



Netcarity is a European project researching and testing technologies which will help older people to improve their wellbeing, independence, safety and health at home. Participants include academics, technology firms, psychologists, sociologists, carers, designers and regional authorities. The project is investigating how new and existing technologies can be integrated cost effectively into people's homes, making them feel more comfortable about remaining in this familiar environment. It is developing and testing a new technology infrastructure for homes, with systems that enhance communication with friends, family and care givers; support everyday living and promote a sense of social inclusion. It will encourage older people to live independently and inspire them to be more socially active. Netcarity's goal is to turn older peoples' homes into supportive environments which include them in society and postpone or avoid the expensive and traumatic move into care homes.

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OLDES is a project co-funded by the European Commission under the VI F.P. under the IST – Ambient Assisted Living theme. The most inclusive expression of the requirement that the OLDES project is addressing is to promote and sustain the wellbeing of older people, at home and in the community, by providing an infrastructure capable of supporting the operation and governance of a dynamic and participative ecology and economy of care. We refer to ecology in recognition of the complexity of aging processes from both clinical and social perspectives and to an economy because of the specific, pervasive and persistent constraints on the resources and capacities of supply in the face of growing demand. We also link the two concepts of operation and governance in relation to the technical and social infrastructure observing that it is only when such environments are shaped through their use and governance that they can be judged to be fit for purpose and, indeed, evolve in the face of the changing purposes and priorities of dynamic communities of care. This paper describes the OLDES reference architecture which creates a framework for the application of current ICT components to the challenging area of tele-care of the elderly. Tele-care combines both tele-medicine, in the form of monitoring and supervising clinical processes and tele-accompany which is concerned with the development and maintenance of social capital through contact and communication. The concept of wellbeing that we are pursuing does not allow these two aspects of care to be separated and treated independently. A consequence of this commitment is that the OLDES environment must accommodate the operations of, and relationships between, different agencies in health, social care and the voluntary and private sectors facilitating their partnership and brokering their co-production, with their clients, of safe and satisfactory outcomes and life experiences. But the available ICT technologies have evolved in the world of the Internet and of eCommerce which has not placed strong requirements for regulation, governance, consent or confidentiality on their structure and operation. They represent the open and public spaces of the market place and this is not necessarily appropriate for the delivery of the relationships of care. A key requirement of the OLDES reference architecture is, therefore, to provide a framework for articulating and implementing safety and security policies and the most important challenge in this context is that the usual recourse to enterprise solution approaches, which set and defend a boundary, are not appropriate. As we have seen, OLDES must be oriented to multi-agency operation and its approach must therefore be one of federation and the management of transactions and flows

across boundaries. A technical consequence of this combination of requirements and principles is that provisioning, identity and relationship management mechanisms must be applied not only to the access and operations of users, in their various roles, but also to the layers of technical service components within the system. This further implies that issues of management and responsibility for individual service components must remain explicit, configurable, auditable and amenable to the processes participative governance.

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The ultimate goal of the SENS ACTION-AAL project is to assist older people in maintaining independent mobility and daily life activities and prevent injuries by introducing smart body fixed sensor-based technology that allows medical professionals to initiate interventions in the home environment. Results achieved during the first year of activity within SENS ACTION-AAL moved from an extended identification of users' needs, characteristics, case and scenarios of use. Three different intervention scenarios for intelligent assistive technology use with elderly subjects and Parkinson's disease patients (proposed as model to study several features of ageing in general in a compressed time frame) were outlined and discussed: tele-rehabilitation, tele-monitoring and tele-care. Domains and available instruments to assess assistive technology device outcomes from a subjective user's perspective were evaluated. Finally, the defined scenarios were translated into technical specifications considering the different requirements and needs. Now we are planning for the second year of the project an in-vivo accurate validation that will be carried out with the support of end-users, will assess the satisfaction of key user requirements, and will produce a solution which is adequate for industrial take-up.

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Mobility means freedom and autonomy for all citizens, including older persons. Functional changes in aging can create gait and balance problems, which are the main risk factors for falling. Elderly at risk of falling seem to suffer of an involuntary motor behaviour that restricts their participation in society. The SMILING project is planning to diminish age related impairments, by interfering with mobility disability and improving carry-over into real life situations. The new approach need active response and problem solving from the target population , to solve new motor problems in real time by inducing variable environments. This multidisciplinary project will offer a reorganization of the rehabilitation process in ageing, through advanced technologies. The SMILING solution, a wearable computer-controlled device, is aimed to implement a systemic solution to re-model training sessions, used prevalently in rehabilitation centres, fitness clubs or home environments to facilitate and ameliorate walking schemas. The end-users needs, acceptance and usability will be assessed and they will participate to the all phases of the project. Moreover special attention will be given to the acceptance of new technology. The final product will improve mobility and functional status of

target populations, significantly prolonging independent living and increasing active participation in society.

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