Community redesigning to achieve healthy ageing and well-being in the super-aging society

超高齢社会を見据えた未来予想図
～人生100年時代を生き抜くために～

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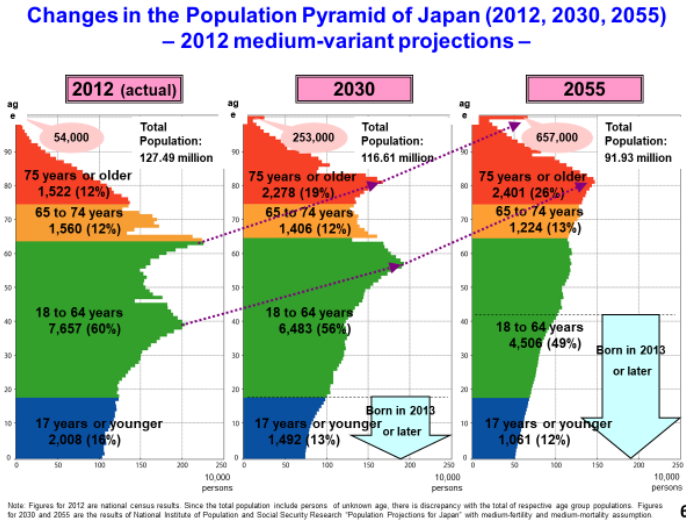
Institute for Future Initiatives

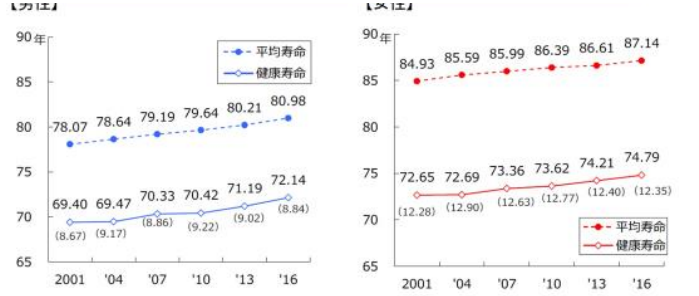
Background (1)

- ✓ Globally, **life expectancy is rising**, and especially in East Asia (including Japan) as well.
- ✓ **Huge gap** between 'Average life expectancy' and 'Healthy life expectancy' is remained. (Ave. 10y)
- ✓ Japan is promoting the bottom-up of two policies **"Long-term care insurance systems"** and **"Community-based integrated care system"**.
- ✓ In addition, Healthy life expectancy should be extended **to realize healthy longevity/aging**.



平均寿命と健康寿命の差：推移

Huge gap between 'Average life expectancy' and 'Healthy life expectancy'



（注）（ ）内の数値は、平均寿命と健康寿命の差。
（資料） 2016年平均寿命は厚生労働省「2016年簡易生命表」。2016年健康寿命は厚生労働省「2016年簡易生命表」と「2016年国民生活基礎調査」を使って、厚生労働科学研究「健康寿命における将来予測と生活習慣病対策の費用対効果に関する研究」による計算法で筆者が計算。

Background (2)
Numbers of elderly, especially “Male”, with social problems are increasing

- *Social isolation*
- *Secluded*
- *Solitude*
- *Distress*
- *Eating alone*

or

Gathering

Our gerontological action research: Overview

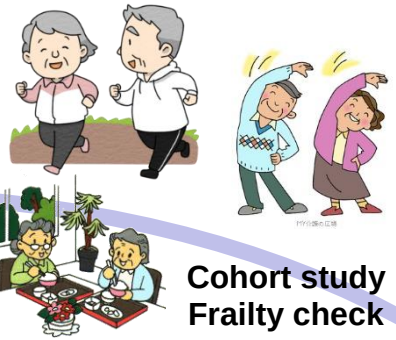
IOG Iijima K

GeronTechnology
Assistive robot
Mobility assistance

Senior Job working after retirement

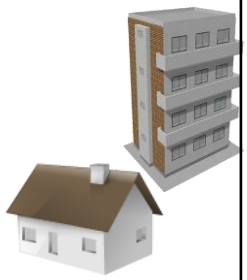
【Cloud】
Work sharing
Job matching

Frailty prevention



Cohort study
Frailty check
Gathering places
Industry-Goverment

Diverse housing (way of dwelling)

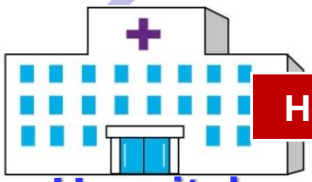


Evaluation

Quality of Life (QOL)

Quality of Community (QOC)

Cost of social security



Hospital

Hospital ⇒ Home

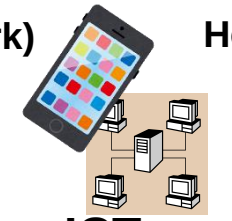
Community

Living support

By residents playing major roles

Integrated community care system

IPW (Inter-professional work)



ICT Network

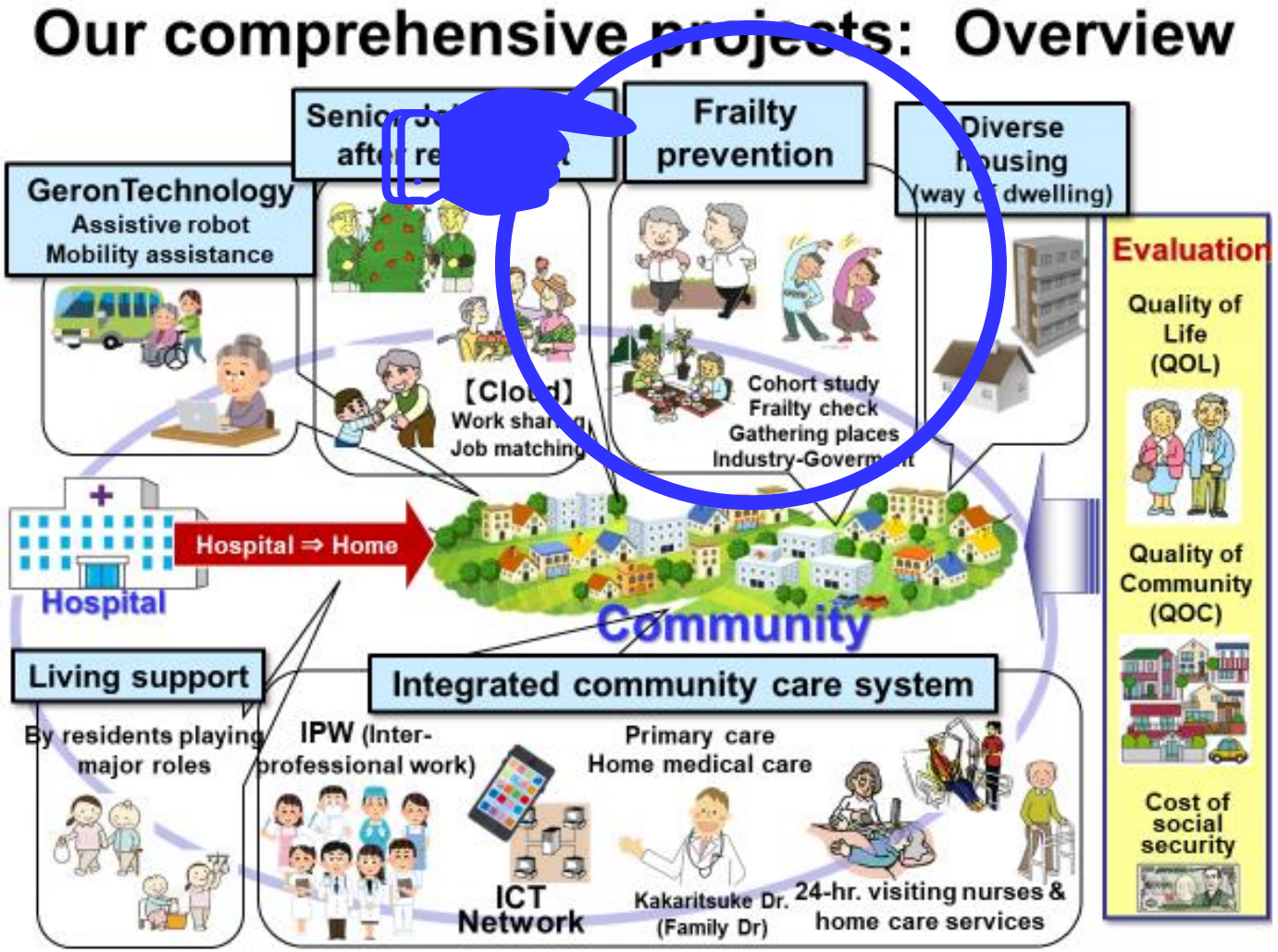
Primary care
Home medical care

Kakaritsuke Dr.
(Family Dr)

24-hr. visiting nurses & home care services

【Topic 1】 Frailty prevention

by the residents playing major roles



Citizen activity of frailty prevention

(Evidence-based Frailty prevention activity by senior resident supporters playing major roles)

1 【Kashiwa study】

Large-scale Longitudinal cohort study

【All independent elderly citizens survey】

Detection of regional difference

Community diagnosis

N=50,000 Large-scale

2 Development of 【Frailty check】 activity conducted by healthy elderly supporters

w/o professional staffs

Citizen Supporter training

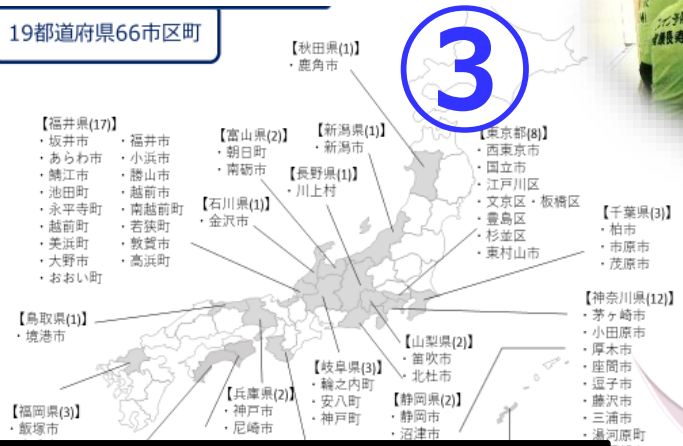
Check and education

(nutrition, oral frailty, physical activity, social participation)

Expending throughout Japan - A national campaign -

19都道府県66市区町

3



Current 82 municipalities joined

Develop the cultivating system of 'Healthy Elderly Citizen Supporter'

Pull male elderly in the gathering activities

4

- **Community diagnosis**
- **AI analysis**
- **Collaboration with industries and municipal government**

Frailty prevention activity: Comprehensive screening check by elderly themselves

Frailty prevention activity in COVID-19 pandemic

air ventilation, frequent disinfect with alcohol

Grip power

speaking smoothly

Eleven check

Finger-ring test

One leg Chair stand

Skeletal muscle volume

To prevent frailty from earlier phase in the community setting,

Importance of “Three Pillars (The Trinity)"

Nutrition

(Diet/ Oral functions)

Social Participation

(Employment, leisure activity, volunteering, gathering place, etc)

Physical activity

(Social daily activity, Exercise, etc.)

（東京大学 飯島勝矢： フレイル予防ハンドブックより）

We have to let the older peoples raise “self-awareness” and “awareness building” for prevention of sarcopenia-related frailty from earlier stage

Development of "Hybrid-style" frailty prevention activity by residents playing major roles

Real gathering-style ⇄ **Online-style**

住民主体の気づきの場・集いの場

コミュニケーションを取りながら行うフレイルチェック！

Follow-up

Real gathering ⋯→ **Online** ⋯→ **Real gathering**

活用１持続性　**活用２**啓発　**活用３**有事

Collaboration with industries, academia and local government (frailty prevention activity)

Frailty check-up was conducted in **Large-scale shopping center**

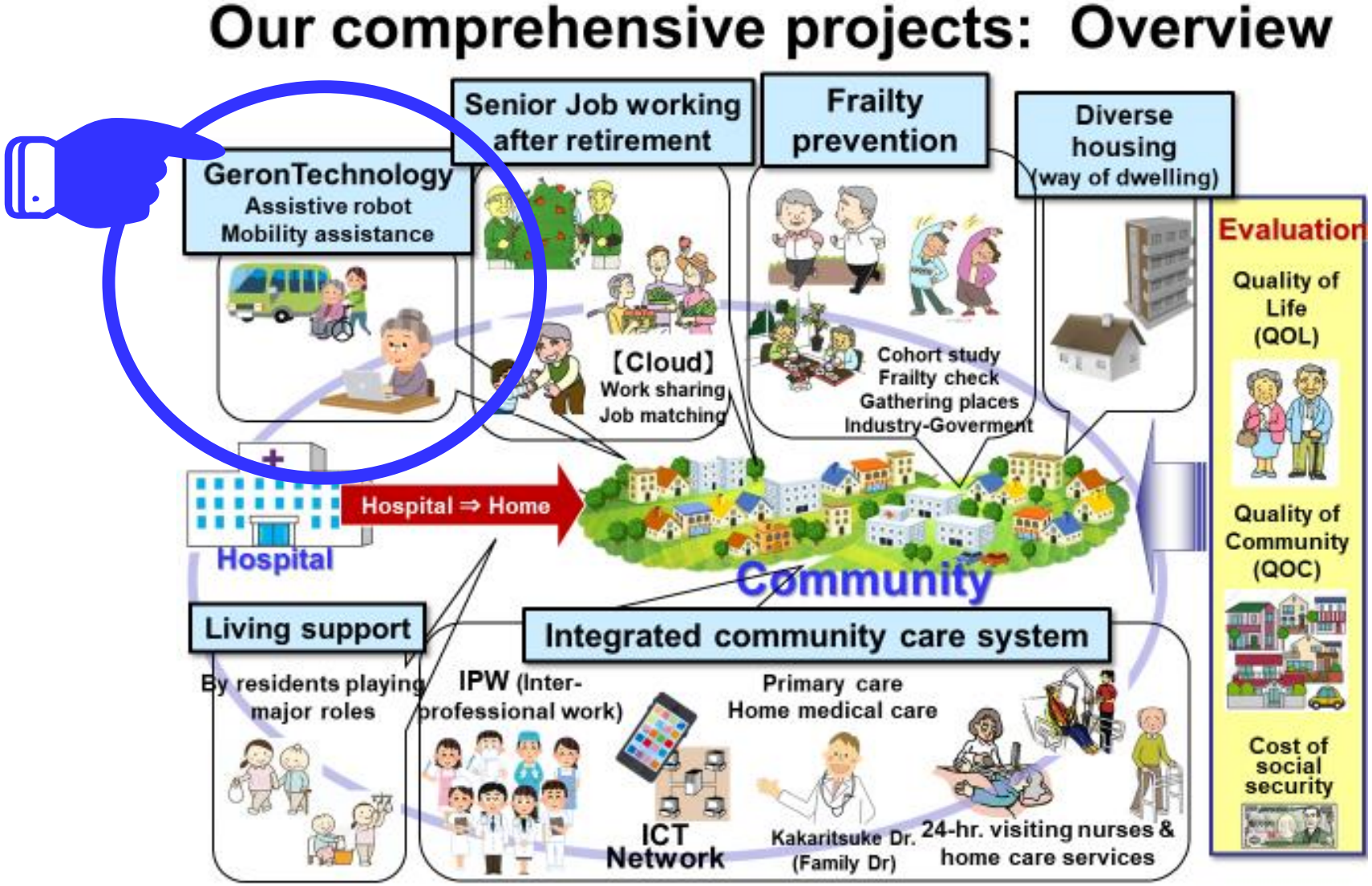
フレイルチェック体験会

産業界の場で住民同士

フレイル予防に　　するブースを設置

食品売場で販促の連動

【Topic 2】 Geron-Technology



Gerontechnology

Mobility Technology | SAR Technology | IoT ICT

Assistive Technology | Sensor technology for daily living

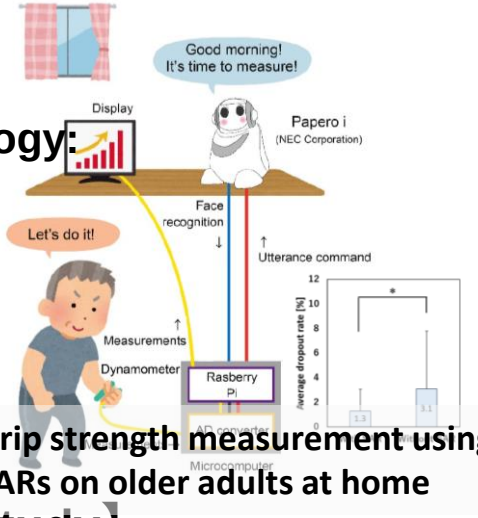
Dementia care technology:

