

Dr. Florian Kohlbacher
German Institute for Japanese Studies (DIJ)

OECD ROUNDTABLE
BETTER AND ACTIVE LIVES IN OLD-AGE:
WHAT ROLE FOR ICTS?

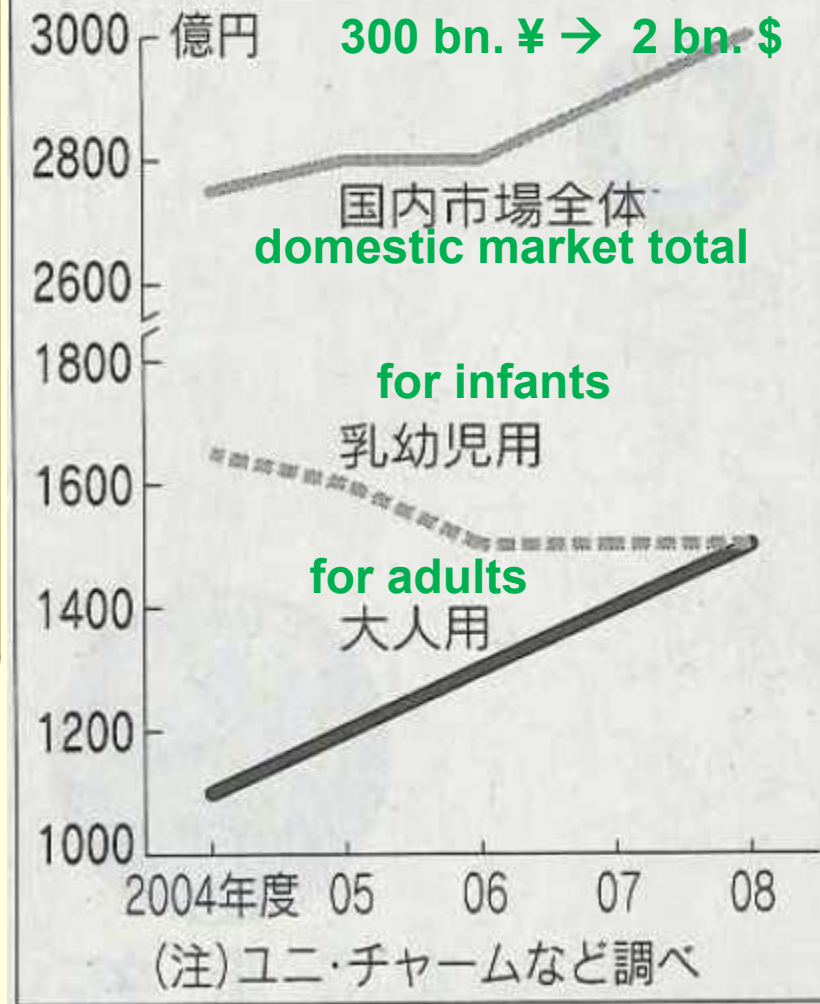
**The business implications of
demographic change**
Lessons from Japan

**The Silver
Market
Phenomenon**

Seoul, 22 November 2013

Japan's Silver Market Phenomenon

Disposable diapers sales in Japan

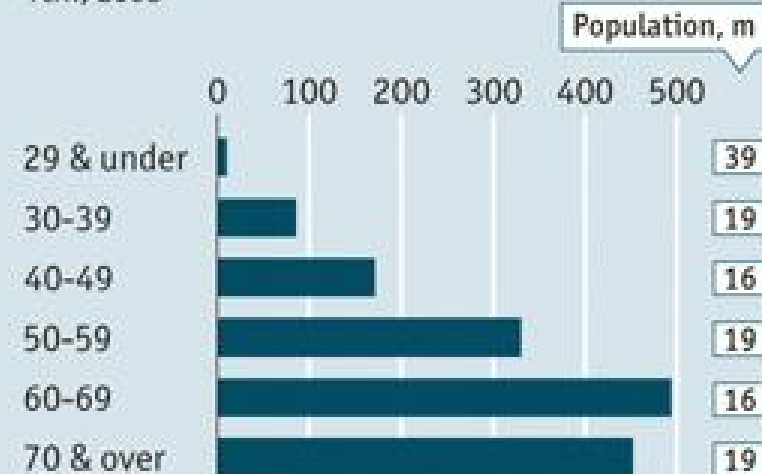


Silver paradise

Expected changes in average

Older, wiser, wealthier

Japanese household wealth, by age group
¥trn, 2008



Source: Nikkei

-200 0 200 400 600

Source: The Nikkei

高齢化先進国”の強みを生かせ Leveraging the strength of an advanced aging society



HOME > これまでの放送 > 2011年 6月 8日(水) 放送

2011年 6月 8日(水)
(NO.3053)

“高齢化先進国”

65歳以上の人口が22%。今、介護分野の技術やサービスが未発達の中、大市場獲得をめざす。経済の縮小、雇用の悪化、少子化が進む日本。介護分野にもつながり、まさに課題に対応する技術やビジネスモデルを模索し、ピンチをチャンスと捉え、可能性と課題を考える。

出演者

フローリアン・コルバハ
（ドイツ日本研究所
所長）が出演します

出演者の発言

フローリアン・コルバハ

【スタジオ1】

●介護ロボットなど

>>日本では製品とか技術を開発をしても、高齢化ビジネスでは市場化が非常に

- Japan is often perceived as a lead market for care robotics (and technologies for the aging society in general)

