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Action Plan

TITTAN
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Translation, Innovation and Technology Transfer in Ageing Network

Partner:

The Digital Health and Care Institute/ University of Strathclyde

DIGITAL HEALTH & CARE INSTITUTE

University of Strathclyde Glasgow

February 2019

Part I – General information

Project: TITTAN – Translation, Innovation and Technology Transfer in Aging Network

Partner organisation: Digital Health and Care Institute/ University of Strathclyde

Other partner organisations involved (if relevant): DHI/University of Strathclyde, Scottish Government, National Services Scotland, NHS Scotland, Scottish Enterprise, Local Government Digital Office, Scottish Centre for Telehealth and Telecare, Tunstall, IBM.

Country: Scotland

NUTS2 region: UKM34

Contact person: Kara Mackenzie

email address: kara.mackenzie@dhi-scotland.com

phone number: +44 (0)141 444 7425

Part II – Policy context

The Action Plan aims to impact:	✓	Investment for Growth and Jobs programme
	☐	European Territorial Cooperation programme
	☐	Other regional development policy instrument

Name of the policy instrument addressed:

Scottish ERDF Operational Programme 2014 – 2020 – Priority "Innovation in support of Growth & Jobs: Promoting business investment in innovation and research; and developing links and synergies between enterprises, R&D centres and higher education sector"

The Action plan will address the policy by:

- Linking enterprise with Scottish Universities and the public and third sectors through the development of the Demonstration and Simulation Environment and related projects.
- Providing innovation and research support to enterprises through the challenges prioritised in DHI's Phase 2.
- Creating several Innovation Clusters (SIGs), bringing together a range of expertise across industry, academia and the public sector to stimulate innovation and research and encourage investment.

Part III – Details of the actions envisaged

ACTION 1 – Integrated Health and Home Monitoring Platform

1. **The background** (please describe the lessons learnt from the project that constitute the basis for the development of the present Action Plan)

The TITTAN project has offered learnings in the successful management of digital transformation of health and care services. As is described in the recently published Scottish Digital Health and Care Strategy (2018), Scotland is pushing forward with the digital health and care agenda and will be changing the services offered to Scottish Citizens to ensure they are more person-centred than ever before. These services will be supporting the ageing population that Scotland currently has to try to predict and prevent ill-health and promote wellbieng.

These Galician best practices resonate with the work that Scotland is currently doing to innovate the health care sector. É-Saúde is an electronic platform, which was developed to improve the communication between citizens and the public healthcare system. The platform aims to be flexible and easy to use, but without compromising security. É-Saúde acts as a tool of personalization of services for the patent by providing citizens with easy access to personalized services and contents according to their personal needs. Since the very beginning a multidisciplinary team (Citizen attention services, Quality services, IT services, Innovation services, nurses, doctors as well as patents), has been working closely with the company in charge of developing the platform. The platform, which is oriented to both sick and healthy citizens, aims to be the meeting point in the virtual field between citizens and the Galician Public Healthcare Systems.

In parallel to the TITTAN project (spanning almost exactly the same time period), DHI worked with NHS Greater Glasgow & Clyde and four Scottish businesses to develop proof of concept platform capabilities partly derived from the É-Saúde work. DHI has proposed a Demonstration & Simulation Environment to allow public and private sector innovators to prototype integrated platform innovations in a safe way before going to live trial. This initially involved two use cases – one for remote monitoring of blood pressure for hypertension management and one for informal care coordination tools for the family of a frail relative. In both cases citizen-held and clinical data sets were merged through this type of platform work. Towards the end of this Phase 1 activity, DHI undertook some concept development work based on the digital homecare integration schema shared through TITTAN. This has led to several consortia bids into various funding streams to deploy this kind of capability in large scale live trials.

