# Redesigning Communities for Aged Society
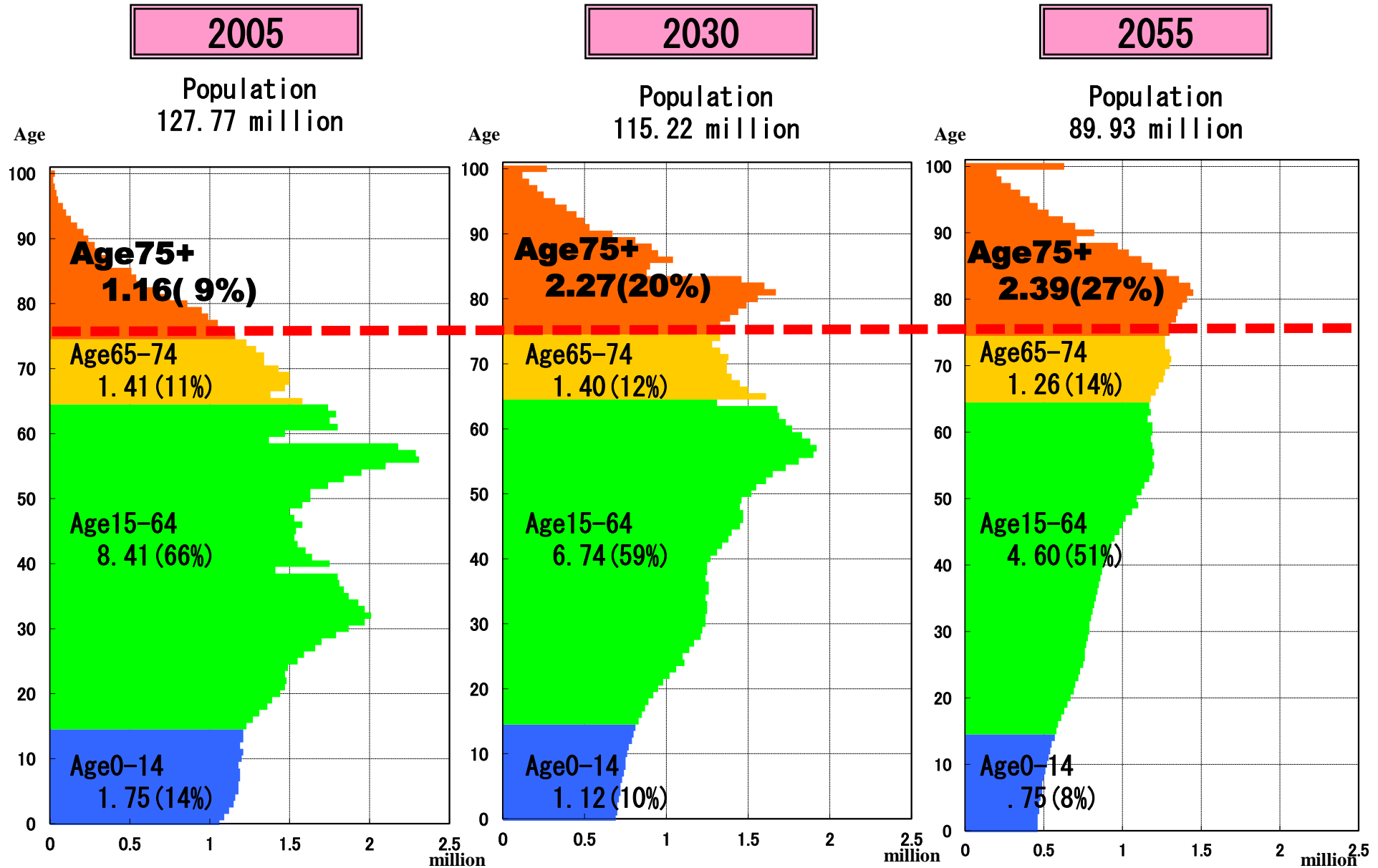## - Kashiwa Model -

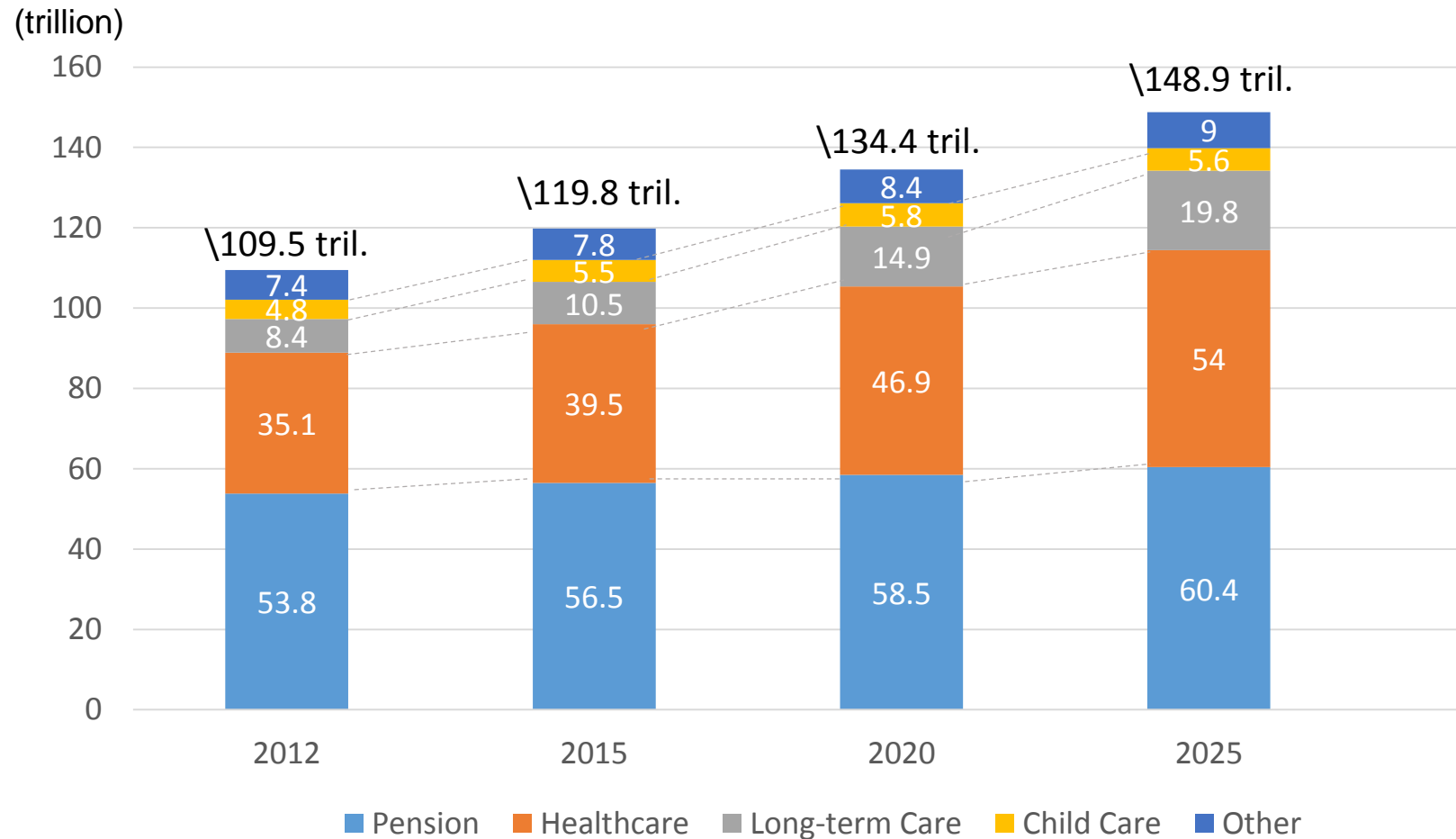**Hiroko Akiyama**

**Institute of Gerontology**
**The University of Tokyo**

IOG
THE INSTITUTE OF GERONTOLOGY

THE UNIVERSITY OF TOKYO

# Drastic Increase of Older-olds (age75+) - Japan



**2005**

Population
127.77 million

**2030**

Population
115.22 million

**2055**

Population
89.93 million

Age75+
1.16( 9%)

Age65-74
1.41 (11%)

Age15-64
8.41 (66%)

Age0-14
1.75 (14%)

Age75+
2.27(20%)

Age65-74
1.40 (12%)

Age15-64
6.74 (59%)

Age0-14
1.12 (10%)

Age75+
2.39(27%)

Age65-74
1.26 (14%)

Age15-64
4.60 (51%)

Age0-14
.75 (8%)

# Social Welfare Spending

(trillion)

| | 2012 | 2015 | 2020 | 2025 |
|---|---|---|---|---|
| Total | \109.5 tril. | \119.8 tril. | \134.4 tril. | \148.9 tril. |
| Other | 7.4 | 7.8 | 8.4 | 9 |
| Child Care | 4.8 | 5.5 | 5.8 | 5.6 |
| Long-term Care | 8.4 | 10.5 | 14.9 | 19.8 |
| Healthcare | 35.1 | 39.5 | 46.9 | 54 |
| Pension | 53.8 | 56.5 | 58.5 | 60.4 |