Fall-prevention system

Weighted blanket

Socially assistive robot technology:

Living with socially assistive robot



Grip strength measurement using SARs on older adults at home

Mobility Technology:

Frailty prevention vehicle

Touch slide control

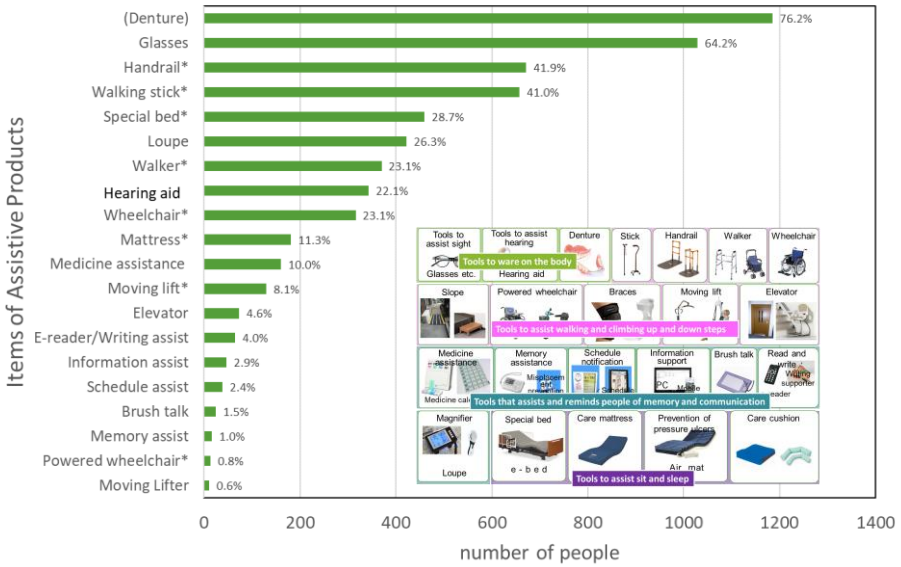
Public personal mobility*

Fall risk analysis

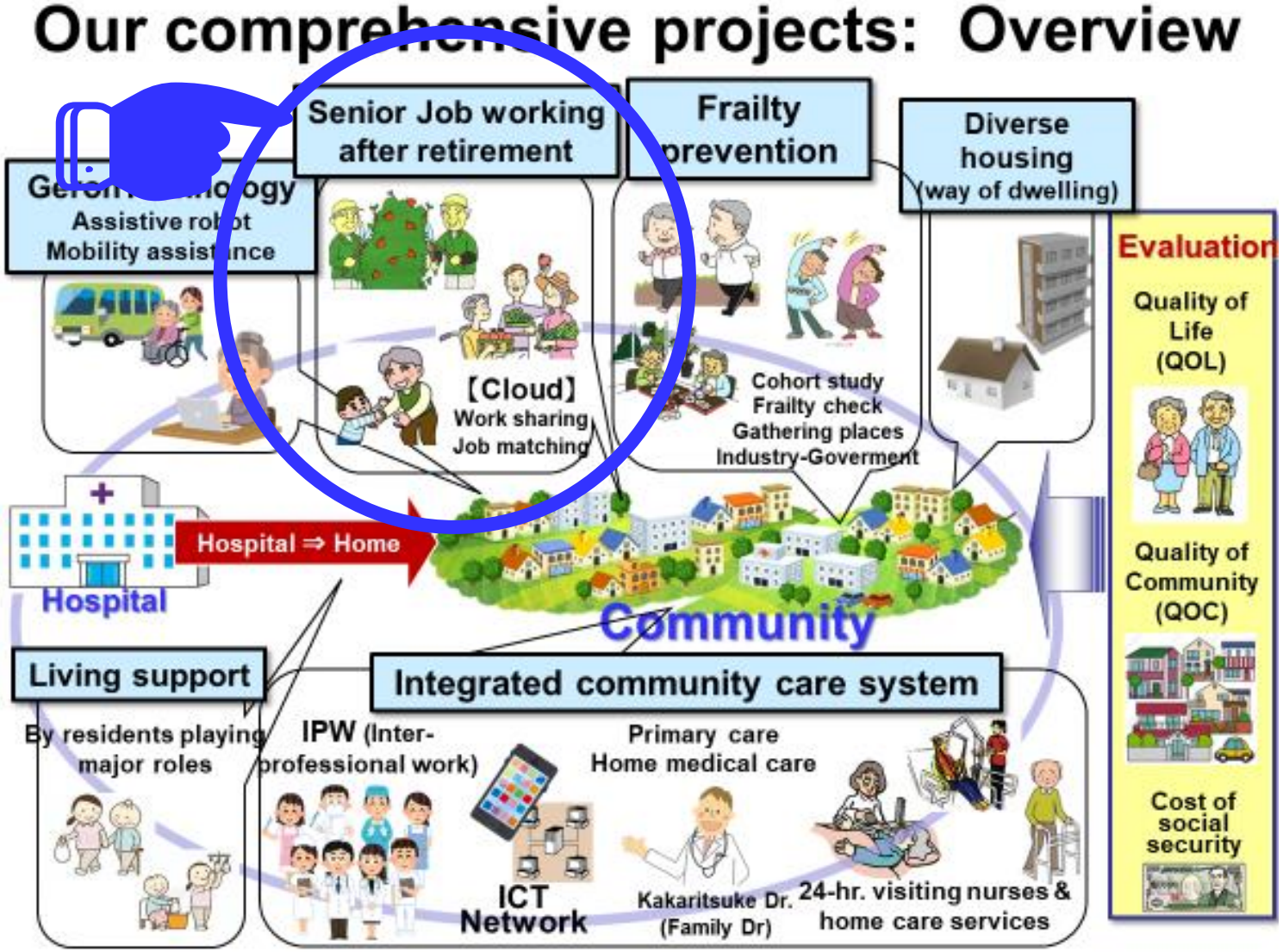
*Low-speed automated driving mobility-based service system

【Kashiwa 90 Study】

What kind of assistive products the oldest-old people use?



【Topic 3】 Senior Job Working



How can we promote “Senior job working” for the second life after retirement

How can we let the elderly discover **a meaningful in their life**?


Hydroponic culture


Cleaning


Agriculture


After-school care for children

Sustainable platform for senior working with worth living


Care, House servant


Agriculture


Private school for English study

Aim: ①Job-matching ②work-shearing:

Senior job working supported by application (ICT)

GBER : Gathering Brisk Elderly in the Region

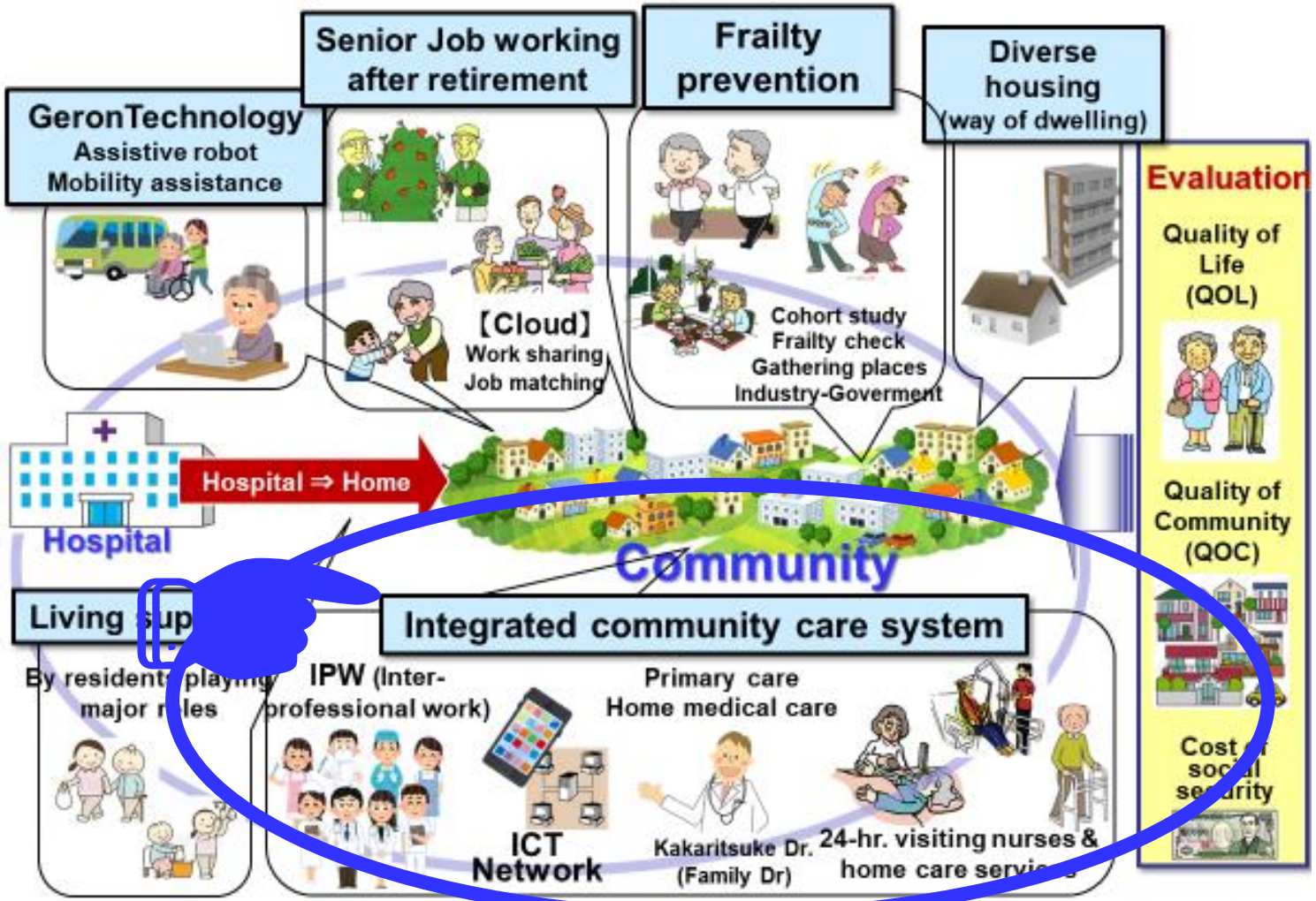
（地域の元気なシニアを集める）

Project by Prof. Atsushi Hiyama (The Institute of Gerontology, The Univ of Tokyo)

https://www.u-tokyo.ac.jp/focus/ja/features/z0508_00004.html

【Topic 4】Integrated Community Care System

Our comprehensive projects: Overview



Integrated Community Care System

※National Long-Term Care Insurance system was launched in 2000

【Implementation】

- Promotion of Home medical care
- Home-visiting nurse function
- Strong cooperation between **medical care and long-term care**
- Inter-professional work (**IPW**)/ Inter-professional education (**IPE**)
- Information and Communication Technology (**ICT**) network
- Daily living support

Comprehensive and Integrated Community Care System

Medical service

- Acute phase Hp
- Subacute phase Hp
- Rehabilitation Hp

- Community clinic
- Primary care physician

Nursing care

- Day service facility
- Home visit nursing station

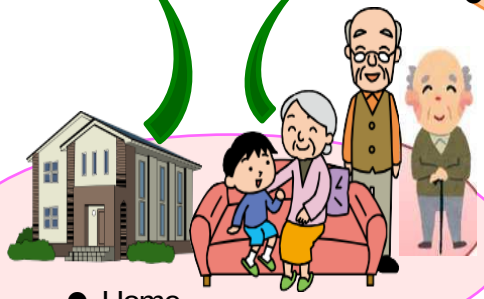
etc.

- Lon-term care health facility
- Nursing home
- Fee-based home
- Group home

etc.

Healthcare planning

- Community General Support Center
- Care manager



- Home
- Fee-based home etc.

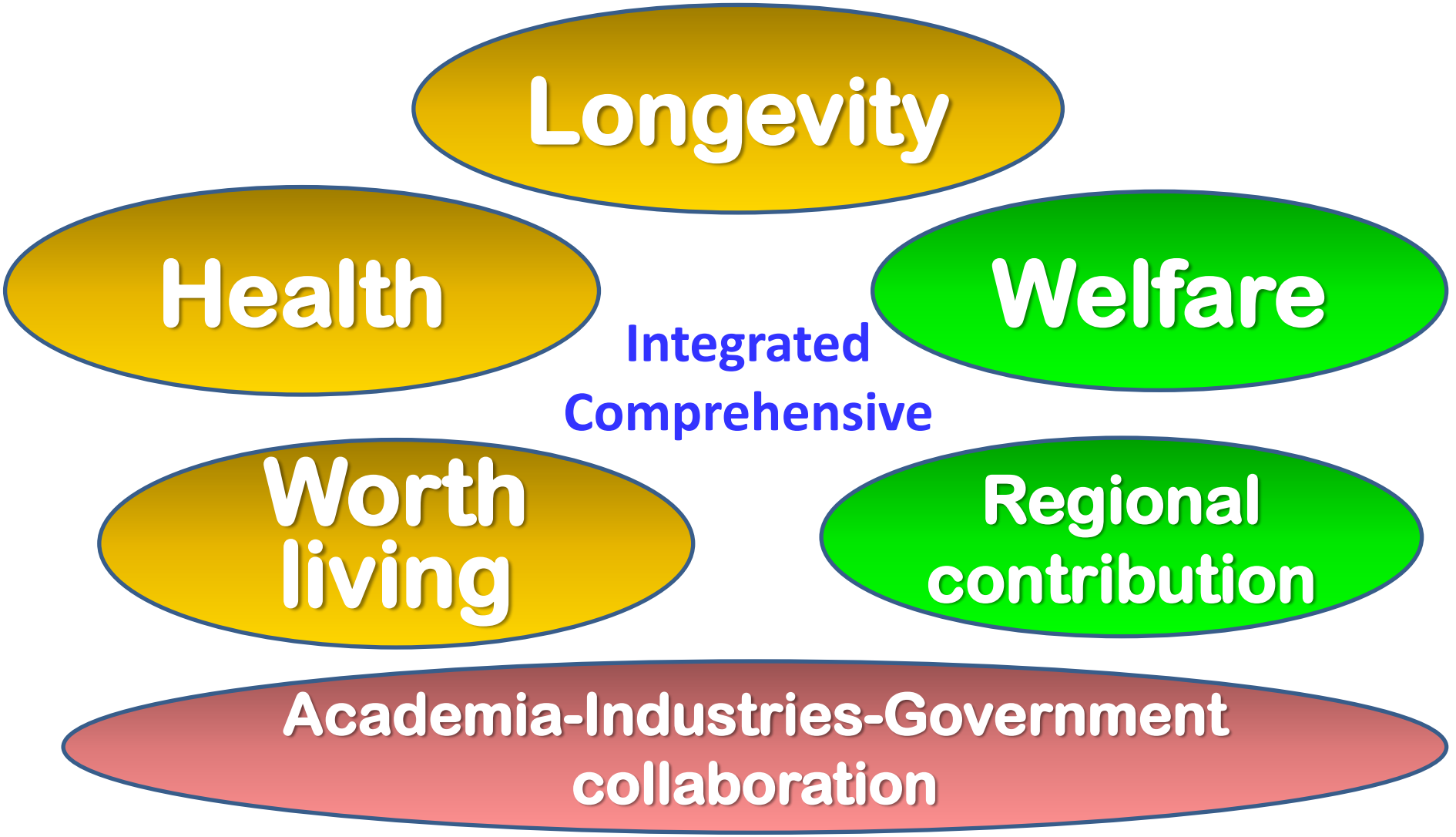
Housing/Living

- Community club
- Community General Support Center

Living support/Prevention

This system provides necessary services within 30-minute walking distance

Our aim in { Age-Friendly Society
Community Re-designing



Planning The 100-Year Life

Industry-Academia-(Municipal) Government collaboration towards an “Inclusive society”

65　70　80　90　100 (y.o.)