- But in reality, hardly any technology makes it onto the market

- Foreign countries have started importing (and testing) Japanese technologies

→ How to fully leverage the strength of a super-aging society? → *Towards a new 'Japan as No. 1'*

について

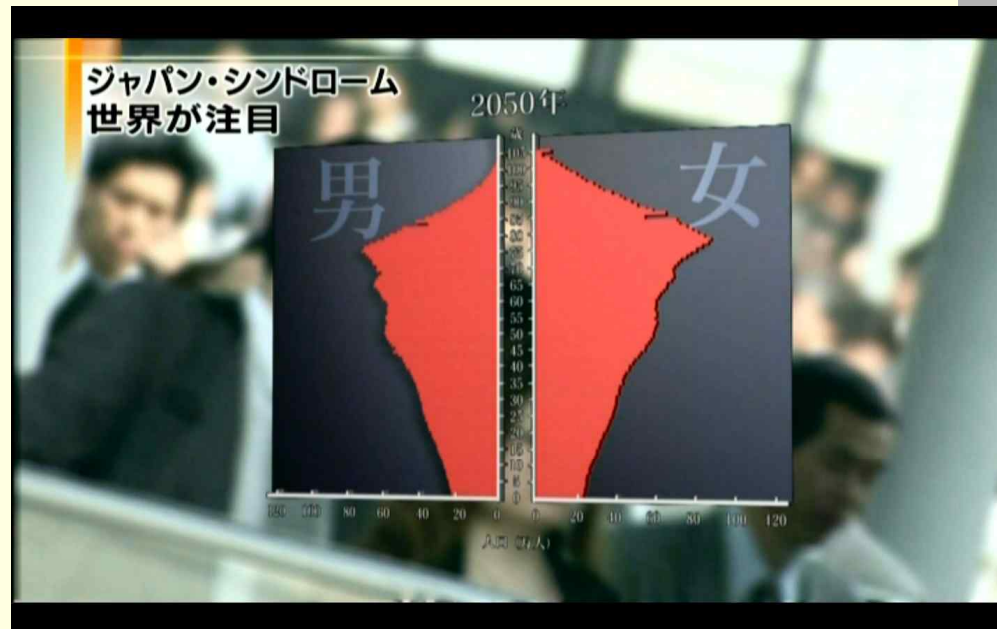
が非常に
くつかの
ね、あと
企業だ
こうえで、
ってくるわ
す。

Agenda



- Business Implications of Demographic Change
- Silver Lead Markets
- Innovation/Technology for the Aging Society
- The Silver Market Phenomenon in Japan – *Revisited*
- Q&A





BUSINESS IMPLICATIONS OF DEMOGRAPHIC CHANGE

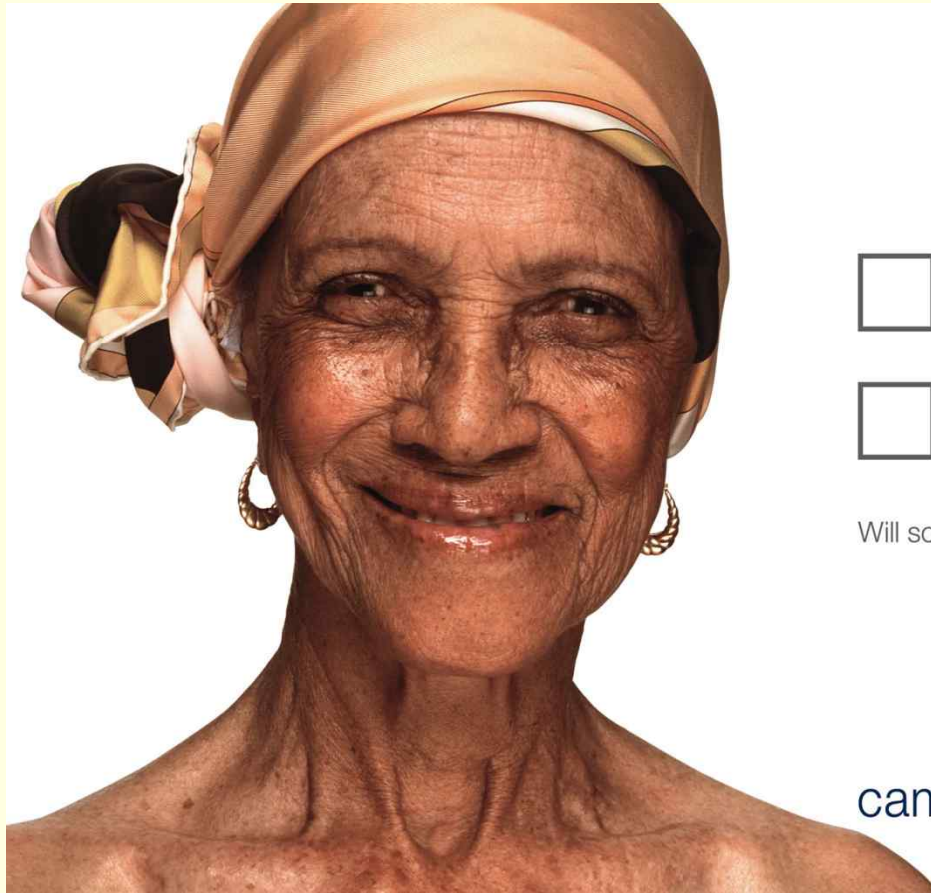
Demographic Change

- Demographic change as a global phenomenon
 - Population aging
 - Population shrinking (vs. population growth)

- Demographic change as a business challenge and opportunity (Drucker 2002; Dychtwald 2000; Kohlbacher & Herstatt 2008/11; Magnus 2009)
 - Aging workforce
 - Shrinking customer base
 - Shift in market segments
 - Silver Business/Markets: new products, technologies etc.

