



#121

# focus

Your gateway to International Standards



*active*  
**AGEING**



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Photo: ACPFA



#121

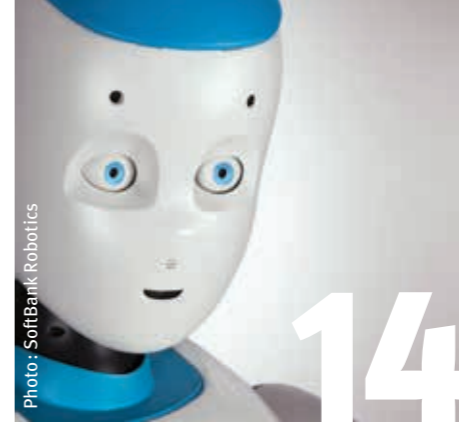


Photo: SoftBank Robotics

# ISO focus

March-April 2017

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# The *ageing* opportunity

Societies are facing major demographic shifts, presenting new challenges to meet the wants and needs of our ageing societies.



Photo: SA

The world's population is ageing. According to the World Health Organization (WHO), nearly two billion people across the world are expected to be over 60 years old by 2050, a figure that's more than triple what it was in 2000.

Australia is no exception. Simply put, the future we face is with many more older Australians than there are today. In 2016, 15% of the Australian population (3.7 million) were aged 65 and over. The proportion of older Australians is expected to grow to 22% (8.7 million) by 2056 and to 24% (12.8 million) by 2096<sup>1)</sup>.

Like other advanced industrial countries, Australia's demographic ageing has become a widely debated and researched policy topic. The country has already started facing significant impacts on workforce planning, government budgets, and industry competitiveness. However, with this challenge come new markets with growth opportunities together with the equally important opportunity to improve the health and well-being of our citizens.

1) Authoritative information and statistics to promote better health and well-being.

The "silver economy" is becoming an increasingly powerful force, thanks to the spending power of 65+ consumers. This silver economy includes not just the direct purchases of products and services by our older citizens, but also the economic activity generated by their spending and broader needs.

We need to address the real issues our older population faces. We may need products and environments adapted to the needs of older people, taking into account the concept of "universal design", a term meaning design that caters for all, young and old, able-bodied as well as those with special needs. Businesses that embrace "age friendliness" can also benefit from increased market opportunities that come from providing relevant products and related services.

So while we are on the cusp of this tremendous market opportunity, we can't overlook the need for a new suite of standards as part of a wider package of economic activity. We must view the silver economy as an opportunity to develop standards that improve quality of life, that facilitate economic growth and that enhance innovation and competitiveness.

Towards this end, Standards Australia has been pursuing a number of initiatives – at both the national and regional level – to tap into the economic potential of the silver economy.

We are working with the Australian government (specifically the Department of Industry, Innovation and Science) to lead a project on "The Role of Standards and Innovation in Driving APEC's Silver Economy" with other members of the Asia-Pacific Economic Cooperation (APEC). The project brings together APEC silver economy stakeholders, including businesses, academia, consumers, national standards bodies, governments and regulators, to exchange views on

the role of standards and innovation to support the growth of the silver economy.

In May 2016, Standards Australia hosted a study mission for SPRING Singapore's Silver Industry Standards Committee, including a "Standards and Innovation Dialogue Workshop – Supporting the Silver Economy". The initiative, which outlined Australia and Singapore's experiences with their ageing populations, identified key observations and developments and the role that standards and conformance will play.

Later in 2016, Standards Australia also distributed a survey across APEC member economies to inform the development of an issues paper which was published in February 2017. Both the survey and the issues paper will help shape the APEC Silver Economy Standards and Innovation Workshop to be hosted in Sydney in early April 2017. This workshop will stimulate thinking and innovation on the potential of standards for growing the silver economy.

The standards strategy that we develop today will affect the scale and growth of this nascent economy. For this reason, increased standards collaboration and fostering innovation are essential if we are to fully benefit from the new and emerging business opportunities provided by the silver economy. By working together, through national standards bodies, private companies and the government, ISO can act as a global leader in harnessing and demonstrating the true value of our ageing population.

What will the world look like in 2060? It will definitely look different from today, it will certainly be older... and almost surely wiser. Some of us may be around to see it; if we are, I hope the effects of the standards developed today will leave a lasting imprint on future generations. Long-term investment and commitment are needed. So let's work together to make this happen. After all, we're not getting any younger! ■

### Fakes don't use standards

Fakes are dangerous. Some counterfeit toys, for instance, have been found to contain harmful levels of phthalates, which can disrupt children's hormones and cause serious long-term health problems. In addition to endangering our health, counterfeit goods also have major economic consequences. Each year, the G20 economies bear an estimated economic cost of over USD 18 billion due to deaths resulting from counterfeit products, with an additional USD 125 million spent on treating counterfeit-product-related injuries\*.

# #fakes unsafe

To raise awareness about the risks and costs of fakes, the ISO Committee on consumer policy (ISO/COPOLCO) launched the #fakesunsafe social media campaign just before the Christmas and New Year break to help people stay safe. The International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU), ISO's partners in standardization, also joined in, along with ISO members that supported the campaign.

**Fact:** ISO technical committee ISO/TC 292, *Security and resilience*, is developing solutions to combat counterfeiting and fraud.

\* Measuring the Magnitude of Global Counterfeiting: Creation of a Contemporary Global Measure of Physical Counterfeiting, Washington DC: Global Intellectual Property Center, 2016, accessed 11 January 2017.




Counterfeit mobile phones contain alarmingly high levels of hazardous substances, well beyond global limits\*

fakes don't meet safety standards

\*Counterfeit and substandard mobile phones: resource guide for Governments (MMF, 2014)

Photo: ITU



IEC Making electronic technology work for you.

When a counterfeit part fails, it will not just cost money... but people's lives. The IEC helps ensure that electronic parts behave as expected, with IECQ

Fakes don't meet standards #fakesunsafe IECQ for quality

Photo: IEC



Avoid food poisoning these holidays

**TOP 5 FOOD FRAUD PRODUCTS\*:**  
MILK, OLIVE OIL, HONEY, SAFFRON, FISH.

\* United States Pharmacopeial Convention (USP)

Fraudulent food businesses don't meet standards

ISO standards



Can this toy increase his risk of cancer, asthma and infertility later in life?

**COUNTERFEIT TOYS CAN CONTAIN HARMFUL LEVELS OF PHTHALATES\***

\* Chartered Trading Standards Institute (CTSI)

Fakes don't meet safety standards

ISO standards



# THE SILVER economy

by Elizabeth Gasiorowski-Denis

Eighty is the new 20! A demographic shift is creating the so-called “silver” economy and a new and powerful consumer class. Here, we look at how new products and services meet the needs and expectations of an older population, and where standards will help.

Companies are preparing for the new wave of older consumers.

**A**fter completing 22.547 km (about 14 miles) on a bike within one hour, 105-year-old cyclist Robert Marchand said: “I’m not a phenomenon. I’m not looking to make progress. When you get up over 100 years, you can’t mess around... Tonight, I’ll party with all my friends.” Words to live by.

Marchand isn’t alone. He’s one of the millions of French citizens over 60 who are living life to the fullest – even at the ripe old age of 105. The demographic evolution in recent years and the forecasts for the coming years show that France is entering the group of the “ageing countries”. According to the Institut national de la statistique et des études économiques (National Institute of Statistics and Economic Studies), 15 million French people are now over 60. In 2030, the number will have grown to 20 million and by 2060 to 24 million.

France is by no means an exception. Many countries are reinventing/reshaping the concept of retirement – and old age itself – by a record number of baby boomers who are, or are approaching, 65. The effects of this demographic shift are being felt well beyond the 105-year-old world record holder.



An historical shift is turning global ageing into a positive development.

## The economics of ageing

The world's population is changing in ways that could barely be imagined a generation ago, and at a pace that is faster than any in recorded history. A recent United Nations World Population Ageing report cites that between 2015 and 2030, the number of people in the world aged 60 years or over is projected to grow by 56%, from 901 million to 1.4 billion. And by 2050, the global population of older persons is anticipated to more than double its size of 2015, reaching nearly 2.1 billion.

This ageing society is largely due to increased life expectancy, a recent phenomenon that did not emerge until the 1970s. Additionally, fertility rates in developed countries, and in many economies, have fallen so far that they face a shortage of younger workers and consumers.

Chancellor Gérard-François Dumont, Professor at Paris-Sorbonne University, says “the vast majority of people in the world will make it to age 70”, once considered an extraordinary old age. The shape of the classic “population pyramid” showing large numbers of young people at the bottom with a few elderly on top has changed.

“The proportion of older consumers in our society is increasing,” Prof. Dumont says, referring to the substantial shifts in the population age structure. “It will change the economy in a way we never could have imagined.”

Most academics agree that an ageing population lowers the long-term structural growth rate of an economy, citing Japan as a real-life example of this phenomenon at work. And while demographics are undoubtedly an important and enduring influence on the economy, raising clear long-term challenges for governments, there are also opportunities.

## Creating new markets

This brings us neatly on to the new prospects of the silver economy – the market for goods and services for people aged 65 and over. This is the “other” side of the coin of the ageing population: it offers many industries an opportunity to target a whole new customer base.

According to the World Economic Forum (WEF), which recently produced a report titled “How 21<sup>st</sup>-Century Longevity Can Create Markets and Drive Economic Growth”, businesses, large and small, have begun to use ageing as a lens through which they view their strategic plans. “As such, ageing becomes a commercial opportunity that feeds the top and bottom lines, encourages workplace and workforce change that can drive productivity, and provides a vehicle to support shared value and

sustainable partnerships with government and civil society.”

Companies are preparing for the new wave of older consumers. With good reason. Today, both “baby boomers” and seniors are wealthier and healthier than ever. In contrast to the generation that came of age during the Second World War, the baby boomers now entering retirement age have experienced steady and long-term employment. Crucially, their spending power is greater.

According to the US Government Consumer Expenditure Survey, US baby boomers outspend other generations by approximately USD 400 billion each year on consumer goods and services. A similar overspend applies in other developed countries where large percentages of disposable income are held by the 60-and-over group. “Done right, markets can become both the driver and beneficiary of population ageing,” asserts the WEF report.

So how are businesses pursuing this potentially lucrative market? In fact, many companies are well on their way to showing the rest of the world through example how to leverage this growing market. Some are embedding “ageing” as a key strategic driver of their commercial goals.

Equally, some businesses have positioned ageing as an opportunity to develop products and services for older consumers, while others are capitalizing on the knowledge and skills of an ageing workforce.