Active health・Frailty prevention

Living support（watch, consultation）

Long-term care, Integrated community care

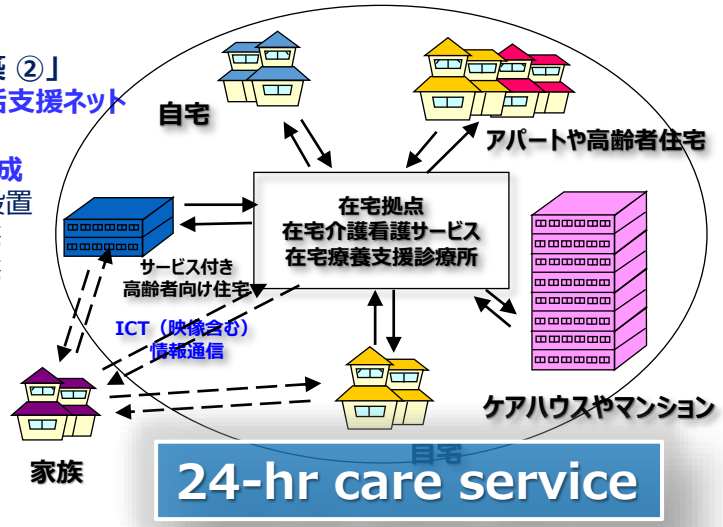
Home medical care

Inclusive Society Gathering places

「社会インフラ構築 ①」
- 道路・交通移動手段（ウオーキングロード）
- 公共サロン ・**真の居場所**
- 集会・交流・イベント
- 空家対策
- 防災（安心・安全都市）

「住民による地域社会活動」
- **相互の支え合い活動**
- **就労、ボランティア**
- **地域見守り・相談**
- その他の生活支援（買物、配食、ゴミ処理等）
- 各種消費活動

「社会インフラ構築 ②」
- **フレイル予防・生活支援ネットワーク形成**
- **市民サポーター育成**
- 地域コンセルジュ設置
- 民間事業との連携
- 右図拠点との連携

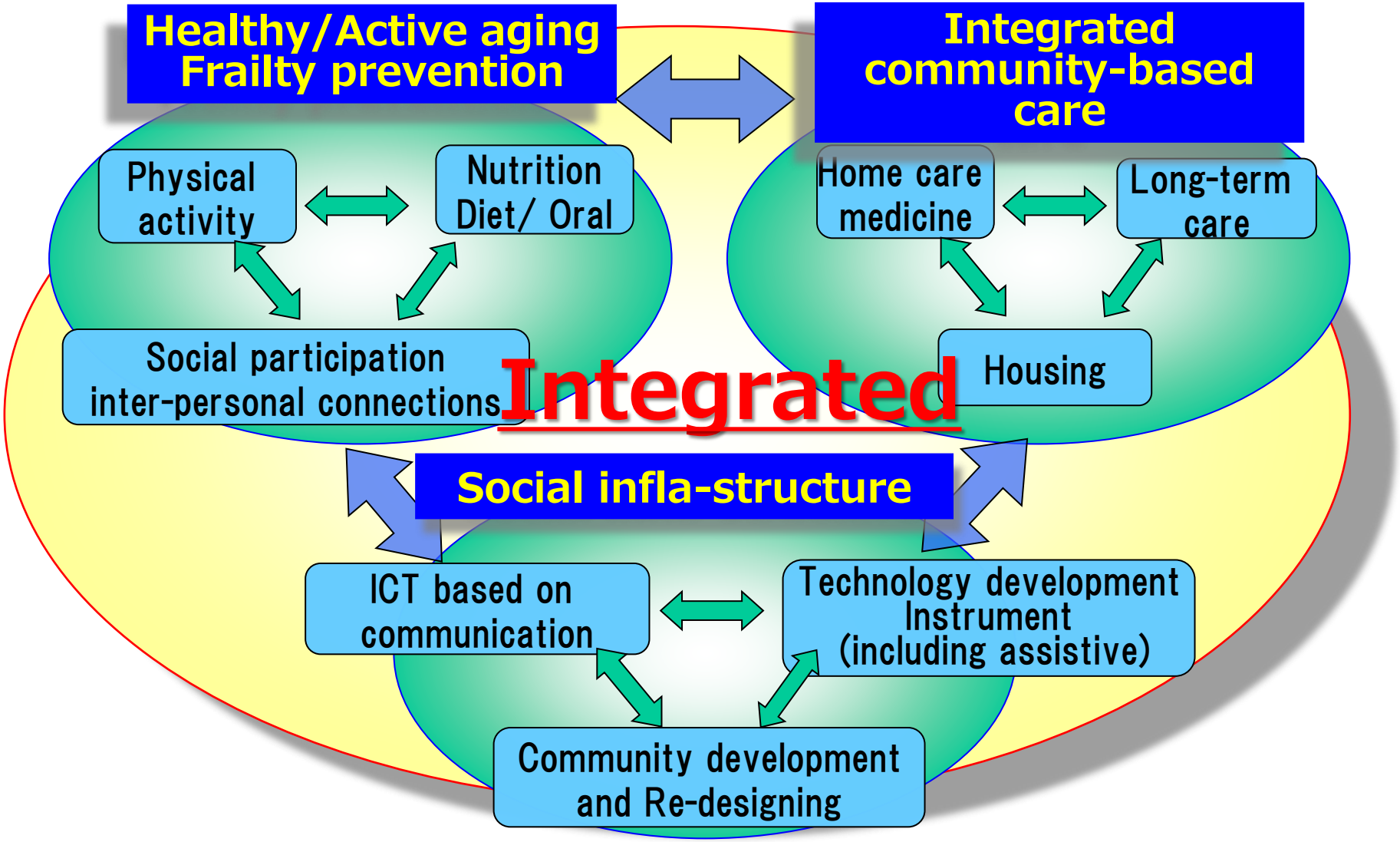


standardization

Information system construction

（The Univ of Tokyo, IOG Kamiya T, Iijima K ）

“Action Research” based on collaboration between Academia, Industries, Municipal Government and Citizen



DX and ICT for Healthy Ageing

Lessons learnt from JAGES

Japan Gerontological Evaluation Study

Katsunori Kondo, PhD, MD

Japan Agency for Gerontological Evaluation Study

Center for Preventive Medical Sciences, Chiba University

CHIBA UNIVERSITY

National Center for Geriatrics and Gerontology, Japan

World Health Organization

Centre for Health Development

http://www.who.int/kobe_centre/mediacentre/jages/en/

Interventions on urban health | Urban health emergencies | Ageing | News and events | Publications

New Project Featuring Japan's Good Practice in Research-to-Action for Healthy Ageing

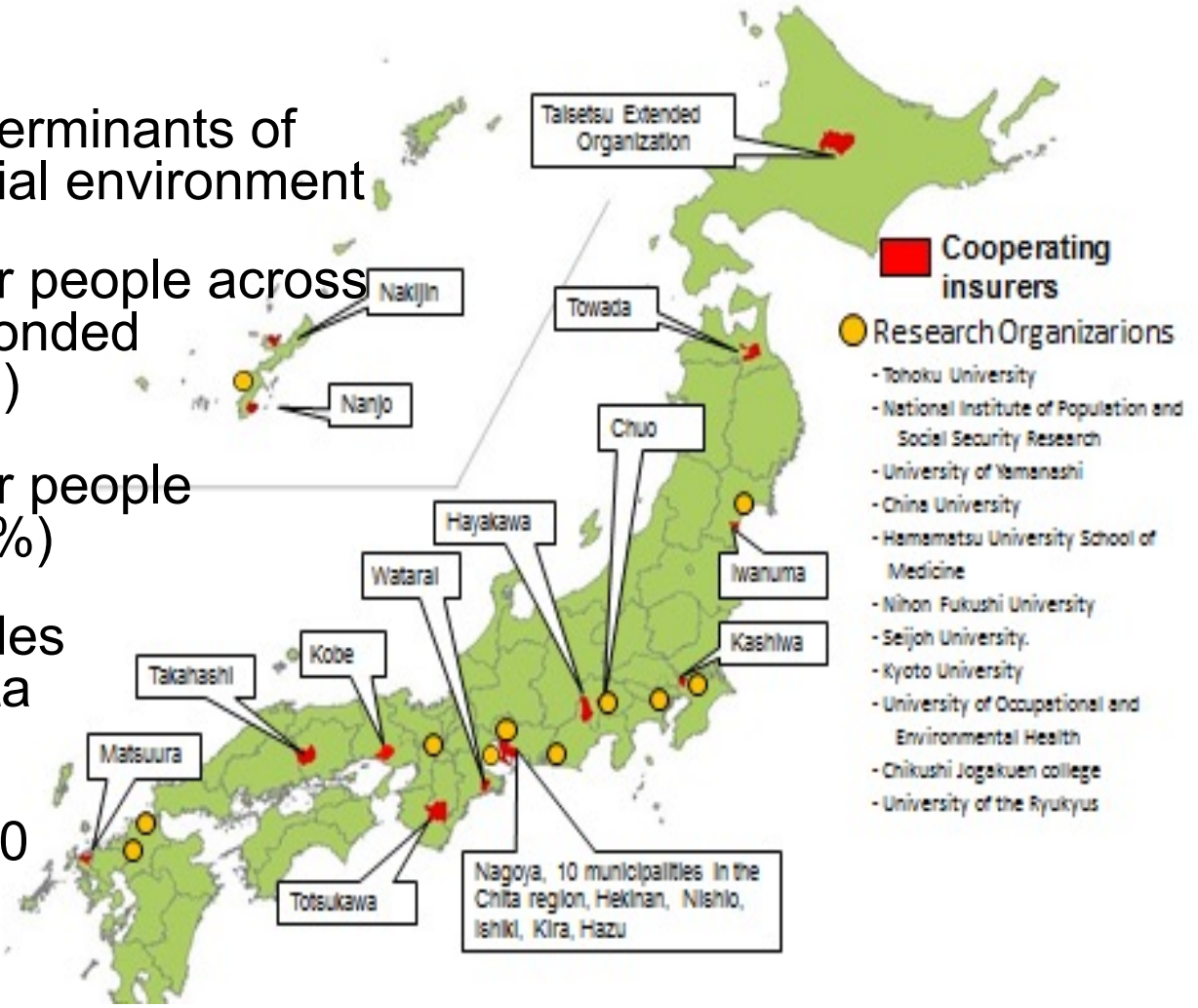
Japan Gerontological Evaluation Study

JAGES

The World Health Organization Centre for Health Development (WHO Kobe Centre) and the National Center for Geriatrics and Gerontology (NCGG) are pleased to announce that they will commence a collaborative research project to advance universal health coverage (UHC) and healthy ageing in Japan.

JApan Gerontological Evaluation Study (JAGES)

- One of the few population-based gerontological surveys in Japan Established in 1999
- Focused on social determinants of health (SDH) and social environment
- In 2010- 112,000 older people across 31 municipalities responded (response rate: 66.3%)
- In 2013- 138,000 older people responded. (RR: 70.3%)
- Another dataset includes 105 municipalities' data with less items
- In 2016- about 200,000 responded (RR: 70%)



Contents of Questionnaire

Active Aging

Health
- Comorbidity
- Smoking/Alcohol
- BMI
- Teeth/Oral functions
- Fall

Psychological
- Depression:GDS15
- Self rated health
- Sense of Coherence

Functions
- ADL; IADL

SDH Social Determinants of Health

Socio economic status
- Household type
  Alone/Cohabitance
- Educational attainment
- Income

Social role
- Employment
- Housework
- Volunteer

Social Support
- receive / provide
- emotional/instrumental
- abuse

Social participation
- Type of organization
- No. of organizations

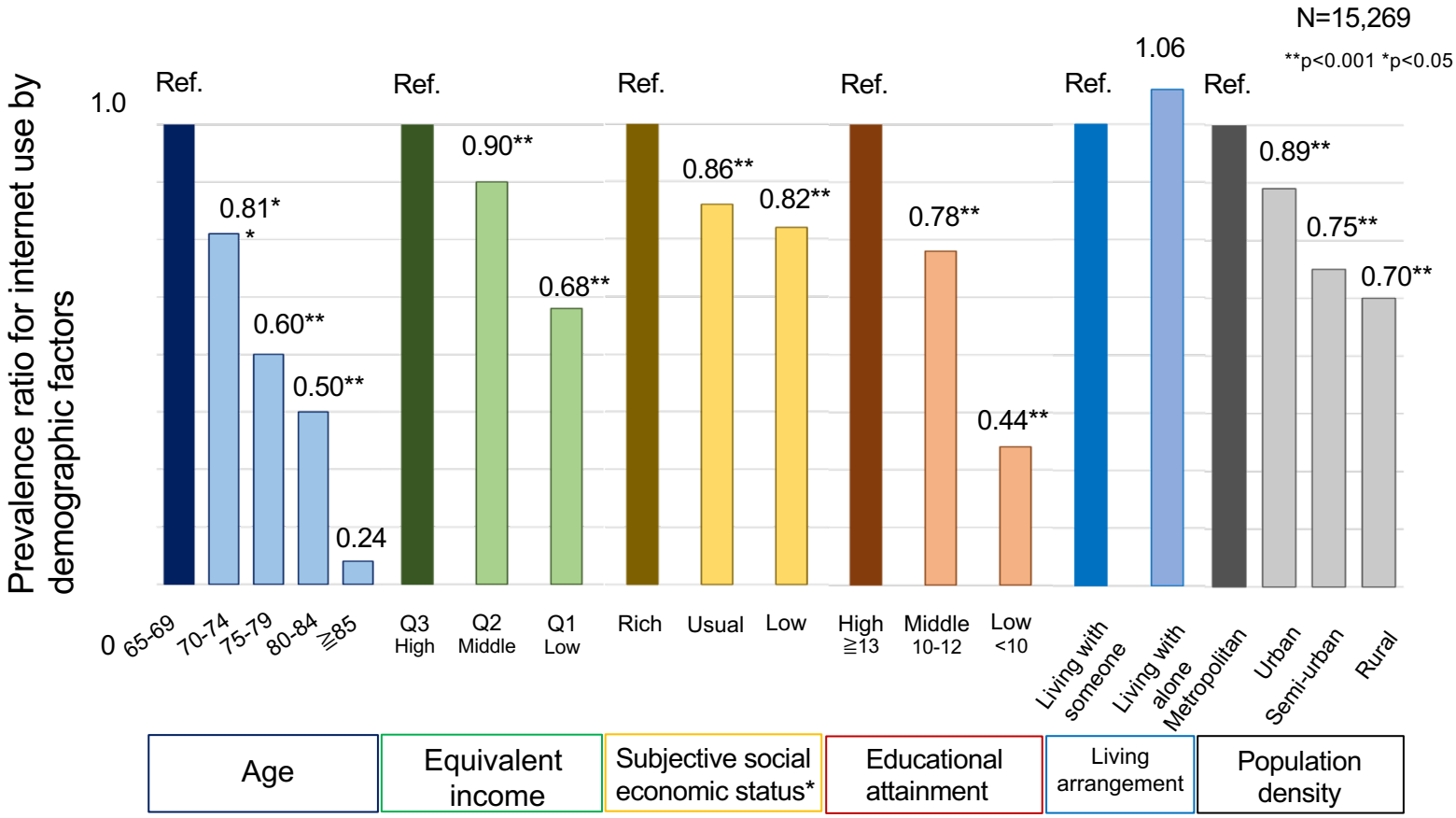
Social capital
- perceived trust, reciprocity
- structure: participation in community organization

