arise in this present day in age, we need to pursue even further cultural and scientific studies concentrating on how to make sustainable societies a reality. The Keihanna Science City was constructed as a research space that focuses on subjects such as global environmental studies; cultural and scientific studies by combining the natural, cultural and social sciences; and various other studies that always keep ahead of the times.

Features of City Construction

The Active Involvement of the Private Sector /

To undergo the development of the Keihanna Science City successfully, the effective collaboration between the citizens and private sectors in the academic, industrial, and administrative fields is essential. This project uses "private sector vitality" as much as possible by assigning each sector roles and functions that make the best use of their strengths.

The Cluster-type Development /

In order to promote the balance of environmentally friendly development among the existing cities and towns, as well as the forestry, agricultural fields, and the natural environment, the Keihanna Science City employed a cluster-type development plan in which 12 cultural and scientific research districts are scattered – much like a cluster of grapes. The city also attempts to unify the entire city by assigning each district urban functions that take advantage of their strengths.

To prevent wasteful investments and unexpected major changes in development plans, we begin working on each district only when they fulfill all necessary conditions for development. This enables us to carry out the development in phases exactly as planned.

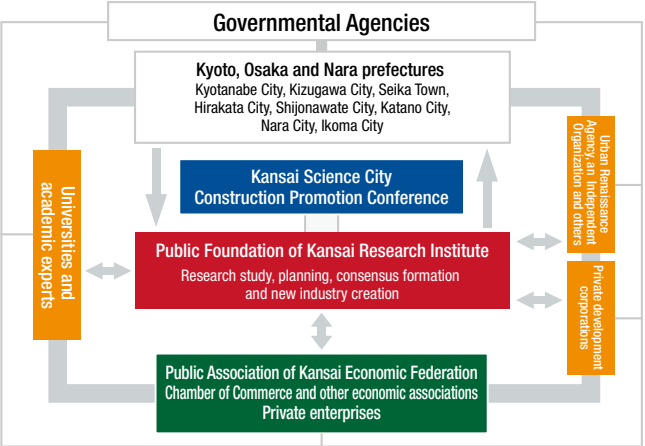
Development with a Fusion between Housing and the Cultural and Scientific Facilities /

The Keihanna Science City construction involves the development of the cultural and scientific facilities along with the residential areas. We aim to construct a fascinating city with a remarkable fusion of academic space and living environment by taking advantage of the convenience of a large city with many residents. In such a city, the collaborative research between institutions and citizens are made possible by asking citizens to participate in scientific studies and demonstrations.

History of City Construction

The construction of the Keihanna Science City was proposed by the "Kansai Science City Surveillance Conversation" (Chairman: Azuma Okuda, former Head of Kyoto University) in 1978. The idea was finalized when the "Kansai Science City Construction Promotion Conference" was established in 1983, by Kyoto, Osaka, and Nara prefectures and economic organizations in the Kansai region. Following the enactment of the Kansai Science City Construction Act in 1987, full-scale construction began as a national project for Japan. More than 30 years have passed since the law came into effect, and about 60 percent of the cultural and scientific research districts are now ready for use. We are currently in the process of moving onto the next step of construction to create a research city with top-level management systems – applying the knowledge and experience we have gathered over the course of our accomplishments with this project.

Organizational Structure for Promoting Urban Development



Kansai Science City Construction Promotion Conference

Established: March 15, 1983
Main Business: (1) Demand activities and public relations activities
(2) Attraction of cultural and scientific research facilities, etc.
Chairman: Masayoshi Matsumoto (Chairman of Kansai Economic Federation)
Representatives: 9 members (The chairman of the Kansai Economic Federation, governors of 3 prefectures, presidents of 3 chambers of commerce, president of the Kansai Research Institute and an academic expert)

Public Foundation of Kansai Research Institute

Public corporation established for the purpose of promoting construction of the science city
Established: June 19, 1986
President: Yasuo Kashiwara (Vice-Chairman of Kansai Economic Federation)
Executive Managing Director: Masanori Nakagawa
Directors: 15 board members appointed from 3 prefectures, related economic organizations, enterprises stakeholders, etc.



Structure and Scale of Keihanna Science City (As of April 1, 2019)

Status of Constitutive Autonomous Body (Population includes the number of registered foreigners.)

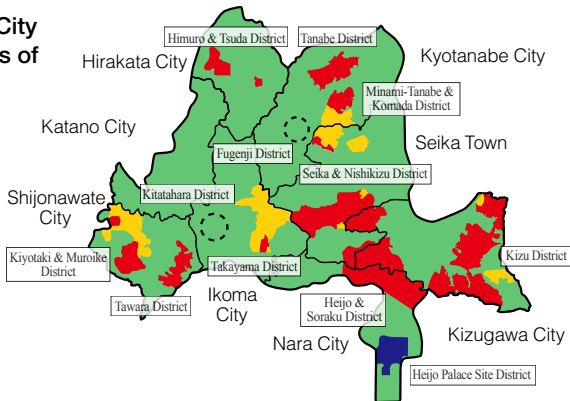
Pref.	Whole Governorate		Of which, Science City Area	
	Municipality Name	Population (persons)	Land Area (ha)	Population (persons)
Kyoto	Kyotanabe City	69,723	2,442	21,147
	Kizugawa City	77,532	2,362	55,827
	Seika Town	37,427	2,566	37,427
	Sub total	184,682	7,370	114,391
Osaka	Hirakata City	401,397	1,510	33,380
	Shijonawate City	55,705	1,470	11,178
	Katano City	77,834	1,550	14,495
	Sub total	534,936	4,530	59,053
Nara	Nara City	356,352	1,460	52,948
	Ikoma City	119,795	2,050	25,465
	Sub total	476,147	3,510	78,413
Total		1,195,765	15,410	251,857

Status of Each Cluster

Pref.	Name of Science District (Cluster)	Municipality to which belongs	Land Area (ha)	Planned Population (persons)	Current Population (persons)
Kyoto	Tanabe District	Kyotanabe City	100	0	55
	Minami-Tanabe & Komada District	Kyotanabe City, Seika Town	344	19,000	3,569
	Kizu District	Kizugawa City	737	32,000	20,673
	Seika & Nishikizu District	Kizugawa City, Seika Town	506	25,000	21,328
	Heijo & Soraku District <Kyoto Area>	Kizugawa City, Seika Town	264	30,000	17,504
	Fugenji District	Kyotanabe City	Undefined	—	—
Kyoto Area Total			1,951	106,000	63,129
Osaka	Himuro & Tsuda District	Hirakata City	74	3,000	3,129
	Kiyotaki & Muroike District	Shijonawate City	340	3,000	133
	Tawara District	Shijonawate City	127	10,000	6,793
	Osaka Area Total		541	16,000	10,055
Nara	Heijo Palace Site District	Nara City	142	1,000	513
	Heijo & Soraku District <Nara Area>	Nara City	362	38,000	23,711
	Takayama District	Ikoma City	333	24,000	487
	Kitatahara District	Ikoma City	Undefined	—	—
	Nara Area Total		837	63,000	24,711
Total			3,329	185,000	97,895

Keihanna Science City Development status of each cluster (As of April 2019)

- In service
- Under construction
- Planned
- Science district in land use adjustment



Keihanna Science City's Logo

"Keihanna" refers to the Kansai Science City. The logo of the city depicts a flying angel known as "Hiten," who scatters flower petals, plays music and burns sweet incense while flying in the sky. The gentle curves in the logo represent the slopes of the Keihanna hills, and the three patterns symbolize "time" accumulated throughout the past, present, and future. The three patterns also represent the cooperation between Kyoto, Osaka, and Nara, or the collaboration between industry, academia, and government.

