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Solutions to master the Demographic Change

Ambient Assisted Living for the Elderly



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List of abbreviations

AAL – Ambient Assisted Living

EU – European Union

ICT – Information and Communication Technologies

DoI – Diffusion of Innovations theory

FP6 – Sixth framework programme

AAL Joint Programme – Ambient Assisted Living Joint Programme

FP7 – Seventh framework programme

ADL – Activities of Daily Living

MS – (EU) Member States

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1 Introduction

1.1 Background

Today's modern society is characterized by its vast and rapid changes in most facets of human and environmental life. Through globalization, challenges that were faced by single countries in the past, today concern groups of countries as a whole as for instance the demographic changes that will reinvent our future. On the one hand, improvements in public health such as sanitation and food hygiene, as well as new medical technologies and solutions have altered and expanded the lifespan that humans are expected to live. On the other hand, through the industrial revolution, the trend to urbanization, and improvement in levels of education, the priorities of people have changed throughout the last generations and so have values and norms that shape contemporary societies (Lee & Reher, 2011). Today, people place more value on their careers and life attainment than ever before and delay family planning decisions through means of contraception, resulting in very low fertility rates. Reasons for this decline have been researched tremendously, but a single reason could not be identified. Rather, the decline is the consequence of changes in social life and economic circumstances throughout the past generations (Lutz, 2006).

After the baby boom in the 1960s, fertility rates have been declining for decades (Eurostat, 2012a). Simultaneously, the gaps between European countries concerning fertility rates have been converging and the latest 2009 Eurostat data for the whole European Union (EU) identifies only one single country (Ireland) that still meets the replacement level, which is considered to be 2.1 children per woman (2012). While in 2002 fertility rates of only 1.45 births have been observed in the EU-27, this has slightly improved to an average of 1.59 in 2009, although some countries still face extremely low rates, such as Germany (1.36), Portugal (1.32) or Latvia (1.31) (Eurostat, 2012b). The trend of decreasing fertility rates has been accompanied by a declining mortality, due to investments in health care and improvements in health awareness among people in developed countries (Grundy, Tomassini, & Festy, 2006). According to Eurostat statistics, the proportion of elderly people in Europe is increasing immensely. While the proportion of the European population aged 65 and older was 17.4 in 2010, it is projected to be 20.6 in 2020 and even 23.6 in 2030 (see Figure 1), implying that almost a quarter of European citizens will be 65 and older in 2030 (Eurostat, 2011). Hence, while fewer children are born, death is prolonged and people become older. This scenario of demographic changes in the western world raises questions to which answers are rather unclear, as for instance: Who will care for the elderly and how will this look like?