2. **Action**

DHI has two main lines of action derived from this platform work:

2.1 Demonstration & Simulation Environment (DSE) – a funding request for DHI Phase 2 has been submitted to Scottish Government. As segment of this funding (circa £400k) will be used to further develop the integration of health and home monitoring platforms to support Scotland's innovation and R&D community. This infrastructure will then be offered 'in kind' to help scale any service redesign activity that would benefit from it. A funding decision is due in April 2019, after which the following actions will be taken forward if successful:

a. Procurement of a consumer health data exchange and home IOT data exchange. Integration of these capabilities with a Personal Data Store (May-July 2019)
b. Integration of these services with clinical systems in at least one NHS health board (July – December 2019)
c. Integration of these services with at least one large scale third sector organisation (July – December 2019)

d. 3-6 third party consuming services connecting to the platforms external APIs to support service redesign activity in health and care organisations (July 2019 – June 2020).

2.2 Just Living – DHI is part of a consortia submitting to H2020 to deliver an initial 200-person trial of this platform capability for frailty service provision. A funding decision is due in April 2019. The action arising would be a 200 person trial enacted on the platform and reporting by mid-2022.

3. Players involved

- NHS National Services Scotland: This is the country's national procurement body. They are also a regional steering group member of the TITTAN project. This organisation is keen to work directly with ACIS to investigate how the procurement practices in the Galician context have allowed for innovation to flourish and to ultimately allow different partners to work together to create a person-centred service.

- Digital Health and Care Institute/ University of Strathclyde: Our organisation will coordinate the relationship between ACIS, the Galician Health Ministry and NSS to ensure that learnings are specific and can be transferred to our region effectively.

- The Scottish Government eHealth team. This division of Scottish Government has a focus on digital health and is proposing funding for some of the activities.

4. Timeframe

The procurement activities for platform capabilities similar to eSaude will be completed by July 2019.

Health and care records systems integrations will be completed by the end of 2019.

Three, third party services will be deployed on the platform by July 2020.

5. Costs

Costs of around £400k in seed funding are already sought and DHI is in advance discussion with Scottish Government on this. After this, the Just Living project would bring in £2 million for a large trial. DHI has another four large live trial project bids in development / submitted.

6. Funding sources (if relevant):

InnovateUK, H2020, Scottish Government.

ACTION 2 – Ecosystem and Engagement Development

1. **The background**

The Basque region is one of the partners of the TITTAN project. The INNOSASUN best practice that the Basque region showcased to the TITTAN network was of particular interest to the Digital Health and Care Institute for the way in which BIOEF interacts with the healthcare system and private entities. The INNOSASUN Programme is a support mechanism to articulate interactions among Basque Public Health System and the business sector, meeting the needs of both sides and providing ad hoc support. This activity is enabled by the Health System's capacities, know-how and its extensive and collaborative network, working as an innovation ecosystem and a living lab. The INNOSASUN Programme is coordinated by the Unit of Relationship with Third Parties within BIOEF, providing support and expertise form Health Research and Innovation network, which comprises Basque Health Department, Basque Public Health System (Osakidetza), Health Research Institutes, Osatek, Kronikgune and socio-sanitary space. Attending to outside-in innovation, INNOSASUN plays an important role because the interaction of companies and technological agents with the health system facilitates the search for technological partners which have innovative solutions to the needs arising from the Healthcare System. Therefore, INNOSASUN provides adapted support to those unmet needs and born ideas within the Healthcare System working in transferring these needs and ideas to the industries and research centre of the region to try to engage them in order to provide innovative solutions in a win-win scenario.

The DHI's main body of work is split into several different 'challenge areas' which the Scottish Government has set for the DHI to tackle. For example, next generation asthma care or digital diabetes management or citizen-centred data sharing or person-centred services. Each of the different challenge areas have partners from public and private sector which work together towards the end goal of each challenge. The way in which BIOEF has managed to coordinate these kinds of engagements through the INNOSASUN programme within the health and care domain is of interest to the DHI and has helped to inform the development of a business case for Phase 2 activity.

2. Action

Taking the learnings from the INNOSASUN programme, DHI will work with the two Scottish Economic Development Agencies, the Scottish Government and NHS to;

- Identify and prioritise areas of special interest (challenges) to take forward in Phase 2 of DHI
- To provide support for public and private sector organisation in relation to Digital Health and Care and specifically in the Challenge areas to be prioritised in Phase 2.
- To create Innovation Clusters (SIGs)
- To use the DHI's demonstration and simulation environment to support public and private organisation.