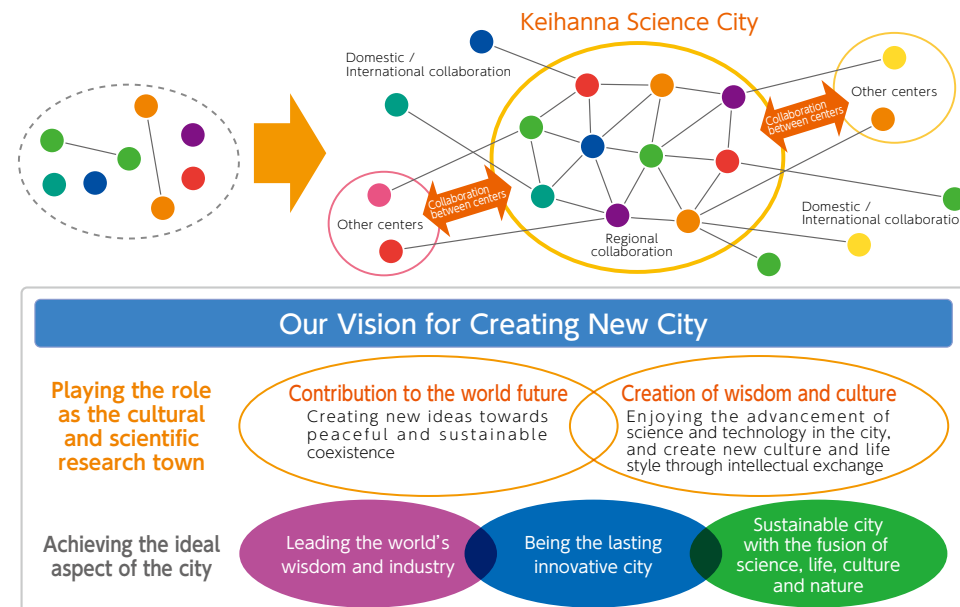
THE OUTLINE OF “THE PLAN FOR CREATING NEW CITY”

The Plan For Creating New City ~ The aspect Keihanna Science City aims ~

Keihanna Science City lying across 3 prefectures is about going up to the next stage enhancing city's presence in the world on featuring the powerful characteristic with lots of integrated parties and their diversity, proceeding construction of new facilities and city development, deepening networks with the relevant districts and parties, and playing the role as the cultural and scientific research town.

Based on this recognition and the purpose creating new city, this plan shows basic ideas about our vision for creating new city.

- ① Creating city under sustainable high-leveled urban management to activate and to interact our characteristics with various clusters
- ② Realizing an unexperienced new urban plan

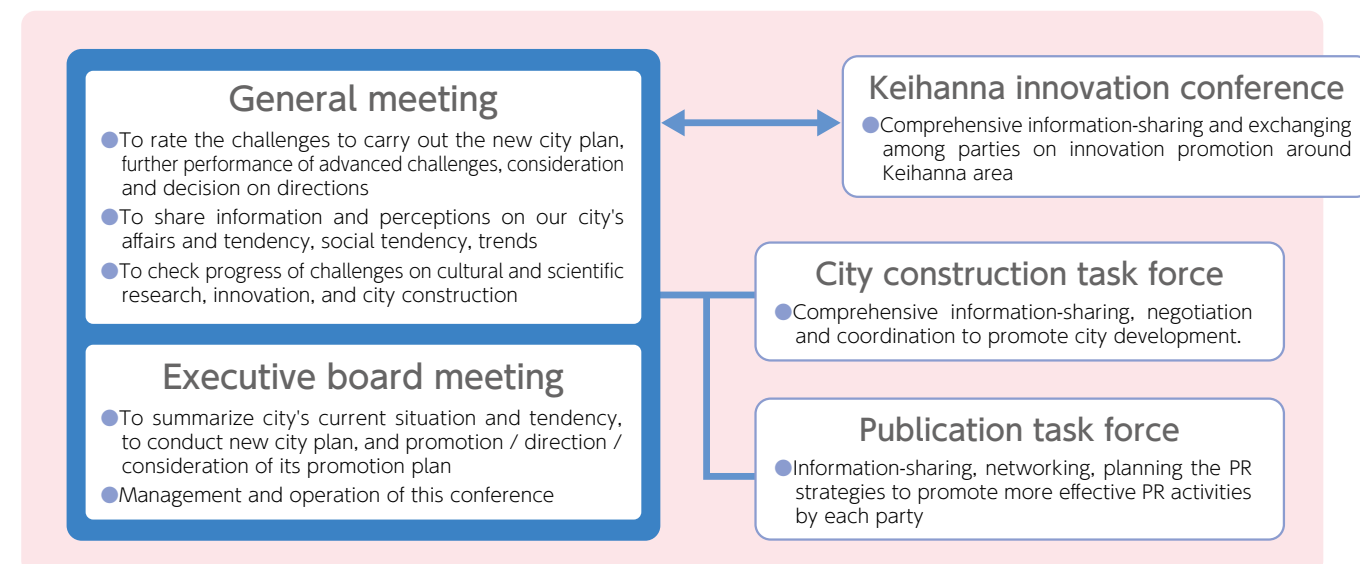


Keihanna Science City's Conference for creating new city

(Established on April 1st, 2016)

In order to create a synergistic network type of management system in accordance with the plan for creating a new city, we established the “Keihanna Science City Conference for creating a new city”. The president of the Public Foundation of the Kansai Research Institute was selected as chairman, and the Institute has over 70 members including advisors, committee members (academics and members from national and local government entities, universities, economic organizations, public utilities, support organizations, exchange organizations, and other institutions).

The concrete approaches the conference has taken to share the achievements of a wide variety of stakeholders include the Keihanna Indicator Map, which assesses the city in its entirety from a higher, comprehensive perspective.



