Creating a nation in which people can lead safe and comfortable lives is a task of utmost importance for Japan. For only by doing so can Japan compete internationally and bequeath a better national environment to posterity, in an era of declining birth rates and population aging.

The Japan Institute of Country-ology and Engineering (“JICE”, a General Incorporated Foundation) is a policy proposal body that contributes to improving the national subsistence, with the aim of creating “a nation in which people can live in safety and reassurance”, “a nation in which people, goods and information can circulate smoothly” and “a pleasant and beautiful nation in which people can live with richness of spirit”. JICE complements the national land administration and helps to promote the effective use and appropriate management of national infrastructure by furnishing the results of outstanding research, among other efforts.

Our ongoing aim is to promote science and technology, as well as tackling various research and other efforts, with additional knowledge from the private, industrial, academic and public sectors. In doing so, we will draw on our advanced technology and combined capabilities in the sectors of rivers, roads, cities, housing, regions, and civil engineering technology.

I hope we can count on your understanding and assistance in achieving these goals.

Kenyu Koumura, President

Background and Purpose of Establishment

JICE was established as the “Japan Institute of Construction Engineering” (an Incorporated Foundation) on June 30th, 1973, with the approval of the Minister of Construction and with funding from private-sector donations, following a proposal by the Construction Technology Development Council (a review body of the Minister of Construction). In December 2000 the name was changed to the “Japan Institute of Country-ology and Engineering”, and on April 1st, 2013, its legal status was changed from an “Incorporated Foundation” to a “General Incorporated Foundation”, following approval by the Prime Minister.

JICE’s purpose is “to conduct comprehensive research as a way of helping to promote the effective use and appropriate management of national infrastructure, thereby contributing to the improvement of public welfare” (Article 3 of the Articles of Incorporation). As such, JICE undertakes the following operations. (Article 4 of the Articles of Incorporation)

1. Research on the use and management of national infrastructure, and the development of social capital to this end (i.e. the development, use, protection and other management of roads, rivers, coasts, urban facilities, housing, etc.; the same applies below), as well as the construction technology required for these.
2. Research on methods of public procurement, reducing costs, assuring quality and other aspects of the management of social capital development.
3. Evaluation and dissemination of technologies for newly developed materials, construction methods, machinery, and others related to social capital development, and allocation of grants for research on construction technology.
4. Research on and international cooperation in overseas social capital development and construction technologies.
5. Operations related to acquiring intellectual property rights and promoting the management and utilization thereof.
6. PR related to the above items, dissemination of results, and gathering and provision of information.
7. Other operations necessary to achieve the purpose of this corporation.
A Policy Proposal Body to Complement National Land Administration

In connection with the use of national infrastructure and development of social capital in Japan, there has been increasing concern over issues such as preparedness for major natural disasters, as well as measures to combat obsolescence, maintain and upgrade social capital in recent years. New models for the use of national infrastructure must also be created to address a rate of population shrinkage running ahead of those in other countries. These include achieving a “participatory society” in which private-sector activity and the citizens themselves play some role in connection with public services, using information communication technology (ICT) to increase the intelligence of social capital, and developing national land infrastructure in a way that boosts international competitiveness.

Laws and ordinances, policy measures, technical standards and other systems are expected to change in line with the changing times, changes in national awareness, advances in science and technology, etc. Meanwhile, social capital with new capabilities and roles is expected to change the use of national infrastructure and the nature of cities and regions in a shrinking population society. JICE interprets these changes judiciously and positively implements initiatives that contribute to creating new norms and standards, such as organizing them as new administrative services.

1 Proposals helping to create tomorrow’s national infrastructure

Policy Research Institute for Country-ology

A research institute established within JICE. As well as promoting comprehensive research and transmitting information on the development of social capital, the Institute makes policy proposals on directions for national infrastructure creation and the development of social capital from a variety of angles. Its proposals are based on forward projections concerning Japanese society and the national subsistence ten or twenty years into the future.

2 Policy proposals to meet the demands of today

Policy Groups

The Water Resources Policy Group, Road Policy Group, City, Housing and Regional Policy Group, and Public Works Management Policy Group are in charge of actively generating effective policy proposals. These include proposals for measures based on a correct assessment of the needs and problem awareness of national land administration, as well as draft amendments to laws and ordinances, technical standards, etc., to reflect policy evaluation, changing times and other factors.

