

# Trajectories of Functional Health and Subjective Well-being over 20 Years

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Well-being in Ageing Societies:  
Perspectives from China, Germany and Japan



**Slide 1**

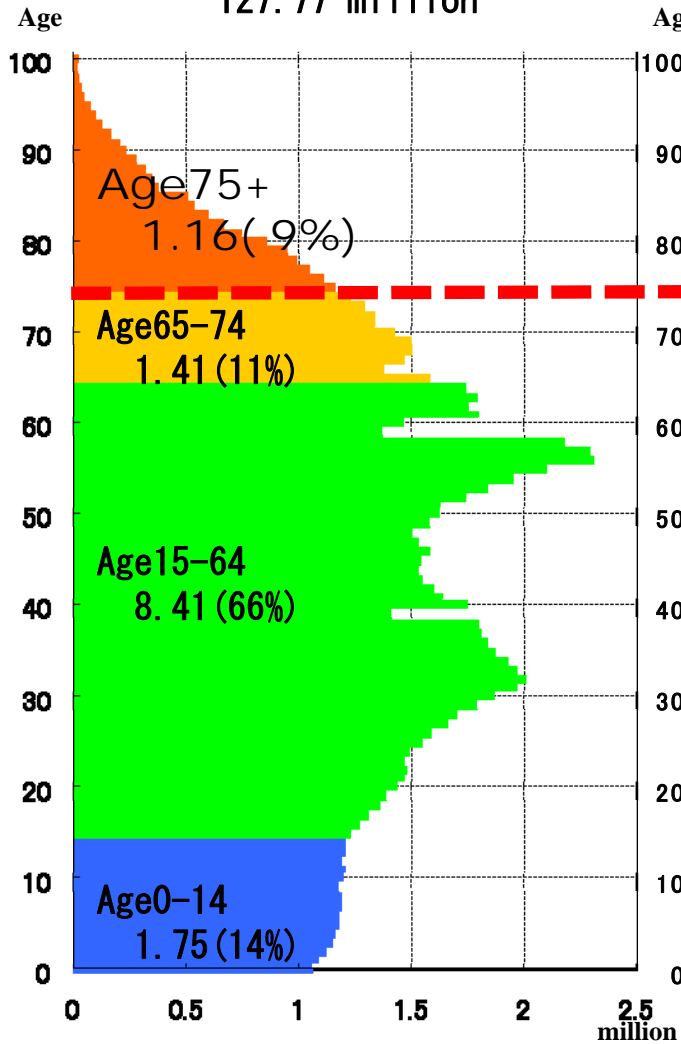
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**秋山弘子1** 秋山弘子, 2011/03/12