Pension ■ Healthcare ■ Long-term Care ■ Child Care ■ Other

# Well-being of Japanese Elderly Survey
## N=5715，（1987-　　　）
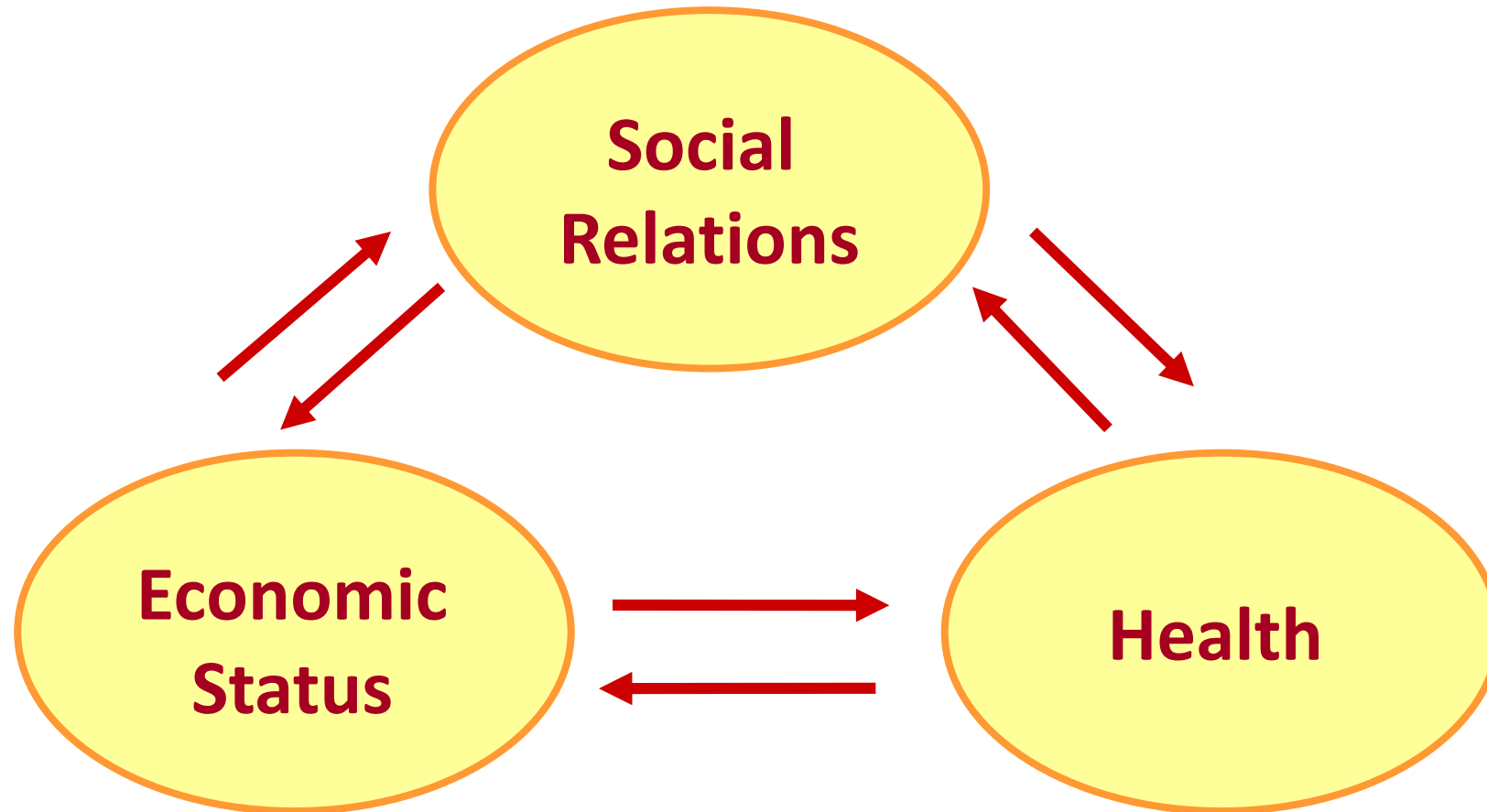
# Survey Design

- **National probability sample of 5715 Japanese (age 60+)**

- **Face-to-face interview in every three years**

- **Supported by NIA & Ministry of Health, Welfare and Labor**

# Survey Years

| | |
|---|---|
| **Wave 1** | **1987** |
| **Wave 2** | **1990** |
| **Wave 3** | **1993** |
| **Wave 4** | **1996** |
| **Wave 5** | **1999** |
| **Wave 6** | **2002** |
| **Wave 7** | **2006** |
| **Wave 8** | **2012** |

**20 years**

# Independent Living Measure

**Score**

- **3**   **ADL & IADL without assistance**
- **2**   **IADL with assistance but ADL without assistance**
- **1**   **ADL & IADL with assistance**
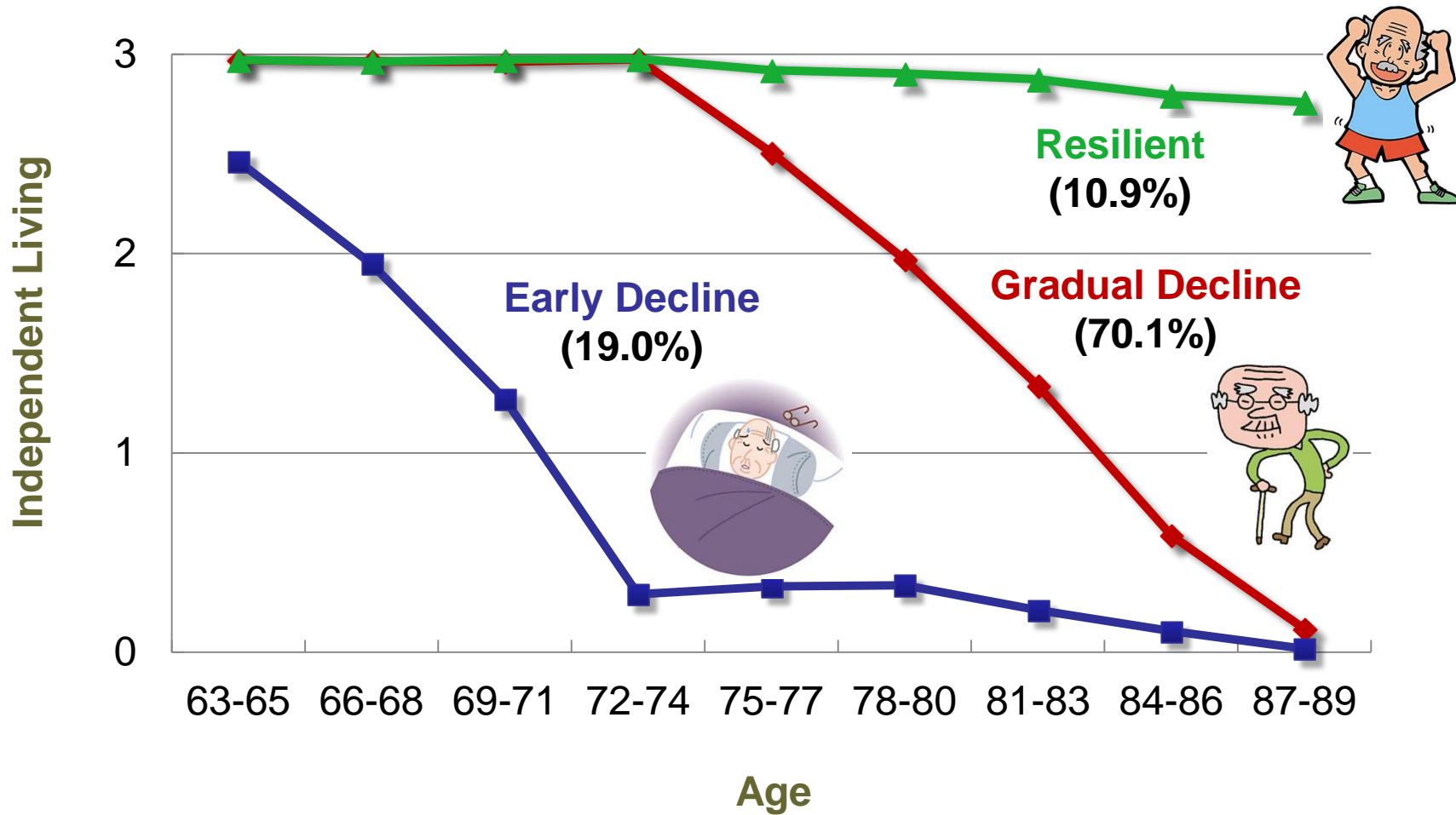- **0**   **Dead**