Others
- Internet use

Characteristics of *J*AGES

- Large sample (n ≧ 100,000) & researchers
  - Response rate were 66.3～70.2%
  - More than 50 researchers use JAGES data
- Multi-dimensional variables
  - Bio-psycho-social factors including SDH & SC
- Cohort studies / repeated panel surveys
  - Reliable (municipalities') endpoint data
  - Natural experiment
  - Evaluation of intervention
- Community-Based Participatory Research
- Using Digital Data wisely for Healthy Aging

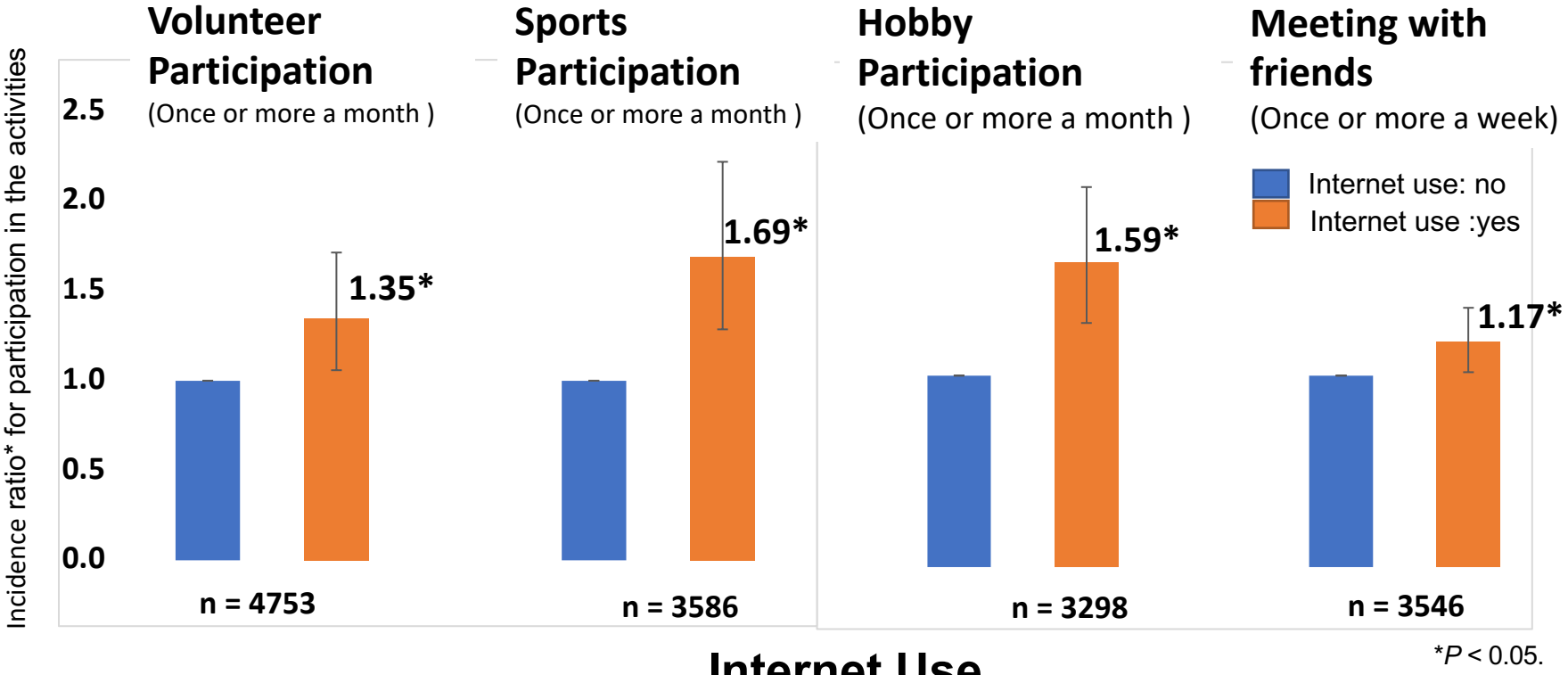
Internet use by demographic factors



Kondo N, Koga C, Nagamine Y editors. Ota A, Shobugawa Y, Cable N, Tajika A, Nakagomi A, Chishima I, Ide K, Ueno T, Fujihara S, Fujinami Y, Yasufuku Y, and Ando Y. Understanding the Role of Internet Access on Health and Health Equity toward Healthy Ageing in the Western Pacific Region. 2021, ISBN 978-4- 9910804-3-2

Social participation by internet use: Longitudinal study 2016-2019

Internet users are more **socially active 3 years later** than non users



Adjusting for age, sex, equivalent income, educational attainment, working status, marital status, living arrangement, self-reported medical condition, self-rated health, activity of daily living, depressive symptoms, frequency of going out, population density.

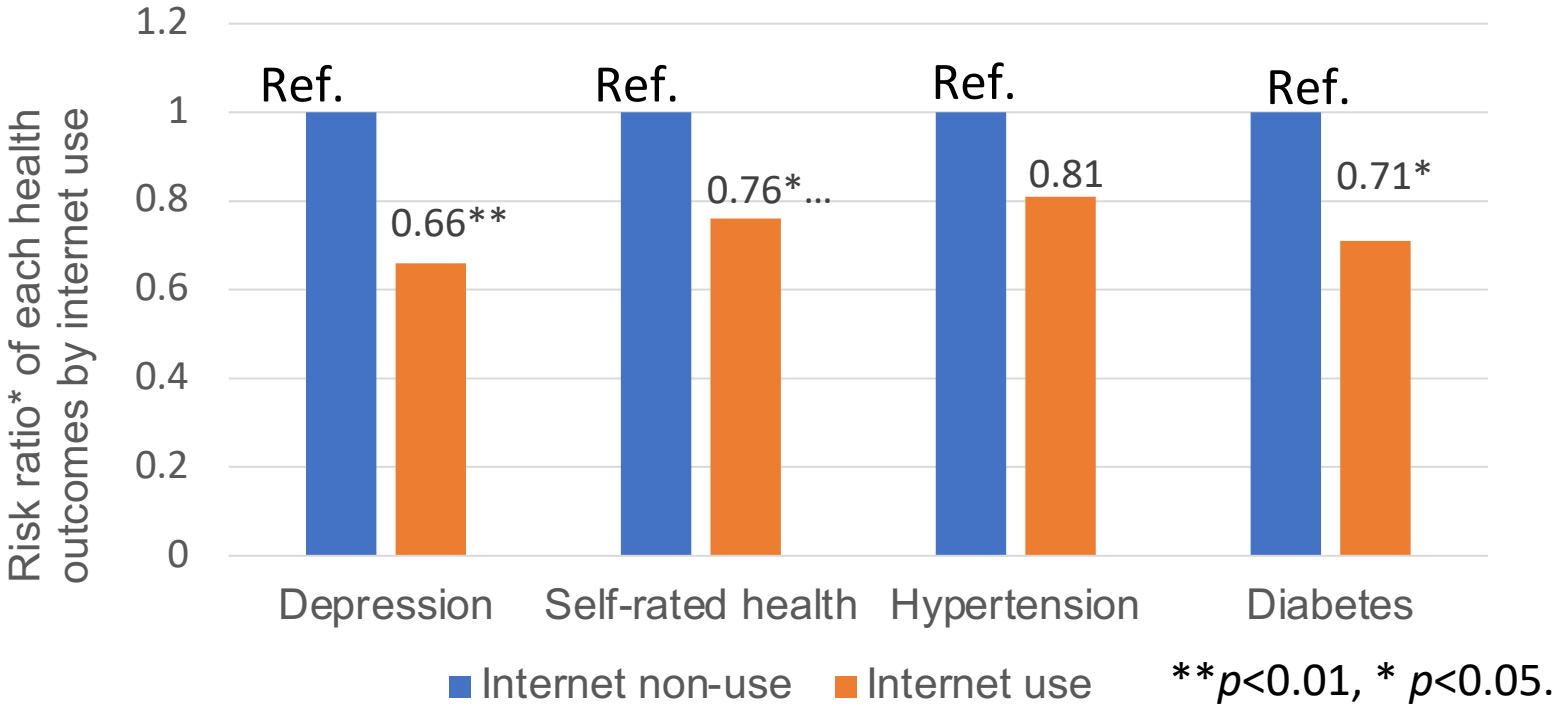
*Prevalence Ratio indicates how large is the prevalence of an event/outcome in one group of subject/individuals relative to another group.

The association between internet use and social participation after 3 years

Health outcomes by internet use : Longitudinal study 2016-2019

Our findings

Internet users have **less risks** than non-users



Adjusted for age, sex, income, educational attainment, working status, living arrangement, preexisting disease (hypertension, diabetes, cardiovascular disease, stroke, cancer, respiratory disease), self-rated health, activities of daily living, depression, population density.

*A risk ratio (RR) compares the risk of a health event among one group with the risk among another group.

The association between internet use and health outcome

Publications and inputs

Feb. 2022

- Papers in English: 276
- Papers in Japanese: 385
- Books: 22
- Academic Awards: 74
- Inputs into government & media
  - Central gov.: Cabinet office, Ministry of Health/ Sports/Land/Industry
  - Local gov.: Yokohama, Nagoya, Kobe, etc.

JAGES met Urban HEART in 2011

Urban Health Equity Assessment and Response Tool (Urban HEART)

World Health Organization

urban HEART

+

Japan Gerontological Evaluation Study

AGES

JAGES : Japan Gerontological Evaluation Study

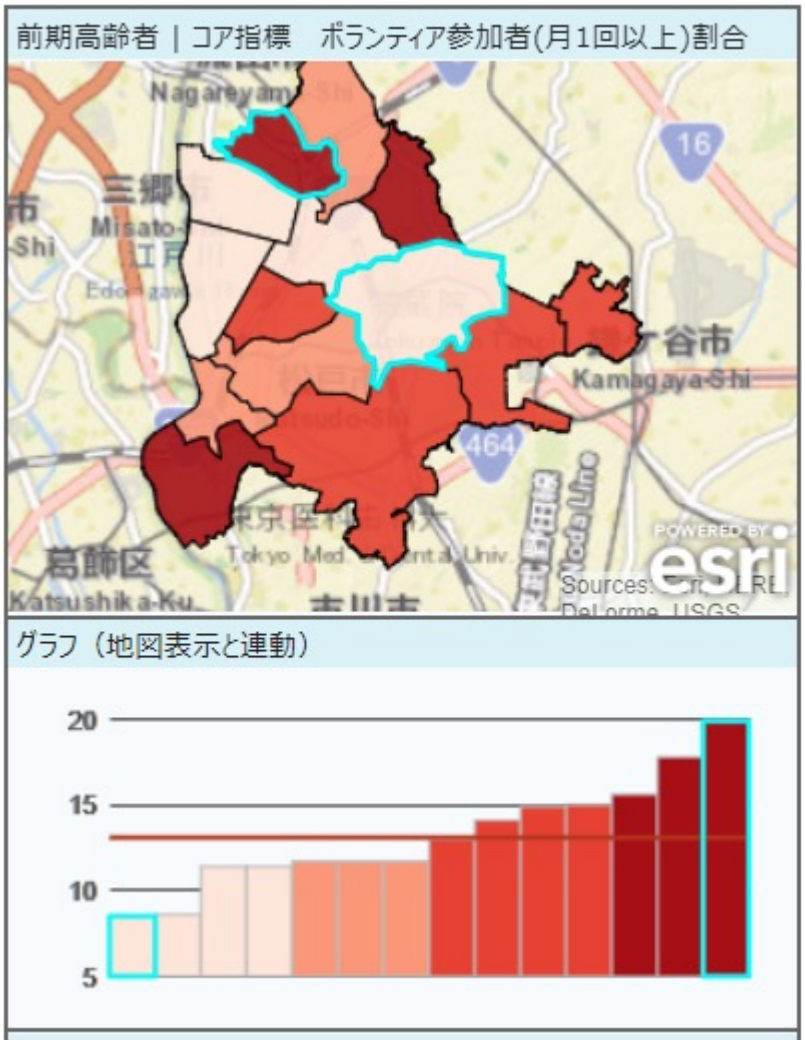
- Urban HEART (Health Equity Assessment and Response Tool) is a management tool for all ages which is developed by WHO.

- We have developed a version for the older population & developed countries: JAGES HEART 2011

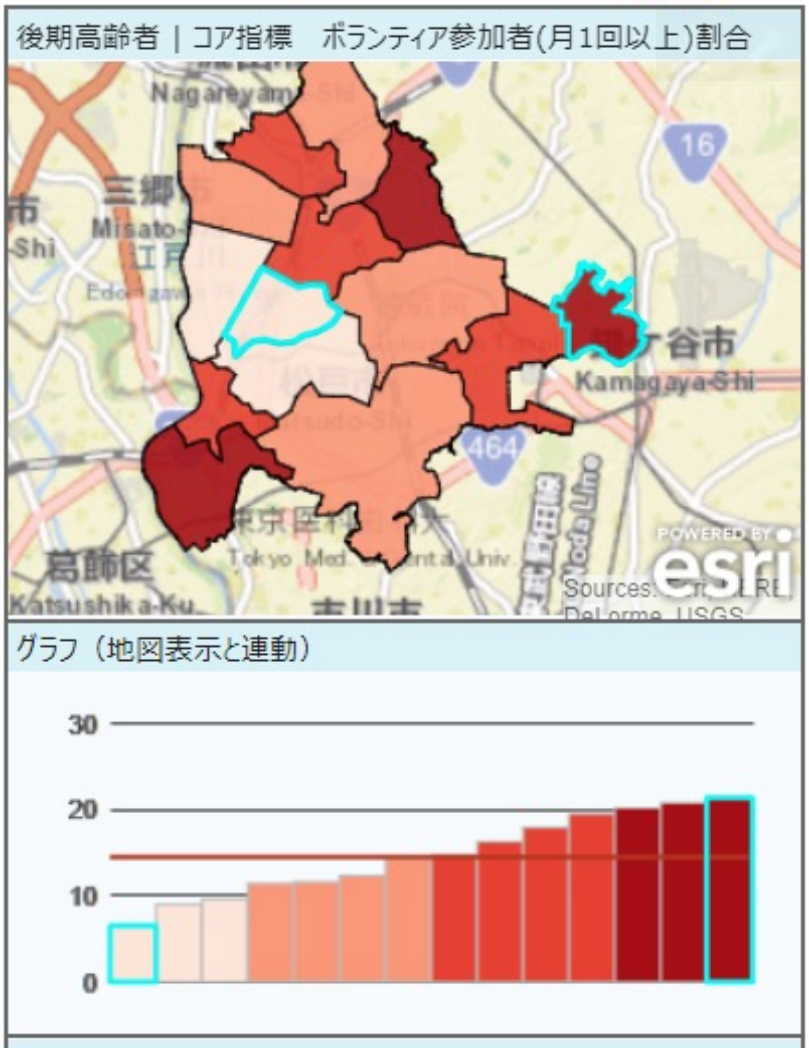
JAGES2016 コア指標

volunteering (1/month+)

