

European KnowledgeTree Group (EKTG)



**Building the European digital health environment –
Turning best practice into mainstreamed implementation!**

Our Aim is to address better uptake of innovation in digital services to facilitate SMART CITY ACTION for Policy Makers, Budget Holders, Users, Financiers, Entrepreneurs, Academics and Industry.

The Tallinn Declaration promises a digital future for Europeans, help us lead the way.

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EKTG Leadership Group

Peter Saraga, Chairman,
Somen Banerjee,
Stephen Bennett,
Michael Gordon,
Paul Green,
Steve Smithson,
Ron Summers,
Ron Wheatcroft,
Alan Willis, Treasurer,
and Maggie Ellis, Coordinator

EKTG International Ambassadors

Christiane Brockes, Switzerland
Henk Herman Napp, Netherlands
Sabine Lobnig, Austria
Sofia Moreno Perez, Spain
Spiros Peristos, Greece

EKTG Planning Group for this Symposium

Richard Foggie, KTN,
Michael Gordon, Touchpoint and EKTG Leadership Group,
Steve Smithson, LSE and EKTG Leadership Group,
Alan Willis, EKTG Leadership Group,
Helen Wilks, EKTG
and Maggie Ellis, EKTG Leadership Group

EKTG Website is now at <https://www.ektg4ehealth.org>

Earlier text and information is at:

<https://connect.innovateuk.org/web/european-knowledge-tree-group>

The European Knowledge Tree Group for Technology and Health (EKTG) would especially like to thank the Neil Bellamy, Nick Howe and NAT WEST Bank staff for their support and guidance for this Symposium.

We are also very grateful to INNOVATE UK/ KTN, have supported this event. We are delighted to have such eminent contributors coming from so many countries.

Background to our work in EKTG

The first meeting of EKTG took place in Denmark in September 2010, supported by DG CONNECT in Brussels. This was followed up by a Symposium at the London School of Economics (LSE) later that year attended by strategically important invited guests.

Seven years later, EKTG comprises a widely drawn group including policy makers, designers and implementers, as well as academics, third sector, central and local government, health professionals and leaders of large and small businesses. The group shares a desire for fundamental change in the way ageing is perceived and cost-effective eHealth is delivered.

Through our cross-EU activity over the last seven years, we have identified first the need for better services and now the need for better understanding and implementation of digital and eHealth technologies by us all. Cost effective services exist in a few places, why?

We believe that the changing demography with an increasing ageing population coupled with fact that evolving mobile technologies creates a huge opportunity for innovation in delivering services in the community, especially to older and disabled people. Where the cost-effective services for people with a mental health problem, a chronic health condition, etc., have been used, excellent results come, users feel more responsible for their health and money has been saved. We have strong support for this from senior officials in Brussels for better education and there is a growing commitment across Europe to rapid deployment of eHealth services. It is an important part of Europe's strategy for a healthy ageing population and for effective management of chronic conditions.

Although technologies have been extensively trialed and evaluated creating a substantial and growing evidence base, we have yet to establish such services nationally. England in particular lags behind. eHealth has not reached educational courses or academic curricula to any great extent. Many people in the associated workforce function are without any recognised or formal qualifications or cover for legal and ethical matters. Are we heading for trouble?

Potential service and supply partners such as health commissioners, social care providers, retail channels and installers must understand each other's concerns and the value innovations that need to be made. Employers are often unaware of the extent of their responsibilities to employees working off-site. Further educational opportunities are needed. We plan to innovate these.

We welcome you and the opportunity for debate and innovation.

EKTG comprises a widely drawn group including policy makers, designers and implementers, as well as academics, third sector, central and local government, health professionals and leaders of large and small businesses, users and their families. The group shares a desire for fundamental change in the way ageing is perceived and eHealth is delivered. We are led by our Board Members – THE EKTG Leadership Group.

EKTG brings together the knowledge and experience of some of the most active users and patients, technologists, academics, service providers from health and care, local and central government officials, and entrepreneurs, from Europe and around the world, to promote excellence and to enhance and support research, policy formation, education and entrepreneurship and other activities that advance and enrich e health in all its forms.

This supreme collective is EKTG; the International Ambassadors are the heart of EKTG and able to contribute to and be critical of all its activities. They work with Supporters to actively develop EKTG both nationally and internationally.

International Ambassadors: They are expected to develop EKTG activity, links with other people and organisations and act on our behalf as agreed. They plan agreed national activities and encourage others to be involved as Supporters and Contributors, both within their national boundaries and ultimately across borders. They are a national address base for EKTG, assisting with collaborations, submissions, collection of data, extending innovation and practical solutions. From time to time they will be involved in Meetings of International Ambassadors. They will actively seek and recruit EKTG Supporters.

Supporters: They are people who attend EKTG events, demonstrate an interest or relevance to our activities, possibly sponsor or help find funds to enable EKTG activity and events etc. If you would like to be a Supporter please tell us.

The role of International Ambassadors at the EKTG

In pursuit of this charitable aim, International Ambassadors engage in a vast variety of activities with and on behalf of the EKTG. These include supporting research, policy formation, education and entrepreneurship and public engagement.

Selection of International Ambassadors.

Every new nomination received by a panel of at least two panel members from the EKTG LG who are tasked with the job of checking and confirming the information in the nomination and with identifying and approaching a variety of additional nomination assessors (often other EKTG International Ambassadors) for further

information and advice.

All candidates are judged according to the EKTG's excellence criteria:

The full citation of personal achievements should highlight the candidate's

individual excellence at some time in his or her career, identifying related outcomes. Possible examples include:

- a) **management of a major organisation**, involving ultimate responsibility for the decisions taken and application of excellent practice
- b) for those in **industrial, commercial, or government organisations**, research or development resulting in significant new products, processes or practices is valid evidence.
- c) nominations from **academic and research institutes** should identify innovation resulting in successful products, processes or practices, in addition to providing evidence of a successful career
- d) **consulting** evidence should focus on contributions to major projects and new practices
- e) **contributing** to User, patient activity groups, documents, etc.
- f) influential **contributions to major committees and agencies concerned with EKTG policy or practice**
- g) any evidence anticipating **likely contribution to the EKTG work.**

EKTG Leadership Group CV's

Peter Saraga currently chairs the Advisory Board of AAL, and undertakes a portfolio of advisory activities in science policy and higher education. He formerly worked at Philips Research in areas including robotics, HDTV, and artificial intelligence. He then became Director of Philips Research Laboratories UK responsible for major programmes in displays, wireless communications, and interactive digital television. He was also a member of the international management team of Philips Research. He is a past President of the Institute of Physics, and was a Vice President and Honorary International Secretary of the Royal Academy of Engineering. He has been a Board Member of the Higher Education Funding Council for England, and was Vice Chair of Sussex University Council. He was a visiting professor at Imperial College London, a member of the Council of Loughborough University and chairs advisory boards at Surrey University, where he was awarded an Honorary Doctorate.

Somen Banerjee is Director of Public Health at the London Borough of Tower Hamlets and the lead DPH on tobacco and workforce for London ADPH. He has worked in Tower Hamlets for ten years after completing his public health training in Oxford. During his public health career, he has gained wide experience working with the World Health Organisation, Department of Health, NICE, Public Health Observatories and the British Heart Foundation Academic Unit in Oxford University.

Stephen Bennett was until recently the Director of Shows at the Royal Horticultural Society, running some of the largest public events in the world. During that time, he designed and planned events with a wide range of people and organisations, handling regulation and practical issues. He now runs his own Company which design and support events in different parts of the world.

Maggie Ellis is currently Lead Academic at Enterprises, The London School of Economics and Political Science (LSE), where she has been involved with EU Research Projects since 1999. MonAMI, and SOCIONICAL projects lead to new EU schemes for Contingencies and EU PPI implementation. Originally an occupational therapist, she managed physical disability and mental health services, has been Chairman of the British OT Association, the European OT Committee and a Member of several university and research boards. Maggie was awarded Fellowships by RCOT and ISPO. She has organised both a Trade and Ministerial Mission to Japan with their Government. EU and ISO Technical Committee Membership brought wider experience linking user needs, planners and policy makers. Maggie is Coordinator the European Technology Group for eHealth (EKTG), which draws membership from EU nations. Maggie uses this background managing Rehabilitation at West Square Associates (WSA). Maggie is a Member of the Cross-Party Groups for Digital Inclusion and Disability, Holyrood and Smart Cities and Legal Aid in the UK Parliament.

Paul Green, Group Finance Director, Fairhome Group PLC

Paul Green's role is to oversee the overall financial stability of the group and to ensure that we have sufficient capital available to meet the demand of the Local Authorities and Housing Association. Fairhome specialise in the provision of development capital for Housing Associations and Care Providers specifically operating in the Supported Living sector. The objective is to help Local Authorities to rehouse vulnerable adults with severe learning difficulties within the community. No two properties are the same as they are customised for the individual needs of the adults who will occupy the property. We now have in excess of £1bpa to deploy in the Supported Living sector. This will allow us to improve the lives of a significant number of the most vulnerable adults in society. Paul was also Chairman of AGM Telecommunications Limited and Sovereign Leasing plc. He founded Sovereign in 1980 when this was sold in 1991 was the largest privately owned leasing company in Europe.

Michael Gordon - after leaving university he was in the military for 18 years before joining a start up homecare company called Healthcare at Home. Over the years HatHome provided care or services for over a million patients receiving treatment in the community for a variety of long term chronic disease illnesses. When he retired as Chairman in 2014 the company had achieved a turnover of £1.3bn. He recently became Chairman of a new company called 'Touchpoint', which is part of the Protelhealth group and which works alongside one of their other very successful companies 'Telmenow'. Both 'Telmenow' and 'Touchpoint' provide technology and support for independent living and we hope to find a niche in the homecare market for helping people to stay comfortable and safe in their own homes rather than enter the Care Home environment before they absolutely have to.

Steve Smithson is a Senior Teaching Fellow in the Department of Management at the LSE. His research interests are in information systems management, e-commerce and the evaluation of information systems. He is a past President of the UK Academy for Information Systems. He chairs various committees at the LSE and within the University of London International Programme as well as chairing a number of local community associations. He is

a Member of the European Knowledge Tree Group and has contributed to several linked projects and schemes associated with the aims of EKTG.

