

# THE GERONTECH MARKET IN JAPAN



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# The Gerontech Market in Japan

## OVERVIEW

The world's leading economies are confronted to the reality of the aging of their populations. Japan stands at the forefront of this socio-economical challenge. **In 2015, 26,7% of the Japanese population was aged 65 and over.**

Forecasts show that **one person out of three will be over 65 by 2030**, and one out of five over 75 (super-aging segment), with about 250,000 seniors 100 and over at that time.

This factor is aggravated by **high life expectancy and a low birthrate** that have led the country into a steep demographic decline since the 1990s (source: Japanese National Institute of Population and Social Security Research).

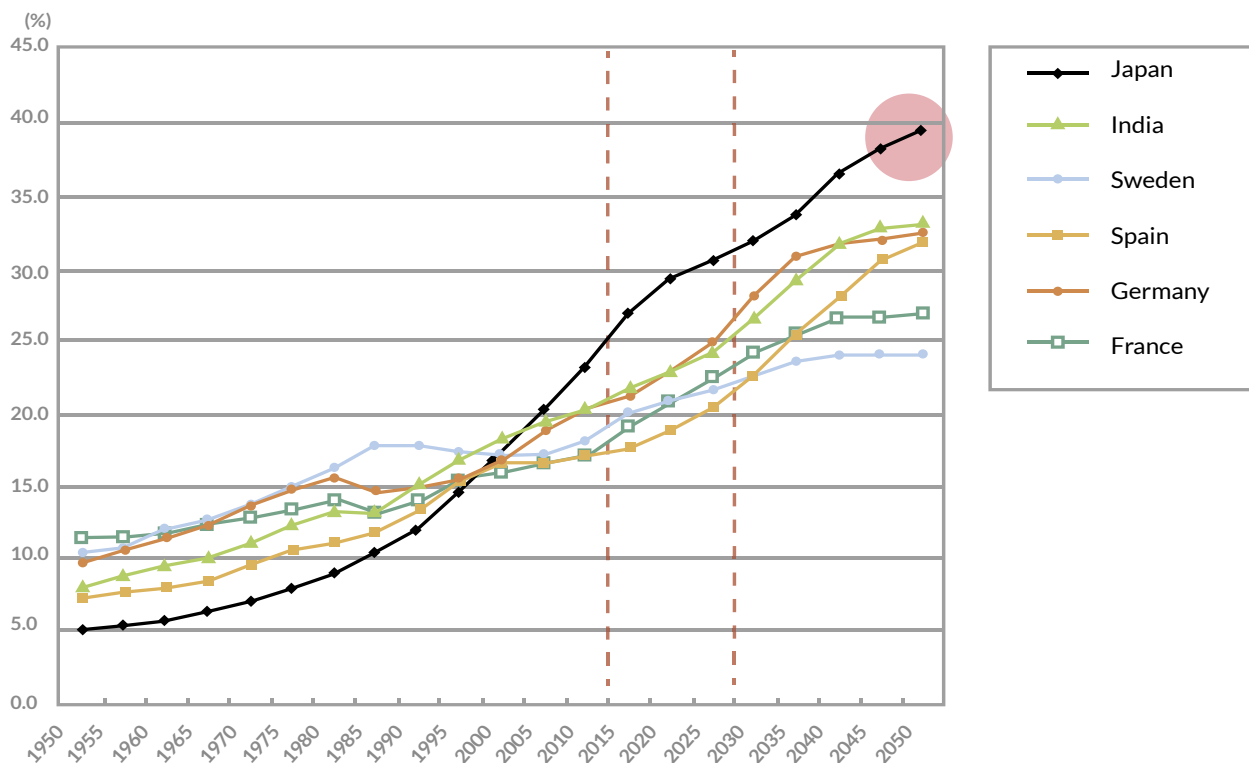


Japan

Pop: 126 mio  
GDP: \$4.841 trillion (3rd)  
Population over 65 years: 26.7%

## COMPARATIVE RATIOS OF POPULATION OVER 65

(source: UN, World Population Prospects – 2010)



# Society 5.0

## SOLUTIONS FOR A SUPERAGING POPULATION

Facing pressing financial burdens caused by exploding health costs, Japan must find solutions to help its aging residents: **improve their health** (medical industry), **relieve overloaded infrastructures** (nursing and care industry), and provide a **pleasant living, risk-free environment** to seniors (quality of life industry).

