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**Integrated Network for Completely Assisted Senior citizen's  
Autonomy**

**D8.4 Report on the organisation and outcome of  
National Events**

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## **Executive Summary**

At first, this deliverable presents the strategy towards organizing exploitation events in each participating country of the inCASA consortium. The main part of the document deals with a detailed reporting on the organization, the agenda and the outcomes of all inCASA national events. At the end of the analysis, we state a synopsis of the conclusions related to these events which helped to a great extent the awareness of the inCASA solution to the target stakeholders, disseminated the outstanding results of the project and facilitated the retrieval of feedback with respect to the inCASA future exploitation.

# 1 Introduction

## 1.1 Purpose and Content of this Deliverable

The purpose of the Task 8.4 - National Exploitation Events is to strengthen stakeholder involvement through a series of national events. The activities aim to demonstrate the capability to present benefits from the pilots and the transferability activities to nation/regional institutions and other stakeholders. This task is in strong synergy with WP7 activities and, especially, with inCASA exploitation and transferability planning.

Each partner is responsible for organising one (or more) national event(s) in their country. The event can be a stand-alone event or a workshop co-arranged with a major national event relevant to inCASA. The event can also be a round table and/or a business meeting involving inCASA stakeholders.

The event could have a programme structure as follows:

1. Introduction to integration of Telehealth and Telecare. The right tool for an easy and effective deployment of integrated services.
2. Presentation of national or regional strategies/plans/driving factors for telemedicine and the use of telemonitoring in healthcare and social care
3. inCASA platform in the national or regional landscape taking into account the national/regional incentives, regulatory matters, revenue models, ROI, etc.
4. Preliminary discussion of a business case for the inCASA platform taking into account user needs, national and regional interfaces, organisational and societal benefits, and present a sustainable business case for implementation.
5. Summary of workshop results, feedback collection and next steps using a common template.

In this deliverable, a full report on the organization and outcomes of the inCASA national events will be presented.

## 1.2 Outline of this Deliverable

This document is structured into the following chapters:

- Chapter 2 provides some common guidelines in order to achieve the following:
  - homogeneous approach and strategy in the organization of the inCASA national events
  - high impact on the participating stakeholders
  - guidance on how to retrieve feedback from the events that could be provided as input into the activity of defining the inCASA business plan.
- Next chapters 3-10 present the organization and outcome of each single inCASA national event under a common template.
- Finally, chapter 11 summarizes the conclusions produced by the inCASA national events overall.

## 2 National Events common guidelines

In order to proceed with common guidelines that can lead to homogeneous and successful national events, the following key points have been proposed to be adopted by the organizing partners:

1. Send invitation to local/national e-Health stakeholders that can promote the event with their participation and provide useful suggestions towards inCASA continuation. Indicative stakeholders are:
  - a. Regional / National Health and Care Authorities Representatives
  - b. Regional / National Health and Care Organizations (hospitals, social care services, research centres etc.) Representatives
  - c. SMEs providing services in the e-Health sector
2. Introduce to the audience the national state of the art in Telehealth and Telecare.
3. Present inCASA EU co-funded project overall including basic aims, consortium partners and Pilot deployments across Europe.
4. In national events where an inCASA Pilot takes place, present the methodology, aims, results and evaluation of the Pilot in order to attract the interest of the audience and help them to participate in an open discussion towards inCASA perspective
5. In national events where an inCASA Pilot takes place, invite end-users that have participated in the Pilot and allow them to express their opinion.
6. Organize an open discussion at the end of the event where proposals for inCASA future evolution should be recorded and analysed.
7. Collect, analyse and evaluate the results from specific questionnaire to be filled in by the participants at the end of the event. The questionnaire is mainly focusing on the deployment and business perspective of a solution similar to inCASA and aims to retrieve useful thoughts concerning usability, social, business and financial aspects of the platform. The questionnaire can be found at the Annex A: Event Participants Questionnaire.
8. There is no fixed number for the required event attendees since an exploitation event can be very fruitful even with a limited number of participants if they form a group of carefully selected stakeholders. In any case, a lower threshold of 10 participants is encouraged to be established among the national events organizers.
9. Perform one or more of the following actions for dissemination reasons:
  - a. Prepare a photo story of the event
  - b. Produce an event's video
  - c. Produce press releases to local/national media
10. Report the business outcomes of the event to WP7 - Business Modelling and Deployment leaders as a useful input towards the production of the final inCASA business plan.

### 3 Greek Event

#### 3.1 Organization

The Greek national exploitation event was co-organized by the National Technical University of Athens (NTUA) and the Konstantopouleio General Hospital of Nea Ionia (KGHNI) at the KGHNI premises on the 8<sup>th</sup> of February, 2013 under the auspices of the Greek Ministry of Health and the 1<sup>st</sup> Regional Health Authority of Attiki. Participants included Municipal (local) authorities, Health Care Authorities, SMEs providing services in the Health sector, Professors, Doctors, ICT researchers, Social workers, Psychologists. Moreover, a significant number of local elderly people attended the event. A total number of **163** persons were registered at the event which finally had a great impact on the audience, on the hospital, on the local society and on the involved authorities.

#### 3.2 Agenda

The agenda of the Greek exploitation event is shown in the following table.

| Time  | Subject  | Event Speakers   |
|-------|--|--|
| 10:00 | Registration   |  |
| 10:30 | Introduction to the Event  | Vasileios Kontozamanis<br><i>CEO at the 1st Regional Health Authority of Attiki</i><br>Olga Balaoura<br><i>CEO at KGHNI</i>  |
| 10:40 | National e-Health policies   | Sotirios Zwtos<br><i>Deputy CEO at the 1st Regional Health Authority of Attiki</i>   |
| 10:50 | The inCASA project and the Greek participation into it                     | Dr. Sotirios Patsilnakos<br><i>KGHNI Cardiology Clinic Director</i>  |
| 11:10 | Modern technologies in inCASA – NTUA's contribution                        | Dimitra Kaklamani<br><i>N.T.U.A. professor</i>   |
| 11:25 | inCASA services, results and preliminary evaluation presentation           | Dr. Athanasios Anadiotis<br><i>KGHNI Cardiologist</i><br>Dr. Konstantinos Papadopoulos<br><i>Electrical &amp; Computer Engineer, N.T.U.A.</i><br>George Lamprinakos<br><i>Electrical &amp; Computer Engineer, N.T.U.A.</i> |
| 12:05 | inCASA end users' session. Impressions from the participation in the Pilot | Lazaros Pougias, Dimitrios Zahakis<br>inCASA patients  |
| 12:20 | Lunch break  |  |
| 13:10 | Benefits from the inCASA solution at a local level                         | Iraklis Gotsis<br>Mayor of Nea Ionia   |

|              |  |  |
|--------------|--|--|
| <b>13:30</b> | <b>inCASA business perspective</b>         | Massimo Caprino<br><i>inCASA project coordinator</i> |
| <b>13:45</b> | <b>Open discussion</b>                     |  |
| <b>14:45</b> | <b>Closing – Certificate of Attendance</b> |  |

**Table 1 Greek Event Agenda**

With respect to the agenda, the opening of the event was made by two important healthcare managers:

1. Vasileios Kontozamanis, CEO at the 1st Regional Health Authority of Attiki. This Health Authority supervises the operation of 18 hospitals and 10 health centres in the region of Athens and belongs to the Greek ministry of Health. KGHNI is among the 18 hospitals supervised by the 1st Regional Health Authority of Attiki. Vasileios Kontozamanis noted the importance of projects like inCASA in the evolution of the Greek healthcare system which should become more efficient while reducing its costs, especially under the current financial circumstances in Greece. He congratulated KGHNI and NTUA for their participation in the inCASA EU project and for the inCASA event organization which helped raising awareness of the project and of e-Health in general.
2. Olga Balaoura, CEO at KGHNI. The CEO of KGHNI congratulated the inCASA team members of KGHNI and NTUA and expressed her commitment to support and lead any action towards the future business exploitation of the inCASA program.

Sotirios Zwtos, Deputy CEO at the 1st Regional Health Authority of Attiki, continued with the state of the art presentation of e-Health in Greece. He provided financial, medical and technological facts for the main running projects in this sector in Greece.

Sotirios Patsilidakos, KGHNI Cardiology Clinic director and KGHNI pilot coordinator, introduced to the audience the goals of the inCASA solution and provided an up to date overview of the most outstanding facts of the inCASA Pilot life. He also presented all inCASA team members from KGHNI, including cardiologists, nurses, psychologists / psychiatrists, social workers.

Dimitra Kaklamani, NTUA Professor, linked the Pilot study with the technological and scientific contribution of NTUA and of the [ICBNet](#) laboratory in the inCASA project and, more specifically, in the KGHNI pilot deployment. She also discussed the future trends concerning the emerging technologies in Telehealth and Telecare and the challenges from the usage of modern healthcare systems, like the need for advanced privacy protection mechanisms.

Athanasios Anadiotis, KGHNI cardiologist, was the one to describe the overall KGHNI pilot workflow and present the most significant intervention examples during the pilot. He made clear that the vision of KGHNI, through the inCASA solution, is to transform the healthcare system from a treatment oriented system to a patient-centred system based on prevention, ubiquitous monitoring and continuous multi-level support.

George Lamprinakos, NTUA researcher, gave to the audience a clear explanation of what the inCASA KGHNI monitoring stands for. He presented the devices used by the patients and the information flow from the patients houses to the Clinical portal. He also referred to the underlying technical components supporting the inCASA deployment.

Konstantinos Papadopoulos, NTUA researcher, presented the up to date evaluation of the inCASA KGHNI solution. He focused on the aspects of patient and professional perception, after having analysed the outcomes of the inCASA common questionnaires.

Lazaros Pougias and Dimitrios Zahakis, 2 out of the 40 patients of the KGHNI Pilot, talked on their own experience from participating in the inCASA monitoring. Lazaros Pougias reported that this program should continue as it certainly can save money from the State and time from the elderly patients who now need to queue up for a long time even for the simplest interaction in the Healthcare domain. Dimitrios Zahakis expressed a great sense of security offered to him by the inCASA system, as he feels that his supervising doctors will intervene appropriately and in time when needed.

Iraklis Gotsis, mayor of Nea Ionia which is the municipality of KGHNI, noted the importance of such programs deployment at a local/municipal level. He mentioned the example of other local area initiatives, like the “Help at Home” program and referred to the difficulties caused by the low budget at a municipal level in supporting solutions like inCASA.

Massimo Caprino, the inCASA project coordinator, presented the European market trends in Telehealth and Telecare and introduced the inCASA business model. He explained that the integration of the social care service in a unique socio-medical platform is the added value of inCASA. This presentation, apart from offering a proper European feeling to the inCASA Greek event, allowed a smooth transition to the “Open Discussion” section which mainly focused on the exploitation perspectives of inCASA and on the factors that may limit the inCASA market adoption in the Greek example.

### 3.3 Photo story



Figure 1: KGHNI CEO Olga Balaoura opening the event



**Figure 2** Sotirios Zwtos, Deputy CEO at the 1st Regional Health Authority of Attiki speaking on the National Telemedicine Network State of the Art



**Figure 3** View of the audience



**Figure 4** View of the audience



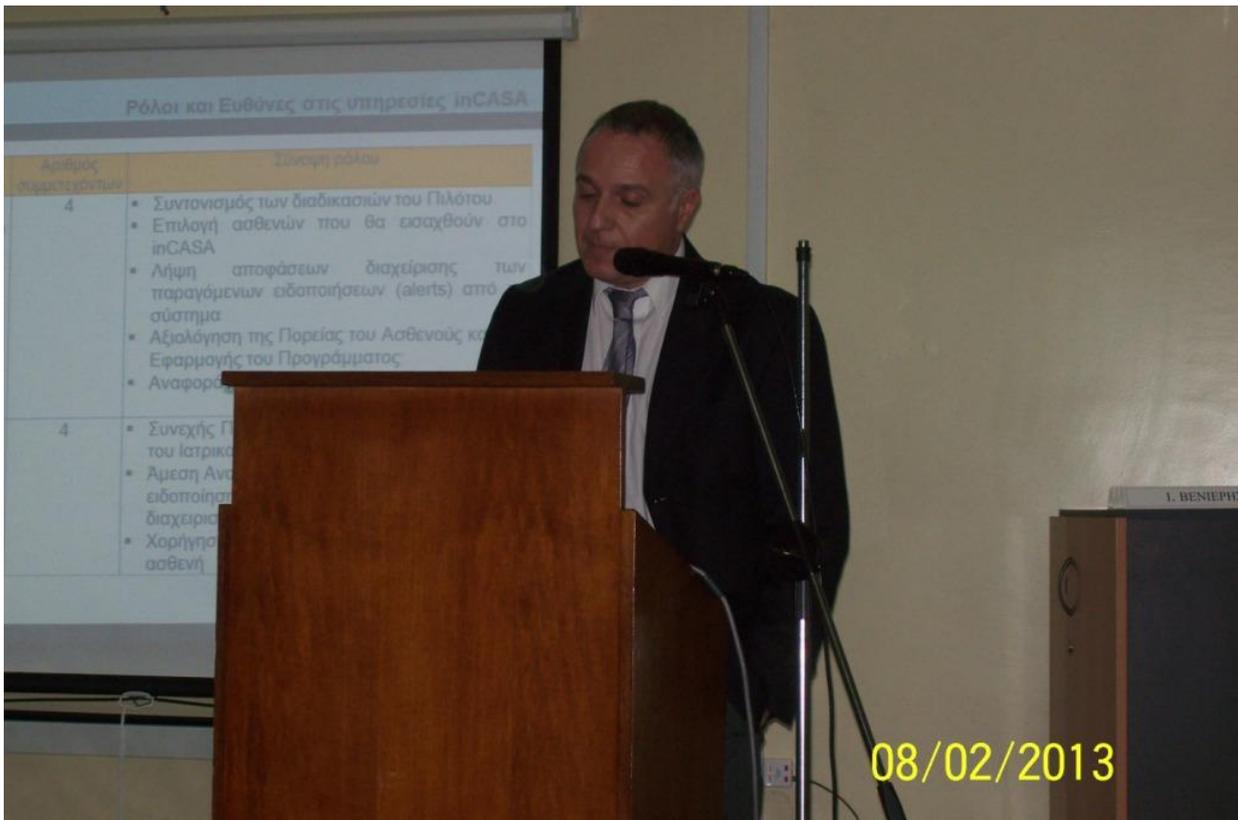
**Figure 5** KGHNI Cardiology Clinic Director and KGHNI Pilot Coordinator Sotirios Patsilnakos speaking on the Greek participation in the project



**Figure 6** NTUA Professor Dimitra Kaklamani speaking on the technical and scientific contribution from NTUA in the inCASA project



**Figure 7** Mayor of Nea Ionia Iraklis Gotsis speaking on the merits of the inCASA platform usage at a local level



**Figure 8** KGHNI Cardiologist Athanasios Anadiotis speaking on the Greek pilot procedures, workflows and results



**Figure 9** NTUA researcher George Lamprinakos speaking on how the inCASA services have been implemented



**Figure 10** NTUA researcher Konstantinos Papadopoulos speaking on the inCASA pilot evaluation



**Figure 11** Lazaros Pougias speaking on his own experience from the Pilot participation



**Figure 12** Project Coordinator Massimo Caprino speaking on the inCASA business perspective



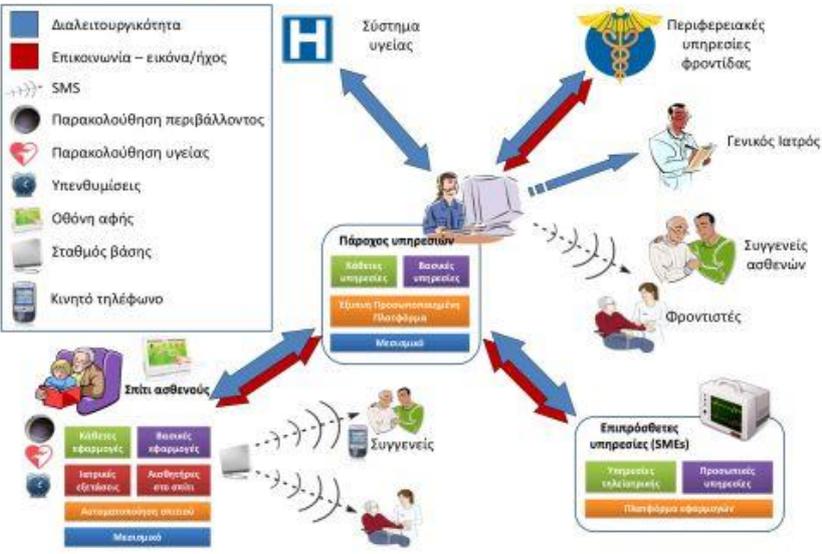



## Το πρόγραμμα inCASA: βελτιώνοντας την ποιότητα ζωής και την παρεχόμενη φροντίδα στους ηλικιωμένους

ΣΤΟΧΟΣ

Η ανάπτυξη ενός συστήματος για την υποστήριξη των ηλικιωμένων και την διευκόλυνση τους να παραμείνουν περισσότερο και πιο υγιείς στο σπίτι τους.

Η πλατφόρμα inCASA



ΥΠΗΡΕΣΙΕΣ ΠΡΟΣΤΙΘΕΜΕΝΗΣ ΑΞΙΑΣ

|   |   |  |  |
|---|---|--|--|
| <br><b>Παρακολούθηση Συνηθειών</b><br>Διακριτική παρακολούθηση των καθημερινών συνηθειών των ηλικιωμένων στο σπίτι τους. Προώθηση ειδοποιήσεων σε επιλεγμένους φορείς, όταν η συμπεριφορά τους είναι ασυνήθιστη. | <br><b>Παρακολούθηση Καταστάσεως Υγείας</b><br>Προσωποποιημένα συστήματα υπηρεσιών τηλεϊατρικής και τηλεφροντίδας στο σπίτι των ηλικιωμένων. Υποστήριξη ενός μοντέλου προσφοράς φροντίδας όπου συνεκτιμάται η κοινωνική, σωματική και ψυχολογική κατάσταση του ασθενούς. | <br><b>Συνέχεια της περιθαλψής</b><br>Υποστήριξη των αλληλεπιδράσεων των ηλικιωμένων με τους φροντιστές τους και τους συγγενείς / κοντινούς τους ανθρώπους. Διασύνδεση με τις υπάρχουσες δομές ψυχολογικής και κοινωνικής στήριξης. | <br><b>Οικιακοί Αυτοματισμοί</b><br>Απομακρυσμένος έλεγχος ηλεκτρονικών συσκευών στο άμεσο περιβάλλον των ηλικιωμένων για τη υποστήριξη των καθημερινών δραστηριοτήτων τους μέσα στο σπίτι. |
|---|---|--|--|

Ο ευφυής συνδυασμός των δεδομένων υγείας και περιβάλλοντος/συμπεριφοράς επιτρέπει την προσφορά εξειδικευμένων υπηρεσιών για τη βελτίωση της ποιότητας ζωής των ηλικιωμένων ασθενών.


Figure 13 inCASA poster in Greek placed at the entrance of the event's hall

## 3.4 Outcomes

### 3.4.1 Feedback from the stakeholders

During the whole event and especially during the open discussion section, relevant feedback from the participating stakeholders was recorded.

#### 3.4.1.1 Health care authorities

Managers from the Health Authority of Attiki outlined the framework for developing new e-Health initiatives and services on the regional level. They highlighted that the limited interoperability of the e-health services developed and often the low level of synergies realized posed the greatest risks to the uptake of the new services. Also, an inhibitive factor is the inadequate training delivered to the health professionals, regarding the use of the new electronic services. The e-health projects currently co-funded by EU and included in the 4th Greek National Strategic Reference Framework are multi-sectorial by design, to overcome the above challenges. Authorities' representatives reported that a new first response to medical emergencies unit will be established, and that it is expected that it will reduce the fragmentation of e-health services delivery on the regional level and will allow for greater synergies to be realized in practice. Additionally, they commented that the new actions target the delivery of novel Telecare services with a lower priority, due to the high cost of the required equipment.

They all characterized the inCASA Greek pilot as a commendable effort that certainly contributes to the establishment of a combined framework to deliver health and social services. They noted that the involvement of the private sector is absolutely crucial to the sustainability of the inCASA services in the long run, due to the currently limited funding opportunities available by the Greek state. In conclusion, a realistic business plan would rely on forming Public–Private Partnerships (**PPPs**) to deliver the inCASA services to the Greek market.

From the part of KGNI, the CEO Ms. Olga Balaoura and all managers were enthusiastic about the great prospects of the inCASA services and commented on the significant efforts made by both the KGHNI and NTUA teams to make the Greek pilot a reality. Meanwhile, they all have an extensive first-hand experience of the problems that the health units face due to the reorganization and consolidation efforts currently undertaken by the Greek state and the difficulties at large due to the economic crisis. KGHNI CEO was also of the opinion that a realistic plan for large scale deployment of the inCASA services in Greece should be based on partnerships made between the public and the private sector. She commented that a niche market for these services would be the **health/social insurance sector**.

#### 3.4.1.2 Local Municipal Authorities

Mr Gkotsis, mayor of Nea Ionia, outlined the operational problems of regional programs funded by the central government, such as “Help at home”, which offer assistance to the elderly people in Nea Ionia. He also detailed the problem that elderly people face in their everyday life, as reported by citizens unions. Mr Gkotsis congratulated the inCASA Greek pilot team and he said that he would certainly endorse a program to offer combined socio-health services to the citizens of Nea Ionia, if funding was made available.

#### 3.4.1.3 Medical Professionals

Medical Professionals noted that inCASA is a great tool for them to monitor efficiently their patients. The inCASA service has been judged as innovative since it involves a multi-disciplinary group of professionals. The integration of the medical and social profile of the patients requires the cooperation among professionals working in different units of the hospital but it is expected to offer a better view of the patient's situation and the ability of early detection of deterioration signs. As a proposal for improvement, the medical professionals and, especially the Cardiologists that are usually out of office (e.g. in surgery rooms) asked for an inCASA mobile application that would enable them to receive important notifications everywhere and anytime.