**ADL questions**

-Bathing

-Walking a short distance

-Going up a few steps

**IADL questions**

-Shopping for groceries or clothes
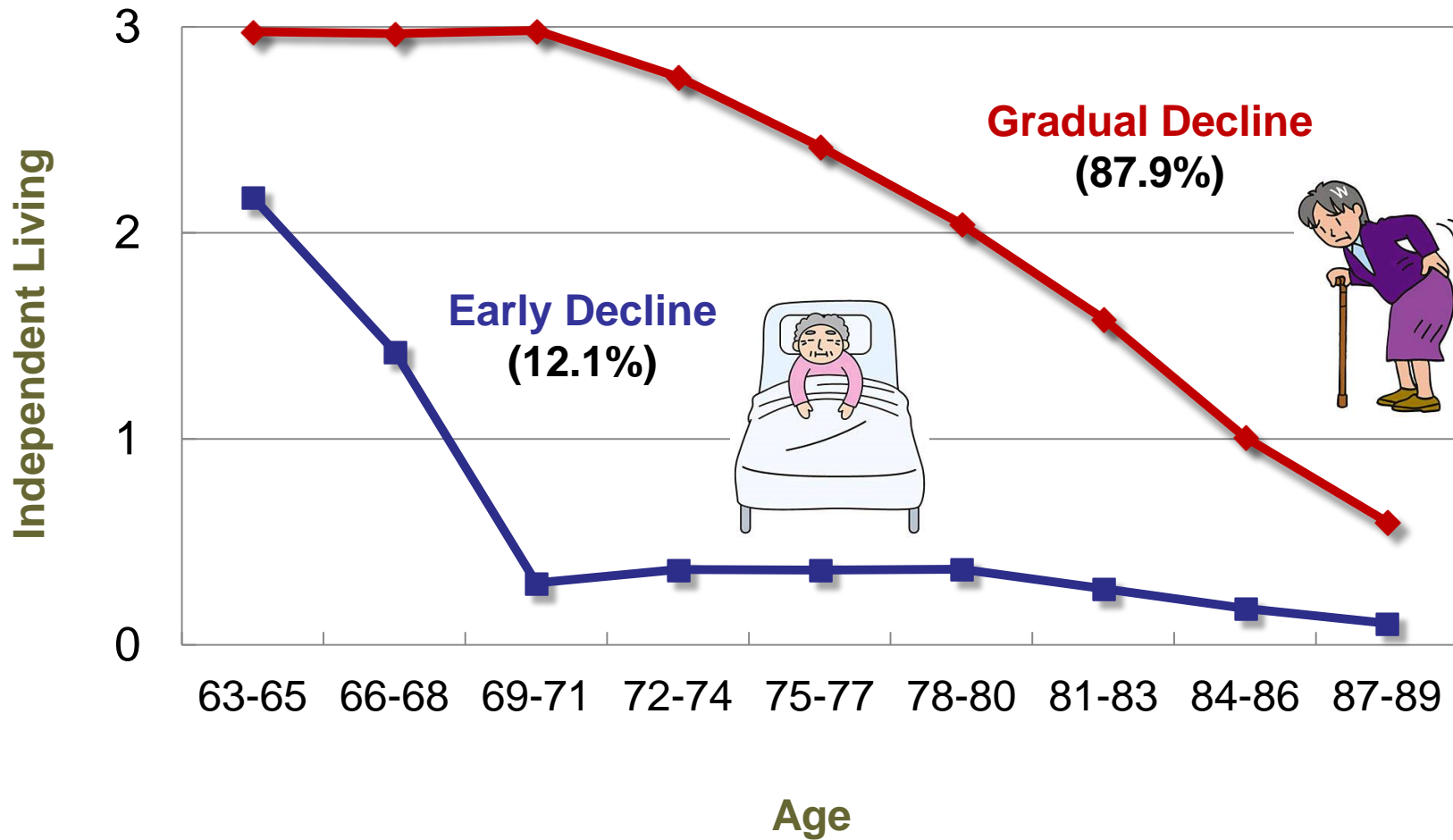
-Using the telephone

-Going out by bus/train
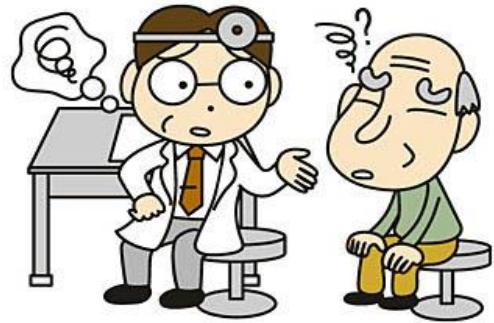
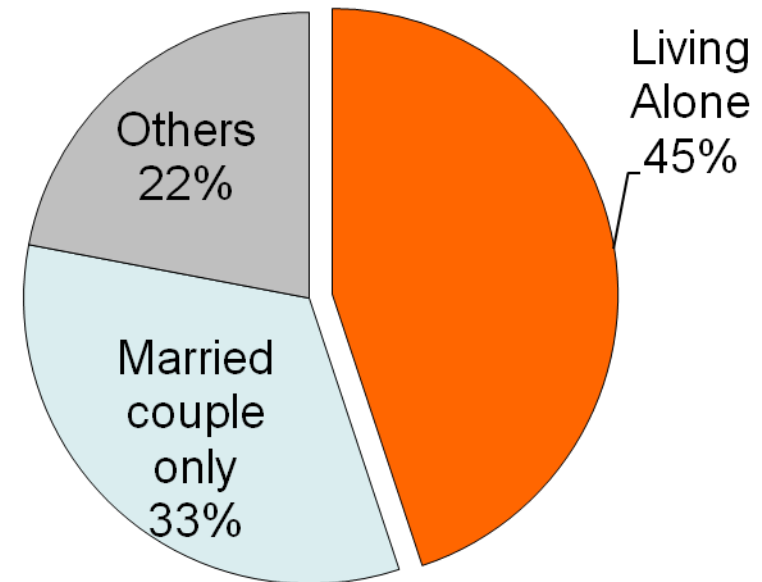# Trajectories of Independent Living

## Men

Independent Living vs Age

- **Resilient (10.9%)**
- **Early Decline (19.0%)**
- **Gradual Decline (70.1%)**

# Trajectories of Independent Living

## Women

Early Decline (12.1%)

Gradual Decline (87.9%)

Independent Living

Age

# Demographic Shift and New Needs (2030)



Dementia 20%
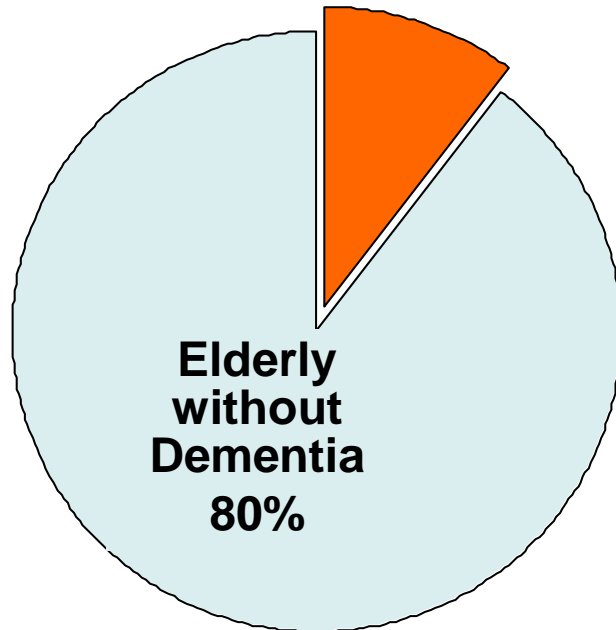
Elderly without Dementia 80%

Living Alone 45%

Others 22%

Married couple only 33%

# Aging Population and Social Security Policies

1960    1990    2013

**Age 65+**    5.7%  →  12.0%  →  25.0%

**Life Expectancy**
Men：65yrs
Women: 70yrs  →  Men：75yrs
Women：81yrs  →  Men：79yrs
Women：86yrs

**Retirement Age**

Age 50-55  →

| 1986 | 1994 | 2004 | recommend Ageless Society |
|---|---|---|---|
| **recommend** Age 60 | **mandatory** Age 60 | **mandatory** Age 65 | |