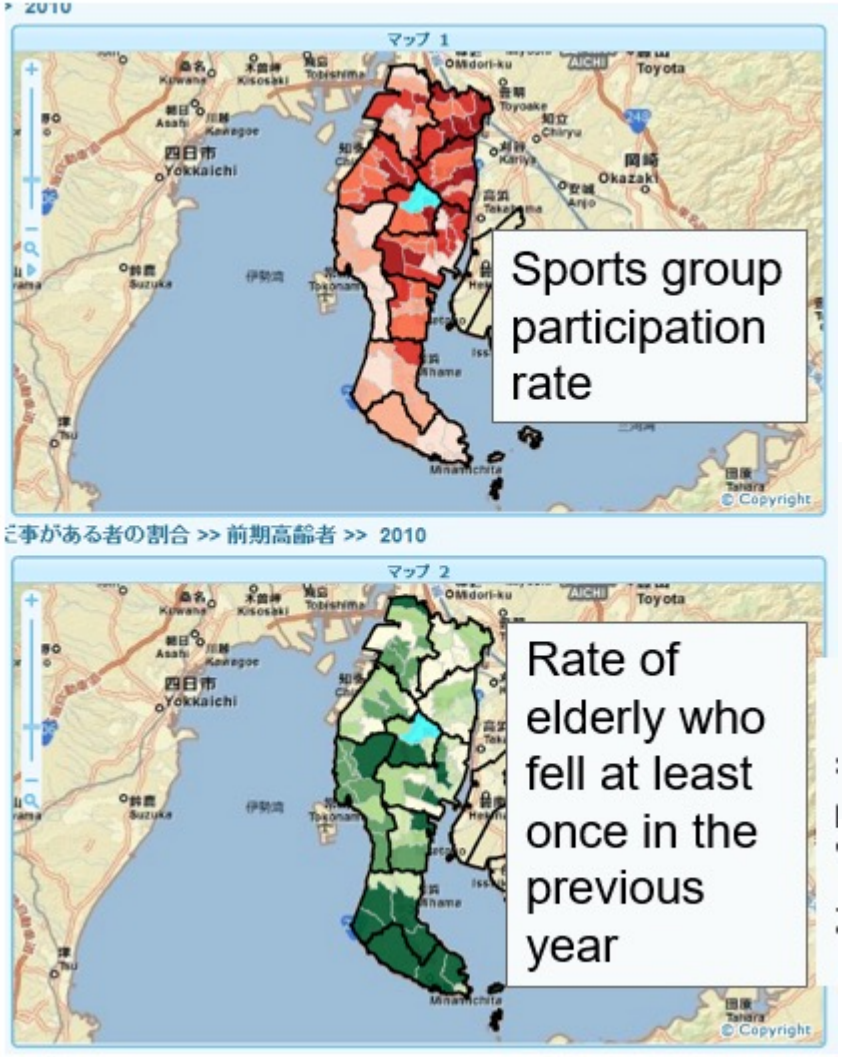
65-74 y.o.



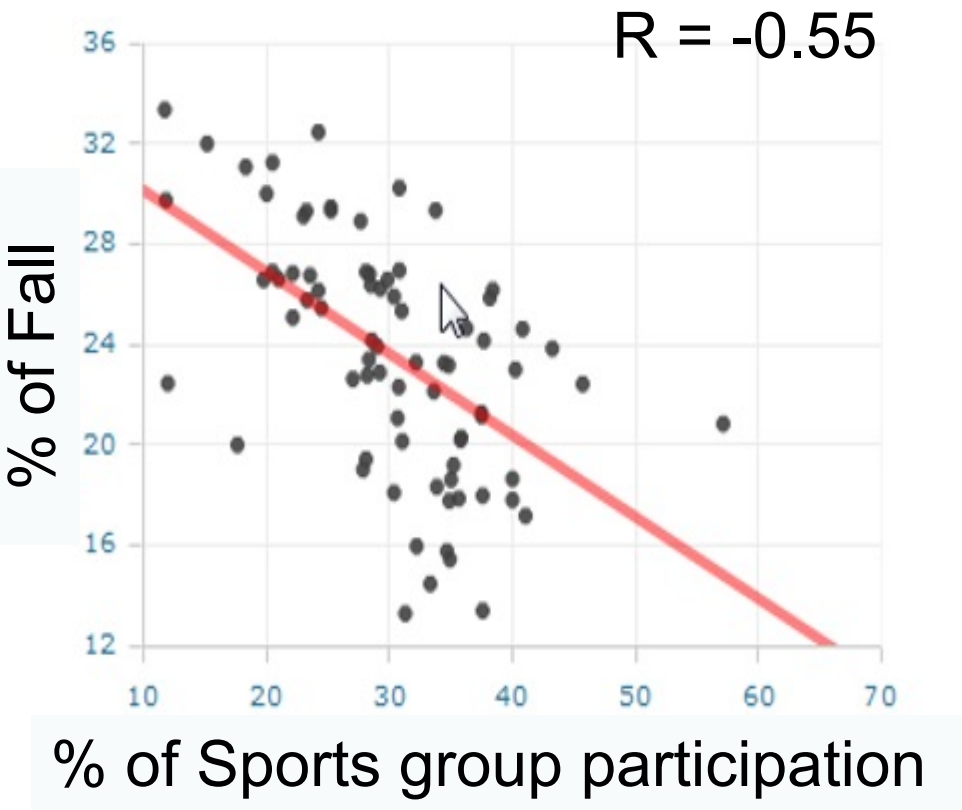
75 y.0. +



% of Sports group participation & % of Fall
limited to aged 65–74



School districts with higher sports group participation rates show lower rates of fall



Comprehensive Strategy for Innovation of Science and Technology (2013. 6.7 Cabinet decision)

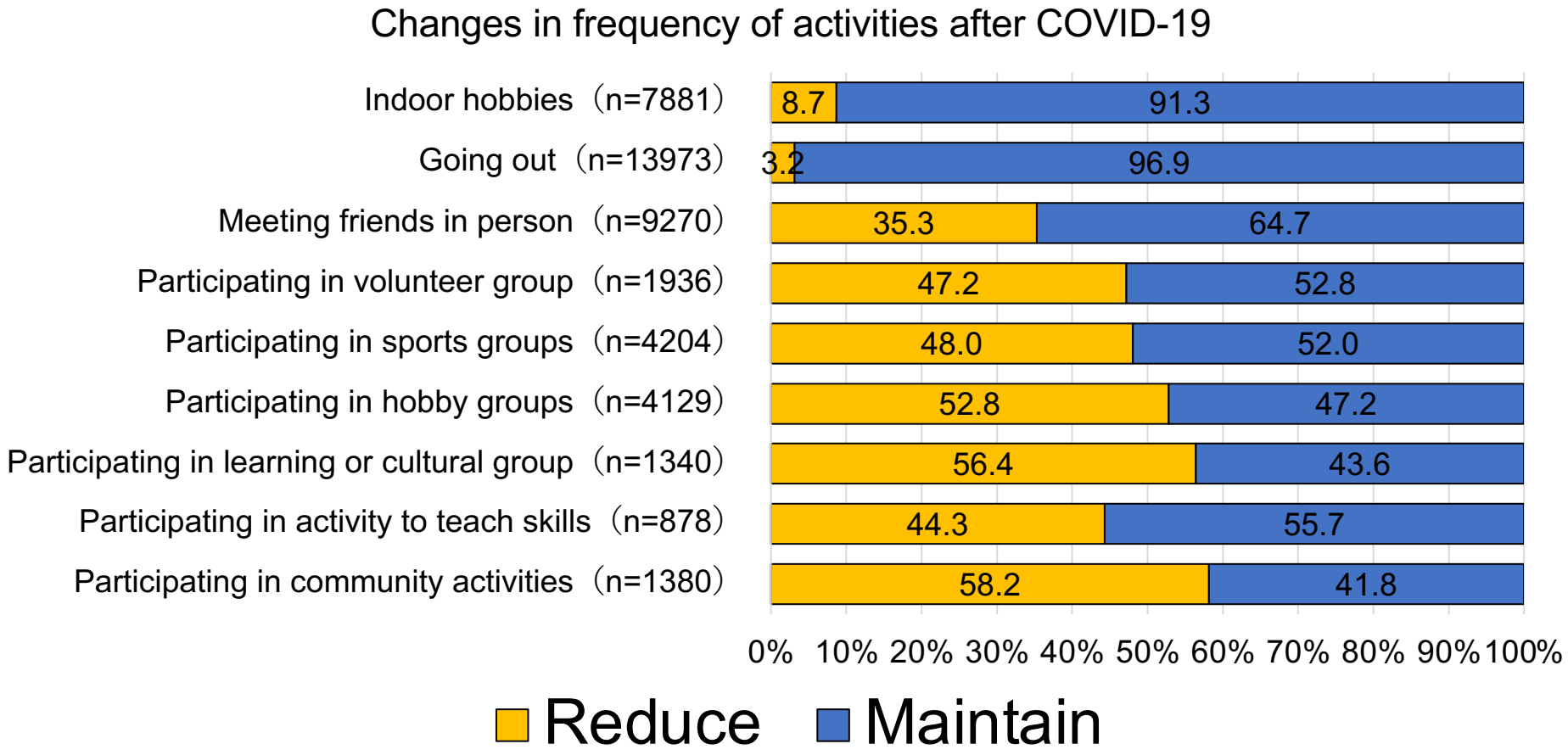
Chapter 2
Challenges of science and technology innovation

Ⅱ. Realization of a healthy society with longevity of life, as a forerunner of international society

Promotion of comprehensive care in the community including health, medical, and social care using IT

・Promotion of "visualization" of health and social care information

Almost half of older persons reduced their social activities



※ Target persons are those who participated in activity more than once a week before COVID-19
※ Reduction：less than once/month during COVID-19　Maintain：more than once/month during COVID-19

Free video calls training for those who wish to use it.

- 60% of the 49 group leaders want to use it.
  - Already using it:7 groups 、Want to use it: 22 groups
- online “Kayoinoba” (gathering activities) using the video calls using smartphones, tablets, and computers
- You can use it to communicate with your family

- ・LINE,zoom

Conducting free training sessions

- **November 2020 to March 2021: 4 courses of about 3 weeks each**
- **151 participants from 25 organizations、No new cases of covid-19 infection reported**

↑初回体験講習会

NHK NEWS WEB

千葉 NEWS WEB

January 13, 2021 Broadcast

Lending Tablets to the older people

01月13日　19時14分

新型コロナウイルスの感染リスクを減らそうと、多くの高齢者が趣味や運動のために仲間と集まるのを控えるようになっています。こうしたなか、地域の高齢者にタブレットを無料で貸し出し、オンラインで交流を続けてもらおうという試みが千葉県松戸市で始まりました。

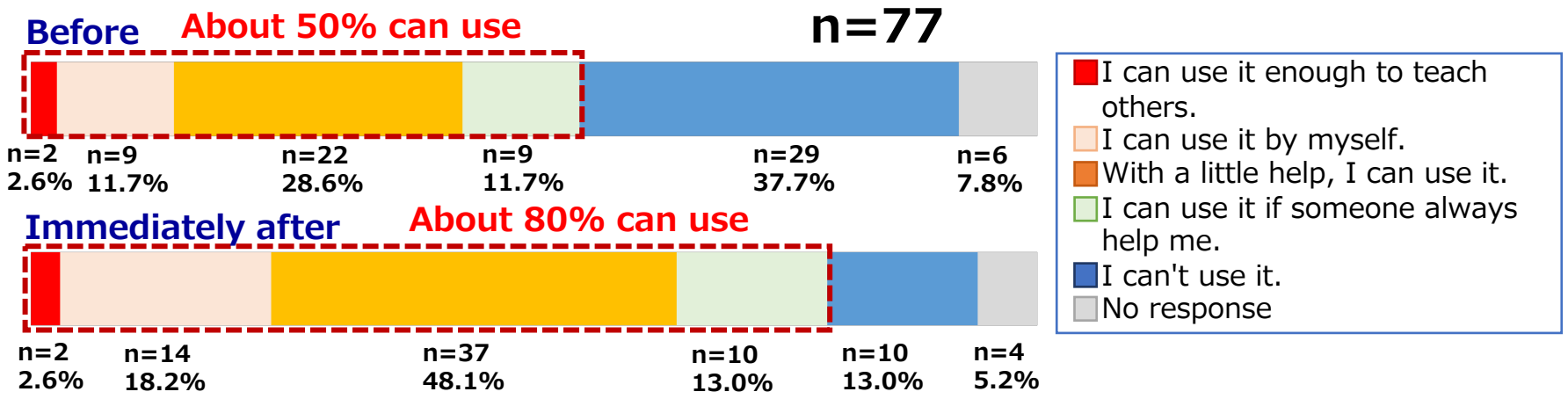
https://www.jages.net/library/media/（2021.3.2 最終アクセス）

↑オンライン体操教室

オンラインでの練習成果を最終日に披露

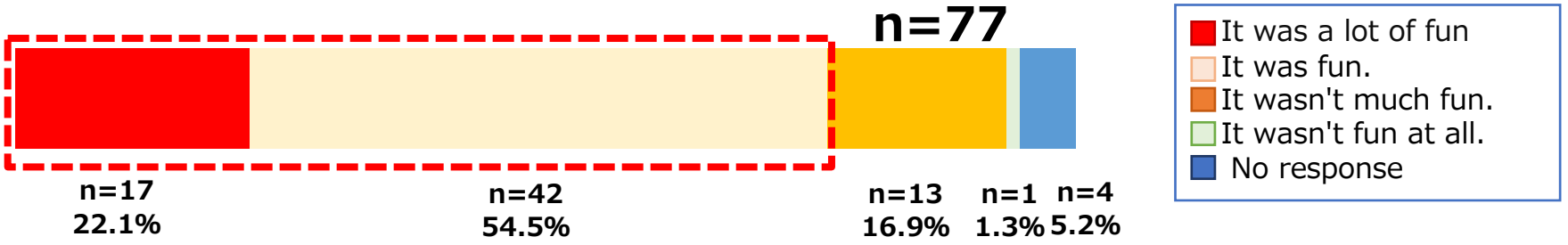
Before and immediately after the Free Online Trial training session

- How well can you use the tablet device ?



The number of people who can use tablets device has **increased from 50% to 80%**

- Did you enjoy the hands-on training session?

