



Biocommunity Kansai (BiocK)

From "Accumulation" to "Collaboration"

Secretariat NPO Kinki Bio-Industry Development Organization Urban Innovation Institute





Overview on Bioeconomy Strategy of the Cabinet Office



Point of "Bioeconomy strategy follow-up"

- We formulated Bio Strategy 2019 and Bio Strategy 2020 as our overall targets to achieve the world's most advanced bio-economy society in 2030. We set targets for each market area and promote initiatives, based on such basic policies as a backcast, to expand our market areas.
- In addition to the 6th basic plan, considering the situation change, such as acceleration of the act with climate change issue, vaccination, and medicine, we will enhance specific initiatives, show the actual plan of the strategy and "Biostrategy follow-up" by brushing up the existing strategies.

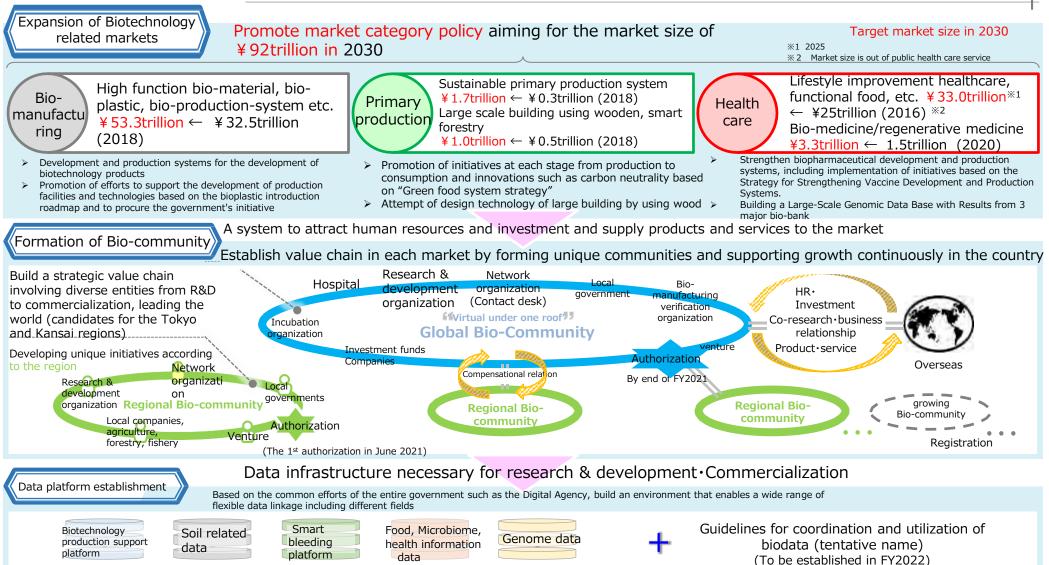


Image of society and market category

[Image of society]

Circulating society in which all industries are linked

Society where sustainable primary production is performed to fill the diverse needs

Society where materials are produced by sustainable production method

A society where medical care and healthcare are linked, and people can participate in society for a long time

(Market categ	jory)
High functional bio-material (lightness endurance, safety) Coordinating ministry METI	Expected expansion of the lightweight and tough biomaterial market Strengths in Material Technology and Utilization Areas (Vehicles, etc.
Bio-plastic (replacement of ordinary plastic) Coordinating ministry METI	Environmental contamination by ocean plastic garbage is a global issue Strengthens the expertise in proper treatment and 3R of plastic materials
• 3 Sustainable primary production system Coordinating ministry MAFF .	Improving agricultural productivity in rapidly growing Asia and Africa is a challenge and expanding dietary needs Strengths in world-level smart agricultural technologies
Organic waste •organic wastewater · treatment · Coordinating ministry METI ·	Growth in Asia and elsewhere is expected to expand the waste treatment and environmental cleanup-related market Strengthens the world's highest level of waste and wastewater treatment
5 Lifestyle improvement health care, functional · Coordinating ministry METI ·	Increase in lifestyle-related diseases, expansion of health-related markets. Countries focus on digital health. Strength in health data as a country with longevity
Biopharmacy, regenerative medicine, 6 cell medicine, gene therapy-related industry Coordinating ministry Health and Medical Strategy Office	Full-scale industrialization of biopharmaceuticals, etc. and the creation of large markets are expected Strengths in traditional basic research and cell culture techniques
Bio-production system (Industry food . • Description production by using biological function)) .	Production technologies using biological functions are growing rapidly, mainly in the United States. Strengths in Microbial Resources, Biological Resources, and Fermentation Technologies
Bio-related analysis, measurement, experiment system Coordinating ministry METI	As a basis of bio-industry, big expansion is expected. Strength in advanced measurement technologies, robotics and other elemental technologies
• 9 Large scale building with wood, smart forestry Coordinating ministry Forestry Agency	Wooden structure effectively reduce greenhouse gas and draws attention mainly in Europe and North America. Strengths in smart forestry in future, wood building technologies, beautiful design, and construction management