Ronald Summers is Professor of Information Engineering at Loughborough University. He has published over 150 peer reviewed journal and conference publications, the majority of which concern some aspect of biomedical engineering or health informatics. He has also published papers on innovation, systems engineering, and results of pedagogic research. His current research focuses on the interaction of the systems discipline and the use of biology in medicine. Enterprise activity focuses on the formation of spin out companies to commercialise past research findings. He has been involved in three thus far: the first, founded in 1989, ceased trading in 2008 after providing the information architecture for the UK NHS Electronic Health Record; the second is a spin-off from the EPSRC: e-Medic research programme – founded in 2003; and the third is a hospital-based spin out to provide a service to patients who are chronically ill – founded in 2010. Prof Summers is also currently working with a molecular process control company to introduce systems capabilities into the production of polyethylene.

Ron Wheatcroft is Technical Manager for Swiss Re's UK and Ireland life and health business. He led Swiss Re's work identifying and quantifying the Life Assurance and Income Protection Gaps in the UK and which has become the model for analysis across many other international markets. He is the author of Swiss Re's *Group Watch* and *Term & Health* reports and co-author of its series of strategic market reviews branded as the *Insurance Report*. He also leads on Swiss Re's work with UK legislators and regulators, seeking ways to ensure the primary market works well for consumers and for financial institutions. Ron is a Board Member of the Investment & Life Assurance Group, where he chairs its Protection Strategy Group. He is a member of GRiD's Regulations Committee and Raising the Market Working Party, and the ABI's Social Care Working Party.

A Chartered Insurer, Ron is a past winner of the Protection Review Lifetime Achievement Award.

Alan Willis until recently has been involved in the Banking world based with the National Westminster Bank in the UK. Now he runs a small support organisation for individuals who need financial advice and services, setting up accounts. Alan is also closely involved in the structure and organisation of activities of the City of London and some Livery Companies.

EKTG 02.01.2018 for further details contact westsqas@mac.com

International Ambassadors for the EKTG

Christiane Brockes, Zurich, Switzerland.

In recent years the technological advances in medicine have resulted in new requirements and challenges in the doctor-patient-relationship. The roles of the patients and medical layers have been altered as technology has developed, as well as the provision of health information. The patient has evolved from being a passive and dependent acceptor regarding medical treatment to an active, well-informed and responsible participant in the health care system. Additionally, digital health

assistants like health and fitness apps are trendy, self-tracking and telemedical consultations in combination with a certain play and fun factor can help to motivate the user to take control of their own health. Nonetheless the patient increasingly requires certain assistance for the creative and profitable utilisation of the often confusing amount of data and information that the apps provide. Medical professionals can support their patient to select and to evaluate the interesting and relevant data for themselves, to avoid danger for example in relation with the protection of data privacy. The digitalisation in healthiness can strongly increase the quality of living from citizens and patients. Therefore “eHealth - better education and understanding” is a big challenge in our society. It is a great pleasure for me to be an international ambassador of EKTG.

I would like to give my long experience in the activities of the EKTG, especially in the field of education of medical staff and layers in e-Health and telemedicine.

I have a widespread network in the German speaking countries. My target is to increase the numbers of collaborations, contributes and supporters of EKTG in mainly four fields:

- 1 Education Institutions i.e. universities, colleges of higher education
- 2 Companies i.e. Novartis, La Roche, Nixdorf, Microsoft, Google, Post
- 3 Organizations eg. Age-Foundation, Quantified Self Society, Prevention of Patients Society
- 4 Regions e.g., mia Engiadina, senior residence, communities

Sabine Lobnig, Vienna, Austria

As international ambassador for the EKTG, I have spread the word about the mission and activities of EKTG within my network of accessibility experts, organisations of persons with disabilities, and industry representatives (mobile technologies mostly). In my role in the Association for the Advancement of Assistive Technology in Europe (AAATE) and my participation in the InLife EU project, I have also informed stakeholders in these groups about EKTG and tried to find synergies and ways for collaboration. The next pertinent event will be the AAATE Congress 2017 in September in Sheffield, which will be the opportunity to talk to many people in the healthcare and social sector, who are right now looking at how technology can help in tackling the challenges ahead, including integrated care and our ageing societies.

Spiros Peristeris, Prescriptive Solutions Entity Ltd., Athens, Greece

Being an EKTG Ambassador means evangelizing its purpose, capabilities and focus to my immediate group of colleagues, relevant experts and Gov. bodies. During the past 6 months, due to my engagement in the deployment of Health-related IT projects in the Middle East, a number of high level Info sessions have been arranged in conjunction with creating overall awareness for our line of products and services as Prescriptive Solutions Entity Services Ltd.

Since PSEntity also provides Security Solutions as a Service, articles have been prepared and submitted as general CyberSafety Guidelines to be included in the EKTG Newsletter. Copies of the Newsletter have been distributed at Fora and Presentations in the ME (Amman-Jordan, UAE-Dubai, Athens-Greece, Bucharest-

Romania). In addition, we would like to introduce vertical capacity within the EKTG in the form of (PSEntityServices Ltd) Products/Services available within the arsenal of EKTG to function as a pivotal/starting point for further refinement and UK localisation under the funded Innovate UK framework.

Henk Herman Nap, Vilans, Utrecht, The Netherlands

Henk has Ph.D., M.Sc. and a background in cognitive ergonomics, with a MSc. degree in psychology (Utrecht University), a Ph.D. in Gerontechnology, and a Postdoc in senior gamers from Eindhoven University of Technology. He worked as a project leader and coordinator in various EU eHealth projects and as research scientist at Stichting Smart Homes. He currently works as a senior scientist/advisor eHealth at Vilans and as a senior researcher at Eindhoven University of Technology in human-technology interaction. Henk Herman published journal & conference papers and is active as a reviewer and associate editor of both. He is continuously involved as a researcher or coordinator in various EU and NL research proposals in the field of AAL, playful persuasion, and UX design. From 2017, Henk Herman is happy to coordinate the AAL eWare project on lifestyle monitoring and social robotics for people with dementia and their (in) formal carers.

Sofía Moreno-Perez, Independent Consultant Madrid, Spain.

My experience in the field stated in 2008 and since then it has covered several activities with complementary perspective among them, that gives me a broad vision of the field (technology, ethics, business) and also a European Network of contacts. At the moment, my experience as European Expert gives me a continuous update on the European Commission trends and policies and my participation in two European projects under the schema of Public Procurement of Innovation (STOPandGO and RITMOCORE) give me a close vision on the drivers and barriers for ICT innovations adoption by European Public Administrations.

This context allows me to contribute to EKTG goals, as EKTG ambassador, in two knowledge areas:

- Policy makers: generation of evidences, identification of drivers and barriers and educational material for deploy and adoption of purchasing mechanisms fostering alignment of interests among care pathway stakeholders
- Clinical professionals: The overwhelming offer of apps and monitoring devices is on one hand an opportunity for a new care service concept but on the other hand is a threat, as not all apps and devices are reliable, efficient or even safe. RITMOCORE will develop a menu of ICT solutions (Apps and monitoring devices) aligned with its care service, based on a Quality Labelling procedure, to facilitate the work to doctor and nurses of recommending ICT solutions to their patients.

Despite this potential contribution, I could also contribute by identifying educational best practices, mostly in Spain and spreading the knowledge generated

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Programme (including abstracts)

Tuesday 23 January

09.30-10.00 Registration/coffee

10.00-10.15 Introduction

Introduction to the Symposium

Peter Saraga, Chairman, EKTG Leadership Group

Welcome

Neil Bellamy

Neil Bellamy, RBS/Natwest Bank, National Head of TMT & Services, Large Corporate & Sectors, UK & Western Europe

“Neil has been a front line Banker for 23 years, joining the “Listening Bank” (Midland) as a Management Trainee before moving to RBS Group.

Bucks born & bred, he’s grown up with the early technology firms who based themselves in the Thames Valley Tech cluster & is applying this passion & experience to his UK role. He is responsible for the top to bottom strategy, proposition & risk in the TMT & Services sectors for RBS in UK & Western Europe – a portfolio with a balance sheet of over £17bn. His team are the no.1 supporter of the Tech sector & help businesses from University spin out to FTSE100 to get the 3B’s – get Backing, get Big & get Bought.

As a Freeman of the City of London (International Bankers) he likes to give back to the banking industry and the tech sector that have both served him well in his career. For RBS he is a strong advocate of the apprentice programme & Entrepreneurial Spark with external mentoring of spin outs at Imperial College & scale ups at Rocket Space, London. He is accredited by the Institute of Enterprise & Entrepreneurship.

Lastly, his Tech “claim to fame”opening the bank account for Oracle when they set up in the UK all those years ago – whatever happened to them!”

Per Erlend Hasvold

Technical Officer, Prevention of Non-Communicable Diseases (PND)
World Health Organization, Geneva, Switzerland

Per will present a summary of some of the important work being done in this area by WHO. Extensive work is included in the WHO remit and recently they have identified greater options for this. Assistive devices and technologies are those whose primary purpose is to maintain or improve an individual’s functioning and independence to

facilitate participation and to enhance overall well-being. They can also help prevent impairments and secondary health conditions. Examples of assistive devices and technologies include wheelchairs, prostheses, hearing aids, visual aids, and specialized computer software and hardware that increase mobility, hearing, vision, or communication capacities. In many low-income and middle-income countries, only 5-15% of people who require assistive devices and technologies have access to them.

He and his colleagues aim to collaborate with others across Europe and the world to benefit society.

10.15-11.30 Session 1 – Awareness

Chair: Ron Summers

UK Health Innovation Ecosystem

Sue Dunkerton

Knowledge Transfer Network, London

Life sciences is a key part of the UK's innovation economy with considerable macro-economic drivers for growth not least the ageing population and the growing burden of chronic disease. Innovation therefore supports our leading competitive businesses but also provides new solutions to healthcare delivery with potential to do things differently, including at that interface between health and social care.

The UK is committed more than ever to increasing investment in R&D and particularly in realising the value of that investment. Recent policy documents and industry papers have set out new initiatives and critically new money to enable collaboration, with a target for the UK to increase its investment in R&D from 1.7% to 2.4% of GDP by 2027.

Helping companies understand this changing policy landscape and navigate the opportunities for them, will always be a challenge. But it is no surprise that the environment for innovation is complex; taking an idea to market in the healthcare world was 'ever so' but new products and services are increasingly enabled by combination technologies and the markets are ever changing with regulatory changes and customers that might combine both statutory bodies and direct to consumers.