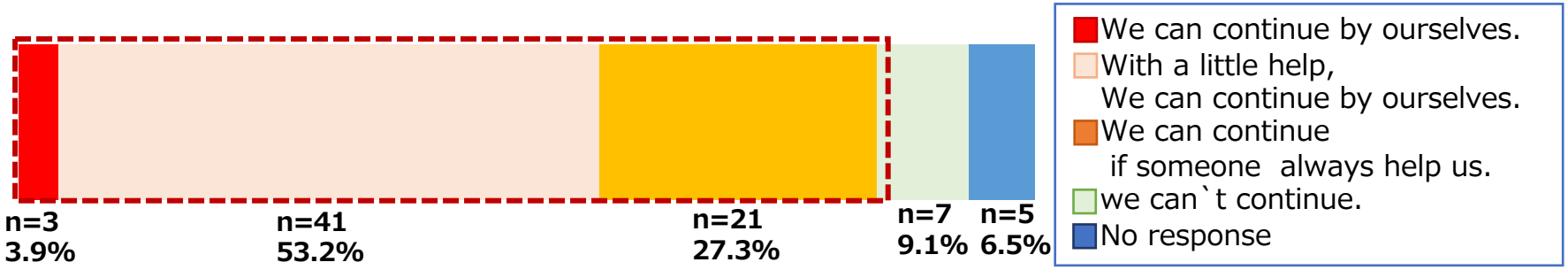


More than 70% said they **enjoyed it.**

Immediately after the Free Online training session

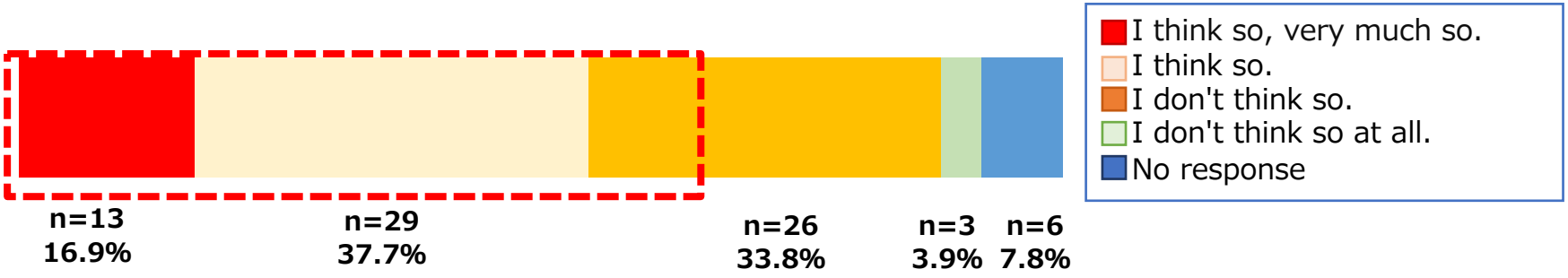
Of the 151 participants who attended the free trial Workshop, 133 older people gave consent to use the study.

- **Do you think it's possible to continue online "Kayoinoba" ?**



88.7% responded "we can continue online Kayoinoba"

- **Do you want to continue your online presence?**

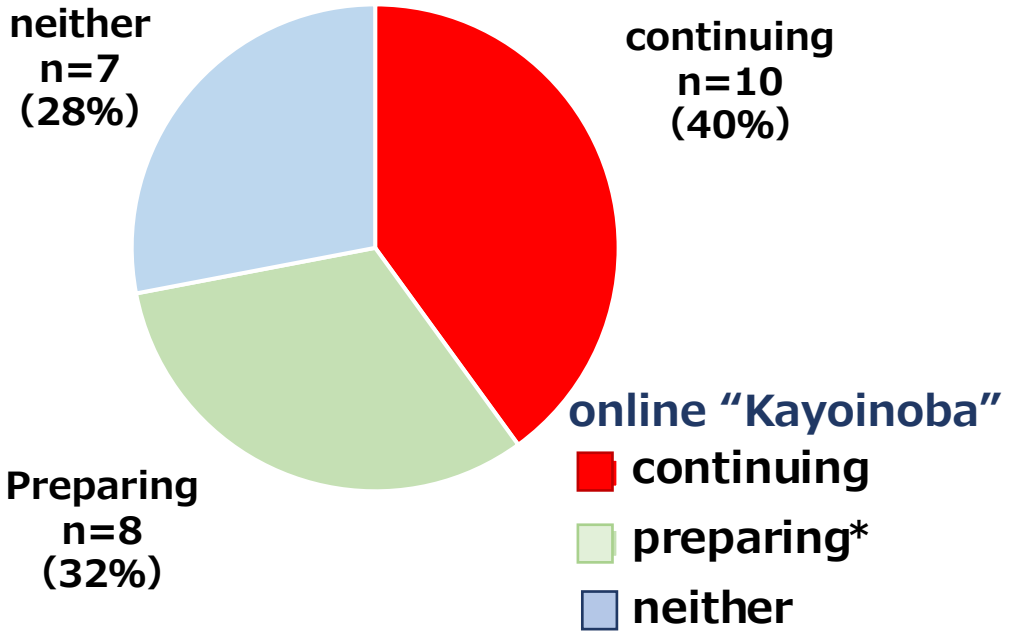


62.4% respondents "want to continue"

*"Kayoinoba" means community gathering places where seniors in the community can gather and interact

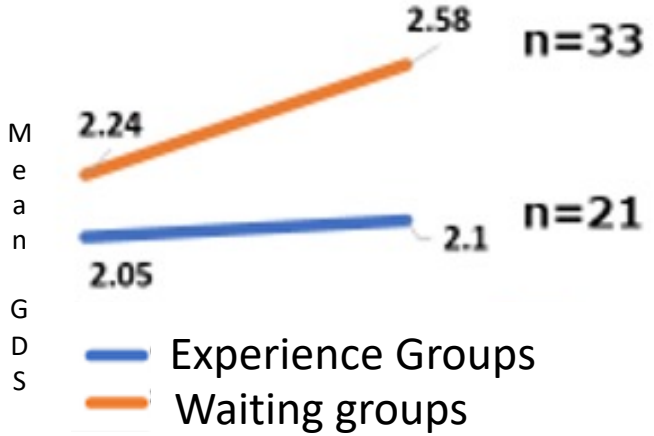
Continuation/preparation status of online activities after 1~6 month

of 25 organizations
18 organizations (72%) are continuing or preparing* online "Kayoinoba"



Suppressing worsening of GDS?

Geriatric Depression Scale
Not significant statistically

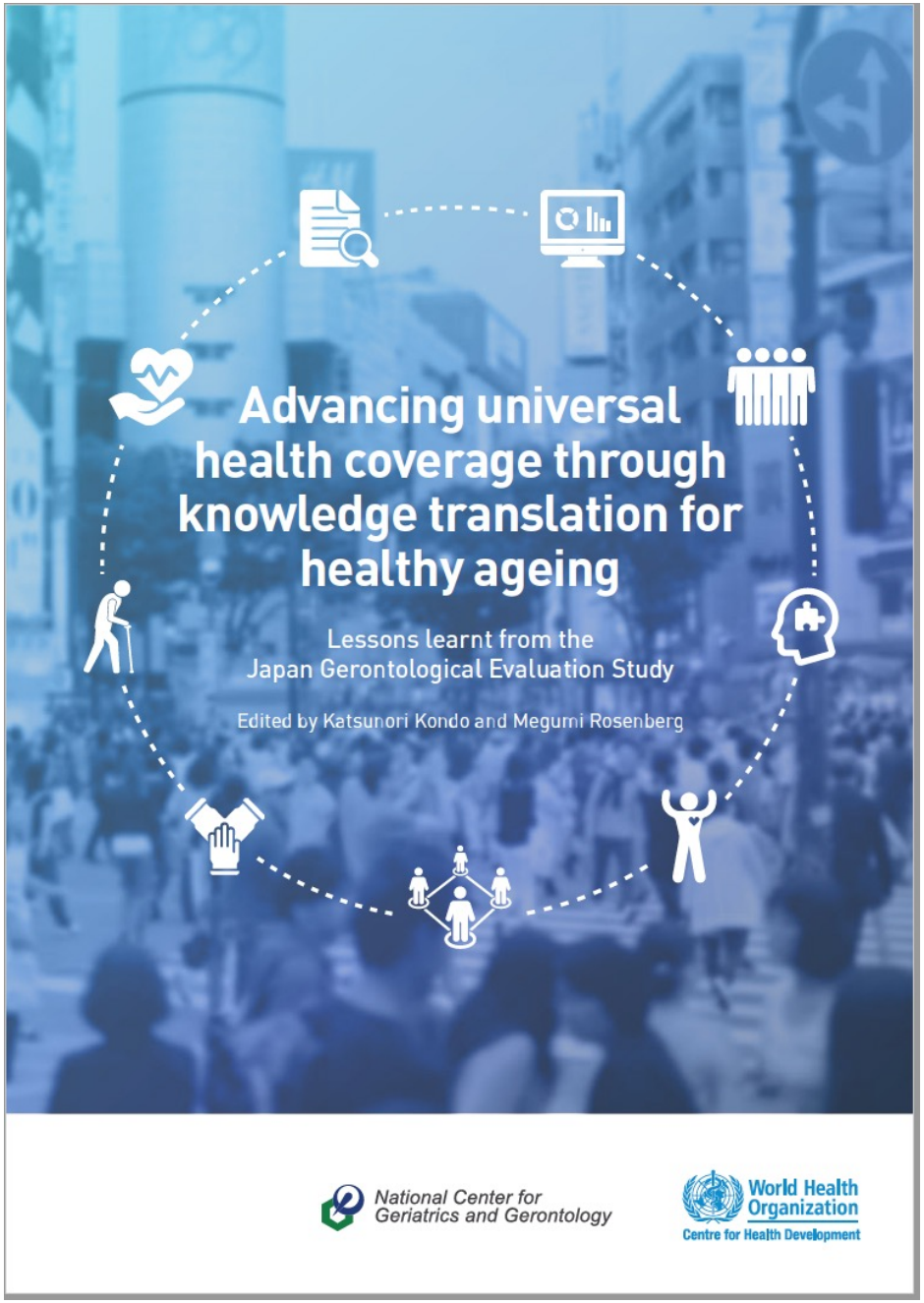


* Preparing means that currently not available, but underway, including the purchase of tablet and other equipment, in order to begin

“Health Japan 21 (2013-23)” The Ministry of Health Labor and welfare

http://www.mhlw.go.jp/stf/shingi/2r9852000002ddhl-att/2r9852000002ddxn.pdf

The town decided to add the program into their general plan 2008-2012

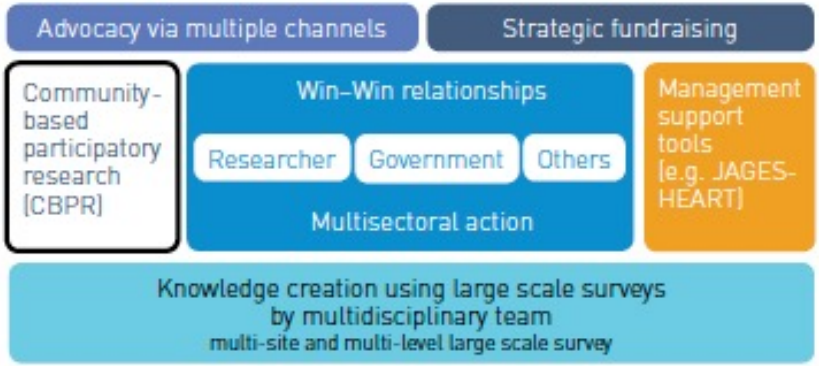


Kondo K, Rosenberg M, editors.

Advancing universal health coverage through knowledge translation for healthy ageing: Lessons learnt from the Japan Gerontological Evaluation Study

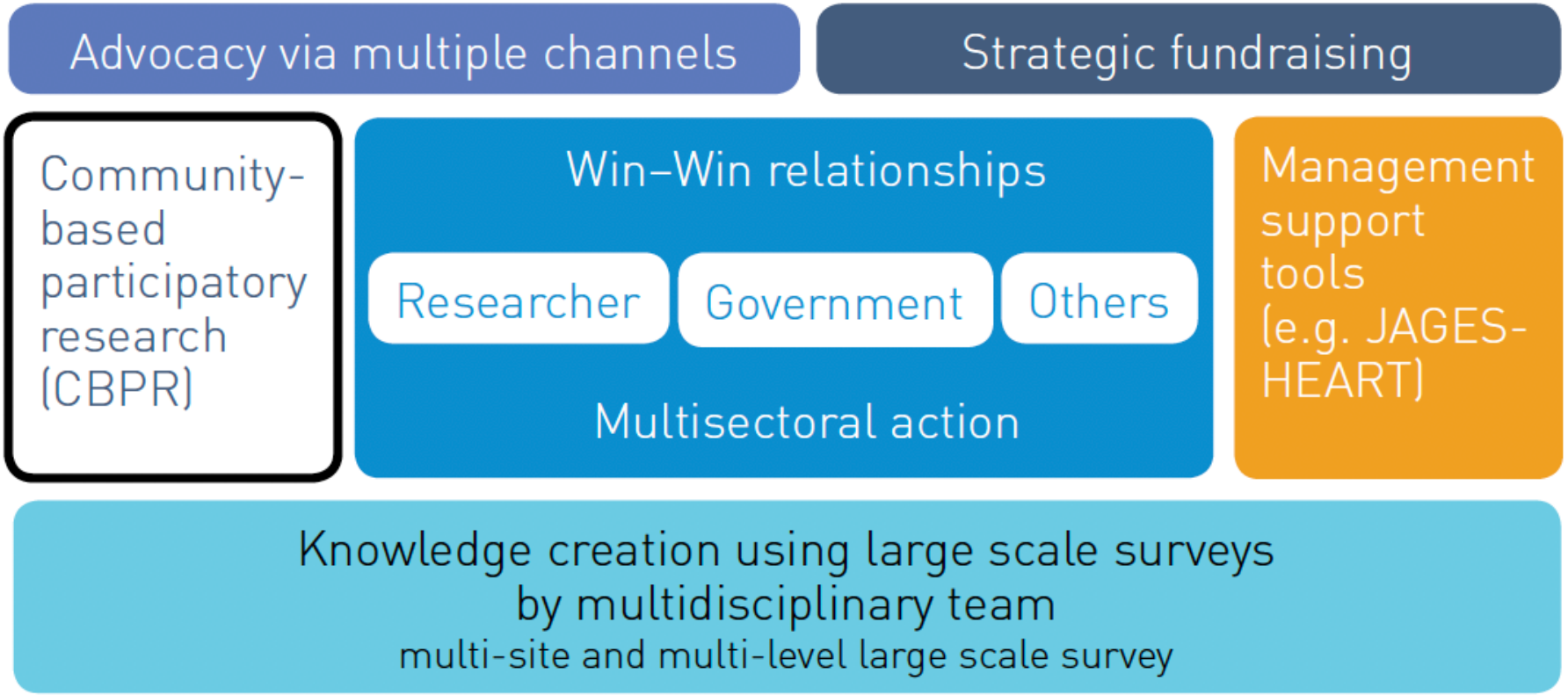
World Health Organization 2018

Figure 2. Key driving factors of JAGES' knowledge translation



https://apps.who.int/iris/bitstream/handle/10665/279010/9789241514569-eng.pdf

Figure 2. Key driving factors of JAGES' knowledge translation



Conclusions

- Incubator platform for win-win solution facilitate knowledge translation and co-creation
  - Researcher, local/central government, practitioner and others share the challenges
- Big longitudinal data provide scientific base for EBPM of Healthy Ageing
  - Ex）To reveal the potential of ICT as a countermeasure for COVID-19
- Collaboration with local gov. makes doing CBPR easier
  - Ex) Providing free ICT training sessions for older people
- DX and ICT could facilitate Healthy Ageing even under the pandemic of COVID-19