- Demographics as one source of innovation opportunities (Drucker, 1985)

A matter of perception...



- wrinkled?
- wonderful?

Will society ever accept 'old' can be beautiful? Join the beauty debate.

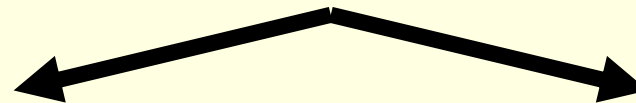
campaignforrealbeauty.co.uk  | *Dove*

Business implications of demographic change



Demographic Change

- Aging
- Shrinking



Challenges/threats

- Workforce crisis
- Lost knowledge
- Shrinking customer base

Chances/opportunities

- Silver market/ silver business
- New product/ service offerings
- 'Gerontechnologies'

Responsibilities

- Age discrimination
- Social innovation
- Support



SILVER LEAD MARKETS

Japan: Lead silver market?



“the present rush into robotics is largely the result of a process need caused by demographics. [...] The Japanese are not ahead in robotics because of technical superiority; [...] But the Japanese had their “baby bust” four or five years earlier than America and almost ten years earlier than West Germany.”

Peter F. Drucker, Innovation and Entrepreneurship
1985

Lead Market Theory

Definition: **The country where an innovation is first widely accepted and adopted** (Beise, 2001; Beise and Rennings 2005)

Factors of relevance

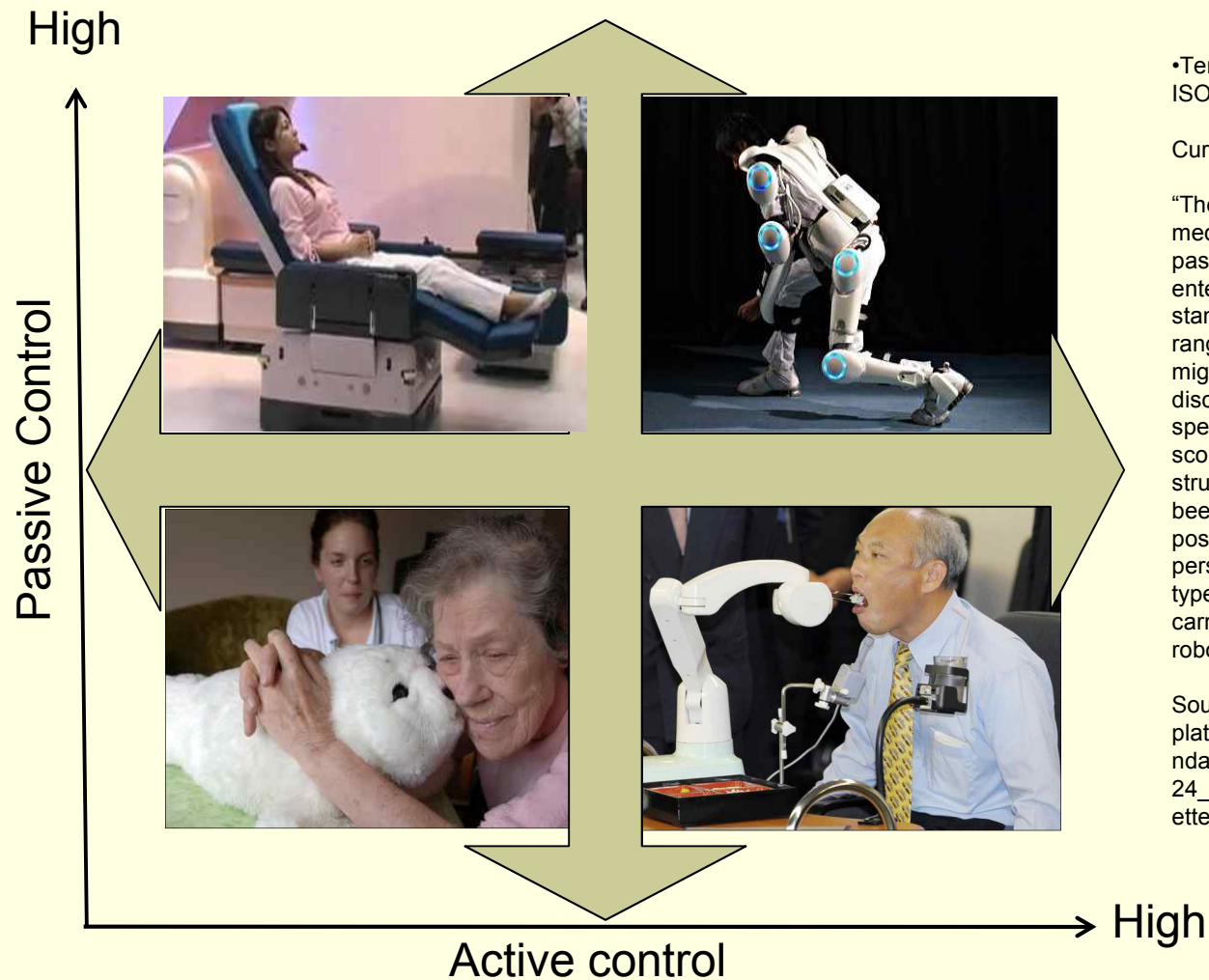


Based on: Beise (2004), and Rennings and Smidt (2008)
Copyright: Dr. Florian Kohlbacher

Development of Care Robots* in Japan



4 examples of integrated solutions (products, gradual levels of control)



•Term not defined in the sense of an ISO-Norm or Standard.