From a medical point of view and based on the actual findings of the pilot, it was reported that 3 major cardiac incidents were actually prevented because of the use of the inCASA services. Such findings were widely referred to and generated a lot of interest, as it was evident in the open discussion that followed the presentation. Dr. Patsilnakos, KGHNI pilot coordinator, referred to the prospect of capitalizing on the inCASA experience to offer the e-health services to an enlarged group of patients suffering from Chronic Heart Failure. During the discussions, he proposed a scheme under which the hospital could become an e-health services provider (i.e. to remote areas in Greece, islands etc.) on behalf of private insurance companies and with the partnership of technology providers, that would be responsible for the deployment and support of the inCASA services and equipment to the remote areas.

#### **3.4.1.4 Patients – End users**

Two end-users of the inCASA platform spoke during the event to share their experiences during the Greek pilot. This section was attended by the audience with great interest and they all appreciated that patients spoke on their own experiences in contrast with the majority of such events, where professionals speak on behalf of them.

Patients emphasized that the inCASA services were user-friendly and that they thoroughly enjoyed using the platform. They commented that the use of the system gradually became an indispensable part of their everyday life and that they would recommend its use to even more people (e.g. within retired people associations). A lot of interest was generated in the audience during the users' speeches; i.e. one of the elderly participants who was familiar with similar efforts in the field of Telemedicine, but not a patient himself, queried the specific security features and provisions of the platform. The members of the NTUA technical team provided all needed confirmations for the security of the platform and the certification of all devices.

What was also recorded from the side of the patients is that they mainly regard such solutions as supplementary to the face to face consultation with their doctors and they don't want to end up losing the human interaction in any case. On the other hand, inCASA like solutions can save them a lot of precious time, since all reported that the procedures in the Greek healthcare domain face delays that a remote monitoring could eliminate.

Last but not least, both patients – speakers appreciated the gentleness and discreetness of all involved Professionals they interacted with: KGHNI cardiologists, NTUA technicians that installed, de-installed and supported the equipment operation, KGHNI psychologists, and social workers. Even in a high technology platform, they consider as high importance factor in order to accept the service the polite and human approach to them from the part of the supporting personnel. This note was taken into consideration from all Medical Professionals as it was exposed in a strong and clear way.

#### **3.4.1.5 Technology providers**

ICT professional and SMEs offering services in the healthcare domain appreciated mainly the adoption and usage of standards inside the inCASA platform, like HL7 protocol. This was marked as a mandatory design aspect in order to allow future integration with other healthcare systems that could form a bigger healthcare monitoring network.

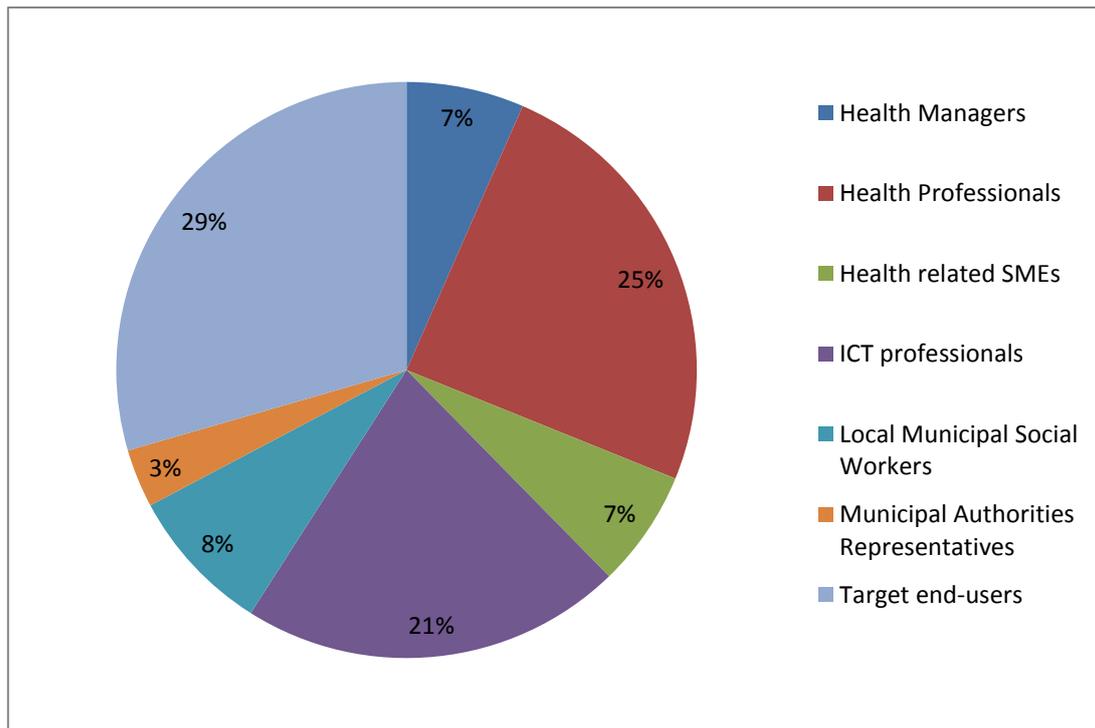
### 3.4.2 Questionnaires Analysis

All event participants were handed out questionnaires to fill in after the inCASA presentation and open discussion end. The questionnaire can be found at the Annex A of this document and mainly targets to retrieve stakeholders feedback on the following key points:

- Proposals for additional applications of the inCASA solution.
- Differentiation of the inCASA services from present telemedicine solutions.
- Value proposition of the inCASA integrated services in terms of social and health care improvement.
- Expected reduction in hospitalization and care costs by using the inCASA integrated services.
- Factors that may limit the inCASA market adoption.
- Organizations that may be interested to invest in the inCASA solution.
- Reasonable monthly subscription rates for the inCASA services (consumers).

A total number of 61 participants filled in the questionnaires and delivered them to the organizing committee. The number of participants per stakeholder type is shown below.

|                                       |    |
|---------------------------------------|----|
| Health Managers                       | 4  |
| Health Professionals                  | 15 |
| Health related SMEs representatives   | 4  |
| ICT professionals                     | 13 |
| Local Municipal Social Workers        | 5  |
| Municipal Authorities Representatives | 2  |
| Target end-users                      | 18 |



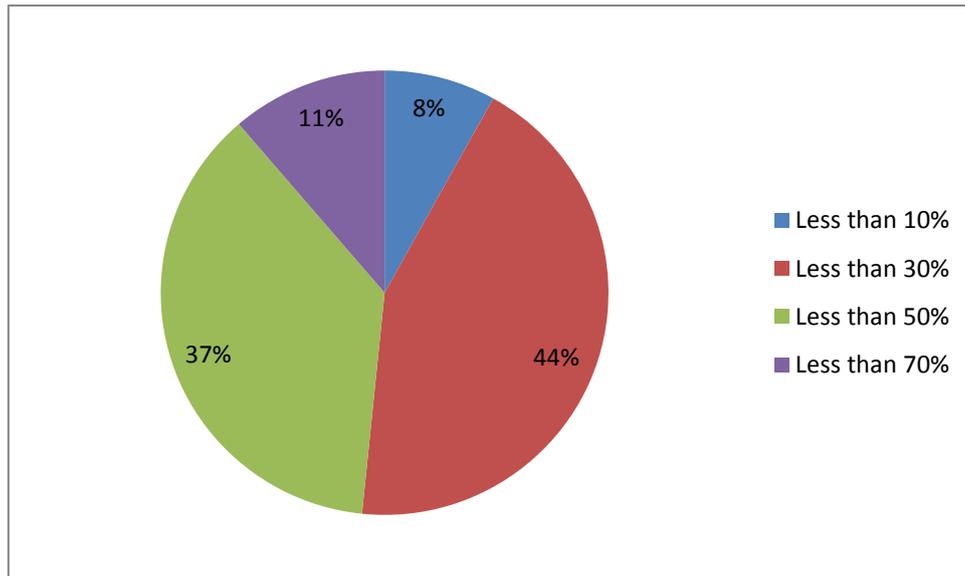
**Figure 14 Stakeholders answering the questionnaires**

All recorded answers agree that inCASA can improve the quality of life of elderly people suffering from chronic diseases. Explanation to this mainly focuses on the sense of security that is usually present to the patient via the inCASA daily monitoring, the degree of prevention that can be achieved, the quick intervention that the system allows and the reduction in the expected hospitalizations. Many noted that when monitored at their own environment, patients feel more safe and comfortable.

All answers are also in favour of the innovative aspect of inCASA. Participants mainly see as innovative the combined health, social and psychological monitoring that is performed in the framework of the KGHNI pilot. They appreciated the regular examination of depression in the recruited Heart Failure patients.

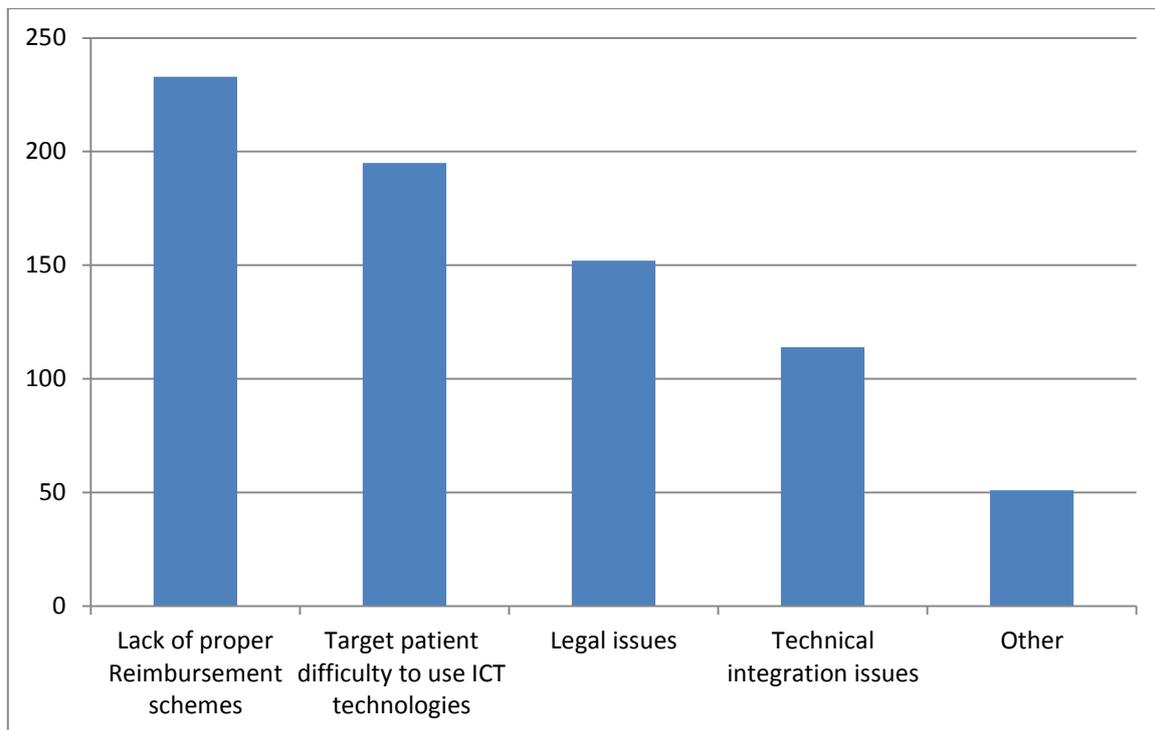
When answering the question “indicate how much hospitalization costs can be reduced through the inCASA system”, the majority of participants replied with “Less than 50%” or “Less than 30%”.

In the following figure, the variation in responses is presented.



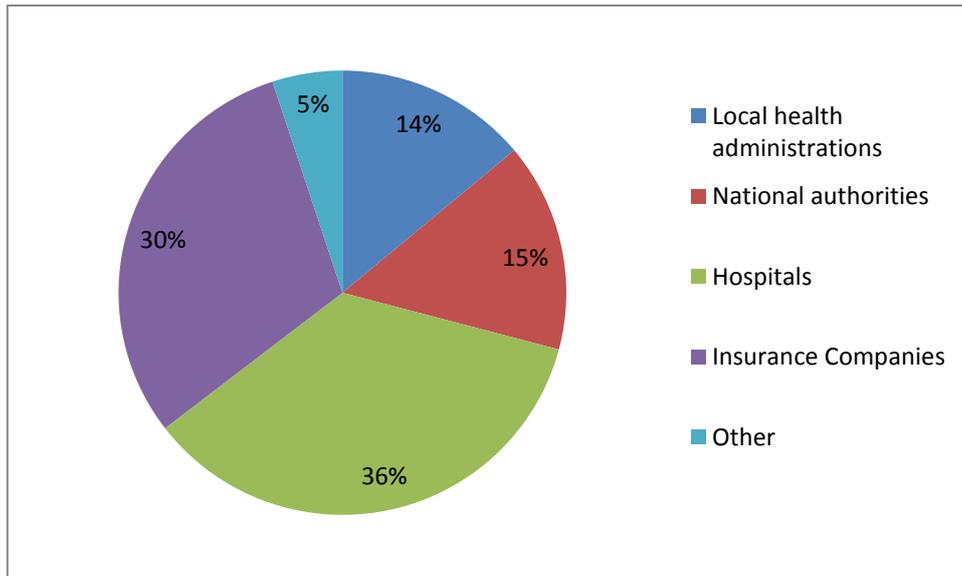
**Figure 15 Estimation of hospitalization costs reductions**

Concerning the possible inCASA limitation factors, the participants marked as first limit factor the lack of Reimbursement/funding that is needed for the service deployment. This can also be justified by the overall situation in Greece, where at the time being, financial issues are the ones that are generally considered the most blocking ones. In the following graph, the limitation factors are shown according to the scoring provided by the respective answers.



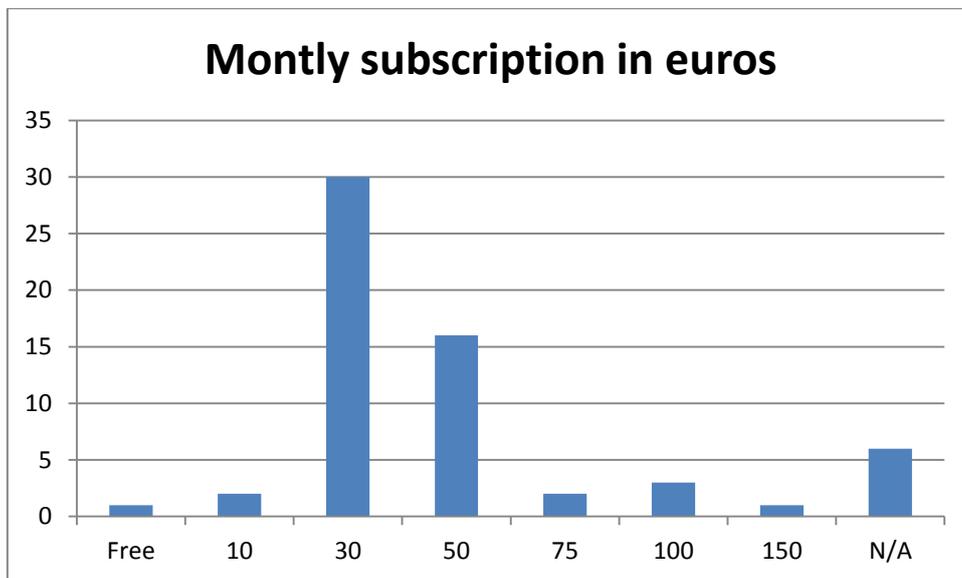
**Figure 16 inCASA market adoption limitation factors**

Regarding the organizations that may be interested in the exploitation of the inCASA solution in Greece, the vast majority of the participants think of hospitals and health insurance companies. The below graph depicts their opinions.



**Figure 17 Organizations that could be interested to invest in the inCASA solution**

Finally, answers to the indication of a reasonable price that could be **paid by the included patient** for inCASA services concluded that such price could be 30-50 euros per month. The following graph shows the various prices (horizontal axis) and the numbers of participants that voted for the respective monthly subscription in euros (vertical axis).



**Figure 18 Reasonable monthly price indication**

## 4 UK event

The UK national exploitation event was undertaken within a Public Service Event - Co-ordinated Care: Meeting the Needs of Patients, Driving Better Integration - <http://www.publicserviceevents.co.uk/overview/256/co-ordinated-care>. The event was chosen as a place to present the inCASA project as it was specifically focused on showcasing real life examples, initiatives and best practice case studies in order for delegates to explore how to turn the integration rhetoric into a reality.

The event which took place on Tuesday 29th March in Birmingham was attended by over 150 delegates including:

- Academics
- Chairs
- Chief Executives
- Chief Medical Officers
- Chief Nurses/Directors of Nursing
- Clinical Commissioning Groups
- Clinical/Medical Directors
- Councillors
- Directors/Heads of Adult Social Services
- Directors/Heads of Care Services
- Directors/Heads of Commissioning/Procurement
- Directors/Heads of Integrated Care
- Directors/Heads of Patient Engagement
- Directors/Heads of Public Health
- Directors/Heads of Policy
- Directors/Heads of Strategic Development
- Directors/Managers of Care Homes
- Directors/Managers of Community/Domiciliary Care
- Heads of Patient Services/Patient Experience
- Health and Wellbeing Boards member
- Health Visitor
- NHS Trust Directors and Senior Management
- Performance/Service Improvement Directors
- QIPP Managers (Quality, Innovation, Productivity and Prevention)
- Social Workers

A Master class was organised by Chorleywood Health Centre and Brunel University to present and discuss inCASA and the integration of organisations and the impact on patient care.

In addition, there was also an exhibition where SME's, charities and other commercial organisations including inCASA were able to demonstrate software and technology.

### 4.1 Agenda

The agenda for the day was as follows:

**08:30**

**Registration and Coffee in the Networking Surgery**

**09:25****Chair's Opening Address****Dr Helen Dickinson**

Senior Lecturer in Health Care Policy and Management, Health Services Management Centre, University of Birmingham; Director, Public Service Academy

**09:30****Don Redding****Director of Policy, National Voices**

“The narrative for coordinated care – use or ornament?”

To assist health and social care organisations in their drive to integrate care, national system leaders are establishing a coordinated framework – at the centre of which is a common 'narrative' to describe what integration means from the service user perspective. National Voices has been closely involved in producing it, but today will reflect on what kinds of challenges are involved in using the narrative to 'make the patient perspective the organising principle of care'.

**09:55****Ian Benson****Authorised Supervising Officer, Staffordshire County Council**

On the 1st April 2012, Staffordshire County Council entered into a Partnership Arrangement with Staffordshire and Stoke-on-Trent Partnership NHS Trust.

The Partnership Trust has developed a number of key projects in order to deliver against the county council's commissioning intentions.

**10:15****Christopher D Loder****Advanced Multi-skilled Practitioner (MSP), Cardiac Catheter Laboratories, Royal Free London NHS Foundation Trust**

“Multi-skilling: a paradigm of success for those entering the Cardiac Cath Lab pathway”

Understanding what is required to deliver a system of work that contributes to a better patient pathway and clinical outcome is essential for us in the NHS. One area of growth is the provision of evidence-based care for those with coronary artery disease. Initially designed to fill vacancies identified by capacity and the shortfall of appropriately qualified staff working in this area, multi-skilling through postgraduate study has assisted in ensuring expedient and successful clinical care when a plan has been designed and managed correctly within individual trust settings. By multi-skilling, staff have a greater, if not more holistic understanding of the patient and their situation, which is required to ensure expedient and effective treatment, what other team members dealing with this patient require, and this approach benefits in many ways.

**10:30 - 10:55****Question and Answer Session****11:00****Masterclass Session**

- inCASA - Delivering integrated Care for the frail elderly using interoperable technology platforms and collaborative health and social care services.
- Building a framework to deliver “person-centred co-ordinated care” the essence of integration across health and social care

**11:45****Coffee in the Networking Surgery**

**12:30**

**Masterclass Session 2**

- Building blocks for care-coordination: Lessons learned and implementation
- How coordinated care centres access and continuity with your GP

**13:15**

**Lunch in the Networking Surgery**

**14:15**

**Masterclass Session 3**

- Flexible working and collaboration in the new NHS
- The Hampshire Health Record – sharing data and implementing shared care across an entire health economy

**15:00**

**Case Study**

**Professor Elisabeth Paice OBE**

**Chair, NHS North West London Integrated Care Pilot**

“Integrated care in North West London: a pilot”

In July 2011, North West London launched a large-scale and ambitious project to integrate care for its population of older people. The pilot, which spans five London boroughs, brings together organisations from the acute, primary care, community care and social care sectors, with the intention of creating seamless pathways of care.

**15:15**

**Case Study**

**Dr Paul Harden**

Oxford University Hospitals NHS Trust

“Co-ordinated care”

**15:30**

**David Shaw**

**Director of Service Development, Marie Curie Cancer Care**

“Redesigning end of life care around patient need”

Discussing integrated care models that aim to improve the coordination of community care, so that patients who are nearing the end of their lives have access to services that are tailored to their needs, any time and day of the week.

**15:45**

**Chair's Afternoon Address**

**16:00**

Flexible and interactive session where the audience gets to be the driving force behind the discussion. Delegates will have the opportunity to share their own experiences and case studies with those attending. We welcome suggestions for talking points before and during the conference.

**16:55**

**Chair's Closing Remarks**

**17:00**

**Conference Close**

### **4.1.1 The inCASA Masterclass Agenda**

#### **The Aims and Objectives**

The Masterclass described early outcomes of the inCASA project. It included an overall discussion about “Frailty” and how it is currently measured and managed within the UK. A presentation followed which described the inCASA platform and the approach used within the UK. The types of information and the way information was being collected was presented and shared via an integrated platform and shared across organisations. A discussion was then held about the benefits of collaborative delivery of services to frail elderly patients.

#### **Delegate Benefits**

Planning and benefits of collaborative health and social care services

Use of collaborative shared data

Introduction to integrated monitoring platforms

Evaluation

#### **Summary**

Delivery of collaborative health and social care services

Assessing Frailty – use of Edmonton Frailty Score

Interoperable telehealth / telecare technology platforms

Combined health and behaviour data – Habits Profile

#### **Speakers**

Dr Russell Jones, GP, Chorleywood Health Centre

Dr Malcolm Clarke, Reader, Brunel University

## **4.2 Photo story**



Figure 19 Masterclass



Figure 20 Dr Russell Jones Introducing inCASA



Figure 21 Exhibition Hall - Presenting the inCASA Platform

## 4.3 Outcomes

### 4.3.1 Feedback from the stakeholders

The Master class was attended by a mixture of Health Care Commissioners, providers, technical providers and front line health care professionals who were either interested in understanding about technologies or who had some previous experience using them in the past. The Master Class was designed to be informal in order to encourage debate and discussion. The main themes of the discussion focused on the following topics.