## Benefits for business

The truth is, there's a tremendous opportunity for business to grow and expand market reach. But that's not all. If exploited effectively, this key demographic can drive higher sales – and more. Ageing will help stimulate innovation, says Prof. Dumont, who is also Chair of the AFNOR<sup>1)</sup> Focus Group on the Silver Economy, one of the main sector's identified in the French Standardization Strategy 2016-2018. “This means adapting or inventing products and services corresponding to the needs of older people, and in all sectors.” At the same time, he says, “we need to consider the products and services offered to younger populations so that they will still be useful when these people age.”

1) Association française de normalisation, ISO member for France.



# THE MATURE MARKET

The world is getting much older... with the over-60 segment growing faster than any other. Here's why this segment provides a new growth opportunity.

## SPENDING POWER

Baby boomers outspend other generations by approximately **USD 400 billion** each year on goods and services

Source: US Government Consumer Expenditure Survey (21)



## GLOBAL WEALTH



In the US, **70%** of disposable income will be in the hands of those over 60

Source: WEF Global Agenda Council on Ageing. "Ageing as a Source for Economic Growth Fact Sheet", 2014



## INTEREST IN TECHNOLOGY

Internet use among Americans 65 and older grew

**150%** between 2009 and 2011, the largest growth in a demographic group



**71%** that go online do so daily

**34%** use social media

Source: Pew Research Center



The fact is, products and services adapted to older customers often benefit everybody. Take, for instance, the Amazon Echo, a voice-activated technology innovation that has amazing potential for helping seniors. It's similar to other voice recognition devices such as Siri on the iPhone. At first glance, the Echo (also referred to as Alexa) might seem like another tech toy. But if you take a closer look, you'll see how this "smart speaker" could improve quality of life for older adults with Alzheimer's or dementia as well as for seniors with mobility limitations and other health conditions.

For example, a senior could easily turn on the light across the room or adjust the room's temperature using only their voice. If they wanted to hear music or read a book, they could do it with another quick voice command. Without Echo, they'd have to ask someone else to help them with these simple tasks.

And whilst both young and old alike undoubtedly benefit from the increased access, choice and convenience that new products and services will deliver, questions remain about consumer protection. This is essential when considering older persons.

### The new consumer class

Ageing is not new to the standards world. Almost two decades ago, in 1999, the ISO Committee on consumer policy (ISO/COPOLCO) held a workshop on ageing populations highlighting the changing global demographics and predicted that "by the year 2025, one in every four persons in developed

countries will be over 60 and that developing countries would also be impacted". It concluded that addressing issues related to quality of life, independence, healthcare and safety are critical so that countries can develop the important infrastructure needed to support an ageing society, including its economic impact.

Consumers International, working alongside its European counterpart, ANEC, has been lobbying for many years for standards that make products and services safe and accessible to all consumers, whatever their age and ability. "It's here that ISO standards can play an important role," says Sadie Homer representing Consumers International. "We need to ensure that all stakeholders are taken into account in developing standards that business can use to deliver products and services, which meet these needs of ALL consumers, however they access them."

Taking stock of the situation, ISO, the International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU) joined forces on a common accessibility policy formalizing their commitment to ensure all future standards contribute to making products, services and environments that are accessible to all. Published in 2014 to coincide with the revision of ISO/IEC Guide 71, *Guide for addressing accessibility in standards*, the resolution emphasizes key points such as the importance of accessible (or universal) design, engaging older persons and persons with disabilities in standards development to safeguard their particular interests, and training standards developers to incorporate accessibility features into standards.



While older people who have some level of disability or impairment are clearly among the most vulnerable groups of consumers, there are many more. These vulnerabilities may also be experienced by other people in society, at any age.

For this reason, a proposal for a standard that aims to help business in addressing the needs of vulnerable consumers, who are most at risk when mistakes are made or as a result of bad practice, is being developed by COPOLCO. It will take inspiration from the British national standard BS 18477:2010, *Inclusive service provision – Requirements for identifying and responding to consumer vulnerability*.

Going forward, standards and guides developed for all consumers will not only protect consumers, they will help businesses thrive at the same time. Homer explains. “With a growing proportion of the global market being comprised of older consumers, businesses need to be confident that the standards they are using have considered and incorporated the needs of all consumers so they can deliver a consistent level of service to all their customers,” she says. “This is all the more important for standards being developed that are specifically aimed at ageing consumers.”

### The boomers’ future

An historical shift is turning global ageing into a positive development. But the work is not yet complete and

powerful questions remain. What are older people’s needs and expectations in relation to different kinds of products and services? How should standards take the needs of older people into account? How will standards need to evolve in response to the trends emerging from these new demographics?

For Chancellor Gérard-François Dumont, standards play a vital role. “Standards are especially important in the silver economy,” he says referring to the different types of players in the new market, such as private enterprises, medical and welfare professionals, local authorities and social security bodies. “This variety of involved parties makes it essential that they be able to find common ground in shared standards.”

What is unique and unprecedented about the potential of an ageing population is the lack of borders. No country is immune from population ageing and if companies are destined to survive in the long term, they will need to embrace the demographic curve as an opportunity to reach an untapped market of older adults. This new market will ensure the prosperity and longevity of these businesses – fuelling a whole new suite of products and services – and will spur a virtuous cycle of standards and ongoing innovation.

So, on that note: Kudos to you, Robert Marchand! Keep rocking your age and embracing life to the fullest that can come with getting older. After all, 80 is the new 20. ■

### Doro designs for the elderly

The “grey dollar” is going to be a significant factor in the market for technology-related products. Yet, by and large, the elderly are neglected when it comes to the design of these products. The result is an exciting niche market.

For Swedish firm Doro, a specialist in developing telecommunication software and products, designing for the elderly seemed like an obvious choice. The company is behind the Doro 8031 smartphone, an easy-to-use mobile phone for older people that is highly intuitive and adapted to the problems associated with age. Seniors are won over by its simplicity and, in just a few weeks, the Doro 8031 has become the reference for older people who are just starting out with mobile communication.

The older generation face significant challenges when it comes to using mobile technologies, so how is Doro addressing the new niche market? Valérie Olek, Sales Manager at Doro, tells us of the brand’s desire to get ever closer to the needs of older people.

#### **ISOfocus: The Doro 8031 is not a conventional smartphone. Which of its features make life easier for older users?**

**Valérie Olek:** The Doro 8031 is a 4G smartphone for older people whose interface has been designed to be as simple and intuitive as possible. We decided to develop an interface that “thinks” like its users and naturally leads them to take actions without getting bogged down by the device’s multiple functions.

More specifically, the touchscreen features three large icons, each associated with an action verb (Call, Search/See and Send). Each one opens up logical suggestions enabling users to accomplish their desired purpose in just a few steps.

#### **Why did Doro decide to focus on this new market niche?**

Founded in 1974, Doro has over 40 years’ experience in the telephony sector. In 2008, we made a major strategic shift, specializing in the development of telephony solutions for older people. We were very much trailblazers in the field in those days, as the majority of mobile phones were aimed exclusively at 25-35 year olds.

There were many factors behind our decision to specialize in this new niche market. For a start, it was clear that this senior demographic was set to increase and would open up genuine prospects for business – prospects enhanced by the scarce supply of products in this area. Ultimately, this enabled us to carve out a position for ourselves in a niche segment, with a unique and attractive offer, and pull out of a core market that was also highly competitive.

#### **Where do standards fit into your activities?**

Standards, legislation and labels are elements that we comply with very strictly when designing our products. We implement environmental directives meticulously and are constantly working to reduce the impact our activities and products have on the environment. Our key suppliers are also ISO 9001- and ISO 14001-certified for quality and environmental management. It’s a primary criterion imposed by Doro’s R&D and quality departments.



Valérie Olek, Sales Manager at Doro.

We made a major strategic shift, specializing in the development of telephony solutions for older people.





# Robots to the rescue!

*Romeo is a 140 cm tall humanoid robot designed to explore and further research into assisting elderly people and those who are losing their autonomy.*

by Maria Lazarte

It won't be long before robots become a normal part of our everyday lives. Soon, our mobile companions will provide everything from coaching to communication to companionship, keeping us independent as we grow older. The era of human and robot interaction has begun, and it is changing the way we experience ageing.



Can robots solve the problems of an ageing society? Ongoing research suggests they can. Today's robots can take out the trash, help you walk and do the shopping. They can crack jokes, recognize emotions and even learn. Although fully functioning robot caregivers may be a long way off, roboticists and physicians predict that a new wave of advances in computerized robotic technologies will be available in coming years to help older adults stay at home longer. It all started in Japan, where expanding lifespans and declining birth rates are causing an alarming drop in the working force and an increasing demand for caregivers. To address gaps in labour and care, the Japanese turned to one of the things they do best: technology. The world is following suit. With people living longer than ever before, the European Union (EU) has been investing tens of millions of euros annually on robotic research for elderly care. "Studies show that national and European ageing-related healthcare costs are continually increasing, so the EU is strategically committed to encouraging sustainability through technology," says Jorge Dias from the University of Coimbra in Portugal, who is working on GrowMeUp, an EU-funded initiative that promotes robotics for active and healthy ageing. "GrowMeUp's objective is to show that a robotic system can increase healthcare efficiency while improving quality of life. We hope it will help the elderly to stay longer in their homes, rather than in care centres."

## Some 160 seniors in Italy and Sweden took part in the four-year pilot.

Another project, Robot-Era, recently conducted the world's largest trial to date for testing the effectiveness and acceptability of robotic services for the elderly. Some 160 seniors in Italy and Sweden took part in the four-year pilot where robots did the shopping, helped take out the trash and watched out for security risks like open doors and gas leaks. "I am happy that a robotic system can facilitate my daily activities," said Wanda Mascitelli, one enthusiastic participant. "Living alone, I feel safer and more relaxed at home." Her verdict is no surprise, even the most skeptical among us can recognize that robotic advancements translate into empowerment for an ageing society.