This presentation focuses on how the UK's health innovation ecosystem has evolved in recent months/years, what it might mean for business and how the process gets simplified by knowing who to talk to.

AAL: from now to the future

Rafael de Andres Medina

AAL

Learnings from current AAL Programme

- Based on 10 years of experience of implementing two successive European/international R&I AAL Programmes Partner State-driven in the field of ageing and digital technologies.

Achievements

- Projects: increase of the active participation of SMEs and a much smaller of end users
- Support Actions: i.e. AAL2Business, AAL Challenge Prize, Hackathons, the annual Forum.
- Interactions with: Regions, EIP-AHA, JPND, JPI HDHL, JPI MYBL.

Objectives of Strategic Masterplan

- In line with Partner States' interests and coordinated with the current preparations of the future Digital Transformation Strategy in Health & Care as well of the new RTD Framework Programme (FP9) at EU level.

Current available AAL related future policy priorities at national and European level

- Input of the Partner States, Stakeholders Executive Board, Central Management Unit.
- EC DG Connect providing the current status on the 'EU Digital Transformation of Health & Care strategy', for which a communication is planned to come out in January 2018 as well as EC DG Research and Innovation providing an overview of possible future financial instruments within the new Framework Programme (FP9).
- With the support of the Advisory Board members, additional relevant European strategy papers, such as the Lamy Report or the Interim evaluation of the AAL Programme, have been studied to bring out relevant input for the future strategy.

Summary of outcomes from Strategy Working Group

- Capture national and European policy priorities in AAL related domains for the future.
- Capture learnings from current AAL Programme on national and European level for future.
- Develop first content elements for future programme with regard to programme rationale, purpose, potential activities and structure.

Content elements of future programme

- To be more inclusive with regard to differing needs of different Partner States, but also of different AAL-related markets, in order to efficiently and effectively achieve future market development objectives.
- This would require a more modular support programme approach, which continues to provide direct project support as well as supports the development of emerging eco-systems necessitating more programmatic measures going beyond individual projects.

The road ahead

- The outcomes of the initial finding, analysis and scoping phase will be translated into a first programme proposal over the coming 3 months.
- An overall programme story will be developed detailing out a future mission-driven programme with respective suggested objectives and implementation support activities.
- This programme content will be shared with individual members for feedback as well as with key stakeholders, in order to come up with a high-level programme proposal in April 2018.
- The interaction with Partner States will be important, in order to capture their input, feedback, concerns, preoccupations and priorities, i.e.:
 - Get from each member their current ideas on future priorities via the developed questionnaire.

- Get their current input on learnings and impact from current AAL Programme (and other related Programmes?)
- Get their input on first programme proposal elements via individual exchange.

AAL Living Lab set up around the lake of Constance

Urs Guggenbühl

University of Applied Sciences, St. Gallen, Switzerland

Although a lot of money has been invested during the past 10-15 years to develop AAL solutions in Europe an AAL market has not yet really developed. AAL solutions and its potential is still not very well known by the end users and involved service providers. This was one of the reasons to initiate AAL Living Labs around the lake of Constance to provide a comprehensive development environment and access to appropriate market channels for AAL solutions. The region around the lake of Constance covers 4 countries (Switzerland, Austria, Germany and Lichtenstein), an association of 30 universities called IBH and a population of around 4 million. In my talk I would like to focus on some of these Living Lab initiatives and report on one Living Lab project we have just completed.

Promoting best practice, using technology to enhance patient self-care

Javier Gonzalez-Durio

Health Economics and Market Access Manager, GlucoRx Ltd.

In times when technological innovations are not the end product, what sort of support facilitates patient care being enhanced? How can technology channel educational touchpoints with both, patients and healthcare professionals? We are living the digital revolution, where academia, healthcare organisations and healthcare industry are collaborating more closely than ever to find solutions that are already enhancing patient care. One of the main challenges healthcare systems still face is compliance, whether to medication treatments or to appropriate use of devices or to any other form of therapy. A huge amount of resources is wasted every day worldwide due to poor compliance. How can technology help on this matter? What is being explored? What could be the role of artificial intelligence in facilitating health related messages being communicated?

My background is in pharmacy and I have always been fascinated by communication and self-care. To me compliance is an enormous challenge that needs three parties to get involved in order to find solutions; patients, healthcare professionals and industry. In this context and in my current role, I am exploring different routes to promote best practice amongst healthcare professionals and to promote best use of technology amongst patients.

Global Accessibility Reporting Initiative (GARI) and m-health services

Sabine Lobnig

Mobile & Wireless Forum (MWF), Vienna

The mobile device (smartphone, tablet, wearable...) is the key to bringing m-health services to the user but it needs to be accessible and easy to use for consumers to accept and actually use it. Many of today's mainstream devices indeed feature a range of accessibility functions that can help persons with disabilities, older users or anyone finding himself in disabling circumstances. However, the average user and particular people unfamiliar with ICTs neither know about the existence of these features nor how to use them. For this reason, the manufacturers created the Global Accessibility Reporting Initiative (GARI) which endeavours to provide information about existing accessibility solutions to consumers that will benefit most from these features. These consumers include seniors, persons with disabilities, their family members and care givers.

Sabine Lobnig will present the GARI project, demonstrate how it works and give an overview of what 10 years of voluntary industry initiative have achieved in promoting and advancing mobile accessibility.

11.30-12.15 Session 2 – Housing and Technology in Society

Chair: Ron Wheatcrof

Facilities planning and design for the ageing population

Evangelia Chrysikou

The Bartlett Real Estate Institute, University College London

e.chrysikou@ucl.ac.uk

Research on the 'silver' economy suggests that products and services enhancing autonomy and social cohesion is a common denominator for successful enterprises, targeting both consumers across the lifespan and younger people who care for them. Policymaking focuses on such interventions mainly from medical-pharmacological and hi-tech perspectives.

This presentation, informed by the work of action Group D4 of the European Innovation Partnership on Active and Healthy Ageing and the research on the Dementia Village and accommodation for people across the lifespan conducted at the Healthcare stream of the Bartlett Real Estate Institute, UCL argues that policies and interventions for active and healthy ageing might benefit from a broader integration framework that would allow the whole spectrum of the environment to become part of the solution. This might be crucial for low tech components of the system, such as the building stock, which tend to be perceived as "problem solved".

Yet, the fact that building infrastructure exists does not mean that buildings are necessarily fit for purpose or that in practice design caters for people across the lifespan. We also witness considerable limitation in adopting and adapting new technologies in a way that could enhance people's lives and produce a seamless environment for people to enjoy. These could be achieved through new architectural

and design paradigms that contrary to the prevailing built environment education and practice, operate in harmony with human perception and physiology and especially with the perception and physiology of people across the lifespan. Through evidence-based multidisciplinary research and architectural interventions, informed by the complexities of human perception and physiology, as well as being flexible to accommodate technologies and become people-focused and smart at the same time, the physical environment itself could join the integrated web of healthcare technologies currently included in the WHO definition.

The impact of the urban environment on health outcomes for citizens

Eime Tobar

Space Syntax, London WC1N 2LG

The urban environment has a significant impact on people's physical and mental health, as well as their ability to access appropriate health-related services. To promote healthy lifestyles and wellbeing therefore, attention must be focused on efficient and effective ways to deliver health services in different urban environments. In the context of an ageing society, the needs of older populations should be a particular consideration.

This presentation will introduce a set of tools which are able to demonstrate how different elements of the urban environment, such as land use, density and mobility networks, combine to affect the potential of individuals to access health-related services, as well as their likelihood to use active travel modes.

These tools can provide an objective assessment of the spatial layout of urban environments, based on health-related outcomes. From this, it is possible to identify place-specific planning and design interventions which will promote active travel and improve access to health services in areas where the urban environment causes a spatial disadvantage for residents. In addition, by overlaying demographic data, such as age group, health status and household size, it is possible to focus on the specific needs of older populations.

Finally, these tools also facilitate collaboration between experts in different domains, overcoming the, often detrimental, impact of silos on the design and delivery of health-related services. In this way, they can be a powerful means of convening planning, transport and health professionals to deliver positive outcomes for citizens.

Exploring the links between commuting and wellbeing: the 'boat factor'

Xu Zhao, Claire Papaix and Petros Ieromonachou

Systems Management and Strategy Department, University of Greenwich, London

Transport can be seen as a 'human system' incorporating policy, infrastructure, and behaviours affecting our daily lives, mood, experiences, emotions and overall wellbeing. After experiencing a positive or negative situation while travelling,

transport activities can have an impact on the external conditions of people's quality of life (such as work-life, family life, social interactions and physical health) as well as on the internal 'psychological functioning' (including creative thinking, productivity, good interpersonal relationships and resilience).

This chain of reaction leads to the identification of different aspects of wellbeing: short term (the presence of positive feelings and affective) vs. long-term wellbeing (the overall satisfaction with life); subjective wellbeing (individual evaluation of quality of life) vs. objective wellbeing (referring to basic to human needs, such as income, health, and education; experiential (short term positive and negative experiences and emotions) vs evaluative (long term overall satisfaction of life), hedonic (wellbeing is achieved through pleasure and happiness) vs. eudaimonic (wellbeing is achieved by the fulfilment or realization of one's true nature).

In addition, marginal external costs of conventional transportation, including local and global air pollution, congestion, road accident, noise, environmental and visual disruption costs, call for an imminent shift of transport mode as a solution for smart and sustainable transportation. Although human activities, and traditional transportation in particular, have become a main reason for climate change, the majority of our citizens declare not to have undertaken any personal action in the past to protect the environment. Hence, if most of us are well aware about the harmful effects of our behaviour on the environment, little is known about how climate change could really impact our lives and even less about our self-efficacy in tackling this issue.

In this context, the links between transport and wellbeing have been receiving a growing interest in the literature. Setting the case of river boat commuting, known for its safe, comfortable and sustainable virtues, we analyse the extent to which promoting inland waterways transport could make the life experience of commuters better or worse. To achieve this, we measure travel satisfaction through a range of tools, comprising mobile phone applications tracking physical health metrics (heart rate, blood pressure, galvanise skin response to travel, etc.) encompassing the objective and short-term definition of wellbeing, as well as surveys and interviews capturing the subjective and hedonic wellbeing component (emotional variables as experienced by the commuter while traveling).