Current discussion:

“The standard ISO 13482 on non-medical personal care robots has passed official voting and has now entered committee draft status. As this standard was trying to include a wide range of future robot applications that might not even been thought of, a long discussion was held to identify and specify the scope and to redirect the formal structure of the document. It has now been agreed, that the scope will possibly be limited to a certain set of personal care tasks related to the robot types “mobile servant robot”, “person carrier robot” and “physical assistant robot””,

Source: http://www.robotics-platform.eu/cms/upload/euRobotics/Standardisation/2010-03-24_euRobotics_Standardisation_Newsletter1.pdf

Many examples. . . .



ht: Dr. Florian Kohlbacher



Kyodo

State of Japanese Care Robotics

(Herstatt & Kohlbacher 2010; 2013)



- **Japan's care robot industry is substantial:**
 - Growing demand base
 - Massive government initiatives
 - High confidence in Japan's engineering capacity, especially with regard to (industrial) robots
- **Japan has potential to become lead market for care-robots – at least on the level of products/individual solutions, but**
 - Despite demand advantage not a lead market yet
 - Many if not most of solutions still in development phase and not ready to market
 - Approvals and safety issues major hurdle
 - Strategy of companies partially missing (target market, user integration)

2012: Japan proposes a new solution



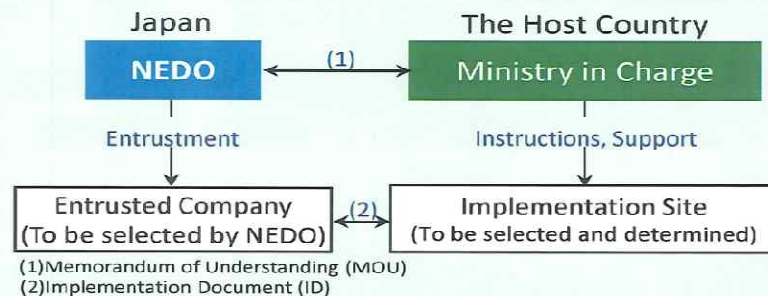
New Cooperation Proposal on Robot Project for the Rehabilitation Therapies

Project Outline

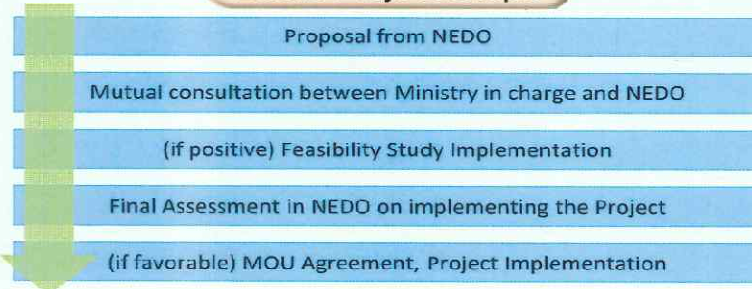
Overview: Introduction and Adaptation of the Japanese Service Robot Technology for the Host Country by R&D, Verification and Demonstration under its Own Conditions.

Duration: 2012FY~2015FY

Contractual Framework of Joint Research Project (Parties involved and framework for MOU, ID)



Basic Project Steps



The Japanese “Human-Support Robot”

1. The Japanese wearable “Human-Support Type Robot” that:

- can assist the person with physical difficulties in its motions such as standing up, walking, sitting down, going up and down the stairs.
- is well used in various fields such as for nursing cares, well-being, and for physical trainings throughout Japan.

2. This robot technology originated in Japan that:

- will be useful globally by the international cooperative project, because many countries are addressing their aging issues and adult diseases such as cerebral hemorrhages.
- will be adaptable by the R&D supported by NEDO under the native and specific conditions in host countries.



The Japanese “Human-Support Robot” will assist the persons with physical difficulties in walking, standing up, etc.



Through the project, Rehabilitation systems suitable for the host countries will be well developed.

Cyberdyne sets up subsidiary in Germany in 2011



日本発ロボットスーツ®、ドイツ・ヘルスケア分野にとっての可能性 CYBERDYNE 社がNRW州に進出

日独交流 150 周年である今年、両国の経済関係は新たな実りを迎えた。日本週間開催中の 2011 年 5 月 27 日、ボーフム市にCYBERDYNE (Germany) GmbH が設立された。

NRW.INVEST 社(NRW州経済振興公社)、デュッセルドルフ日本商工会議所、ボーフム市、BG ベルクマンズハイデル大学病院ならびにコンテック社の密接な協力関係のもと、CYBERDYNE 株式会社の CEO であり、ロボットスーツHAL®の生みの親でもある、山海嘉之教授のテクノロジーがNRW州へ導入されることになった。

medlands.RUHR
Der Gesundheitsstandort Bochum

über uns | standort | flächen | **service** | Suchbegriff »

v.l.: Hr. Friedrich (contec GmbH), Dr. Rosenfeld (TGR GmbH / Stadt Bochum), Prof. Sankai (Cyberdyne Inc.), Prof. Schildhauer (UK Bergmannsheil), Fr. Wassner (NRW Invest), Hr. Loer (NRW Japan KK) Foto: Grosler

service.