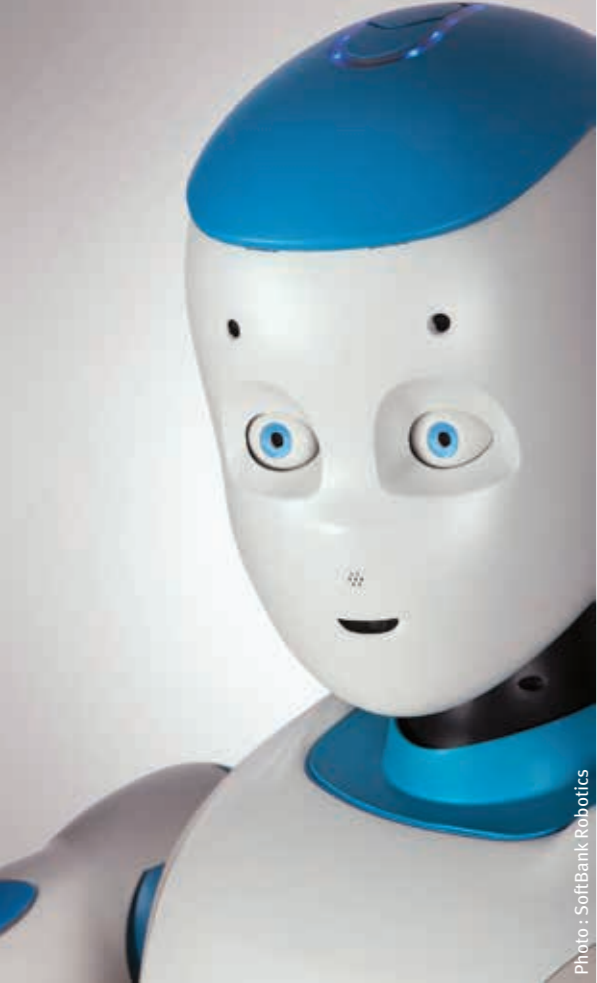


Photo : SoftBank Robotics

### A robot called Romeo

Robots offer a way to maintain our autonomy as we get older. Romeo, a humanoid robot developed by SoftBank Robotics, was designed to do just that. Tall for a service robot at 1.40 m, he can keep track of your schedule, remind you to buy milk and tell you how much medicine to take. He'll offer advice to help you through your daily activities while making sure you didn't leave the stove on.

"Our robot can help in three key areas : making sure our clients are safe at home, connecting them to their entourage and performing daily tasks around the house," says the company's Research Innovation Director, Rodolphe Gelin.

A major advantage of having a robot live with an elderly person is that it can get to know their habits, like how much they sleep or when they eat, so it can detect a potential problem and inform caregivers and the family. A virtual care network both encourages users to socialize and makes it easier to care for them. "This increases quality of life for both the elderly and their family, while reducing care consumption."

And we are only scratching the surface, many other ongoing initiatives have similar goals. The Iron Hand project, for instance, is developing and testing a robotic glove to compensate for lost hand strength and grip caused by ageing, which can be crippling if people struggle with daily tasks like opening a bottle or preparing meals. Hocoma, one of the companies involved in the project, is a pioneer in developing innovative medical technology for functional movement therapy. "Our solutions help therapists to cope with current demographic and economic challenges by intensifying the therapy and its effective outcome," explains its Chief Creative Officer, Mike Fuhrmann. "For example, Andago is being used to help people who have suffered a fall or a stroke to regain confidence in walking. The Iron Hand project is another step forward."

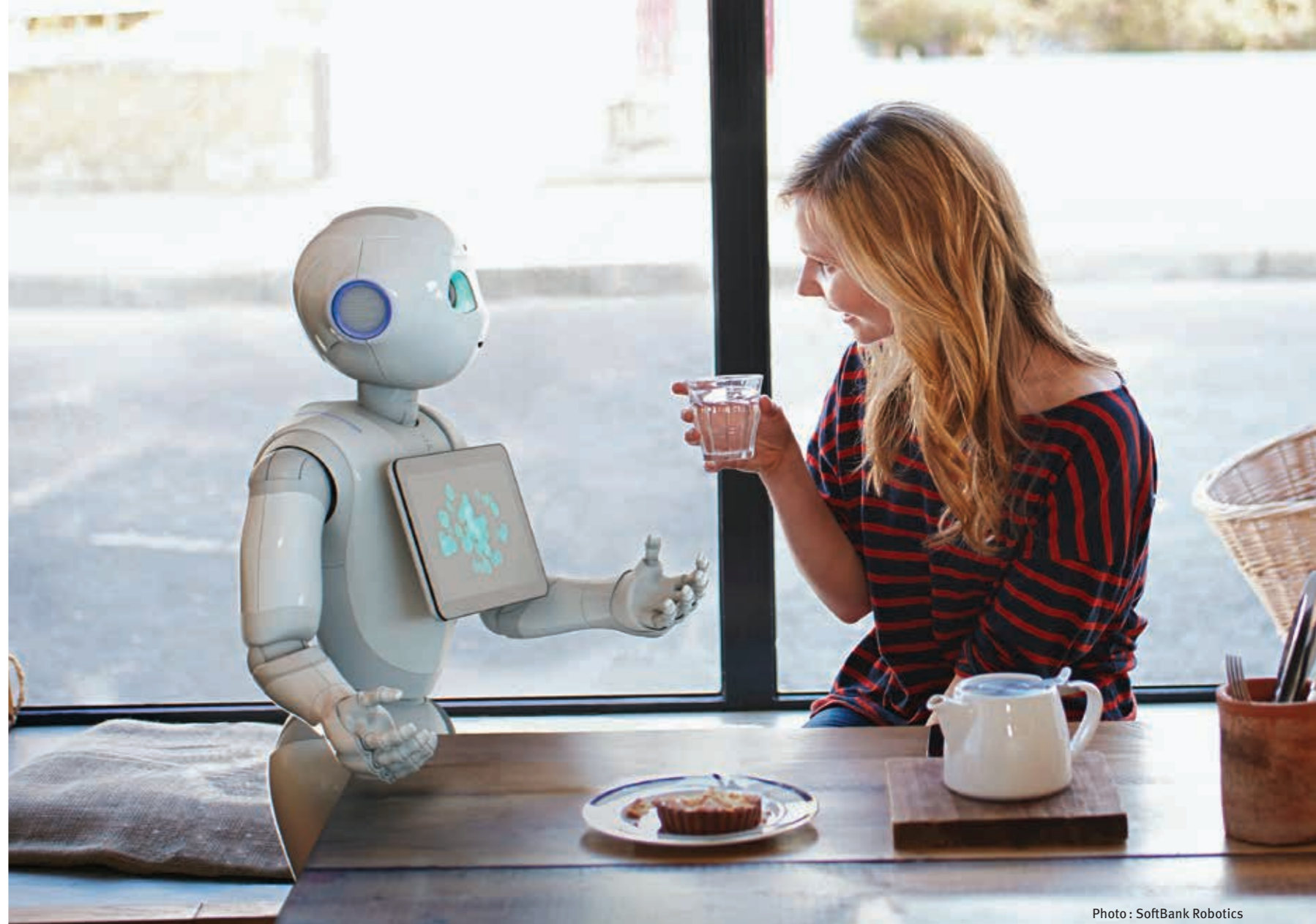


Photo : SoftBank Robotics

A trusty companion, Pepper is able to communicate with you through the most intuitive interface we know : voice, touch and emotions.

### Dehumanizing the elderly ?

As the number of devices multiplies, how will the elderly respond ? Are we alienating them ? Gelin doesn't think so. "On the contrary, in retirement houses, the robot becomes a centre of attention and discussion bringing people together. These machines strengthen social connections, namely by allowing grandparents to maintain closer contact with their grandchildren. Ultimately, we are talking about assistive devices compensating for handicaps, which users often find less stigmatizing than, for example, a cane or a wheelchair." The robotics expert does not deny that a human nurse or family member offers better company, but he believes that, in our fast-paced society, this is not always possible. "It's better, and much safer, to have a robot than be alone."

That's an important point, because companionship is also on the robotics agenda. Hasbro has developed robotic cats targeted specifically at the elderly to fill that void. Similarly, Pepper, another humanoid robot to come out of SoftBank Robotics, can recognize and respond to emotions. Playful and approachable, he is already used in dozens of retirement homes throughout Europe to inform and entertain residents.

Robotics are also being used to address gaps in a declining labour force. Tokyo's Haneda Airport is working with Japanese robotics and technology company Cyberdyne to equip its staff with robotic lumbar supports, so that older people can do the heavy tasks usually done by the physically young and strong, like luggage lifting.

A virtual care network  
both encourages  
users to socialize and  
makes it easier to  
care for them.

It's up to all of us to embrace the potential robotics has to offer.

### Driving the silver economy

All these developments demonstrate that technology is set to become a major driver for the silver economy, the nascent market of goods and services for seniors. But before we get there, we need the right standards. “One of the most noticeable barriers to integrating robotics in elderly care is the lack of comprehensive standards and laws to commercialize these products so they can reach society,” says Dias. “Safety, security, standards and certification need to be addressed if we want autonomous social robots in healthcare. International Standards are key.”

Until recently, robots were mainly used in industrial applications and kept apart from workers. “We were not prepared for human-robot contact,” says Prof. Gurbinder Singh Virk, Convenor of the ISO working group that developed the first standard for personal care robots. “As research began on a new generation of robots that would help people with daily life, we had to make sure that we could control and mitigate hazards arising from close interactions with humans.” Many of the emerging service robots were neither industrial nor medical devices, so they were not covered by existing standards, especially when it came to safety. This created uncertainty for investors. What if millions of dollars later, the products were deemed unsafe or accidents led to litigation against manufacturers?

ISO stepped in with groups of experts from universities, robotic designer companies, governmental agencies and other stakeholders to develop ISO 13482, the first standard for the safety of personal care robots. The standard helps address hazards by, for example, limiting movements and force, avoiding sharp edges and hazardous emissions, and so on. Unsurprisingly, Japan has been among the first to embrace it, but the standard is now taking off globally.

“It's difficult to evaluate a new product as ‘good’ or ‘bad’,” explains Gelin. “By indicating a level of performance, International Standards help us compare to a reference. Safety standards are particularly crucial. People need to trust the robot they have at home, and knowing that it meets standards is reassuring.”

Before publication of ISO 13482, SoftBank Robotics relied solely on IEC 60950 for information technology equipment since, in a way, their robot systems worked like a computer. “Now that ISO 13482 on the safety of personal care robots is available, we are looking into applying it,” says Gelin. “It's quite demanding on some points, but we do hope to use it, as dedicated standards like this one will make things easier for our industry.”

Mike Fuhrmann agrees: “Hocoma has been a pioneer in integrating innovative technology into medical applications and we are proud to participate in ISO standardization work. We are actively using standards like ISO 13485 (quality of medical devices), ISO 14971 (risk management for medical devices) and the IEC 60601 series (basic safety and performance of medical electrical equipment). Our priority is that our solutions can be used safely by individuals alone at home, regardless of disability or age-related constraints.”

### A game changer

ISO 13482 is just a first step. Recently, ISO consolidated all its robotics work into one dedicated committee in order to better meet the growing needs of a rapidly developing industry. As technology evolves, so will the standards that regulate it.