**1. *The barriers of information sharing within the UK across different health and social organisations.***

This topic was mentioned particularly by the front line staffs who have found the sharing of information even within their own organisations to be difficult. Often data still needs to be faxed under the “safe haven” of data governance. Emails are not permitted in many instances and the different patient management systems within the health care system and the social care system means that information is often duplicated and missed information is common.

**2. *The progress to integrating health and care services within England.***

Some attendees had mentioned that there was much work going on to try and improve the integration of health and social care services in England. Much work has already been undertaken in Scotland but that this was slow to roll out.

**3. *How combining health and social care information can support patients in their own home.***

A number of district nurses and those from specialist community teams felt that the inCASA solution could be of great benefit to their patient group. Specifically using activity monitoring could be a very useful way of monitoring rehabilitation of those newly discharged from hospital. The plug and play approach to installing the equipment and reusability of the devices was described as being “ideal” for carrying around by the community teams.

A palliative care community nurse felt the platform could also be beneficial for monitoring pain levels within palliative care. Currently, patients are visited in the home to be assessed. Asking a patient to measure their pain level at home, combined with other measurements would reduce the number of visits as well provide more timely pain management to the patient.

**4. *The cost of technology and how to drive the cost down and break the monopoly in the market.***

When discussing the current technology available it was evident that there was much frustration at the cost of equipment and providing such services. With the spending constraints within the NHS and public services there was concern that services like inCASA would be difficult to adopt.

There was a general consensus that there was a need to focus on service redesign supported by technical innovation, not the other way around. Many studies including the Whole System Demonstrator Pilots have had many mixed outcomes where technical solutions were costly and did not provide the cost savings that had been expected.

**5. *How to incentivise General Practitioners within England to provide additional services when there is no funding available.***

GP engagement in such services was also cited as a major barrier to adoption. GP's are under considerable pressure with the restructuring and it is still unclear how successful the new changes will be.

**6. *How to evaluate projects in a way that will provide evidence for services to be commissioned.***

Difficulties with evaluating outcomes of these pilots were discussed. Specifically about understanding cost benefit and clinical outcomes. Small scale pilots such as inCASA were felt to be important in respect to driving innovation, however it was accepted that they do not provide sufficient evidence to persuade commissioners to commission services on a major scale.

### **4.3.2 Questionnaires analysis**

Questionnaires were sent via email to participants of the Masterclass. The results below are from 9 questionnaires that have been completed.

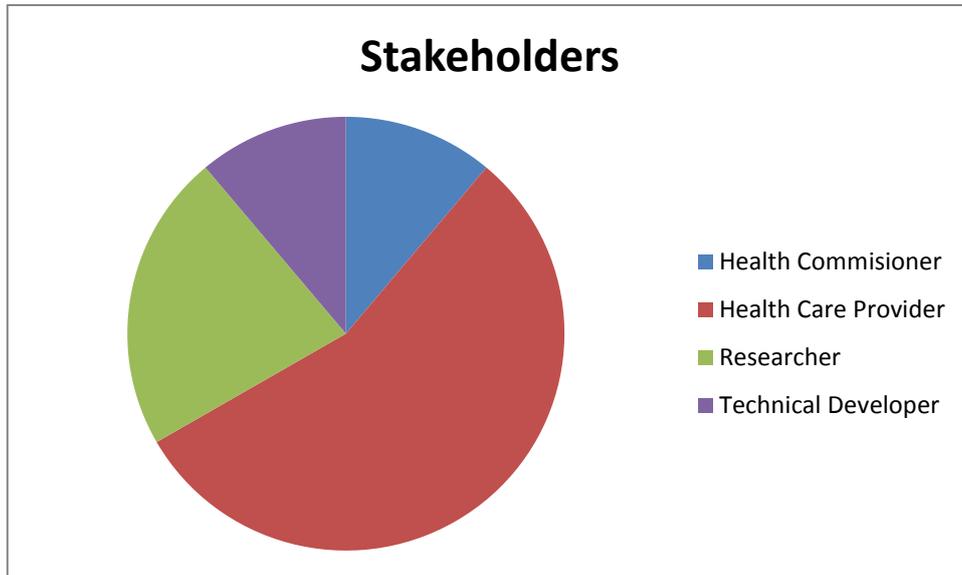


Figure 22 Stakeholder profession

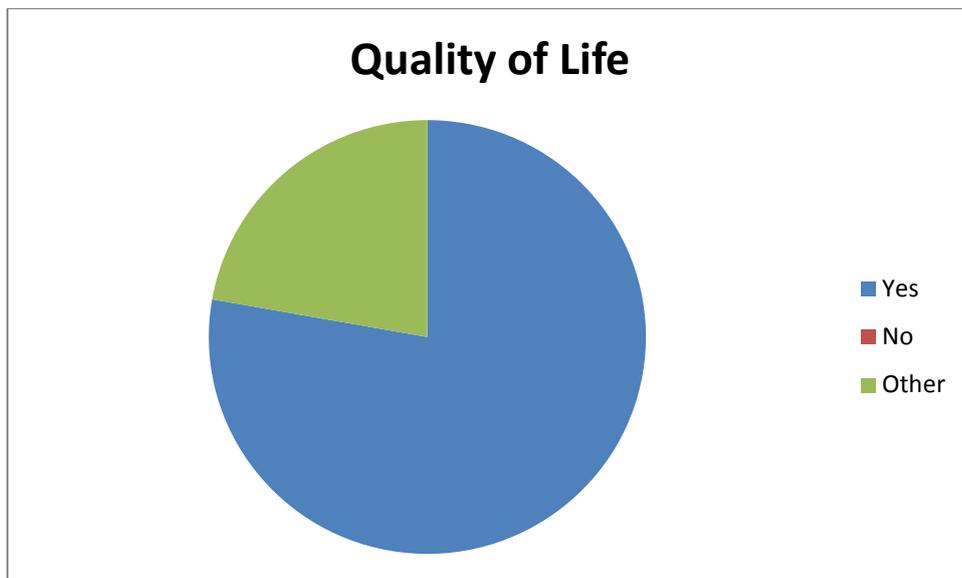
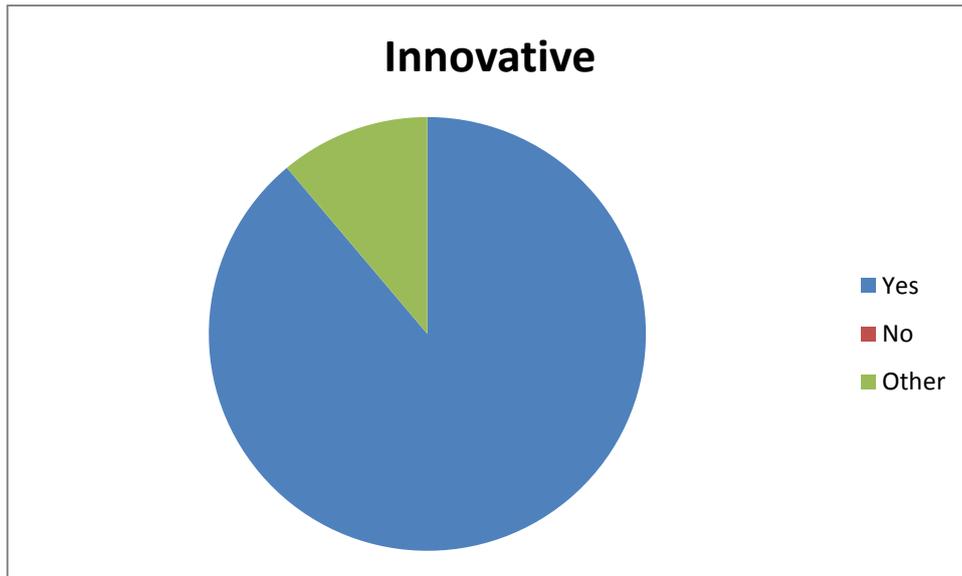


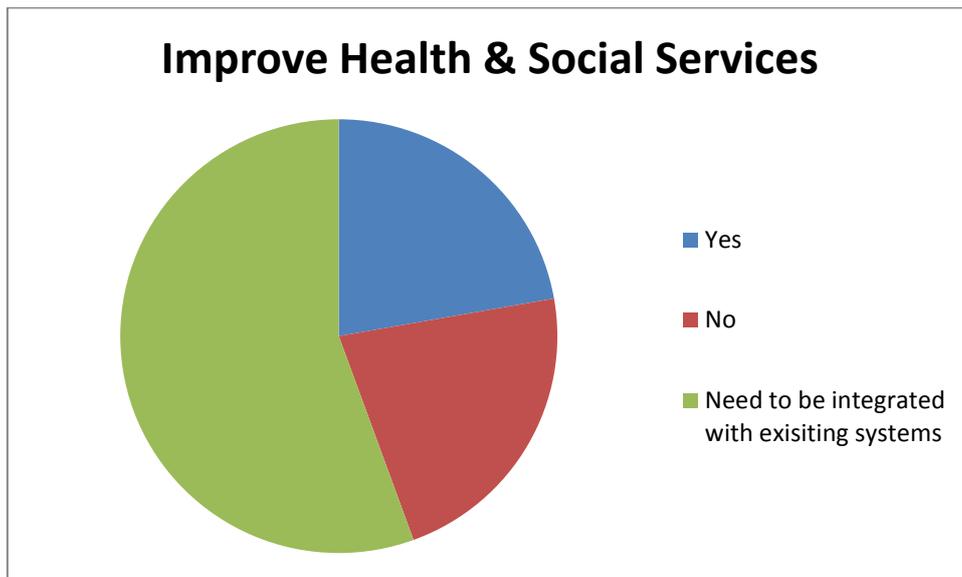
Figure 23 Impact of inCASA on Quality of Life

Most felt that the inCASA solution could lead to improvements in quality of life. However, it was mentioned that solutions should focus more on service redesign and the management of information as opposed to technology in a person’s home. It was also mentioned that such solutions and services should be targeted carefully at the right individual to maximise benefits.



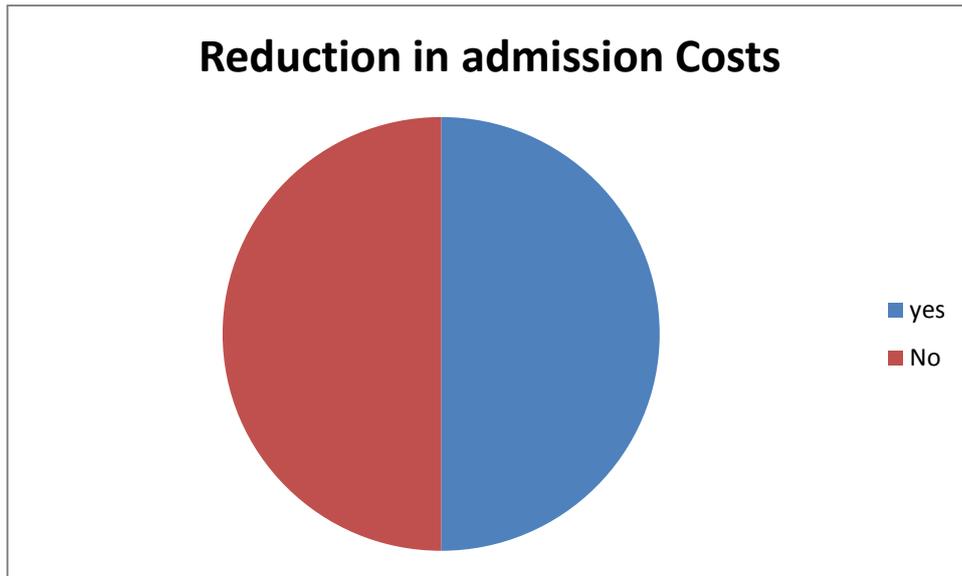
**Figure 24 Innovation of the inCASA platform**

Most felt that the platform was innovative in its aim of using integrated tools and services to respond to information gathered by the tools. Some mentioned other solutions that were in use, however these were either focused on health or social.



**Figure 25 Help to improve health and social services**

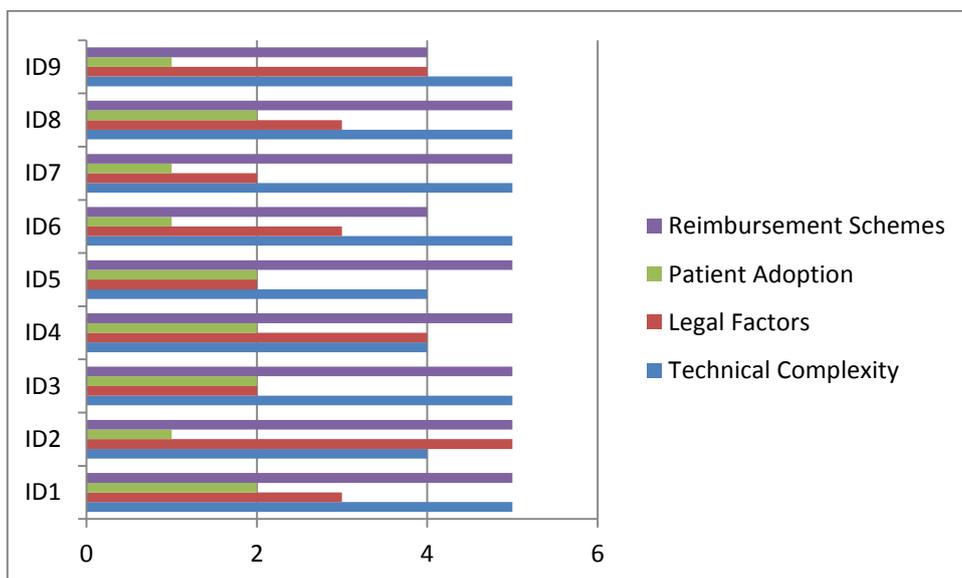
It was felt that there was a need to understand how information from these systems could be integrated with existing systems to alleviate duplication of data and overcome the data protection issues faced by many in sharing information between organisations.



**Figure 26 Can inCASA help reduce hospitalisations?**

Of those that agreed that the use of the inCASA platform could reduce hospitalisation costs, they felt that it would save less than 10%.

It was mentioned that the only way to really reduce costs would be to close the beds that would have been used otherwise they will only be taken by other patients. So it may improve efficiency but not necessarily reduce costs.



**Figure 27 Factors affecting the adoption of inCASA**

Reimbursement was felt to be the main barrier to market adoption and the management of budgets across the different health and social care organisations.

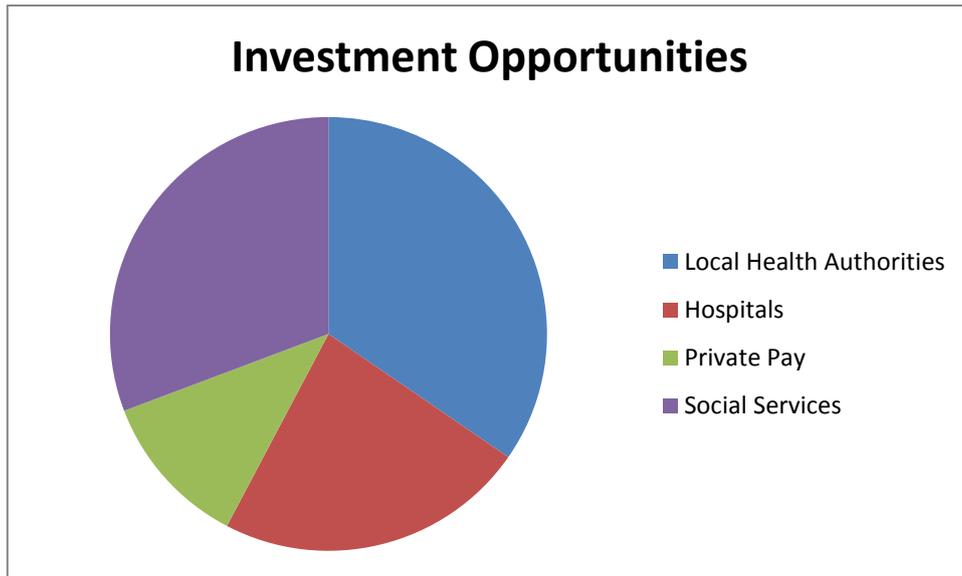


Figure 28 Investment Opportunities in the UK

In addition to those listed on the questionnaire, a couple of responders commented that the platform could be used as a private pay model. Specifically for families who had older relatives who lived further away.

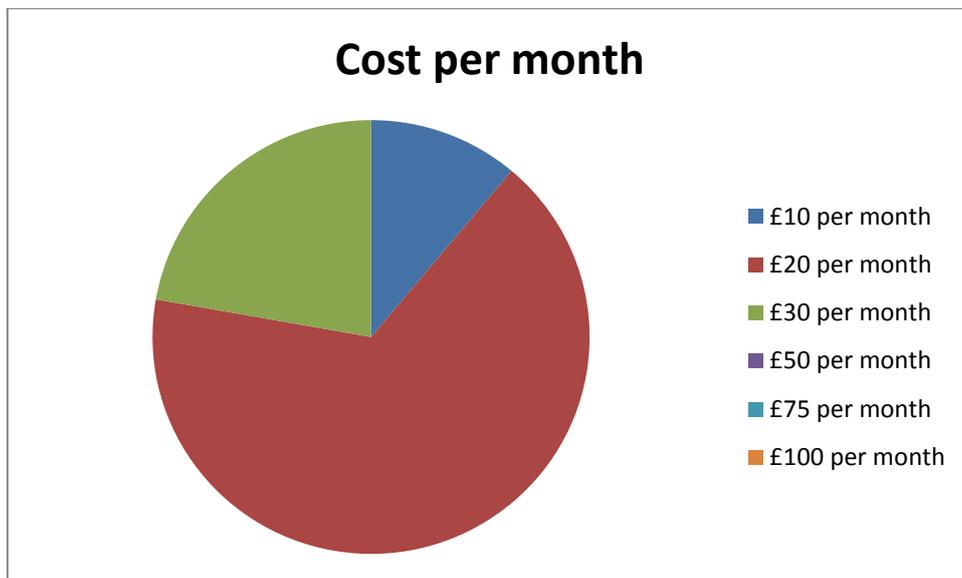


Figure 29 Cost of inCASA service

The majority of responders felt that a service should cost no more than £20 per month.

## 5 German event

### 5.1 Organization

The German national exploitation event was co-organized by the state organisation Baden-Württemberg International in its series of international events. In this case, the event took place in the German–Finnish Health Care and E-Health Forum June 13<sup>th</sup> and 14<sup>th</sup> in Oulu (Finland).



**Figure 30 Logo of the German-Finnish Health Care and E-Health Forum**

Participants of the event came from three stakeholder groups and from two European regions in Germany (Baden-Württemberg) and in Finland (Oulu region), which rendered the event an ideal platform to discuss the challenges of telehealth and telecare:

These three groups were on the German side

- politicians, including the president of the state parliament of Baden-Württemberg, Guido Wolf, five more members of the state parliament from all parties
  - Friedlinde Gurr-Hirsch, (CDU, Christian Democratic Union),
  - Nikolaus Tschenk, (Alliance '90 / Die GRÜNEN, Greens),
  - Helen Heberer, (SPD, Social Democratic Party),
  - Jochen Haußmann, (FDP, Liberals),
  - and high officials from state ministries (Ministry of Science, Research and the Arts, Ministry of Finance and Economics)
- representatives from companies, being active in the field of health care and hospitals, like from
  - Karl Storz GmbH & Co. KG,
  - Aesculap AG,
  - SCHILLINGER (BDU) Healthcare Human and Business Resources,
  - and others.
- representatives from Science and Research, like
  - Prof. Dr. rer. nat. Wilhelm Stork, Head of Institute (ITIV), Director at FZI, Karlsruhe Institute of Technology (KIT), Institute for Information Processing Technology (ITIV) / Research Center for Information Processing (FZI),
  - Prof. Dr. rer. pol. Anke Simon, Head of the Department of Business –Healthcare Management, and Head of the Department of Applied Health Sciences in Nursing and Midwifery, Faculty of Business Baden-Württemberg Cooperative State University (DHBW) Campus Stuttgart,
  - Prof. Dr. Stefan Kirn, Head of Study Program Commercial Informatics, University of Hohenheim, and
  - Prof. Dr.-Ing. Axel Sikora from Offenburg University of Applied Sciences and Steinbeis Innovation Center Embedded Design and Networking (sizedn)
  - and others.

A large delegation from the Finnish side participated, so that around 150 participants were at the forum.

## 5.2 Agenda

A program of three and a half days was setup. The following figure shows the program of the afternoon session of June, 13th, 2013, when the presentation of the inCASA project took place.