4 Challenges to realize our Future Vision

1 Cultivating the intellectual frontier with fusion of science technology and culture Promotion of cultural and scientific research

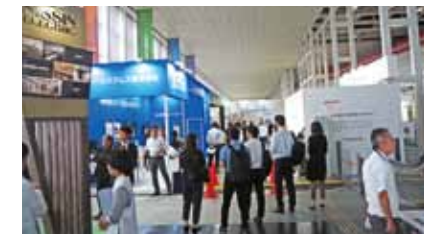
- To intensify the role of our city pioneering intellectual frontier, through interactive cooperation between universities and research institutes
- To promote pleiotropic research on “world future” with cross-cutting cooperation among natural science, humanities and social science
- To enhance the frontier research on eco / energy, population / food / water problems, medical care / brain science for the academic research of sustainable society
- To enrich human resource within coordination among universities, research institutes and companies
- To flourish original Keihanna culture, we cherish to blend culture / academic research / science into the daily life, and to bloom education / study program enjoying intellectual learning



The 3rd Tokyo Forum held by International Institute for Advanced Studies. On the theme “Constructing sustainable society and science” (February 2015)

2 Motorizing open-innovation to the world Promotion of innovation

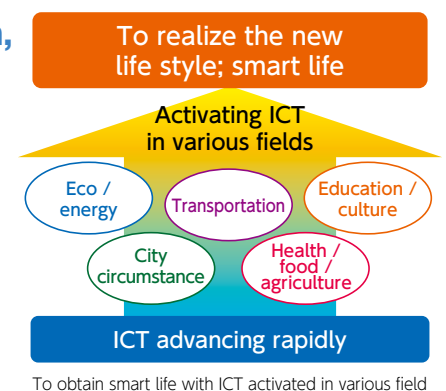
- Based on the open-innovation hub, we newly build up the integrated support system to produce and to direct projects for setting up academic research and innovation strategy, intellectual property, harmonizing the interests among stakeholders, and supporting field demonstrations for the industrialization activating scientific technology
- To tighten cooperation among Keihanna Open Innovation Center @ Kyoto (KICK) and incubation facilities, universities, and research institutes
- To strengthen the relations with local industries, we generate the network among local associations supporting innovative projects in Kansai for motorizing Kansai
- To enhance the international networking, we diligently invite proper international conferences and seminars interchanging and networking with foreign science parks
- To set up the circumstance accepting residences, education, job opportunity, employment on promotion inviting foreign schools, research institutes, and companies



Kyoto Smart-City Expo 2019 at the Keihanna open-innovation center @ Kyoto

3 Promoting the infrastructure for the future generation, producing smart life being ahead of the world City development

- To nurture new lifestyles (meta-comfortable lifestyles); smart life motorizing eco-system, energy, transportation and innovation with ICT advancing rapidly
- To raise our city's charm by utilizing historical cultural heritages and natural resources.
- To enhance our city's diversity, furthermore, we enforce to invite research institute leading the frontier business / academic field, and manufacturers playing the role to work research institute, and to enrich the function of the conventions supporting interchanging and networking.
- To enforce the extension of the major routes such as Route163, Route Yamate and Central-Yamato-Route, to improve access and network to the nation-wide infrastructure such as Shinkansen lines and major highways, Kansai International Airport(KIX), Kyoto, Osaka and Nara.
- To promote the Double Track Project of JR Katamachi line; Science City line and Nara line and to discuss about extending Kintetsu Keihanna line
- To develop the new transportation system improving mobility such as the ICT future system of the chain bus and car-sharing



4 Constructing networking management system generating the synergetic effect City management

- We produce the new cooperation with every facility joining equally, and with building up networking management system generating multiplier effect,
 - ① Conference for creating new city playing the role of network hub in our city
 - ② New cooperating system among the above three fields, promoting culture and science, city development and promoting innovation
 - ③ Establishing the system consolidating and transmitting information as the city management center



Creation of New Industries from Keihanna Science City

Enterprises in various fields, many kinds of universities and various research institutes are integrated in Keihanna Science City. The objectives of the city are "to lead the knowledge and industries in the world" and "to create innovation sustainably". For the above objectives, we promote creations of new business and industries utilizing cutting edge science and technologies in the city in cooperation with industries, government, universities and the other science cities. The city also has a wider range of research and industrial areas.

The city has strong international network among companies, research institutes and universities in the world and strong global communication channels.

International interactions among researchers are also very active.

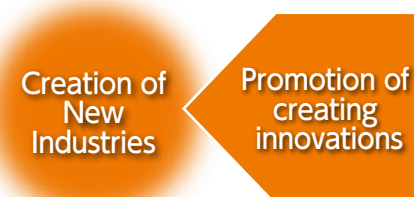
We will aim for the creation of new industries from Keihanna in the areas of information and communication, environment and energy, medical and biotechnology utilizing integration of knowledges and the potential of the city for exiting innovation.

Creation of innovations and industrial development

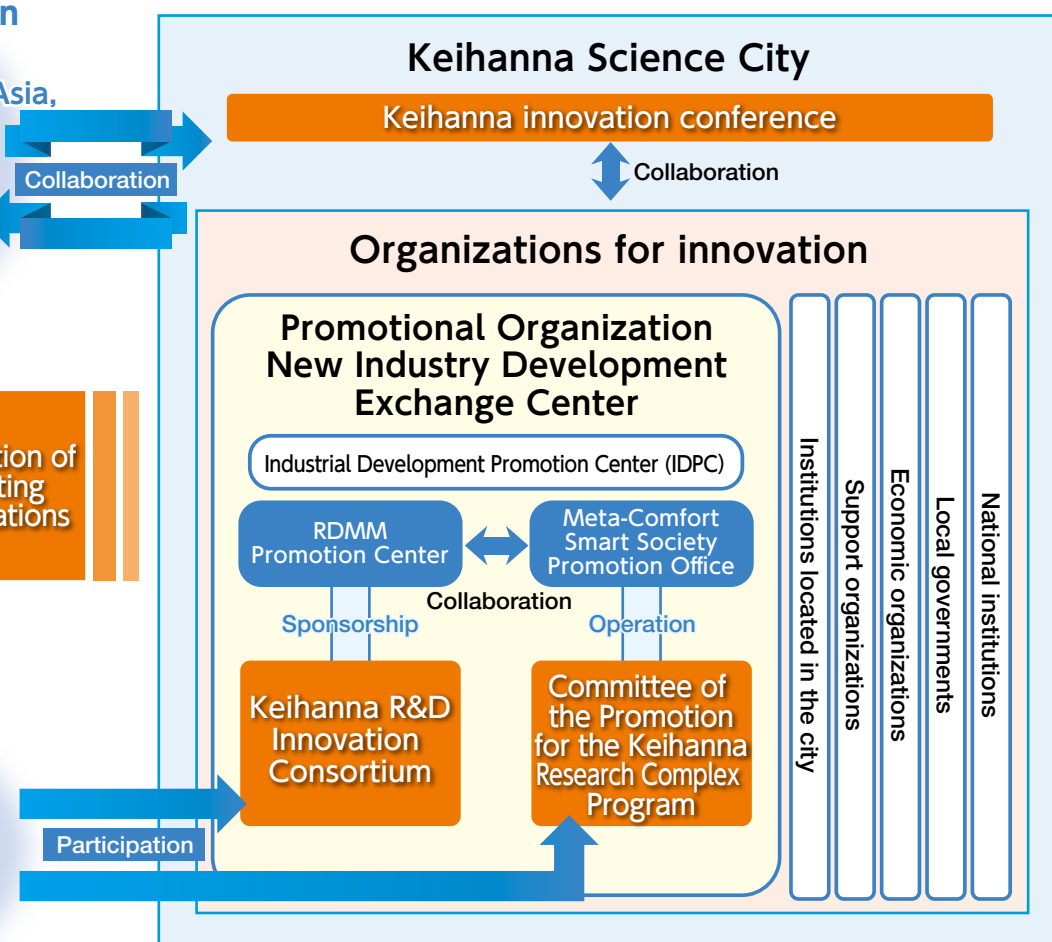
In Keihanna Science City, various institutions and organizations are providing detailed hands-on supports to small and medium sized enterprises and venture companies. They are also promoting industrial development based on the innovative research and development. We are working on the establishment of sustainable innovation schemes based on open innovation such as "RDMM promotion center" (details are described in P06) and the "Keihanna Research Complex" (details are described in P07).