Prof. Virk is excited about the future: “The work we are doing at ISO can catalyse the development of a mass market in robotics. One of the biggest issues today remains the high cost of production. Standards could change this. We are currently working on facilitating plug-and-play robot components by formulating modularity standards for service robots, to make the industry more competitive and accessible. It could be a game changer.”

This is only the beginning of the robotics adventure. For some, standards development will indicate the direction in which we should, or not, go forward. But it's up to all of us to embrace the potential robotics has to offer and decide what role we want it to play in our lives. ■



Photo: Hocoma, Switzerland

*Andago is a mobile robot for body-weight supported gait training that allows upright, hands-free walking without spatial limitations.*



# The beauty of the golden years

by Elizabeth Gasiorowski-Denis

More and more seniors are saying it's never too late and are signing up for various aesthetic procedures. But what standards are guiding the industry's services? How can patients be sure they're getting the best possible care? Here's the latest on plastic surgery later in life.

At age 75, Hanna Groch has always felt younger than the age on her birth certificate. She works full time as a property manager and keeps an active social calendar, busying herself with English and IT courses at her community college, not to mention regular outings with her two grandchildren.

But one thing needed improvement, she decided – her appearance. “I’m more active than most people my age. I don’t feel old, I feel good, but people were coming up to me and saying, ‘You look tired. You look run down.’ I got fed up with it,” Groch says. So two years ago, Ms Groch, who lives between Poland and France, underwent eyelid surgery and is planning further procedures, including to her neck and jaw.

“If you look in the mirror and you don’t like the way you look, if you can improve yourself, why not?” she said. “I would have done this years and years ago, but then again, a lot of it wasn’t available years and years ago.”

## Why choose aesthetic surgery?

Groch isn’t alone. She’s just one of many in their 60s, 70s and even 80s who are looking to enhance their golden years with a cosmetic procedure. Of the procedures that are most popular among seniors, it’s no surprise that age-reversing treatments like facelifts and eyelid surgery take the top spots.



According to the American Society for Aesthetic Plastic Surgery (ASAPS), more than one million surgical and non-surgical treatments were performed on the 65 and older set in 2014. It's a number that's grown 63% in the last five years, and nearly 320% in the last 15.

There are as many reasons for getting cosmetic surgery as there are older patients, experts say. Some people are living longer and remaining healthier, and they want their physiques to align with their psyches – such as Ms Groch. Others are still looking for jobs and want to be seen as youthful contenders. But in many cases, seniors choose plastic surgery because they desire the boost of self-confidence it can provide.

Olivier Pégorier, a European board-certified surgeon based in France, is seeing an increasing number of older patients. “Since the ‘image’ that one puts across has become so important, cosmetic surgery has become appealing to older people seeking to gain a refreshed, rejuvenated appearance.”

The growing number of surgeries, he says, is also explained by cultural and economic shifts, including an increasing retirement age and life expectancy. Then, too, people are enhancing their quality of life and want their outer appearance to complement their inner vitality.

**The number of surgical and non-surgical treatments has grown nearly 320% in the last 15 years.**

“As less invasive techniques continue to evolve, coupled with people living better and longer, there is really no maximum age for cosmetic procedures anymore,” said Dr Pégorier, who specializes in plastic, aesthetic and reconstructive surgery. “It is increasingly common for women and men in their 60s and 70s to maintain a youthful appearance.” Seniors are recognizing that living well later in life is just as important as living longer. But as more older adults go under the knife, the question of safety arises. Having aesthetic surgery is not getting a haircut, it is real surgery with all the potential risks and complications connected to it.

#### **An aesthetic first**

Whether in their own country or abroad, patients expect to be treated by competent practitioners in a safe environment and to be informed about relevant issues related to their procedure, including risks. Surprisingly few standards have focused on aesthetic surgery services. Until recently. These expectations have now been addressed by the new European standard for aesthetic surgery services. Two years ago, the European Committee for Standardization (CEN) published a standard in relation to aesthetic surgery services (EN 16372). Comprehensive in scope, it covers the entire service level: before, during and after the aesthetic procedure has been carried out.

Anne Hayes, Head of Market Development for Governance & Resilience at BSI, the national standards body for the United Kingdom and ISO member for the country, believes the standard will help create a level playing field in Europe: “Plastic surgeons across Europe felt strongly that patients had few standards to refer to when choosing a surgeon, clinic or hospital,” she says. “EN 16372 is aimed to create a benchmark regarding the quality expected when undergoing a cosmetic procedure.”

Patients expect to be treated by competent practitioners in a safe environment.



EN 16372 was developed to provide an improvement in the level of aesthetic surgery services to enhance patient safety and satisfaction, and reduce the risk of complications. The aim is to promote consistently high standards for aesthetic surgery service providers across Europe. So how will the standard work? How will patients travelling to other countries to have procedures benefit? According to Hayes, the standard will give patients an indication of what quality of service should be delivered to them. “In that way, patients would have greater protection in countries where there are no laws regulating cosmetic surgery,” she says.

### Into the future

On the whole, EN 16372 will apply to any EU member states whose national standards body is governed by CEN. This includes the United Kingdom, as well as other European countries from Poland to Portugal and Finland to France – in total 31 member states whose aesthetic surgery industries will be covered by the standard.

With more and more medical tourism, there’s been growing concern about having safe, quality products, procedures and providers. And while most doctors who practise in this area do so to a high standard, patients may (and do) come across poor practice. Establishing service standards for the aesthetic industry could reduce risks facing patients when they travel abroad for healthcare.

With a European standard now a reality, the aesthetic industry may be wondering whether an International Standard might be in the pipeline. And while most signs indicate that this is still a long way off, a few are already speculating on its feasibility.

“An International Standard would give greater protection to patients who now travel in increasing numbers overseas for surgery,” says Anne Hayes, referring to the rapidly growing medical tourism market. “It would also facilitate internationally recognized training schedules and qualifications for aesthetic surgery to be developed.”

For Dr Pégrier, it would indeed be desirable for an International Standard to be developed. “Medical practices – including good practice expected of all surgeons who perform aesthetic surgery – could then be properly compared around the world,” he says. “With the surge in medical tourism, an International Standard will become essential.”



**In 2014, more than one million surgical and non-surgical treatments were performed on the 65 and older.**

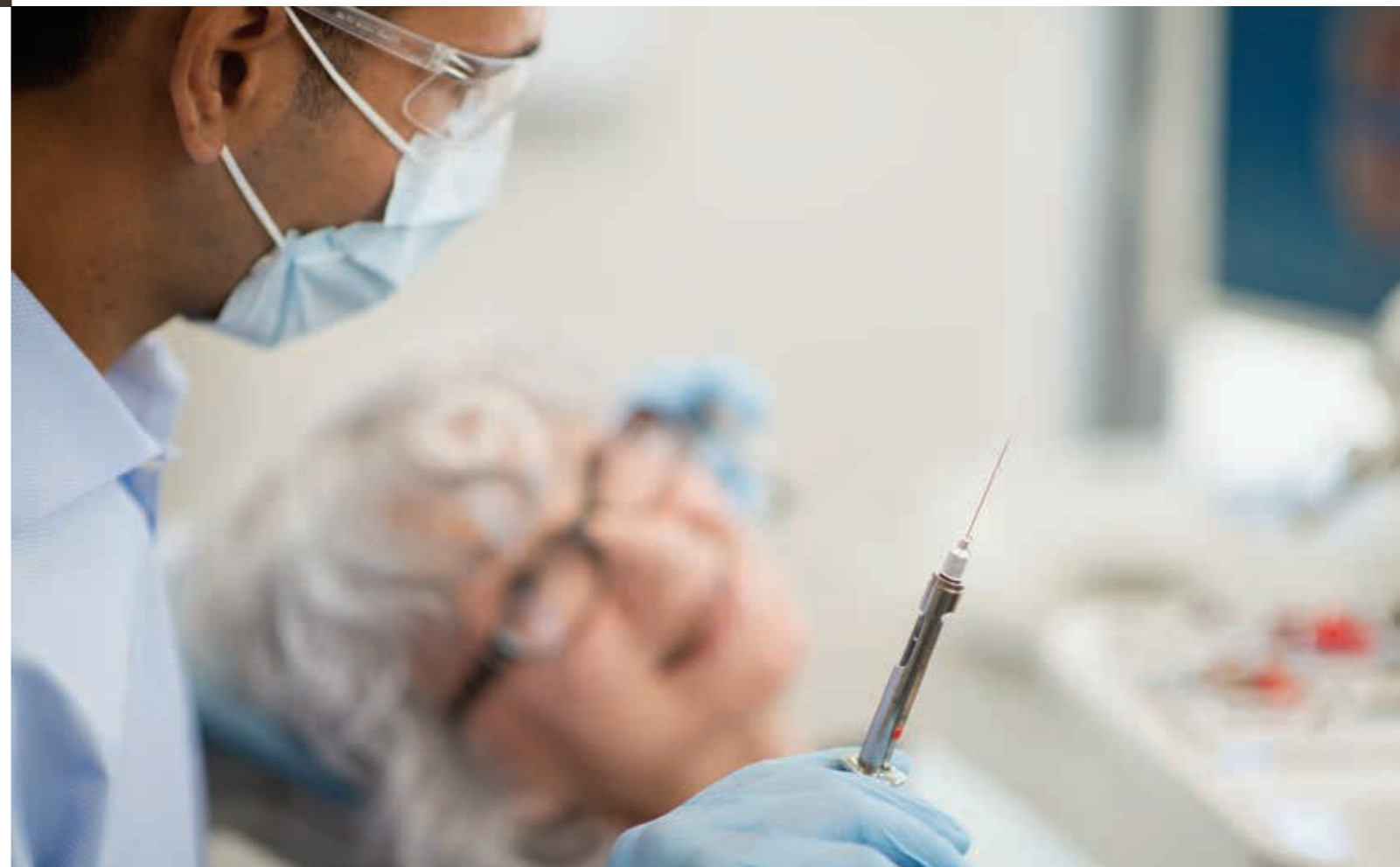
Seniors are challenging society's definition of what retirement should mean.

### The debate goes on...

Although plastic surgery is gaining acceptance, people still have strong opinions about the subject. Proponents of such treatment say it can boost confidence and quality of life, while those who oppose it contend that older people who choose to go under the knife are inadvertently perpetuating ageism.

Regardless of which side of the fence you're on, one thing is certain: aesthetic surgery is here to stay. It is no longer just for the young, rich and famous. Seniors are challenging and rewriting society's definition of what retirement should mean. They're active and many are still competing for jobs in their 70s and 80s. This fast-growing group of aesthetic surgery patients is determined to look younger and more vibrant than their birth certificates suggest they should.