Our target sample for data collection would be of 1,000 respondents across our two studied European capitals, London (UK) and Stockholm (Sweden). Our designed questionnaire aims at capturing the variations in terms of attitudes, perceptions, and wellbeing outcomes that can be derived from using different travelling modes (driver/passenger, surface public transport modes, river boat transport, walking and cycling).

Finally, deep learning techniques will be used to compute both kind of data and infer wellbeing indexes from using different travel modes for different types of travellers in both cities.

Data, Information and Optimised Care Delivery

Stephen Hope
Docobo, UK

The 21st Century brings with it a population suffering with multiple chronic conditions, the need for multiple medications and wide ranging care needs in both health (physical and mental) and social care. Whilst ageing is a major factor these conditions are by no means restricted to the retired elderly living at home which has been the traditional view. Now with the increasing retirement age many people, young and old need to self-manage their condition at home at working and in their life in general. This presentation discusses the importance of health data collection in both a home and mobile environment to enable Optimised Care delivery.

12.15-13.30 Lunch/Networking

13.30-14.45 Parallel Session 3a – Procurement & Practice

Chair: Peter Saraga Reporter: Helen Rushton

Procuring innovations: barriers and drivers in delivering technology benefits to citizens and society. Experiences from STOPandGO

Sofía Moreno-Pérez, STOPandGO, Spain

STOPandGO is an EU funded project fostering ICT adoption by public authorities, aiming to increase independent living among older adults. A shift from merely purchasing devices to purchasing whole comprehensive service provisions can become a powerful catalyst for the transformation of Health Care Public Services. However, the journey is difficult and, during almost four years, 12 public procurers tried to overcome myriads of obstacles until, finally, four of those procurers became best-practice stories. The Liverpool Municipality, Sant Pau Hospital in Barcelona, the Municipality of Helmond in the Netherlands and Hospital Miguel Servet in Zaragoza all managed to succeed and deliver advanced care models, increasing the quality of the care they provide to citizens, while also ensuring their own long term sustainability. In this presentation, I will analyse the drivers and barriers shared by all participant procurers.

New Technologies in Social Care

Ann Williams
Liverpool City Council

In my presentation, I will explain the STOP & GO programme and the technologies we have introduced and some of the issues we have learned from introducing technology at scale. Briefly below are some of the points I will describe

- The main objectives and aims of the STOP & GO Programme

- The fact that STOP and GO project focuses on:
1. Procuring services enabled by technology instead of “just” innovative technology itself
 2. The technology has to exist as there is no funding for development of technology

Following the successful procurement process we have introduced 3 new technologies:

- Webroster a digital rostering system that is compatible with the PASSsystem. This system provides an optimal organisation of rostering staff to meet the needs of the service user. E.g. if the service user values the same carer above the actual time of the call etc.
- The PASSsystem is a digital care plan system that provides a single view of care records from enquiry, assessment, medication and task changes and reviews – meaning less time printing and disseminating, less time duplicating notes and less time on administration. Using the PASSsystem’s care management platform to update the care plan ensures Care Workers are notified of medication and task changes in real-time – NO NEED to print paper copies – it’s all on Care Workers’ phones. The Care Plans produced are CQC compliant. The family members of the service users (with their permission) can use an App that accesses the detail in real time.
- The Caring Cloud technology is very innovative as it uses sensor technology supported through LoRaWAN technology. This can provide a complete monitoring of the ambience and activity within a house to the domiciliary care providers and family and friends of the service user. The Low frequency radio technology is being developed across the city as part of the Sensor City programme and gives social services the opportunity to tap in to the low cost technology that does not rely on the service user having broad band. We are comparing the traditional analogue telecare equipment with the new IoT technology and sensors. Potentially the costs of telecare can be reduced significantly ie the cost of monitoring a traditional piece of equipment is costing us £1.49 per week this will cost 16p a week.

Procurement and Promulgation

Richard Foggie

Digital Economy and Internet of Things, KTN

Richard covers ‘digital’ within the Knowledge Transfer Network working through collaboration to realise opportunities that underpin digital service delivery improvement and generate business. He also has experience of Europe collaborative R&I such as STOP&GO, and similar projects. This presentation will also address promulgation of information. Previously in BIS, he led on ‘electronics innovation’, including Cloud and Supercomputing, Future Internet, RFID and NFC technologies including impacts on civil society; and the technology and business aspects of Assisted Living. Before public service, Richard trained as a device physicist and worked with compound semiconductors at GEC’s Hirst Research Centre.

Planning, Commissioning & Providing Technology Enabled Care Services

Brian Donnelly

Chief Executive, CECOPS

CECOPS CIC is an independent standards and accreditation body for assistive technology services including, for example, digital health, telecare, eHealth, wheelchair services. The work of CECOPS covers the planning, commissioning and provision of services including clinical and technical aspects.

CECOPS offers a quality framework which includes outcome-based standards, online support tools and training. CECOPS is widely used in the UK with growing interest internationally.

This presentation will focus on Planning, Commissioning & Providing Technology Enabled Care Services (TECS) and will look at Quality, Continuous Improvement & Scaling Up of services. The session will include a summary of CECOPS CIC and how our scheme works. It will also take a brief look at the new *International Code of Practice for Planning, Commissioning and Providing Technology Enabled Care Services* (TECS) developed by CECOPS.

Organisational and system-wide readiness will be considered, as well as a brief look at our unique software tool used by organisations to help them carry out a self-assessment, support change & contract management, as well as driving continuous improvement.

The CECOPS TECS framework and support tools can be used to share good practice regionally, nationally and internationally, and help with community building, accelerating readiness and scaling up of services, and this will be discussed.

The session will conclude by summarizing how CECOPS can support organisations in planning, commissioning, implementing and providing TECS services.

Assistive solutions procurement: measuring impacts rather than activities

Laida San Sebastián

Grupo Icavi, San Sebastian, Spain

For over 15 years Grupo ICAVI has developed and expanded an 'assistive solutions' purchase model for administrations and is now developing a decision-making tool based on multiple choice scenarios in order to help know in advance the economic, social and organisational impact and implications of each scenario for each region. Key agents in the promotion of the professionalisation of the sector, since 2016 the work's spectrum has been widened towards impact generation and social return on investments in the ageing sector, economic return being **ONLY** one aspect.

The goal of any public policy or service in the field of ageing and health is an abstract and intangible concept: Wellbeing of citizens, quality of life, social inclusion... And it sounds good.

But the daily reality of these organisations is an obstacle race, full of constraints, conditions and interpretations that make it difficult to raise one's head and check where the goal is. All the energies are concentrated in not falling at the next hurdle, making the final goal something distant and unreal. The common public procurement methods don't help as they only support buying activities; so, activities, and not impacts, is what they get.

As a consequence, the only parameter that is known and measured is, in the best cases, **WHAT WE HAVE DONE**, the services and activities that have been

developed, how many hurdles we have jumped, but nothing is known about how close to the goal we have arrived.

But, what if there was a way not to lose focus on the goal, to make it tangible and make sure we create impact on it? What if we can, for instance, say, that this year the wellbeing of my target group has increased from 6.5 to 6.9 thanks to this or that specific area of work I have developed, and that this or that other activity has not created the desired impact?

An innovative public procurement concept, based on buying IMPACTS instead of services and activities, together with an advanced management methodology focused on GOALS ACHIEVEMENT INDICATORS and measuring tools... might be a good start.

Some eHealth services to be offered and Procured

Spiros Peristeris, Prescriptive Solutions Entity Ltd., Athens, Greece

Health related Security Activities & EU Priorities:

detection and communication – preparedness requires timely detection and rapid distribution of information to relevant stakeholders.

threat and risk assessment – Data collection on threats and risks from relevant EU agencies, and sharing with national authorities.

preparedness – expand national capacity for preparedness by offering technical assistance and guidelines.

scientific advice – responding to a public health crisis requires rapid mobilisation of experts, expert opinions are shared via alert and communication systems.

crisis management and testing of plans– through the help of national authorities, develop protocols and guidelines for best preparedness practices and test emergency plans through exercises.

cooperation –support preparedness across sectors internationally, support and promote the WHO International Health Regulations and create links between alert systems across Europe and on an international level.

13.30-14.45 Parallel Session 3b – Towards Implementation

Chair: Alan Willis **Reporter:** Ron Summers

Clinicians as design thinkers: an export opportunity for the NHS

Ian Smith

The Social Care Platform, everis, an NTT Data Company, London

The NHS is a vast and complex organisation, with a rich seam of health expertise. But this expertise is largely confined to silos of individual NHS Trusts. We want to show NHS executives and subject matter experts how we can enable the conversion of this 'brainware' into software. In practice, this means capturing and recognising the Intellectual Property (IP) - then converted into digital solutions, which in turn, are

monetised on a global basis and where recurring royalties are paid to NHS Trusts, CCGs and other subject matter experts.

Turning 'brainware' into software is enabled by Design Thinking. So, what is Design Thinking? Simply put, Design Thinking is a human-centred approach to solving problems. Design Thinking applied to digital innovation includes taking advantage of emerging technologies: Artificial Intelligence (AI), Big Data and Machine Learning. This means enabling the NHS to co-create solutions with their know-how and Intellectual Property (IP) on a number of platforms.

The Hasso Plattner Institute of Design at Stanford University (d.school) is home to great Design Thinkers. At the d.school, Design Thinking is expressed as five steps in the innovation process: Empathize; Define; Ideate; Prototype; and Test. For digital innovation with next generation IT, this translates into apps and workflows that should conform to three simple Design Principles: Meaningful Journey; Fierce Reduction; and Progressive Disclosure.

Meaningful Journey means apps used on desktop, tablet and smartphone devices that work the way users intuitively think and work. Fierce Reduction means eliminating everything you can from a process, task or set of tasks: applying lean thinking to Service Design. Progressive Disclosure means limiting what users see on a device screen only what they need to see and act upon: avoid cognitive overload.

In developing empathy, it is important to discover hidden needs alongside those problems more clearly expressed by stakeholders. In many ways, this goes against being purely 'data-driven': you need to look at the people, not just the data. It is wrong to try to create an artificial layer between business and personal: all business is personal - and vice versa. If digital innovation is to improve business processes, then firstly, there must be empathy with its users. This means paying great attention to creating a Meaningful Journey, eliminating waste and complexity of processes and tasks with Fierce Reduction - and finally, from prototyping and beyond - enabling Progressive Disclosure to reduce stress and maximise ease of use of a new digital app.