**Baden-Württemberg International**

Gesellschaft für internationale wirtschaftliche und wissenschaftliche Zusammenarbeit mbH



2a) Fachthematische Delegation (Wirtschaft + Wissenschaft)

Workshops

Moderation:  
**Päivi Sillanaukee**, Amtsleiterin des Ministeriums für Soziales und Gesundheit  
 Finnlands  
**N. N.** Baden-Württemberg

**Workshop I: Smart Home / Smart Living**

- **Keynote Baden-Württemberg:**  
**Prof. Dr. Wilhelm Stork**, Direktor im Forschungsbereich Embedded Systems and Sensors Engineering (ESS), Forschungszentrum Informatik Karlsruhe (FZI) und Leiter Bereich Mikrosystemtechnik, Institut für Technik der Informationsverarbeitung (ITIV), Karlsruher Institut für Technologie (KIT)
- **Keynote Finnland:**  
**Ambient Assisted Living – Von Technologie zu Service Networks**  
**Prof. Niilo Saranummi**, Forschungsprofessor, Forschungskoodinator ICT for Health, VTT Technical Research Centre of Finland

**Fach- und Projektpräsentationen** durch Vertreter aus Wirtschaft und Wissenschaft in Baden-Württemberg und Finnland

- **Innovative and Professional Healthcare Concepts in Rural Areas:**  
**Amtzell 2038**  
**Prof. Dr. Axel Olaf Kern**, Hochschule Weingarten, Gesundheitsökonomie, Sozial- und Gesundheitsmanagement
- **Titel**  
**Dr. Manne Hannula**, Leitender Ausbilder, Medical Engineering R&D Center, Oulu Hochschule für Angewandte Wissenschaften, Geschäftsführer, Otometri Oy und Neurometri Oy
- **Experiences from the inCASA project: Integrated Network for Completely Assisted Senior citizen's Autonomy**  
**Prof. Dr.-Ing. Axel Sikora**, Dipl.-Ing. Dipl.-Wirt.-Ing., Offenburg University of Applied Sciences
- **Care communication**  
**Ilkka Ketola**, Videra Ltd
- **Service Robots for Health-Care Services**  
**Dr.- Ing. Dipl.-Inf. Birgit Graf**, Fraunhofer Institute for Manufacturing Engineering and Automation IPA
- **Titel**  
**Marita Perälä-Heape**, Centre for Health and Technology CHT
- **Diskussion**

**Figure 31: details of the two day program, afternoon session of day 1:  
Workshop I: Smart Home / Smart Living**

### 5.3 Photo story



Figure 32 Entrance to the Auditorium of the Oulu University



Figure 33 Booth in the exhibition area with inCASA poster



**Figure 34 View of the auditorium**



**Figure 35 Prof. Dr.-Ing. Axel Sikora during his presentation on the inCASA project**



Figure 36 Prof. Dr.-Ing. Axel Sikora during his presentation on the inCASA project

## 5.4 Outcomes

### 5.4.1 Feedback from the stakeholders

Generally, the feedback from the participants of the presentation of Prof. Sikora was very positive and many stakeholders showed good interest in the inCASA project, its experiences and outcomes. Nevertheless, although 100 copies of the questionnaires were distributed in the lecture theatre, only 7 filled copies were handed in. Of course, this does not allow a statistically sound analysis.

It was interesting to see that Finnish participants were even more concerned about the telehealth, as their major concern is the even faster demographic change of Finland in comparison with most other European countries.

#### 5.4.1.1 Local Municipal Authorities

Mrs Eila Valtanen, mayor of the rural community Kuhmo in Eastern Finland along the border with Russia, was extremely interested in the approach, as there is a strong need of telehealth in her rural area with low population density. Discussions about a possible application or adaptation of the inCASA project will follow, as soon as Mr Valtanen has spoken with their local community council and her local experts.

Main requirement here would possibly be the mostly autonomous operation of the remote systems, as no skilled personnel would be around.

#### 5.4.1.2 Researchers

Various researchers were participating in the forum. Consequently, a lot of discussions were held with them.

Vadym Kramar from the Oulu University of Applied Sciences has been developing and operating various home automation systems. For him, the challenges of the system integration are very well known. He very much appreciated the efforts of inCASA for a possibly generic approach, however, also highlighted the limitations with regard to additional systems of home automation and telehealth applications.

Prof. Dr. Wilhelm Stork, Head of Institute of Information Processing Technologies (ITIV) at the Karlsruhe Institute of Technology also showed good interest in the system. He also is well aware of the integration challenges for the different sensors into a generic system.

### 5.4.1.3 Technology providers

As the forum was held as a forum for research and economy, representatives from various companies participated as well. Two of them also filled the questionnaire: Dr. Leonhard, Head of Technology at KARL STORZ GmbH & Co KG, one of the world-wide market leaders in endoscopy, and Mr Hartelt, Vice President Global Sales from Aesculap AG, being forerunner in surgical and interventional processes. Although, neither is a specialist in the field of telecare, both showed deep interest and appreciated the integration efforts. Both representatives mentioned that also for them, this is one of the major challenges.

In addition, Mr Uetz, Head of Division Medical and Laboratory Engineering at HWP Planungsgesellschaft mbH, has already precise requirements from the planning and the operation of homes for elderly people and clearly stated that, if such a system would be commercially available, he would know of several short-term installation possibilities.

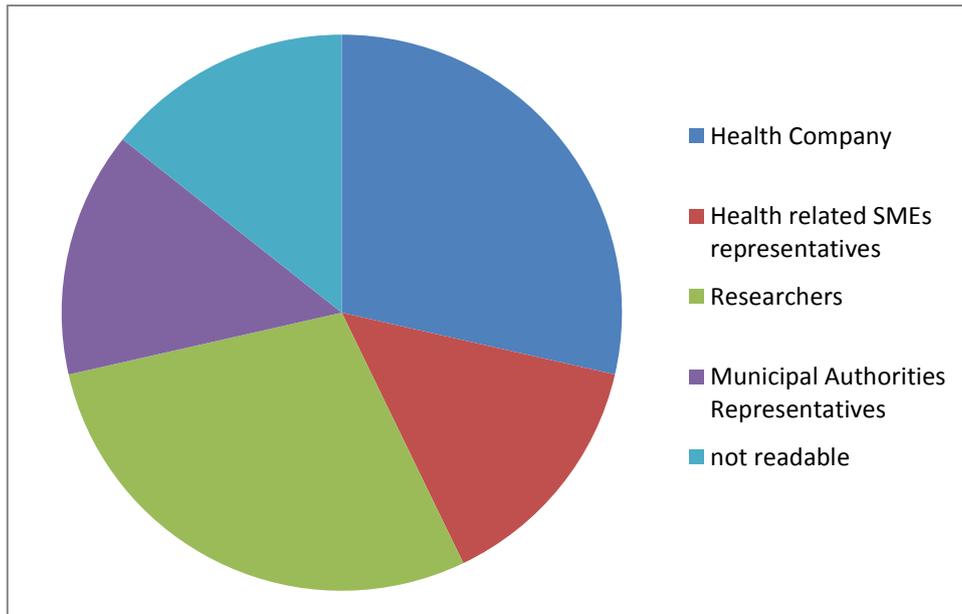
### 5.4.2 Questionnaires analysis

All event participants were handed out questionnaires to fill in after the inCASA presentation. The standard inCASA questionnaire from Annex A of this document was used. It mainly targets to retrieve stakeholders feedback on the following key points:

- Proposals for additional applications of the inCASA solution.
- Differentiation of the inCASA services from present telemedicine solutions.
- Value proposition of the inCASA integrated services in terms of social and health care improvement.
- Expected reduction in hospitalization and care costs by using the inCASA integrated services.
- Factors that may limit the inCASA market adoption.
- Organizations that may be interested to invest in the inCASA solution.
- Reasonable monthly subscription rates for the inCASA services (consumers).

A total number of 7 participants filled in the questionnaires and delivered them to the organizing committee. The number of participants per stakeholder type is shown below.

|                                       |   |
|---------------------------------------|---|
| Health Company                        | 2 |
| Health related SMEs representatives   | 1 |
| Researchers                           | 2 |
| Municipal Authorities Representatives | 1 |
| not readable                          | 1 |

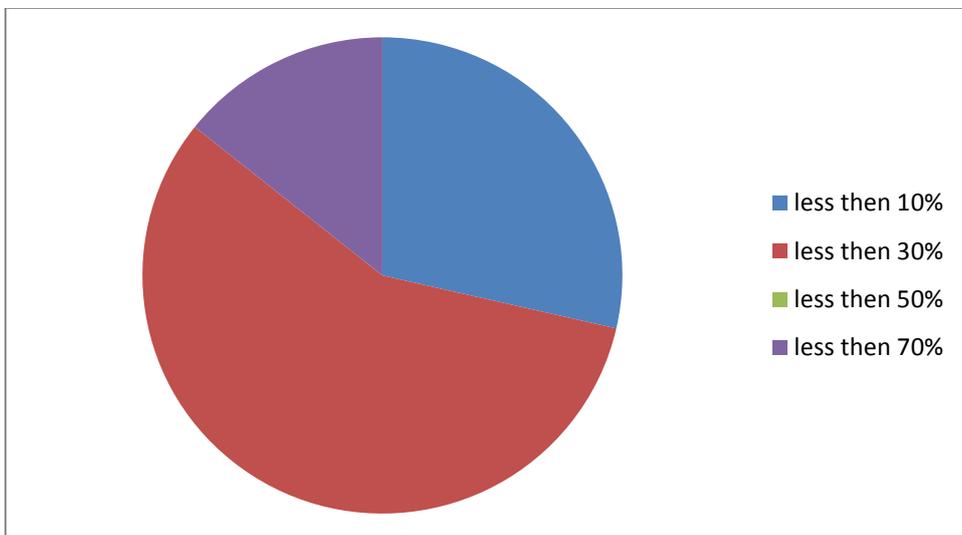


**Figure 37 Stakeholders answering the questionnaires at the German National Event**

All recorded answers agree that inCASA can improve the quality of life of elderly people suffering from chronic diseases.

When answering at the question “indicate how much hospitalization costs can be reduced through the inCASA system”, the majority of participants replied with “Less than 30%”.

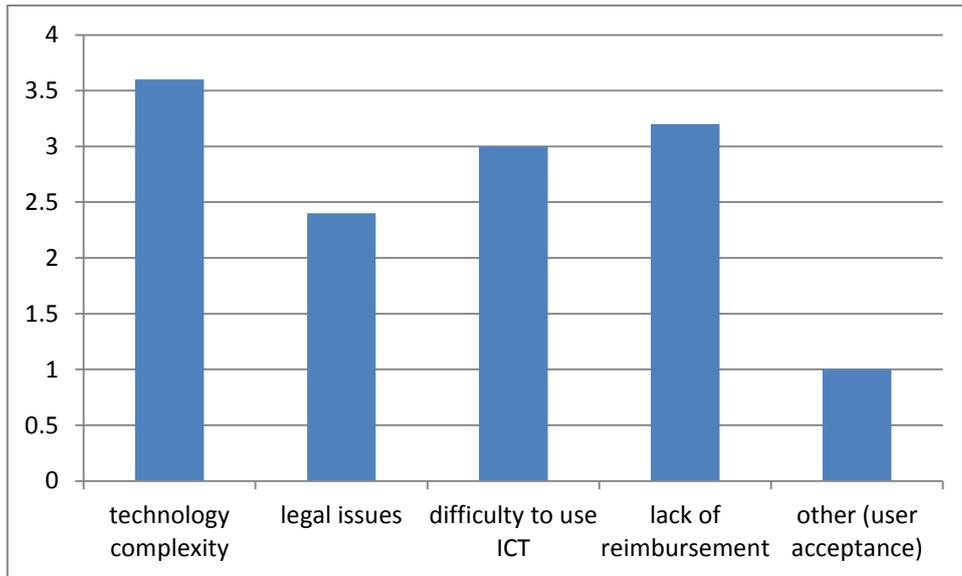
In the following figure, the variation of responses is presented.



**Figure 38 Estimation of hospitalization costs reductions at the German National Event**

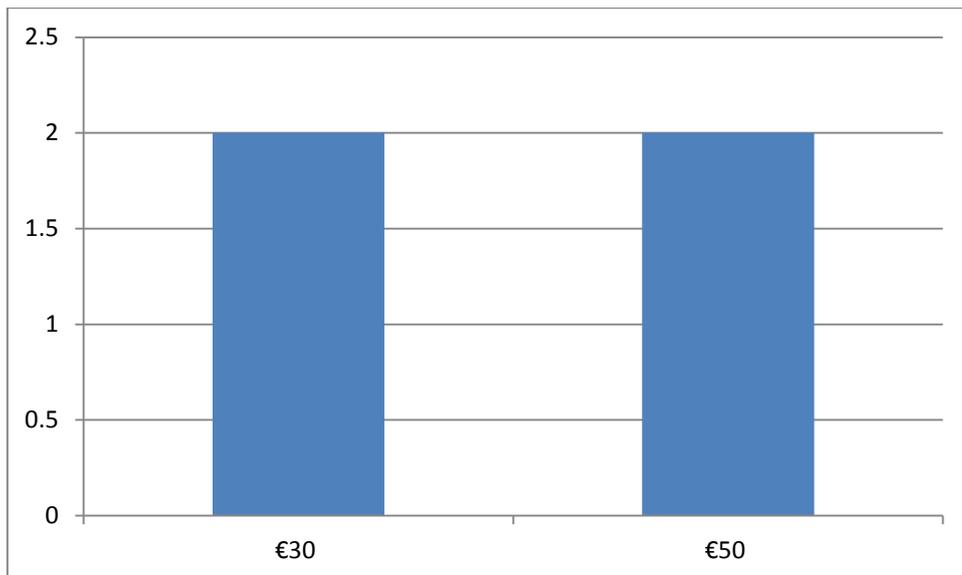
Concerning the possible inCASA limitation factors, the participants marked as first limit factor complexity of technology, followed by lack of reimbursement/funding that is needed for the service deployment.

The “other aspect” (user acceptance) was given by one participant of the questionnaire.



**Figure 39 inCASA market adoption limitation factors**

As reasonable price indication, participants indicated evenly 30 € to 50 € per month.



**Figure 40 Reasonable monthly price indication**

## 6 French event

### 6.1 Organization

The two French exploitation events were organized by INSERM. The first event was a round table organized in the framework of the first CASyM stakeholder meeting in Lyon on March 26<sup>th</sup> 2013 (round table: systems medicine for improving patients care). CASyM (Coordinating Action Systems Medicine) is a European project which aims to develop a road map outlining an integrative strategy for the implementation of systems medicine across Europe. This meeting involved high-profile stakeholders from the clinical sector, academia, industry, government and patient organizations. The second event occurred during the annual meeting of ITMO TS (Thematic Institute Technologies for Health) in Bordeaux on April 10<sup>th</sup> 2013. This event was a round table entitled “Technological Innovations for Health: is there a place for the user?”. This meeting brought together actors contributing to a high level of academic research and carrying valuable innovations.

### 6.2 Agenda

The agenda of the first French event organized in Lyon on March 26<sup>th</sup> 2013 is shown in the following table:

| <b>Time</b>   | <b>Subjects</b>   | <b>Event Speaker</b>                                  |
|---------------|---|---|
| 8:30 – 9:00   | <b>Welcoming coffee</b>   |   |
| 9:00 – 12:00  | <b>Round table: Systems medicine for improving patient care</b> | <b>Alexandre Arbaud (INSERM)<br/>All participants</b> |
| 12:00 – 14:00 | <b>Lunch</b>  |   |
| 14:00 – 16:00 | <b>Round tables wrap up sessions</b>                            | <b>Round tables leaders</b>                           |

**Table 2 First French event agenda**

The agenda of the second French event organized in Bordeaux on April 10<sup>th</sup> is shown in the following table:

| <b>Time</b>   | <b>Subjects</b> | <b>Event Speaker</b> |
|---------------|-----------------|----------------------|
| 14:00 – 14:15 | <b>Opening</b>  |                      |

|               |   |   |
|---------------|---|---|
| 14:15 – 15:00 | <b>Introduction to the event</b>  | <b>ITMO manager</b>                               |
| 15:00 – 15:30 | <b>Strategy and prospects of e-health domain</b>  | <b>UTT professor</b>                              |
| 15:30 – 17:00 | <b>Round table: Technological innovation for health, is there a place for the user?</b> | <b>Francis Lévi (INSERM)<br/>All participants</b> |

**Table 3 Second French event agenda**

### 6.3 Photo story



**Figure 41 Alexandre Arbaud presenting the inCASA project and the French pilot**



**Figure 42 Round table participants discussing about systems medicine**



**Figure 43 Round tables participants defining priority issues and priority actions**



Figure 44 Dr. Francis Lévi presenting the French pilot infrastructure at the ITMO TS event

## 6.4 Outcomes

INSERM participated in the first French event by leading a round table in the framework of the European project CASyM. The round table title was “Systems Medicine for improving patient care”. The inCASA project and the activities of the French Pilot were presented as the state of the art. The participants found the project innovative and posed many questions about patient education, patient perception and satisfaction and economic aspects. The second part of the round table allowed defining priority issues and actions to be implemented for improving patient care in a short, mid or long term and with a low, middle or high impact.

The participants brought out that generally clinicians and patients have to be convinced of systems medicine’s interests for patient care. Pushing a few cases of success, based on the analysis of what is possible now (technically and legally), should help systems medicine development and integration in clinical studies. The goal is to take advantage of and prioritize clinical indications according to the “low hanging fruits” to prove clinical utility, convince the clinical community and enable fast translation into clinical practice (possible involvement of national health services for adoption).

Then the participants pointed out that systems medicine will not be able to bring medical progress if it is not supported by the society. That is why the defined priority actions were:

- the development of an ethical and legal framework (establish common rules and principles for data acquisition, sharing, integration, reduction to practice, define how to achieve patient consent, to respond to fears of misuse of provided data, define solutions for data protection/open innovation, inform/educate FDA, EMA and others, align clinical interests with industry),
- the development of sustainable business models (based on value analysis to define economic and society benefits, evaluate how systems medicine affects cost of healthcare, include SMEs, national health systems, insurance companies, re-imagine ‘pre-competitiveness’: identify and deploy incentives for pharma to align with clinical or academic, encourage and reward data sharing, measure impact in terms of shorter life cycle for drug discovery and development, demonstrate new medicine on systems medicine) and
- the development of education (implement systems medicine and emerging concepts in new tools for medical education, licensing exams, medical school accreditation, drive concepts through academically oriented pioneering clinicians, educate clinicians: edit regular guidelines to general practitioners and develop CME for clinical specialties, secure regulatory and accrediting input, assess continually clinician perspectives on value of system medicine, test impact of new understanding, develop marketing and communication, reinforce notion that system medicine requires new patient-provider

relationships, prepare society for systems medicine risks and potential benefits in a realistic way).

INSERM also participated in a second round table during the annual meeting of ITMO TS. The main topic was the technological innovations for health. Dr. Francis Lévi presented the inCASA project, the context and preliminary results of the French pilot and the INSERM recent activities in Domomedicine domain. The participants were very enthusiastic regarding the prospects of the inCASA services as the pilot was one of the first successful Domomedicine experiments.

The concept of Domomedicine was also presented with the article published in the widely known French national newspaper “Le Figaro” on February 23th. In this article it is explained that the inCASA solution is a first step towards the development of a new patient-centered health system. As many patients suffer from chronic diseases, the Domomedicine services are an opportunity to improve healthcare and social care while reducing costs. The article is shown in Figure 45. The photo on the left shows a patient using the inCASA platform for symptoms assessment whereas the photo on the right shows healthcare professionals analysing a patient’s rest-activity patterns after downloading the Actigraph file transmitted by the patient. This article benefited from a large audience as Le Figaro is the most read national newspaper in France.

# Peut-on recevoir des soins de qualité à domicile ?

**En partenariat avec «Le Figaro», des membres de l'Académie des technologies répondent aux grandes questions de l'actualité scientifique.**

Le nombre de personnes souffrant de maladies chroniques (cancers, diabète, pathologies rénales ou respiratoires...) est en forte hausse dans tous les pays développés, principalement sous l'effet de l'allongement de la durée de la vie. En France, on estime que 9,8 millions de nos concitoyens sont dans cette situation. Ces patients, souvent atteints de plusieurs maux à la fois (on parle alors de multipathologies), expriment fortement le souhait d'être soignés à domicile voire dans leur milieu socio-professionnel. Sous réserve, bien sûr, que ces soins soient comparables, en quantité et en qualité, à ceux qui leur seraient dispensés dans une structure hospitalière.

Impensable il y a encore une dizaine d'années, cette médecine « à la maison »

ou « au travail », également appelée « domomédecine », à l'issue d'un rapport de l'Académie des technologies, est possible aujourd'hui grâce à un grand nombre d'innovations. La mise au point d'instruments miniaturisés, non invasifs, communicants, fiables et économiquement abordables (voir article ci-dessus) permet en effet de mesurer en continu de multiples paramètres biologiques et comportementaux ou de maîtriser l'administration programmée de traitements (chimiothérapie, dialyse rétro, par exemple) tout en s'insérant dans l'environnement du patient.

La domomédecine intègre évidemment les progrès réalisés par la télé-médecine. Cette médecine à distance, rendue possible par l'évolution technologique et réglementaire (loi hospital, patient, santé, territoire de juillet 2009), apporte déjà des réponses à des problèmes sensibles : améliorer l'accessibilité aux soins sur tous les points du territoire, promouvoir la collaboration entre professionnels de santé (médecins, infirmières, kinésithérapeutes...) et, du coup, optimiser l'emploi de ressources médicales rares ou amenées à l'être de plus en plus.



**François Guinot**  
CHIMISTE ET ECONOMISTE, MEMBRE DE L'ACADEMIE DES TECHNOLOGIES

Mais la domomédecine veut aller plus loin en recréant l'ensemble du système sur le couple patient-médecin sans oublier les proches (conjoints, parents, amis...), dont les difficultés insuffisamment reconnues seraient ainsi mieux prises en compte.

Si une mise en œuvre suppose toutefois de relever un certain nombre de défis. Pour répondre aux besoins d'un malade atteint de multipathologies, les technologies médicales existantes, souvent dédiées à une pathologie donnée, devront en effet être combinées et rendues com-

patibles les unes avec les autres. En clair, il s'agit de concevoir un système intégré, un « système de systèmes », aux performances supérieures à celles qui résulteraient d'une simple juxtaposition.

Des changements de comportement et d'habitudes sont également à prévoir : le patient ne sera plus soigné en fonction des disponibilités des instruments médicaux ou des capacités d'hébergement dans les centres de soins, mais l'inverse. Sans parler des problèmes juridiques ou réglementaires qu'il faudra surmonter : confidentialité des données, sécurité et fiabilité dans leur transmission, paiement à l'acte ou au forfait des soignants. D'où la nécessité de procéder à une expérimentation à large échelle. Déjà des projets ont été retenus par diverses instances (Fonds unique interministériel, Investissements d'avenir...) au terme d'une sélection sévère. C'est le cas de PICADO et d'Éclair'age, portés par Altiran ; ou de Domocare, porté par la société Assin'able. Leurs résultats seront précieux pour la réalisation du projet lui-même. Celui-ci portera sur plusieurs milliers de patients et durera trois à quatre ans pour un budget évalué à quelques dizaines de millions d'euros.

Des l'origine, Champagne-Ardenne, sous l'impulsion du président de son conseil régional, Jean-Paul Bachy, s'est montrée déterminée à jouer un rôle pilote. Un consortium formé par son agence de développement Carima, et élargi à d'autres régions comme l'Île-de-France, réunit les acteurs de santé, les pôles de compétitivité et les nombreuses entreprises concernées dans une dynamique prometteuse. Les enjeux de santé, d'économie de la santé, de développement technologique et par conséquent de créations d'entreprises et d'emplois sont considérables.