# Drastic Increase of Older-olds (age75+)

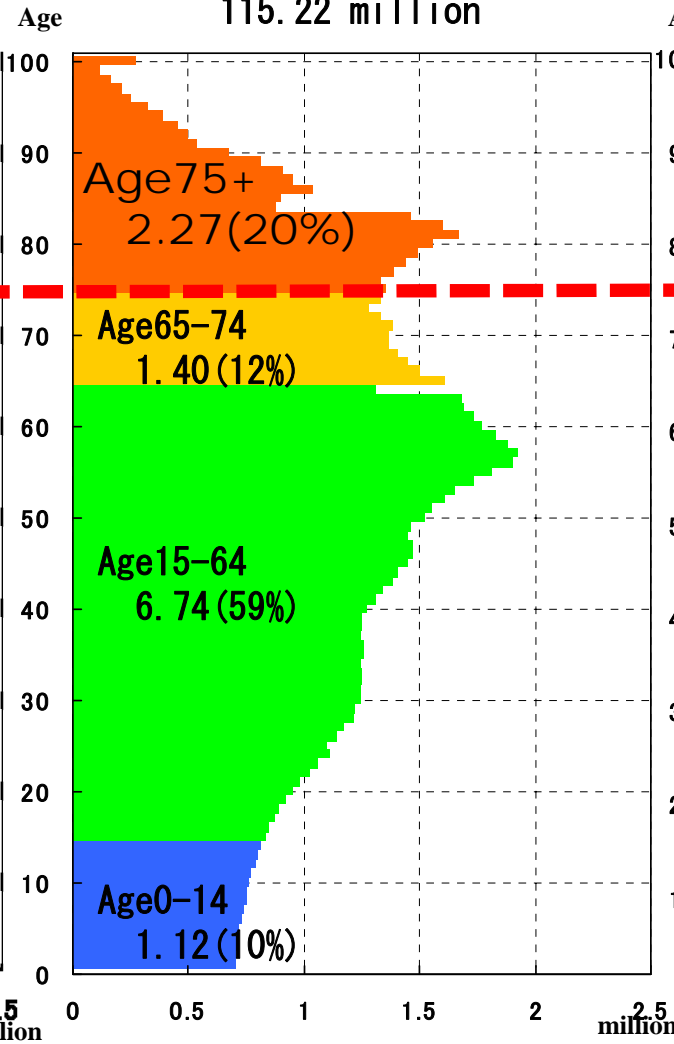
2005

Population  
127.77 million



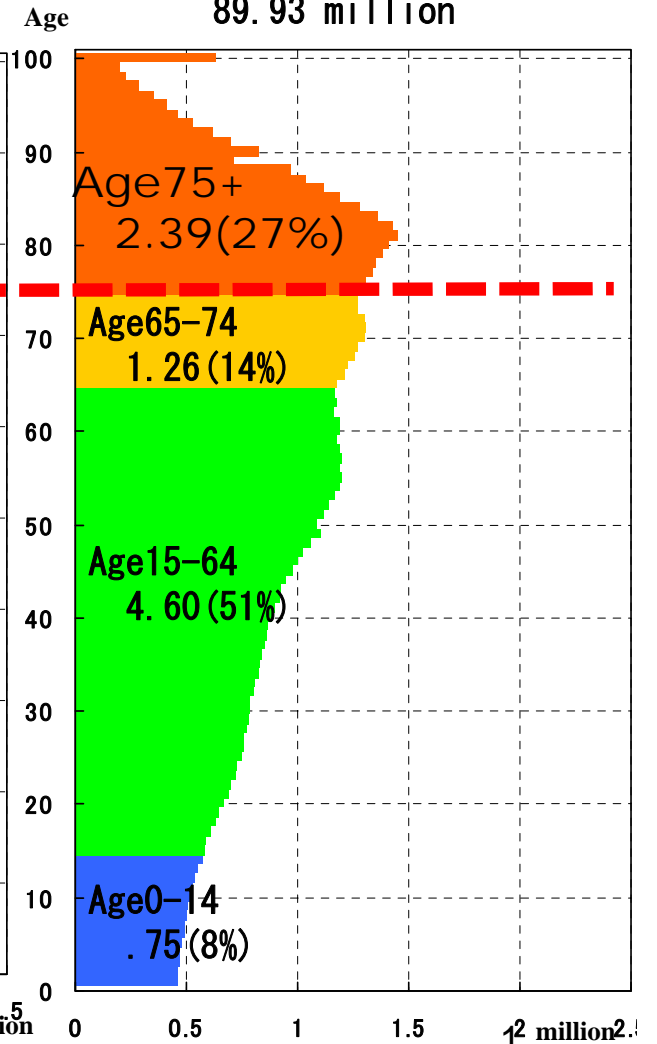
2030

Population  
115.22 million



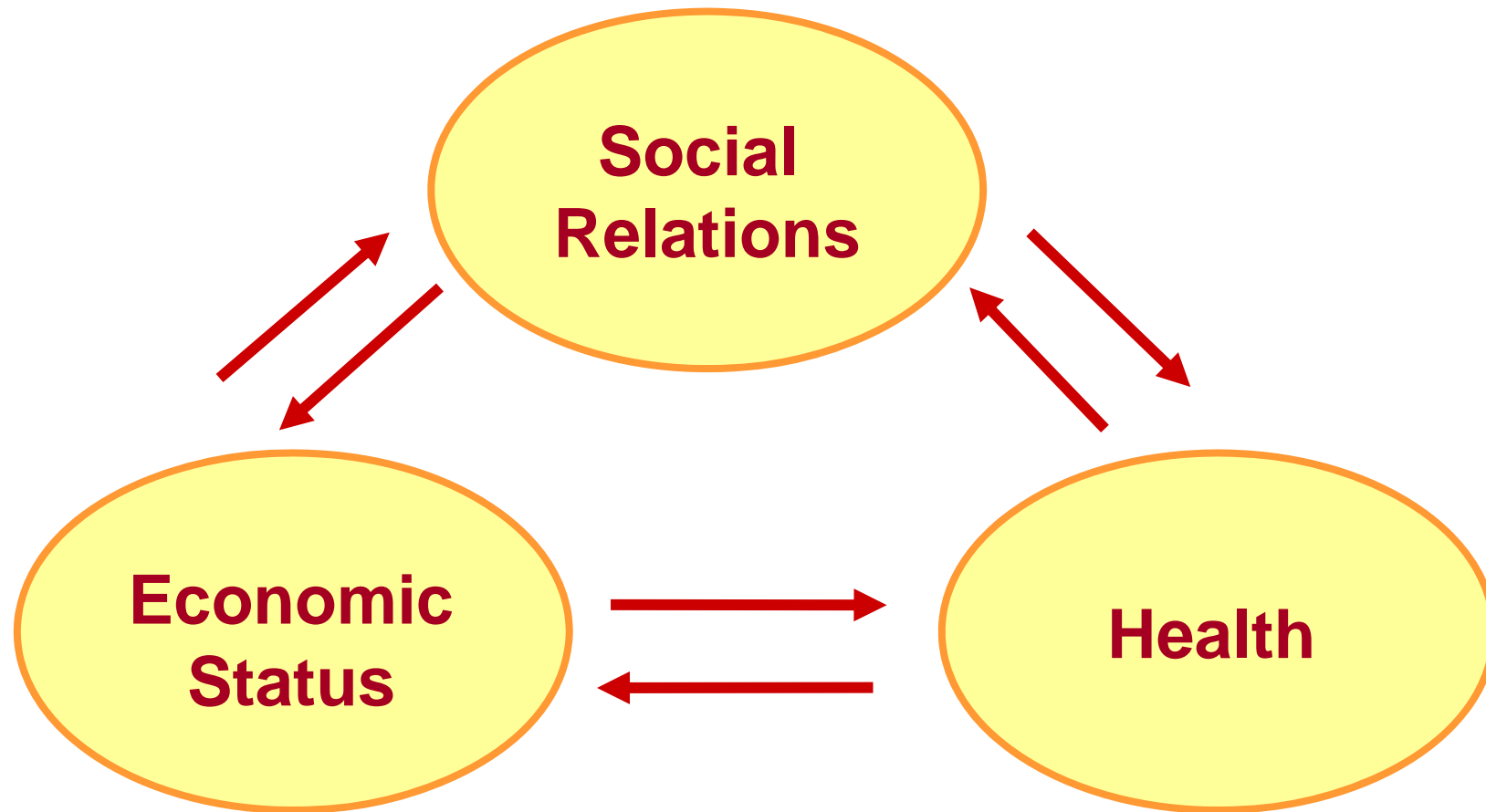
2055

Population  
89.93 million



# Well-being of Japanese Elderly


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**

# National Panel Survey of Japanese Elderly

<b>Wave 1</b>	<b>1987</b>		<b>20 years</b>
<b>Wave 2</b>	<b>1990</b>		
<b>Wave 3</b>	<b>1993</b>		
<b>Wave 4</b>	<b>1996</b>		
<b>Wave 5</b>	<b>1999</b>		
<b>Wave 6</b>	<b>2002</b>		
<b>Wave 7</b>	<b>2006</b>		
<b>Wave 8</b>	<b>2012</b>		

(Biomarkers and performance tests added)