Make roadmap of market category



Regional characteristics, strengths, and challenges of Kansai



Kansai's strengths and challenges

Accumulation of bio-related industries

- ✓ Historically, bio-industries such as pharmaceuticals, medical devices, and fermentation have been concentrated;
- Small and medium-sized manufacturing companies with advanced technologies, such as development and manufacturing of medical devices, are concentrated mainly in Eastern Osaka;
- Biorelated contract manufacturing organization (CMO) and contract development & manufacturing; organization (CDMO) businesses have been actively expanded in recent years.

Accumulation of advanced research & development organization

- ✓ High-level research institutes and high-quality researchers are concentrated;
- Advanced research and development is progressing in the fields of regenerative medicine and immunity, such as iPS cells and cancer immunotherapy;
- ✓ Leading Research & development in cutting-edge fields, such as supercomputers;
- ✓ There are many research & development-type private companies;
- ✓ Diverse clusters in a wide range of fields have been developed and are compactly integrated.

The charm of the area

- Internationally, the cities of Osaka, Kyoto, and Kobe are significantly recognized as attractive cities;
- Kansai International Airport is the gateway to Kansai and has strong ties overseas, especially in Asia;
- ✓ Office rent and industrial zone rent are also relatively reasonable and have excellent cost competitiveness.

Expectation to the future

- ✓ Many large-scale projects for Research & Development-type industrial promotion are being promoted;
- There is a foundation for producing start-up companies and it is expected;
- ✓ Osaka/Kansai Expo 2025 is scheduled, and future orientation is being cultivated.

Challenges

- Lack of venture mindset, human resources and funds;
- ✓ Startup awareness is low;
- Lack of CXO human resources responsible for the management;
- There is no cohesiveness as Kansai.



Accumulation of bio-industry and research bases in Kansai 🖯

Industrial clusters with diversity and depth

Kansai's proud concentration of research centers

Kyoto University Center for iPS Cell Research and Application (CiRA), Foundation for iPS Cell Research and Application (CiRA_F) RIKEN (Keihanna) Research Institute of Innovative Technology for the Earth(RITE) Kyoto Research Park (KRP) Osaka University University Public Corporation Osaka National Institute of Biomedical Innovation, Health and Nutrition National Cerebral and Cardiovascular Center National Institute of Advanced Industrial Science and Technology (Kansai Center)

Science and Technology (Kansai Center) RIKEN (Suita) Saito, Kento, Nakanoshima Kansai Pharmaceutical Industries Association, Doshomachi LINK-J WEST Kinki Bio-Industry Development Organization Urban Innovation Institute

Kobe University RIKEN (Kobe) Kobe Biomedical Innovation Cluster (KBIC) /Supercomputer "Fugaku" Organization for Engineering Biology (OEB) Manufacturing Technology Association of Biologics (MAB) Biologics Center for Research and Training (BCRET) Harima Science Park City / Large Synchrotron Radiation Facility "SPring-8" By such efforts Of KSAC *, KSII ** universities and research institutes Collaboration is progressing

*Keihanshin startup academia coalition ** Kansai Innovation Initiative



About the Biocommunity Kansai



About the Biocommunity Kansai

3.