En plus de stimuler le progrès médical, la domomédecine devrait, en effet, permettre de réaliser de substantielles économies, dans la mesure des 56 milliards d'euros consacrés chaque année au traitement des maladies chroniques. La France, en pointe sur ce concept, doit veiller à ne pas être distancée par d'autres pays européens qui en ont bien perçu l'intérêt. ■

« Le patient, les technologies et la médecine ambulatoire », avec la direction de Francis Lévi et Christian Saguez, rapport de l'Académie des technologies, 2008.



## Un nouveau système de santé centré sur le patient

La réalisation de soins, même complexes, au domicile de patients atteints de pathologies chroniques, et notamment de cancers, diabète, maladies cardiaques ou respiratoires, permettrait d'améliorer sensiblement leur qualité de vie, de réduire les risques de complications et de diminuer la fréquence des hospitalisations tout en maintenant au mieux leur état de santé.

Pour y parvenir, douze partenaires industriels et académiques (1) de huit pays ont conçu et réalisé ensemble, dans le cadre du projet européen InCASA (2), un système d'information permettant de collecter et de visualiser en temps réel les données médicales recueillies chez le patient ou transmises par lui.

Concrètement, une plateforme électronique interactive recueille chaque jour les données nécessaires pour évaluer la qualité de vie du patient ainsi que divers symptômes auto-estimés. Le dispositif inclut également la transmission « sans fil » des mesures du poids corporel, de la tension artérielle, de la fréquence cardiaque, de la glycémie, de l'oxygénation du sang, mais aussi des performances physiques, des activités domestiques et du rythme circadien d'activité-repos du malade.

Toutes ces informations sont envoyées à un serveur en toute confidentialité avant d'être analysées quotidiennement par l'équipe biomédicale en charge du suivi, en coordination avec le médecin traitant. Des seuils d'alerte préalablement définis motivent, le cas échéant, une intervention auprès du patient.



**Francis Lévi**  
CANCÉROLOGUE, MEMBRE DE L'ACADEMIE DES TECHNOLOGIES

Dans le cas du cancer, l'objectif est de sécuriser la réalisation, au domicile du malade, de protocoles de chimiothérapie. Il s'agit de combiner trois ou quatre médicaments anticancéreux perfusés selon les horloges biologiques (qui rythment sur 24 heures le métabolisme et la prolifération des cellules saines) à l'aide d'une pompe programmable portable.

**Mesurer l'impact sur la qualité et la durée de vie**

L'optimisation de la tolérance et de l'efficacité de ce traitement administré en fonction des rythmes biologiques, le maintien du patient dans son milieu familial et la correction précoce d'altérations détectées à partir des enregistrements des fonctions biologiques ou des symptômes concourent à une amélioration significative de la prise en charge et des résultats.

L'exemple vécu de M. B. le prouve. Cette personne, atteinte de métastases pulmonaires dues à un cancer colorectal, a d'abord reçu deux protocoles de chimiothérapie conventionnelle, administrés en hospitalisation de trois

jours toutes les deux semaines. Ces traitements n'étaient plus actifs. Son médecin lui a proposé de recevoir une chimiothérapie insensibilisée avec quatre médicaments.

Après avoir donné son consentement pour participer au projet de domomédecine InCASA, M. B. a reçu ce nouveau traitement chez lui, dans de bonnes conditions de sécurité. Non seulement ses métastases ont durablement régressé, mais les effets secondaires, détectés précocement grâce au système InCASA, ont été moindres. Aujourd'hui, M. B. peut rester dans son environnement auprès de sa famille et de ses voisins, faire ses courses et continuer sa vie sociale, sans rupture provoquée par une hospitalisation d'urgence.

Reste maintenant à déployer à grande échelle ce nouveau système de santé centré sur le patient afin d'appréhender et d'optimiser conjointement ses dimensions médicales, scientifiques, éthiques, organisationnelles, sociales et économiques, et de mesurer son impact sur la qualité et la durée de vie des patients, les pratiques de soins, la recherche scientifique et l'économie de la santé. C'est tout l'objet du projet PICADO (voir article ci-dessus) soutenu par l'État, les régions Île-de-France et Champagne-Ardenne et la Ville de Paris, en cours depuis quelques mois. ■

(1) Daxi l'ambit Insem - Rythmes biologiques et cancers - que je dirige à l'Hôpital Paul Broca de Villejuif (75 de Paris).

(2) Integrated Network for Complicity Assisted Senior Citizen's Autonomy.

**9,8 MILLIONS** de Français souffrent de pathologies chroniques : cancer, diabète, maladies rénales, cardiaques et respiratoires...

**56 MILLIARDS D'EUROS** C'est le coût annuel de la prise en charge des maladies chroniques en France.

**3** préprojets ont été retenus pour préparer une expérimentation à grande échelle de la « domomédecine » qui concernera plusieurs milliers de patients.

## Des technologies porteuses d'innovation

La domomédecine est conçue pour traiter de manière globale, sur une grande échelle, l'ensemble des pathologies dont sont atteints les patients ainsi que les problématiques liées à leur maintien à domicile. Il s'agit d'un exemple typique de grands systèmes complexes dans lequel interviennent, autour du couple patient-médecin, de très nombreux acteurs (professionnels de santé, prestataires de services...).

Le système d'information qui relie ces derniers entre eux en est l'infrastructure de base. Il permet d'assurer la collecte, le transfert, le traitement et l'archivage de toutes les données ainsi que la coordination et l'ensemble des échanges entre les intervenants.

En amont, le domicile du patient est équipé de dispositifs, médicaux ou non, de surveillance (capteurs physiologiques et comportementaux, dispositifs médicaux passifs ou actifs...). Ces dispositifs, d'un usage le plus simple possible et très fiables, doivent être conçus dans une approche multipathologique afin d'en minimiser le nombre.

S'appuyant sur les standards du secteur médical, le système d'information (réseau informatique et serveurs) assure l'ensemble des échanges d'informations entre les intervenants. Il prend en compte trois contraintes fortes : garantir la confidentialité des données, avoir une disponibilité sans faille 24 heures sur 24 et assurer une sécurité totale de fonctionnement.

Grâce aux techniques numériques recourues de traitement des informations, un système de génération et de gestion des alertes médicales ainsi que de mise en œuvre et de suivi des décisions as-



**Christian Saguez**  
INGÉNIEUR MEMBRE DE L'ACADEMIE DES TECHNOLOGIES

sociétés est mis en œuvre. Par ailleurs, l'analyse globale des données recueillies constitue une source importante de progrès médical.

Comme indiqué précédemment, les composants du système installés au domicile des patients doivent être le moins invasifs possible et très simples d'emploi. Malgré cela, l'utilisation optimale d'un tel dispositif suppose que tous les acteurs concernés (patients et leur entourage, professionnels de santé et prestataires de service) soient consciencieusement formés.

**Source d'emplois**

Autre point important : des travaux de recherche et développement doivent accompagner le déploiement de la domomédecine, notamment pour la conception de nouveaux dispositifs et systèmes (miniaturisation et capteurs, capacité de traitement, sécurité...) prenant en compte les derniers progrès médicaux et technologiques.

Sur le plan économique, enfin, les technologies mises en œuvre sont extrêmement porteuses d'innovation. Elles ne manqueraient pas de favoriser le développement ou la création de sociétés innovantes dans un secteur en forte demande qui représente une importante source de richesses et d'emplois. ■

Figure 45 Article published in French national newspaper "Le Figaro"

## 7 Italian event

### 7.1 Organization

The Italian national exploitation event was co-organized by Santer Reply, Invent and ATC Torino during the e-Health Forum (<http://www.ehealthforum.it/node/4736>) in Rome at the ATA Hotel Villa Pamphili premises on the 28<sup>th</sup> of May, 2013 in Rome.

The event has more than 1,000 members, 560 participants including 28 speakers. Numbers of great importance than those recorded by the 5th edition of the eHealth Conference.

The event was focused on two specific areas - the **Clinical Engineering** and **Diagnostic Imaging** - developed in a vertical and parallel in the afternoon session. The **Health Informatics**, however, has been the focus of the morning session.

For this special occasion the eHealth Conference hosted high-calibre professional speakers who addressed in front of a very participating audience a number of issues of fundamental interest with regard to the sphere of technological innovation in health care sector.

The Conference was sponsored mainly by:

- Ministry of Health
- Ministry of Economic Development
- SIRM: an Italian association on Medical Radiology
- AICC: an Italian association on Clinical Engineer



Ministero della Salute



Ministero dello Sviluppo Economico



The major speakers who have aroused extensive debate and discussion are:

**Lidia di Minco** (Director of New Health Information System – Ministry of Health) and **Claudio Saccavini** (Technical Director Consorzio Arsenàl.it) both dealing with the “Patient empowerment and FSE”.

**Corrado Bibbolino** (Radiologist, Director of the magazine “Il Radiologo”) e **Luisa Begnozzi** (President AIFM - Associazione Italiana di Fisica Medica) with a speech on “Innovation in Imaging Diagnostic: Processes and system interactions”.

**Lorenzo Leogrando** (President AICC - Associazione Italiana Ingegneri Clinici) focused on the thematic “Software and medical devices: integration and applications of software solutions. “

In a stand staged for inCASA all day, REPLY, INVENT and ATC had met different stakeholders, interested in our solution within a specific stand dedicated to the demo of the solution.

In the afternoon we presented details of inCASA approach within a dedicated workshop: <http://www.ehealthforum.it/node/4823>

About 40 attenders followed the workshop, and different categories of stakeholders came to inCASA stand for asking details. The main stakeholders involved and participating in the event can be identified in: Health Care Providers, ICT professionals and researchers, Professors and Students of Medicine, Doctors and Health Professionals.

The target audience more relevant to an exploitation perspective was constituted by Public Health Care Providers (specifically from Piemonte, Lombardia, Emilia Romagna and Puglia). Also the Italian Ministry of Defence was present. Within the private companies, it was relevant the presence of insurances (ex: Reale Mutua), interested in the up scaling of insurance services related to the housing services.

## 7.2 Agenda

| Time          | Subjects   | Event Speaker   |
|---------------|--|---|
| 14:30 – 14:40 | <b>The European Year 2012: Follow Up and Developments of initiatives and projects at National and International level.</b> | <b>Annamaria Matarazzo</b><br>( <i>Dipartimento per le politiche della famiglia-presidenza del consiglio dei ministri</i> ) |
| 14:40 – 14:55 | <b>AgeingWell: an EU network to disseminate ICT for Ageing, the Tecnopolo's scope.</b>                                     | <b>Angela Ciancia</b><br>(Tecnopolo SpA)  |
| 14:55 – 15:10 | <b>Socio-Health data Integration</b>   | <b>Angelo Rossi Mori</b><br>(CNR)   |
| 15:10 – 15:25 | <b>Project inCASA: Advanced Technologies for elderly</b>   | <b>Massimo Caprino</b><br>(SANTER REPLY)  |
| 15:25 – 15:45 | <b>inCASA Solution: The services</b>   | <b>Raffaele di Fiore</b><br>(SANTER REPLY)  |
| 15:45 – 16:00 | <b>inCASA: Market impact and the economic benefits</b>   | <b>Antonio Zangrilli</b><br>(INVENT)  |
| 16:00 – 16:15 | <b>End-Users: Impressions, Success Stories</b>   | <b>Gianfranco Tarabuzzi</b><br>(ATC)  |
| 16:15 – 16:30 | <b>Open Session</b>  |   |

Table 4 Italian Workshop Agenda

During the all-day event, experts of Santer Reply, Invent and ATC Torino were attending to the stand to provide insight and technical information of inCASA to the intended audience. Later, following the agenda schedule, the workshop started at 14:30.

Annamaria Matarazzo, responsible for family policy within council of ministers. She presented the Italian activity carried out since last year for implementing the Active Ageing initiative at a national level. She looked at the inCASA project approach as a good practice for enhancing autonomy in ageing people.

Angela Ciancia, Thematic network ageing well responsible, presented the “Ageing Well Thematic Network”, an ICT-PSP project, where the main objective is the creation of a European network able to improve the quality of life for elderly people through the promotion of ICT innovations and solutions. inCASA, as a relevant project in the field of Active Ageing and Social Inclusion was submitted to the network as a “Good Practices” as an example to follow. The presence in this network will also grant surely further chance of dissemination and exploitation.

Angelo Rossi Mori, scientist at CNR-ITB, explained how important the use of the modern technology is in order to improve the quality level of the cure and how strategic is the use of the data available to better define a pattern of cure. Angelo pinpointed how only with a data integration, both social and health, will be possible to extend and improve the concept of Tele-Care and Tele-Health and to build impactful integrated services.

Massimo Caprino, the inCASA project coordinator, explained the overall inCASA solution and how the technology provided can improve the quality of life for elderly people. Massimo pointed out how the solution is perfectly balanced between the Tele-health and Tele-care and how these two points

are perfectly integrated in granting the maximum return in term of: Quality of Life, Social Inclusion and Active Ageing.

Raffaele di Fiore, the inCASA project manager, focused his speech on the services offered by the inCASA solution pinpointing the importance of the habits monitoring to generate a specific profile for every single end-user. This habits profile allow a better vision of the overall user life style and a significant deviation from this routine will trigger an alarm to be handled. This point opened an insightful discussion between the workshop's participants.

Antonio Zangrilli, Senior consultant and Partner at Invent, presented some findings on market trends regarding Tele-Health and Tele-Care going to assess the inCASA positioning. Furthermore Antonio explained the main differences from inCASA solution against relevant competitors; the speech was closed with an overview on the market dimensions and the related exploitable possibility.

Gianfranco Tarabuzzi, the responsible for the Italian Pilot, focused his intervention on the feedback gained during the pilot phase. Gianfranco clarified how the elderly were truly and fully satisfied with the entire system because, during the piloting phase, they felt a sense of increased safety and an improvement in their quality of life. During his speech he also presented the initial results of the questionnaire, Technology Acceptance, submitted to the end-users; the results were impressive and positive with an overall satisfaction of 80%.

### 7.3 Photo story



Figure 46: eHealth Conference



Figure 47: Raffaele di Fiore attending at the inCASA Stand



Figure 48: The inCASA Leaflets



Figure 49: The Sensors



Figure 50: The Workshop



Figure 51: Workshop Opening



Figure 52: Annamaria Matarazzo talking about the Europe2012 Active Ageing and future developments



Figure 53: Angela Ciancia presents the EU Ageing Well Thematic Network



Figure 54: Angelo Rossi Mori talking about Socio-Health data Integration



**Figure 55: Massimo Caprino explaining the inCASA Service Model**



**Figure 56: The Video Presentation**



Figure 57: Raffaele di Fiore talking about the Services offered by the inCASA Solution



Figure 58: Antonio Zangrilli talking about the inCASA Business Model



**Figure 59: Gianfranco Tarabuzzi reporting the End-Users impressions**

## 7.4 Outcomes

During the workshop the level of attention was very high and all the participants were interested in the entire topic proposed but revealing a particular interest in the thematic related to the integration between telecare and telehealth.

The idea to play the inCASA ATC Video was very successful because in only three (3) minutes was possible to prove and illustrate the real essence of the inCASA project and, specifically of the Italian Pilot.

Just after the Video, Tarabuzzi Gianfranco explained in detail the overall model established for the Italian Pilot. This was one of the major points of discussion.

### 7.4.1 Feedback from the stakeholders

The people who came to the stand, before and especially after the workshop, asking for information about the inCASA project were of different categories (e.g. Professors, students, ICT Professional, eHealth Manager). The main interest, based on the different discussions engaged, was related to the mechanism of data collection to generate the habits model and about the sensors used in the project. Moreover, a high series of questions were focused on the Italian Pilots and the services provided.

Summarizing it is possible to group the questions' kind in some macro-categories:

- General Requests on the platform
  - Technical Information

- Users and Stakeholders involved in the process
- Sensors available
- Data Collection System
- Alarms managing and actions undertaken
  - How an alarm is triggered
  - How the habits model is created
  - How the alarms are handled by the different actors involved
  - What are the main action undertaken when an alarm trigger
- Projects Related
  - Structure of the Consortium
  - Kind of European Project
  - Solution’s Continuity
  - Involvement of GPs
- ROI
  - Benefits for the service providers
  - Benefits the end user
  - Benefit for the public authorities

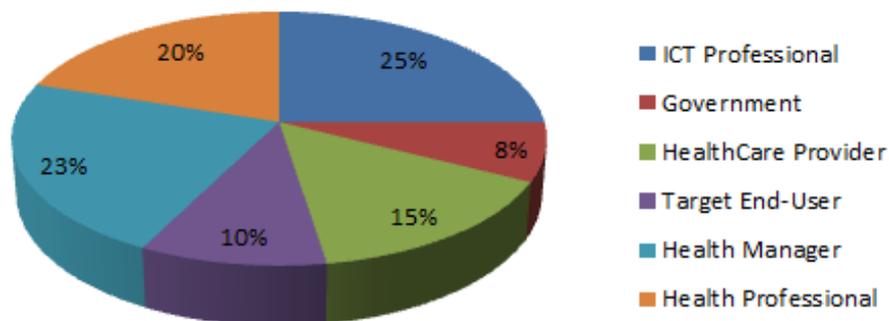
### 7.4.2 Questionnaires analysis

The questionnaires were handed out after the workshop and the inCASA presentation to all the participants.

The questionnaire mainly targets to retrieve stakeholders feedback on the following key points:

- Proposals for additional applications of the inCASA solution.
- Differentiation of the inCASA services from present telemedicine solutions.
- Value proposition of the inCASA integrated services in terms of social and health care improvement.
- Expected reduction in hospitalization and care costs by using the inCASA integrated services.
- Factors that may limit the inCASA market adoption.
- Organizations that may be interested to invest in the inCASA solution.
- Reasonable monthly subscription rates for the inCASA services (consumers).

The total number of participants (40) per stakeholder type is shown below:



**Figure 60 Stakeholder answering the Questionnaires**

As from Figure 61 Limitation Factors it is possible to notice how the stakeholders, who compiled the questionnaire, think that the main limitation factors are of medium entity (1: Low Limitation – 5: High Limitation) and there is only a single spike of high level of limitation where the 36% of stakeholders interviewed think that the Refund System is a high level limitation.

**Technology Limitation:** We can find only a single spike on the graph related to the technology limitation factor, where the 90% of stakeholder think that this point can be an issue. The data is good because it is a low level limitation factor that can be easily fixed. Moving on to the High Level side we will find 0% of stakeholders interviewed indicating the Technology as a limitation factor.

**Legal Limitation:** This category rise up starting from a low level (10%) percentage growing to 59% as an almost high level limitation factor. This data means that stakeholders are concerned about the legal implication of the inCASA system.

**Technology acceptance:** This data is coherent with the Technology acceptance Test performed by the Italian Pilot ATC where the overall End-Users declared that they are perfectly comfortable with the technology provided. The spike of 36% of a medium-High level concern about the Tech acceptance can be seen as an indication of how the technology to be used should be easy to use by the End-users.

**Refund System:** As from the graph the Refund System starts with a 0% at low level impediments and grows to the 36% at the high level illustrating the **major concerns** of the stakeholders regarding this point.