# Functional Health Measure

## Score

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

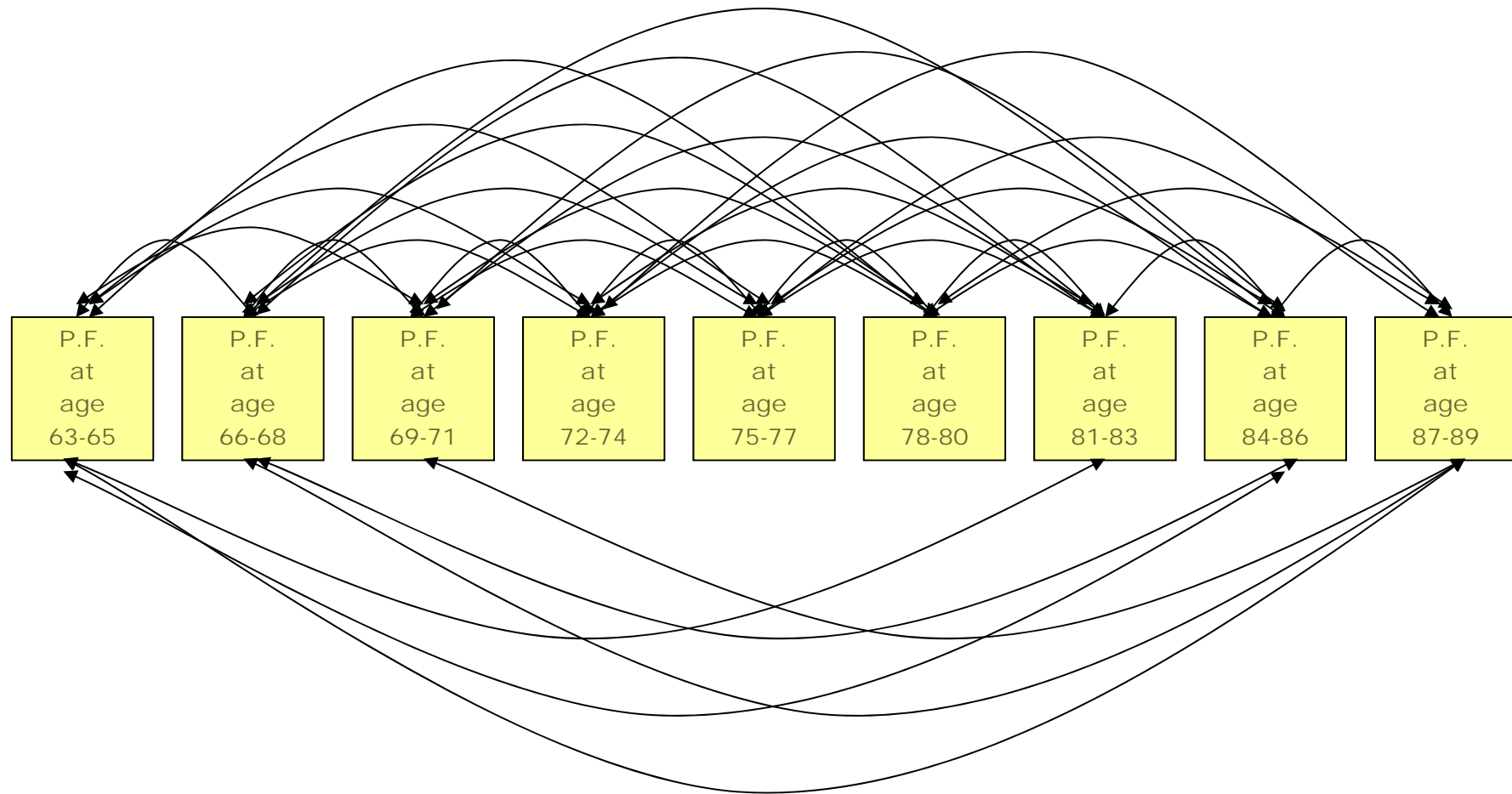
## ADL questions

- Bathing**
- Walking a short distance**
- Going up a few steps**

## IADL questions

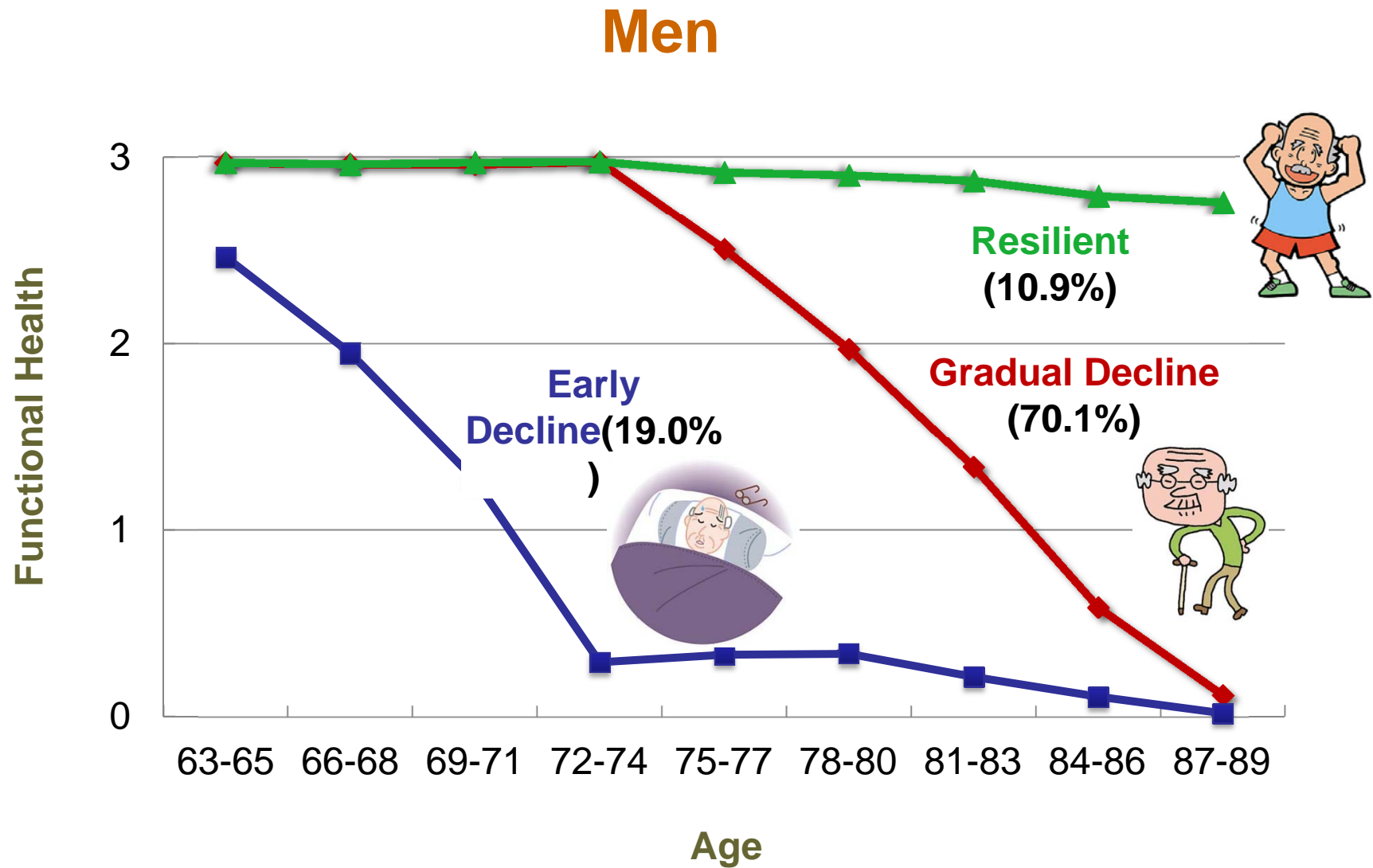
- Shopping for groceries or clothes**
- Using the telephone**
- Going out by bus/train**

