



Aging Well in a Connected World

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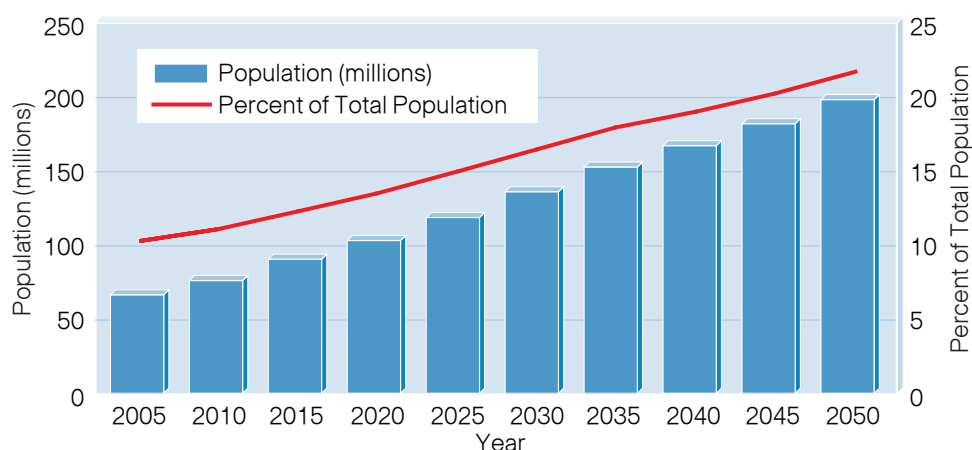
Cisco Internet Business Solutions Group (IBSG)

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Introduction

The world's population is aging significantly. Every second, two more people somewhere in the world turn 60; by 2029, those over 60 years of age will represent nearly one-third of Europe's population, with Japan and North America close behind.¹ The baby-boom generation is getting old.

Figure 1. World Population Aged 60 and Above



Source: United Nations World Population Prospects, 2008

Our aging population is cause for celebration, providing the opportunity for society to benefit from the economic engagement and broad experience of a growing number of older people.

Aging populations also present major social and economic challenges, however, including the need to stretch already-scarce health and social care resources, while at the same time responding to demands for greater participation by older people leading increasingly rich and fulfilling lives.

In this paper, we will explore these unprecedented opportunities and challenges, looking in particular at how innovative deployment of new communication technologies can help improve health and social care, and extend the participation of older people in social and economic activities. It has become increasingly important to look at these two aspects—extending participation and improving health and care—jointly, given the established interdependency between them in later years.²

1. United Nations World Population Prospects, 2008 Revision, <http://esa.un.org/unpp/p2k0data.asp>

2. "Healthy Working Life Expectancies at Age 50 in Europe: A New Indicator," A. Lievre et al., *The Journal of Nutrition, Health & Aging*, Vol. 11, No. 6, 2007, <http://www.serdi-fr.com/jnha/page.php?annee=2007&numero=6>

On the health and social care side, the most pressing requirement is addressing the challenge of meeting the care needs of the significant minority of over-60s (around 20 percent) who experience major health problems. World Health Organization (WHO) data shows that chronic diseases such as cardiovascular disease, pulmonary disease, and diabetes (which are most prevalent in the over-60s) account for more than 50 percent of healthcare expenditures in most countries, and as much as 80 percent in some.³ The care models currently employed in most countries, however, simply are not sustainable in the face of changing demographics and disease patterns.

The same changing demographics also pose a significant challenge for the organization of work and economic activity. At present, 40 percent of employers in the United States have difficulty filling specific roles due to the lack of available talent, while the equivalent figures for Singapore and Japan are nearly 60 percent.⁴ The traditional workforce of the under-60s is shrinking—by 2050 in Europe, for example, there will be only two people of traditional working age for every retired person (compared to four per retired person today).⁵

These figures alone demonstrate that the requirement for new models of participation is inevitable if growth is not to be constrained and the needs of society are to be met.