総務省
Ministry of Internal Affairs and Communications

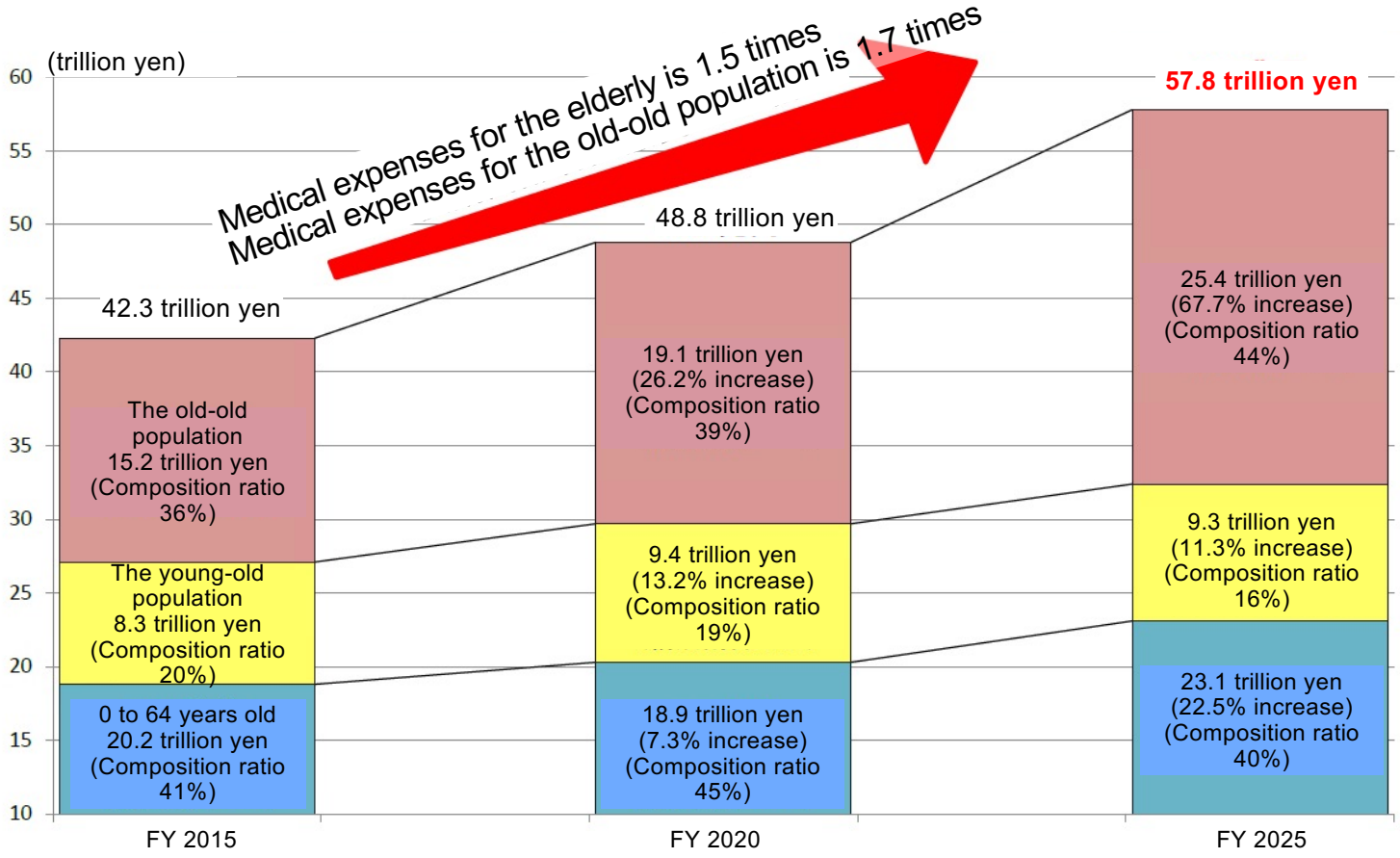
Latest trends of ICT Policies in Medical Care and Health Care Fields

Atsuko OSAKI
Digital Corporate Affairs Office
Information and Communications Bureau
MIC of JAPAN

Issues that Japan faces in medical field ①
—Increase in medical expenses—

1. Estimation of national medical expenses

National medical expenses will increase from 42.3 trillion yen in FY 2015 to 57.8 trillion yen in FY 2035 by 1.4 times.
Among them, medical expenses for elderly people aged 65 and older will increase 1.5 times from 23.5 trillion yen to 34.7 trillion yen.
Their proportion to the total medical expenses also will increase from 55% to 60%.
In particular, the medical expenses of the old-old population will rapidly increase 1.7 times from 15.2 trillion yen to 25.5 trillion yen.



The old-old population means 75 yrs old and older

The young-old population means 65 yrs old and older and younger than 75 yrs old

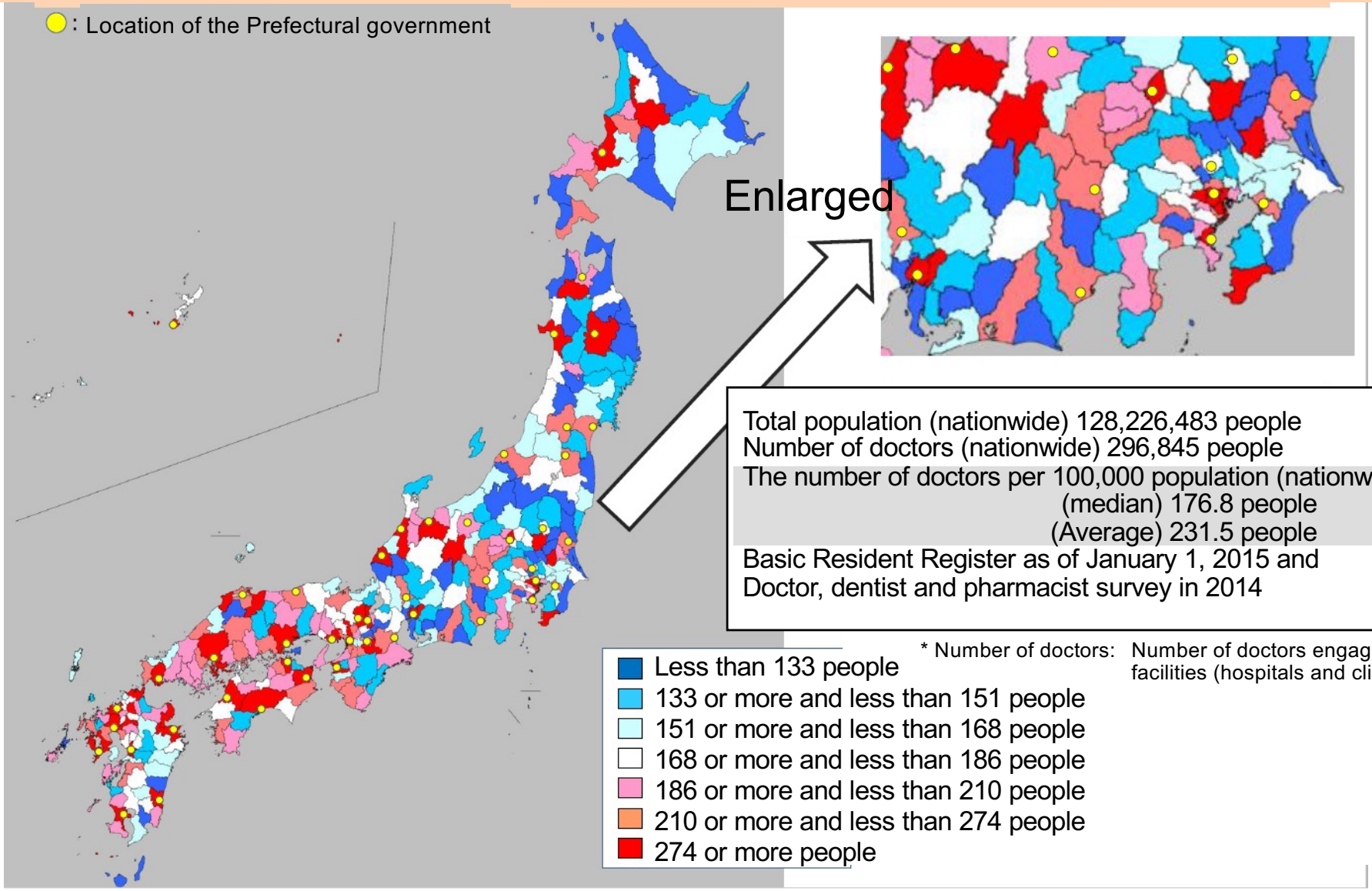
The figures in parentheses are growth rates from 2015 (fractions are adjusted)

(According to the estimate of the National Federation of Health Insurance Societies)

"Estimation of national medical expenses etc. for fiscal 2025" (September 25, 2017)
Excerpt from materials prepared by the National Federation of Health Insurance Societies

Issues that Japan faces in medical field ②
—Uneven distribution of doctors—

The number of doctors per 100,000 population at each secondary medical zone (2014)

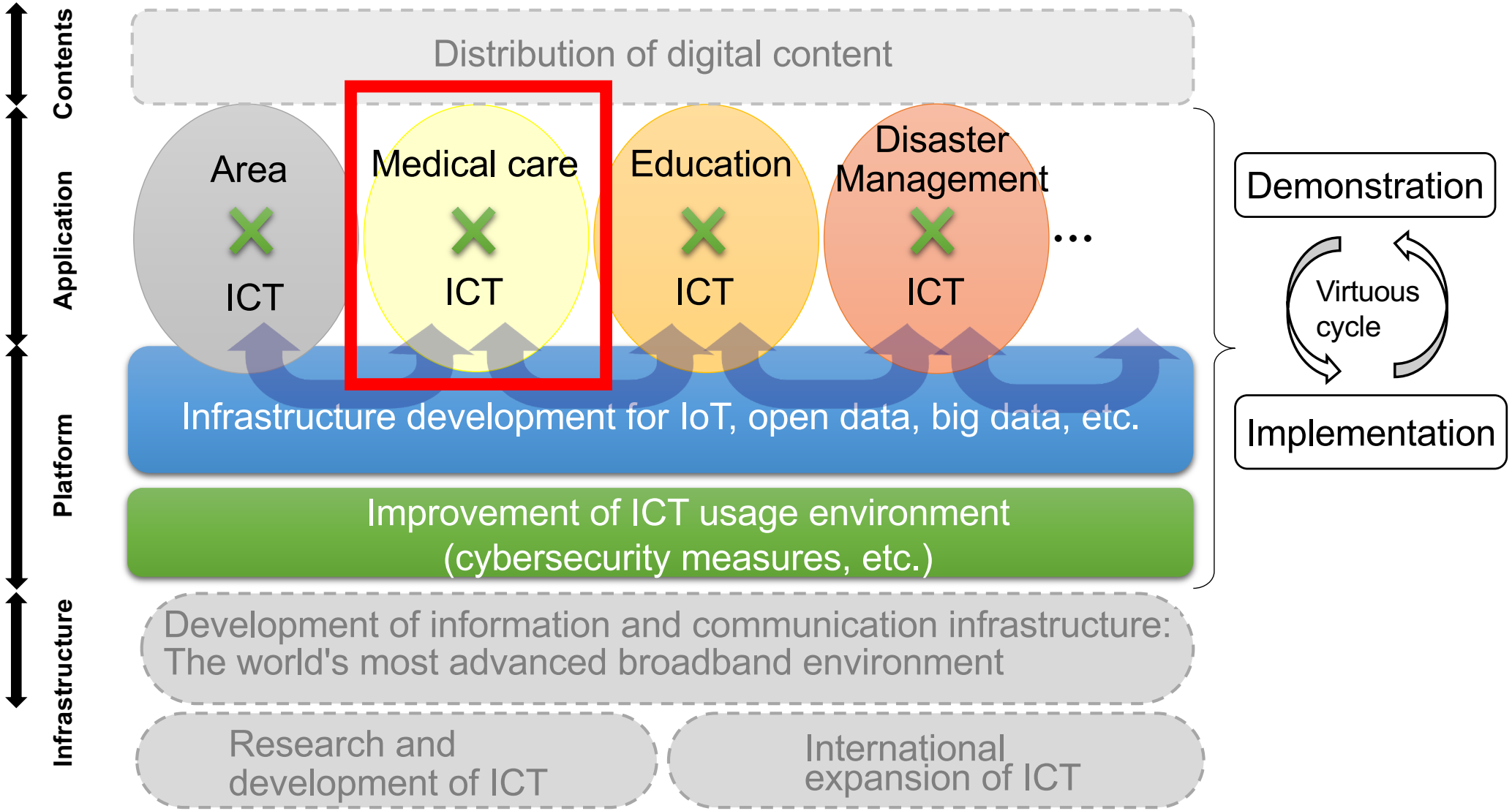


"Countermeasures against uneven distribution of doctors" (February 9, 2018)
Excerpt from material prepared by Health Policy Bureau, Ministry of Health, Labor and Welfare Medical Politics

"Medical Care, Nursing Care and Health Care X ICT" and MIC

Item 59, Paragraph 1, Article 4 (Affairs under the Jurisdiction) of the Act for Establishment of the Ministry of Internal Affairs and Communications

Matters related to discipline and promotion of electromagnetic distribution of information.



1. Cases of Research and Development related to Medical ICT

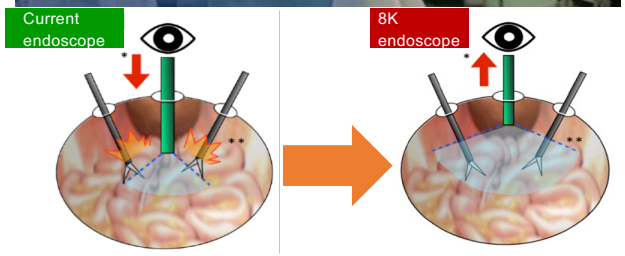
① Project on Utilizing High Definition Medical Imaging Data up to 8K Quality

(Project period: FY 2019 to FY 2021)

Overview

Development of a prototype of a rigid endoscopic surgery system utilizing 8K technology was carried out from 2016 to 2018.

From FY 2019 onward, the 8K endoscopy system will be further improved, and at the same time research and development for the realization of telesurgery support by applying the 8K endoscopy system will be carried out.



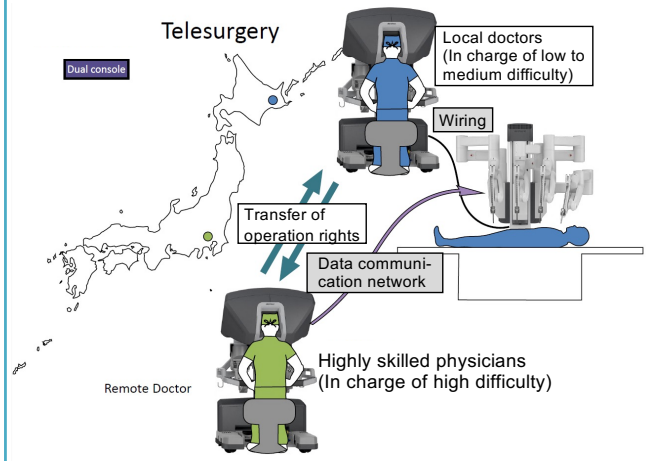
② Research Project for advanced telemedicine network

(Project period: FY 2020 to FY 2021)

Overview

At conducting telesurgery, each medical society is required to develop guidelines that specify the necessary communication environment.

Research and development will be conducted with clinical trials of telesurgery using actual surgical support robots, networks, etc., to contribute to developing telesurgery guidelines.



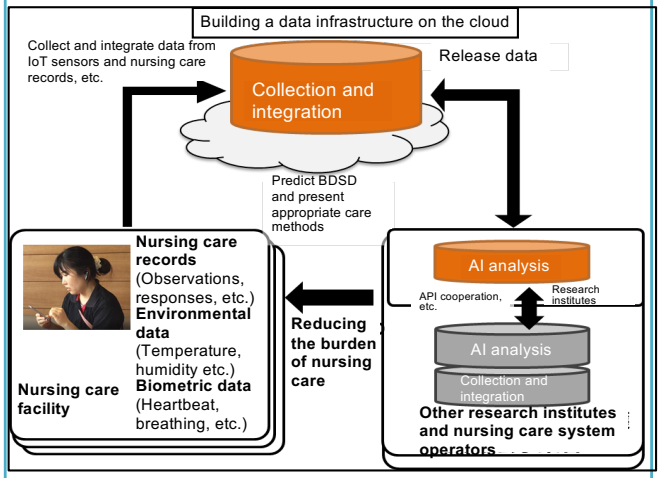
③ Research Project for Artificial Intelligence and Internet of things System for Dementia Care

(Project period: FY 2020 to FY 2022)

Overview

In FY 2017 and FY 2018, an "IoT service responding to dementia" was demonstrated and achieved a certain effect in reducing the number of Behavioral and Psychological Symptoms of Dementia (BPSD) cases and reducing the burden of nursing care.