# Latent Class Analysis: Model



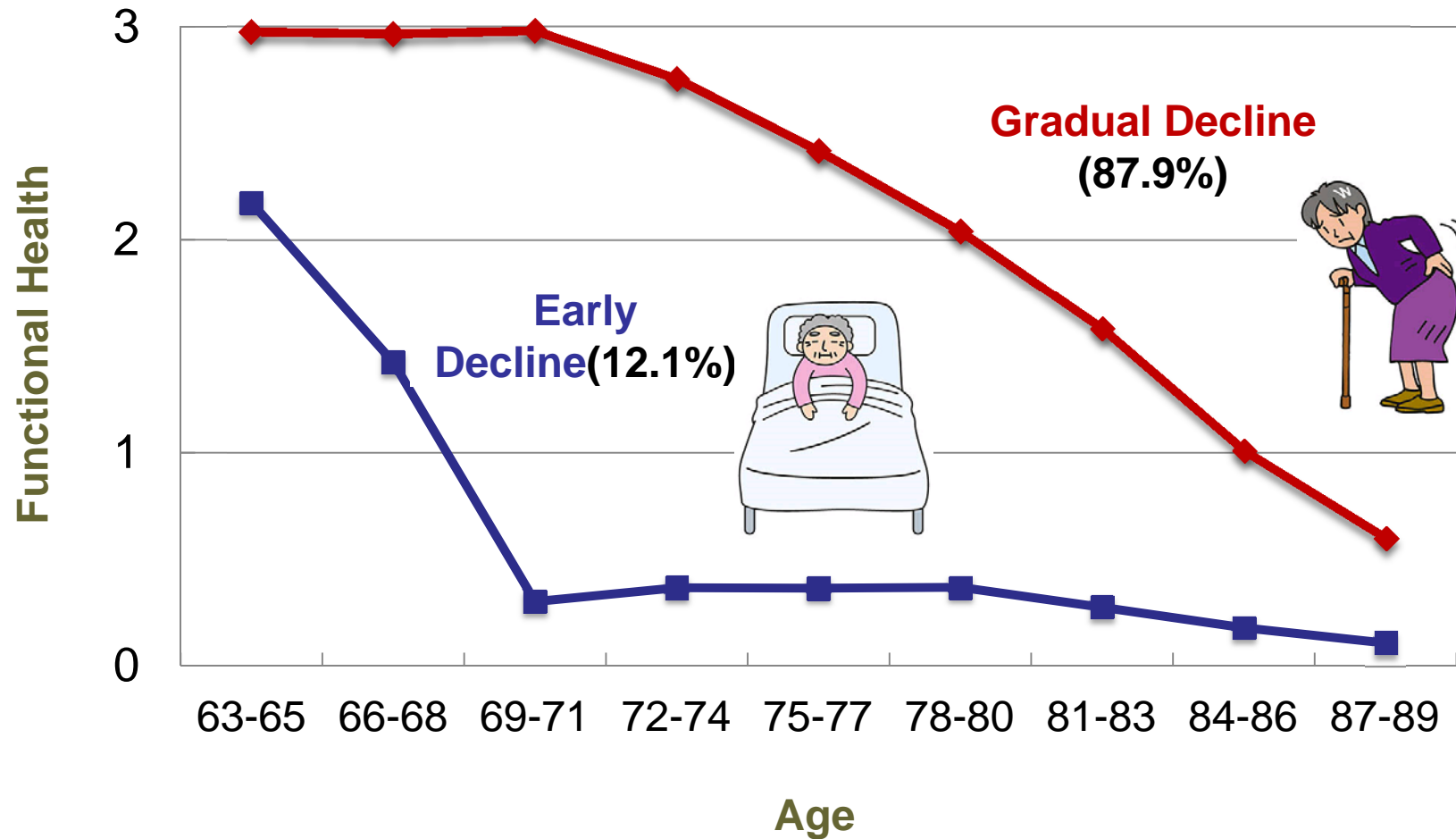


# Trajectories of Functional Health



# Trajectories of Functional Health

## Women



# Subjective Well-being Measures

## **LSI-A**

- The happiest time in life**
- Looking back, satisfied with my life**
- Will enjoy the life**

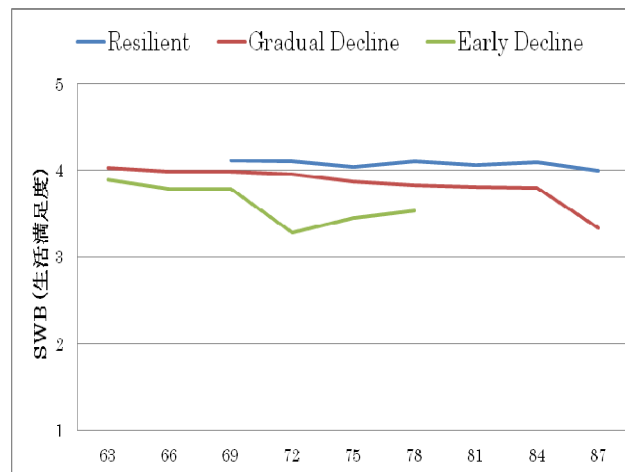
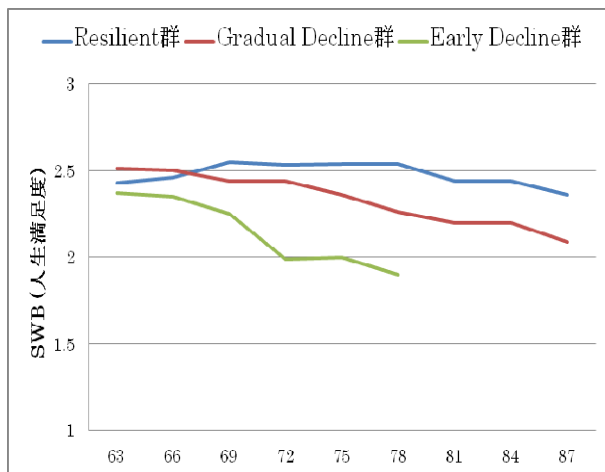
## **General life satisfaction**

# Trajectories of Life Satisfaction

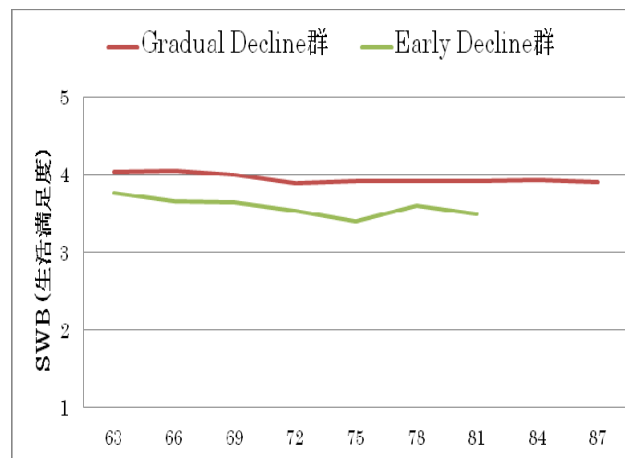
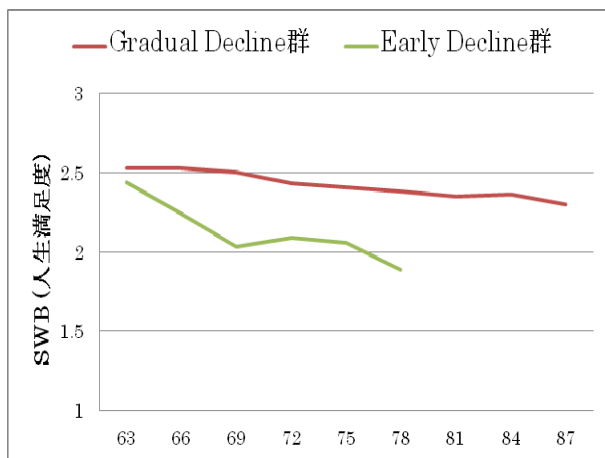
**LSI-A**