**Social Security Policies**

| 1961 |
|---|
| Public Pension System |
| National Health Insurance |

| 1985 |
|---|
| Pension System Reform Benefit age：Age 60⇒65 |

| 2000 |
|---|
| National LTC Insurance |

～Rapid Increase of Social Security Costs～



1970

# National Long-Term Care Insurance system enacted in 2000



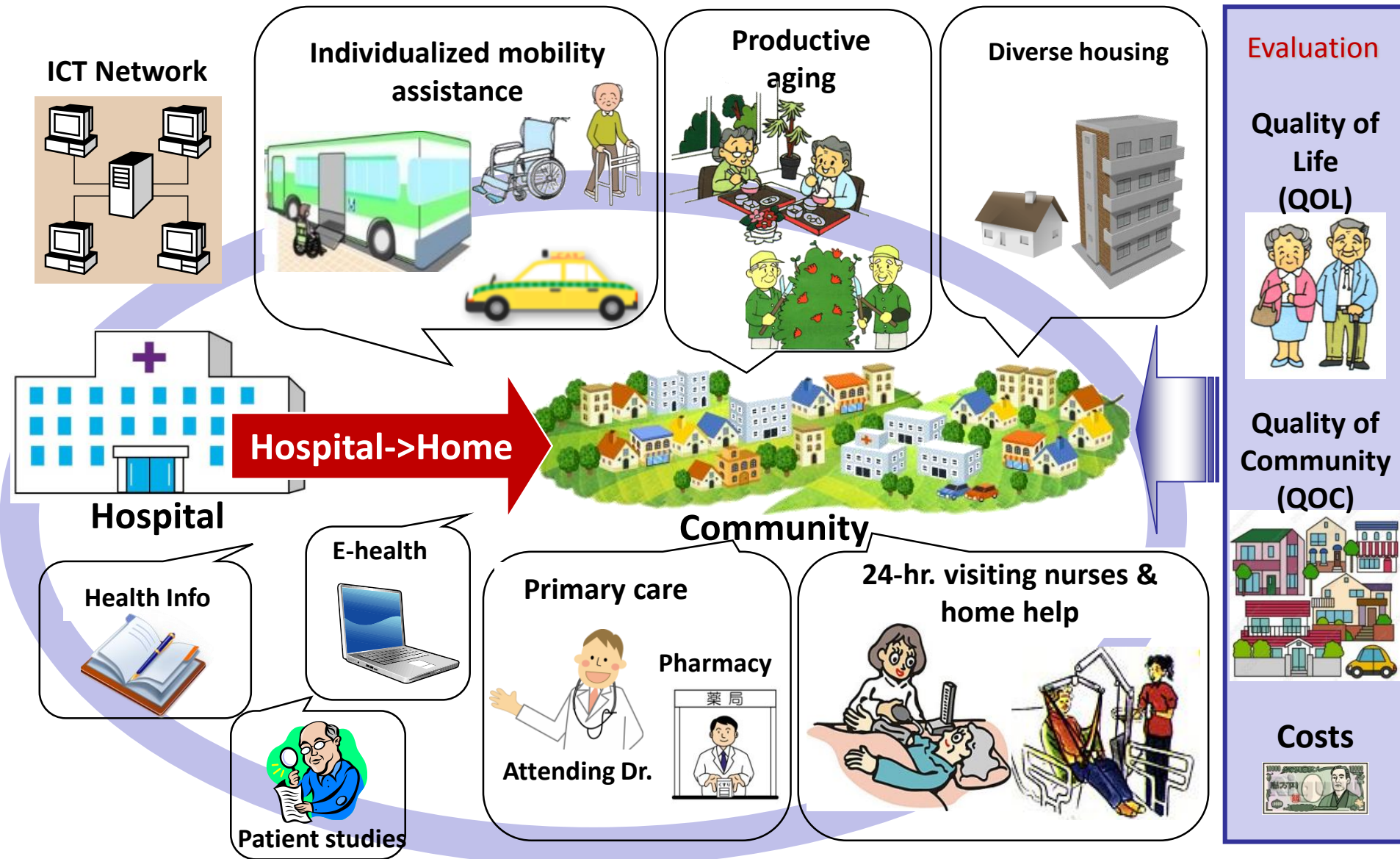The insurance covers both institutional and home care.

We know what are issues.

What we need now are **solutions and actions**!

# Action Research

- **Aims to solve a social problem**

- **Active participation in collaboration of multi-stakeholders**

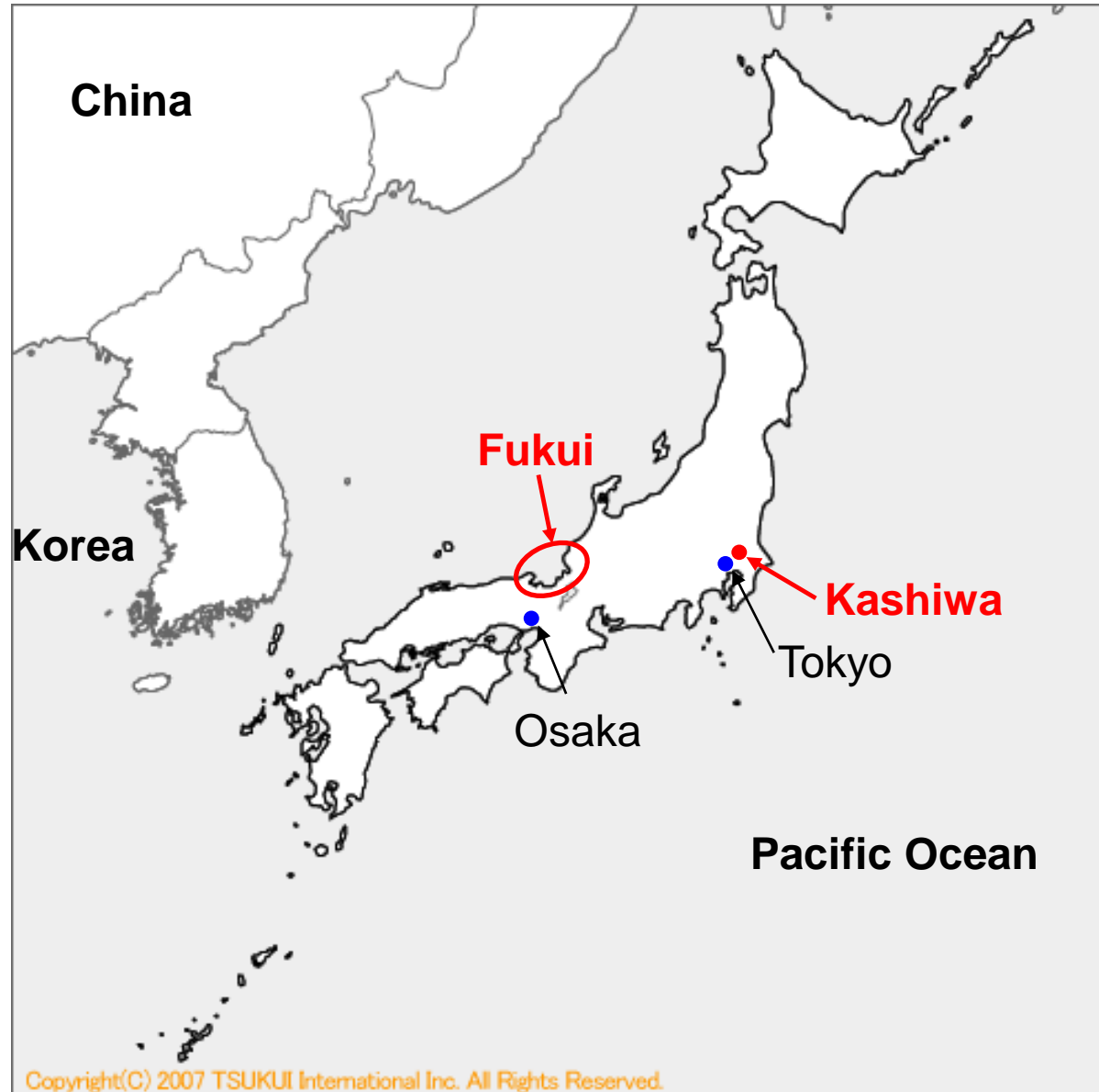- **A spiral of steps, each of which is composed of a PDCA circle**

# Redesigning Communities for Aged Society



ICT Network

Individualized mobility assistance

Productive aging

Diverse housing

Hospital

Hospital->Home

Community

Health Info

E-health

Patient studies

Primary care

Attending Dr.

Pharmacy

24-hr. visiting nurses & home help

Evaluation

Quality of Life (QOL)

Quality of Community (QOC)