All of this, of course, means that the NHS has to be comfortable with the concept of making money from its know-how. This can be difficult for some time-served NHS managers to accept. After all, the NHS is all about taking care of citizens - not making money. But engaging in Design Thinking and turning 'brainware' into software - fully supported by Department for International Trade and the Foreign & Commonwealth Office - can lead to substantial value creation - and prestige for the NHS, clinicians, nurses - and many other subject matter experts.

Disruptive technologies and their influence

Vadim Kramar

Oulu University of Applied Sciences (Oamk), Finland

We all know that the advancement of technologies is unstoppable. The speed of technologies' advancement that we have observed in recent years is amazing. But we all know that any technology is a double-edged sword; any technology has advantages and disadvantages. I'm in a very difficult position. For many years I have been involved in the development of technologies. I like technologies, but I do not need them. Yet... At least some of them... That is what I think. But can I really avoid

technologies? Are we able to resist the technology wave? Do we need to do so and how can we do that?

Internet of Things, Block-chain, Big Data analytics, Virtual, Augmented, Mixed and Hybrid Reality, Algorithmic Techniques, Simulations, Gamification, and Artificial Intelligence are among the disruptive technologies listed by the European Commission in the Horizon 2020 calls. What is the level of disruption they bring to us, who are still lost in a wood of the Digital Divide, Digital Inclusion, and Digital Democracy?

We understand that disruption brings societal and economic challenges, and changes caused by actions addressing those challenges may last for a long time. But, after all, the one who is always reached by these changes is a single person. A human. Any of us. All of us.

That is probably a reason that a new way of developing human-oriented technologies focuses on the user. The European Commission encourages us to practise user-centred design, user-driven development and early user inclusion. Do we understand these methodologies correctly and are we able to follow user needs, sacrificing our great technological ideas? Furthermore, do we understand what the notion “user” really means and whether this notion is broad enough? And finally, can any technology make any of us happy: me, you or our user?

eRedbook Prototyping with NHS England London Region

Dan Moulin (Sitekit Applications Ltd, Banbury, Oxon) and Kenny Gibson (Child Health Commissioner, NHS London Region)

London registers over 140,000 pregnancies and 136,000 births every year. 31% of children move between health providers in the first five years of their lives, with the risk that child health information is lost between services and regions. This is a significant administrative burden for the NHS and a risk to patient safety.

NHS England’s Child Health Information Strategy: “Healthy Children: transforming child health information” sets the direction for the development of child health information, supporting the ambitions of 5YFV and PHC2020. The programme responds to parents’ requests for an electronic record to help them manage their child’s early years and, from a clinical perspective, sets out the direction for achieving an integrated way of knowing where every child is and how they are doing. Not only does this improve children’s individual well-being and quality of care: it also allows analysis on population level to inform NHS management of strategic priorities to improve care at large.

Since the introduction of the Child Health Digital Strategy, fundamental steps have been taken to achieve interoperability between NHS child health systems and the person-held electronic ‘Red Book’, known as eRedbook. Joined-up digital systems enable health services across London to have a single, comprehensive view of every child, and parents to be directly engaged and thus better informed to make the right choices for their child.

Achieving interoperability required transforming the existing Child Health Information Services and IT infrastructure to reduce the silos and enable collaboration. Simplifying the infrastructure consisted of replacing the existing 23 systems to a single, pan-London solution provided by SystemC, and processing huge volumes of data.

In parallel, provider Sitekit and NHS partners created and implemented FHIR messaging with eRedbook and other systems. The entire overhaul was completed in four months and included the delivery of 33 FHIR profiles for eRedbook messaging, 5 different types of data events flowing into eRedbook (including birth details and NIPE) across London and 12 events so far for local messaging from Your Healthcare a local provider. To achieve this, project teams worked intensively together with parents, health visiting and midwifery units and other health services.

It also gives parents access to their own child's digital data for the first time by providing an interface with the e-Redbook. And it opens the door to exciting new collaborations in terms of care prevention – such as parent support tools for asthma and diabetes. Results include:

- Availability of more robust & evidenced controls assurance
- Data can be reported in hours, as opposed to weeks
- 50% admin time saving
- Fewer £1.87 letters
- eRedbook can now be given out at 20 weeks gestation, so parents can set up a record before the baby is born
- 90% improved engagement and support

The platform offers tremendous opportunity to connect services across geographic regions and develop personalised support tools that help parents manage their child's health and well-being. In 2018, further roll-out of eRedbook will take place in London and additional regions, with parents' and clinicians' feedback at the centre of development.

Addressing challenges in non-invasive monitoring of vital signs

Laurence Pearce and Jose Garcia
xim Ltd, Southampton, UK

Patient monitoring is a necessary but time-consuming activity. After patients are released from care, it is difficult to monitor their recovery, mostly because they lack equipment or training to collect useful health data. In clinical wards, nurses take readings of the vital signs of patients while carrying out a myriad of other activities.

In cases where constant monitoring is not warranted, it is desirable to have a fast and easy device to collect vital sign data. Xim Ltd is evaluating a non-invasive solution for vital sign acquisition called Lifelight®. Lifelight® combines computer vision with data analytics to collect vital sign data (heart rate, respiration rate, blood pressure and oxygen saturation) and provide early warnings based on the National Early Warning Score (NEWS). Using only a camera, the system can detect a user's

vital signs by observing tiny changes in skin colour. If there is a high health risk within the next 24 hours, the application can trigger alerts.

Xim has been awarded funding by Innovate UK & SBRI to prototype and trial the application. Xim is validating the application with clinical specialists in collaborating partner institutions to gain insight into the challenges the application will face on release. Initial results suggest the need to provide intuitive, easy to use visual results that allow a professional to make fast decisions.

It is challenging to associate a patient's vital signs to medication being taken at the time. A knowledge of current treatment can provide indications to assess the collected data. Ideally, we could associate a particular patient's readings with their records. However, data privacy restrictions require a careful and complex set up.

Currently, we are collecting data validating the accuracy of vital signs acquisition. The results of the validation process will inform the modification for release and future developments.

Once validated, Lifelight® offers significant potential to help move towards a sustainable, preventative healthcare system, especially for older people to easily self-monitor at home without the need for special equipment or skills.

Making eHealth a reality - learning from Simple Telehealth's community of practice

Lisa Taylor & Karen Moore

Simple Shared Healthcare, Stoke-on-Trent, UK

Despite widely acknowledged financial challenges currently facing the NHS, combined with the unprecedented rise in the demand for its services, adoption and diffusion of innovation in any complex health (and/or social care) system presents particular challenges. The delivery of eHealth adds to the complexity with its requirement to ensure an ethical approach, patient safety and solid information governance when working with often commercial companies while being confident that the products invested in will deliver the anticipated benefits

To date, the market for telehealth and telecare technologies is moving at a fast pace, with many pragmatic opportunities available to address the challenges currently faced, many supported by a maturing evidence base.

However, despite such progress, challenges in delivering innovative redesign as a vehicle to improve quality while seeking to maximise cost- effectiveness remain. Organisational characteristics and readiness for change are intrinsic to eHealth's successful application and the delivery of its benefits.

Florence (Flo) has a solid and growing evidence base, having supported over 70,000 patients in the UK as the NHS owned and developed self-management tool. Flo uses safe, proven, familiar techniques and methods to help patients to engage with, and adhere better to, shared clinical management plans in between clinician contacts using patients' own mobile phones or landlines enabling people to manage their conditions from their homes. Flo's application has now spread beyond health into education and social care; and the outcomes and learning generated from the

Simple Telehealth community of practice have inspired further development internationally using the same methodology.

Despite such success and growing evidence base that now accompanies Flo, challenges common to all eHealth integration remain resulting in implementations that are either sustained, or fail. To increase the likelihood of success and operating with an NHS Simple Telehealth license, Simple Shared Healthcare Ltd partners with member organisations to provide education, coaching and support to increase organisations' capabilities to implement and innovate with Simple Telehealth and its related technologies including 'Florence' (UK & Ireland), 'Annie' (USA) and 'Nellie' (Australia) for the benefit of the patients and users they serve and being a Social Enterprise, any trading surplus (profit) is re-cycled back into the health and social care community to drive continuing innovation and dissemination of best practice.

Based on Simple Shared Healthcare's experiences, this discussion aims to consolidate national learning by sharing specific examples of best practice gathered from Flo's integration. The discussion will focus on critical factors that delivered success, including those that have succeeded in diffusing eHealth more widely, and conversely where organisational characteristics and context have resulted in failure to adopt or implement; or, much worse, lessons learned from where successful eHealth delivery has failed to attract continued funding.

The discussion uses key learning derived from the use of Flo in over 70 organisations and refers to best practice evidence and examples shared over the previous 8 years, however the experience shared is relatable to the integration of any eHealth redesign.

Combinatorial solutions to developing technology for self-management of chronic conditions: case study

Adam Lester-George
LeLan, Bristol

SocialDiabetes Connect is a unique product being developed and tested through a collaboration between UK consultancy LeLan, Spanish app-developer SocialDiabetes, and NHS Scotland. Funded by the Small Business Research Initiative, this exciting project explores how different digital technologies can be adapted and integrated to present a combinatorial solution for supporting people with Type 1 diabetes (T1DM) in their day-to-day lives.

T1DM is life-threatening, incurable, chronic condition that must be constantly managed through a range of activities, including regular blood glucose testing, diet monitoring and medication compliance. Because people with T1D typically only see their diabetes specialist 2-4 times annually, the vast majority of their critical care must be self-managed through a number of challenging daily routines that can lead to added stress and anxiety.

SocialDiabetes Connect has been developed to act as a convenient suite of tools to help remove some of this stress and help individuals to keep on top of their condition with minimum fuss. As a combinatorial offering, it brings together:

- an award-winning glucose and insulin management system (SocialDiabetes bolus management)
- a unique and newly-developed online social network (SocialDiabetes Peer Network)
- a cutting-edge interactive user experience interface (developed by partners at Nottingham Trent University)
- an acclaimed online structured education course (BERTIE Online)

In this presentation, project coordinator Adam Lester-George (LeLan) will outline the rationale for taking a combinatorial approach to solving the challenges of self-management (as opposed to building from scratch) and will describe ways in which similar collaborative approaches could help to improve the delivery of personalised healthcare through the NHS.