**Men**

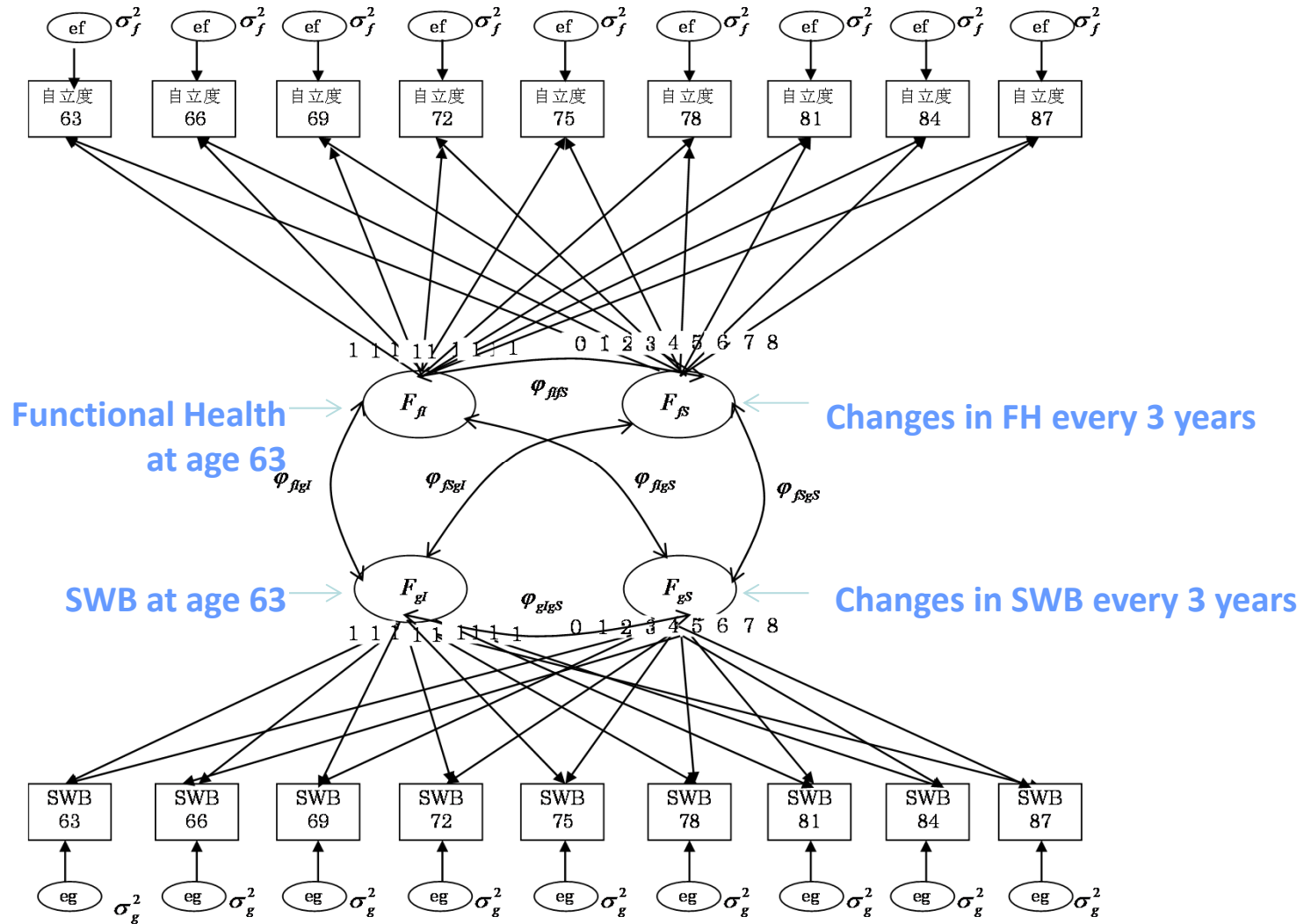
**GLS**



**Women**



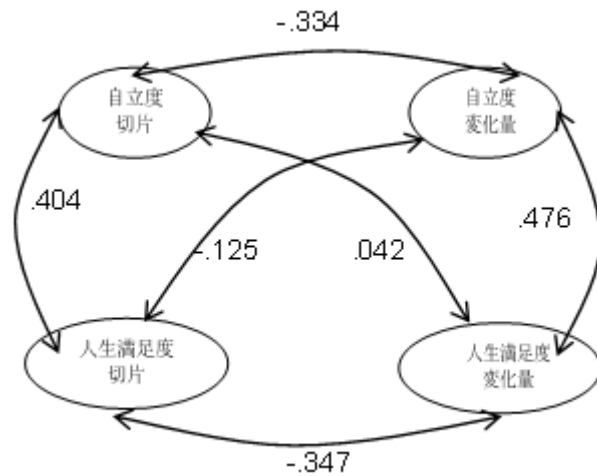
# Changes in Functional Health and Subjective Well-being



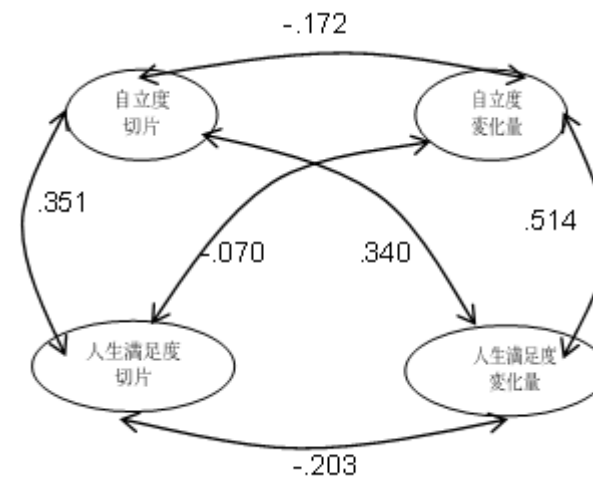
# Changes in Functional Health and Subjective Well-being