In the field of nursing care alone, costs have soared over the past fifteen years, going from **3.6 trillion JPY in 2000, to 10.4 trillion JPY in 2016**.



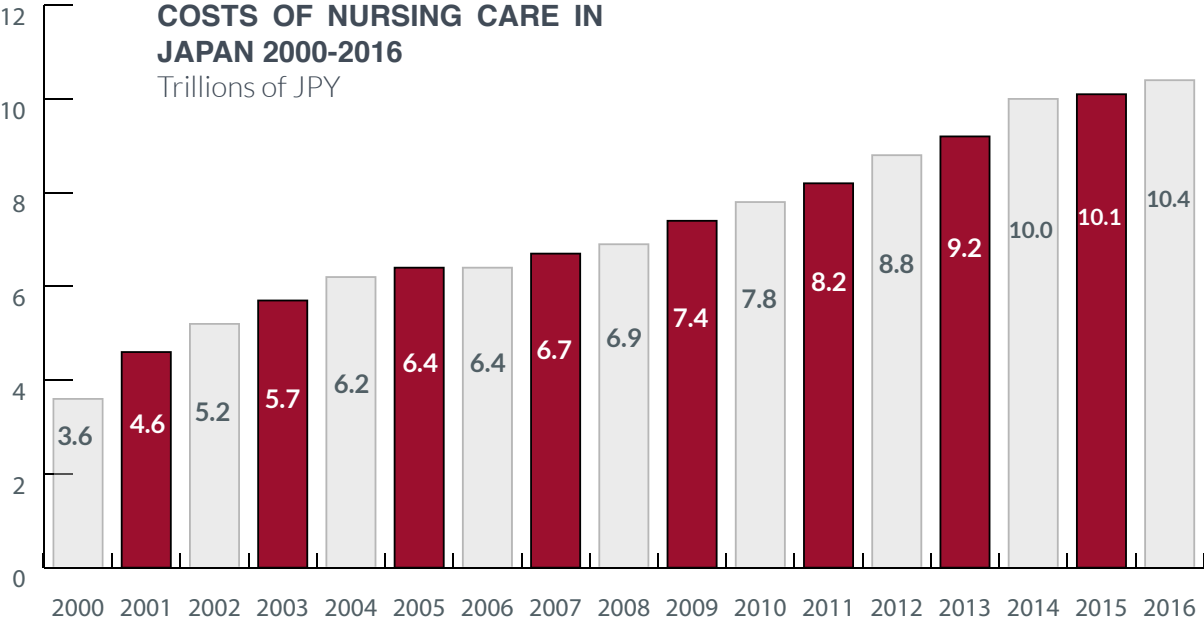
**MEDICAL INDUSTRY**



**NURSING & CARE INDUSTRY**



**QUALITY OF LIFE INDUSTRY**



	2000	2001	2002	2003	2004	2005	2007	2007	2008	2009	2010	2011	2012	2013	2014
GDP %	0.7%	0.9%	1.0%	1.1%	1.2%	1.3%	1.3%	1.3%	1.4%	1.6%	1.6%	1.8%	1.8%	1.9%	2.0%

Since 2017, the Japanese government favors an in-depth socio-economic transformation of Japan to reach a so-called “**Society 5.0**”. The public and private sectors at large are encouraged to turn towards innovative solutions stemming **from the Fourth Industrial Revolution, such as robots, use of Big Data, drones, AI-based solutions, and IoT tools.**

They are seen as one of the main sources of solutions to tackle issues raised by the super-aging trend of the population.