News

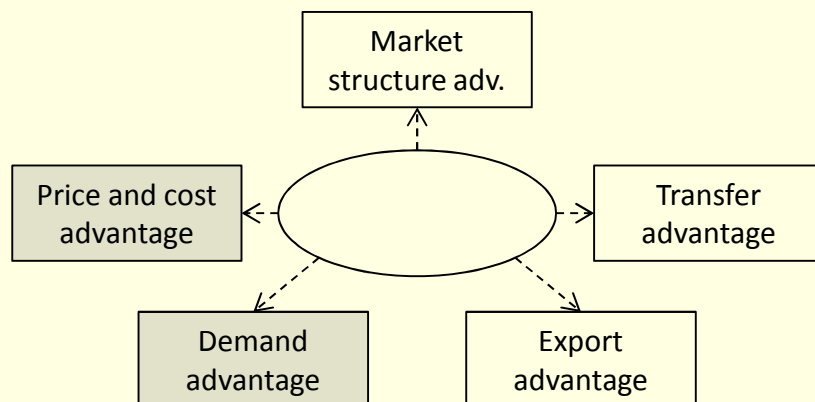
Termine

Die Zukunft fängt in Bochum an

26. Mai 2011 in Technologieprojekte, Unternehmen, Wissenschaft

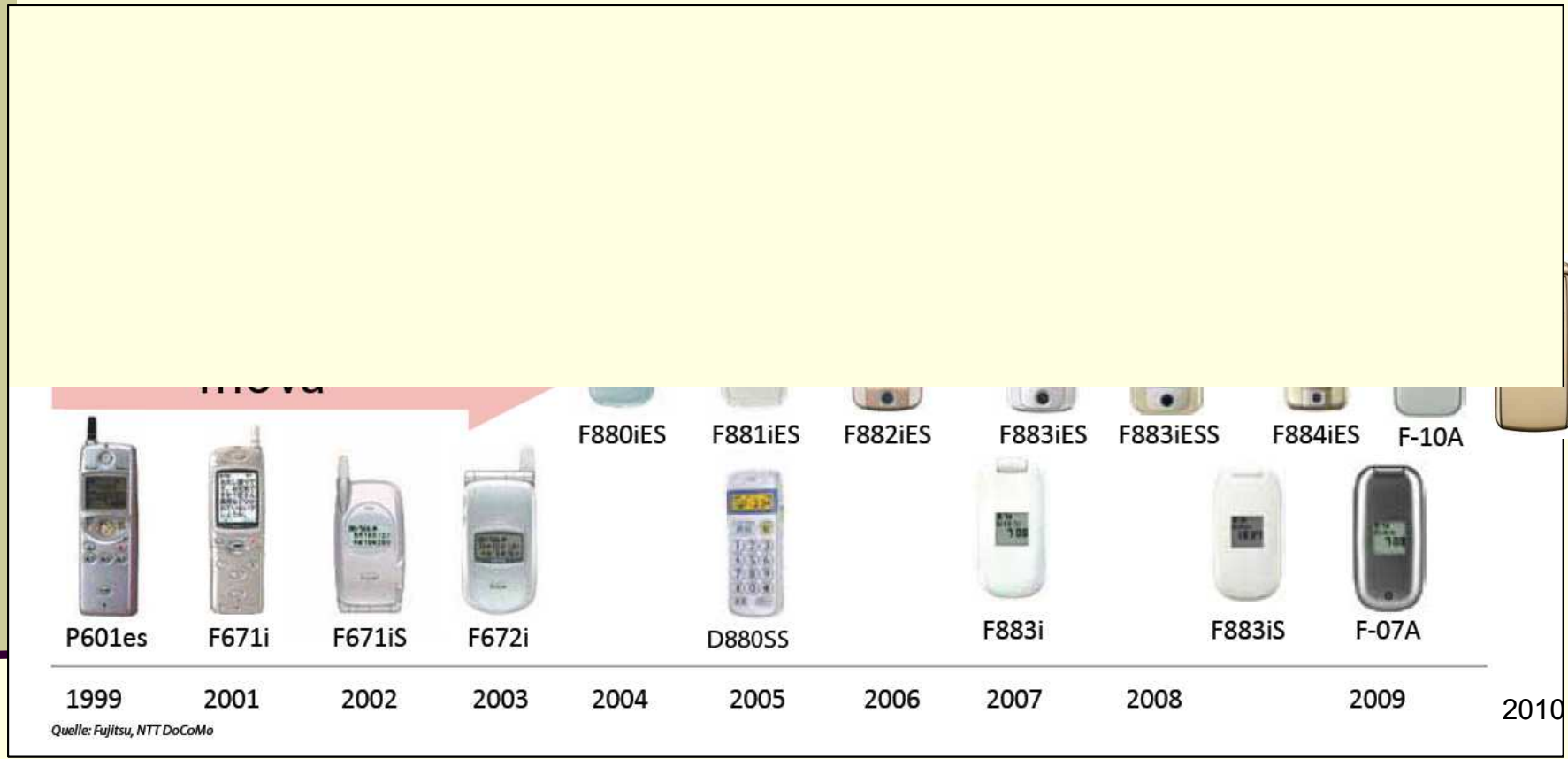
CYBERDYNE gründet in Bochum seine deutsche Niederlassung und wird

Mobile Phones: Raku-Raku Phone



- *Raku* = “easy-to-use”
- Modular structure of model line-up
- Learning effects
- Continuity and innovation
- *R&D in close collaboration with NTT DoCoMo*
- Bundling with *services* (e.g. health management)

Raku-Raku Phone Timeline (1999-2010)



- Rapid release of Raku-Raku phone models
- 20 million Raku-Raku phones sold in Japan between 2001 and 2013