Costs

# Major Projects

- **Productive aging**
- **Life long learning**
- **Human Bonds**
- **Frailty prevention**
- **Health care & long term care**
- **Housing**
- **Transportation**
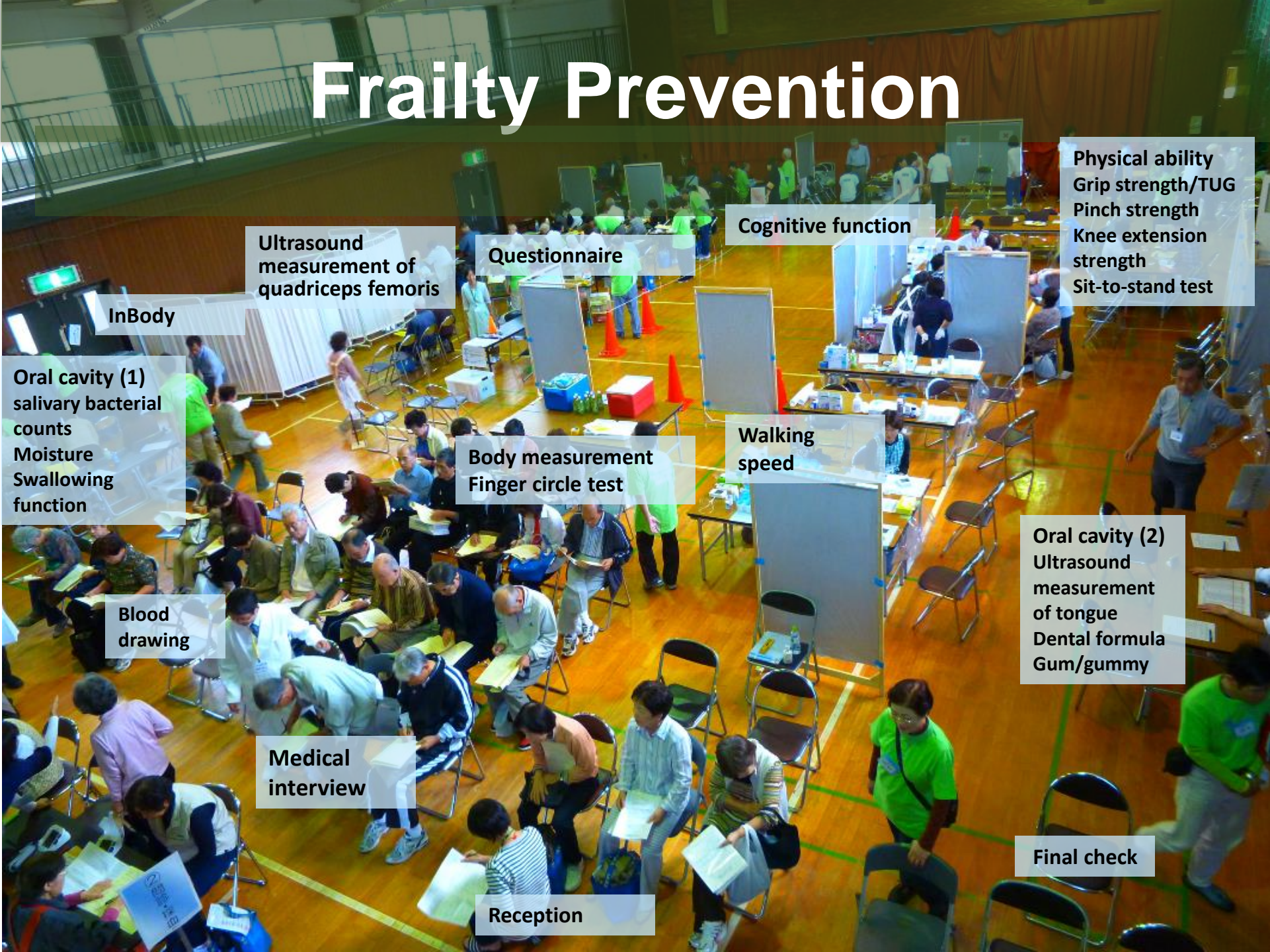- **ICT**

# Social Experiment Sites

# Community for 2030



Group Home

Blueberry Farm

Park

Community Center

Recycling Factory

Cart to move around the community

Assisted Living

Nursery

Library

Community Eatery

Home Care Station

Stores

Day Care

Blueberry Farm

Grade School

Skilled Care Nursing

# Frailty Prevention



Physical ability
Grip strength/TUG
Pinch strength
Knee extension strength
Sit-to-stand test

Cognitive function

Ultrasound measurement of quadriceps femoris

Questionnaire

InBody

Oral cavity (1)
salivary bacterial counts
Moisture
Swallowing function

Walking speed

Body measurement
Finger circle test

Oral cavity (2)
Ultrasound measurement of tongue
Dental formula
Gum/gummy

Blood drawing

Medical interview

Final check

Reception

# Multi-dimensional Frailty

**"Physical"**
frailty

**"Mental"**
frailty

**"Social"**
frailty

Borrowed from Prof. Katsuya Iijima's lecture
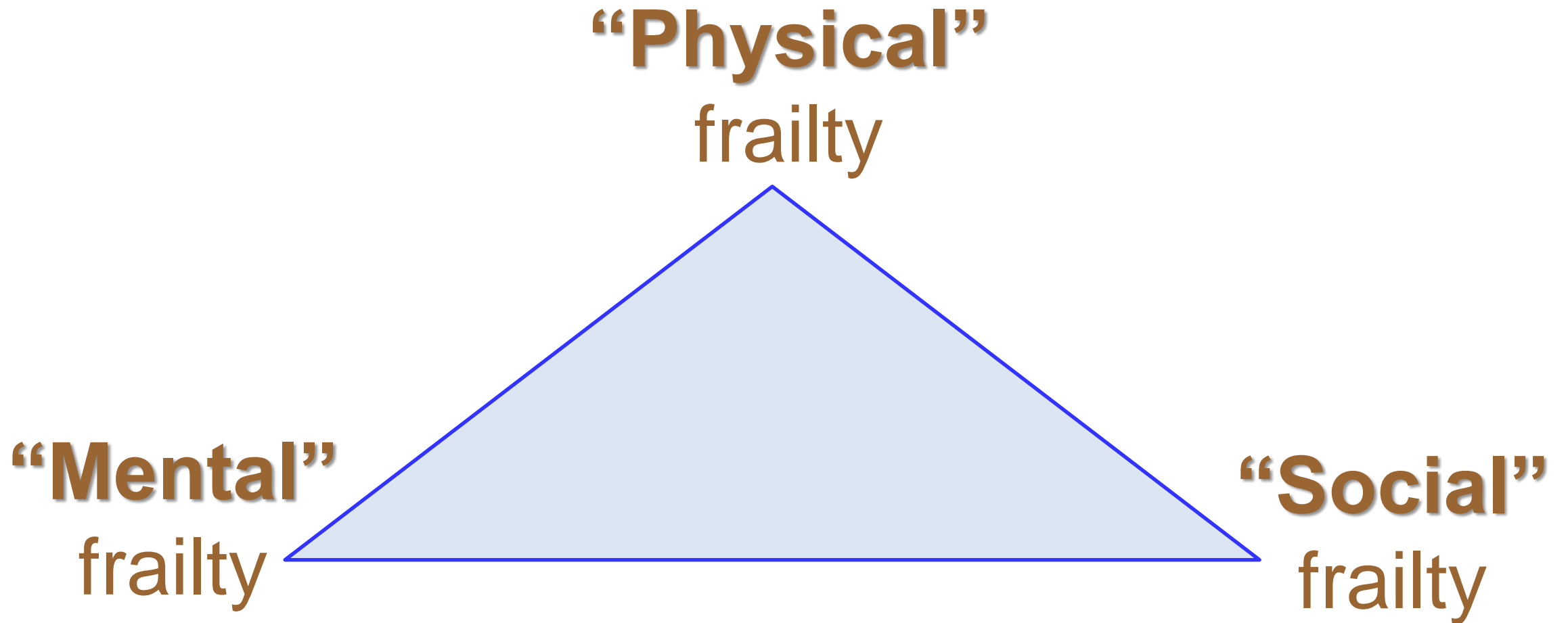
# Frailty Check-up Conducted by Senior Citizen Supporters