R&D centers in Japan and overseas

- Research centers in Asia, North America, Europe, etc.
- Tsukuba Science City
- Umekita
- Kobe Biomedical Innovation Cluster



Companies, research institutions, local governments, financial institutions, residents etc.

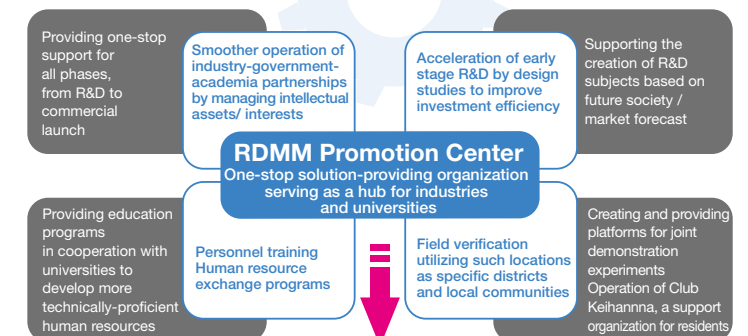


Activity for Sustainable Innovation Part 1 in Keihanna Science City

Foster a future city together with the residents - New Industry and Business from the region of Keihanna

Keihanna R&D Innovation Consortium RDMM Promotion Center

The RDMM (Research & Development for Monozukuri through Marketing) Support Center serves as a hub of the network for the creation of a steady stream of innovations. It supports R&D for the manufacturing and service industries while keeping an eye on market trends. Its aim is to create new industries and businesses which fully utilize their strengths.



Expediting innovation by responding to business needs

Keihanna R&D Innovation Consortium

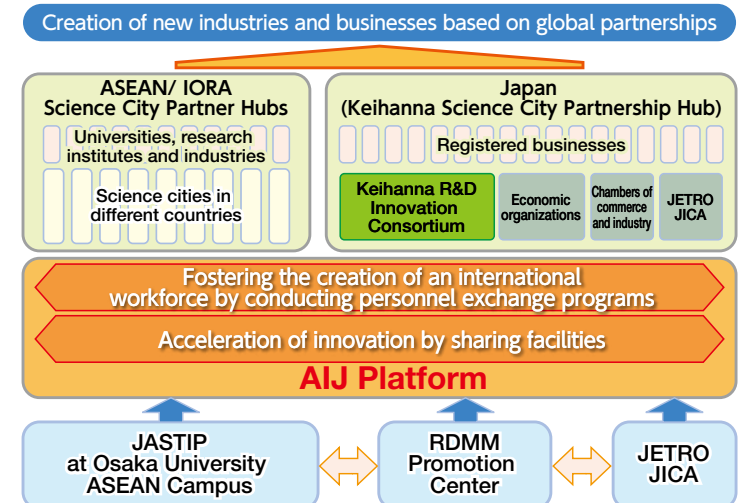
The aim of the Keihanna R&D Innovation Consortium is the creation of new concepts for business and products through working group (WG) activities in the fields of future marketing and design studies. It provides real options for earlier evaluation of a project, facilitating a newly created concept and platforms for demonstration experiments, taking advantage of its location in Keihanna. With these measures, it promotes industry-academia-government partnerships, cross-industrial cooperation, and utilization of R&D achievements, putting new industries and businesses on the fast track to launching.

New business creation and innovation partnerships with ASEAN and IORA nations

Construction and Utilization of the AIJ Platform

The AIJ* Platform provides specific plans and projects for innovative partnerships between research institutes, universities and businesses, with the aim of facilitating the creation of new industries and businesses. The platform is supported by Keihanna Science City/Japan and other Science Cities in ASEAN and IORA nations, which serve as hubs. Utilizing the AIJ Platform, a joint project between the Northern Science Park (NSP) in Thailand and a Kansai company has already started and is preparing for collaboration in the biomedical and food industries.

*AIJ: ASEAN, IORA (Indian Ocean Rim Association) and Japan



Utilization of Residents' Creativity

Club Keihanna

Residents have formed this organization as a way to have their opinions reflected in the creation of future industries and new products as well as in the development of their town.

Members* can express their own opinions about future products and services and participate in discussions.

* About 2,600 members are registered as of March 2020.



Utilization of specific district status

Keihanna Public Road Experimental Platform (K-PEP)

K-PEP (Keihanna Public Road Experimental Platform) is the first mutually usable public road experimental platform in Japan with participants of Keihanna residents.

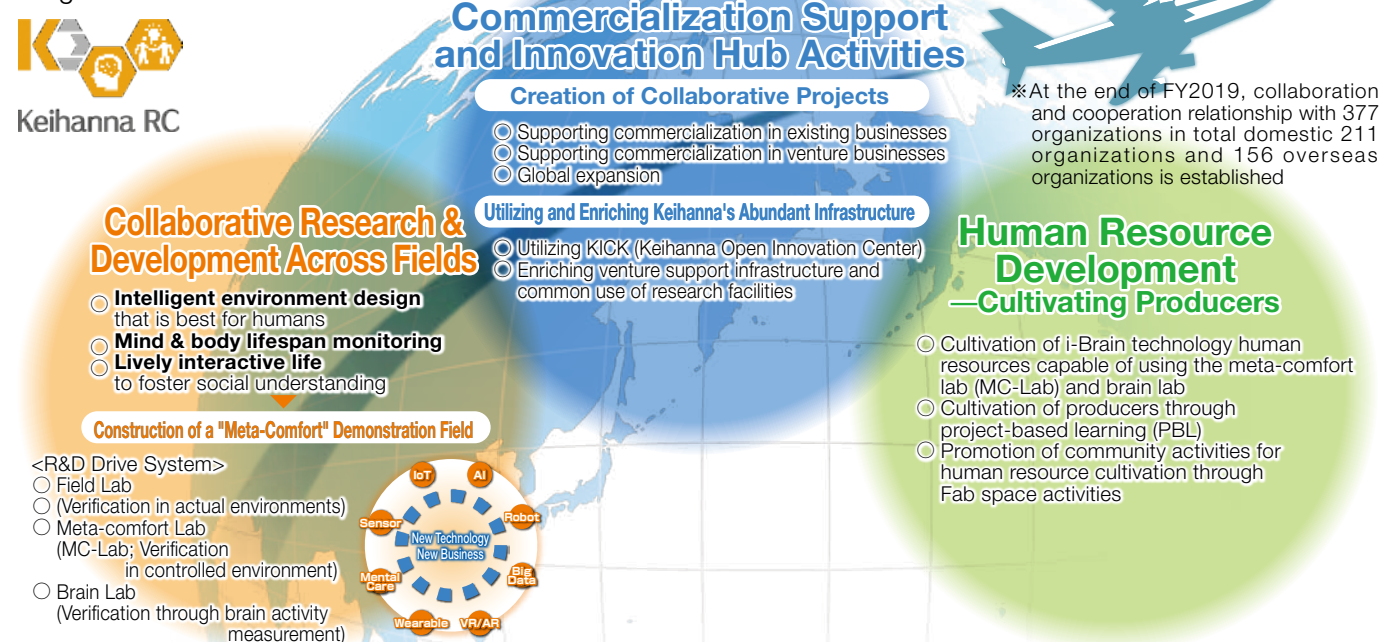
RDMM Promotion Center provides one-stop support for demonstration experiments, including the coordination with local residents and administrative agencies such as the police department and local government.