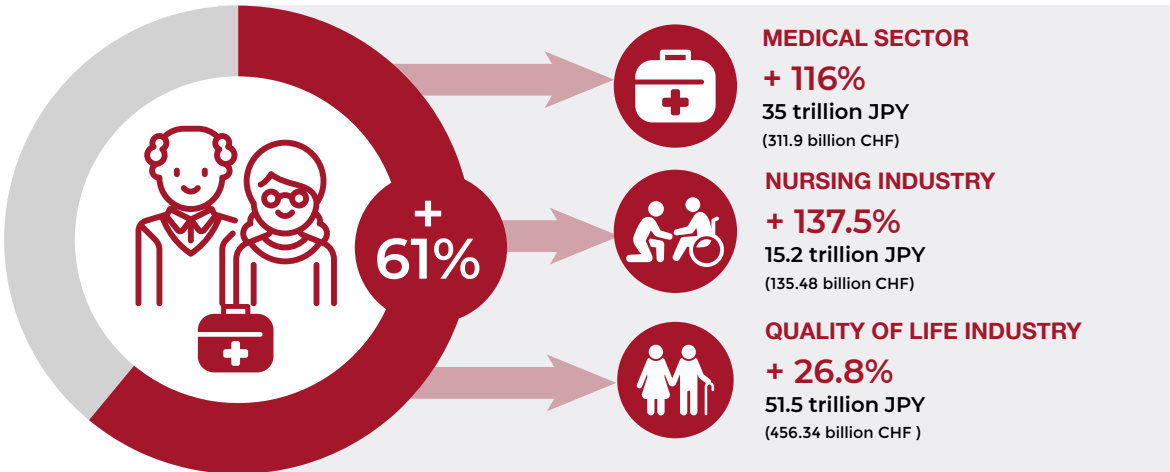
With the baby-boomer generation reaching **75 in 2025**, the Japanese government has laid down a strategy relying on such innovation to extend the range of the “healthy lifespan” of Japanese population.

The official goal is for Japan **to become the world’s first lifelong active and healthy society, where appropriate medical and nursing care can be provided to residents, regardless of their location.**

The total size of the so-called “**Silver Market**” is thus estimated to reach **101.3 trillion JPY** by 2025 (902.85 billion CHF), a 61% growth compared to 2007.

More specifically, the medical sector will reach **35 trillion JPY** (311.9 billion CHF, + 116%), the nursing industry **15.2 trillion JPY** (135.48 billion CHF, +137.5%), and the quality of life segment **51.5 trillion JPY** (456.34 billion CHF, +26.8%).

### SILVER MARKET SIZE BY 2025



**101.3 trillion JPY**

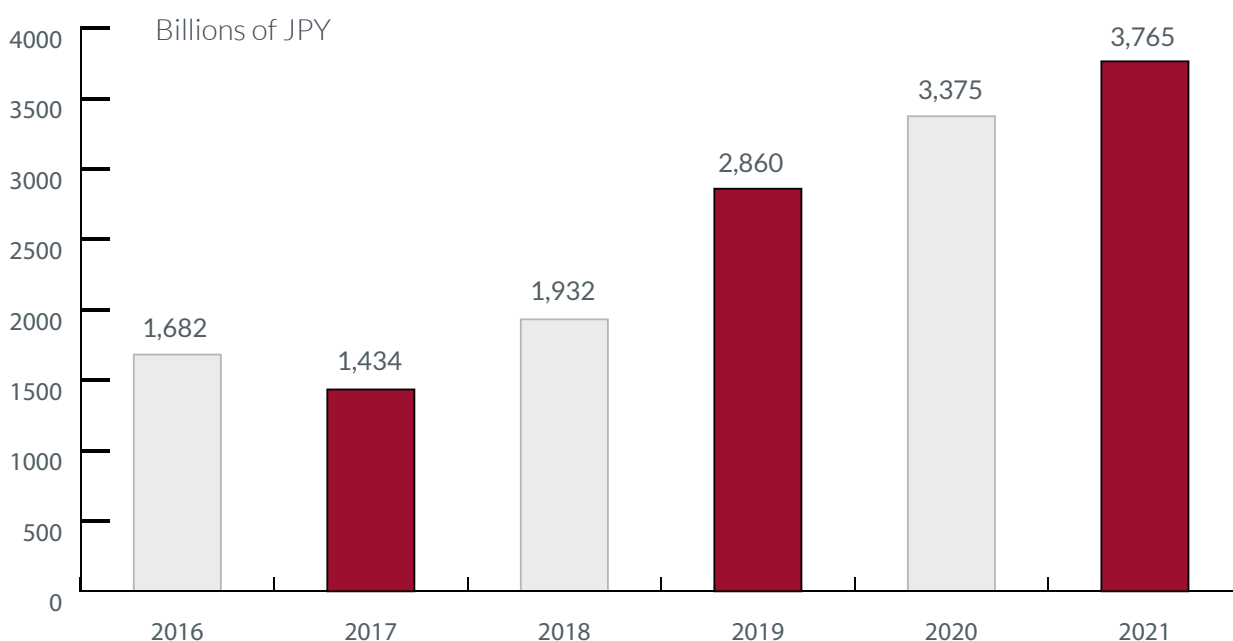
# Market Needs

## ROBOTICS

Robotics is gaining significant traction, not only to relieve the physical burden of workers or to replace them altogether, but also to maintain and promote the independence of individuals at home.