**Training program for senior citizen supporters**



**Frailty check-up conducted by senior citizen supporters**
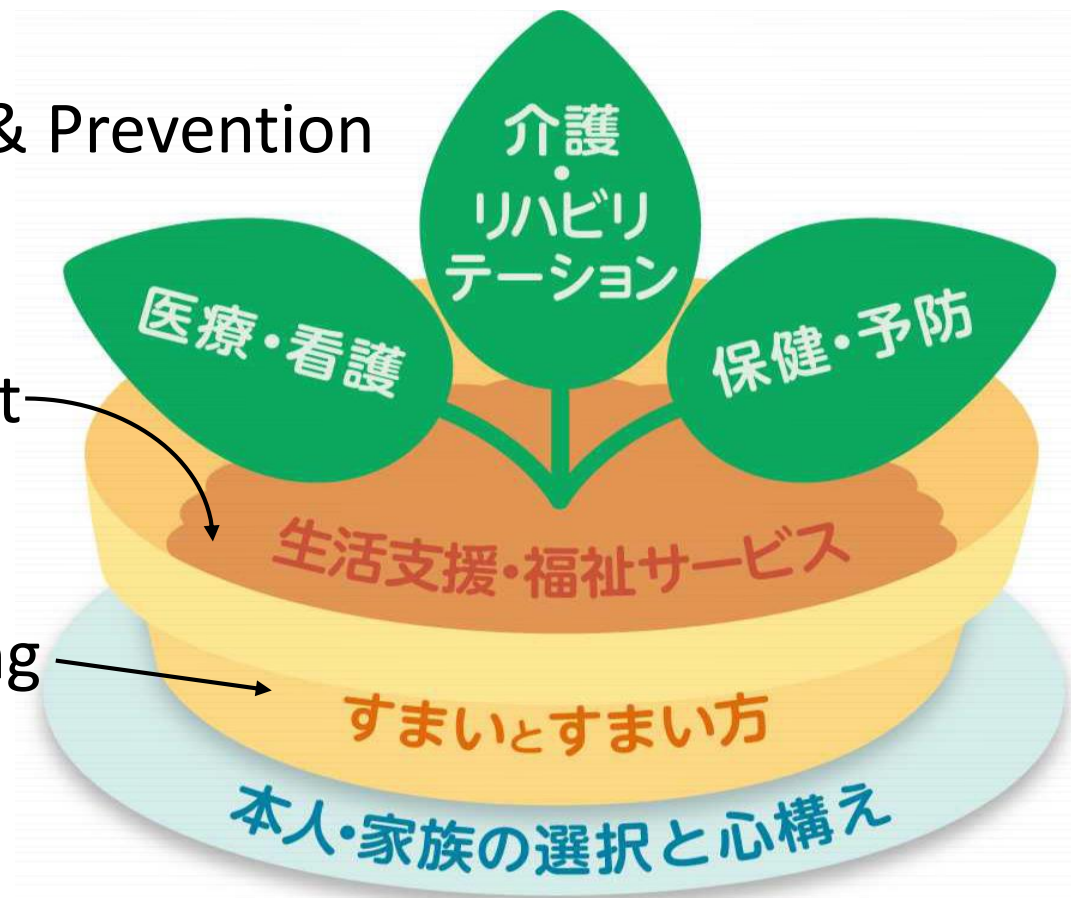
# 【日本】お年寄りの姿の変遷



１年１０ヶ月「寝たき
り」
だった

# Flowerpot Concept of Integrated Community Care System
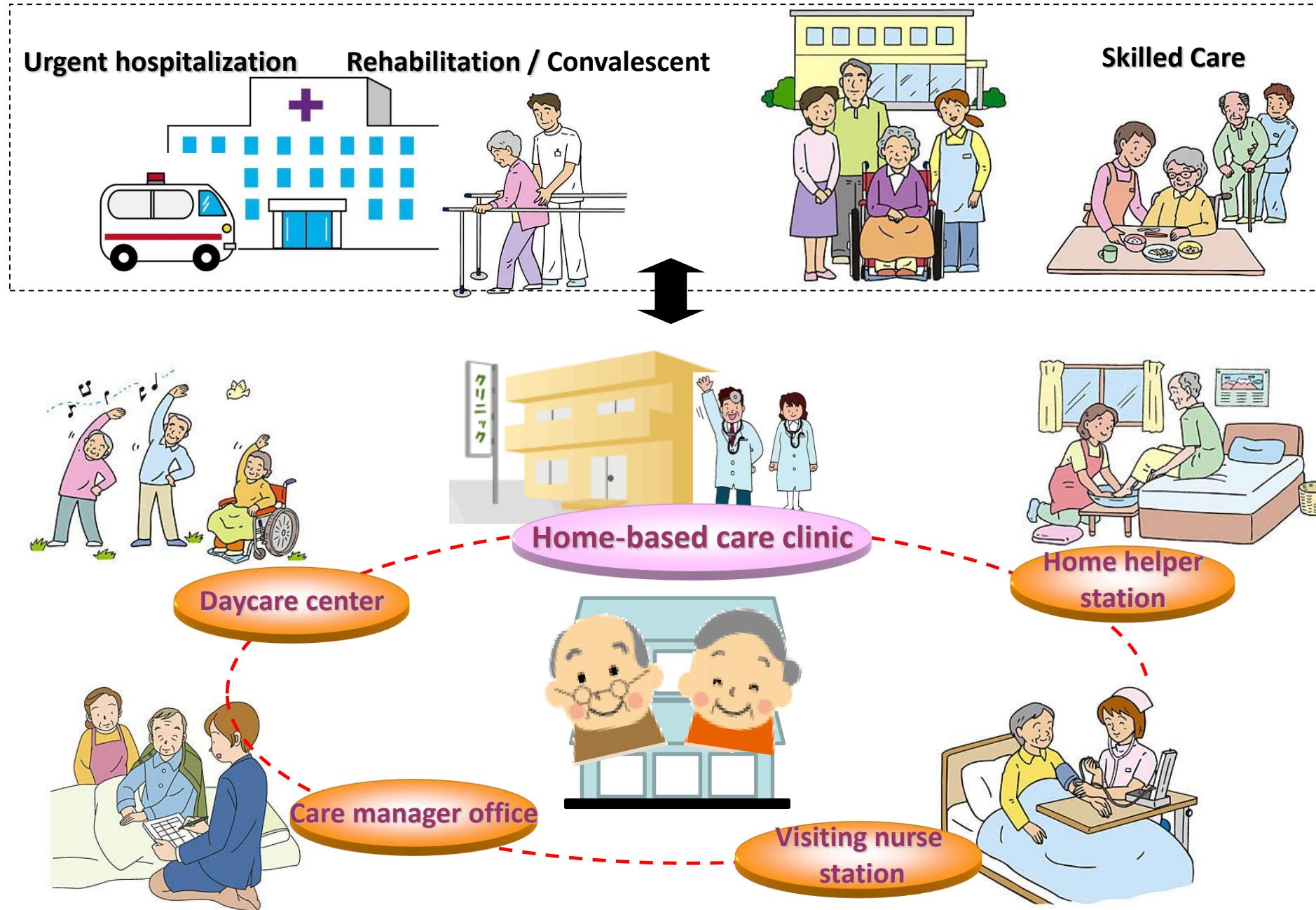
**Plant:** Healthcare & Prevention
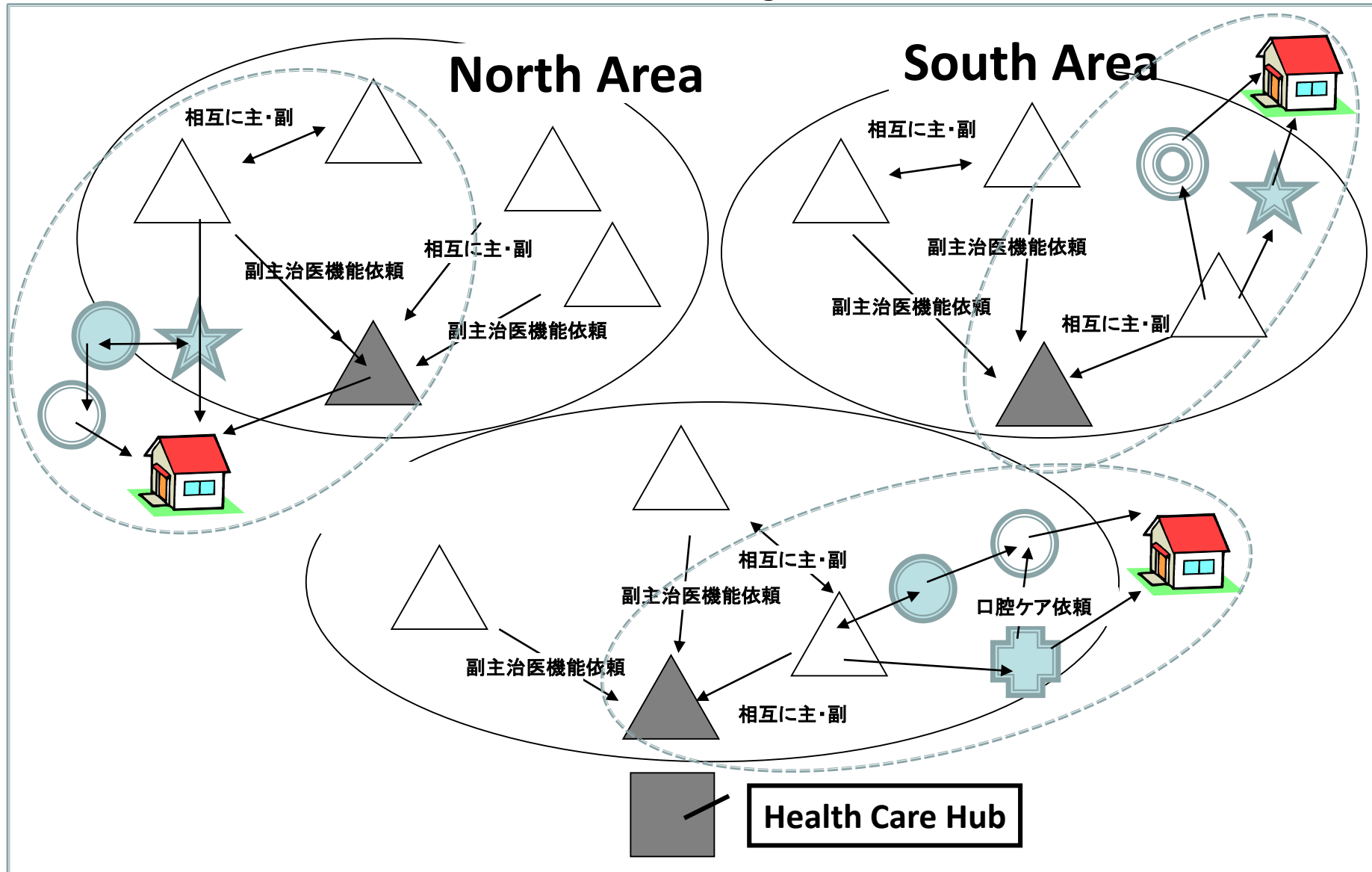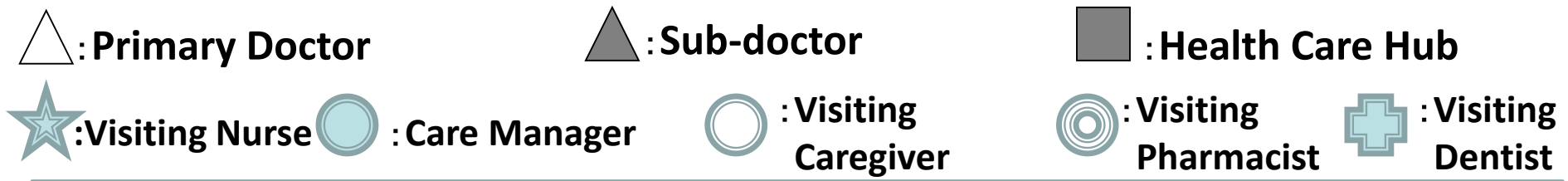
**Earth:** Living support