15.15-17.00 Session 4 – Implementation & Beyond

Chair: Michael Gordon

Reports from Parallel Sessions

Ron Summers & Helen Rushton

Digital Health Technology Catalyst

Chris Sawyer

Innovate UK, Swindon

Digital health is evolving at a rapid pace and this is having a profound impact on healthcare delivery. The Digital Health Technology Catalyst is a £35m 4-year programme being funded through the Industrial Strategy Challenge Fund and was a recommendation of the Accelerated Access Review. The catalyst will help to grow the vibrant digital health sector, delivering the solutions the NHS needs to realise vital efficiencies and improve patient outcomes. The programme is being run by Innovate UK and many projects have already been funded through its initial round. The next round of the catalyst is due to launch in several weeks and in this session Chris Sawyer will provide an overview of the first round and an introduction to round 2.

East London NHS foundation trust and Telehealth

Raguraman Padmanabhan

East London NHS Foundation Trust, London

Telehealth simply describes health related services being provided at a distance where appropriate. They can be provided through the internet using a TV, computer or smartphone, or by text on a mobile phone or simply using a phone call. East London Foundation Trust's (ELFT) services use TV, text and phone calls, and videos to connect clinicians with their patients.

The service model that underpinned the business case assumed a step up/step down transition between home and hospital in terms of providing and facilitating integrated care. A key element in the model was support for self-care which was recognised as important at all points. Currently ELFT runs projects like using simple telehealth to monitor patients who are at risk and healed pressure ulcers using simple mobile technology health solutions. A feasibility research is ongoing as well here at ELFT for patients with severe mental illness in view of support solutions via a simple texting service called Florence. ELFT has been the leader in terms of integrating the primary care services and also secondary care where appropriate in the transitional model mentioned above.

The successful development of telehealth services needs the trust of clinicians; health, social care and support practitioners; service users and carers. The European Code of Practice for Telehealth Services offers a basis for such trust. ELFT was the first in the country to have achieved the accreditation status. The EU Code provides a useful external critique of ELFT's telehealth operation and a stimulus to improve the service, in particular certification would help the Trust, its partners and patients be assured that it is complying with best practice in terms of the telehealth services that it offers.

Henk Herman Nap & Sandra Suijkerbuijk

Technische Universiteit Eindhoven, The Netherlands

eWare – a social robot to support integrated care

Caring for a person with dementia can be a significant personal and emotional challenge for informal carers. Informal caregivers frequently report experiencing high levels of stress, mental and physical fatigue, social withdrawal and sleeplessness. Several technologies and services have been developed to support the care for people with dementia. Lifestyle monitoring can reduce caregiver's distress and thereby extend the period that the informal caregiver can sustain the care and support needs for the person with dementia. Nevertheless, lifestyle monitoring is unidirectional without the person with dementia in the communication loop. In the eWare project (AAL), we add social robotics to lifestyle monitoring to support bidirectional communication. Furthermore, the lifestyle monitoring sensors add context awareness to the social robot and the social robot provides an interface between the person with dementia and the (in)formal carer. With increasing context awareness, the social robot can provide context relevant suggestions. The integration of lifestyle monitoring and social robotics is promising and of value to support integrated care and independent living.

The Fourth Industrial Revolution. Is the UK healthcare system ready?

David Docherty

National Centre for Universities and Business, London

Digital technologies have transformed consumer-led industries, but achieved limited impact in the provision of healthcare. However, healthcare providers, payers, physicians and patients are rapidly exploring the potential of a myriad of digital technologies, leading to the very definition of healthcare to be questioned. In response to the growing challenges, the National Centre for Universities and Business (NCUB) established a Task Force to review and make recommendations on the potential methods in which government, employers, businesses and universities can integrate and collaborate to maximise the benefit of the emerging digital healthcare ecosystem to the UK economy and society.

Although the potential of digital healthcare to provide benefit to the UK is vast, it will only be realised if translated and utilised effectively at a population level. Across the eighteen months of the task force, we have realised that the biggest challenges are not the inventiveness of universities and firms, but implementation and risk taking. Our recommendations, therefore, will focus on campaigning to secure the right skills and training at universities and colleges, liberating the talent and insight of healthcare 'digital natives', reviewing new digital marketplaces to enable faster and more appropriate translation, and exploring pathfinders, such as digital gaming for adolescent mental health. We contextualise our findings in the emerging fourth industrial revolution, that brings transformational integration of the physical, digital, and biological worlds.

The Task Force is chaired by:

- John Jeans (Chairman, EM Imaging; Chairman, UK Biocentre; Non-Executive Director, ProMetic Pharma SMT Ltd.; Adviser to the Prime Minister, Medical Technologies)
- Beverley Byrant (Chief Operating Officer at System C and Graphnet Care Alliance; Former Director of Digital Transformation, NHS Digital, NHS England)

17.00-17.40 Networking Wine Session

Wednesday 24 January

09.00-10.00 Registration/Coffee

10.00-11.00 Session 5 – Housing

Chair: Steve Smithson

Ageing: how it is; how it could be

Joan Bakewell (Baroness Bakewell)

House of Lords

No one is seriously addressing the opportunities that are on the horizon for the old. We spend our lives getting there - diets, exercise, - then don't make the most of it when we get there. Changes in society and culture have the potential to change all that.

There are many losses to confront as you get old: looks and physique decline; friends die, skills get out of date, jobs dry up, pensions aren't adequate. But new and different circumstances can make a difference.

But first we need to stay fit. Everyone over 60 should draw up their own health audit: how are their limbs, their mobility, their balance, their organs. Do their hearing and their eyesight need attention. And this audit isn't a one-off. Each of us needs to appraise our own physical well being annually. Then we can act: seeking support through exercise, walking, pharmacology, check-ups. Staying healthy is no longer to be taken for granted.

But then there is the more elusive question: what are we to do with our old age? What use can we make of it? I am convinced everyone needs a project in their lives. Waking each day with the prospect of something good to do, something – however modest – to bring reward and pleasure. It can be tending a garden...or simply a window box. It can be volunteering for the numerous charities crying out for help. It can be something larger in scale: As President of Birkbeck in the University of London, I present degrees to many over 40s, over 60s, who have graduated in a whole range of subjects, chosen not to enhance their career prospects - too late for that - but for the sheer pleasure of learning.

With the coming of the AI revolution, the availability of robots to do routine jobs will force society to reappraise what human life is for. The once acceptable forms - training, working, retiring - will need to be radically rethought. We can put the new technologies to our own use. The old stand to benefit as much if not more than most. We must play our part in shaping how this revolution proceeds. We can do this because we represent a huge market. And one that is growing. The need for gadgetry to help with mobility, daily routines, managing our homes will grow and will serve us well. But we need to be on board: old people should be fluent with the Internet. On line shopping already serves them well. We need the habits now familiar to some, to be spread among the many who perhaps think they are too old.... too old means losing out on the very things that make old age more comfortable and rewarding.

And then there is the psychology of growing old: as we get closer to death we need to confront its reality. It is waiting for everyone: we, the old, are just a little closer. But there are good things about it, too: we are no longer harassed by career worries; we have yielded our place in the job market. We know who we are and have settled for being ourselves. The future offers us the chance to make the most of it before we go.

Tech to the Rescue?

Richard Best (Lord Best)
House of Lords

In 1997 the Joseph Rowntree Foundation opened a “Smart Home”, a state-of-the-art bungalow in the continuing care retirement community we had recently built to the north of York. This was equipped with a range of devices to assist independent living for an older resident with mobility difficulties.

At the press of an icon on a hand-held remote control, doors and windows could be closed and locked (just like for cars); other icons turned on the heating, ran a bath (to a pre-determined depth and temperature), and controlled all manner of other equipment. At a fixed time in the morning, the bedside alarm would ring, lights would go from dim to bright, the kettle would boil, the TV would come on.

So clever was our Smart Home and so simple its ease of use, visitors flocked to see it in action. Indeed, we even had a deputation from Japan where some of the equipment was manufactured. The resident said she loved the bungalow – and enjoyed demonstrating its delights to her visitors.

But then Colin – the ever-helpful on-site engineer who looked after the Smart Home – left us for a new job at the other end of the country. Only then did I realise that his services had been required on numerous occasions each week. The Smart Home was not so smart after all. The resident lost the remote, broke it, dropped it in the bath; the self-closing windows nearly killed her cat; the machinery was distinctly clunky. Without Colin’s omnipresence to put things right, the Smart Home was a disaster. Within months the kit was dismantled or abandoned and today this is just another retirement bungalow – an extremely nice one but with no pretensions for smartness.

Over the intervening 20 years I have awaited news that others elsewhere have cracked the teething troubles, have found simple ways of mechanising gadgets around the home, no doubt controlling everything from the mobile phone not the remote control. But I have been much disappointed. We have all become cleverer in designing fully accessible and adaptable homes for older people – enshrined in HAPPI standards (from the Housing Our Ageing Population Panel for Innovation). But the wonders of the “tech” have contributed very little. The call systems for raising the alarm are much the same as 20 years ago. In visiting developments for older people the only apparent impact from the decades of extraordinary technological advance seems to be in the use of Skype and Facetime - means of communication not particularly intended for older people (some of whom resolutely prefer the phone!).

I am told that the pressure pads under the bedside mats, for dementia sufferers, still give trouble. And advances in “tele-health” - principally through forms of monitoring long-term conditions – seem always to be “coming soon”.

So, my plea to all those who have revolutionised our ways of working and communicating in so many fields is to turn their attention to the limitless opportunities for tech to improve older peoples’ lives.

Occupational Therapy and Assistive Technology

Helen Rushton

OTUK Occupational Therapy & Professional Development

Helen will outline how occupational therapists can support individuals, services, industry and communities when considering the use of assistive technology.

Adoption of assistive technologies has seen a significant increase in recent years, however much more is required if we are to fully embrace the possibilities. Awareness of products and services that exist and how to obtain them is often limited. People need to acknowledge the need for assistive technologies. Design and cost are key issues. Believing that a product would really make a difference, in relation to quality of life and safety at home are all factors that encourage people to explore the benefits. People are willing to buy products if they are thought to be good value and will make a difference to their lives. Traditionally, businesses in this sector were set up to serve statutory services rather than consumers. In today's market the lines are not so well defined and often a mixture of products and services are required. Utilising the occupational therapists understanding of how people as individuals and communities engage in the activities of living can provide a myriad of insights to enable the adoption of assistive technologies in today's market.

