SmartHealth Final Report

EDITION November 2020

English version

Contents

Executive Summary

- Smarthealth is a 2 year programme offering **bespoke cross-border SMEs business support to e-health technologies from the Channel area** that was co-funded by INTERREG.
- The objective of the SmartHealth programme was to design and test a new cross-border accompanying SMEs programme in the context of EU transition to develop new innovative products and services in E-health.
- 21 clinical and care statements across 6 UK and FR healthcare establishments were highlighted and presented using videos.
- Across 3 calls, 16 applications were received and 14 SMEs were awarded SmartHealth winners (7 UK and 7 FR) and two international award ceremonies were held.
- 8 cross-border meetings (via teleconference) were held between SmartHealth winning SMEs and their allocated healthcare establishments.
- The cross-border support programme comprised of 9 international modules (International Pathway, Health & Care market and value proposition, procurement, co-development, how to set up a company funding opportunities, data protection, human factors, regulations, COVID-19 supply chain) that were delivered via webinars and workshops. All content from these sessions was prepared into a Catalogues of Training Modules and summarised into a Training Workbook (which was reported as good or very good by 83% of SmartHealth winning SMEs.)
- Several innovative communication methods were used to publicise SmartHealth during the programme implementation period including social media, e-shots, 3 healthcare regulatory affairs documents and 5 newsletters. A final dissemination webinar was also hosted to present our successes, lessons learnt and case studies.
- COVID-19 introduced several challenges to the implementation of SmartHealth. All meetings, training sessions and events were rescheduled for online delivery and the amount of time available by SmartHealth Healthcare Establishment Partners to work with the winning SMEs was significantly impacted. Nonetheless, all SmartHealth winners except 2 (Oscare and Cievert) had a successful kick-off meeting with their assigned Healthcare Establishment.
- Contributions to horizontal principles and programme indicators were considered and applied throughout the project.
- The evaluation showed that 83% of SmartHealth SME winners (across both UK and FR) were satisfied or somewhat satisfied with the support received through SmartHealth and 67% of SmartHealth winners intend to continue collaborating with their assigned healthcare establishment.

Introduction

SmartHealth, is a 2-year cross-border Interreg FCE project developed by four experienced innovation agencies and clusters: SEHTA, EPM, Eurasanté and Amiens Cluster. As part of this project, 395.634,84 EUR was granted by the INTERREG Channel programme to help stimulate Franco-British understanding and cooperation between the local health and care providers with shared clinical needs, and SmartHealth winners (SMEs) providing digital solutions. This Final Report acts as the summary for the activities conducted to meet this objective and provides an overview of what has been delivered and achieved. The project ran from the 1st September 2018 until the 30th November 2020.

SmartHealth partners

South East Health Technologies Alliance (SEHTA) is a health technology network organisation, providing business support for the benefit of their members who represent health technology SMEs, health professionals, care providers and academia. Founded in 2005 as an organisation to understand and meet the needs of small healthcare businesses, SEHTA is one of the largest networks of individuals from Academia, Business and Care/Clinicians (with over 1,100 members), with the purpose of improving the health and care of the citizens of the UK as well as increasing wealth. They achieve this by offering support on a one-to-one basis through their business support services and one-to-many through workshops, training and other events.

Amiens Cluster association was founded in April 2017. Two of the founding members are the Amiens-Picardie University Hospital and the Amiens-Picardie Chamber of Commerce and Industry. The main objectives of the e-health cluster are 1) to support the development of innovative projects by sign posting to various experts, organizing call for proposals, running creative challenge etc. and 2) to promote these through dedicated events and to provide access to experimental fields, business opportunities and financial intermediation.

EPM works with regional development agencies, clusters and innovation centres, and SMEs to help them understand EU Policy and run international projects. EPM has a 15-year experience in Franco-British co-operation and is an expert in the health sector.

Eurasanté is an incubator, a technology transfer tool and a cluster manager in the biotech, medtech, nutrition and healthcare fields in Northern France. It assists French and foreign companies, entrepreneurs, scientists and clinicians with their innovations and development projects.

Health Establishment Partners in SmartHealth	
Graham Care (UK)	The **Graham Care Group** provides **care** home accommodation for over 300 people in Surrey, Kent and Sussex. With five homes, another one under construction and several development sites, the **group** could potentially offer places to over 700 residents.
Portsmouth Hospital NHS Trust (UK)	Portsmouth Hospitals NHS Trust runs St Mary's Hospital, Queen Alexandra Hospital, Petersfield Hospital and Gosport War Memorial Hospital, in Hampshire, UK.
Surrey & Sussex NHS Trust (UK)	Surrey and Sussex Healthcare NHS Trust runs East Surrey Hospital in Redhill and outpatient services at Caterham Dene Hospital and Oxted Health Centre in Surrey, and at Crawley Hospital, Horsham and Queen Victoria Hospital in West Sussex, UK.
Academic Hospital of Amiens-Picardie (France)	Amiens Public **Hospital, France.** CHU Amiens-Picardie is located 6 km from city center of Amiens. CHU Amiens Picardie is the biggest employer in Picardie region with 5600 employees on 3 different locations.
Victor Pauchet Health Group (France)	The Clinic is a **Pauchet Victor** MCO establishment (Medicine Surgery Obstetrics) consisting in particular of a medical-surgical center and a child-woman pole (Maternity, gynaecology surgery, paediatric ward, IVF, etc.) located in Amiens, France.
Hospital of Calais (France)	Calais Hospital is now part of the UK N.H.S system. N.H.S patients may now choose to have their elective consultant opinion and subsequent hospital treatment at the new (built in 2012) Calais Hospital (Centre Hospitalier de Calais).