In 2018, the market size of care-oriented robotics in Japan is expected to reach **1.332 billion JPY**, a 34.7% increase from 2017, and **3.765 billion JPY** by 2021.

### TRENDS AND FORECASTS OF THE JAPANESE CARE ROBOT MARKET



In the robotics sector, needs include communication robots, robotic assistance to move bed-ridden seniors, surveillance robots that provide assistance to on-site nurses to reduce the number of nurse calls, rehabilitation and exercise equipment, or special bathing apparatus.

**Walking and overall mobility assistance** for elderly people is also a high priority. Latest models of walkers implement new technologies.

## EXAMPLES OF MANUFACTURERS OF EXTERNAL SUITS ASSISTING CAREGIVERS

<b>Smart Support Co., Ltd.</b> <a href="http://smartsupport.co.jp/">http://smartsupport.co.jp/</a>	<b>Smart Suit EX</b> <a href="http://robotcare.jp/?page_id=198">http://robotcare.jp/?page_id=198</a>
<b>ATOM Project LLP</b> <a href="http://www.t-atom.com/">http://www.t-atom.com/</a>	<b>Power Assist Suit</b> <a href="http://robotcare.jp/?page_id=851">http://robotcare.jp/?page_id=851</a>
<b>Kikuchi Seisakusho Co., Ltd.</b> <a href="http://www.kikuchiseisakusho.co.jp/">http://www.kikuchiseisakusho.co.jp/</a>	<b>Suit for nursing care</b> <a href="http://robotcare.jp/?page_id=849">http://robotcare.jp/?page_id=849</a>
<b>Cyberdyne corporation</b> <a href="https://www.cyberdyne.jp/english/">https://www.cyberdyne.jp/english/</a>	<b>HAL Robotic Belt</b> <a href="http://robotcare.jp/?page_id=846">http://robotcare.jp/?page_id=846</a>

## OTHER IMPORTANT MANUFACTURERS OF TRANSFER AID ROBOTS INCLUDE:



**Sumitomo Riko Corp.**  
<https://www.sumitomoriko.co.jp/>



**Sekisui Home Techno Corp.**  
<http://www.sekisui-hometechno.co.jp/>,



**Toyota Motor Corp.**  
<https://www.toyota.co.jp/>



**Yaskawa Electric Corp.**  
<https://www.yaskawa.co.jp/product/medical>



**Panasonic AgeFree Corp.**  
<https://panasonic.co.jp/es/pesaf/>

## EXAMPLES OF MANUFACTURERS OF ROBOTS AND WALKERS ASSISTING SENIOR MOBILITY :

<b>Kikuchi Seisakusho Co., Ltd.</b> <a href="http://www.kikuchiseisakusho.co.jp/">http://www.kikuchiseisakusho.co.jp/</a>	<b>Body weight support travel aid</b> <a href="http://robotcare.jp/?page_id=58">http://robotcare.jp/?page_id=58</a>
<b>TacaoF Co. Ltd.</b> <a href="https://www.tacaof.co.jp/">https://www.tacaof.co.jp/</a>	<b>Keepace (inverted pendulum technology)</b> <a href="http://robotcare.jp/?page_id=859">http://robotcare.jp/?page_id=859</a>
<b>Kawamura Cycle Co., Ltd.</b> <a href="http://www.kawamura-cycle.co.jp/kawamura_hp/">http://www.kawamura-cycle.co.jp/kawamura_hp/</a>	<b>RoboCart: outdoor walking assistance</b> <a href="http://robotcare.jp/?page_id=857">http://robotcare.jp/?page_id=857</a>
<b>Cyberdyne corporation</b> <a href="https://www.cyberdyne.jp/english/">https://www.cyberdyne.jp/english/</a>	<b>Tecpo : Outdoor mobility powered aid.</b> <a href="http://robotcare.jp/?page_id=2298">http://robotcare.jp/?page_id=2298</a>
<b>Imasen Engineering Co., Ltd.</b>	<b>Robot-Assisted Walker</b> <a href="http://robotcare.jp/?page_id=171">http://robotcare.jp/?page_id=171</a>
<b>Azbil Co., Ltd.</b> <a href="https://www.azbil.com/index.html">https://www.azbil.com/index.html</a>	<b>Robot-assisted walker for uneven terrain</b> <a href="http://robotcare.jp/?page_id=865">http://robotcare.jp/?page_id=865</a>
<b>RT Works Works, Ltd</b> <a href="https://www.rtworks.co.jp/">https://www.rtworks.co.jp/</a>	<b>Otasuke Walker</b> <a href="http://robotcare.jp/?page_id=863">http://robotcare.jp/?page_id=863</a>
<b>Shintec Hozumi Co., Ltd.</b> <a href="http://sales.shcl.co.jp/">http://sales.shcl.co.jp/</a>	<b>Robot-Assisted Walker RT.1</b> <a href="http://robotcare.jp/?page_id=273">http://robotcare.jp/?page_id=273</a>