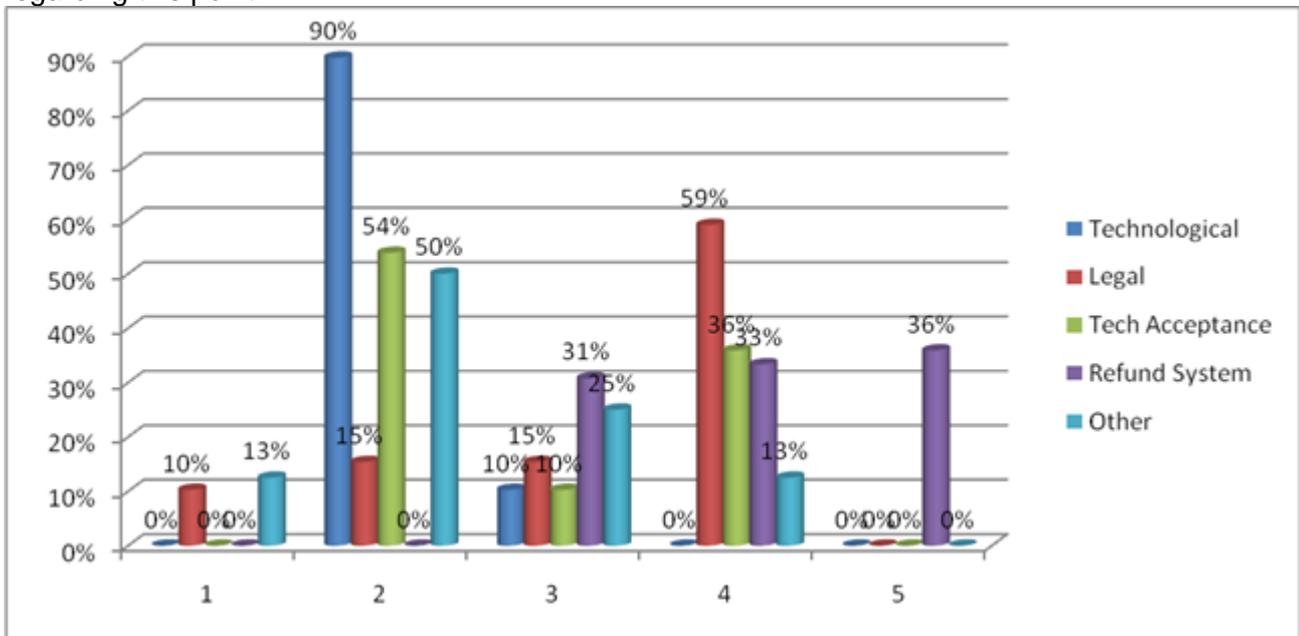
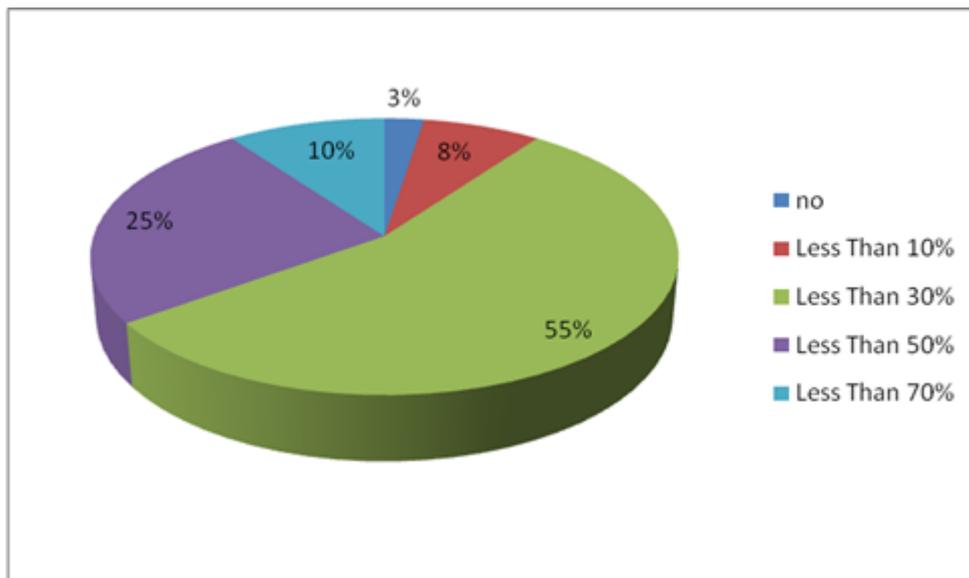


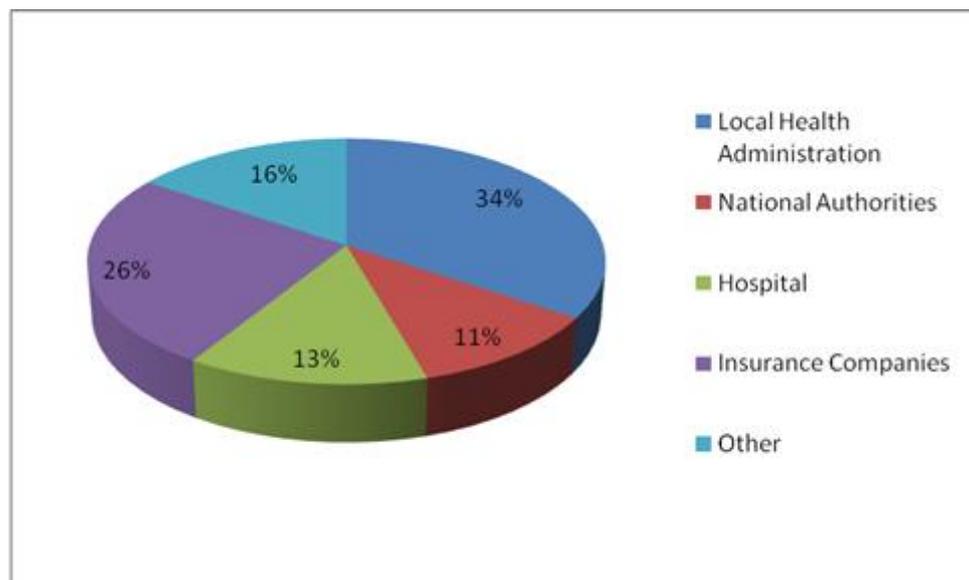
Figure 61 Limitation Factors

When answering the question: “*indicate how much hospitalization costs can be reduced through the inCASA system*”, as from Figure 62 Estimation of hospitalization costs reductions, the 55% of the interviewed believe that there will be an impact of “Less than 30%” while the 25% think that there will be an hypothetical cost reduction of “Less Than 50%”. Only the 3% think there will not be possible to reduce the hospitalization cost with the inCASA solution.



**Figure 62 Estimation of hospitalization costs reductions**

Regarding Figure 63 Organizations that could be interested to invest in the inCASA solution, we can find that the 34% of stakeholder think that the Local Health Administration could be a good interlocutor for the future exploitation of the inCASA project. Moreover the 36% of participants think that the Insurance Companies could be interested as well. Hospital and National authorities play a similar role with a respective 11% and 13% of the total vote.

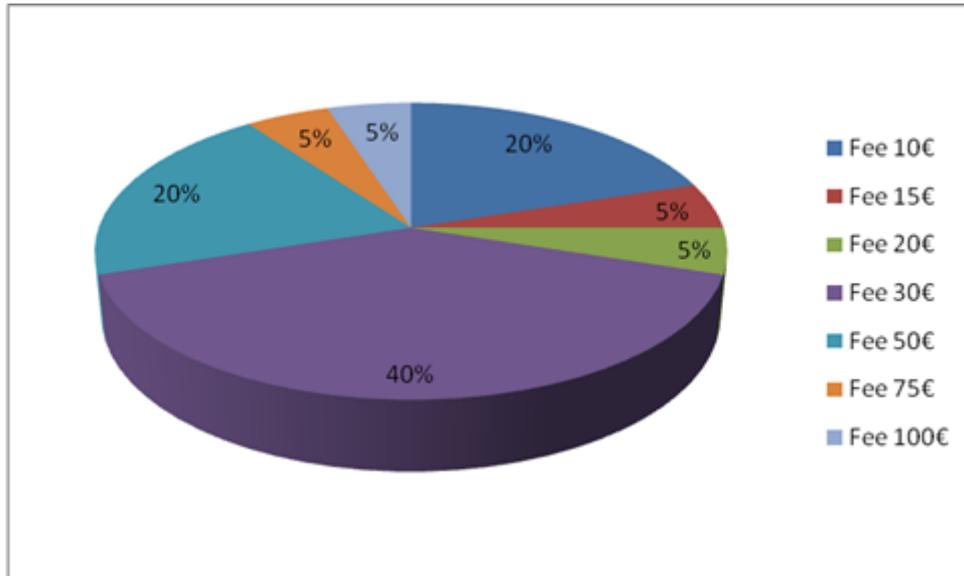


**Figure 63 Organizations that could be interested to invest in the inCASA solution**

Figure 64 Reasonable monthly price indication indicates the percentage on the global number of the stakeholder divided per price slot.

The most important price slot to be considered is the “Fee 10€” that count the 20% of the total stakeholder involved and the “Fee 30€” counting the 40%. Another 20% of stakeholder think that a reasonable price will be “Fee 50€”. Only 5%, for both values, think that a Fee of 75€ and 100€ will be reasonable.

NB: prices estimation can be considered conservative, as influences by the specific focus of the Italian pilot, more related to telecare.



**Figure 64 Reasonable monthly price indication**

## 8 Spanish event

### 8.1 Organization

The Spanish national exploitation event which took place at FHC in Calahorra (La Rioja) on 20<sup>th</sup> of June, 2013, was organised by Pelayo Benito, Coordinator of the pilot at Fundación Hospital de Calahorra (FHC). Health care authorities, diverse health professionals (Doctors, nurses, nursing assistants, etc.), social workers and external SMEs providing services in the health sector participated in the event, which can be considered a great success not only for the number of people taking part but also for the quality of the information exposed.

Telefónica also participated actively during the event with Jordi Rovira, representative of the inCASA project, and Unai Gómez, representative of the commercial unit of Telefónica, which is starting a pre-commercial pilot in this region. Jordi Rovira gave a presentation highlighting why the current chronic care model is failing and how systems such as inCASA could help to find efficiencies in the Healthcare system and improve quality of life of patients. This, in fact, has been shown in Calahorra's pilot, by demonstrating that rehabilitation could be carried out at patients' homes with the same level of quality as in Hospitals. That means taking off some burden of the system and preventing patients from moving to the care centre by using ambulances or taxi depending on their state of health.

Furthermore, a significant effort was put on the dissemination of the event through the usage of social networks and especially Twitter. An account was created for this purpose which acquired many followers and attracted their interest on the event and on the project in general. One can follow at [https://twitter.com/incasa\\_spain](https://twitter.com/incasa_spain) and see the “Annex B: Twitter account for the Spanish exploitation event” of this document for more information on the social network activities of the inCASA Spanish event organizers.

### 8.2 Agenda

| Time             | Subject  | Event Speaker   |
|------------------|--|---|
| 09:30 –<br>09:45 | <b>Opening session: The future of chronic patient care.</b>  | <b>Carlos Piserra</b> (Medical Director and INCASA Project Promoter) and <b>Alejandro López del Val</b> (Manager-Director of the FHC) |
| 09:45 –<br>10:30 | <b>The technological challenges of at-home assistance in social healthcare.</b>  | <b>Telefonica R&amp;D</b>   |
| 10:30 –<br>10:45 | <b>Break.</b>  |   |
| 10:45 –<br>11:15 | <b>An at-home rehabilitation program in patients that suffer from chronic EPOC.</b>                                    | <b>Ricardo Jarrod</b> from FHC  |
| 11:15 –<br>11:45 | <b>Break and coffee reception.</b>   |   |
| 11:45 –<br>11:55 | <b>INCASA video.</b>   |   |
| 11:55 –<br>12:05 | <b>The care and social aspects of an at-home assistance program for chronic patients, an interdisciplinary vision.</b> | <b>FHC professionals involved in carrying out the project</b> (social workers, physiotherapists)                                      |

|                  |  |  |
|------------------|--|--|
| 12:05 –<br>12:15 | <b>Making at-home assistance a reality: From paper to action.</b>                  | <b>UPICAL</b> (technical support and equipment installation); <b>INNOVA</b> (administrative management of the project) and other collaborators |
| 12:15 –<br>12:25 | <b>A patient’s vision about at-home assistance: Advantages and inconveniences.</b> | <b>Participating patient in the FHC-INCASA project</b>   |
| 12:25 –<br>13:00 | <b>Question period and closing</b>   |  |

### 8.3 Photo story



Figure 65 The Spanish event's poster



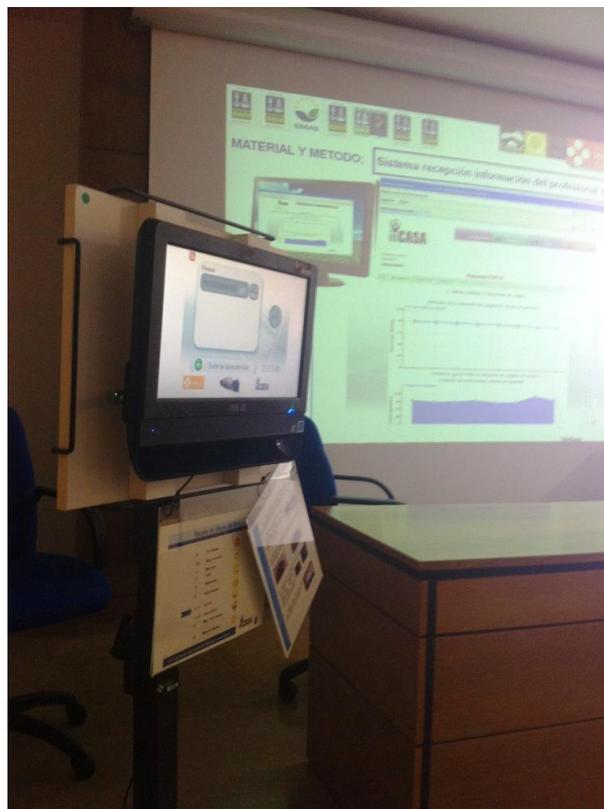
**Figure 66 Carlos Piserra and Alejandro López del Val – Opening session.**



**Figure 67 View of the participants**



**Figure 68 Ricardo Jarid presenting “An at-home rehabilitation program in patients that suffer from chronic EPOC.”**



**Figure 69 FHC patient equipment**

## 8.4 Outcomes

The questionnaires to gauge satisfaction and opinion were handed out to attendees during the opening session of the program. In total, 24 participants were present to comment on various aspects of inCASA addressed within this form.

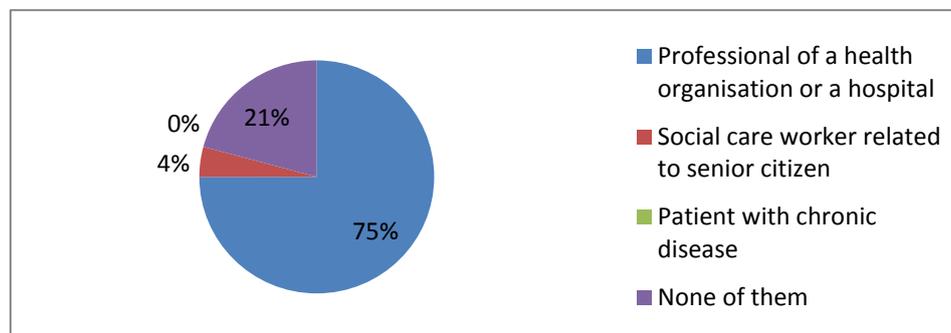
### 8.4.1 Feedback from the stakeholders

As the majority of attendees were healthcare professionals, much of the feedback from participants focussed on the importance and benefit of having an at-home care program. From the patient perspective, a program such as InCASA would help to maintain the health status of a patient with chronic illness and if possible, provide minor improvements to respiratory functioning. On the other hand, such a program would be of great value to the healthcare system by avoiding placing a substantially large strain on the system in the form of providing in-hospital care for long periods of time. By making at-home care accessible, inpatient costs can be reduced and hospital space increased.

Another significant issue that arose during the event was concern about properly facilitating the at-home use of the device by elderly patients. A challenge that would be remaining during the implementation of InCASA would be ensuring that patients were appropriately trained on using the equipment without assistance at home.

### 8.4.2 Questionnaires analysis

The 24 participants that attended the session can be divided into the following categories of stakeholders:

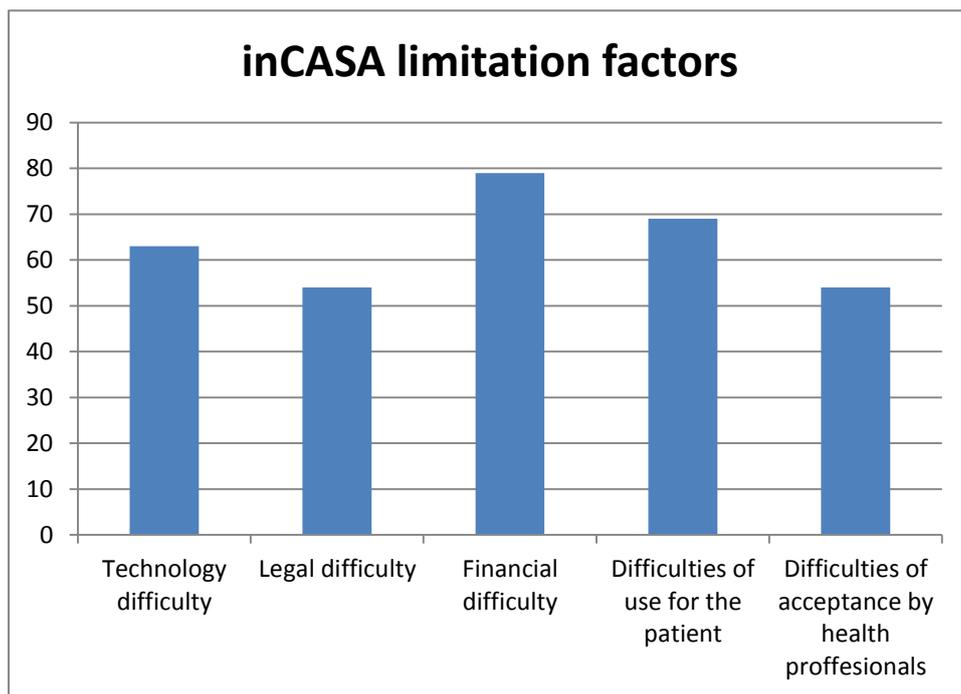


**Figure 70 Participants per stakeholder type**

When asked to comment on the four questions focussing on the feasibility of the INCASA project as a method of at-home patient care the overriding response of participants was very positive. The majority of attendees fully agreed with the following statements:

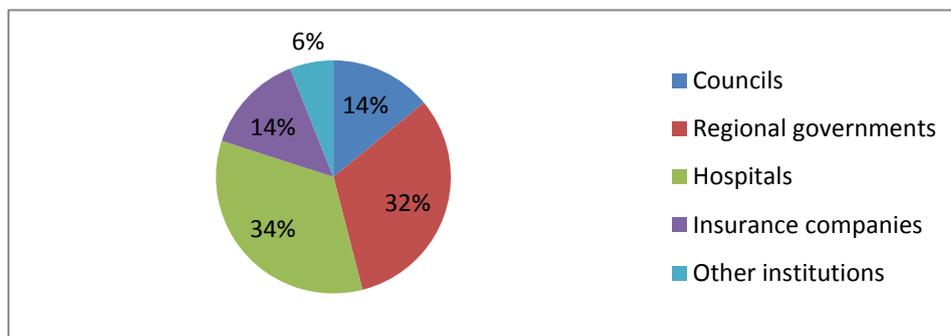
- (1) inCASA can improve the standard of living of senior citizens that suffer from chronic diseases.
- (2) inCASA represents a real innovation regarding the telemedicine solutions used at the moment.
- (3) inCASA represents a really good solution to improve social and health services.
- (4) inCASA can contribute to reduce future costs of hospitalization providing health services to the patient in his own home.

Of all participants that attended the event, 79% believed that financial difficulty would be the largest hindrance to launching initiatives such as inCASA.



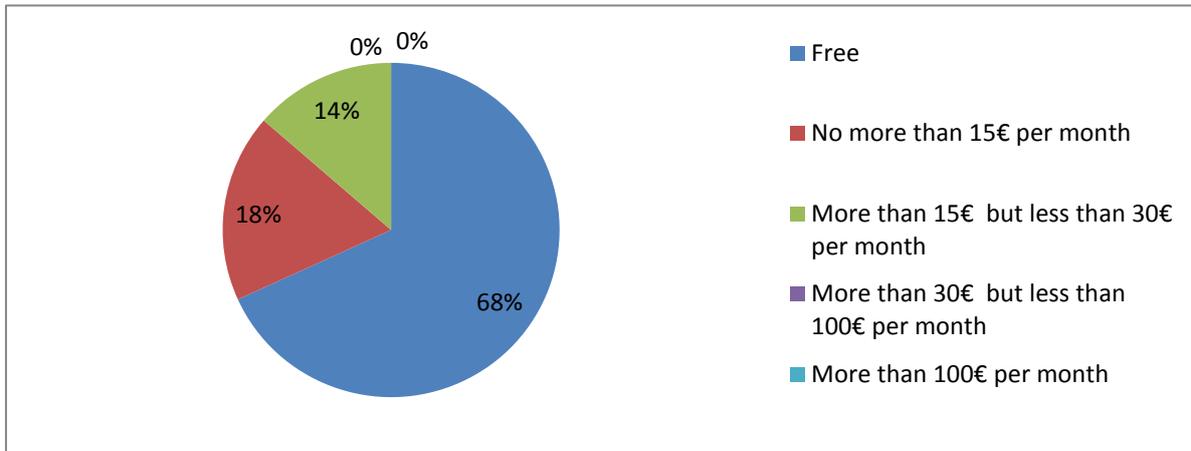
**Figure 71 Participants opinion on the main factors that can hinder launching initiatives like inCASA.**

According to Spanish participants in this region, regional governments and hospitals would be the two institution bodies most interested in incorporating a solution like inCASA.



**Figure 72 Percentage of institutions, according to participants, within the region (La Rioja) that could be interested in incorporating a solution like inCASA.**

Taking into consideration the social status and state of the healthcare system in this region, almost three-quarters of participants believed that a healthcare solution such as inCASA should be free.



**Figure 73 Participant estimates of a reasonable price of a solution like inCASA, taking into account the social and health system of the region (La Rioja).**

## 9 Swedish event

The Swedish event took place at the Vitalis exhibition and conference at The Swedish Exhibition Centre in Gothenburg, Sweden 16<sup>th</sup>-18<sup>th</sup> April. As the Vitalis has the focus on eHealth issues, CNet participated with an inCASA exhibition as foundation for visitors to inspire and get inspired. Vitalis is a place to meet colleagues and partners from Sweden and the Nordic region where the health care sector is currently faced with great challenges and there's a need to invest in competence, know-how and new tools such as the inCASA platform. Vitalis is by far the largest eHealth event in Scandinavia and it broke the record on the number of visitors from previous years. The number of people visiting the conference went up with 32% to a total of 4027 unique visitors!