## LSI-A

### Men

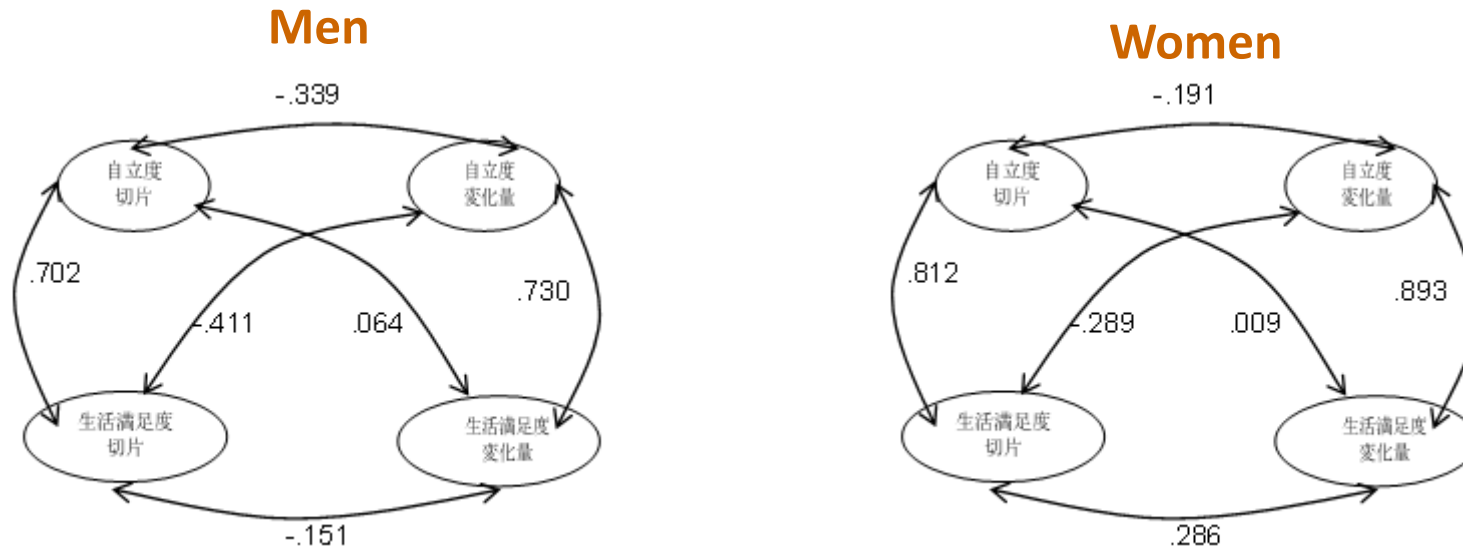


### Women

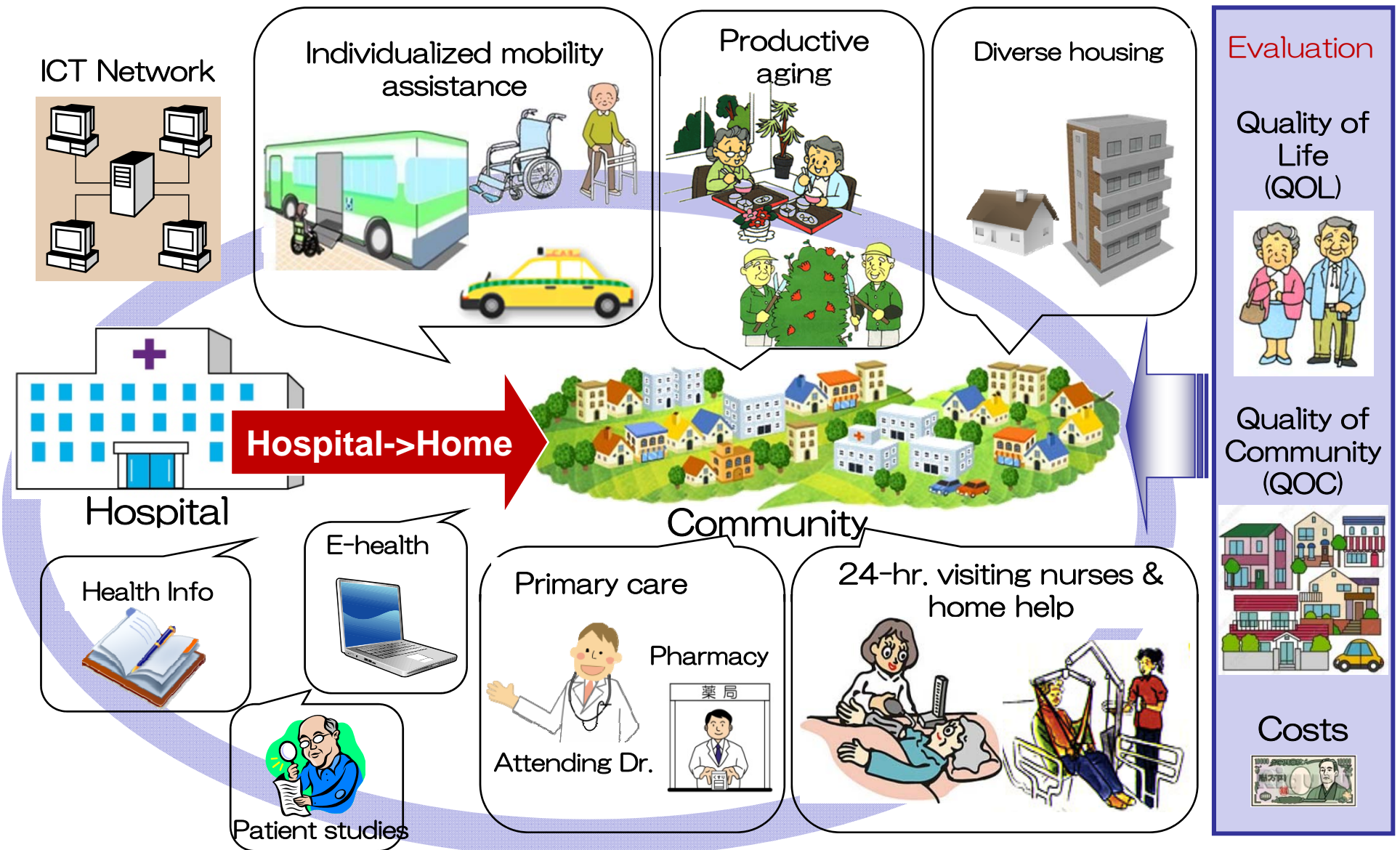


# Changes in Functional Health and Subjective Well-being

## General Life Satisfaction