# Market Needs


## AI-BASED SOLUTIONS

AI-based solutions to detect onset of dementia/support patients affected by dementia are also of interest.

In general, AI-based solutions linked to diagnosis and treatment to improve the quality of chronic medical are needed.

**Products and software** able to predict events based on life rhythms (such as ultrasonic sensors backed-up by AI to predict timing of urine excretion) are needed to improve the dignity and general quality of life of the elderly, reduce the burden of caregivers and improve their efficiency, **whether at home, in care centers or in hospital.**

**AI-based software integrated into smartphones** or personal devices to detect and/or prevent the onset of dementia and/or diminish its consequences to allow those affected to maintain their autonomy at home are one of the main areas of opportunities.



Use of **wearable terminals for remote monitoring, of IoT devices and equipment collecting and analyzing data related to life rhythms** are particularly of interest to identify onset of dementia but also the progression of disease and the worsening of symptoms.

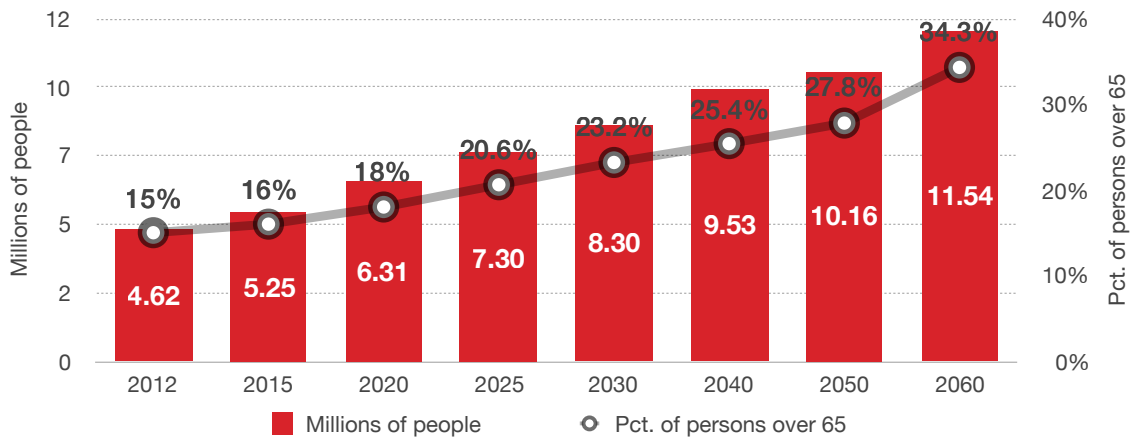
In October 2018, **SoftBank Robotics Corp.** (<https://www.softbank.jp/en/corp/group/sbr/>) and its parent company SoftBank Corp. (<https://www.softbank.jp/corp/>), launched an experiment program using their humanoid communication robot **“Pepper”** in a nursing home center.

The goal is to use this robot, able to adapt to each patient thanks to **facial recognition**, as a dialogue partner for patients suffering from dementia and to support speech and hand rehabilitation.