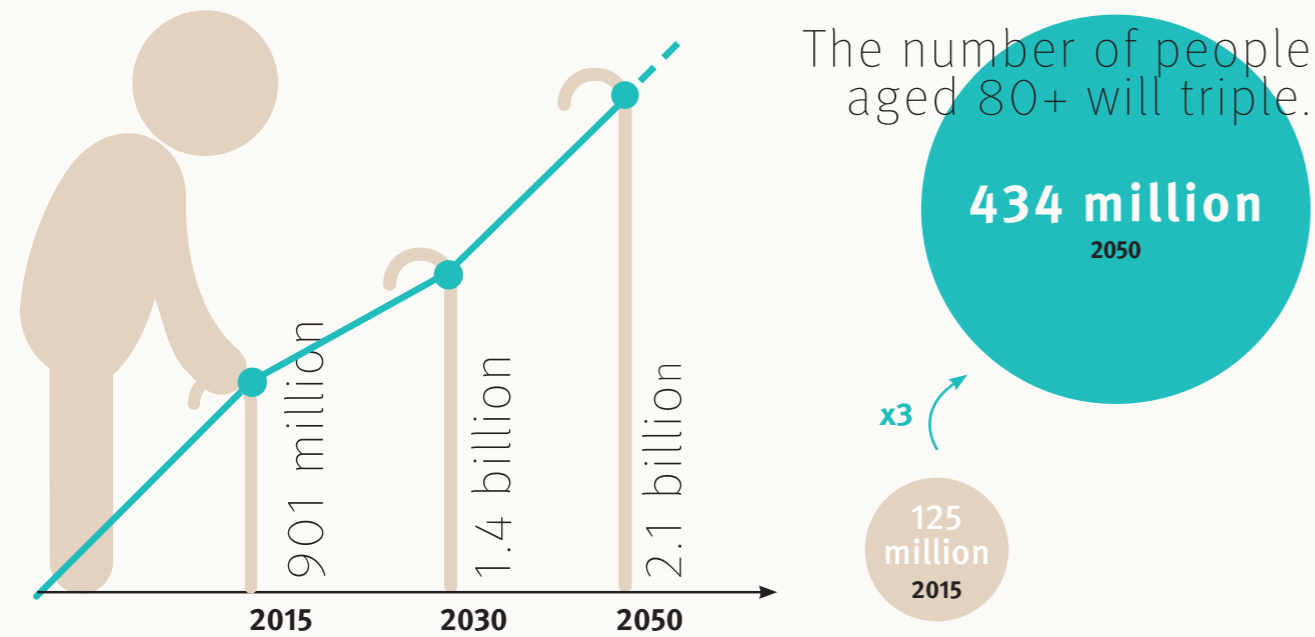
Hanna Groch sums things up rather nicely: “At the end of the day, the only thing important to me is whether I am safe under the scalpel. Everything else is irrelevant.” ■



# Facts & figures of an ageing world

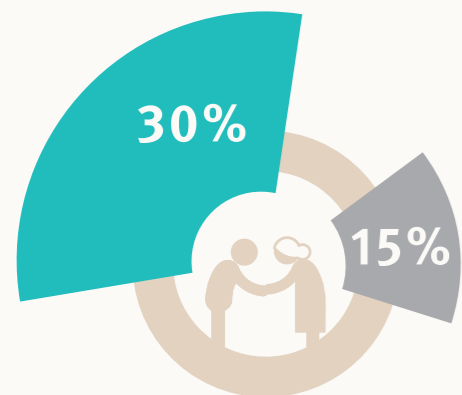
## HOW MANY ?

PROJECTION OF THE NUMBER OF PEOPLE AGED 60+



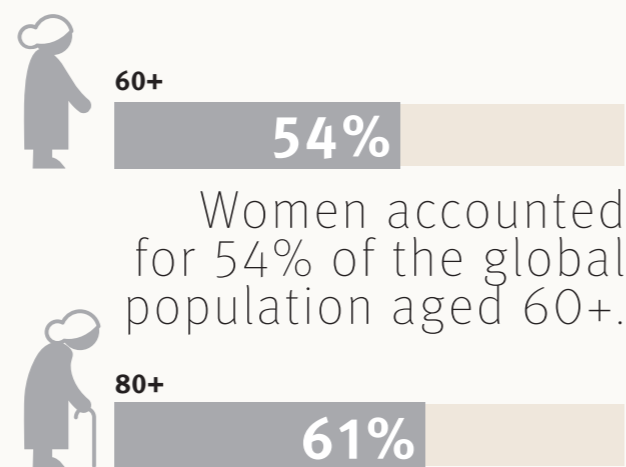
## WHO ?

LABOUR FORCE IN 2015



Among the 65+ group, 30% of men and 15% of women were active in the labour force.

WOMEN IN 2015



Women accounted for 54% of the global population aged 60+.

61% of women were aged 80+ in 2015.

## WHEN ?

PEOPLE OF TRADITIONAL WORKING AGES (20-64 YEARS)

IN 2015



7 working-aged people for 1 older person aged 65+.

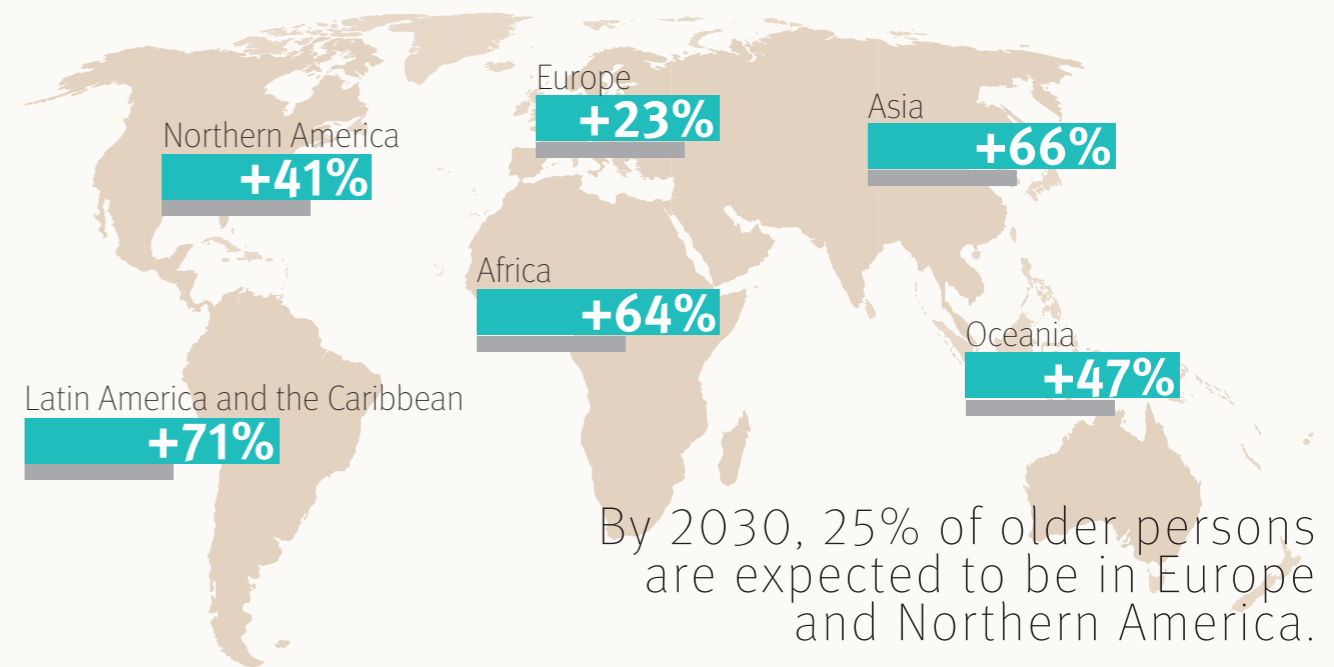
IN 2050



3.5 working-aged people for 1 older person aged 65+.

## WHERE ?

EXPECTED INCREASE IN THE 60+ POPULATION OVER THE NEXT 15 YEARS



PEOPLE AGED 60+ ARE INCREASINGLY CONCENTRATED IN URBAN AREAS



Source: World Population Ageing report 2015, United Nations





# Why today's ageing population has a *silver lining*

Japan is ageing faster than any other country on the planet, with serious consequences for its economy and society. Twenty-five per cent of Japanese are over 65, but not only do they live longer, they work longer, stay healthier and enjoy better care for the elderly. And their sunset years are proving good business in the Land of the Rising Sun.

Japan has the highest proportion of older adults in the world, with 25% of citizens aged 65 or over. At the same time, the country's population is shrinking at rates never witnessed before. According to the National Institute of Population and Social Security Research, a think-tank under the Japanese Ministry of Health, Labour and Welfare, the population of Japan has nearly tripled in the 20<sup>th</sup> century. Yet with its falling birth rate, high life expectancies and next to no immigration, the country is on track for a uniquely high ratio of seniors.

This dramatic "greying" of society is putting severe strain on the country's economy and social services (pensions, health and long-term care), which the Japanese government hopes to counter with policies intended to restore fertility rates and make the elderly more active in society. But the demographics of ageing are not all doom and gloom. In Japan, where retirees enjoy high average wealth, there is an opportunity to develop a new set of products and services targeted at the elderly – a trend known as the "silver economy". Many companies are taking advantage of this rising market, such as mobile phone operator NTT DoCoMo that launched a smartphone with larger fonts and simplified e-mail functions for its older customers or baby-food manufacturers that developed nutritiously balanced soft foods for seniors.

Japan is a leader in seeking international standardization for accessible technology. Back in 1998, in response to a Japanese proposal, an ISO task force was charged with developing a policy statement on general principles and guidelines for the design of products and the environment that address the needs of older persons and persons with disabilities. The result was ISO/IEC Guide 71, which provides guidance for the consideration of accessibility issues during the development or revision of standards.

In many ways, Japan is grappling with a demographic time bomb and is tackling the problem with innovative programmes including everything from comprehensive long-term-care insurance to robotics. At their core is accessible (or universal) design, rooted in a robust set of standards – a concept that Dr Ken Sagawa, a staunch proponent and Convenor of the working group on ergonomics for people with special requirements

(ISO/TC 159/WG 2), advocates as "not just for the old, but for everyone".

**ISOfocus:** What are the effects of Japan's demographic transition? Why is a focus on ageing and older adults important to you?

**Dr Ken Sagawa:** One of the most serious effects of social ageing is the lack of adequate care for older people. If this demographic trend continues, it will become more and more difficult for our elders to get the care services they deserve, especially after retirement, as the number of young people who support the welfare state is dwindling while the expense of running social care programmes for seniors is increasing dramatically. This inverted population pyramid is not the preserve of developed countries; many developing countries are experiencing the problem as well. It has really become a worldwide predicament.