Raku-Raku Phone Timeline (most recent developments)



market entry in France
with Raku-Raku smart
phone

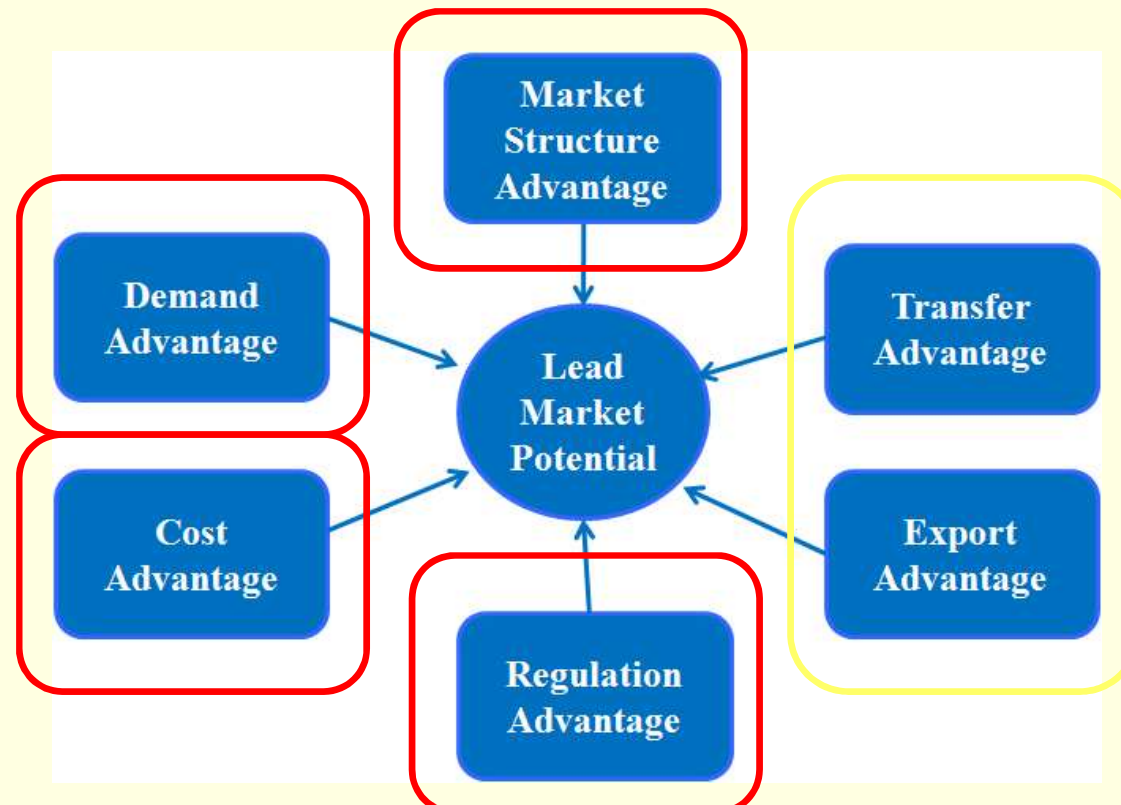
- August 2013: Raku-Raku smart phone 2 introduced in Japan

Is Japan a lead market for care robots and mobile phones for older users?



Definition: **The country where an innovation is first widely accepted and adopted** (Beise, 2001; Beise and Rennings 2005)

Factors of relevance



Based on: Beise (2004), and Rennings and Smidt (2008)

Copyright: Dr. Florian Kohlbacher

Care Robotics: Problems that inhibit emergence of a market



Problems

- Functionality/ User expectations not met
- Cost
- Safety issues
- Regulations & financial support
- Japan-specific design

Impact on

- Demand advantage
- Cost advantage
- Regulation advantage
- Regulation advantage/ market structure advantage
- Transfer and export advantage



INNOVATION/ TECHNOLOGY FOR THE AGING SOCIETY

“Concerning ageing, we are talking too much about technology and not about innovation. But what counts is not what is technically possible. What counts is what people want.”

Professor Joseph F. Coughlin, Director, MIT AgeLab

“The” Silver Market

■ A very diverse and dynamic market

- No homogeneous market segment
- 50+ covers people from 50 to 100!
- Big differences in
 - needs and wants/ life-styles
 - individual financial status
 - individual health condition
 - social activity/interaction level
- Pre-retirement vs. post-retirement
- Chronological vs. cognitive age
- Cohort and period effects (in addition to age effects)



■ A sophisticated and demanding market

- Experience
- Increasingly selective (→ socioemotional selectivity theory)
- Focus on present-oriented/emotion-related goals (→ SST)