Vision	Spreading a bio-first approach to build a Global Biocommunity and realize a sustainable society
Goal	Creating an ultimate ecosystem for the bio-fields in Kansai
Key word	Shifting from "Accumulation" to "Collaboration"

Name

Biocommunity Kansai Abbreviation: BiocK

Establishment

July 1st, 2021

Certification

April 22, 2022

(Global bio-community certification by the Japanese cabinet office)

Action plan

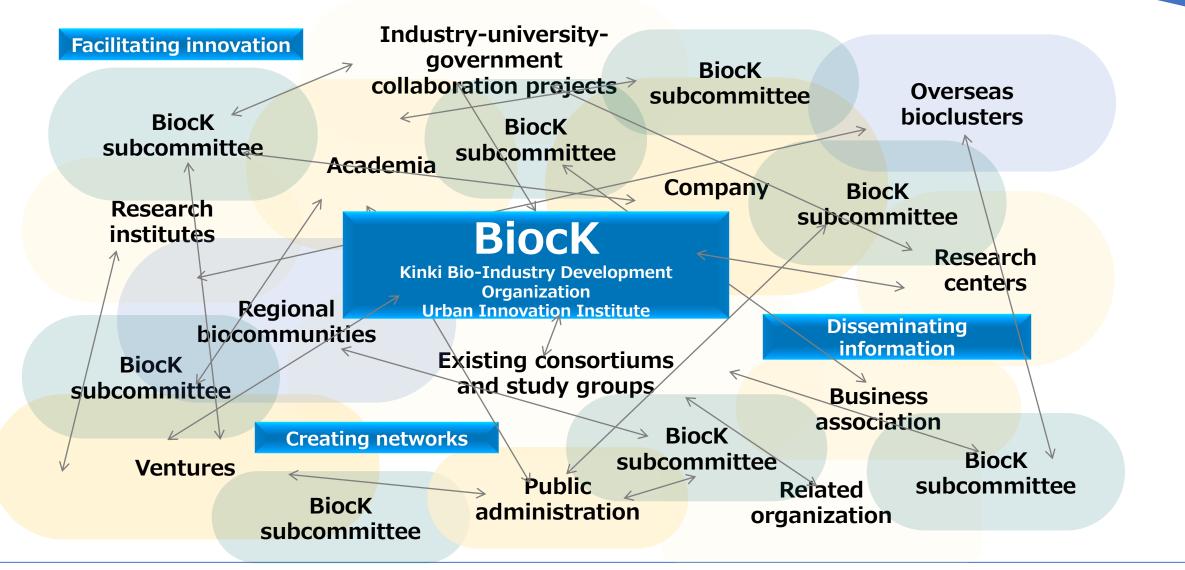
- 1. Facilitating innovation;
- 2. Creating networks;
- 3. Disseminating information.

How the biocommunity should be:

- ✓ Making a community focusing on industry;
- ✓ Strengthening collaboration across all of the biocommunity;
- \checkmark Leading to new innovation.

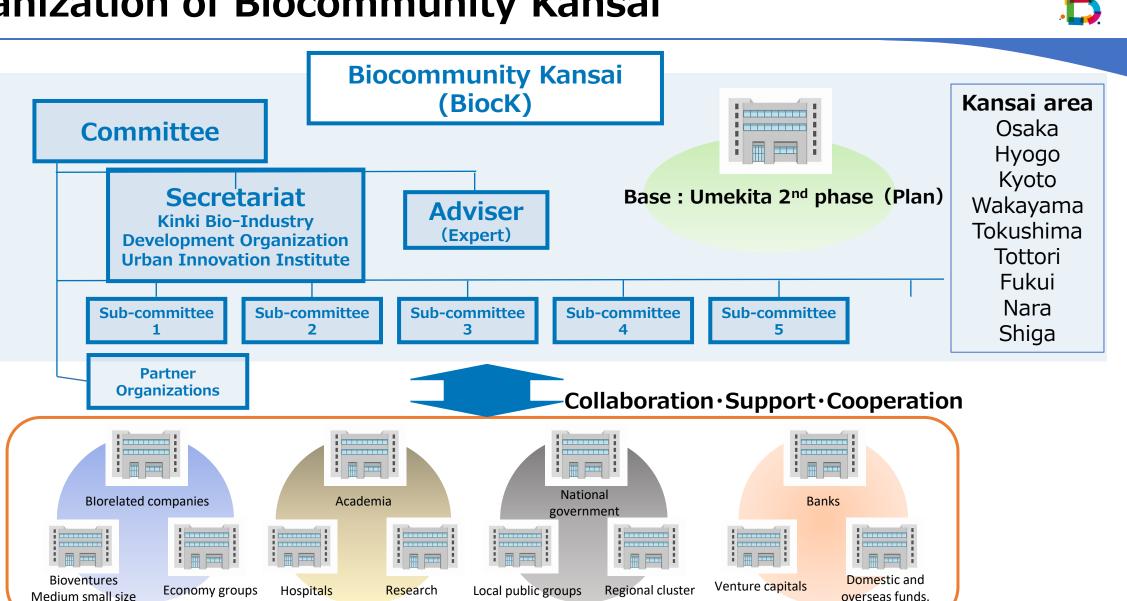


Shifting from "Accumulation" to "Collaboration"





Organization of Biocommunity Kansai



institutes



companies

etc.