Activity for Sustainable Innovation Part 2 in Keihanna Science City

Global Research Complex project for creation of 'Meta-Comfort' smart society via *i-Brain*×*ICT* Currently people prefer spiritual richness to having lots of things

At the Keihanna Research Complex we have taken our abundance of i-Brain (brain and human science technologies) research results and advanced ICT (Information Communications Technologies) to promote progress in tackling areas in brain science in which AI is not yet fully understood or utilized. Simultaneously, we focus on social affluence, which grows through peace, vitality, and sympathy, and enact new "meta-comfort" technologies and services, and create the next generation smart city under certain social systems where such innovations are promoted in sustainable manners (calling it as "innovation eco-system").

This program has been adopted as one of the nationwide programs in three regions in Japan, "The World-class R&D and Verification Experiments (Research Complex) Promotion Program implemented by the Japan Science and Technology Agency (JST). With its vision to realize the concept of an ideal community and social values in 5 and 10 years shared by the members of industry, academia, government, and financial institutions, this program was developed to grow and extend the research complex as the foundation for the promotion of innovation to deploy cutting-edge research and development, commercialization of achievements, and human resource development in an integrated and unified manner.



(Laboratory for quantitatively and objectively measuring the movement of heart and mind of people as "meta-comfort" by combining five sensory elements such as air conditioning / lighting / video / sound / aroma and leading it to commercialization.)

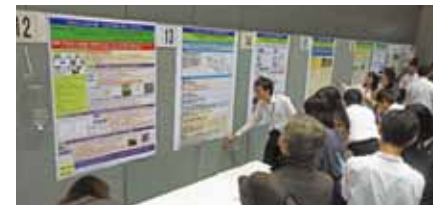
Various Events in Keihanna Science City

In Keihanna Science City, active exchanges between citizens and researchers, among researchers, etc. are held through various events.

Citizen-Researcher Interaction

○Lectures open to the public in cooperation with universities

Collaborating with universities in this city, we hold lectures open to the public under the keyword of "knowledge transmission from Keihanna". Specialized lecturers in these universities explain state-of-the-art research cases in an easy-to-understand way about the areas of citizen's high interest.



○Mahoroba · Keihanna SSH (Super Science High School) Science Festival

We hold the festival for junior high school students and high school students in and around the city. It consists of lectures and poster sessions, and at poster sessions, free opinion exchange and discussion with researchers and engineers are held, which creates a precious place for education.

○Keihanna Science Cafe

We invite experts who are active in various fields as guest speakers, deepening mutual exchanges among lecturers and other participants about topics of cutting-edge science and technology, and aim to create new business by interchange of different industries.



○Innovation Mixer in Keihanna

We hold opportunities for exchange of information in a wide range of themes across various industries among employees and researchers of various location facilities such as companies and research institutions located in the city.



○Keihanna Information and Communication Fair

Information and telecommunications related organizations located in this city cooperate to introduce state-of-the-art technologies and research achievements in the field of information and communication by presentation, demonstration and other information.



<Other Efforts>



Keihanna Philosophy Café "Goethe no Kai"



Takayama Science Festival



Keihanna Plaza Mini-Concert

Business Mixer

○Keihanna Business Trade Fair

In order to contribute to the creation of new industries and the promotion of regional industries by providing places of collaborating and matching between seeds which small and medium enterprises, venture companies, universities and research institutions with cutting-edge technology located in this city, and industrial needs of various fields, we hold exhibition business meetings.



○Kyoto Smart City Expo

We will provide opportunities to connect with new business by establishing a place for domestic and foreign ICT industry related companies, organizations, researchers, etc. to gather and exchange and to receive stimulus from each other. We will also give lectures by AI and IoT experts and introduce actions of developed local governments.

Facilities & Organizations

Public Facilities & Organizations in Keihanna Science City

International Institute for Advanced Studies (IIAS)

The International Institute for Advanced Studies was founded in 1984, since then, we are pursuing a variety of research towards solving from the discovery of the various challenges faced by human society. By serving as a core institution of knowledge of the Kansai Science City by presenting new perspectives and directions through various activities including Keihanna "Edison no Kai" aiming to promote open innovation, we will work toward realization of a sustainable society from the relationship with various institutions, administration, university and residents.



A concrete trial for the promotion of the Kansai Science City- Aiming improvement of health literacy- (started from FY2019)



"Keihanna" Edison no Kai " In order to promote cooperation among the institutions located in Keihanna Science City, we are eagerly working on building a network and creating an environment that fosters collaboration.

Advanced Telecommunications Research Institute International (ATR)

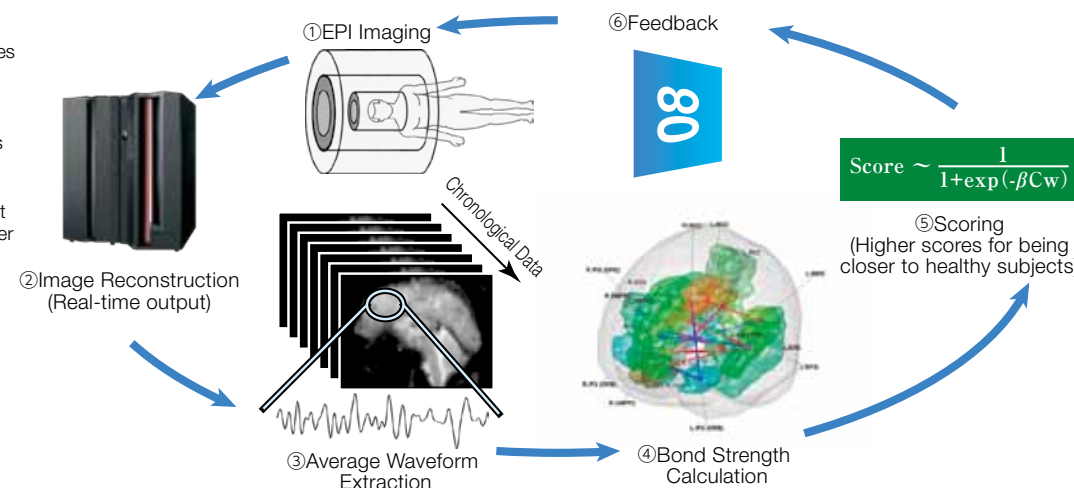
ATR is a research and development institute mainly specialized in the fields of computational neuroscience, life-supporting robots, and wireless communications. Specific research themes include: development of treatment methods for mental disorders using fMRI, and network-based BMI for more self-support of the elderly and people with long-term care.