My personal interest in ageing lies in finding ways to keep our senior citizens in good health and working longer without the need for social care, and investigating how science and technology can help them lead more active and productive lives well into old age. What we need to reduce is pathological ageing – healthy ageing is the aim. One solution is to create more caring communities by improving many of the products, services and environments for older people. There is exciting work being done in this area, driven largely by technological innovation such as robotics, artificial intelligence, telemedicine and biotechnology.

**What makes for a successful, healthy living situation for the ageing population? Is there any particular recipe that works?**

Rather than offering a particular recipe, I can share with you a general concept that has fared well in coping with the challenges of technological development in ageing societies. At the crossroads of advancing technology and advancing age, "gerontechnology" is a field of scientific research combining gerontology (the science of ageing) and technological development to address the various problems associated with ageing. It has three main objectives: the prevention of ageing, the compensation of ageing, and the enhancement of quality of life in old age.

Physical exercise and regular mental and cognitive activities are known to be effective in preventing or slowing down the process of ageing and there are a variety of “recipes” for prevention in this area. Compensation is another way of solving the problems of ageing when ageing itself cannot be prevented. Growing old is associated with an irreversible loss of faculties. As we age, our sensory abilities (eyesight, hearing, etc.) deteriorate. While this cannot be avoided, we can “compensate” the functional deficit with assistive devices, such as hearing aids, or through accessible design in the form of easy-to-read font for older people. ISO is developing several standards on accessible design to help make the products, services and environments we encounter in all aspects of daily life more accessible.

The last objective – enhancement – is a rather new concept. Contrary to prevention or compensation, it aims to raise the level of satisfaction and enjoyment in older people’s lives – through leisure activities, hobbies, games, etc. – from “zero” (no problem) to “positive” (happy and healthy), whether they suffer from health complaints or not. This field has seen little development so far but I think it is important and should be promoted through ISO in the future as a precondition for a happy, active ageing society.

**As our population ages, how will it influence the way in which accessible design is implemented?**

As the global population grows steadily older, the effects on retail and manufacturing industries will be enormous, driven by an ever greater demand for accessible design. Today’s seniors are fitter, richer and more active than in previous generations and they constitute an important consumer group whose needs should be systematically addressed when creating new products and services.

Mature consumers are different. They require different cosmetics formulations or food for special dietary needs, easy-to-open packages and product labels with larger font. They also often enjoy shopping, are loyal to brands and, with more disposable income, are not particularly price-sensitive. Consumer goods industries have a responsibility, as well as a unique opportunity, to provide them with the appropriate goods and services that serve their needs and expectations. Yet while the over 65s may have special needs, they don’t want to be singled out – or ignored. This means creating “one-size-fits-all” products by incorporating accessible design features right from the drawing board. I am confident Japan will respond positively to this societal obligation and new business opportunity.

**Are the products being developed adequately prepared to deal with an ageing population? If not, how do they need to change?**

A growing number of products are being developed that are suitable for use by older people or people with disabilities. But these so-called “accessible” products are limited relative to the glut of items on the market and more effort must be made



*Dr Ken Sagawa, Convenor of the working group on ergonomics for people with special requirements (ISO/TC 159/WG 2).*



What we need to reduce is pathological ageing – healthy ageing is the aim.

to design consumer goods that can be used easily and comfortably by older people.

One way to achieve this is to get manufacturers to apply accessible-design standards in industry. Accessibility standards are on the rise, not only in ISO but in ISO’s partner organizations, the International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU). Incorporating the strategies advocated in those standards into the design and development process from the outset can avoid expensive retrofitting later on. Standards organizations need a robust mechanism in place to encourage the implementation of such standards in industry – certification or accreditation is one way of doing this.

All this ties in with the concept of “accessible design” (also known as universal design) conveyed in the joint IEC/ISO/ITU policy on standardization and accessibility<sup>1)</sup> whereby “products, systems, services, environments and facilities can be used by persons from a population with the widest range of characteristics and abilities”, including senior citizens. To create accessible, user-friendly design,

<sup>1)</sup> In 2014, ISO, the International Electrotechnical Commission (IEC) and the International Telecommunication Union (ITU) released a common accessibility policy formalizing their commitment to ensure that all future standards published by the three organizations contribute to making products, services and environments that are accessible to all.

only two age groups need to be studied: the younger and the older. If the proposed design system applies to both younger and older users, then it will also apply to users between these two age groups – i.e. everyone. This universal design philosophy is a move towards inclusion, promising solutions for people with diverse abilities, and is an essential driver of a healthy society.

**What standards are available to enable the ageing population to live better? Are there any other standards that haven’t been developed that you think could help?**

There are many standards that will help improve life for the ageing population, from conceptual documents (guides or sector guides) to individual standards that apply on a case-by-case basis to products, services and environments. Although they are limited in number for the time being, it is important to let designers in industry know of their existence.

So far, ISO and other national or international standards organizations have remained at the conceptual level, providing very general guidelines. Efforts must now be geared towards developing individual standards that improve the accessibility of specific products, services and environments for the enhancement of our senior citizens’ lives. Our industries and designers are crying out for them. ■

## MAJOR MAKEOVER FOR ISO.ORG

Few things evolve quicker than the Internet. And with five years having passed since the last refresh for ISO.org, we felt it was about time for a major upgrade in order to keep up with the changing expectations of our site visitors.

Due to be launched in March, the site features the fresh look of ISO's updated visual identity and better reflects our defining belief that "great things happen when the world agrees". The second thing that users will probably notice is the simplified navigation, which makes journeys more intuitive and adapts better to mobile devices. This is backed up with the addition of a more intelligent search, an essential improvement considering that users increasingly look for keywords rather than browsing through links.

Designed and built in-house, the site uses an open-source platform developed in Switzerland. Using a modular approach to page building, the ISO team's atomic-design method gives a customized feel that is quick to evolve. It means more flexibility and greater reactivity when it comes to telling the world our story, whether it's the new standards we're working on, or how standards contribute every day to making the world a safer, more reliable place. This built-in flexibility means we can better answer the needs of more than 1.5 million people who visit ISO.org each month, whether they're looking to find out more about ISO, how they can get involved in standards development, or simply learn more about how ISO standards touch almost every aspect of daily life.



Photo: DNPQ

## LA FRANCOPHONIE MEETS IN MADAGASCAR

The 16<sup>th</sup> Sommet de la Francophonie, a gathering of French-speaking countries held at the end of 2016 in Madagascar, culminated in the adoption of the Antananarivo Declaration. The Declaration calls for better cooperation among member countries to achieve stability in the world and the francophone community. Over 6 500 participants, including 20 heads of state and government and some 2 500 delegates, took part in this important event.

Without doubt, the highlight of the meeting was the launch of the national unit for Women, Youth and Standardization by the Association Réseau Normalisation et Francophonie (RNF). Established under the auspices of the BNM, ISO's member in Madagascar, the unit is a one-stop shop offering women and young entrepreneurs access to awareness-raising campaigns, training, coaching and good-practice guidance on standards and quality management.

The RNF, with which ISO collaborates on various standardization topics, contributes to the economic development of the French-speaking world through projects concerning standardization and related disciplines. In an interconnected world, standards lie at the heart of international trade, opening the door to exports and the global value chain. Madagascar is one of four countries to implement this model, which the RNF hopes to replicate in other member states of the Francophonie.

## MAURITANIA TAKES STEPS TO COUNTER CORRUPTION

While corruption remains a challenge in Mauritania, it is not a foregone conclusion. In a land where 50% of the population is afflicted by poverty, the fight against corruption is an integral part of much wider efforts for securing good governance, a streamlined administration and socioeconomic development. A latecomer to standardization – the country joined ISO in 2009 as a correspondent member – Mauritania is nonetheless an active player. Under the impetus of the DNPQ, the country's national standards body and member of ISO, this membership has paved the way for the development of a quality infrastructure, which is closely modelled on the ISO strategic plan.

Since 2010, technical standards committees have been working on a national level in various sectors of industry. The last to be established, in the final quarter of 2016, is charged with the adoption of ISO 37001 on anti-bribery management systems. The ISO standard was given the green light by the Mauritanian government, as an additional tool in the country's anti-bribery legislation aimed at improving the business climate nationwide.

## WORLD HEALTH DAY 2017

For people living with depression, talking about it can be the first step towards recovery. Under the banner "Depression: let's talk", World Health Day 2017, which is celebrated by the World Health Organization (WHO) on 7 April, aims to remove the stigma surrounding mental illness and encourage more people with mood-related disorders to seek help.

Depression affects people of all ages, from all walks of life, in all countries. It causes mental anguish and impacts on the ability to carry out even the simplest everyday tasks, with sometimes devastating consequences for relationships with family and friends and the ability to earn a living. The condition is surprisingly common in older people, where it is often a reaction to ill-health, disability and isolation.

Over the years, ISO has excelled at providing solutions that relieve the plight of the elderly, including a raft of standards on accessibility. Based on the concept of inclusive design, they support the development of products and services that can be used by everyone, regardless of age or ability – helping to keep older citizens connected and fully engaged in society.



## GLOBAL STRATEGY FOR HEALTHY AGEING

For the first time in history, most people can expect to live into their sixties and beyond. Longevity brings with it opportunities like further education, a new career or the pursuit of long neglected passions. "With good health and a supportive environment, age need not be a barrier to older people continuing to do the things they value," says Alana Officer, Senior Health Adviser for Ageing and Life Course at the World Health Organization (WHO). "Unfortunately, there is little evidence that today's older adults are enjoying better health than previous generations," says Alana. Our health in old age depends on our biology, personal characteristics, and physical and social environment. Supportive environments, for example those with safe and accessible public buildings and transport, enable people to do what is important to them, despite losses in capacity.

One of WHO's priorities is to promote age-friendly cities and communities that enable senior citizens to age "actively". Concrete action like implementing ISO standards for accessibility to products and facilities, monitoring service performance, and smart infrastructures, can help meet this goal.



Photo: UNI

Vito Amendolara, Project Leader of the UNI/PdR 25:2016.

## MEDITERRANEAN DIET DISCOVERY

What kind of diet is best for maintaining the health of ageing brains and bodies? A common answer is the "Mediterranean diet", which, a new study suggests, could prevent the brain from shrinking in old age and help reduce cognitive decline.