Biocommunity Kansai committee organization

	Chairperson of the committee	Takuko Sawada	Chairman, Kansai Eco	onomic Fe	ederation Venture Ecos	system Committee
Vice chairperson of the committeeRyuichi MorotomiVice Chairperson of the committee, ExecutiveTsuneaki Sakata, Ph.D.			Vice Chairman, Venture Ecosystem Committee, Kansai Economic Federation Chairman, Kansai Association of Corporate Executives "Bridge Forum Committee"			
			Chairman, NPO Kinki Bio-Industry Development Organization Vice Chairman, Life Science Promotion Committee, Osaka Chamber of Commerce and Industry President, All Japan Biocommunity Liaison Committee			
	Secretary General	Kiyofumi Takata	Senior Director, NPO	Kinki Bio-	Industry Developmen	t Organization
	Deputy Secretary General					
Ka Co Na Na Na RII Na Re Ad	tional Cerebral and Car tional Institute of Adva tional Agriculture and F KEN tional Institute of Tech search Institute of Inno	Kyoto Chamber of Kobe Chamber of medical Innovation, H rdiovascular Center inced Industrial Scien Food Research Organ nology and Evaluation ovative Technology fo ations Research Instit	amber of Commerce and Industry amber of Commerce and Industry mber of Commerce and IndustryOsaka University Kyoto UniversityOsaka city, Osaka Pref. Kobe city, Hyogo Pref.amber of Commerce and Industry mber of Commerce and IndustryKyoto University Kobe UniversityOsaka Metropolitan UniversityOsaka City, Osaka Pref. Kobe city, Hyogo Pref.ation, Health and Nutrition enter of Science and Technology Kansai CenterTokushima University Osaka Metropolitan UniversityTokushima Pref. Tokushima Pref.I Science and Technology Kansai CenterKansai Pharmaceutical Industries Japan External Trade OrganizationSakai city, Fukui Pref. Sakai city, Fukui Pref.aluation logy for the Earth n Institute InternationalKansai Medium Enterprises and Regional Innovation, Japan Life Science Innovation Network Japan			
	Japan Bioindustry Association					

Action Plan (1) Facilitating innovation



By forming a responsible consortium (subcommittee) to promote open innovation to solve social issues, we'll take on challenges that cannot be solved by one company or one research institution.

① Facilitating of open innovation by companies

B

- Themes are solicited mainly from Kansai companies, and the core companies get the commitment of the management and become responsible leaders.
- Leader companies play a central role in forming and managing subcommittees involving Kansai and related organizations in Japan and overseas.
- ② Collaborate with industry-academia-government collaboration projects
 - Cooperate with industry-academia-government collaboration projects promoted by the national and local governments, and give them a role as subcommittees, as necessary.
 - > Aim to improve the overall results by utilizing the BiocK network, such as by collaborating with other subcommittees

Special attention will be given to the following issues, which will be the basis for all activities, and subcommittees will be formed to address them

category	Task	Direction of efforts
Startup support	Lack of venture mindset, human resources, and funds; Low recognition from overseas; Extremely small numbers of ventures, especially in the later stages of development.	Development of CXO human resources (business plan development, intellectual property securing, etc.); Series B and subsequent funding; Cooperation with Osaka/Kyoto/Hyogo Kobe Consortium, KSAC, KSII; Proposal of funding mechanism that is not bound by the existing frameworks.
Securing human resources	Lack of CXO personnel to manage startups; Lack of human resources involved in bio-manufacturing.	Launch of CXO Human Resources Discovery Program through Human Resources Exchange; Approach to high-school students to foster their entrepreneurial mindset; Collaboration with a biomanufacturing human resources development Project.
Biofoundry	Establishment of biomanufacturing technology requires technology development and upfront investment; If we can build a value chain, it will be a great strength.	Strengthening projects related to biomanufacturing technology and cell- manufacturing technology; Utilization of CDMO, CMO, bio-manufacturing bases of operating companies;
Data linkage and utilization	Creating rules for collecting, integrating, and using biorelated data; Building a system that can be operated sustainably.	Construction of data linkage system from Kansai; Realization of Society 5.0.