3 Sustaining and growing technical capabilities through research

Project Teams

In “Project Teams” organized within each Policy Group, engineers draw on their combined technical capabilities to collaborate beyond the confines of individual departments, producing a high quality of research output. Meanwhile, as well as passing on technical knowledge by taking part in research planning on a continuous basis, engineers in specialist fields make positive efforts to tackle new research fields based on this knowledge.
Characteristics of JICE Operations

Research undertaken by JICE has an extremely high level of public interest, and demands combined strengths as well as capabilities in planning, coordination and continuity. This includes cross-sector collaboration and coordination of views, operations across diverse fields of technology, total involvement from proposals to development and evaluation, and follow-ups. JICE tackles this research from an impartial and neutral standpoint.

Moreover, as well as taking steps for use and dissemination by transmitting information, etc., JICE also strives to promote science and technology, such as by issuing awards for outstanding construction technology in the private sector and providing grants for research and development. The results obtained from JICE’s research contribute to efforts by national and local governments to develop housing and social capital.

Aiming to materialize
“a nation in which people can live in safety and reassurance”
“a nation in which people, goods and information can circulate smoothly”
“a pleasant and beautiful nation in which people can live with richness of spirit”

Policy proposals
- The Policy Research Institute for Country-ology forecasts the future state of the nation based on changes in socio-economic conditions, etc., and debates and proposes the philosophy of national infrastructure development.
- Follow-ups for policy measures, existing research, and other independent research on policy proposals targeting three to five years hence.
- Commissioned research to propose solutions for issues that should be addressed by the national land administration.

Promotion of science and technology
- Awards, grants and certification for technology development
  - “Infrastructure Technology Development Awards”
  - “Research and Development Grants”
  - Construction Technology Review and Certification (General Civil Engineering Construction Methods)
- Land administration.

Support for promotion of housing and social capital development undertaken by the Ministry of Land, Infrastructure, Transport and Tourism, local authorities, etc.

Research demonstrating combined technical capabilities and drawing on continuous accumulation
- Collaboration between engineers in each sector
- Combining knowledge from the private and public sectors, industry and academia
- Helping to improve the quality of measures through continuous involvement, from the system design of measures to support for the development of measures, policy evaluation and revisions.

Pioneering research contributing to effective use and appropriate management of national infrastructure
- Advanced and pioneering research drawing on technology accumulated to date
  - Preparation of various technical standards
  - Creation of measures and plans for development of social capital
  - Homes and town planning
  - Protection and development of natural environments and scenery
  - Stock utilization and management technology
  - Construction management and public works cost analysis
  - New operational methods and consensus building
  - Technology development etc.

Transmission of information on housing and social capital development
- Transmission of information on research results, housing and social capital development, etc.
  - “JICE REPORT”
  - Website
  - Publications
  - Lectures etc.

An impartial and neutral standpoint
- Awards, grants and certification for technology development
  - “Infrastructure Technology Development Awards”
  - “Research and Development Grants”
  - Construction Technology Review and Certification (General Civil Engineering Construction Methods)

JICE’s system
- Accumulating data, information and knowledge
- Research by Policy Groups and Project Teams
- Maintaining and improving the quality of research results (ISO9001) etc.
Infrastructure Technology Development Awards

These awards are conferred on selected new technologies that have been developed and commercialized within the past five years. The purpose is to stimulate R&D motivation among technology developers and to help improve the promotion of construction technologies. The awards are implemented jointly with the Coastal Development Institute of Technology, with backing from the Ministry of Land, Infrastructure, Transport and Tourism.

Since fiscal 2009, JICE has given awards for technologies developed independently by local small and medium construction businesses, specialist contractors, etc., which contribute to local communities through their use and application. These awards go under the title “Local Contribution Technology Awards”.

Research and Development Grants

Grants are awarded for outstanding research and development, with the aim of promoting R&D in advanced technology in various sectors and contributing to the better use, development or protection of national infrastructure through housing and social capital development. In principle, the recipients of grants are researchers in universities, vocational high schools and institutions belonging to these, or researchers in private-sector companies. Grants are awarded to about ten cases of R&D every year. The results are presented at report meetings, while the outline of the research is published on the JICE website, and information is broadly transmitted.

Construction Technology Review and Certification (General Civil Engineering Construction Methods)

The aim of this initiative is to promote R&D in the private sector and to ensure that new technologies are correctly and quickly introduced into construction projects. Based on requests from developers, general construction methods independently developed by private companies are technically reviewed and objectively certified by professional and academic experts, among others. As one of the 14 corporate members of the Council for Construction Technology Review and Certification (secretariat: JICE), JICE reviews and certifies construction technology (general civil engineering construction methods) related to roads, rivers, coasts, etc.
Demonstrating Policy Proposal Functions

■ Research demonstrating combined technical capabilities and drawing on continuous accumulation

JICE engineers with advanced technical ability in the sectors of rivers, roads, cities, housing, and civil engineering collaborate in conducting research on increasingly sophisticated and complex national land administration issues. At the same time, JICE also draws on an extensive human resource network across the private and public sectors, industry and academia to establish committees and others wherever appropriate, thus providing high-quality outcomes.