The Conversational Android ERICA developed by the ERATO ISHIGURO Symbiotic Human-Robot Interaction Project

Advanced fMRI based on Data and Artificial Intelligence Working Towards Application of Real-Time Neuro Feedback to Mental Disorder Care

Based on the hypothesis that mental disorders are abnormalities in brain dynamics, we work to quantify brain dynamics using brain function binding patterns (bond NF) or multi-voxel patterns (DecNeF) as biomarkers and decoders. From this we work to use reinforcement (neuro operant conditioning) to guide the disorder dynamics to healthy dynamics.



Kansai-kan of the National Diet Library

The Kansai-kan is a major research library that supports innovative research at Keihanna Science City by providing access to a wide range of information. The Kansai-kan houses more than 2 million books and 110 thousand periodicals and newspapers published in Japan and around the world. It also archives 3.5 million scientific and technological materials—including conference proceedings, technical reports, and doctoral dissertations in European languages as well as technical standards from Japan and around the world; 600 thousand doctoral dissertations from Japanese universities; 170 thousand scientific research reports funded by grants from the Ministry of Education, Culture, Sports, Science and Technology; and a further half million materials in Asian languages other than Japanese. Moreover, on-site users can access a variety of online journals and databases including major newspapers, Web OYA-bunko, D1-Law.com, Ichushi-Web, JDreamIII, Web of Science, ScienceDirect, EBSCOhost, ProQuest Central, CNKI, and KISS.



Researchers can stay abreast of recent trends by reading academic and industry journals, both in print and in electronic form, available in the General Collections Room and the Asian Resources Room.



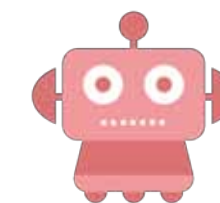
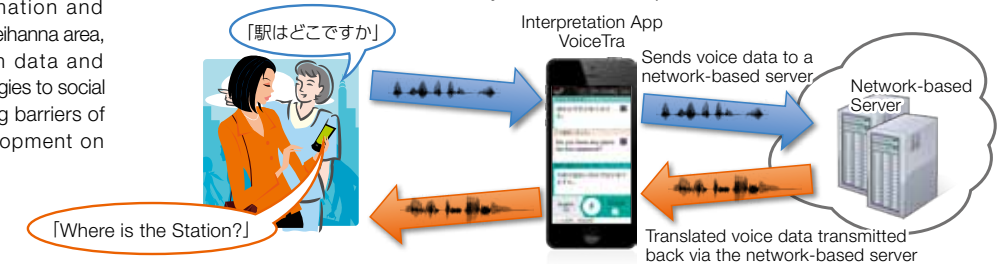
A variety of facilities are available for library patrons, including seminar rooms for those who wish hold discussion using library materials and private rooms for those who wish to concentrate quietly on their research.

At Keihanna Science City, advanced research and development in various fields such as environment / energy, information communication (ICT), bioscience, optical science, nanoscience, are being conducted, and various manufacturing companies ranging from the world's leading large enterprises to medium-sized and venture companies are active for creation of products and services based on advanced technology and innovation of manufacturing.

National Institute of Information and Communications Technology (NICT)

As the only information and communications focused public research institution, this facility is a driving force in research and development of Information and Communications Technology (ICT). In the Keihanna area, it works on drawing knowledge from data and information, applying data analysis technologies to social intelligence technologies, and overcoming barriers of language through research and development on multi-language translation technologies.

VoiceTra Network-based multilingual speech translation system for smartphones



Let's provide karaoke services and surveillance robots to assist in the care for the elderly

It would be nice if we can tend to the elderly using robots

WEKDA

A next-generation conversation system that allows users to talk about various subjects and topics based on knowledge provided by WISDOM X, NICT's large-scale web information analysis system. By utilizing deep learning AI, we can provide valuable information to users through natural dialogue.

Research Institute of Innovative Technology for the Earth (RITE)

We conduct research and development activities of innovative energy and environmental technologies as a center of excellence on the mitigation of global warming. Our focus areas are CCS technology, which captures CO₂ from large emission sources such as electric power plants and factories and stores it in an underground aquifer, biorefinery technology to produce biofuels and green chemicals from non-food biomass, systematic study regarding policies and measures to mitigate global warming through the analysis and the evaluation of various countermeasures, and inorganic membranes to be applied for dehydrogenating process which is essential for realizing hydrogen society.



Bio-fuel and green chemicals production from non-food biomass by utilizing microorganism



Visualization of CO₂ distribution in a sample rock using X-ray CT

National Institutes for Quantum and Radiological Science and Technology (QST)

Kansai Photon Science Institute

Following the successful development of powerful lasers such as J-KAREN, an ultra-short pulse laser of the world's top class, we work on academic, medical, and industrial applications for high powered lasers, including development of a compact accelerator for use in particle beam cancer therapy, practical use of remote and non-contact methods to detect defects in concrete using lasers, and a palm-sized non-invasive blood glucose level sensor and more.



World Class Ultra-Short Pulse Ultra-High-Intensity Laser J-KAREN



Quick Remote / Non-contact Laser Detection Method To Discover Concrete Defects

RIKEN Research in Keihanna Science City

RIKEN, a national research and development institute, is Japan's flagship research institute in the natural sciences. It is committed to helping maintain Japan's industrial development in response to social and national needs. As one of the pillars of the RIKEN Initiative for Scientific Excellence, our presence in Keihanna Science City is part of a wider effort to strengthen our ability to achieve world-class research outcomes. Here, RIKEN research teams have collaborated with other research institutions to develop bases for research activities. These bases function as science and technology hubs that produce innovation through collaborations with academia and industry, pushing research forward toward excellent results.



Keihanna Plaza Super Lab Building

RIKEN Research in Keihanna Science City			Location
Research	RIKEN BioResource Research Center (BRC)	At RIKEN BRC, disease-specific iPS cells established from patients with various diseases are provided as bioresources. By utilizing disease-specific iPS cells, the reproduction of disease pathology in a culture dish, accelerated exploration of disease mechanisms, and development of drug discoveries are expected.	Keihanna Plaza
	iPSC-based Drug Discovery and Development Team	This team develops basic technologies for iPS cell culture technology, differentiation technology, pathomechanism analysis, and screening methods by preparing disease-target cells from these disease-specific iPS cells.	
	RIKEN Center for Advanced Intelligence Project (AIP)	AIP's mission is to achieve scientific breakthroughs and to contribute to solving the issues faced by society and humanity through developing and applying innovative AI technologies. Researchers at AIP also conduct research on ethical, legal, and social issues caused by the spread of artificial intelligence technology.	Advanced Telecommunications Research Institute International (ATR)
	Disaster Resilience Science Team	This team is researching ways to minimize the damage from natural disasters, restore damaged social systems efficiently and effectively, and allow the rapid resumption of social and economic activities.	
	Computational Brain Dynamics Team	This team is developing big data analysis and dynamics modeling methods of human brain imaging data such as fMRI, MEG, EEG and NIRS in order to realize novel imaging-based diagnoses and therapies.	
	Information Integration for Neuroscience Team	This team is developing necessary key technologies, such as robust EEG analysis techniques using fMRI data as well as brain state estimation methods by integrating everyday multi-sensor data and brain information.	
	Tourism Information Analytics Team	This team is developing technologies that can be applied to inbound tourism information analytics through analyses of big data obtained by IoT-based sensing and social media as well as deep learning.	Nara Institute of Science and Technology (NAIST)
	Artificial Intelligence Ethics and Society Team	This team aims to develop a comprehensive platform to build an ethical foundation for continued coevolution with technology through coexistence and symbiosis among things, machines, and artificial intelligence.	Kyoto Univ. International Institute for Advanced Studies (IIAS)
	Robotics Project, RIKEN Baton Zone Program		Advanced Telecommunications Research Institute International (ATR)
	Keihanna Administrative Office, Science and Technology Hub Promotion Section, Science and Technology Hub Promotion Division		International Institute for Advanced Studies (IIAS)

Promoting Urban Development for Smart Lifestyles

We will work toward the realization of an unprecedented level of comfort in life and local society. Citizens can expect dramatic improvements in the quality of life in various fields such as transportation systems, health, food and agriculture, culture and education, as well as environmental and energy fields.