Subcommittee

B

Biocommunity Kansai

As of October 1, 2023



Name of the subcommittee	Social Issues Areas	Content of Efforts	Leadership Organization
Biomethane subcommittee	Environment and energy	Carbon neutralization of energy	Osaka Gas Co., Ltd.
Plastic subcommittee	Environment and energy	Bioplastic	Saraya Co., Ltd.
Mental health subcommittee	Healthcare	Improving social productivity	Shionogi & Co., Ltd.
Personal data subcommittee	Healthcare	Use of personal data	Nippon Telegraph and Telephone West Corporation
Wellbeing Subcommittee on Aspergillus (national bacteria)	Lifestyle modification healthcare	Elucidation of health and cosmetic effects of Aspergillus oryzae	Gekkeikan Sake Co., Ltd.
Life Style DX subcommittee	Digital Healthcare	Updating Lifestyles with Digital	Suntory Global Innovation Center Limited
Smart cultivation subcommittee	Continuous primary production system	Maximizing the use of biotechnology in the primary industry	Yanmar Holdings Co., Ltd.
Utilization of wood and CLT with DX subcommittee	Large scale and Mid-to-high- rise building using wood and CLT	Reuse of CLT with Building Information Modeling (BIM) data	TAKENAKA CORPORATION
Biofoundry cluster subcommittee	Manufacturing Value Chain	Biomanufacturing	Baccus Bio innovation Co., Ltd.
Subcommittee on Analysis and Measurement Technologies	All biotechnology fields	Promoting bioindustry through analysis and measurement technologies	Shimadzu Corporation
Space Biological Experiments Subcommittee	All biotechnology fields	Construct a democratized space biological experiment platform using satellite payloads from Japan	IDDK Co., Ltd.
Section committee changing the world of Biotechnology by sound	Biotechnology production system / health care	Use of sound to Biotechnology production system and health care area	Onkyo Corporation
Start-up subcommittee	Support for start-up	Support for start-up in Kansai	Sumitomo Mitsui Banking Corporation (SMBC)

Companies" and "Industry-Academia-Government Collaboration Projects" that will play a central role in the new subcommittee are now being recruited.

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Subcommittee

As of October 1, 2023



Name of the subcommittee	Social Issues Areas	Content of Efforts	Leadership Organization	Remarks
Subcommittee on digital biohealth	Healthcare	General health industry city	National Cerebral and Cardiovascular Center	Field of JST co- creation
Subcommittee on photonics life engineering	Healthcare	Photonics biotechnology	Osaka University	Field of JST co- creation
Well-being with bright eyes subcommittee	Healthcare	Social implementation of happy lifestyles through digital health big data with a focus on ophthalmology	Tohoku University	Field of JST co- creation
Food loss subcommittee	Continuous primary production system	Innovative low food loss co-creation base	Osaka University	Field of JST co- creation
Future urban subcommittee	Sustainable society	Dissemination of future intellectual infrastructure models	Osaka University	Field of JST co- creation
Biomass subcommittee	Carbon neutral	Realization of carbon zero emissions through biomass technology	Tokyo University of Agriculture and Technology (TUAT)	Field of JST co- creation AMED
Subcommittee on cell production	Regenerative medicine	Construction of an ecosystem for cell production	Osaka University	AMED
Regenerative Medicine subcommittee ~kansai Regenerative therapy initiative~ (kRi)	Regenerative medicine	Evolve regenerative medicine by building a regenerative medicine ecosystem, social enlightenment, human resource development, and global Expansion	Osaka University	AMED · NEDO
Subcommittee on modality	Healthcare	Manufacture of antibodies, gene therapy products, and vaccines	Manufacturing Technology Association of Biologics (MAB)	AMED · NEDO
White bioindustry subcommittee	White bioindustry	Biofoundry business	Osaka University (representative sponsor)	NEDO
Human Resource Development in industrial Bio-production fields	Supporting trial manufacturing and educating engineers in bioindustry fields	Biofoundry business	Osaka Institute of Technology	NEDO
Subcommittee on digital green	Continuous primary production system / Digital healthcare/ Bioproduction system	Realization of a sustainable society in which Keihanna Science City and nearby rural villages complement each other	Nara Institute of Science and Technology	
Health Functions Quotient	Prediction of and Prevention from Health Vulnerability	Maximize Personalized Health	Kobe University and RIKEN	

