Redesigning Communities for Healthy Longevity
~ A Model from Kashiwa, Japan ~

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Challenges and Opportunities of a 100 year Life Society

- Individual: Life design for 100 years
- Society: Redesigning the infrastructure
- Industry: Gold mine of innovation
Demographics (Japan)

Life Expectancy:

Men: 81 years
Women: 87 years

Fertility Rate: 1.43

Age 65+: 28%
Demographic Shifts (1950—2050)

資料: 総務省統計局「国勢調査」,国立社会保障・人口問題研究所「日本の将来推計人口(平成14年1月推計)」
Old Age Dependency Ratios  (Age 20-64 / Age 65+)

Year 1965
9.1 persons

Year 2012
2.4 persons

Year 2050
1.2 persons

Needs to increase labor force

Longer work life

Child care support
Redesigning Communities for 2030

- Hospital->Home
- Individualized mobility assistance
- Productive aging
- Diverse housing
- ICT Network
- Health Info
- E-health
- Patient studies
- Primary care
- 24-hr. visiting nurses & home help
- Attending Dr.
- Pharmacy
- 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
We Live Longer & Work Longer

It is good for the well-being of individuals and the society
We are Living Longer and Healthier!

11 years younger in usual walking speed between 1992 & 2002

Walking Speed

Men

Women
Definition of ‘old-age’ : age 75+

75歳で高齢者、65歳は「准高齢者」 学会提言
2017/1/5 19:17 | 日本経済新聞 電子版

日本老年学会の報告によれば、現在は65歳以上と定義されている「高齢者」を75歳以上に見直すよう求める提案を発表した。医療の進展や生活環境の改善などにより、10年間後の身体の動きや知的能力が5～10歳ほど高いと指摘した。

前進高齢者とされる65～74歳は、活発な社会活動が可能な人の大多数を含む「准高齢者」に区分するよう提案。社会の支え手と捉え直すことが、明るく活力ある高齢化社会につながるとしている。

65歳以上を「支えられる側」として設計されている社会福祉や雇用制度の在り方に関する議論にも大きな影響を与えそうだ。

平均寿命を越える90歳以上は「超高齢者」とした。提案をまとめた大内建友・徳島県社会福祉協議会の事務局長は「高齢者に対する意識を変え、社会参加を促すきっかけになる」と述べた。

学会は、平均年齢の増加に対するさまざまなデータを解析。身体の動きや知能の検査結果、残った歯の数などは同一年齢で比べると年々高まる傾向があり、死亡率や要介護認定率は減少していた。

内閣府の調査でも、65歳以上を高齢者とすることに否定的な意見が大半で、男性70歳以上、女性は75歳以上を高齢者とする回答が最多だったことも考慮した。

准高齢者、仕事やボランティアなど社会に参加しながら、病気の予防に取り組み、高齢期に備える時期だとした。

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What do you want to do after age 65?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Overall</th>
<th>Male</th>
<th>Female</th>
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<tbody>
<tr>
<td>Employment</td>
<td>3.36</td>
<td>3.46</td>
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<td>Health enhancement activities</td>
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<td>3.32</td>
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<td>Natural experience activities</td>
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<td>Food-related activities</td>
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<td>3.11</td>
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<td>Art and music activities</td>
<td>3.17</td>
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<td>Voluntary work</td>
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<td>Environmental activities</td>
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<td>2.94</td>
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<td>Contributing to community</td>
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<td>3.00</td>
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<tr>
<td>Contribution to community</td>
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<td>Community building activities</td>
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<tr>
<td>Care-related activities</td>
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<td>Support activities for the elderly</td>
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<tr>
<td>Education activities</td>
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<td>2.84</td>
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<td>Cross-generational activities</td>
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<td>Personal care and activities</td>
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<td>2.50</td>
<td>3.03</td>
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<td>Child and youth support activities</td>
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<td>2.59</td>
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<td>Catering activities</td>
<td>2.67</td>
<td>2.83</td>
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<td>Gender and exchange activities</td>
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<td>Overseas activities</td>
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<tr>
<td>Support activities for the elderly</td>
<td>2.53</td>
<td>2.61</td>
<td>2.45</td>
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</tbody>
</table>
Life twice as long

50 year life ⇒ 100 year life

Sunset years of life ⇒ Second chapter of life
Labor force participation rate & health expenditure by prefecture (Age 65+)

Sources: Ministry of Health, Labour and Welfare; Statistics Bureau
Japanese seniors are willing to work

70% of people age 60+ want to work until age 70 and longer

Source: Seniors’ Social Participation Survey (Cabinet Office)
Work Places for the Second Life

- Community Farm
- Community Eatery
- Farmers Market
- Meal Delivery
- After-school Program
- Paper Diapers Recycling Factory
- Mini-vegetable Factory
- Roof Garden
Creating Work Places and Work Style

Utilizing fallow lands
**Urban farming**

Using vacant houses
**Mini vegetable factory**

@ renovated apartment complex
**Rooftop farm**

**Community eatery**

Mobile shops, meals-on-wheels

**Child-care support**

Supporting & enhancing living

Farmers union “Kashiwa Noen”
Kashiwa City, Agri. Committee, etc.

Daiwa House
Urban Renaissance Agency (UR)
(discussing the post-renovation plans)

Private company
(open invitation for participation)

Kurumi Gakuen (local kindergarten)
Sugiura Environ. Project (local company)
Kashiwa City Dept. of Family, etc.

Tokyo Marine Nichido Better Life Service
City Dept. of Aging, Social Welfare Council, etc.
New Work Style for the Second Life

Office Seven
- “Job seminar” for residents: held 6 times & 517 people completed
- Using work-sharing, a flexible employment scheme for both employers and workers
- Technological development using a cloud computing system to support the flexible work scheme
Seminar Dates & Programs

**#1 June 22**

**AM:** Second-life work 101

**PM:** Current job opportunities and environment for seniors

**#2 June 29**

**AM:** Expectations from employers

**PM:** New work styles in the second-life

Seminar Venue

**The Univ. of Tokyo Kashiwa Campus Research bldg. 6th fl.**

This seminar is for:
- Age 60+
- City residents
- Interested in working
- Can participate in evaluation, etc.

*The 4th job seminar June 22 (Fri.) & 27th (Fri.)*

*The 5th job seminar July 24th (Tue.) and 31st (Tue.)*

※*The 5th seminar will focus on agriculture*
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
Life-long Active Society

Individual

Health

Purpose of Life

Connected

Sense of Belonging

Income

Society

Producers

Consumers

Tax Payers

Public Finance for Healthcare/Welfare

Community Power

Preventing Social Isolation

Well-balanced Mutual Support Society
Policy Recommendation to Ministry of Health, Welfare and Labor
Towards Life-long Active Society

• Pension reforms
• Reduction of labor market barriers
• Enhancing employability
KEIROKA: 3S Assistive Technology

KEIROKA Technology
Assistive technology to reduce fatigue/load of human workers in manual labors, e.g. agricultural work, nursing care, construction, designed on the concept of 3S assist.

3S Assist
- Secure assistance
- Sustainable assistance to maintain physical functions
- Subliminal assistance not to disturb sensory functions

Smart Suit ®
Semi-active KEIROKA Technology

Smart Suit ® Lite
Passive KEIROKA Technology

KEIROKA technologies for buck support

Biomechanical design for Smart Suit

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http://keiroka.org/
AI Platform for Augmenting Intelligent Production of Diverse Human Resources
Life Expectancy

Healthy Life Expectancy

Engaged Life Expectancy
Collaboration of Multi-stakeholders

Municipal Government

Universities

Industry

Citizens