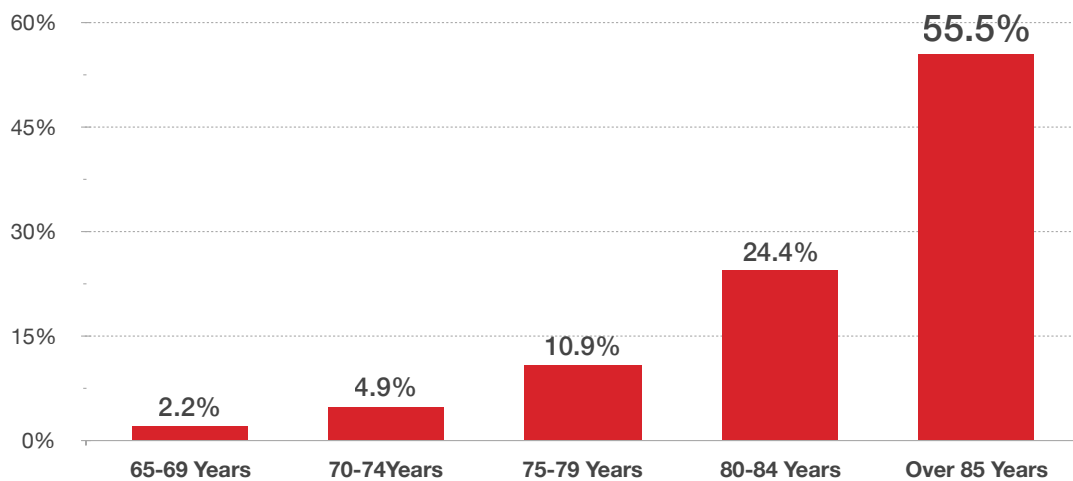
With an estimated **7 million (Japan’s population in total: 127 million) affected by dementia by 2025**, and one in five possibly developing symptoms, the challenges for handling this disease are enormous, especially when combined to superaging factor. Market potential is significant.



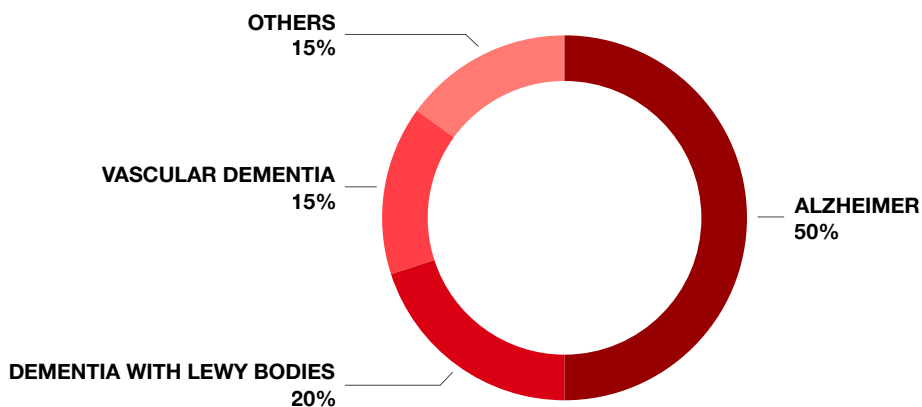
## JAPANESE POPULATION AFFECTED BY DEMENTIA