Biocommunity Kansai

Action of Subcommittees



2nd subcommittee meeting Aug 31, 2022 Activity reports from 19 subcommittees

3rd subcommittee meeting Aug 31, 2023



Dissemination of information from subcommittees On BiocK's website(https://biock.jp/en/activity/)

Composition of the subcommittees and how to proceed with the activities:





(2) Creating networks Action plan

Tsuruoka Science Park

UNIVERSITY OF FUKUI

University of Yamanashi

Umekita Future INnovation Organization

Japan Association for Techno-innovation in Agriculture, Forestry and Fisheries

◆ Partner Organizations (58 organizations (in Japan)) Domestic Accelerating domestic collaboration to form **CiRA** Foundation Cloud Security Alliance Japan Chapter Inc. collaboration Foundation for Biomedical Research and Innovation at Kobe. a bioecosystem GENERAL INCORPORATED ASSOCIATION PHR COUNCIL Gunma Greet Innovation Platform (G-GIP) Hiroshima Bio DX Community HOKKAIDO UNIVERSITY ♦ The 1st Biocommunity Collaboration Conference Japan Hydrogen Association Japan MA-T Industrial Association February 2nd, 2022 Japan Society of Northern California Hokkai Josho Gakuen Educational Foundation; OSAKA INSTITUTE OF TECHNOLOGY do Global : Biocommunity Kansai (BiocK) Kansai Health and Medical Association Kansai Innovation Initiative KANSAI UNIVERSITY Greater Tokyo Biocommunity (GTB) KINDAI University Kurume City Regional : Hokkaido Prime Biocommunity Kurume Research Park Co., Ltd. Kyoto Municipal Institute of Industrial Technology and Culture KYOTO MUNICIPAL INSTITUTE OF INDUSTRIAL TECHNOLOGY AND CULTURE Tsuruoka Biocommunity Kyoto Prefectural University Kyoto Research Park Corp. Nagaoka Biocommunity Life Science Incubation Council[Willsame Inc.] Nagaoka Bioeconomy Consortium Fukuoka Biocommunity NARA INSTITUTE of SCIENCE and TECHNOLOGY National Center for Industrial Property Information and Training (INPIT) Tsur National Research Institute of Brewing Hiroshima Bio-DX-Community New Energy and Industrial Technology Development Organization uoka NPO Recycling System Center Okinawa Biocommunity Okinawa BioCommunity Okinawa Institute of Science and Technology Graduate University Organization for Advanced Healthcare Innovation Naga Organization for Engineering Biology oka Osaka Business and Investment Center OSAKA BUSINESS DEVELOPMENT AGENCY **OSAKA CONVENTION & TOURISM BUREAU** Osaka Science & Technology Center Osaka University Hospital Department of Medical Innovation **GTB** PhotoLIFE (PhotoBIO-OIL) PMK initiative Public Foundation of Kansai Research Institute BiocK Public Interest Incorporated Foundation Senri Life Science Foundatioin Region-wide Industrial Promotion Bureau, Union of Kansai Governments **Hiros** Research Institute of Innovative Technology for the Earth hima **RIKEN BioResource Research Center** Fuku **RIKEN** Center for Computational Science RIKEN SPring-8 Center. oka SAMURAI Biotech Association Shiga Bio-Industry Organization Shiga Prefecture The Doshisha The New Industry Research Organization (NIRO) ♦ Kyoto-Osaka-Kobe collaboration THE RITSUMEIKAN TRUST Toyama Pharmaceutical Valley Development Consortium

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meeting (held once every 1-2 months)