**Flowerpot:** Housing

**Tray:** Patient's choice & preparation

介護・リハビリテーション

医療・看護

保健・予防

生活支援・福祉サービス

すまいとすまい方

本人・家族の選択と心構え

# Integrated Home-based Care

**Urgent hospitalization**   **Rehabilitation / Convalescent**   **Skilled Care**

**Home-based care clinic**

**Daycare center**

**Home helper station**

**Care manager office**

**Visiting nurse station**

# 5 Working Groups

（1） **Physician WG**
・**Kashiwa Medical Association and hospitals**
・**Workable relations among the primary doctors, sub-doctors and hospitals**

（2） **Coordination WG**
・**Coordination among health care and long-term-care services**

（3） **Trial Practice WG**
・**Testing and verification of the system using by trial runs**

（4） **Hospital WG**
・**Discharge protocol and backup system of home-based care**

（5） **Face-to-Face WG**
・**All service providers get together and enhance the partnerships**

# Training Workshop for Health and LTC Professionals on Home-based Care

## Day 1

〇Curriculum
- **Needs for home-based care**
- **Identifying useful resources in the area (GW)**
- **GW by profession**
- **Networking party**



**GW by mixed professionals**

## Practicum
（Physician only）

〇**3 hours × 2 times**
〇**Options**
**Accompany with:**
- **Physician home visit**
- **Nurse home visit**
- **Care manager visit**
- **Ward rounds in hospice**



**Accompanying Dr. home visit**

## Day 2
（1 month after Day 1）

〇Curriculum
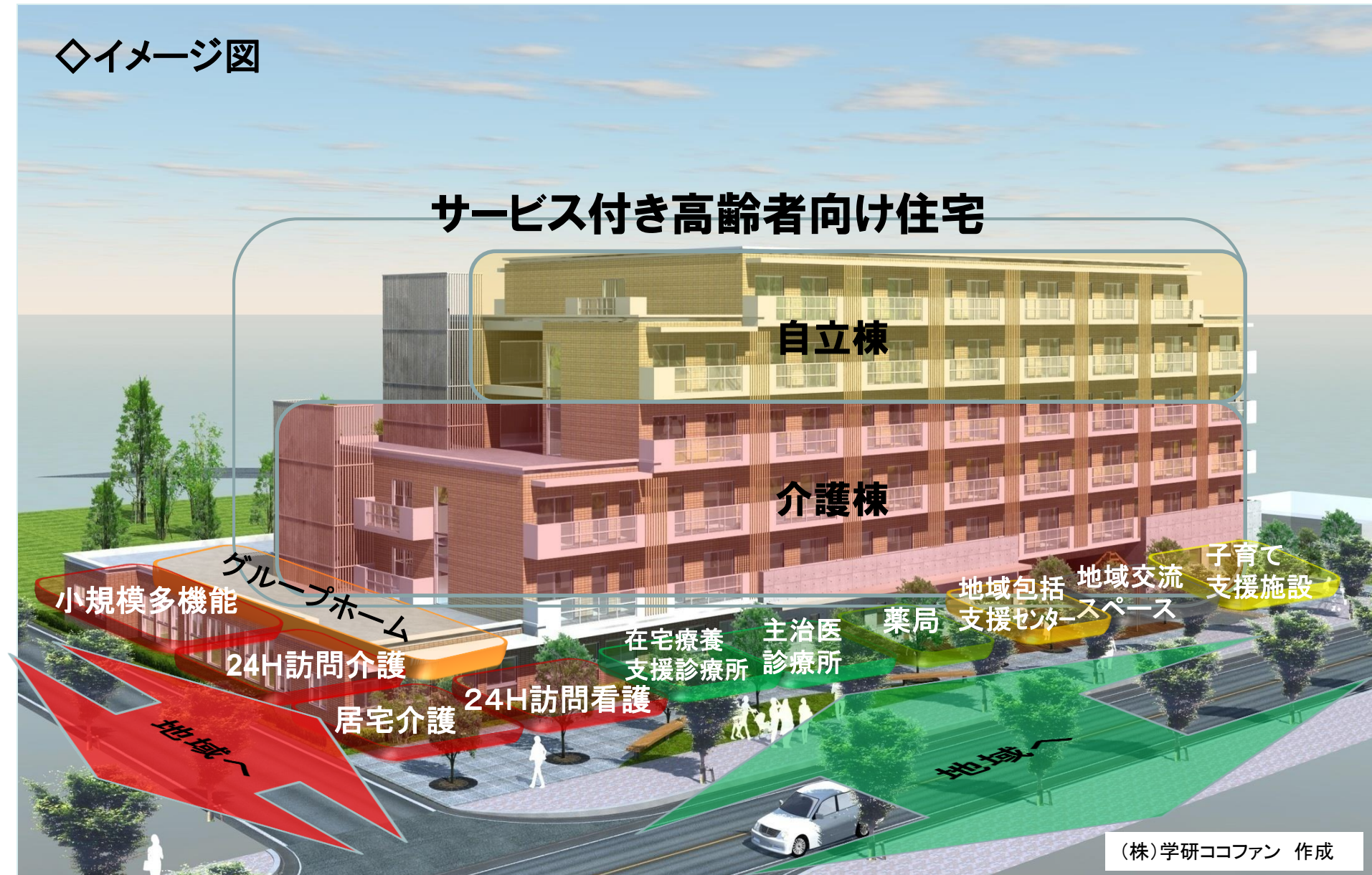- Starting Home-based Care
- Collaboration of multi-professionals
- GW by profession
- Review of practicum experience（GW）
- Challenges and solutions of home-based care（GW）
- System & compensation
- Awarding certificate