## RATIO OF ELDERLY POPULATION AFFECTED BY DEMENTIA



## TYPE OF DEMENTIA



## EXAMPLES OF MANUFACTURERS OF DEMENTIA MANAGEMENT SYSTEMS :

<p><b>Fluoro Works Co., Ltd.</b>  <a href="https://www.furo.org/index.html">https://www.furo.org/index.html</a></p>	<p><b>Dementia Care Management Platform</b>  <a href="http://robotcare.jp/?page_id=282">http://robotcare.jp/?page_id=282</a></p>
<p><b>Logical Product Co., Ltd.</b>  <a href="http://www.lp-d.co.jp/">http://www.lp-d.co.jp/</a></p>	<p><b>Networked Outlet Monitoring Robot for Dementia Patients</b>  <a href="http://robotcare.jp/?page_id=115">http://robotcare.jp/?page_id=115</a></p>
<p><b>Kyokko Co. Ltd.</b>  <a href="http://www.kyokko.co.jp/">http://www.kyokko.co.jp/</a></p>	<p><b>Monitoring Support Platform for People with Dementia</b>  <a href="http://robotcare.jp/?page_id=180">http://robotcare.jp/?page_id=180</a></p>
<p><b>Idea Quest Co., Ltd.</b>  <a href="http://www.ideaquest4u.com/">http://www.ideaquest4u.com/</a></p>	<p><b>Non-contact Tracking System of Dementia Patients used on Beds using FG Vision Sensor</b>  <a href="http://robotcare.jp/?page_id=127">http://robotcare.jp/?page_id=127</a></p>
<p><b>Nissho Denki Co. Ltd.</b>  <a href="http://www.nissho-denki.co.jp/">http://www.nissho-denki.co.jp/</a></p>	<p><b>Non-contact Monitoring System using Infrared Array</b>  <a href="http://robotcare.jp/?page_id=153">http://robotcare.jp/?page_id=153</a></p>
<p><b>Sharp Corporation</b>  <a href="http://www.sharp.co.jp/">http://www.sharp.co.jp/</a></p>	<p><b>Monitoring Support Platform for Care Facility</b>  <a href="http://robotcare.jp/?page_id=165">http://robotcare.jp/?page_id=165</a></p>
<p><b>RTC Co., Ltd.</b>  <a href="http://www.rtc-corp.co.jp/">http://www.rtc-corp.co.jp/</a></p>	<p><b>Out-of-bed Prediction and Notification System for Dementia Patients</b>  <a href="http://robotcare.jp/?page_id=877">http://robotcare.jp/?page_id=877</a></p>
<p><b>Funai Electric Co., Ltd.</b>  <a href="https://funai.jp/">https://funai.jp/</a></p>	

# Market Needs

## REMOTE SENSOR AND MONITORING TECHNOLOGY

With an estimated **6 million seniors living alone by 2025**, many in increasingly isolated rural areas, technology-based products allowing caretakers (families and/or social workers) to check remotely their status, thus compensating for distance, lack of personnel and failing demographics, are also needed.

Areas of interest include **delivery drones, remote sensors, smart house, home furniture** designed to guarantee safety, solutions to ease up housework tasks, mobility and shopping, or senior-friendly applications making it easy to stay in touch with family members and friends to keep them socially connected and active.

The market size of remote sensor and monitoring market for the elderly reached **9.8 billion JPY in 2016 and is expected to reach 13.9 billion JPY by 2025** as family awareness regarding the safety of elderly members increases.

Emergency call solutions make up for the biggest market share in this sector, as many users are reluctant to be monitored constantly. Individuals, but also their families and even municipalities purchase those solutions, as part as their services to local residents.

Ranking second is the sub-sector of **remote monitoring sensors**, combined or not to wearable devices, able to check and confirm the safety of elderly people who fear accidents, sudden changes in their physical condition or wandering outside due to dementia.

During the night, in case of anomaly, images are sent to the smartphone of surveillance personnel. Such a system allows to prioritize calls based on urgency and improve efficiency.



### Solxyz Imarumo HI

Includes a Notification button, luminance sensor, motion/micro-tremor sensor, humidity and temperature sensor,

Displaying all the information on the smartphone.

# Market Needs

## REMOTE SENSOR AND MONITORING TECHNOLOGY

Another growing sub-sector is the utilities and infrastructure monitoring service. Relying on **IoT technology**, the safety of the elderly is confirmed through the regular use of utilities such as electricity and gas, or bathroom furniture (toilets). An additional benefit of this system is that it is possible to review electricity rates and gas charges.

Here, too, **AI and IoT will play a key role** and their use is also expected to grow significantly.

For example, Earth Eyes Co. Ltd. and the social welfare service company Yoshimitsu launched in September 2018 an AI-based robot camera affixed on the ceiling of the living room. It detects body movement and based on collected data regarding the daily habits and behavior of the patient, it is able to analyze aberrations, predict falls and send alerts to nursing personnel (source: <http://www.innervision.co.jp/products/release/20181019>).

Another example of patient monitoring is the « **Patient Watcher** » designed by **Alco Ex Co. Ltd.** Patient Watcher is a system that analyzes recordings of body movements – including lack of movement - taped by infrared cameras and then notifies to nursing personnel anomalies. Using Cloud technology, information can be sent to desk computers, smartphones or pre-existing nurse call networks (<https://kaigorobot-online.com/contents/9>).



Communication giant **NTT DATA has developed a monitoring service for nursing homes**, by combining infrared cameras, ground sensors, bioreading captors and a communication robot.