Biocommunity Kansa

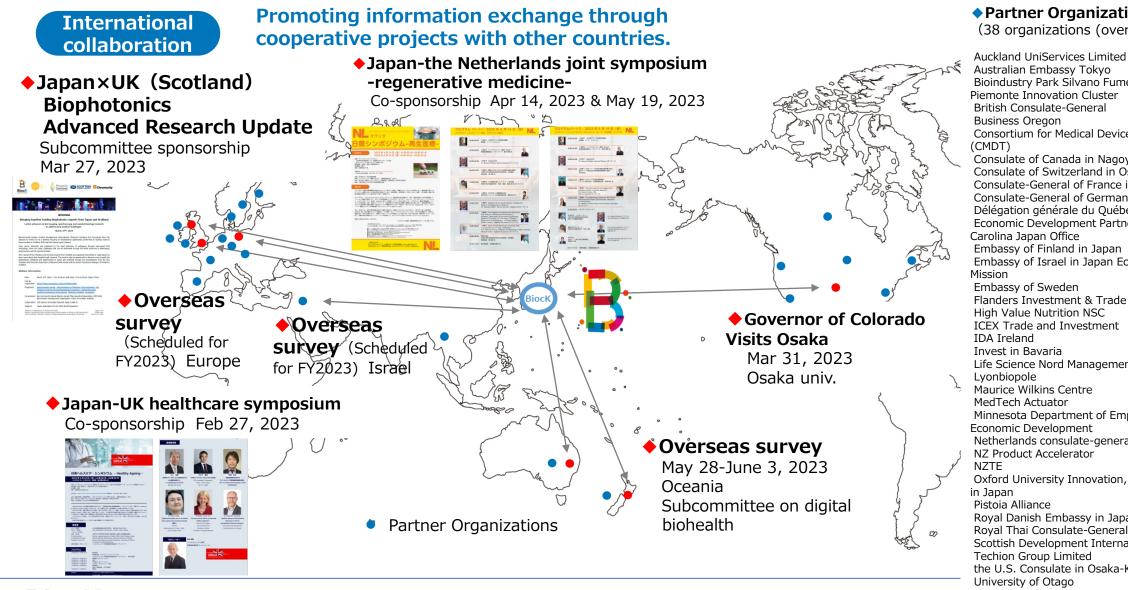
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(2) Creating networks Action plan

Bioc

Biocommunity Kansa



Partner Organizations

(38 organizations (overseas))

Australian Embassy Tokyo Bioindustry Park Silvano Fumero - bioPmed Piemonte Innovation Cluster British Consulate-General Consortium for Medical Device Technologies Consulate of Canada in Nagoya Consulate of Switzerland in Osaka Consulate-General of France in Kyoto Consulate-General of Germany in Osaka-Kobe Délégation générale du Québec à Tokyo Economic Development Partnership of North Carolina Japan Office Embassy of Finland in Japan Embassy of Israel in Japan Economic & Trade Embassy of Sweden Flanders Investment & Trade High Value Nutrition NSC ICEX Trade and Investment Life Science Nord Management GmbH Maurice Wilkins Centre Minnesota Department of Employment and Economic Development Netherlands consulate-general in Osaka NZ Product Accelerator Oxford University Innovation, Representative Royal Danish Embassy in Japan Royal Thai Consulate-General, Osaka Scottish Development International Techion Group Limited the U.S. Consulate in Osaka-Kobe University of Otago University Philanthropy Victorian Government Business Office Tokvo

Action Plan (3) Disseminating information



Dissemination of Bioinformation from Kansai

- Dissemination of information on activities and potential in Kansai;
- ✓ Information dissemination involving citizens;
- ✓ Transmission of information regarding economic security.

Building Kansai brand

- ✓ Awareness of Osaka, Kyoto, and Kobe is high, but awareness of Kansai is low;
- We would like to contribute to establishing and improving the value of the Kansai brand by disseminating bioinformation as a whole Kansai.

Osaka / Kansai Expo2025

- Participating in the demonstration of experiments;
- ✓ Realizing social implementation;
- Making a chance to appeal to the World.



Logo, homepage, pamphlet, movie, seminar, symposium, individual meeting, and others,



Action Plan (3) Disseminating information



BioJapan2022

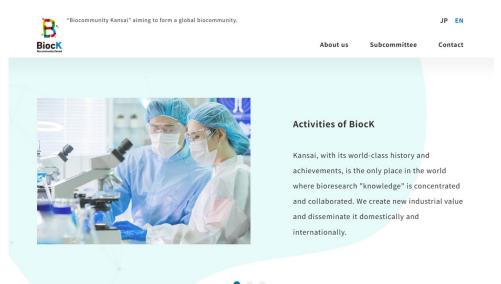
Oct, 2022



International Symposium being planned

Theme : Planetary health Format : International Symposium Date : April 17 and 18, 2025 Place : TBD

English website launched Oct, 2022



Announcements from BiocK and each organization

2023/03/07

Put on the website, Mail magazine : Approx. 50 per year



Biocommunity Kansai and MAGIA sign Memorandum of Understanding to promote internationalization of MedTech. Monday February 27, 2023 – Osaka, Japan … 🧿