Meanwhile, JICE continuously conducts research, from studies on drafting measures and formulating plans to research on providing tools to support the implementation of measures, evaluating policy and making improvements based on this. By so doing, JICE demonstrates technical capabilities based on past data accumulation and knowledge, and in this way helps to improve the quality of national land administration.

■ Gathering opinions from an impartial and neutral standpoint

Increasingly sophisticated and complex issues of national land administration and issues spanning a wide range of policy fields need to be studied from an impartial and neutral standpoint based on long-term perspectives, while taking an overall view of the whole. Whenever there is a problem awareness, conflict of interests, or other issue among the various stakeholders, JICE responds by coordinating views and gathering knowledge, etc.

■ Research directly linked to policy measure proposals, laws and ordinances, technical standards, etc.

Based on the past accumulation of data as well as technical capabilities and knowledge, JICE continuously researches important technical issues of national land administration and compiles the results thereof. These results are then used as basic data for proposing measures, and are reflected in laws and ordinances, technical standards, etc., at administrative level.
The aims of the Policy Research Institute for Country-ology are to further promote and systemize general research on social capital development, and to conduct research and make policy proposals on future directions for the appearance of national infrastructure and social capital development, among other issues, based on social trends both in Japan and abroad.

The Institute aims to be Japan's opinion leader on national land policies (development of national infrastructure and social capital) as a policy proposal body in that field.

For each of these six sectors of national land policy, JICE conducts research activities with a firm footing in the changing times, to identify what sort of services should be provided to the public as social capital in the first place.

### Main activities of the Institute in recent years

1. **Independent research**
   - As well as conducting unique research, including studies of new theories on flood control planning on the assumption of climate change and research on PPP and various other project implementation methods, JICE has also been disseminating results in forms such as reference guides on technical standards and developing simulation programs.

2. **Collaboration with academic experts, permanent committees**
   - JICE has also set up its own permanent committees with the aim of accumulating technical information, strengthening human networks with academic and other experts, and leading JICE's next operational development, etc. So far, three of these have been formed: the “Embankment Committee”, the “Coasts Committee” and the “Road Space Committee”.

3. **Lectures, etc**
   - JICE holds a symposium entitled “Discussions on the National Infrastructure and Social Capital of the Future,” led by academic experts commissioned by JICE as research advisers. Meanwhile, external experts are invited to give lectures hosted by the Institute.

4. **Transmitting information on national infrastructure and social capital**
   - JICE transmits information on national infrastructure and social capital in everyday language for the benefit of the general public. Examples include web pages introducing the characteristic features of Japan's national infrastructure in terms that can be understood by children from late elementary to junior high school age, live camera maps of national route highways and rivers, and civil engineering heritage maps.
Urgent issues facing Japan today include the growing frequency and severity of disasters associated with climate change, etc., and increased vulnerability to disasters due to progressive population aging and other changes in social circumstances. To address these issues, the Group conducts research in core technical fields related to flood control, water utilization and disaster prevention. This includes support for drafting policies and measures in the sectors of rivers and coasts and support for producing and revising technical standards, with the aim of protecting human life from disasters, ensuring the sustainability of socio-economic activity, and helping to create a society in which people can live in safety and reassurance.

Main research in recent years

1. Research on directions for social capital development connected with flood control in response to climate change
2. Comprehensive disaster prevention and crisis management measures
3. Ensuring the reliability of embankments and other river management facilities, etc.
4. Improving flood control stock maintenance and management technology

Of the research results produced by the Water Resources Policy Group, publications are disclosed on the JICE website (left). Besides this, the "River Technology Forum" has been set up as an avenue for exchanging views on these publications (right).

[URL] http://jice.or.jp/forum_river/modules/newbb/  *In Japanese only
Road Policy Group

A paradigm shift has been underway in the road sector, with subjects for discussion including the generalization of financial resources, delegation of ordinances on road structure standards, and road toll measures. When the Great East Japan Earthquake disaster occurred amid this situation, it underscored the importance of forming a road network including the extended Sanriku Expressway. Moreover, as aging and population shrinkage proceed apace, appropriate maintenance and effective use of increasingly obsolete social capital had come to be regarded as major tasks. However, the Sasago Tunnel roof collapse accident of December 2012 highlighted obsolescence as a particularly pressing task. As such, this Group is engaged in research on road policies for the future, with focus on the multiple functions of roads.