3. Players involved

- University of Strathclyde/DHI
- Scottish Enterprise, Enterprise Europe Network, Highlands & Islands Enterprise - Economic Development Agencies – to assist with the support being provided to industry partners and SIGs
- Scottish Government/NHS Scotland/The Digital Office for Local Government – to work with DHI to identify and prioritise the challenges for Phase 2 of DHI's activity.

4. Timeframe

The challenges that are currently being run within the DHI are continuing for the next 2-5 years and thus this action will feed into that work until the end of the project in September 2020.

5. **Costs**

DHI is currently negotiating the budget for DHI's Phase 2 activity, this value will indicate how many challenges are identified and how many SIGs are created. This budget will be available April 2019.

6. Funding sources:

Scottish Government

ACTION 3 – Next Generation Solutions for Healthy Aging inScotland

1. The background

One of the best practices that Scotland have found to be very interesting is the CCS Telehealth Ostsachsen from Saxony. The telemedicine platform "CCS Telehealth Ostsachsen" is a European pilot scheme which offers a broad range of possibilities in networked medical care and is intended to help overcome former limitations in healthcare. To do this, the project makes an open and universally applicable IT platform available for the healthcare of an entire region - in Eastern Saxony and beyond.

Three applications demonstrate the potential of the developed infrastructure:

Tele coaching:

- Remote application for patient-centered care of patients with heart insufficiency
- Specially trained Tele Nurses supervise health data of patents at home
- Patent submits health data via provided tablet and secure mobile connection

Telepathology:

- Pathological tissue slices are scanned by high performance medical scanner
- Approx. 2GB per picture, stored in special local data centre
- Partner institution provides clinical counsel after examining picture via secure connection

Tele stroke:

- Case manager organizes outpatient care of stroke patents after initial hospitalization and treatment, uses e-health infrastructure and EMR for managing care pathways.
- In case of worsening health status, specialists contact GPs and imitate changes in medication or pathways, using information stored in the EMR on the e-health infrastructure.

In Scotland, DHI, the Scottish Centre Telehealth and Telecare, the Digital Office for Local Government, Tunstall and IBM are leading a consortium to develop a managed proactive and predictive service model for a Next Generation Solution for Healthy Aging (NGS). The proposal aims to establish an open-source technical architecture to support a range of digital health and care products and services, enabling data to transfer between public and consumer systems, and stimulating market growth.. It is proposed that the solution will be based on an open IT Platform which will enable a range of services to be delivered to the citizens of Scotland replacing the traditional analogue Telehealth and Telecare services

2. Action

The Digital Health and Care Institute will use the learning to inform the development of the Next Generation Solutions for Healthy Aging proposal for Scotland as described above. In order to have a ‘once for Scotland’ approach to the design of the Next Generation Solution for Healthy Aging, DHI are facilitating a Health Aging Innovation Cluster to ensure engagement from Industry, academia, third sector and other public bodies.

3. Players involved

- DHI/University of Strathclyde – leading development of the NGS Proposal
- Tunstall – Industry partner for the proposal
- IBM – Industry partner for the proposal
- Local Government Digital Office/SCTT – leading the development of the proposal on behalf of the Public Sector
- Healthy Aging Innovation Cluster (SIG) – providing access to a wide range of digital products and services and test bed environments

4. Timeframe

It is proposed that there would be a 3-5 year initial test project which would be completed by 2024, leading to a Scotland wide scale up. It is anticipated that this will align with the international Analogue to Digital telecare service switch over.

5. **Costs**

The cost for this project is still being established.

6. **Funding sources**:

It is anticipated that the funding will come from Scottish Government, Innovate UK, commercial partner contributions and others.

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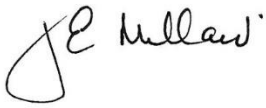
Signature: 

Stamp of the organisation (if available): (Jim Millard, Scottish Government) .