Areas to innovate for the Silver Market



Improved Live and
Autonomy

Needs and Demands

Mobility and travel

Active Participation,
Social contacts and Fun

Health and Safety

Easy-to-use products



Pharmaceuticals, gerontechnologies
and supportive devices

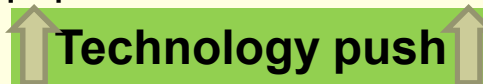
Luxury products and services

Transgenerational solutions

Cars Life long learning and education

Travel, financial and insurance
packages

Housing and sanitary equipments



Microsystems,
Software and
Electronics

Pharmaceuticals
and Biotech

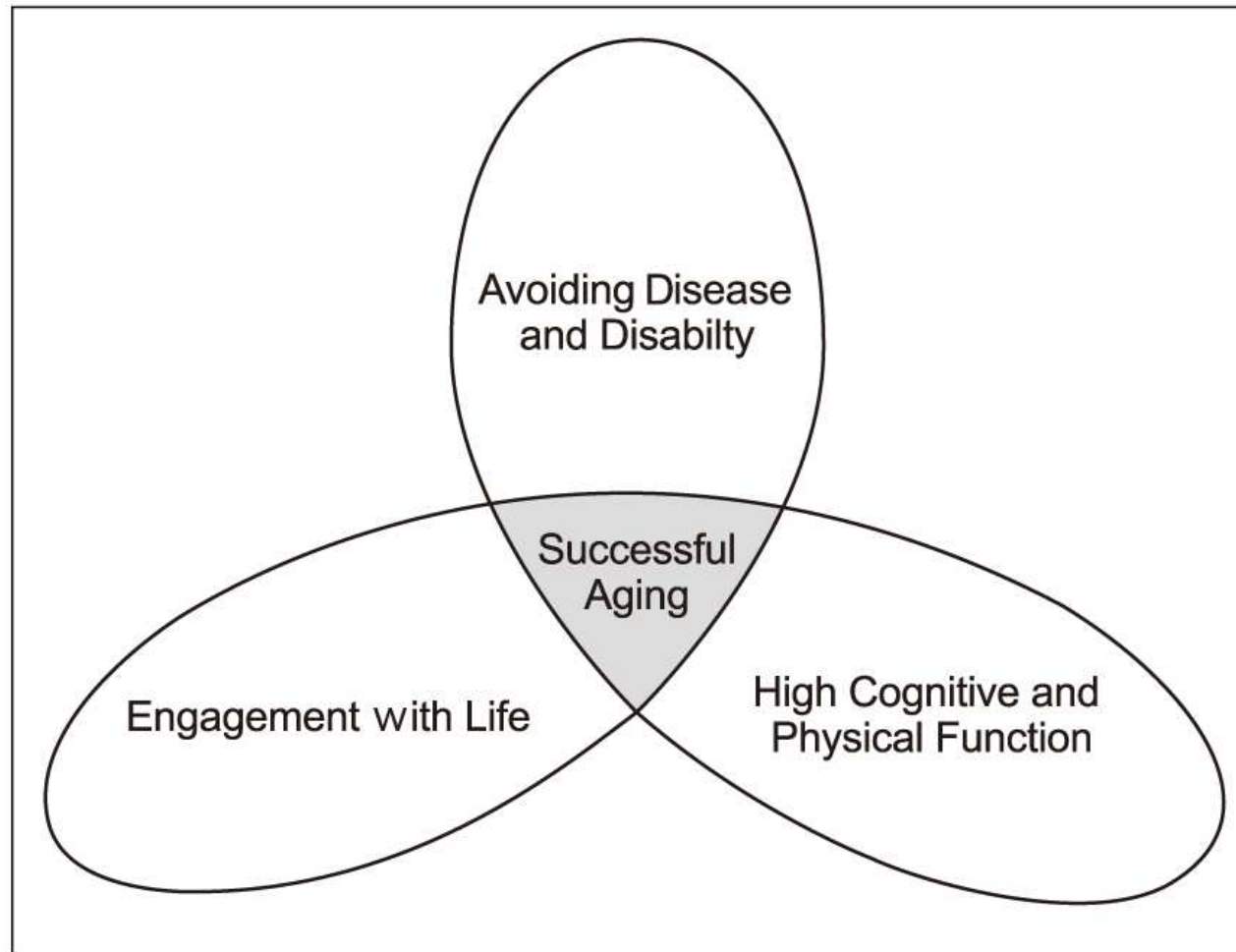
Nanotechnologies and
intelligent textiles

Design and New Materials

Technologies

Robotics and
Mechanics

The Goal: Successful Aging



Universal goal:
Social Participation
(Gough, 1998)

Source: Rowe & Kahn 1997

Silver Technology (R&D and marketing)



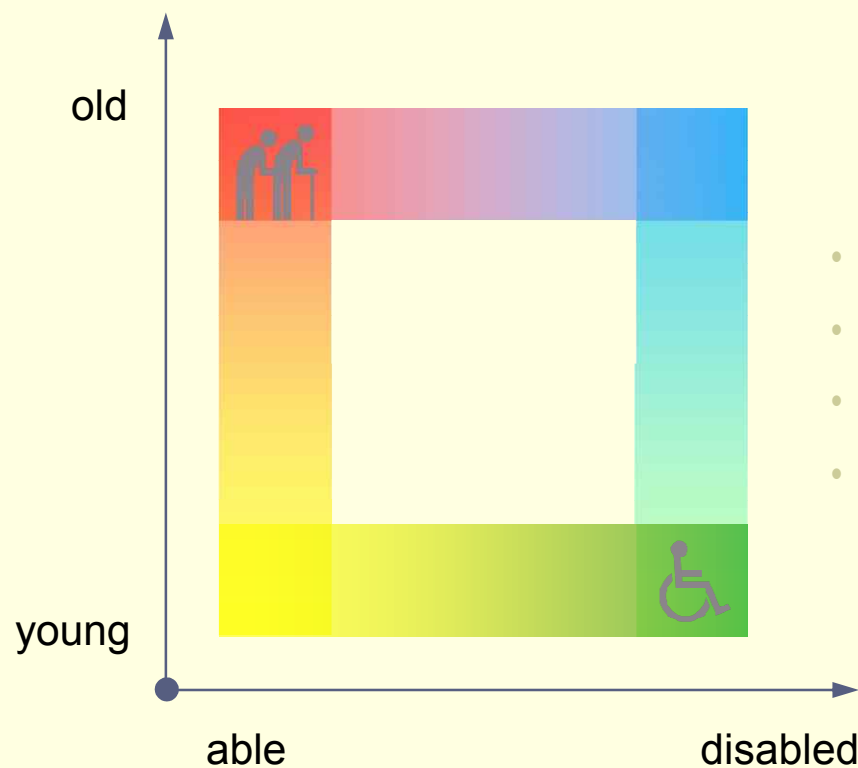
Problems

- Functionality/ User expectations not met
- Cost
- Safety issues
- Regulations & financial support

Solutions

- User-driven R&D
- Volume; Disruptive innovations, Business model
- Clinical trials/ user testing
- Engage policy makers

Old vs. Young?