This research and development will push forward with improving the accuracy of AI that contributes to BPSD cares, establishing evidence from a medical point of view, and studying its expansion to medical practices and home cares.

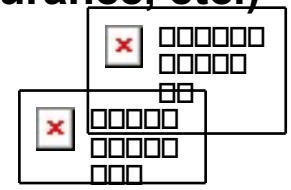


Development of PHR service model

- In recent years, along with the spread of cloud computing and mobile phones (smartphones), it has become possible to **utilize** Personal Health Record (PHR), which is personal medical care, nursing care, and health data, **for various services with the consent of the person**.
- From FY 2016 to FY 2018, in a research and development project of the Japan Agency for Medical Research and Development (AMED), they conducted **development of new service models** related to (1) support for pregnancy, childbirth, and child-rearing, (2) prevention of disease and the state needing nursing care, (3) prevention of lifestyle-related disease aggravation, and (4) cooperation between medical care and nursing care.
- From FY 2019 onward, based on the results of the above project, they studied such as the way that necessary rules should be, aiming for the spread and deployment of PHR services.

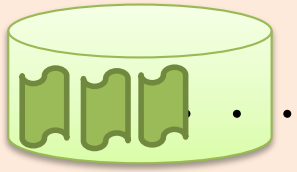
Local governments

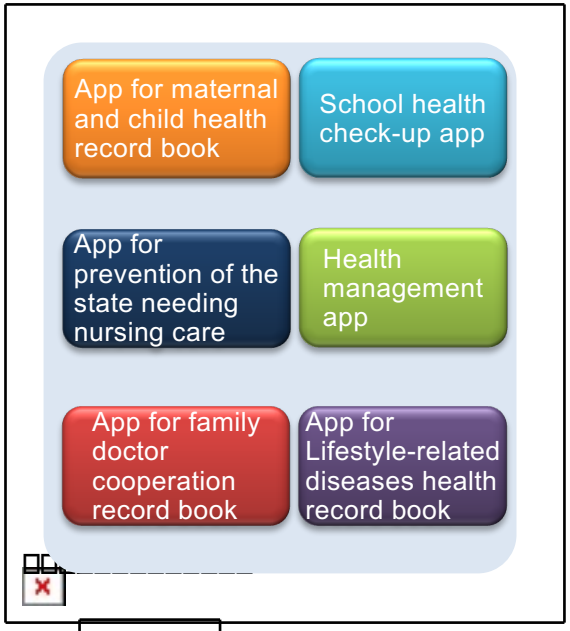
Insurer (Health Insurance, National Health Insurance, etc.)



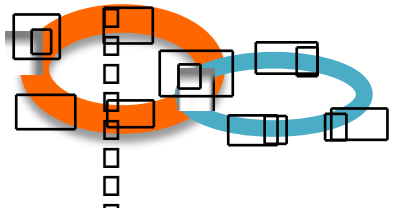
Data collection under the consent of the person

PHR Data Cooperation server



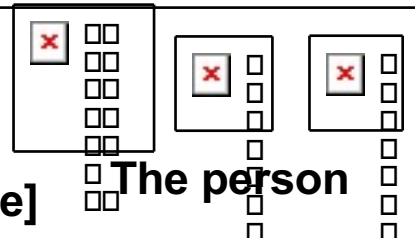


Medical institutions / EHR (Electronic Health Record)



[Collect personal medical information / health information in chronological order through apps and utilize them]

[Acquire apps according to each person's own life stage]



The person

Latest trends of ICT Policies in Medical Care and Health Care Fields

～Overseas Expansion of Medical ICT～

Iori Watanabe(Ms.)
International Digital Infrastructure Promotion division
Global Strategy bureau MIC of JAPAN

Overseas Expansion of Medical ICT

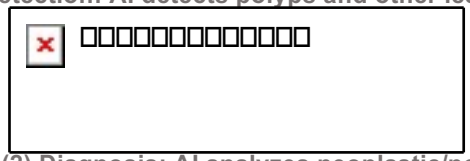
■ **To promote the overseas development of the advanced medical and health fields using ICT, including mobile and cloud technologies, and to support the promotion of the early detection of diseases and preventive medicine in each country, especially in Southeast Asia and Latin America.**

AI-supported endoscope diagnosis system using high-definition video

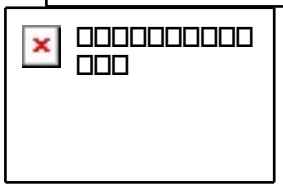
- AI assists in everything from lesion detection to diagnosis, reducing the burden on doctors and patients.
- Detection: AI analyzes images during colonoscopy to detect polyps in real time.
- Diagnosis: AI differentiates between neoplastic polyps that need to be removed and non-neoplastic polyps that do not need to be removed.
- Starting with the demonstration in Thailand in fiscal 2021, seeking to expand the project to other ASEAN member countries.

Demonstration examples

(1) Detection: AI detects polyps and other lesions



(2) Diagnosis: AI analyzes neoplastic/non-neoplastic

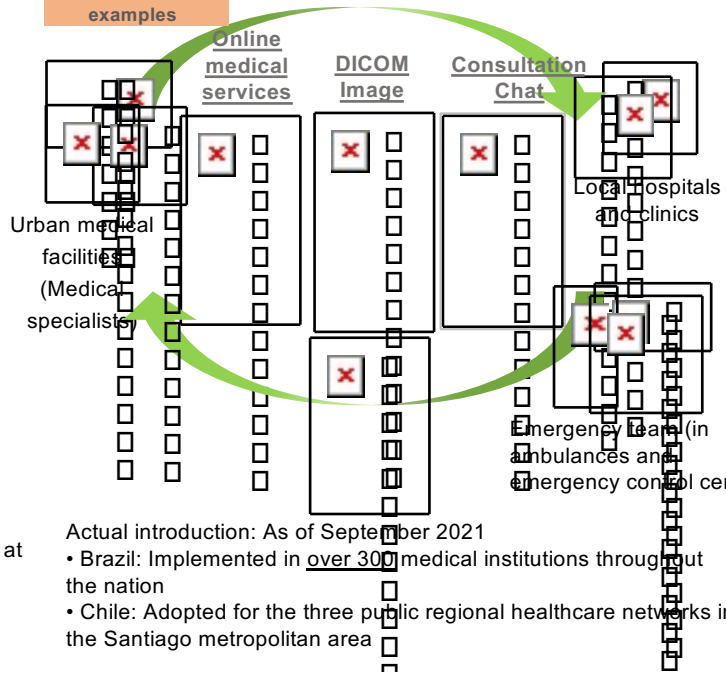


* Research and development support at the Ministry of Internal Affairs and Communications (2017 - R1 AMED grant)

Telemedicine network

- Realization of simple and highly accurate telemedicine by using smartphones. (Demonstration projects in Latin America, ASEAN, etc.)
- Introducing an SNS-type mobile cloud service that medical images can be shared among medical experts who can contact each other.
- Reducing the burden of expensive server installation costs and operational expenses by using an extra-hospital cloud.

Demonstration examples

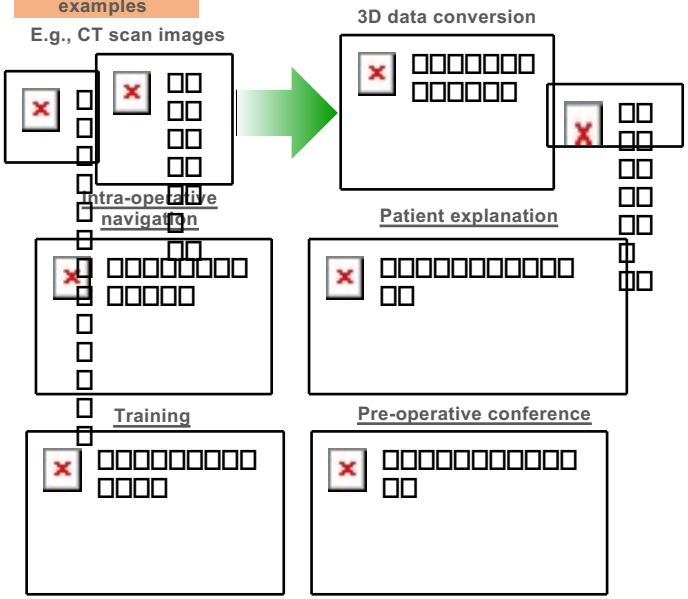


Actual introduction: As of September 2021
- Brazil: Implemented in over 300 medical institutions throughout the nation
- Chile: Adopted for the three public regional healthcare networks in the Santiago metropolitan area

Medical systems using ICT, such as VR technology

- Improving the quality of surgeries and treatments by converting polygon data from CT data, MRI data, etc. into VR and understanding the 3D structure.
- Applications are available in the cloud and using commercially available devices makes it possible to provide services quickly and inexpensively.
- Multiple people from remote locations can participate in the same virtual space through a communications function.
- Starting with the demonstration in Singapore in fiscal 2021, seeking to expand the project to other ASEAN member countries.

Demonstration examples



2 Promotion of Symbiotic Society Using Digital Technology

Yui Takahashi（Mr.）
Digital Inclusion and Accessibility Division
Information and Communications Bureau
MIC of JAPAN

Promotion of Symbiotic Society Using Digital Technology

Background

<Japan's demographic structure in the era of 100-year life spans>

- While the total population is decreasing, the percentage of older people is increasing, and the working-age population is decreasing.
- Japan's population of 100 years old or older is estimated to be 550,000 in 2065 as a result of people's extended average life span and healthy life span.
- Under the circumstances, regardless of age, gender, disability, or nationality, it is necessary to support society with everyone.

<Arrival of Society 5.0 with full-fledged IoT/AI utilization (progress of 5G ultra-high-speed, ultra-low delay, multiple simultaneous connections)>

- With the spread of 5G, it will be possible to collect big data on individual objects and people in real time.
- Development and popularization of AI speakers, wearable devices, AI home appliances, multilingual translation, AR/VR, automated driving, general-purpose AI robots, etc.
- The development and diffusion of these technologies and related services will make it possible to achieve matters that have been considered impossible in people's daily lives, and the structure of employment and the ideal state of society can change.

Social image to be aimed at

<Realization of a symbiotic society using digital technology>

- Utilizing various possibilities (e.g., Society 5.0, the fifth new society in human history) according to the characteristics of each region.
- The goal is to realize a society where everyone, regardless of age, disability, gender, nationality, etc., can enjoy the convenience of digital applications, become a leader, and lead a rich life with diverse values and lifestyles (Digital Application Symbiosis Society).

Support for Promotion of Information Barrier-free in Telecommunications and Broadcasting Field

◆ The following subsidies will be provided to eliminate the digital divide and create an information barrier-free environment where everyone, including the disabled and elderly, can enjoy ICT benefits.

(1) Research and development of technologies for bridging the digital divide

MIC

Subsidies of up to one-half of the cost (up to 30 million yen) are provided to **those researching and developing new ICT equipment and services**. These research and development are expected to enhance communications and broadcasting services that contribute to the convenience of the elderly and disabled.

(2) Subsidies for the promotion of information barrier-free communications and broadcasting services and development

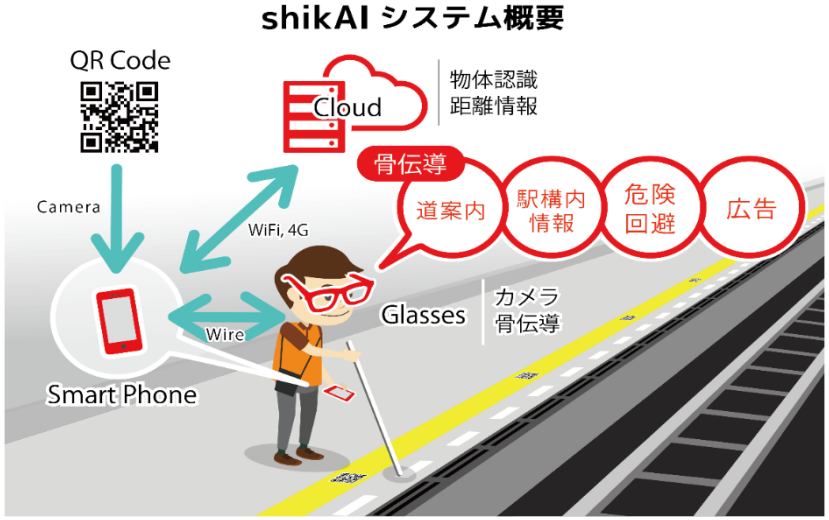
NICT

Through the National Institute of Information and Communications Technology **(NICT)**, **subsidies of up to one-half of the cost** are provided to t**hose providing communications and broadcasting services** that contribute to the convenience of the physically disabled.

(Reference) Examples of subsidies

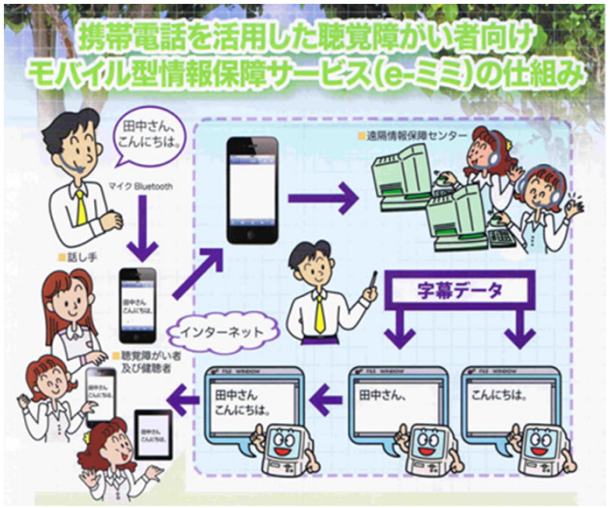
Research and development of a walking guidance service for the visually impaired on station premises

Information from QR codes placed in subway stations and information from wearable devices in the form of eyeglasses are integrated with smartphones to provide directions, station information, danger avoidance, and even advertisements while using cloud services.



Mobile-type information security service (e-Mimi)

For supporting the aurally challenged in learning, text information is provided to high schools, universities, workshops, and seminars from remote locations by computerized text interpretation (summary writing).



(1) Converting the audience's voice sent through smartphones into text.

(2) Using the Internet, the subtitles are displayed on smartphones and tablet devices owned by users in the venue.

Overall Picture of MIC' Project on Digital Utilization Support

- Conducting training sessions at mobile phone stores nationwide since fiscal 2021 to provide explanations, consultations, and other support for online administrative procedures, etc., to eliminate the concerns of older people who are not comfortable using digital technology.
  (Examples of training sessions: How to apply for Individual Number Cards, how to use the Mynaportal, e-Tax, and online medical services/Basic smartphone operation, and how to use the Internet)
- The plan is to dispatch instructors in and after fiscal 2021 to 750 cities, towns, and villages (*) that do not have mobile phone stores.
  FY2020 supplement budget: 930 million yen; FY2022 supplement budget: 330 million yen; FY2022 initial budget: 1.67 billion yen

E.g., mobile carriers (e.g., in urban areas)

Since 2021
Training sessions (nationwide)

Entities that have bases across Japan to hold seminars and provide support at these bases (assumed to be mobile phone stores)

Community-based support (local)

Since 2021
Seminar (community collaboration type)

Entities (local ICT companies, social welfare councils, etc.) that provide support in public places, such as community centers, in cooperation with local governments.

From FY2022
Dispatch of Lecturers for Project on Digital Utilization Support

Conducting the training of highly skilled instructors, who will serve as local leaders, for the project on digital utilization support and dispatching them to support cities, towns, and villages that do not have mobile phone stores.

FY2021: Approx. 2,000 locations → **FY2022: Expanded to 3,000 locations**