Huge Opportunities Beckon

While changing demographics present major challenges, they also introduce important new opportunities. Older people will be more significant contributors to society, their families, and the workplace, and will expect and demand more options and control over their daily lives than did their predecessors.⁶

The majority of over-60s have never been as healthy and able as they are today, representing a wealth of experience and (often) willing talent. The power of the “gray dollar” is also stimulating providers to develop innovative services to meet the needs of this growing customer base.

There are also new opportunities to stretch scarce resources and help increase older people’s participation in daily life by using today’s communication technologies, based on high-speed broadband connectivity. If used strategically, these can help extend participation and improve health and care. A few key examples of new opportunities are outlined below:

Extending Participation

Social interaction: New ways to interact with family, friends, service providers, and communities. For example, chatting via a single-button video link such as telepresence, seeking personalized advice at any time of the day or night from a real or virtual adviser,

3. “The World Health Report 2002: Reducing the Risks, Promoting Healthy Life,” World Health Organization, 2002, http://whqlibdoc.who.int/whr/2002/WHO_2002.pdf

4. “Europe at Risk,” World Economic Forum, 2008, <http://www.weforum.org/pdf/globalrisk/Europe@Risk08.pdf>

5. Management-issues, Ltd., 2007, <http://www.management-issues.com/2007/3/30/research/four-out-of-10-employers-face-recruitment-problems.asp>; Euromonitor, 2008, http://www.euromonitor.com/Special_Report_Skills_shortage_hinders_Asia_Pacific_growth

6. “The Future of Retirement: The New Old Age,” HSBC and the Oxford Institute of Ageing, 2007, 2006, 2005, <http://www.hsbc.com/1/2/retirement/future-of-retirement>

or using social networking tools to easily find new friends with common interests anywhere in the world.

Working and volunteering: New arrangements that help attract and use the untapped talents of older people, such as flexible work options from a local workplace like a smart work center; age-friendly, home-based, and mobile work arrangements; or a portal service that matches volunteers with others' needs.

Learning and skills development: New, life-long opportunities for stimulus and personal development. Examples of these include learning services and communities tailored for older people, whether in employment or not, or services that enable older people to provide their experience and time to coach others of all ages, regardless of location.

Improving Health and Care

Personal health management: New knowledge, support, and services to prevent disease and maintain well-being such as personalized health and support information from professionals, tailored for patient needs, or citizen health checks using commercial devices to monitor the user's body and environment.

Formal care: New models for providing care at home, in the community, and on the move, including remote consultation using high-quality combined video and medical device links such as Cisco HealthPresence; environmental monitoring through flood, gas, temperature, fall, or activity monitors; or body monitoring through wearable or implantable devices that monitor biosignals such as blood sugar and heart rhythm.

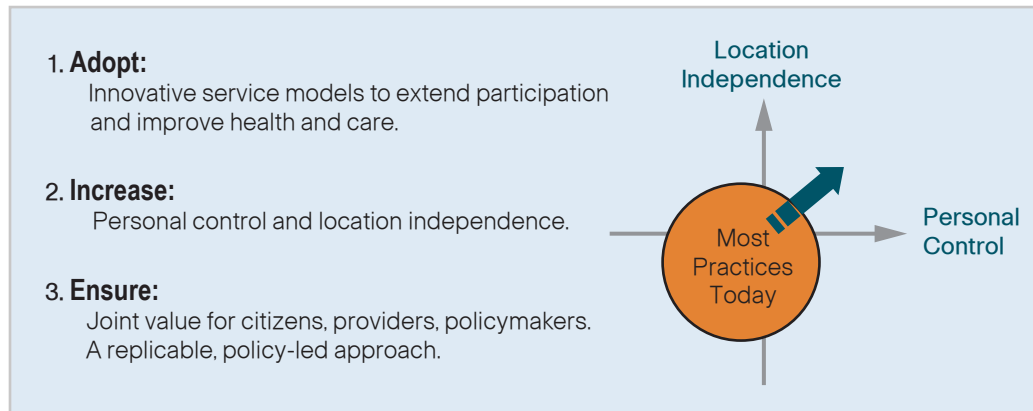
Informal care: New support environments for informal caregivers from within families and the not-for-profit sector, including multichannel collaboration and support networks among informal caregivers, or a trusted platform for multichannel support from professional care staff.