Below you can see a full list of exhibitors including CNet. This list gives a hint of the level of commitment and the size of the exhibition.

|  |  |  |
|--|--|--|
| <i>21st Century Mobile AB</i>          | <i>Fujitsu Sweden AB</i>                 | <i>NEC Scandinavia AB</i>                    |
| <i>AAL Forum 2013</i>                  | <i>Gatsoft AS</i>                        | <i>Norrbotten i samverkan</i>                |
| <i>Advance AB</i>                      | <i>Grade AB</i>                          | <i>NovaMedTech</i>                           |
| <i>Advania AB</i>                      | <i>Göteborgs Universitet Sahlgrenska</i> | <i>PhysioTools Oy</i>                        |
| <i>AGA Gas AB</i>                      | <i>Akademins kansli</i>                  | <i>Ping Pong AB</i>                          |
| <i>Linde Healthcare</i>                | <i>GöteborgsBIO</i>                      | <i>Pro4u Public Management AB</i>            |
| <i>Alkit Communications AB</i>         | <i>Harsoria Healthcare Pvt.Ltd</i>       | <i>Pulsen AB</i>                             |
| <i>Apotekens Service AB</i>            | <i>Health Solutions AB</i>               | <i>RES Software</i>                          |
| <i>Appva AB</i>                        | <i>Herrljunga Ledstångsfabrik AB</i>     | <i>Ricoh Sverige AB</i>                      |
| <i>At Lan AB</i>                       | <i>Hewlett-Packard Sverige AB</i>        | <i>RxEye AB</i>                              |
| <i>Atea Sverige AB</i>                 | <i>Hosit</i>                             | <i>Sahlgrenska Science Park</i>              |
| <i>Attachmate</i>                      | <i>HOW Solutions AB</i>                  | <i>SecMaker AB</i>                           |
| <i>B3IT Healthcare AB</i>              | <i>Hälsans Nya Verktyg</i>               | <i>Sectra Sverige AB</i>                     |
| <i>BEST Teleprodukter AB</i>           | <i>IBM Svenska AB</i>                    | <i>Siemens</i>                               |
| <i>BRG Business Region Göteborg AB</i> | <i>IDG International Data Group AB</i>   | <i>SIS-Swedish Standards Institute</i>       |
| <i>Callista Enterprise AB</i>          | <i>Imatis AS</i>                         | <i>Sjukhusläkarna</i>                        |
| <i>Cambio Healthcare Systems AB</i>    | <i>Imprivata</i>                         | <i>Socialstyrelsen</i>                       |
| <i>Capgemini Sverige AB</i>            | <i>Infogo Soft AB</i>                    | <i>Software Point AB</i>                     |
| <i>Center för eHälsa i samverkan,</i>  | <i>Intel Sweden AB</i>                   | <i>Sogeti Sverige AB</i>                     |
| <i>CeHis</i>                           | <i>InterSystems AB Sweden</i>            | <i>SOS International Swedish Branch</i>      |
| <i>Cerner Limited</i>                  | <i>Intraphone AB</i>                     | <i>Stretch Public AB</i>                     |
| <i>CGI Sverige AB</i>                  | <i>IT Centrum Väst @Business Region</i>  | <i>Studentlitteratur AB</i>                  |
| <b>CNet Svenska AB</b>                 | <i>Göteborg</i>                          | <i>Swedish ICT Research AB</i>               |
| <i>CompuGroup Medical Sweden AB</i>    | <i>IT-universitetet i Göteborg</i>       | <i>Svensk Förening för Medicinsk</i>         |
| <i>CSC Scandihealth A/S</i>            | <i>Karolinska Universitetssjukhuset</i>  | <i>Informatik</i>                            |
| <i>Diabetes Tools Sweden AB</i>        | <i>Huddinge</i>                          | <i>Svensk förening för medicinsk teknik</i>  |
| <i>Domitor Consulting AB</i>           | <i>Kibi Sverige AB</i>                   | <i>och fysik</i>                             |
| <i>East Sweden Convention Bureau</i>   | <i>Lincor Solutions</i>                  | <i>Svensk Krisledning AB</i>                 |
| <i>Ekahau Oy</i>                       | <i>Mawell Scandinavia AB</i>             | <i>Telia</i>                                 |
| <i>e-man AB</i>                        | <i>Max Manus AB</i>                      | <i>TellusTalk / Multimedia Messaging</i>     |
| <i>EMC Information Systems Sweden</i>  | <i>MEDEXA Diagnostisk Service AB</i>     | <i>Tieto Sweden Healthcare &amp; Welfare</i> |
| <i>Epic</i>                            | <i>Medibas</i>                           | <i>Usify AB</i>                              |
| <i>Esri Sverige AB</i>                 | <i>MedTech Magazine</i>                  | <i>Wagner Form AB</i>                        |
| <i>EVRY Consulting AB</i>              | <i>MedTech West</i>                      | <i>Vingmed AB</i>                            |
| <i>EVRY HealthCare AB</i>              | <i>Merck AB</i>                          | <i>Vision</i>                                |
| <i>EVRY Healthcare Solutions AB</i>    | <i>Miljöpartiet de gröna</i>             | <i>VM ware</i>                               |

CNet exhibited a 9 square meter boot with a big screen presentation on inCASA, inCASA leaflet and the inCASA poster (see figures). The boot location was optimal with several big company and organisation names next to it. Further it was on the way to the conference halls meaning that a lot of potential visitors had to pass the boot giving us extra opportunity to exploit the inCASA platform.

### 9.1 Agenda

The agenda for the Vitalis conference was built on several themes and instead of including the entire scheduled conference talks (as it is not directly relevant for the inCASA exhibition event) we will only provide the topics here in order to raise awareness of the scope of the Vitalis conference:

1. *Patient security (integrity)*
2. *Reporting technologies*
3. *Usability*
4. *Distance care*
5. *Future technology*
6. *Patient security (pharma)*
7. *Welfare/residence technology*
8. *Patient security (information security)*
9. *Change management*
10. *Web-based journals*

## 9.2 Photo story

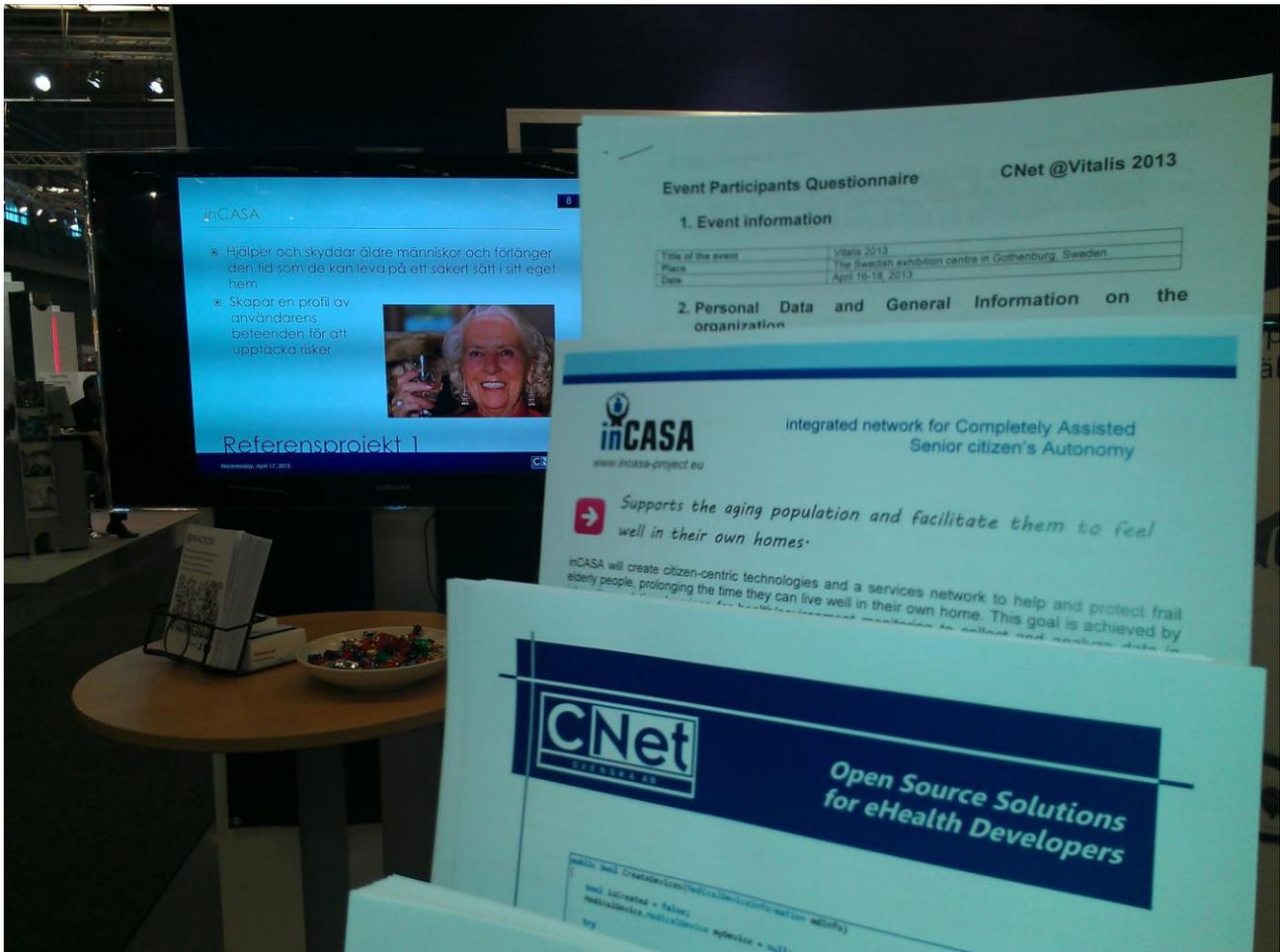
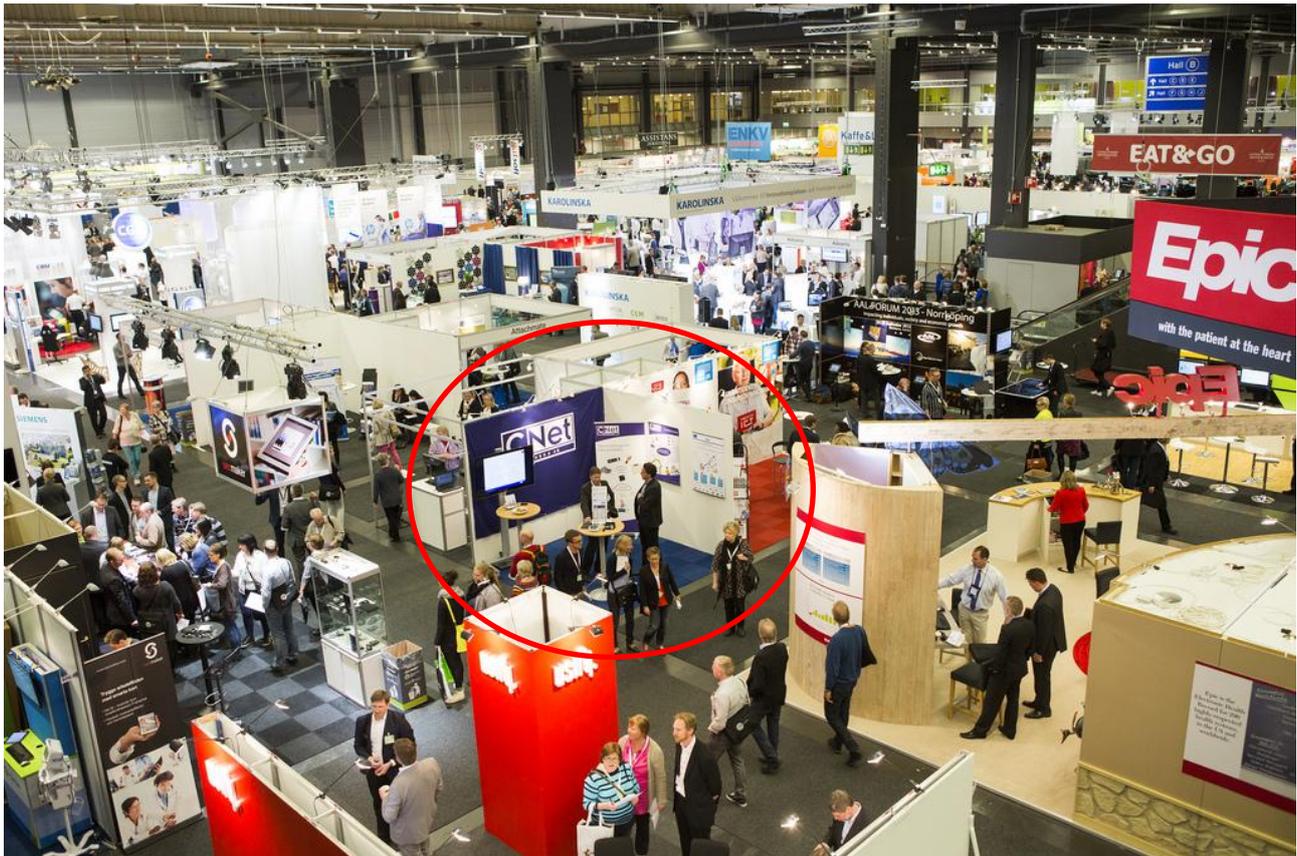


Figure 74 inCASA paper stand with leaflet and questionnaire. In background powerpoint presentation about inCASA on large screen.



Figure 75 inCASA poster position next to busy point in the exhibition hall.



**Figure 76** Location of CNet boot in a photo that is included in the Vitalis report. It shows approximately 20% of total exhibition area.

## 9.3 Outcomes

The outcome of Vitalis from CNet point of view was very positive. We gathered a list with approximately 40 prospective customers, mainly in Sweden but also in other Scandinavian countries. The customers were mainly coming from various authorities and could be both from Swedish municipalities (e.g. Gothenburg city), county councils (e.g. Östergötland's and Västerbotten's county councils) and state-oriented organisations (e.g. Sahlgrenska Incubator) but potential customers were also represented by interest groups for patients and people with special needs. Additionally there were also a few politicians visiting our boot. So far we have already had one meeting with a Norwegian company and have booked two more prospect meetings before summer. Another upcoming meeting is with the municipality of Sundbyberg just outside of Stockholm. In 2015 Sundbyberg will take over the responsibility for home care from the county council and now wants to know more on remote care as cheaper and more effective alternative. The presentation of the inCASA platform attracted the Sundbyberg representatives and the meeting will to great extent be based on the flexibility provided by inCASA.

### 9.3.1 Feedback from the stakeholders

From 2015 the responsibility of elderly care in Sweden will be transferred from regional level to local municipality level<sup>1</sup>. Therefore many municipalities visited Vitalis in order to learn about what kind of systems and services exist on the market. Our solution as presented on Vitalis was appreciated for its approach of being open and based on standards, while still supporting many of the devices available on the markets,

<sup>1</sup> [http://www.skl.se/vi\\_arbetar\\_med/socialomsorgochstod/aldre/a-o\\_aldefragor/hemsjukvard](http://www.skl.se/vi_arbetar_med/socialomsorgochstod/aldre/a-o_aldefragor/hemsjukvard)

From autumn 2014, Swedish government will launch a National Personal Health Account for every citizen<sup>2</sup>, an account in the cloud where everyone can store and gather all personal health-related information, including vital signs measurements, electronic patient records but also diet and fitness data. During Vitalis we did get several questions about connecting InCasa with the Swedish Health Account system, which is something we already have started looking into.

### **9.3.2 Questionnaires analysis**

Vitalis is a busy commercial event and during the event it was not possible to have people filling out lengthy questionnaires. Instead we had discussions of various lengths with the visitors.

In general, the concept of integrating telecare and telehealth services is seen as attractive on the Swedish healthcare market, and will be important when responsibility of elderly care is shifted down to local municipality level. Because of cost of home visits for instance in the Northern regions, the need for technology platforms allowing remote control and monitoring is high, but it is often pointed out that technology cannot replace human communication rather be a complement and enhancement. Much of this will be further elaborated on different levels as it is a current hot topic in Sweden and because of this it would be too predictable and unforeseen to conclude things in beforehand. The fact is that the approach of combining telecare and telehealth is the right path to go, both from a technical and economic viewpoint.

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<sup>2</sup> [http://www.apotekensservice.se/aktuellt/aktuella\\_uppdrag/ett\\_personligt\\_halsokonto/](http://www.apotekensservice.se/aktuellt/aktuella_uppdrag/ett_personligt_halsokonto/)

## 10 Danish event

### 10.1 Danish national event, Welfare Technology '13

The Danish national event, Welfare Technology '13 (in Danish "Velfærdsteknologi '13": <http://event.cok.dk/velfaerd13>), in which In-JeT was going to participate was cancelled on 21 May 2013, only 2 weeks before the conference was supposed to be held (6 June).

This conference represented a unique exploitation opportunity for the inCASA project because it was precisely aimed at Danish stakeholders, especially decision makers and service providers in the health- and social care domain, with the objective of presenting the technological solutions and services available in this field. When In-JeT first contacted the organisers in the beginning of this year with a proposal and summary for a presentation, they were very interested and pleased to include us in the programme because as they said: *"the project sounds very interesting and extremely relevant to the target group for the conference"*.

Therefore, it was extremely unfortunate that it was cancelled but a similar high profile national event, The eHealth Observatory, is planned for December 2013 in which In-JeT plans to participate (see section 10.2 below).

#### 10.1.1 Organisation

The Welfare Technology '13 conference has been held with great success the previous years with more than 300 participants and consists of both presentations and exhibitions. This annual conference is aimed at Danish Municipalities, Regions, healthcare and social care professionals. As the title suggests, the focus is on technological solutions for welfare services with a particular focus on social and healthcare services for the elderly. The Minister for Economic Affairs and the Interior, Margrethe Vestager, and former Health Minister and current President for the Union of Danish Pensioners and member of the government's "Elderly Commission", Arne Rolighed, were among the many prominent speakers at the conference.

In-JeT and Skive Municipality were going to give a presentation on the inCASA project and the experiences from the Skive Transferability Model. The presentation, entitled "Improved actions against chronic diseases using telemedicine solutions", was placed under the theme of "Citizens hospitalised in their own home: The cooperation between municipalities, regions and private (providers)".

In addition, In-JeT had organised an exhibition stand demonstrating the project's technical solution and results. Specifically, the transferability capabilities of inCASA were going to be demonstrated. The demonstration was showing how the touch screen and some of the devices were used by chronic elderly patients in Skive and visitors would have the opportunity to try the devices themselves (blood pressure and blood glucose) and see how data is transmitted and presented in the inCASA Consumer Application online.

#### 10.1.2 Agenda

The agenda for Welfare Technology '13 had five themes:

- Citizens hospitalised in their own home: The cooperation between municipalities, regions and private (providers)
- Disabilities

- The technologically competent citizen
- Economics, strategy and the international perspective
- Product presentations.

Below is the official agenda (in Danish).



## Velfærdsteknologi '13

Torsdag den 6. juni 2013, kl. 8.00 – 16.30.

Odense Congress Center, Ørbækvej 350, 5220 Odense SØ.

|       |   |
|-------|---|
| 8.00  | Registrering og morgenkaffe med mulighed for at besøge udstillerne  |
| 9.15  | Velkommen<br>v. konferencier Henrik Føhns, journalist og studievært på DR P1s Harddisken  |
| 9.30  | Fra projekt til implementering<br>v. økonomi- og indenrigsminister Margrethe Vestager<br>Regeringens visioner for velfærdsteknologi |
| 10.00 | Gennemgang af dagens program  |
| 10.15 | Kaffepause med mulighed for at besøge udstillerne   |
| 10.40 | Dagens program fortsætter på de fem scener  |

**Tema: Borger indlagt i eget hjem****Om samspillet mellem kommuner – regioner – private.**

|       |   |
|-------|---|
| 10.40 | <p><b>Debatindlæg ved Danske Regioner og KL</b><br/> Hør repræsentanter fra KL og Danske Regioner debattere velfærdsteknologiske tendenser og hvilke muligheder og udfordringer det medfører.</p>   |
| 11.25 | <p><b>Kaffepause</b></p>  |
| 11.35 | <p><b>Leverandørperspektivet – Telesundhed set i OPI-sammenhæng</b><br/> v. Jens Lunn, adm. direktør ved Falck Hjælpemidler<br/> Hør om Falcks rolle i sundhedshotspottet i Horsens – et projekt der forløser potentialet med hvordan vi håndterer de telemedicinske udfordringer i spændingsfeltet mellem kommune, region og borger.</p>   |
| 12.20 | <p><b>Frokost</b></p>   |
| 13.20 | <p><b>Styrket kronikerindsats med telemedicinsk udstyr</b><br/> v. Bende Juel Okkerstrøm og Elsebeth Hummelgaard, Skive kommune<br/> Projektet inCASA i Skive kommune har fokus på, hvordan telemedicinsk udstyr kan være med til at støtte skrøbelige ældre borgere med KOL eller diabetes i hverdagen, så de kan blive længere i eget hjem og undgå indlæggelser. Hør hvordan udstyret kan være med til at styrke forståelsen af egen sygdom, se sammenhænge mellem forskellige faktorer, som har betydning for sundhedstilstanden, og hvordan det kan understøtte den tværfaglige sundheds- og omsorgsindsats.</p> |
| 14.05 | <p><b>Kaffepause samt mulighed for at besøge udstillere</b></p>   |
| 14.30 | <p><b>Behovsfokuserede løsninger – hvordan sikres kvalitetsløft og udgiftsreduktion gennem forandringerne?</b><br/> v. læge og Ph.d., Martin Vesterby<br/> Med erfaringer fra interdisciplinært innovationsarbejde og udvikling af IT til sundhedssektoren præsenteres eksempler på, hvordan man arbejder med behovsfokuserede løsninger. Eksempler på de organisatoriske forandringer implementering af IT kan medføre og hvordan man kan flytte opgaver fra sundhedssektoren til patienter og deres pårørende – med et samlet fokus på kvalitetsløft og udgiftsreduktion.</p>                                       |
| 15.15 | <p><b>Hvordan kan man teknologisk imødekomme nybagte mødres behov i hjemmet?</b><br/> v. Cand. Cur. og Ph.d.-studerende Dorthe Boe Danbjørg, Syddansk Universitet<br/> Om et projekt på OUH Svendborg med at imødekomme nybagte mødres behov i hjemmet vha. en app til iPad. Fra idegenerering og udvikling til afprøvning og evaluering af løsningen. Hvordan gør løsningen det muligt at yde vejledning over afstand? Noget som tidligere foregik på hospitalet, men som nu skal varetages hjemme.</p>  |
| 16.00 | <p><b>Tak for i dag</b></p>   |

**Tema: Handicap**

|       |   |
|-------|---|
| 10.40 | <b>Borgerperspektivet på velfærdsteknologi</b><br>v. Thorkild Olesen, næstformand for Danske Handicaporganisationer   |
| 11.25 | <b>Kaffepause</b>   |
| 11.35 | <b>Den velfærdsteknologiske indsats på handicapområdet sættes til debat</b><br>v. Hans Andersen, handicapordfører fra Venstre og Henrik Føhns, studievært på P1s Harddisken   |
| 12.20 | <b>Frokost</b>  |
| 13.20 | <b>MOVISS – Velfærdsteknologi i praksis</b><br>v. Flemming Paasch, Fagcenter for Autisme og ADHD, Aalborg kommune<br>Oplægget tager udgangspunkt i støttesystemet MOVISS herunder en kort gennemgang af systemets vej fra idé til projekt. Der vil være en indføring i systemets grundlæggende funktioner og muligheder for individualisering af støtten. Endvidere vil der være en gennemgang af de erfaringer der er gjort gennem implementeringsprocessen af MOVISS. |
| 14.05 | <b>Kaffepause samt mulighed for at besøge udstillere</b>  |
| 14.30 | <b>Velfærdsteknologien indenfor handicapområdet</b><br>v. Søren Torpegaard Bech, direktør for Den Sociale Virksomhed<br>Hvordan kan man systematisere anvendelsen af velfærdsteknologi for at få et overblik over den samlede indsats i organisationen? Om en netværksbaseret organisering af velfærdsteknologiske tiltag.  |
| 15.15 | <b>Trivselsskærmen</b><br>v. Brian Østergaard, chef ved E-mergency<br>Om erfaringerne med trivselsskærmen carePlan. En løsning der kan bruges i plejecentre og hos hjemmeplejen ved at gøre ældre og handicappede mere selvhjulpne i deres dagligdag og dermed øge deres autonomi og værdighed.   |
| 16.00 | <b>Tak for i dag</b>  |