The Mediterranean diet became part of UNESCO's Intangible Cultural Heritage in 2013 as a repository of skills, knowledge, practices and traditions ranging from the landscape to the table. Italians are enhancing efforts to promote the diet. A Regional Law on the Mediterranean Diet was passed in the region of Campania, including the creation of a Regional Observatory that will articulate a standardization system for safeguarding the values of the Mediterranean diet.

This renewed focus is supported by UNI, ISO's member for Italy, with the publication of a new standard. UNI/PdR 25:2016: *Mediterranean Diet UNESCO Intangible Cultural Heritage of Humanity – Guidelines for Promoting a Lifestyle and Cultural Approach for Sustainable Development*, lays out key points for promoting a culture favourable to sustainable development through lifestyles, knowledge and local traditions related to the Mediterranean diet pattern.

"We need to make people understand all the links between diet and lifestyle," says Vito Amendolara, Project Leader of Italy's new standard. "We also need to increase visibility of cross-cultural connections, well-being and happiness, conviviality, and sustainable economic development in a clean and secure environment, now and for the future."



by Clare Naden

The growing average age of populations is not always a burden on society, it can be a rewarding opportunity to enrich communities and our world as a whole. Increasingly, governments and local authorities are seizing the gift of longevity to imagine social infrastructure differently – and new areas of standardization are in the pipeline ready to help.

# How to adapt to *AGEING SOCIETIES*



We are not getting any younger and neither is the world's population. The number of older people has exploded in recent years and we are approaching an era where words like “aged societies” are becoming a reality. In fact, by 2050 it is expected that many countries will be classed as “super-aged societies”, meaning that more than 21% of the population is over 65; and by 2030, the number of people in the world aged 60 years and above will have grown by 56%<sup>1)</sup>.

Adapting to this trend poses economic, social and political challenges and may increase the dependency of older citizens on those of working age. This regularly conjures up doomsday scenarios of workforce shortages, the financial collapse of pension and health systems, mass loneliness and insecurity.

The truth is, ageing will dramatically alter the way societies and economies work. This includes how older adults find fulfilment, at what age they retire and their quality of life once they do retire. Linked with this are the pressures on societies in terms of healthcare, social security and accessibility, each of which calls for innovative solutions in everything

from city infrastructures to community-based living, allowing everyone to benefit from the contribution that older people can offer.

So as we enter an era where more and more people will be living longer, it begs the question: Is the so-called “burden” of older age sustainable, or even real? And how can we manage the change and embrace the opportunities presented by our shifting demographics? The answer could lie in standardization, which is a powerful tool to support the adaptation of goods, services and environments to the needs of ageing populations.

## Unlocking social capital

Global ageing is widely seen as one of the most significant risks to global prosperity. Yet, according to Dr Malcolm Fisk, a Senior Research Fellow at Leicester's De Montfort University in the United Kingdom who is active in a number of projects aimed at challenging ageism, the fact that there are more people over a certain age is a real opportunity. “Older people represent a cadre of knowledgeable and experienced individuals,” he says. “They are immensely adaptable. And, indeed, they have to be in order to deal with loss of income (on retirement), bereavement, disability [and] the prejudice of others.”

1) World Population Ageing: [www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015\\_Report.pdf](http://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2015_Report.pdf)

**By 2030,  
the number of  
people in the  
world aged  
60 years and  
above will have  
grown by 56%.**



Ageing, admittedly, is a challenge to global public infrastructure, but the good news is that if policy makers and leaders plan adequately for the changes ahead, we stand a very good chance of realizing the potential benefits of the ageing trend – such as utilizing the immense social capital of older people – while avoiding its perils.

Recent population trends indicate that virtually every country should anticipate significant growth in the number of older persons over the coming decades. Although Japan is said to have the world's oldest population, it is the less developed countries that are experiencing the most dramatic demographic change. To face up to this global phenomenon, multi-sectoral policies are needed in all countries to ensure that older citizens are able to participate actively in the economic, social, cultural and political life of their societies.

By understanding their specific population trends, governments can anticipate future needs with respect to their older population and can proactively implement the policies and programmes that will ensure the well-being and full socio-economic integration of older persons while, at the same time, being better positioned to maintain the fiscal solvency of pension and healthcare systems and promoting economic growth. A case in point is the “Abenomics” policy, announced by the Japanese government in 2015, which promises to strengthen the social security system and put in place an integrated community care system, enabling older people to live independently – with support where necessary – for the rest of their lives.

On a more local scale, there are a number of schemes that try to keep older people safe, engaged, and productive. The World Health Organization Global Network of Age-friendly Cities and Communities, for example, features initiatives such as the New York City Department of Transport's Safe Streets for Seniors programme, which saw 7 600 dangerous road intersections redesigned and pedestrian fatalities fall by 21%.

### **Accessibility is key**

If older people can remain active participants in society, they can continue to contribute to our socio-economic development. Engagement also helps prevent isolation and loneliness, and can ensure financial security. Inclusive design sets about creating environments that take into account different users' needs. It is focused on needs related to participation (access to information, accessible buildings and public transport), health (accessible and affordable healthcare services and opportunities to be physically active), continuing education (models of lifelong learning) and security (affordable housing and services) – in short, all things that foster age-friendly accessibility.



Accessibility lies at the core of age-friendly communities, in everything “from buildings and homes to the configurability and usability of products and services,” says Malcolm Fisk. This will present a number of challenges in the future, but standards can play a key role in facilitating and encouraging innovation in this area. “Universal design criteria must apply... and must be more embedded in standards.”

Accessibility is central to the Swedish municipality of Danderyd's programme to ensure citizens are able to make informed choices on how they want to live their life at an older age. The town is keen for its residents to continue to live independently and enjoy a good quality of life for as long as possible, explains Jonas Sundling, Quality Manager of Social Service at Danderyd Council and an active member of CEN's technical committee CEN/TC 449, *Quality of care for older people*. “We have a comprehensive accessibility plan, renewed every two years, that not only covers physical accessibility in council-owned buildings and public places, but accessibility to information as well.”

“We also believe that highly qualified health and social caregivers want to work with high-quality

employers,” he adds, “which is why we are active in [Sweden's technical committee] SIS/TK 572. We have recently developed a Swedish standard on the quality of care for elderly people in ordinary or residential care facilities and are working towards implementing it in our organization.” Accessibility is also a key factor in the Progressive project<sup>2)</sup>, a European Commission-funded research initiative aimed at setting in place a dynamic and sustainable framework where the contribution of standards and standardization for information and communication technology can be maximized in services that support active and healthy ageing.

“We are going to set down guidelines that link to a clear notion of ‘good practice’,” says Malcolm Fisk, leader of the project. “Our work will include setting frameworks to get the voice of older people heard in the standardization process. The commercial interests of the companies involved in such processes will, therefore, be more balanced, at least in those areas that impact on older people.”

<sup>2)</sup> [www.progressivestandards.eu](http://www.progressivestandards.eu)

## Age-friendly standards

On an international level, work is underway to use standardization as a means to facilitate innovative solutions for the challenges posed by ageing populations. Developed as a starting point for addressing these issues, the international workshop agreement IWA 18, *Framework for integrated community-based life-long health and care services in aged societies*, is designed to encourage healthcare service providers to operate “a shift in thinking towards person-centred services” that are dignified, accessible, safe and easy to use as a basis for establishing societies where people can stay healthy and active for as long as possible.

The framework, which was developed by experts from government, public health, industry and research, lays down the fundamentals of what should be addressed when considering community-based integrated health and care services for older people. It focuses on ensuring that basic individual needs like healthcare, daily living tasks, well-being, human contact and safety will continue to be met as a person grows older.

Recognizing the need to go further in this area, ISO has developed a Strategic Advisory Group (SAG) on Ageing Societies to help inform its future work in supporting the demographic transition. Led by BSI, ISO’s member for the United Kingdom, and composed of experts from all areas of government, community infrastructure, research and the aged care industry, it aims to investigate how standards can help solve the challenges posed by ageing populations. ISO already has expertise across a broad scope of

ISO already has expertise across a broad scope of topics that impact on ageing societies.

topics that impact on ageing societies and is well placed to undertake strategic work in this area.

SAG Secretary and BSI representative Ben Carson says the group has so far identified seven key challenging areas comprising :

- Community care service/in-home
- Enabling/assistive technology for the elderly
- Caregiving
- Integrated information management
- Future planning
- Enabling communities
- Building standards

The next step will be to carry out a gap analysis of existing national, regional and international standards and guidelines to identify where knowledge already exists and prioritize where future standards could be developed. On this point, Carson is positive : “The group recognizes there is already a wide range of standards that help communities adapt.” For example, ISO 37120 for sustainable development in communities defines a set of indicators to steer and measure the performance of city services (such as transport, health, safety and recreation) and helps track where improvements can be made.

Other documents also contribute indirectly to the cause, such as ISO/IEC Guide 71, *Guide for addressing accessibility in standards*. It is particularly helpful in developing requirements and recommendations for standards that focus on systems that people use, interact with or access.

## Reinventing old age

The irony of our times is that older people, who were traditionally respected for their wisdom as prophets and leaders, are now a source of anxiety for the future. We need to change our mindset that ageing can be positive rather than negative. Discarding old stereotypes, we must change our institutions and public policies to reflect the altered needs, aspirations and capacities of older people.

Such profound evolution involves standards that challenge ageism and embrace the opportunities that an ageing population can give us, by facilitating their engagement and involvement. It will take some time before more standards from this perspective are published, but the SAG’s gap analysis report (due out only later this year) is a significant step forward. It will identify some of the shortcomings and provide a catalyst for innovative solutions that cover generations and demographics.

Drawing on expertise from around the globe is a key to that. “Every country has its own issues and priorities when it comes to managing older populations,” concedes Carson, “so bringing together this group of experts from such diverse specialty areas and geographical regions means we can all learn from each other and provide a more holistic approach.” For it’s not just about taking care of older people, it is about harnessing their capacity to contribute to what all of us in society want for the future. ■





Photo: Council for Third Age, C3A

# Boosting

## Singapore's silver industry

To better prepare for a rapidly ageing population, SPRING Singapore, ISO member for the country, began to engage key stakeholders to identify and develop relevant standards needs as a strategic enabler to promote the silver industry. Here's how they are panning out in Singapore.

Technologies will play a key role in supporting the silver industries in the next wave.

**B**y 2030, one in four Singaporeans will be over 65, triggering what many have called the new silver economy. This new economy will affect all aspects of our society – business, healthcare, policy, technology, the list goes on. The fact that Singapore's population is seeing an unprecedented shift in the age structure is no small matter. The challenges of this demographic evolution are well known. Less talked about, however, are the parallel opportunities presented by the growth of the silver economy: recognizing older adults as consumers as well as active economic contributors.