Keihanna Open Innovation Center(KICK)

Information sharing & distribution

By hosting the Kyoto Smart City Expo at the Keihanna Open Innovation Center (KICK) and Keihanna Plaza, we can share information on the latest technologies and systems both of the Keihanna Science City facilities and enterprises as well as of the rest of the country and the world, and through business exchanges work to promote and implement these for all of society.

Related technologies & systems development

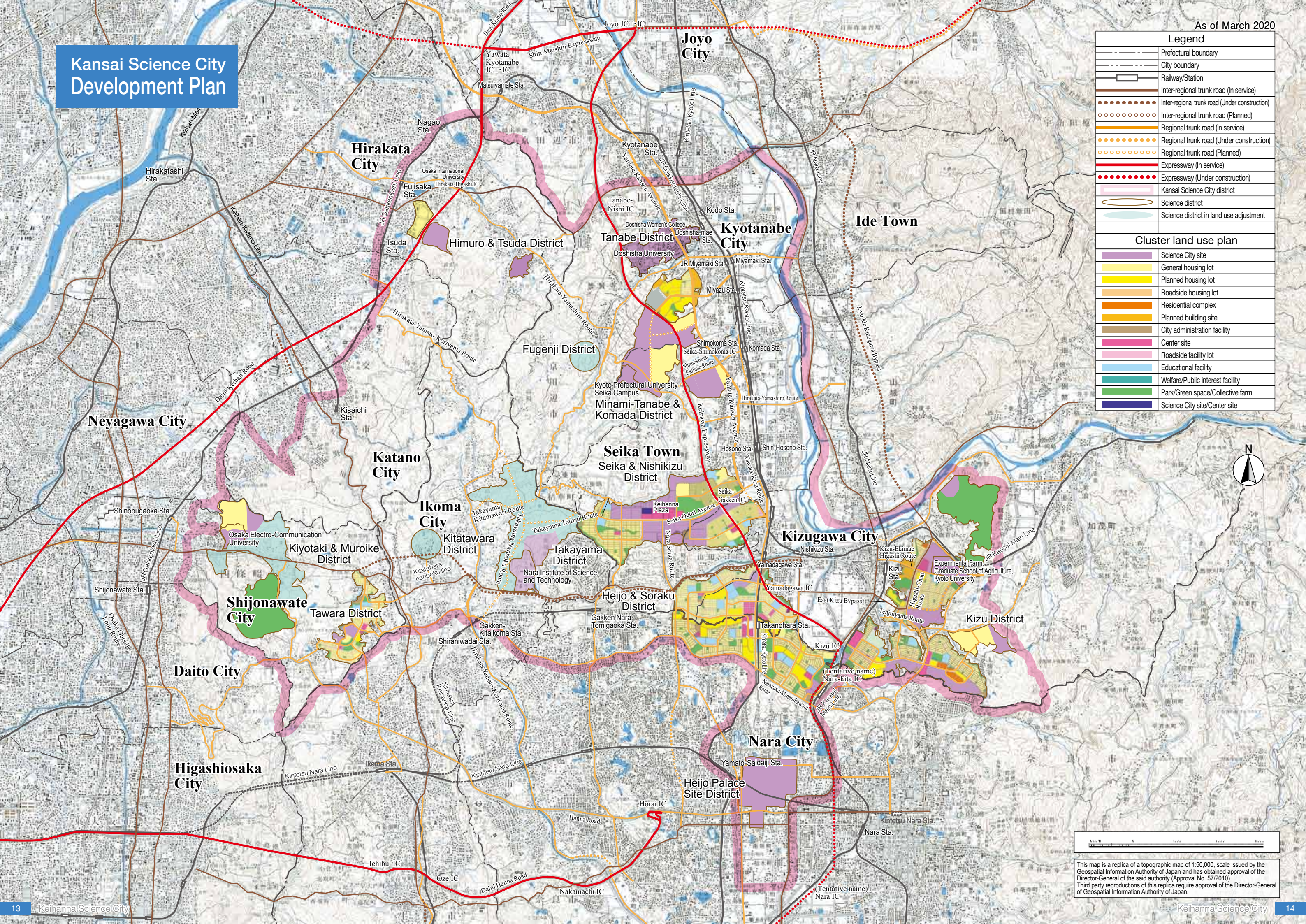
In collaboration with RDMM Support Center and RC efforts, and through the utilization of KICK, smart lifestyles, smart energy & ICT, smart agriculture, and smart culture & education are the four cores on which we promote smart cities through the development of related technologies and systems through open innovation.