**Tema: Den teknologisk kompetente borger**

|       |  |
|-------|--|
| 10.40 | <p><b>Barrierer og udfordringer for medarbejdere og borgere</b><br/> v. Katja Marianne Kayser, adm. direktør i Sundheds- og omsorgsforvaltningen, Københavns kommune<br/> Velfærdsteknologiens start italesat som arbejdskraftbesparende og som fremmende et bedre arbejdsmiljø.<br/> Hvordan giver velfærdsteknologi muligheder for at borgeren selv kan klare mere og hvordan er velfærdsteknologi en integreret del af hverdagen - både i hjemmet, på plejehjemmet og på institutioner?</p> |
| 11.25 | <p><b>Kaffepause</b></p>   |
| 11.35 | <p><b>Kompetencer til velfærd</b><br/> v. prof. Pernille Kræmmergård, Aalborg Universitet<br/> Udvikling og indførelse af velfærdsteknologi kræver ledelse og kompetenceudvikling på alle niveauer i den kommunale sektor. Hvordan kan arbejdet med velfærdsteknologi organiseres i kommunen, og hvilke krav stiller det ledelsen og medarbejdere?</p>   |
| 12.20 | <p><b>Frokost</b></p>  |
| 13.20 | <p><b>Det telemedicinske konsortium</b><br/> v. Karin Holland, direktør ved Sundhed og Socialservice, Horsens kommune<br/> Hør om det unikke samarbejde mellem kommune, hospital og private virksomheder om visioner for fremtidens telemedicin. Samarbejdet indebærer bl.a. en forsøgsperiode på over tre år, hvor 400 borgere i Horsens kommune med kronisk sygdom vil kunne gå til lægen hjemme i deres egen stue.</p>  |
| 14.05 | <p><b>Kaffepause samt mulighed for at besøge udstillere</b></p>  |
| 14.30 | <p><b>Seniorliv og velfærdsteknologi,</b><br/> v. Arne Rolighed, tidl. Sundhedsminister og formand for Danske Pensionister<br/> Hvordan påvirker det ældre pludselig at blive brugere af velfærdsteknologiske hjælpemidler? Hvordan bevares den empatiske og respektfulde tilgang til den ældre patient i implementering af velfærdsteknologi?</p>   |
| 16.00 | <p><b>Tak for i dag</b></p>  |

| <b>Tema: Økonomi, strategi og det internationale perspektiv</b> |   |
|---|---|
| <b>10.40</b>  | <b>Investering eller udgift?</b><br>Om KLs strategiske tilgang til velfærdsteknologien.   |
| <b>11.25</b>  | <b>Kaffepause</b>   |
| <b>11.35</b>  | <b>Sådan gør de i Sverige!</b><br>v. <b>Raymond Dahlberg</b> , Hjälpmedelsinstitutet<br>Det svenske projekt "Teknik for Ældre" fandt sted i årene 2007 – 2012 i et samarbejde mellem det svenske hjælpemiddelsinstitut og den svenske regering. Hør om projektets resultater, som kan inspirere til lignende modeller i de øvrige nordiske lande.   |
| <b>12.20</b>  | <b>Frokost</b>  |
| <b>13.20</b>  | <b>Brug ressourcerne rigtigt</b><br>v. <b>Jens Kastenskov</b> , CareTech Consult<br>Hør om et helt nyt netværk, hvor kommunerne på en systematisk måde måler og evaluerer effekterne af deres velfærdsteknologiske indsats. Målingerne belyser effekter indenfor politiske målsætninger, borgertilfredshed, økonomi, medarbejdertilfredshed og projekteksekvering. Det giver en god mulighed for at opstille et ensartet sammenligningsgrundlag for kommunerne imellem. |
| <b>14.05</b>  | <b>Kaffepause med mulighed for at besøge udstillere</b>   |
| <b>14.30</b>  | <b>Fredericia Former Fremtiden – strategi og satsninger med inddragelse af velfærdsteknologi</b><br>v. <b>Morten Hoff</b> , chefkonsulent hos Fredericia Kommune<br>Hør om hvordan velfærdsteknologi integreres i tiltag som Fredericia Kommune har haft succes med. Bl.a. projektet "Længst muligt i eget liv", der både involverede hjemmeboende og borgere på plejecentre.   |
| <b>15.15</b>  | <b>Velfærdsteknologiske tiltag i Norden</b><br>v. <b>Erland Winterberg</b> , projektleder ved Nordic Centre for Welfare and Social Issues<br>Hvilke velfærdsteknologiske tiltag og politikker er at finde i de fem nordiske lande? Eksempler på konkrete tiltag og projekter af bred interesse, samt potentialet for et udvidet nordisk samarbejde på området.  |
| <b>16.00</b>  | <b>Tak for i dag</b>  |

| <b>Tema: Produktscene</b> |   |
|---------------------------|---|
| 10.40                     | Produktudstillere.  |
| 11.00                     | Produktudstillere.  |
| 11.25                     | Pause   |
| 11.35                     | Hvad vil der ske i løbet af de næste 10 år - her og ude i verden?<br>Et bud på den kommende udvikling indenfor velfærdsteknologi og telemedicin.  |
| 12.20                     | Frokost   |
| 13.20                     | Velfærds Teknologi Vurdering (VTV)<br>v. Dorthe Malig Rasmussen, konsulent, cand.scient.san., Ph.d., Teknologisk Institut<br>Et evalueringskoncept udviklet af Teknologisk Institut, som bl.a. kan bruges til at udvælge de bedste eller meste relevante velfærdsteknologiske teknologier.  |
| 14.05                     | Pause   |
| 14.30                     | Velfærdsteknologi og vækst – hvordan?<br>v. Søren Duus, Duus Communications<br>Hvilken læring kan drages af de mange pilotprojekter, der gennem tiden er skabt i Danmark? Læring der tilsammen udgør et bud på en storskala løsning, som dækker de nødvendige valg af teknologier, standarder og infrastruktur. Herunder også om organisatorisk opbygning af en samarbejdskultur, mellem de forskellige aktører på det velfærdsteknologiske felt. |
| 15.15                     | Produktudstillere   |
| 15.35                     | Produktudstillere   |
| 16.00                     | Tak for i dag   |

### 10.1.3 Cancellation Reporting

As noted above, the event was cancelled just 2 weeks before it was supposed to be held. Based on the previous success of the conference, its programme and the current strong focus on telemedicine and telecare in Denmark, it was completely unforeseen and unexpected that the conference would be cancelled due to few registrations. As soon as we were notified, we started an intense search for other relevant events and investigated the option of organising our own national event in cooperation with Skive. Skive has been very helpful in approaching their contacts (relevant stakeholders) in municipalities and regions. However, given the extremely short time frame and the fact that the summer holiday begin mid-June in Denmark, the option of organising our own event is not deemed feasible and there are no other relevant externally organised events until the late autumn/winter this year.

Screenshot from the conference “Welfare Technology ‘13” website. The headline says: **“Unfortunately, Welfare Technology ’13 has been cancelled due to few registrations”**.



We have also received an official letter from the organisers confirming the cancellation – see below:



**COK -  
National Institute for  
Government Management  
and Training**  
Hedeager 5, 1.sal  
8200 Aarhus N  
T: 8779 6300  
cok@cok.dk  
www.cok.dk

Den 14. Th of June 2013

## Declaration regarding cancellation

The Conference 'Welfare technology 2013' was cancelled on May 21.st due to lack of enrollments.

The cancellation was unexpected as the Conference has been held the previous years with great connectivity.

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Ib Oustrup  
CEO

## 10.2 Future Event: eHealth Observatory 2013

In-JeT plans to participate in a large annual national event, The eHealth Observatory (in Danish “E-sundhedsobservatoriet”) with the intention of presenting the inCASA solution for exploitation purposes on the Danish market.<sup>3</sup>

The eHealth Observatory will be on the 2<sup>nd</sup> and 3<sup>rd</sup> of December 2013 at Hotel Nyborg Strand in Nyborg, Denmark.

At the time of writing, the website, agenda and further information about the forthcoming conference have yet to be published. However, this conference had been a recurrent annual event since 2001.

### 10.2.1 Organisation

The eHealth Observatory is a part of the Danish Centre for Health Informatics at Aalborg University in Denmark. The Danish Centre for Health Informatics contributes to research and understanding of the interrelationship among health problems, the organisation of the health system and information technology. The basic research fields within the network are:

- user interface and usability
- technology assessment and implementation
- decision support systems
- clinical information systems, and EHR
- telemedicine
- organisation and management
- quality development and assurance
- user driven innovation
- ambient assisted living
- clinical work practice
- eHealth technologies.

Members of its Advisory Board include among others:

- The Danish Regions’ organisation for Healthcare IT<sup>4</sup>
- Local Government Denmark<sup>5</sup>
- MedCom<sup>6</sup>
- Sundhed.dk<sup>7</sup>
- Danish Medical Association<sup>8</sup>
- Danish Patients<sup>9</sup>
- Center for IT Innovation, University of Copenhagen<sup>10</sup>
- Danish Society for Clinical Telemedicine<sup>11</sup>

<sup>3</sup> <http://2012.e-sundhedsobservatoriet.dk/>

<sup>4</sup> <http://www.regioner.dk/sundhed/sundheds-it/rsi>

<sup>5</sup> <http://www.kl.dk/English/>

<sup>6</sup> <http://medcom.dk/wm109991>

<sup>7</sup> <https://www.sundhed.dk/>

<sup>8</sup> <http://www.laeger.dk/portal/page/portal/LAEGERDK/Laegerdk/ServiceMenu/ENGLISH>

<sup>9</sup> <http://danskepatienter.dk/about-danish-patients>

<sup>10</sup> <http://citi.ku.dk/english>

<sup>11</sup> <http://www.dskt.dk/>

In-JeT will present the inCASA platform at the eHealth Observatory conference in 2013, focusing on demonstrating how the inCASA platform enables the integration of health and social care in order to achieve better, more efficient and continuous care for the elderly and chronic patients. Evidence and experiences from the Transferability Model in Skive will be presented, thus demonstrating how the inCASA solution can be transferred and made to fit the needs and requirements of the user.

In-JeT already has a significant contact list of relevant stakeholders and many of these are recurrent participants at this conference. Nevertheless, In-JeT will send out a press release to inform stakeholders of the opportunity to learn more about the inCASA solution at the conference.

inCASA brochures and evaluation results from Skive will be made available to interested stakeholders at the conference.

## 10.2.2 Previous Years Agendas

The conference usually presents a mixture of experiences from existing implementations of Telehealth and Telecare solutions and services (e.g. experiences and results related to clinical, cross-sectorial integration and workflow, organisational, economic/resource, and regulatory issues), eHealth projects, and future visions for eHealth.

The theme of last year's conference was "eHealth as the Foundation that Ensures Continuity and Consistency in the Citizen's Healthcare System". The ageing population and increase of chronic patients in Denmark were some of the factors behind the 2012 conference theme. The programme highlighted that in Denmark eHealth is considered one of the key elements for the transformation of the healthcare system towards:

- Increased citizen/patient empowerment
- Increased quality in treatment and continuity in patient care models
- Increased resource efficiency through prevention, improved quality and re-assignment of responsibilities.

Previous conferences have focused on a variety of topics related to eHealth such as:

- Changing Focus from Disease to Health: eHealth as a Tool for Renewal of the Healthcare System
- Efficient eHealth for Healthcare Staff and Patients
- New Ways towards Integrated Healthcare IT Systems
- Cross-sectorial Patient Care Plans and Shared Care
- Integration and Connections between Systems, Data, Services and Clinical Processes
- Status of the National IT Strategy for Healthcare
- The Implementation of Electronic Health Records in Hospitals.

## 10.2.3 Expected Outcomes

Current trends in Denmark demonstrate a focus on integration of healthcare and social care services in order to optimise continuity and efficiency of the Danish welfare system. Several municipalities, who are responsible for health and social care to citizens, are currently involved in testing eHealth (Telecare and Telehealth) services and solutions aimed particularly at the elderly and chronic patients. The eHealth Observatory is a well-renowned venue for sharing experiences and evidence of eHealth services.

The eHealth Observatory is aimed at both primary and secondary healthcare providers, e.g. the municipalities and regions (including hospitals), as well as patients, relatives, healthcare professionals and decision makers on various levels. As such, the conference represents a unique

opportunity to reach all stakeholders within the Danish health and social care system and, as the title suggests, particularly stakeholders involved in eHealth.

Presenting the experiences from the Skive model provides a strong use case and evidence base for commercial exploitation of the inCASA platform and will play a significant role for our success in targeting Danish municipalities and regions who are responsible for provide social care and primary and secondary healthcare. In-JeT thus expects that the conference will allow us to generate a significant commercial interest in the inCASA platform and that it will expand our existing customer base.

## 11 Conclusion

This deliverable has reported on the organisation and the outcomes of the National Events hosted at each country participating in the inCASA project. For the organization of the events a series of common guidelines was established that facilitated the development of different approaches to informing the key stakeholders and for receiving qualitative and quantitative feedback. All events sought the participation of local/regional authorities, which were identified early on as the key stakeholders for enabling larger-scale deployments of the inCASA platform in the future. Also, several events placed significant focus on the compliance to standards and the integration aspects of the inCASA services, both key factors in enabling the enrichment of the inCASA ecosystem and the future development of added-value services and new products (by SMEs and service providers in the health/social services sectors). Additionally important was the feedback received by end-users, specifically health professionals and patients that have participated in the inCASA pilots. Finally, almost all national events gathered valuable input on the market opportunities for inCASA services in each country, given the respective structuring and size of the individual markets, and the existing legislative/organisational frameworks and national policies for health and social services provision.

The main outcomes of the national events can be summarized along the axes described above:

- 1. User satisfaction and identified opportunities:** The pilots' users who found the opportunity to detail their experiences during the national events were generally enthusiastic with the inCASA integrated services and would recommend them to other potential end-users; they would also like to see them provided on a larger scale from regional administrations or by social security organizations/insurance companies. The described experiences corroborate the findings produced by the statistical analysis of the pilots' questionnaires (see inCASA deliverable 6.6 Pilot Evaluation Report and inCASA platform validation and recommendation Report).
- 2. Professional users and added value to care services:** Their view, as voiced in the events, was that the innovative services developed within inCASA can support the transformation of the healthcare system from a treatment oriented system to a patient-centred system based on prevention, ubiquitous monitoring and continuous multi-level support. Regarding the added value of the integrated socio-health inCASA services, the professionals expect that they will offer a better view of the patient's situation and the ability of early detection of deterioration signs.
- 3. Technology and services providers:** The health care sector is currently faced by great challenges and there's a need to invest in competence, know-how and new tools such as the inCASA platform. Integration of services remains a significant challenge as voiced by many key market stakeholders. ICT professional and SMEs that participated in the events appreciated the adoption of standards inside the inCASA, because they facilitate future integration with other systems that could form a bigger healthcare monitoring network. Also significant interest was expressed on the mechanism of data collection to generate the habits model and about the sensors used. A number of prospective customers expressed their interest in the inCASA technologies and were ready to offer their insight and expertise for developing additional use cases and short-term installation possibilities.
- 4. Regional administrations, the national and European dimensions:** There is currently a gradual transformation of the health and social care services delivery taking place within European countries: a) adopting integrated care models and b) shifting the responsibilities from the national to the regional level (i.e. municipal, country-side) for providing care. Stakeholders from regional administrations participating in the events assessed that the

inCASA approach of combining Telecare and Telehealth is the right path to go, both from a technical and an economic viewpoint. Sustainable business models definition (based on value analysis for society), standards-based equipment proliferation and combined care models driving technological innovation, all play a significant role in adopting integrated approaches on the regional level. Expected results include taking off some burden from the national Healthcare systems, improving the quality of life of elderly and chronic patients, providing efficient services to rural areas with low population densities and enabling resources to be mobilized in a more targeted fashion (i.e. activity monitoring for tracking the rehabilitation of those newly discharged from hospital). A significant challenge remains regarding the sharing of information between different organizations (i.e. duplicate or missed information) but some countries are already taking initiatives towards harmonizing access to care information (i.e. National Personal Health Account for every citizen in Sweden, stored in the cloud).

5. **Market potential:** The stakeholders who participated in the national events answered a questionnaire to outline the market potential of the integrated services. The lack of proper reimbursement schemes and the financial difficulties were consolidated as the prime inhibiting factors to market-wide adoption of the inCASA ecosystem. Interestingly enough the majority of participants, regardless of their country of origin, suggested a marginal price of about 30 euros/month subscription-based inCASA services' provision, with the notable exception of the Spanish stakeholders that were overwhelmingly in favor of providing the services completely for free. This price refers to the **estimated reasonable price to be paid by the patient** and is of course less than the overall price of the service which will be further analyzed in the inCASA Final Business Plan. The above exception when correlated with other findings, such as differences noted in the assessment of which organizations are better-poised to introduce the inCASA services in the respective markets, suggest that business plans should be developed according to the realities on the ground at target countries \ regions. In regards to the expected effects of the successful introduction of the inCASA services in local markets, most stakeholders expect a less than 30% reduction of hospitalization costs with the exception of the UK participants who assess that little if no reduction of costs will be achieved. Other factors noted that should be considered while building a market solution, are the technical integration with existing systems and the ease of use of the inCASA services and equipment.

## 12 References

- [1] inCASA project, D8.3 Dissemination strategy, activities and plans
- [2] Greek event reporting – [xtypos.eu](http://xtypos.eu) website
- [3] Greek event reporting – [frontpages.gr](http://frontpages.gr) website

## Annex A: Event Participants Questionnaire

### 1. Event information

|                           |  |
|---------------------------|--|
| <b>Title of the event</b> |  |
| <b>Place</b>              |  |
| <b>Date</b>               |  |

### 2. Personal Data and General Information on the organization

|   |  |
|---|--|
| <b>Company / Organization name</b>            |  |
| <b>Address</b>                                |  |
| <b>Web site</b>                               |  |
| <b>Name of the Participant</b>                |  |
| <b>Tel.</b>                                   |  |
| <b>E-mail</b>                                 |  |
| <b>Fax</b>                                    |  |
| <b>Role inside the Company / Organization</b> |  |
| <b>Expertise</b>                              |  |

**3. Do you think inCASA can improve the quality of life of elderly people suffering from chronic diseases?**

Yes

No

Please provide further explanations

.....  
.....  
.....  
.....  
.....

**4. Do you think the inCASA integrated platform, combining Telecare and Telehealth services, represent a real innovation with respect to the present telemedicine solutions?**

Yes

No

Please provide further explanations

.....  
.....  
.....  
.....  
.....

**5. Do you think the inCASA integrated platform, combining Telecare and Telehealth services, represent a very good solution to improve the social care and health services?**

Yes  No

Please provide further explanations

.....  
 .....  
 .....  
 .....

**6. Do you think the inCASA integrated platform may contribute to reduce hospitalization costs by providing health services directly at patient home?**

Yes  No

If yes please try to indicate how much costs can be reduced

|               |                          |
|---------------|--------------------------|
|               |                          |
| less than 10% | <input type="checkbox"/> |
| less than 30% | <input type="checkbox"/> |
| less than 50% | <input type="checkbox"/> |
| less than 70% | <input type="checkbox"/> |

**7. According to your knowledge what are the main factors that may limit the inCASA market adoption (Please score the limitation factors from 1 to 5)?**

|  | 1                        | 2                        | 3                        | 4                        | 5                        |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Technology complexity due to the difficulty to the integration with the present system | <input type="checkbox"/> |
| Legal issues   | <input type="checkbox"/> |
| Target patient difficulty to use ICT technologies at home                              | <input type="checkbox"/> |
| Lack of proper reimbursement schemes   | <input type="checkbox"/> |
| Other:   | <input type="checkbox"/> |

**8. Considering the health system in your country/region, could you make a list of the organizations that could be interested to invest in the inCASA solution?**

|  |                          |
|--|--------------------------|
|  |                          |
| Local health administrations (please specify: .....<br>.....<br>.....) | <input type="checkbox"/> |
| National authorities   | <input type="checkbox"/> |
| Hospitals  | <input type="checkbox"/> |
| Insurance companies  | <input type="checkbox"/> |
| Other: .....<br>.....<br>.....   | <input type="checkbox"/> |

**9. Considering the health system in your country/region, the current financial status and according to your knowledge of the health care system could you please indicate a reasonable price that could be paid by the included patient for inCASA services, selecting one of those reported in the table below?**

|   |                          |
|---|--------------------------|
|   |                          |
| € 30 per month and per patient  | <input type="checkbox"/> |
| € 50 per month and per patient  | <input type="checkbox"/> |
| € 75 per month and per patient  | <input type="checkbox"/> |
| € 100 per month and per patient   | <input type="checkbox"/> |
| Please fill-in here if you want to propose another indicative price:<br>€ ..... | <input type="checkbox"/> |

## Annex B: Twitter account for the Spanish exploitation event

**inCASA spain**  
 @inCASA\_spain  
 Cuenta oficial del evento de difusión del proyecto inCASA de Fundación Hospital Calahorra (La Rioja). Tele-asistencia de pacientes crónicos. #HealthIT #eHealth  
 incasaspain.blogspot.com.es

106 TWEETS    456 FOLLOWING    130 FOLLOWERS    [Follow](#)

**Tweets**

**inCASA spain** @inCASA\_spain 25 Jun  
 "The future of chronic patient care" , speech by the Managing Director of FHC @alopezdelval: [slidesha.re/133EQoi](http://slidesha.re/133EQoi)  
 Expand

**inCASA spain** @inCASA\_spain 25 Jun  
 "Realizing the remote assistance: from paper to address" intervention by Ms. Carolina Fernandez [slidesha.re/133FhPn](http://slidesha.re/133FhPn)  
 Expand

**inCASA spain** @inCASA\_spain 25 Jun  
 "The social aspect of care and tele-assistance in chronic patients, an