# Redesigning Communities for 2030

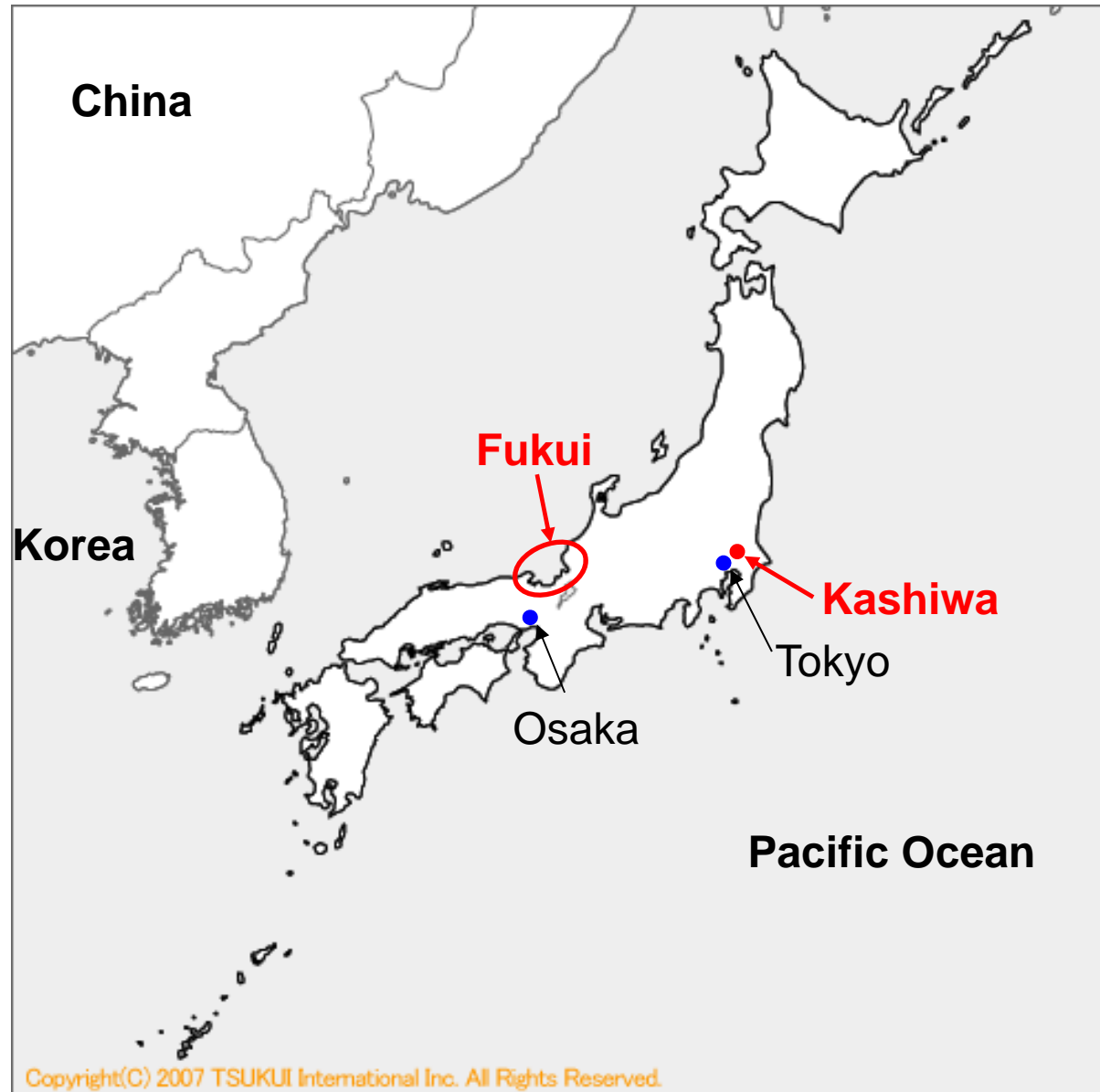




# Major Projects

- **Productive aging**
- **Human Bonds**
- **Housing**
- **Health Care**
- **Transportation**
- **ICT**