The use, misuse and the failure to use assistive technology

Maggie Ellis

London School of Economics and West Square Associates

Modern day technology can make a great deal of difference to our lives, whether we are a Therapist, in Industry, a Budget Holder, a User or a Carer. Although we have wonderful Research and Development too few people get to read the outcomes and implement recommended changes. In 1999 the Lancet published a top-rated Falls Reduction Project we undertook at King's College Medical School: the cost effectiveness findings have still not been implemented. In many countries similar things have happened in housing, the community and everyday living. In the same timescale budget reductions have occurred in many services. Charities used to offer information and support, now they charge and frequently gain a percentage from companies they recommend. Coverage in the media is rarely relevant. Few people in the UK use on line access to medical records or to reliable information about assistive technology.

This presentation aims to summarise the options, benefits and savings which add satisfaction, a healthier society and better use of opportunities.

EUROSTAT show that there is a higher proportion of people living with a disability in the population.

We are in a critical period:

- Effect of demographic change is accelerating
- Market demand is increasing
- The private market based on fitness and well-being is expanding
- The silver or golden economy is growing in numbers
- Emergence of new technologies, such as Big Data and Internet of Things
- Unethical industrial advice is on the increase leading to more inappropriate purchases
- Some procurement systems restrict the provision of appropriate Assistive Technology

How can we best educate users, service providers and policy makers?

How can we stop the wrong systems and solutions being used?

11.00-11.30 Coffee

11.30-12.30 Session 6 – Housing and Technology for Citizens

Chair: Richard Best

Meeting the challenges of a social care model that delivers for everyone

Ron Wheatcroft

Swiss Re Europe S.A., London

As the population ages, finding a sustainable model to deliver a fair social care model which works for the population has proved elusive. There is an urgent need for a funding model in which the responsibility of the State, Local Authorities and the citizen is clear and where the means exist through products and services to enable them to meet those responsibilities.

The insurance sector has sought ways to support citizens through the provision of products but these have largely failed given the complexity of the system and uncertainty over who will pay what in practice. Outside social care provision, digital and other technology is playing a greater role as part of the insurance model, whether through preventative services to make home safer or by enabling people to return to working after a period of disability when they are able to do so.

The Government will be issuing a Green Paper on the funding of social care for older people in the summer. The problem won't go away and ahead of the Green Paper, it is timely to consider how products, services and technology could come together to deliver the Government's objectives.

Role of activity monitors in active and healthy ageing

Shailey Minocha

The Open University, UK

Over the last two years, a team of researchers at UK's Open University has been investigating the role of activity monitors in socialisation and in improving the wellbeing of people aged over 55 years, of carers, and of people being cared for. Activity monitoring technologies, such as those from Fitbit, Garmin and Samsung, help to track activity, exercise, water and food intake, heart rate and sleep.

Given the UK's ageing profile and as part of the agendas of Active and Healthy Ageing and digital NHS, there is an increasing focus on maintaining health in later life and encouraging physical activity to preserve mobility and motor skills, and self-monitoring of health and medical conditions.

In this presentation, we will discuss the results of this two-year research programme: how activity monitors can bring about positive behavioural changes in people over 55 years towards active lifestyle and healthy diet; as a preventative measure towards medical conditions; for monitoring of health and mobility when suffering from a medical condition; during prehabilitation (improving fitness levels before surgery), and in rehabilitation (supporting recovery and mobility after surgical intervention).

How can AAL and e-health solutions be perceived by users as added value?

Brigitte Bührlen

WIR! Stiftung pflegender Angehöriger, Munchen, Germany

My aim is to make it clear that all e-Health and AAL services must bring added value to citizens and users. They finance and use all the offers.

Society in the western industrialized nations must live and cope with the effects of demographic change, which can only be mastered across generations.

The group that I put in the centre of my attention are the family-caregivers.

They have a large, often decisive influence on the acquisition and use of technical support services. They are the ones who decide to a large extent, which offers are chosen and used and which ones are not. Their experience should be incorporated and used in development processes.

Within the framework of the generational change and the associated stronger affinity to technical, digital and networked offerings, the user perspective should be included much more strongly than before.

Often, users have not yet formed a relevant lobby to enforce their interests.

This will change with the steady growth of the market and the associated growing diversity of offerings.

Are science, are the digital, the health and care economy prepared on self-confident and informed users, on a fast changing society?

So, how can users perceive AAL and e-health solutions as added value?

Questions must be asked, answers must be given: The future has already begun.

The use of Digital Technology in tactical approaches to Ageing

Ruth Rose

SE England Forum on Ageing (SEEFa)

The drudgery of infirmity and of loneliness are not just the bugbear of older age, they are the root causes of depression, frequent illness, loss of agility, mental decline and rising care costs.

The Challenge:

To create self sustaining social interaction between members of small groups using refined versions of current internet social platforms and focussed technology to make access simple.

The Needs:

Voice activation. Interactive conversation via Smart TV set or tablet style device. Encryption and group management similar to WhatsApp with one leader member. Group size no larger than 20, no smaller than 4 or 5. Local agency such as AgeUks or similar to actively organise setting up, provide advice line and occasionally monitor.

Looking at Solutions:

Finding low running cost and possible use of low cost tablets already on the market. Automatic recharging, Voice activation with auto switch-off (and override). Identification of groups with common interests. Made uncomplicated by avoiding the hugely confusing and daunting options presented by smartphones and full access to the internet. Possibly second channel for interaction with family and emergency.

Actions:

Two or three trial groups using WhatsApp. Find the users' most valued aspects and listen to suggestions for improvement (like longer life batteries, louder amplification) before making or devising anything too specialist. Work out sustainable initial capital and running costs for users. Evaluate cost and resources needed for the setting up organisation. Evaluate whether visual screen-up like Skype is desirable or a hindrance.

‘Connect with Me’- the case for effective cross sector working by developing an integrated early intervention model for under-fives, on an autistic spectrum pathway, and their parents

Alison Lentz, Kari Askey and Eunice Costello

Ronald Openshaw Nursery Education Centre and Newham SEND Hub for early years, London

Increasing demand with diminishing resources across the early years sector means that a shift to smarter working will be essential. In the last 2 years Newham has seen a marked increase in the number of under-fives receiving a diagnosis of autism. This has stretched relevant support services across health, education and social care with a direct impact on the levels of support parents and early years settings can expect. The SEND Hub for early years has researched and developed an early childhood intervention that has the potential to put parents in the driving seat, be highly child-centred, draw agencies together to deliver support in a holistic, ‘one stop’ way, and reduce unnecessary bureaucracy. It has necessitated a major change in mind-set for many professionals but the pilot programme is now under way! As we see the benefits we must also begin to explore how our many and varied IT systems can be co-ordinated to support, and not hinder, cross sector working.

12.30-13.30 Lunch/Networking

13.30-14.45 Session 7 – Smart Cities

Chair: Maggie Ellis

How Greater Manchester is leading as a UK City-Region in the area of health innovation

Michael Contaldo
Greater Manchester Combined Authority

A brief summary of the work underway in Greater Manchester to help the city-region position itself as a pioneer in the area of health innovation including e-health and data analytics.

An agile approach to eHealth and Smart Cities

Calum Handforth
Winston Churchill Memorial Trust, London

The agile approach to project management - piloting and iterating to deliver products that customers need, and responding to change instead of trying to specify everything at the outset - is at the heart of digital service development. Similarly, evidence and insight - often in the form of randomised controlled trials (RCTs) drives health and medicine. However, these founding principles are often forgotten when developing eHealth and Smart Cities solutions. This presentation will focus on how to apply these key tenets - drawing on my experience in one of the UK Government's Behaviour Change Teams, where I designed and led one of the largest RCTs to inform policy development - and my international fellowship researching digital government and digital public service delivery in Estonia, Norway, Singapore and the UK. Governments and others working on eHealth and Smart Cities need to be building in space for experimentation and feedback loops; they need to be using the startup mentality where possible; they need to be committing to monitoring and evaluating; and they need to be testing, learning and iterating.

Use of electricity events data in elderly care/monitoring

Sergey Ogorodnov
Voltaware, London

Voltaware is an electricity sensor-based technology that monitors the elderly home non-intrusively from a single easy to install sensor in realtime. The Voltaware cloud uses advanced machine learning techniques to learn the behaviour/timetable/patterns of appliance use of the elderly. The system can then raise various levels of alarms to the carers/next of kin via telephone calls, sms or app notifications in case it detects abnormality.

Voltaware can be added to existing elderly care solutions to reduce the overall cost, by reducing the number of cameras etc., and at the same time, improving effectiveness. The system can be deployed standalone to provide an elderly monitoring service which is low cost, non-intrusive and offers a high level of reliability. Voltaware is currently looking for industry partners who can add value in terms of integrations, expertise and sales networks, to help us commercialise the technology.

NHS Digital Academy

Harpreet Sood
NHS England
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An overview of the NHS Digital Academy, including programme content and wider context of workforce development.

Mind the Gap!

Andrew Cowen
Future Care UK, London
info@futurecareuk.com

“Mind the Gap” explores the reality of delivering smart city integrated health services, spanning multi-stakeholder interests and barriers to market.

The starting point is based on the premise that a smart city infrastructure is a given. It is estimated that the sector is worth 41.5 trillion by 2020. But unless we can deliver services that reside on a smart city infrastructure, then this vast amount of \$1.5 trillion is not achievable. Furthermore, the absence of a nationwide smart city standard is making the market even more fragmented. Smart city infrastructures e.g. LoRaWAN, Sig fox and others, battle it out at the detriment of early adoption, missing opportunities and introducing confusion in the market place.

Also, what is meant by smart city integrated service? Pragmatically, what can we do with this infrastructure to improve citizen’s lives, public and private sector interests. Currently there is little evidence of real integration. Most “integration” is just smarter ways, engaging vertical market focuses e.g. reducing lighting costs for councils by having sensors on lamp post to increase, decrease, turn on/off street lighting according to ambient light levels. However, where is the integration to incorporate the luminance of a street light to engage, real-time, with a partially sighted citizen’s needs?