Main research in recent years

1. Research on measures for drafting and implementing new road policies and road plans
2. Research on road structure standards
3. Research on more efficient logistics
4. Research on promoting effective traffic safety measures
5. Research on upgrading road management and disaster crisis management plans
6. Research on the use of roads in social experiments, etc.
7. Research on “roadside stations”
8. Research on public-private collaborative services using ITS
9. Research on support for pedestrians using Ubiquitous technology

Expressway development will produce 123 times the current redundancy between Tokyo and Nagoya

(left) Now (Shin-Tomei Expressway opened inside Shizuoka Prefecture)
(right) In future (14,000km of roads developed)

Tokyo-Nagoya (now): 60 routes
Tokyo-Nagoya (in future): 7,390 routes

Calculation of detour routes between Tokyo and Nagoya – now and in future (when development of 14,000km of high-grade highway is complete)

The JICE website includes an “Information site on technical standards for road structure”.

【URL】 http://www.jice.or.jp/services/roads/info  *In Japanese
City, Housing and Regional Policy Group

The circumstances surrounding cities, housing and regions are going through some major upheavals, including the increasing desire for safe and affluent lifestyles amid population aging, declining birthrates and population shrinkage, and the advance of characteristic initiatives in collaboration with the private sector. To address these issues, we conduct research related to drafting policies for support of local revitalization efforts, measures for sustainable homes and local planning, measures to address dense urban areas, and studies to achieve safe and reassuring lifestyles, among others.

Main research in recent years

1. Town planning with public-private collaboration: Using private vitality to create prosperity
2. Town planning with intensive urban structure: Renovation and development of city centers, etc.
3. Town planning with urban and local regeneration, etc.: Policy evaluation of urban regeneration and development plans, etc.
4. Barrier-free town planning: Promotion of barrier-free environments in an aging society
5. Safe town planning: Forming robust cities and regions
6. Town planning with urban transport: Ensuring smooth transport inside cities
This Group undertakes research and public benefit projects on quality assurance and improvements to technical capability in public procurement and social capital development, improvements to construction production systems in public works, and development of technical standards, as well as promoting the development of and disseminating technologies that help to develop social capital and manage national infrastructure.

Priority research in recent years

1. Research to assure the quality of public works
2. Research to improve the public works implementation process
3. Research to promote technology development in the construction sector
“JICE REPORT”, website

Twice a year, JICE publishes “JICE Reports” with contents including JICE research reports on contemporary and technical issues in national land administration, as well as business reports. Details can also be found on the JICE website.

JICE also publishes various information on the results of its main research, together with the outcome of the “Infrastructure Technology Development Awards”, “Research and Development Grants” and others on the JICE website, in books and elsewhere. In this way, JICE transmits information to society at large.

Holding lectures, etc.

“Technology Research Presentation Meetings” are held once a year with the aim of introducing JICE’s pioneering and broad-ranging research, among others. Meanwhile, of the results obtained in independent research and commissioned research, JICE holds lecture meetings, exhibitions and other events to publicize those that are particularly worthy of disseminating and transmitting to the general public.

Publications, books for lending.

The JICE website gives a list of books and others published by JICE. Some may be obtained free of charge by downloading PDF files, some bought from the publisher, and some borrowed from JICE.

Promoting overseas surveys and international cooperation

JICE conducts overseas surveys to monitor foreign legislation on construction projects and technology, schemes for project implementation, trends in leading-edge technology, etc., with the aim of reflecting these in its own research.

As international cooperation and exchange efforts, JICE holds a Construction Technology Seminar once a year in collaboration with the Korean Institute of Construction Technology (KICT). JICE also promotes mutual cooperation based on an agreement with the World Meteorological Organization (WMO), which promotes integrated floodwater management.
Organization

JICE’s staff consists of 12 officers (3 full-time) and 89 employees. Of the latter, 79 are engineering staff and 10 are administrative staff.

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<td>President</td>
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<td>(Representative director)</td>
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* Policy Research Institute for Country-ology consists of multiple affiliation staff

(as of July 1st, 2019)
Transport Access to the JICE Office

By Subway
- Kamiya-cho Station on Hibiya Line: two minutes walk from Exit 3.
- Toranomon Station on Ginza Line: nine minutes walk from Exit 4.
- Onarimon Station on Toei-Mita Line: eight minutes walk from Exit A5.

By Car
- By the fourth traffic signal, driving towards Kamiya-cho from the Toranomon Junction on Sakurada-Dori Avenue (National Route 1).

Japan Institute of Country-ology and Engineering, General Incorporated Foundation
Nissay Toranomon Building, 12-1 Toranomon 3-chome Minato-ku, Tokyo 105-0001
http://www.jice.or.jp

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<tr>
<th>Division</th>
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<td>03-4519-5000</td>
<td>03-4519-5010</td>
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Date of Certification: 17th June, 1998 Renewed 29th May, 2013

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