Developing New Service Models

Each of the opportunities outlined above invites innovative approaches that take advantage of today's communication technologies. Two core features are common to all—(1) increase citizens' and service users' personal control and (2) overcome the constraints of place and time through services that are largely location-independent.

We are living in new times, with challenges and opportunities that the world has never faced. Many traditional approaches will not serve us today; we must explore fundamentally new ones. The Cisco Internet Business Solutions Group (IBSG) has begun to work with a number of national and regional governments, companies, and the not-for-profit sector to help develop innovative service models that exploit those two core features (increase of personal control and location independence) to truly change the game. (Insights from this work will be shared in subsequent papers.) As illustrated in Figure 2, the objective is to provide services where and when they are most effective, efficient, or desirable (location independence), and to deliver a truly consumer-centric experience (personal control).

Figure 2. Guiding Principles for Aging Well



Source: Cisco IBSG, 2009

Increasing personal control: People like to be in control—including the degree of control they want others to assume in any given situation. This not only makes them feel better, but also allows services to be more closely aligned to individuals' needs.

The health sector, for example, has already learned that greater personal control and participation in decisions leads to better patient adherence to treatment regimes. New models of care based on significantly increased personal control will enable health and care to develop from the old “care and cure” models to ones focused predominantly on “prevention and maintenance.”

Increasing personal control is also central to improving older people's participation in society in general, whether by learning, engaging in a favorite interest, working and volunteering in “age-friendly” ways—or pushing a button to interact with a distant grandchild every day via telepresence, rather than waiting for an annual visit.

Increasing location independence: Today's Internet and mobile communications tools have changed perceptions of “location” forever. Next-generation possibilities are changing these even further, providing support, harnessing knowledge, and enabling rich interaction.

Simple video communication already brings dispersed families closer together. Now, work is recognized as something to do, not somewhere to go, with businesses and employees benefiting from anytime, anywhere working practices and other collaborative opportunities. For example, regions in Spain are piloting mobile arrangements to attract retirees back to knowledge-economy sectors such as journalism, while “Smart

Work Centers” are being rolled out in the Netherlands to provide accessible office environments close to home that fully link to employers’ main locations.

Many healthcare services are beginning to develop location-independent models as well. Taking chronic disease management into the patient’s home, instead of relying solely on outpatient appointments in hospitals and clinics, is one example. Wide adoption of solutions such as home and mobile telehealth and telecare, together with a cohesive and citizen-based approach, can do much to increase care effectiveness and overcome the limitations of time and place.

Adopting innovative and scalable service models that increase personal control and location independence to the benefit of citizens, providers, and policymakers is central to addressing the “gray” agenda in an effective and sustainable way.

Achieving Scalable Success

While economics and expectations will drive demand for new service models, and connected technologies may enable them, significantly more is required for scalable success.

Policy: Policy and practice based on yesterday’s needs will not withstand the pressures of today’s demographic trends. The world’s current financial crisis, and governments’ response to it, presents an outstanding opportunity to disrupt these old norms. Furthermore, if recovery is to be sustainable, economic stimulus actions must foster radical innovation that addresses the macro issues of today—such as climate change, aging society, and the technology revolution—and resists every temptation to consolidate outdated structures.

These are early days for policies on aging, but important ones. Policymakers who recognize the full economic significance of their aging population on both the supply and demand sides of the economy, and who take a holistic view in addressing the related challenges and opportunities, can create conditions for truly sustainable growth. Such an approach would ensure that all policies are age-aware, all communities age-friendly, and all procedures and practices fully inclusive.

Policies of particular importance are those concerning the workforce, health, social care, housing, and community developments. Establishing clear policies for each of these that promote the principles outlined in Figure 2, and creating strong links between each policy area, will be an important start. Also important is ensuring high-speed, next-generation broadband connectivity to all homes, facilities, and communities. This is a critical part of the social infrastructure required for today’s aging society, helping make service access ubiquitous, and enabling new service ideas to be developed relatively quickly, cheaply, and at scale.