- young people become old
- young people can become disabled
- old people can become disabled
- disabled people become old

*Beware of Ageism!
Think Transgenerationally!*



Silver Market ↔ Aging Workforce



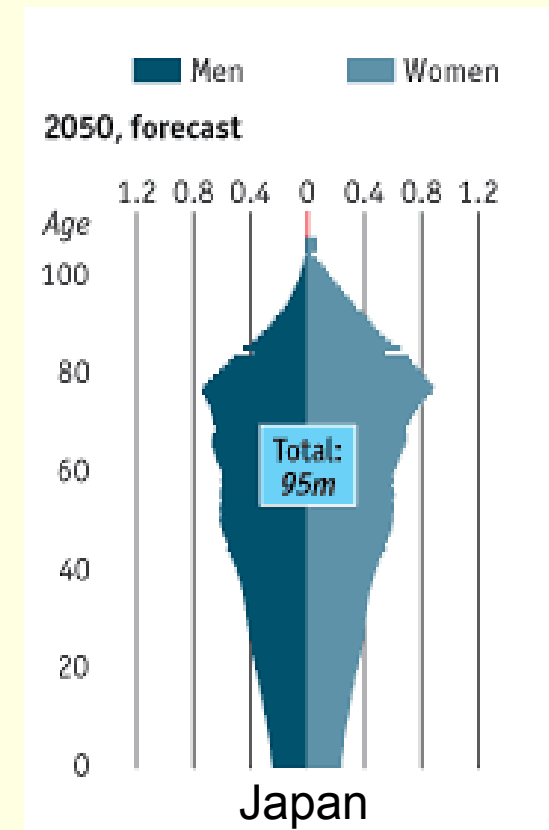
- Older workers as older customers and vice versa
- Older workers in product development/marketing (age-diverse teams; older models in advertising)
- B2B Silver Market: age-friendly workplace



It's not only about the business case: Responsibility!



- Gerontechnologies and other products and services for the elderly as *corporate social responsibility/ social innovation* for those at the bottom (top?) of the aging pyramid



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Dr. Florian Kohlbacher



THE SILVER MARKET PHENOMENON IN JAPAN

Japan`s Silver Market in Short

- **(potential) Lead market**
 - Various products and services
 - Innovation and new technologies
- Affluent and healthy customers with time
 - Baby boomers as a special consumer group
- Very old people with need for care and support
- Attractive also to foreign companies
- Potential to export solutions to other aging countries
- **But the real potential has not yet been full recognized/
leveraged → *only certain pioneer firms***



→ *Current window of opportunity*

→ *What is the scenario for the silver market in the future?*

The Future of the Silver Market in Japan



- „old, rich & healthy“ → „old, poor & sick“
- Poverty among the elderly (65+ ca. 20%)
- Population groups with low income and insufficient coverage by the social security net
 - non-regular employees (> 1/3 of all employees)
 - working poor
 - social stratification/ gap society (*kakusashakai*)
- Business opportunities through
 - Care and support products and services
 - Age-friendly, transgenerational products and services
 - New business models (make up for low margin by high volume)
- **Corporate Social Responsibility (CSR)**



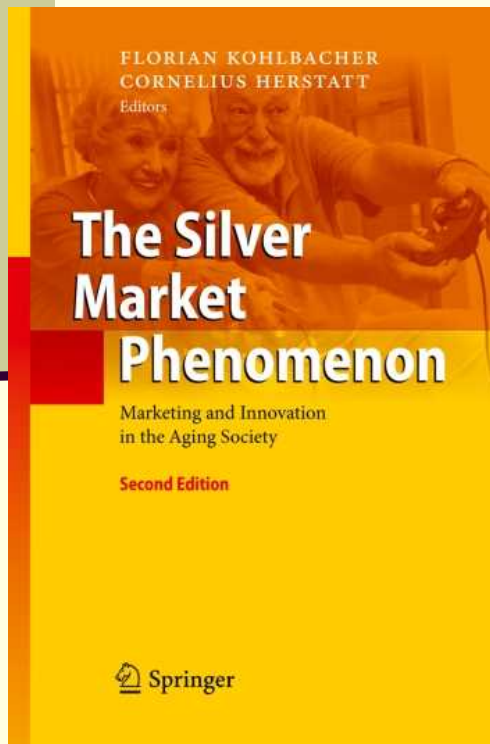
Silver Market Book, 2nd edition



*“The Silver Market Phenomenon: Marketing and Innovation
in the Aging Society”*

2nd edition, Springer, 2011

Editors: Florian Kohlbacher and Cornelius Herstatt)



In the light of the global demographic shift, this book offers an excellent overview on the matter itself as well as a thorough insight on the opportunities and challenges, which come along with it. Kohlbacher and Herstatt gathered contributors of profound expertise from a wide range of areas. This volume is full of concrete examples, first-hand insights and practical advice. A great tool I would like to recommend to any marketing, R&D or product manager.

Makoto Miwa

Director of Tokyo R&D Center, Panasonic Corporation, Japan

Thank you!

ご清聴ありがとうございました。



Further information:

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