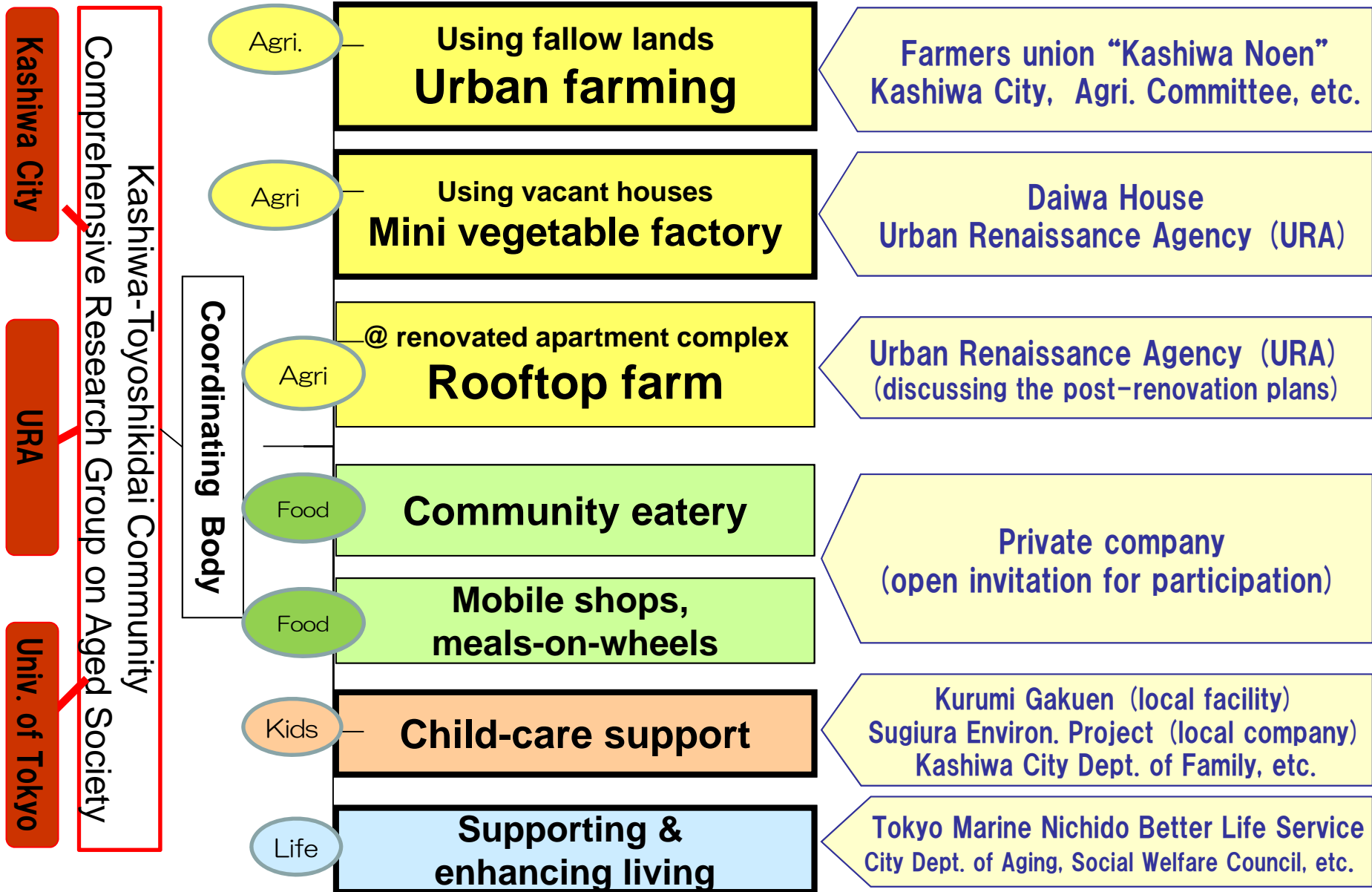
# Social Experiment Sites



# Work Places for the Second Life



# Creating Places to Work





# Active Seniors



# Effect Indicators



## Individual

**Physical and mental health**

**Social relations**

**Meaningful life**

**Smile**



## Community

**Tax revenue**

**Health care costs**

**Social capital**



# Evaluation Study

## Vascular test

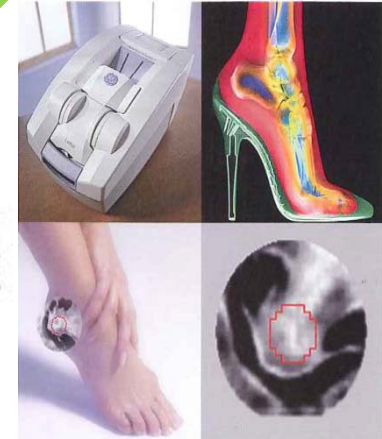
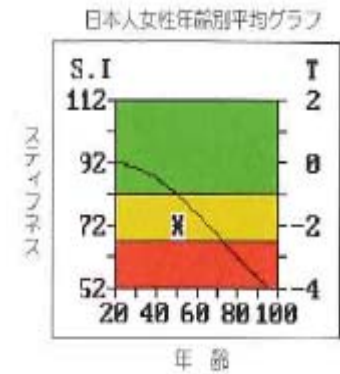


- CAVI/ABI
- FMD

## IOG Lab



## Bone density



## Body composition



- Fat/body water/  
bone and muscle mass

## Physical activity



- Pedometer/calories/Mets

## Cognitive function



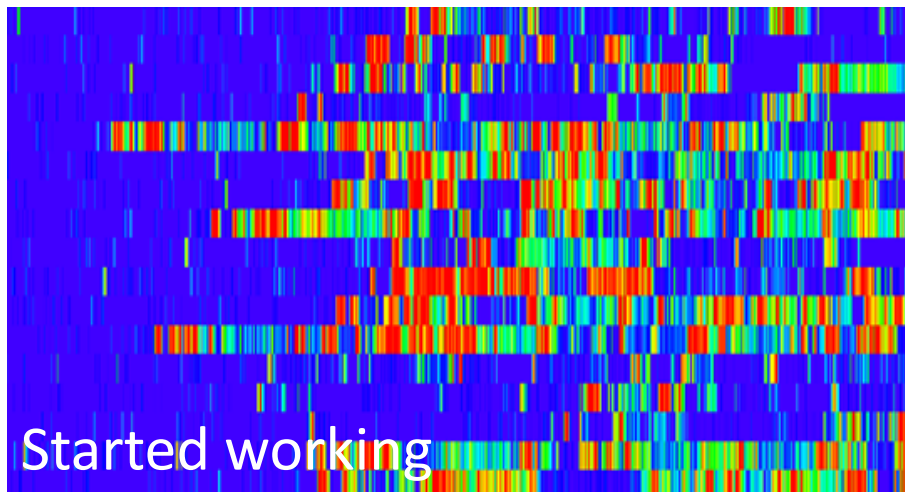
# Data

## Physical Activities



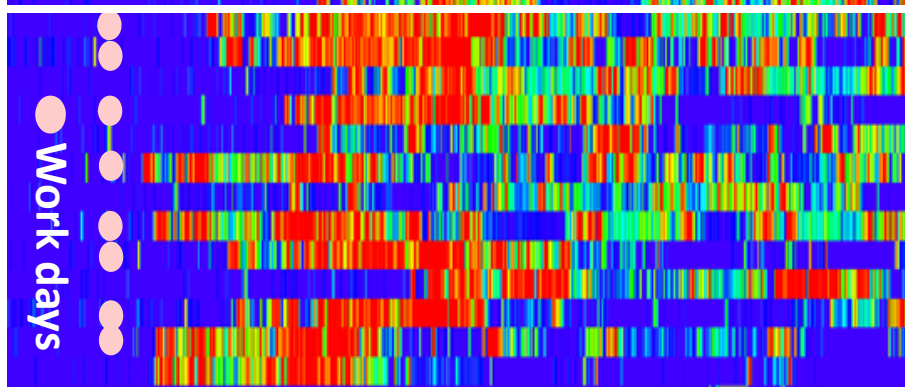
## Activity Tapestry

Jan. 15



Started working

Feb. 2



Work days

Feb. 15

6:00

12:00

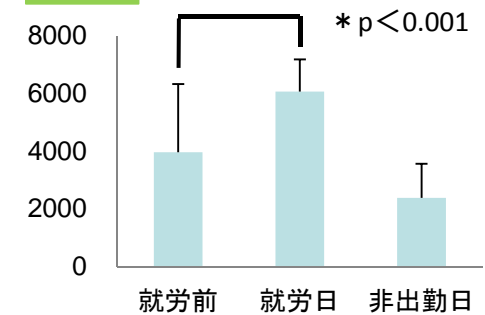
18:00

Activity Frequency

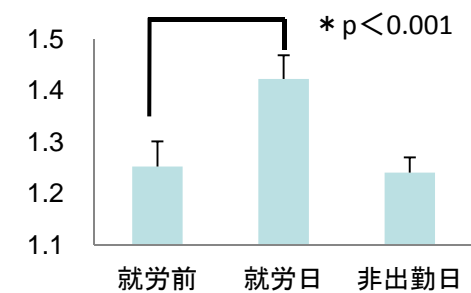
Low

High

## 歩数



## Mets (運動強度)



## 消費カロリー