Objective

The objective of the SmartHealth programme was to design and test a new cross-border accompanying SMEs programme in the context of EU transition to develop new innovative products and services in E-health. The ambition is to use digital enabling technologies to develop new E-health products in response to identified clinical needs involving the participation of local hospitals.

Outputs

1.1 Number of innovative products, processes, services, or systems designed (MP)

T1 Communication, Healthcare Regulatory Affairs and awards to SMEs

Project Logo - The design of the project logo was led by Eurasanté but all partners inputted into the design of the Project's logo during Semester 1. All project communications display the INTERREG logo as well as the Smarthealth Logo. It helps to raise awareness and build a strong brand.

A3 Poster - Eurasanté co-ordinated the production on an A3 poster for the project with input from all partners during Semester 1. English and French versions were created and printed to display at events.

Banner Stand - Eurasanté co-ordinated the production of a banner stand for the project with input from all partners during Semester 1. One English banner stand and one French Banner stand was produced. The English banner stand is stored at SEHTA's main offices and used for the English SmartHealth events.

Leaflet - Eurasanté co-ordinated the production of the leaflet for the project with input from all Project partners during Semester 1. It describes the project aim, consortium, main goal and how to get involved in the SmartHealth programme.

Newsletter - Five SmartHealth newsletters have been created and disseminated to the SmartHealth Partners' networks (December 2018, March 2019, August 2019, February 2020 and June 2020).

Cross-border kick-off meeting - On 05/02/19 two kick off events were hosted. One in London (hosted by SEHTA and attended by SEHTA and EPM) whilst the other was hosted in Amiens (lead by Amiens Cluster and attended by Eurasante). Both events were run at the same time with a live cross-border connection. The London event was attended by 37 SMEs as well as the three UK healthcare establishments. The Amiens event was attended by two healthcare establishments, ten SMEs and one "other" organisation type. Questions asked during the live, cross-border relay were used to produce an FAQ document to help potential applications better understand the scope of the SmartHealth competition. Feedback forms were collected from that day and were wholly positive from the SMEs and Hospitals community.

Inserts on partners' websites updated with Healthcare Regulatory changes - The partnership published the first healthcare regulatory affairs in the context of EU transition in August

2020.The second was published in February 2020 and in June 2020, we issued the third and final healthcare regulatory affairs update in the context of EU transition and COVID-19.

International Business Award Ceremony - The Smarthealth Round 1 International Business Award Ceremony was held in Lille on 26/06/2019 at MedFit conference.

The SmartHealth Round 2 and Round 3 Ceremony was held in Lille on 12/02/2020. All SmartHealth project partners attended and so did representatives from 9 of the 10 winning SMEs.

There was a total of 13 SmartHealth SME winners:

1) Mind Over Matter (UK) and Integrative BioComputing (FR) – Portsmouth NHS Hospital (UK)
2) MiiCARE (UK) and Humaniteam (FR) – Graham Care (UK)
3) Sweatcoin (UK) and HeroicSante (FR) - Portsmouth NHS Hospital (UK)
4) Piota Apps (UK) and Horizontal Software (FR) - Surrey & Sussex NHS Trust (UK)
5) Docobo (UK) - Hospital of Calais (FR)
6) Alpha MD (UK) - Hospital of Calais (FR)
7) Cievert (UK) - Amiens Picardie Hospital (FR)
8) Psycle (FR) - Graham Care (UK)
9) Bookbeo (FR) - Surrey and Sussex NHS Trust (UK)

All cross-border SME winning partnerships were established by the SmartHealth team through successful matchmaking efforts with the use of Partner Search Forms. We facilitated scheduling potential partnership calls between SMEs and participated in numerous phone calls to help foster and inspire collaboration between potential partnering SMEs so that they would apply for the SmartHealth programme together.

T2 Design of an innovative international SMEs support programme in E-health

List of clinical and care statements of need - During Semester 2, SEHTA held interviews with the UK hospitals and Eurasante and AC held interviews with the French hospitals. Videos were created from these interviews, and translated by EPM, to explain the needs in both English and French.