Addressing today’s skills gaps is another key part of the picture, both in meeting supply needs and maximizing spending power. Age is a poor indicator of capability; the American Association of Retired Persons (AARP) reported in 2007 that U.S. employ-

ers who invest in age-friendly arrangements gain a \$3 to \$14 return on every \$1 they spend,⁷ while the attendant benefits for society and the economy overall, through a more active, engaged, and healthier population, add considerably more. Policies based on making full use of the available knowledge pool—for example, by removing fixed retirement ages, promoting flexible and location-independent working, and reskilling the aging workforce—are, therefore, an obvious part of holistic, age-aware policymaking.

Policymakers have the opportunity to align social, economic, and investment agendas to help citizens, communities, and nations age well. Future success depends on taking advantage of this opportunity at many levels.

Readiness: In the next few years, the “gray” agenda is likely to grow in public and government prominence as the “green” agenda has done in the last few years. Without suitable organizational and technological readiness, however, efforts to address the gray agenda will add only marginal value, no matter how strong the policy vision. Ensuring this readiness now, including establishment of always-on connectivity through a high-speed broadband network platform, will be central to ensuring that full advantage can be taken of major trends such as:

- Rich, video-based interaction, triggered by voice, touch, and motion
- Easy mobility with simple, intuitive devices
- Intelligent information—provided in the most useful ways from the most appropriate sources

When clear policy combines with systemwide readiness and ruthless prioritization of options, delivery models that cut across organizational walls become a reality.

Long-term care for older people is a significant example. In 2008, eight in 10 adults who received long-term care at home in the United States obtained it exclusively from family members, friends, and volunteers. The personal costs to such informal caregivers are significant, with nearly 50 percent reporting giving up vacations, hobbies, or social activities, and more than 25 percent exercising less frequently. This impacts caregivers’ well-being and effectiveness, and increases their own personal health risks.⁸ If a strong “Connected Caregiver” community were established by a regional government, for example, expertise and support could flow readily from professional care staff to informal caregivers, as well as among informal caregivers. This broadband-enabled environment would support easy communication by many different means, including text messaging; social networking and other web tools; interactive video; phone; and in-person contact. Where useful, the caregiver community could be extended nationally or internationally with little difficulty—in particular where there is value from creating critical knowledge and experience for addressing rare medical conditions.

7. http://www.aarp.org/money/work/employer_resource_ctr/retention/articles/how_employers_can_support_working_caregivers.html

8. “Caregiving in America,” The ILC-SCHHE Taskforce for the Caregiving Project for Older Americans, 2007, <http://www.ilcusa.org/pages/publications/ageism-caregiving-sleep.ph>

Online training could also be accessed at convenient times, and respite or stimulus could be gained from other types of interactions, independent of place or time. Individuals would gain higher-quality care as a result; informal caregivers' quality of life would improve, reducing the risk of "burning out"; and professional care providers could increase their coverage and effectiveness. Policymakers would reap benefits by helping contain the increasing demand for costly residential and institutional care, meeting social policy targets—and earning respect and engagement from an increasingly important gray vote.

Conclusion

The implications of our "graying" world are huge, and if sustainable recovery or growth is desired, taking rapid and strategic action is no longer optional. Once we free ourselves of preconceptions about how services are delivered, many creative opportunities open up.

Adopting innovative and scalable service models that increase personal control and location independence can bring significant value to citizens, providers, and policymakers. This presents a radical change to current norms of policy and practice, but is central to addressing the major economic, social, and political implications of our rapidly aging world.

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More Information

The Cisco Internet Business Solutions Group (IBSG), the global strategic consulting arm of Cisco, helps CXOs and public sector leaders transform their organizations—first by designing innovative business processes, and then by integrating advanced technologies into visionary roadmaps that address key CXO concerns.

For further information about IBSG, visit <http://www.cisco.com/go/ibsg>



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