During the night, in case of anomaly, images are sent to the smartphone of surveillance personnel. Such a system allows to prioritize calls based on urgency and improve efficiency. <https://newswitch.jp/p/14441>

## EXAMPLES OF MANUFACTURERS OF MONITORING SYSTEMS

<b>Solxyz Co., Ltd.</b> <a href="https://www.solxyz.co.jp/">https://www.solxyz.co.jp/</a>	<b>Monitoring aid system “Imairumo HI”</b> <a href="http://robotcare.jp/?page_id=2322">http://robotcare.jp/?page_id=2322</a>
<b>ADT Corp.</b> <a href="http://adtco.biz/">http://adtco.biz/</a>	<b>Cloud monitoring system using 3D sensors for home nursing care</b> <a href="http://robotcare.jp/?page_id=2332">http://robotcare.jp/?page_id=2332</a>
<b>CQ-S Net Co., Ltd.</b> <a href="http://radar-light.com/index.html">http://radar-light.com/index.html</a>	<b>Monitoring system using radar technology (fall detector for private homes)</b> <a href="http://robotcare.jp/?page_id=2336">http://robotcare.jp/?page_id=2336</a>
<b>Fuji Software Co., Ltd.</b> <a href="http://www.fsi.co.jp/">http://www.fsi.co.jp/</a>	<b>Monitoring robot for fall detection and prevention at home</b> <a href="http://robotcare.jp/?page_id=2345">http://robotcare.jp/?page_id=2345</a>
<b>Idea Quest Co., Ltd.</b> <a href="http://www.ideaquest4u.com/">http://www.ideaquest4u.com/</a>	<b>Bathroom/Washroom Monitoring System</b> <a href="http://robotcare.jp/?page_id=4387">http://robotcare.jp/?page_id=4387</a>
<b>Toli Co., Ltd.</b> <a href="https://www.toli.co.jp/">https://www.toli.co.jp/</a>	<b>ETERIOR® MAT : cordless, battery-less, wireless monitoring mat</b> <a href="http://robotcare.jp/?page_id=96">http://robotcare.jp/?page_id=96</a>
<b>GOV Co., Ltd.</b> <a href="http://www.go-v.co.jp/">http://www.go-v.co.jp/</a>	<b>Vital Sensing Monitoring System</b> <a href="http://robotcare.jp/?page_id=888">http://robotcare.jp/?page_id=888</a>
<b>Koga Software Co., Ltd.</b> <a href="https://www.kogasoftware.com/">https://www.kogasoftware.com/</a>	<b>Safety Monitoring System using 24GHz Radar Technology</b> <a href="http://robotcare.jp/?page_id=873">http://robotcare.jp/?page_id=873</a>

# Opportunities for Swiss Companies

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Established Swiss companies and start-ups alike that have developed tech tools and solutions that target the **“Silver market”**, or that could be adapted to such needs, can find in Japan many attractive opportunities.

- **Remote sensors and monitoring systems**
- **External suits to help nurses and care personnel carry patients**
- **Biosensors**
- **Dementia-compensating or preventing tools and apps**

Japan faces a serious shortage of human resources with advanced **IT skills and background in the field of Big Data, IoT, AI, etc.** In light of the stringent social and economic challenges generated by the superaging process of the population, solutions developed by companies overseas that can be integrated into local projects or with local partners, through open innovation, are needed.

Large domestic actors such as **Yaskawa Corp.** (<https://www.yaskawa-global.com/> world leader in the mechatronics industry) have adopted such a strategy and begun to acquire foreign startups, as they acknowledge their lack of in-house skills and resources to reach some of their development goals. This is also true in the specific welfare and medical fields.

In 2017, private sector financial assets hit **3 quadrillion JPY (25 trillion CHF)**, and foreign acquisition activity and **FDI grew by 20.2 percent.**

# Want to Know More?

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## CONTACT US !

Together with experienced industry specialists, the Swiss Business Hub Japan will help Swiss and Liechtenstein companies explore and develop their chances based upon customized and in-depth analysis.

The Swiss Business Hub in Tokyo can open doors to the Japanese Gerontech sector and your potential partners.

Our team in Switzerland and Japan will help you decide on a suitable market strategy for Japan. We will prepare a service package based on your specific requirements and business priorities. We work with a wide network of local partners and industry experts.



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