**Group photo**
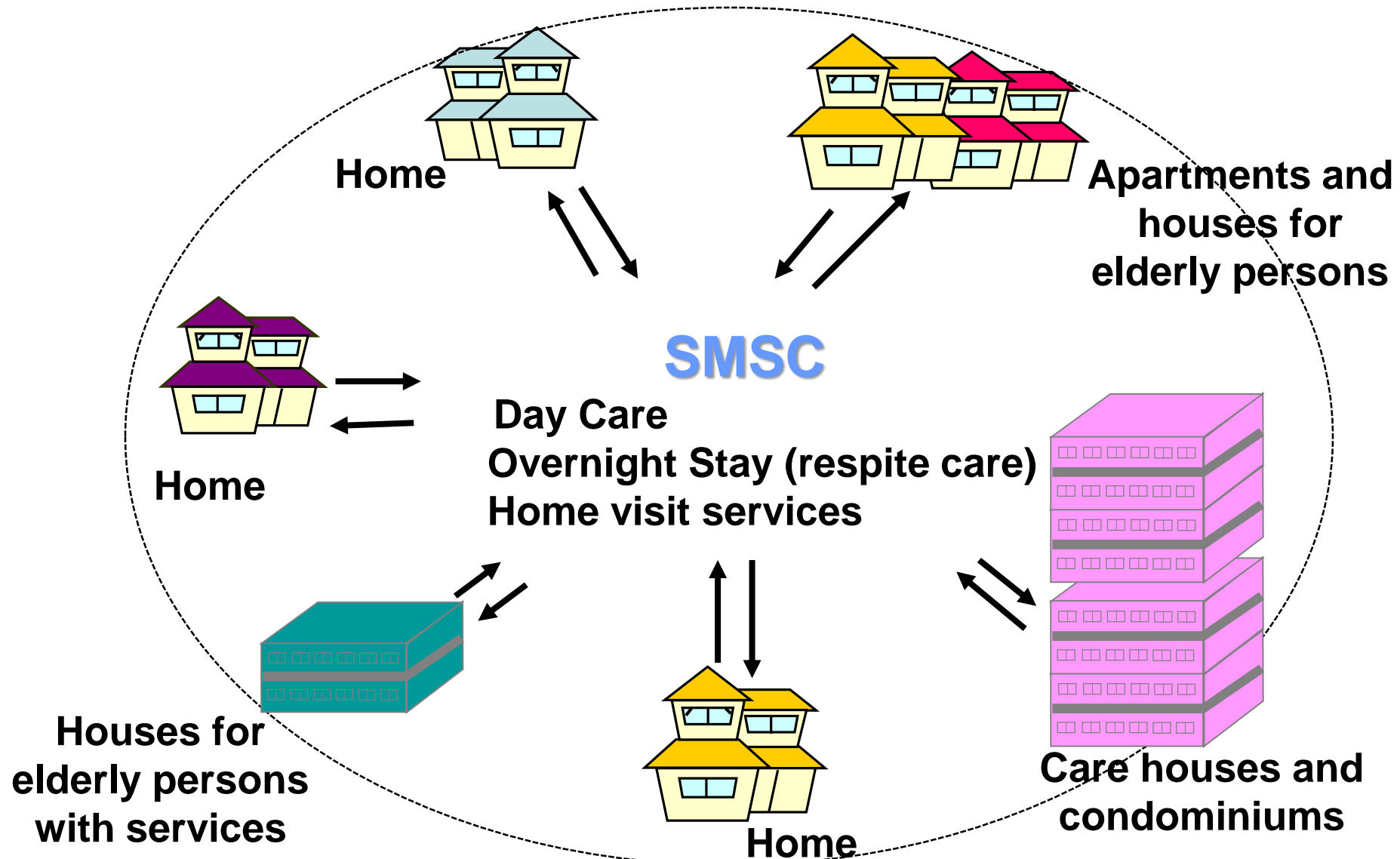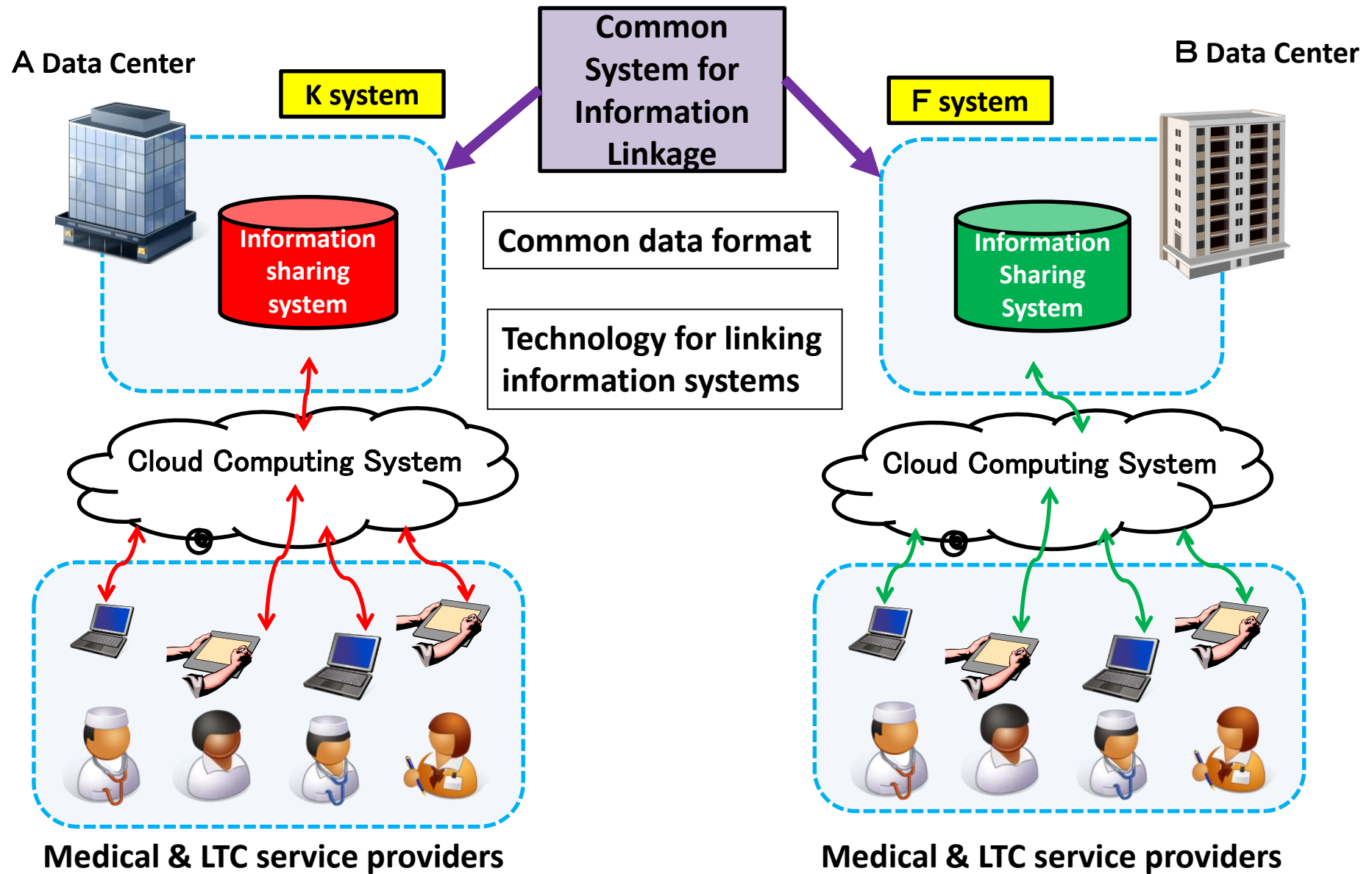
# Assisted Living in Community



◇イメージ図

サービス付き高齢者向け住宅
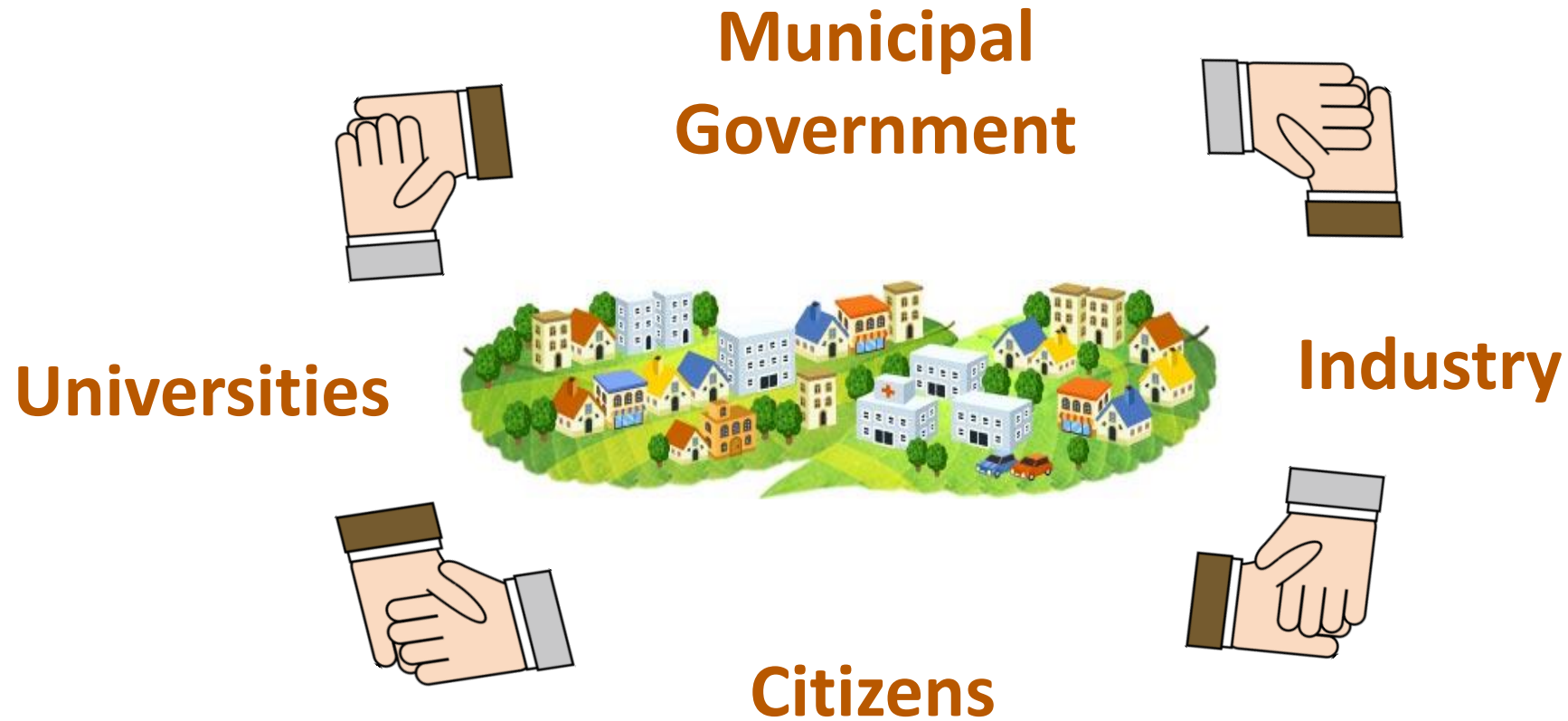
自立棟

介護棟

グループホーム

小規模多機能

24H訪問介護

居宅介護

24H訪問看護

在宅療養
支援診療所

主治医
診療所

薬局

地域包括
支援センター

地域交流
スペース

子育て
支援施設

地域へ

地域へ

（株）学研ココファン　作成

# Home-based Health Care

# Small Multifunctional Service Center



Home

Apartments and houses for elderly persons

SMSC

Day Care
Overnight Stay (respite care)
Home visit services

Home

Houses for elderly persons with services

Care houses and condominiums

Home

# Common Infrastructure for Sharing Information



**A Data Center**

**K system**

**Information sharing system**

**Common System for Information Linkage**

**B Data Center**

**F system**

**Information Sharing System**

**Common data format**

**Technology for linking information systems**

Cloud Computing System

Cloud Computing System

**Medical & LTC service providers**

**Medical & LTC service providers**

# Guidebook to Community-based Integrated Care System