The situation starts to get even more complicated once we begin to look at implementing a service that impacts across several public-sectors: Council, NHS and Social Services stakeholders. Although getting better, public sector is very fragmented and fraught with legacy and proprietary systems that do not communicate with each other, data is collected and stored in multiple formats and structures. Services across these stakeholders are disjointed and inefficient. Traditional work practises, fear and protectionism all play a key role in slowing down the take up and advent of new ways of doing things.

Using FALLS Predict™, a pilot service Future Care is developing, as an example: I will, in very general terms, show the impact of falls on lives, business, the community and the public purse, but in doing so highlight the barrier to implementing the service. This will include data integration for static, historic and real-time challenges, adoption and the pilot inertia, social impact measurement and RoI, plus remuneration and incentivising strategies to support change in tradition business practices or personal behaviours. I will also briefly address the lack of thought

leadership, business models and sources of funds and investor appetite for such smart city schemes.

The conclusion is more of a question to the panel and audience. Now that we are mindful that the gap exists, how do we, businesses and institutions work together to bridge the gap and what needs to change?

14.45-15.00 Coffee/Networking

15.00-16.30 Session 8 – Education & the Future

Chair: Alan Willis, EKTG Leadership Group

The UK health informatics training landscape

Amitava Banerjee and Lydia Abou-Nader.

Amitava Banerjee also represents the Royal College of Physicians
Farr Institute of Health Informatics Research, University College London
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Successive consensus health policy documents and independent reports have emphasised the need for development and innovation in healthcare IT. As the amount and the complexity of data involved in modern healthcare have increased, terms such as “big data”, “digital medicine”, “ehealth” and “data-driven healthcare” have become commonplace. Health informatics is the variably defined discipline which has rapidly evolved to study the implementation and impact of information technology in health systems. Political drivers in the UK are calling for an “information fit workforce” to deliver ambitious targets of a paperless NHS by 2020 and achieve an NHS with a “high degree of digital maturity by 2023”. However, there is limited information on how clinicians will be equipped to achieve these goals in such a short space of time. Without a knowledge of health informatics, doctors and other health professionals will find it difficult to keep pace with or capitalize on the advances in technology and need for new models of care and research.

In the UK, there is an alignment of opportunity on several levels which could enable improvement of the ehealth knowledge of clinicians at scale. First, the Digital Academy has been established to train the next cadre of digital health leaders or Chief Clinical Informatics Officers (CCIOs) nationally. Second, the Global Digital Exemplar programme has identified sites around the country which are to lead in ehealth and become examples to other hospitals around the country. Third, there is a professionalization of health informatics among health and IT professionals with the formation of the Faculty of Clinical Informatics and the Federation of Informatics Professionals. However, there are still major gaps in the undergraduate and postgraduate curricula of doctors which need to be addressed. In this presentation, I will highlight the opportunities but also the challenges facing the medical workforce in ehealth training, focusing on examples of good practice.

Development of a Greek e-library in gerontology and geriatrics

Elizabeth Mestheneos

Hellenic Association of Gerontology and Geriatrics

A grant from the TIMA Charitable Foundation in Nov 2016 permitted the Hellenic Association of Gerontology and Geriatrics, a not for profit NGO concerned with the promotion of information and education on ageing since 1977, to develop the first Greek e-library in gerontology and geriatrics. In Greece there is no governmental department concerned primarily with ageing issues, nor any university or research centre with either a gerontology or geriatrics department. This is the reason HAGG took the initiative to establish a resource for Greek policy makers, the public and researchers to strengthen knowledge about how to improve the health and well being of older people. Many individuals and institutions have worked on ageing subjects but without easy access to foreign language and Greek findings. Over 1200 links and Abstracts in Greek have been entered onto the site as of January 2018. See www.gerolib.gr

It is designed and has suitable entries for different kinds of readers:

- the public – whether older people, family members, local authorities, NGOs, or civil servants.
- educational material and information for social and health care professionals, service providers, managers and for all those working professionally with and for older people
- research data and findings – mainly designed for academics and researchers and who wish to access the most up to date findings
- Theses/dissertations of students have been listed in the e-library and include original pieces of research.
- Some material and articles primarily for experts
- a list of Foundations, NGOs, professional associations that have worked on ageing issues as is a valuable source of information enabling readers to check on the specific contributions of these organizations.

It should be obvious that any library is only as good as the numbers using and contributing to it. How do we get everyone to know about its existence and remember to use it? Reaching the Greek public is difficult – and the mass media are rarely fascinated by either libraries or older people. Many bodies and individuals like to keep information, activities and findings as their exclusive “possession” yet we need cooperation and the sharing of knowledge and involvement in debates. We are asking those with relevant material to send links and inputs; while those with new research programmes will be asked to make a donation to the e-library to publicise their future findings in the e-library through their publicity budget. The e-library of gerontology and geriatrics will need support in order to stay up to date and functioning. But will it receive it?

Educating the Professionals

Christiane Brockes,

University of Zurich, Switzerland

E-health is a new section in the healthcare system. Information and communication technology are used to increase the quality of therapy and safety of the patient and to

decrease the treatment expenses. Telemedicine is a part of e-health and utilizes telecommunication technologies for diagnosis, consultation, and therapy. Digital health assistants like health and fitness apps are trendy; self-tracking in combination with a certain play and fun factor can help to motivate the user to take control of their own health. Also in this quantified self-field the patients increasingly require certain assistance for the creative and profitable utilization of the often confusing amount of data and information that the apps provide. Medical professionals can support their patient to select and to evaluate the interesting and relevant data for themselves and to avoid danger, for example, in relation with the protection of data privacy. Doctors can use the virtual communication possibilities to advise and to take care of the patients. The quality of the given medical support and intervention depends on the medical expertise and the knowledge of telemedicine of the doctor. Adjustments in the basic and further education are inevitable for the reason that doctors are well qualified to support their patients competently and with self-confidence in the increasingly complex digitalization of healthcare.

Often medical doctors have doubts and mistrust regarding the new sector of telemedicine and e-health. As an answer to the growing importance of this new field, especially with the view of the demographic alteration, the progressive shortage of doctors, and the cost pressure in the healthcare system, we developed an education module “Clinical Telemedicine/e-Health,” which was implemented by the Faculty of Medicine of Zurich in the curriculum of medical students in autumn 2008. An education module for medical students in this form is unique in Europe. Therefore, the module was systematically evaluated to determine if the students would benefit from this course. In 2011, 2015, and 2016 further evaluations were performed. The positive assessments of the module indicates the successful introduction of the topics of telemedicine and e-health to medical students. Throughout the course, the students gained confidence and basic skills. The intended use of telemedicine as important supplement to the traditional medical consultation and treatment method speaks for the success of learning.

In general, the education of the professional staff that work with the applied Ambient Active Living (AAL)-solutions is useful to provide confidence, acceptance and knowledge. Furthermore a general support and monitoring of the end-users of AAL-services is necessary in order to provide access to innovative technologies and services in the home environment and in the private living sector based on sound knowledge of social life styles, geriatrics and family discussions. The main goal of our support and education is to provide confidence, acceptance and knowledge of the fast-growing e-Health-sector and to increase the quality of life and safety.

Rait Kuuse

Government of Estonia, Deputy Secretary General on Social Policy, Estonian Ministry of Social Affairs

Estonia is a country in north-eastern Europe of approximately 1.3 million people. Estonia, as other post-communist countries following the collapse of the Soviet Union set prior focus on economic reforms.

Estonia is currently well known as a frontrunner in the area of e-governance. The high level of e-services, good examples of digital solutions like e-elections, e-taxes, e-police, e-health, e-banking, e-school and e-residence are widely known. Continuous attention and investments have also supported development of rich and vibrating IT industry and start-up scene. According to Funderbeam Start up Investment Report, Estonia is third in Europe regarding the highest number of start-ups per capita. The digital agenda was also a central theme during the Estonian Presidency of the Council of EU to mark the commitment in that area.

With the increase in wealth, more resources have become available for the social welfare sector. Despite success in overall economic development, the level of social spending is below EU-28 and OECD average. At the same time, the challenges like ageing population, ensuring equal opportunities and modernisation of services are the same as everywhere in Europe. Therefore, the impact of innovative thinking and start up culture needs to be enlarged to the area of social welfare, as this sector is somewhat lagging behind in terms of innovation.

The issues of redefining the balance in providing social services for people and employing new approaches like sharing economy to serve social sector sustainability are there. The main expectation towards digitalisation is the possibility to use scarce human resources more wisely and where it's needed. For a small country like Estonia, there is a greater need to seek for the balance between public and private sector engagement, some policy areas still do not attract, as the market is not yet visible or large enough. Therefore, in developing our ecosystem for innovation in the field of social policy government has taken a stronger lead to guide processes to meet challenges.

The Ministry of Social Affairs has set an aim to use the potential of e-governance and innovation for meeting the future challenges. The culture of innovation is supported through policies encouraging development and renewal of the social welfare services and approaches. First promising results are already visible, but there is more to happen.

Current presentation allows an insight to the evolvement of the social welfare sector in Estonia.

Summary of the Symposium

Steve Smithson

London School of Economics and EKTG Leadership Group

Closing Words

Nick Howe

NatWest Business Banking, London

Nick Howe, Enterprise Manager, NatWest Business Banking

Nick has worked for NatWest Business in various roles for the last 23 years having been inspired by the very first business customer that he met. As Enterprise manager Nick's work sees him travelling across London & South East and working in partnership with numerous business support organisations and educational establishments who are all focussing on the area of enterprise. Last year this saw over 10000 people across London & South East benefitting from the bank working with the wide array of community organisations to provide enterprise education. Nick has been proud to see the work that he started as a pilot in London be rolled out into a much more prominent role elsewhere across the UK by NatWest.

Nick has seen by working with so many entrepreneurs the mindset of needing to be comfortable being uncomfortable. Being a corporate employee should be no different so whilst Nick is eager to deliver many areas of expertise to Agile Ageing with an attitude of open collaboration it is not without putting himself in areas he is unfamiliar with in this space. Nick, on behalf of NatWest, is delighted to host this conference again this year. @Nick__Howe

EKTG Website is now at <https://www.ektg4ehealth.org>
Earlier text and information is at:
<https://connect.innovateuk.org/web/european-knowledge-tree-group>