### New opportunities

Singapore's ageing population also provides excellent opportunities for the standards world. SPRING Singapore, ISO member for the country, set up a Silver Industry Standards Committee (SISC) in 2011 to develop and facilitate the implementation of standards in order to support active ageing initiatives. The positive effects are new products/services that meet the needs and wants of older adults.

“The silver industry has an enormous market potential; however, there is a need to put in place standards to ensure the safety, quality and interoperability of products and services that support ageing,” says SISC Chairman Robert Chew. “Technologies will play a key role in supporting the silver industries in the next wave, and standards will help enable the deployment of these new technologies.”

With inputs from industry associations, professional bodies, government agencies, institutions of higher learning and voluntary welfare organizations, SISC has identified a number of focus areas to support active ageing. These are liveability within homes and community, nutrition, healthcare and technology.

### Liveability within homes and community

SISC has developed Singapore Standard SS 599, *Guide for way-finding signage in public areas*, to describe wayfinding signing principles and elements for pedestrians, with specific attention to helping seniors commute more confidently in indoor and outdoor public spaces.

Taking into account the loss of cognitive functions that inevitably takes place with ageing, such as visual or mobility-related impairments, SISC also rolled out a new set of design guidelines for age-friendly homes (SS 605) that covers the provisions of ramps, grab bars, non-trip flooring and adaptable toilet layout to enhance seniors' safety, comfort and accessibility at home. These provisions will help reduce the risk of seniors having a fall in their home environment.



Photo: Ms Mary-Ann Chiam

## Nutrition

A new standard – SS 604, *Guidelines on nutrition and food service for older adults* – was launched in March 2015, targeting some 20 acute hospitals/specialty centres, 80 intermediate and long-term care facilities and over 350 meals-on-wheels services. It covers guidelines on nutrition care policies and quality practices, food service standards, hygiene and food safety, menu planning, food selection, food preparation and portioning, fortified food and nutritional supplements. The standard also provides benchmarks to assess the nutrient content of meals served to seniors in intermediate and long-term care facilities, as well as social care facilities. In particular, nursing homes have given positive feedback, claiming that SS 604 has helped them meet the nutritional needs of seniors in their care. “These guidelines have provided an invaluable technical checklist,” says Mary-Ann Chiam, Chair of the technical committee on nutrition for the elderly. “This standard will ensure that vulnerable seniors get adequate and balanced nutrition to face their daily health challenges head on.”

## Healthcare and technology

SISC has also worked with the Information Technology Standards Committee to develop a technical reference on remote vital sign monitoring (TR 45). Taking advantage of advanced technologies, this new standard will help patients easily upload their vital sign data taken at home to a central portal.

Cadi Scientific, a Singapore-based healthcare technology company specializing in wireless sensing, tracking and matching devices, piloted the interface protocol defined in TR 45. The company used TR 45 in its SmartSense system – an ingenious disc-like wearable that automatically monitors a patient’s temperature and location round-the-clock – to demonstrate its interfacing feasibility to the national portal.

Dr Lim Soh Min, Chief Marketing Officer of Cadi Scientific, explains: “Through the adoption of TR 45, Cadi SmartSense System has become even more interoperable, allowing Cadi Scientific a first-mover advantage to tap into the region’s market.” Cadi Scientific’s solutions, including wearable tags, are now deployed to more than one million patients in Singapore and countries in the region.

Moving ahead into the next stage, a Silver Industry Standards Roadmap has been developed outlining standards development for the next three to five years. The roadmap, to be launched in March 2017, will support

the Singapore government’s new Action Plan to enable its citizens to age successfully.

## Coordination is key

“Better coordination among regional and international standardization bodies is paramount,” explains Ms Choy Sauw Kook, Assistant Chief Executive, Quality & Excellence Group, SPRING Singapore. “Having gained experience in the development of national standards, SPRING is currently working with our counterparts to look into the development of regional and international standards to support an age-inclusive society.”

One example of this approach is SPRING’s participation in the Asia-Pacific Economic Cooperation (APEC) Project Steering Group (PSG) on the silver economy. This work, which will serve as a framework for the development of standards and innovative responses, is expected to assist APEC in its coordinating efforts to identify and capitalize on

the increasing demand for innovative products and services for ageing.

Another example is SPRING’s involvement in the ISO Strategic Advisory Group (SAG) on Ageing Societies, which is investigating how standards can help solve the challenges posed by ageing populations. Its mandate is to consider the issues and opportunities arising from older societies and identify where knowledge already exists at a national, regional and international level. The end result will help guide ISO’s future work in supporting the demographic transition.

The silver economy is a rising issue on the world’s agenda. In the coming years, more standards will become available as the needs of the ageing market are better understood. And this is just the beginning. Further development of the silver economy – standards and all – will not only help promote growth and jobs in the future, but also, equally important, provide a way to create a just and equal society for all ages. Let’s not miss out on this once-in-a-lifetime opportunity. ■

The silver economy  
is a rising issue on  
the world’s agenda.



Photo: Cadi Scientific





Photo: ACPPA

# Enjoy retirement thanks to ISO 9001

Supporting our seniors and helping them to maintain an independent lifestyle has been ACPPA's mission for over 30 years. To substantiate its approach, the not-for-profit Group that manages care homes and services for senior citizens has deployed ISO 9001 throughout its management system in the quest for quality services.

The once unfavourable image associated with old people's homes has evolved dramatically, thanks in particular to modern, bright and spacious facilities where residents enjoy personalized care and support, dispensed by a proficient multidisciplinary team.

As we get older, the desire to "stay in your own home" is pitted against the challenges of day-to-day living. The ACPPA Group care homes offer residents the solutions that meet their needs while reflecting their level of autonomy, and combines a lively social life, high-quality accommodation and a wide range of activities with essential care services.

This level of quality requires unwavering commitment and dedication, underpinned by a process that must be continually reviewed and developed. But how do you sustain the quest for excellence? ACPPA relies on various quality models, including national service standards and ISO 9001, which it implements in the Group's fifty or more care homes across France. Laurentia Palazzo, Quality & Communication Director for the Group, tells us how

ISO 9001:2015 is helping the organization become more efficient without compromising its human and ethical values.

**ISOfocus:** What are the benefits of ISO 9001:2015 on the Group's different activities?

**Laurentia Palazzo:** The new requirements of ISO 9001:2015 are wholly consistent with the organizational and management changes that ACPPA wants to implement. After three cycles of certification to the 2008 edition, the Group became interested in the EFQM management model (European Foundation for Quality Management), which provides a general framework for promoting excellence in terms of operation and performance.

The new edition of the standard follows the same line. The audit we underwent to renew our ISO 9001 certification enabled us to measure precisely how far we had come and the progress made in our quest for excellence, while identifying the weaknesses we must continue to address in all of the Group's activities.

Improvements in our performance are connected with our capacity to align the Group's strategy with our quality system.



Laurentia Palazzo, ACPPA Group's Quality & Communication Director.

### How long has ACPPA Group been certified and what is the purpose of the standard?

We have, since 2005, an NF Service certification for “in-home personal services” (based on NF X50-056), which is one of the leading European marks for quality, reliability and professionalism of services. We also have an SGS Qualicert certification covering our residential facilities for dependent older persons. In 2007 we opted for a combined certification including ISO 9001 for both our accommodation and our residential and in-home care services, our health training division and our head office. The standard has helped us establish a coherent and consistent framework by which to manage the Group's quality management system (QMS) in all of our activities and processes.

For as long as we have had our quality scheme, we have viewed ISO standards, as well as our French national standards and French Law 2002-2 (of 2 January 2002) reforming the social and healthcare system, as opportunities to be seized. French legislation encourages the development of personalized plans for residents in care homes, taking into account their needs and expectations. All these requirements enable us to “grow” by allowing our organization and our QMS to evolve.

### How does ISO 9001:2015 contribute to creating a dynamic within a care home's community (residents, staff, families) and help sustain an optimal quality of life?

Taking into account the expectations of key interested parties in the management system – in this case, our residents, their families and our staff – is a requirement of ISO 9001 that has been strengthened in the new edition. Identifying these interested parties more precisely in order to integrate their requirements into the QMS in a more relevant way, and ensuring their needs and challenges are being taken into account, are changes we wanted to make. This is made easier with the 2015 edition of the standard.

The transition to ISO 9001:2015 also involved new evaluation methods for our auditors. Interviews with our residents and their families enabled us to confront different points of view and cross-reference available data so that we can build on existing strengths and target improvement actions for a better quality of life.

### The over-65s are on the increase and represent a diverse population – their vitality, life stories and expectations are different. Does ISO 9001:2015 help you adapt to these various needs and requirements? How does the standard support innovation?

ISO 9001:2015 emphasizes the importance of getting to know your organization's context, which is in constant flux, namely its environment (internal and external) and its

interested parties. This understanding is key to the success of any organization.

Offering personalized support to our residents, through a formal Personal Support Plan, has been a stated priority of our quality improvement policy for the past two years and has been widely promoted by our managing director. Ongoing development of our QMS helps us achieve this objective. The positive impact of this “Personalized Support Plan” is measurable for everyone – residents and staff alike.

What's more, the changing demographics and expectations of an older population have led us to focus more directly on innovation, alongside the continual improvement aspect. Innovative thinking and actions are being initiated in all areas, including technology, service, management systems, etc. In fact, senior management recently decided to invest in an integrated monitoring tool for its QMS, which affords a comparative overview of our action plans, evaluations and events on each of the Group's sites.

We have become gradually convinced that improvements in our performance are connected with our capacity to align the Group's strategy and governance with our quality system and the way we manage risk and opportunity. The new direction assumed by ISO 9001:2015 has confirmed this intuition and our desire to develop and operate an integrated management system (IMS) based on three pillars – governance, quality management and risk management. We have already made considerable headway.

### What future challenges do you foresee with regard to quality?

We have just submitted an application for the Rhône-Alpes Quality & Performance Award, which recognizes companies at the regional level for their commitment to excellence, their engagement and the pertinence of their management approach. This gave us another opportunity to benchmark our performance and identify any weaknesses and areas for improvement based on the EFQM model, which particularly impressed us.

On a broader level, in January 2017 we started to deploy our new CAP 2021 project, focused on our Group's increased commitment to corporate social responsibility (CSR) over the next five years. With this in mind, we hope to provide a direction to all stakeholders involved in our activity: our employees, our partners and our customers (i.e. our residents and their families).

Thanks to changes in the standard's requirements, the ISO 9001:2015 certification – coupled with the Group's annual QMS audit – plays a large part in the ongoing dynamic and provides a safeguard against anything that might lead us off the path to excellence. ■



Photo : ACPPA



Photo : ACPPA