History of City Construction

1978 September:	"Kansai Science City Surveillance Conversation (Chairman: Azuma Okuda, ex principal of Kyoto University)" was set up.
November:	Japan's Prime Minister approved a "Basic Development Plan for the Kinki Region" that included studies for the Kansai Science City Vision.
1981 November:	Kyoto Pref. released a "draft of basic concepts to construct a culture, science and research city."
1982 June:	National Land Agency announced the "Basic Concepts of the Kansai Science City (pilot plan)."
1983 March:	The "Kansai Science City Construction Promotion Conference" was established by 3 prefectures, Kansai Economic Federation and others.
1984 February:	Nara Pref. announced their "Basic Plan for the Kansai Science City."
March:	Kyoto Pref. announced a "draft of basic construction plans (for the area in Kyoto Pref.) for the Kansai Science City."
1985 March:	Osaka Pref. announced their "Basic Plan for the Kansai Science City."
1986 April:	The Kyotanabe Campus of Doshisha University and Doshisha Women's College of Liberal Arts opened. Doshisha-mae Station on the JR Katamachi Line opened.
June:	The "Foundation (now Public Foundation) of Kansai Research Institute" was established by the Housing And Urban Development Corporation (now Urban Renaissance Agency), 3 prefectures and financial circles of the Kansai region.
September:	The "Diet Member Confederation for Promoting the Construction of the Kansai Science City" was inaugurated.
1987 June:	The Kansai Science City Construction Act was promulgated and enforced.
September:	Kansai Science City districts were designated. The "Basic Policy on the Construction of Kansai Science City" was determined based on the Construction Promotion Law for the Kansai Science City.
1988 June:	"Hiten" was selected as the logo for the Science City.
1989 April:	Advanced Telecommunications Research Institute International (ATR) opened.
August:	The "Keihanna Corporation" was founded as the administrative body for establishing and managing cultural and scientific research exchange facilities.
1990 July:	The Ion Engineering Center (now Ion Technology Center) opened./The Kiyotaki No.1 Tunnel on Route163 opened to traffic.
1991 April:	Midori no Bunkaen (natural park) opened.
December:	Keina Road (between Tanabe-Nishi and Seika-Shimokoma) opened to traffic.
1993 March:	Keina Road (between Seika-Shimokoma and Yamadagawa) opened to traffic.
April:	Cultural and scientific exchange facilities for "Keihanna Plaza" were completed and opened. The first entrance ceremony was held at the Nara Institute of Science and Technology.
October:	The International Institute for Advanced Studies (IIAS) opened (established in August 1984)/The Takayama Science Plaza opened.
November:	The Research Institute of Innovative Technology for the Earth (RITE) opened.
1994 September:	"Keihanna Science City Festival'94" was held (Opening of the science city).
1995 April:	Kyoto Prefectural Keihanna Commemorative Park opened.
1997 April:	The Kyoto Prefectural Agricultural Resources Research Center (now Biotechnology Research Department, Kyoto Prefectural Agriculture, Forestry and Fisheries Technology Center) and the University Farm, Faculty of Agriculture, Kyoto Prefectural University opened./Daini Hanna Road opened to traffic.
1998 February:	Restoration work on the Suzaku Gate of Heijo Palace site was completed.
May:	The Second Stage Plan Promotion Conference announced "Aiming for realization of Second Stage Plan."
1999 September:	The Advanced Photon Research Center, Kansai Research Establishment, Japan Atomic Energy Research Institute (now National Institutes for Quantum and Radiological Science and Technology) commenced research.
2000 April:	Keina Road (between Yamadagawa and Kizu) opened to traffic.
July:	The Keihanna Human Info-Communication Research Center, Communications Research Laboratory opened. The Institute of Free Electron Laser, Graduate School of Engineering, Osaka University open
2001 July:	The Kids' Science Museum of Photons opened.
2002 April:	The Ministry of Education, Culture, Sports, Science and Technology (MEXT) selected the "Science City Research Project" for the "Intellectual Cluster Creation Project."
October:	The Kansai-kan of the National Diet Library opened.
2003 March:	Daini Keihan Road (between Oguraike and Hirakata-Higashi) opened to traffic.
April:	The Science City was authorized as a "Special Intellectual District," where visa requirements for foreign researchers were eased.
June:	The "Keihanna Info-Communication Open Laboratory" of Keihanna Human Info-Communication Research Center, Communications Research Laboratory opened.
2005 April:	The Keihanna New Industry Creation and Interactive Community Center opened.
November:	Exchange promotion agreement was signed with Beijing Science Park.
2006 March:	The "Third Stage Plan of the Kansai Science City" was formulated./The Kintetsu "Keihanna Line" started operation.
November:	Doshisha University Gakentoshi Campus opened.
December:	D-egg (Organization for SMEs and Regional Innovation) opened on the Kyotanabe Campus of Doshisha University.
2007 March:	Kizu-cho, Kamo-cho and Yamashiro-cho were consolidated into Kizugawa City.
April:	The number of companies/organizations with facilities in the Science City exceeded 100.
October:	The "Children Who Live in Science City" project was launched.
2008 May:	The "Development of Ubiquitous Bio-instrumentation Healthcare Devices and Systems" was adopted by MEXT as a "City Area Program in Industry-Academia-Government Joint Research."
2009 July:	The Kansai Research Institute was merged with the Keihanna New Industry Creation and Interactive Community Center.
2010 January:	Celebrations for the 1300th anniversary of Nara Heijo-kyo Capital started.
March:	Daini Keihan Road (between Hirakata-Higashi and Kadoma) opened to traffic./The "Keihanna Wide-Area Regional Basic Plan" was crafted to develop wide-area industrial clusters by creating new industr
April:	The Science City was selected as one of METI's "Next-Generation Energy and Social System Demonstration Areas."
2011 April:	Doshisha International Academy opened.
August:	The Keihanna Science City Healthcare Development District was selected amongst regions promoting regional innovation strategies as one of the "Regions Focused on Strengthening International Com
December:	The Science City was designated a part of the Kansai Innovation International Comprehensive Strategic Special Zone.
2013 April:	Osaka Prefectural Kita-Osaka Advanced Vocational Training Center opened.
2014 March:	The Kiyotaki No.2 Tunnel on Route163 opened to traffic.
2015 May:	The Keihanna Open Innovation Center (KICK) opened.
2016 March:	"The Plan for Creating New City" was formulated.
April:	"Experimental Farm, Graduate School of Agriculture, Kyoto University" opened.
September:	The Science City's research project was officially adopted by the Japan Science and Technology Agency's Global Research-Complex Program.
2017 April:	Shin-Meishin Expwy. (between Yahata-Kyotanabe JCT/IC to Joyo JCT/IC) opened to traffic.
2018 March:	Nara Palace Site Historical Park opened.
April:	"iPSC-based Drug Discovery and Development Collaboration Base" established at RIKEN's Keihanna campus
2020 March:	The Kizu-higashi Bypass of Route 163 and the Higashi-chuo Line of Urban Development Road opened to traffic

Kansai Science City Development Plan

Legend	
	Prefectural boundary
	City boundary
	Railway/Station
	Inter-regional trunk road (In service)
	Inter-regional trunk road (Under construction)
	Inter-regional trunk road (Planned)
	Regional trunk road (In service)
	Regional trunk road (Under construction)
	Regional trunk road (Planned)
	Expressway (In service)
	Expressway (Under construction)
	Kansai Science City district
	Science district
	Science district in land use adjustment
Cluster land use plan	
	Science City site
	General housing lot
	Planned housing lot
	Roadside housing lot
	Residential complex
	Planned building site
	City administration facility
	Center site
	Roadside facility lot
	Educational facility
	Welfare/Public interest facility
	Park/Green space/Collective farm
	Science City site/Center site



This map is a replica of a topographic map of 1:50,000, scale issued by the Geospatial Information Authority of Japan and has obtained approval of the Director-General of the said authority (Approval No. 57/2010). Third party reproductions of this replica require approval of the Director-General of Geospatial Information Authority of Japan.



Access Map



Road Access Map

•Approx. 40 min. from Kyoto Station to Keihanna Plaza

(Via Daini Keihan Road, Shin-Meishin Expressway, Keinawa Expressway)

•Approx. 55 min. from Shin-Osaka Station to Keihanna Plaza

(Via Hanshin Expressway Moriguchi Line, Kinki Expressway, Daini Keihan Road, Shin-Meishin Expressway, Keinawa Expressway)



Railroad Access Map

•Approx. 50 min. from Kyoto Station to Keihanna Plaza

(Kintetsu Kyoto Line, Nara Kotsu Bus)

•Approx. 60 min. from Osaka Namba Station to Keihanna Plaza

(Kintetsu Nara Line, Kintetsu Keihanna Line, Nara Kotsu Bus)



Keihanna Science City



Public Foundation of Kansai Research Institute

Kansai Science City Construction Promotion Conference

Laboratory Wing 3F, Keihanna Plaza (Keihanna Science City)

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