The following clinical and are statements of need were highlighted and presented using videos:

For Graham Care:

https://www.youtube.com/watch?v=ywky8n-VUTs

1- Data integration with predictive algorithms

2: Communicating data to carers/relatives

3: Regulatory – translate hard data into soft outcomes

For Portsmouth Hospital:

https://www.youtube.com/watch?v=yN8DhiJSOFw

4: Self-management of long term conditions

5: Portsmouth Hospital NHS Trust 2: Live documentation of patient's health status

6: Portsmouth Hospital NHS Trust 3: Promote healthy lifestyle choices

For Surrey & Sussex NHS Trust:

https://www.youtube.com/watch?v=2edGTIk-GLw

7: Surrey & Sussex NHS Trust 1: Outpatient services

8: Surrey & Sussex NHS Trust 2: Mental Health

9: Surrey & Sussex NHS Trust 3: Hospital bed availability and patient discharge

For Academic Hospital of Amiens-Picardie:

https://www.youtube.com/watch?v=genEw93tusU

10: Monitor for patients undergoing robotic surgery

11: Academic Hospital of Amiens-Picardie 2: Monitor for patients undergoing chemotherapy

For Victor Pauchet Health Group

https://www.youtube.com/watch?v=LbzKth7_ics

12: Time-saving regulatory/administrative solution

13: Personalising chronic disease treatment management

14: Accelerate patient transfer administratively and medically

15: Patient monitor connecting to Dr/hospital's software

16: Health Sat-Nav

17: Update carers' skills

For Calais Hospital:

https://www.youtube.com/watch?v=Uxcf_DeqxiI

18: Non-verbal communication tool for hospital patients

19: Virtual reality simulation to facilitate mobility

20: E-learning tool to educate new hospital employees about strokes

21: Post stroke monitoring application

Meeting with Directors of the participating healthcare institutions – All SmartHealth partners developed relationships with Healthcare Establishments in the Interreg FCE area. SEHTA met with all three UK healthcare institutions (Graham Care, Portsmouth Hospital and Surrey and Sussex NHS Foundation Trust) on the 7th, 11th and 19th of December 2018 to explain the SmartHealth project process, film for the video advertising their clinical needs and secure their commitment for the project's two-year duration. The French partner side met with 3 healthcare establishments: CHU Amiens, Groupe Victor Pauchet and CH Calais.

Amiens Cluster was in charge of organising meetings with CHU Amiens and Groupe Victor Pauchet. An introductory meeting with CHU Amiens took place on the 9th of October 2018 and the video interviews were held on the 18th of January 2019. The video interview meeting with Groupe Victor Pauchet took place on the 11th of January 2019. Eurasanté was responsible for organising meetings with for CH Calais. Eurasanté held several meetings with to explain the project, discover their healthcare needs, film for the advertisement video and embark them in co-creation with the SmartHealth winners (giving advice and processes about co-creation and experimentations). These meetings were held with CH Calais on the 10th and 24th January 2019.

Advertising clinical and care statements of need to SMEs - All partners advertised the SmartHealth Calls to their respective membership via email to declare the highlighted clinical needs. All videos are available on Youtube and were used to draw in potential applicants as well as to raise awareness surrounding these cross-border clinical challenges.

Organising and delivering Award Information Day workshops – SmartHealth Partners hosted the Round 1 Information Day in London on 3 April 2019, where SEHTA and EPM ran 1.2.1 sessions for applicants on how to complete the application form. Partners hosted the Round 2 Information Day Workshop in London on 02/10/2019 which 13 SMEs attended. All attendees were given the opportunity to give a presentation and have their SmartHealth queries (regarding the programme in general or specific questions related to the application form) answered during 1.2.1 sessions with SEHTA and/or EPM. A cross-border relay was organised at each event and attended by Eurasanté.

Healthcare professional training workshop - SEHTA and EPM hosted a meeting with each of the three UK Healthcare Establishments to train them about the project. The meetings with Sussex & Surrey NHS Foundation Trust and Graham Care took place on the 20/05/2019 whilst the meeting with Portsmouth Hospital took place on the 26/07/2019. Eurasanté and Amiens

Cluster were responsible for the professional training workshops with the FR healthcare partners. Eurasanté organised physical and phone meetings with Calais Hospital (because of the distance and given the fact that the agenda of the Director of the hospital was very busy). A 3-hour meeting with Calais' hospital was held on January 24th to update them about the SmartHealth project and give them comprehensive detail about the applicants wishing to participate in the programme. From then, we had frequent exchanges by email and phone to keep them informed about the project's key milestones. Healthcare professional training workshops did not take place with CHU Amiens or Groupe Victor Pauchet due to extended absence leave within Amiens Cluster.

Design, assessment and receipt of award applications - Application Forms, De Minimis Application Guidance and FAQ Documents were prepared for by the SmartHealth partnership for each of the three SmartHealth Application Rounds.

Across Round 1, 2 applications were received (comprising 4 SMEs) and both applications were successful.

Across Round 2 and Round 3, a total of 14 applications were received. All 14 Round applications were marked by the SmartHealth team and the top-marking ones were sent to their respective ranked healthcare establishments for their decision to collaborate with them. 8 applications (comprising 10 SMEs) were successful from Round 2 and Round 3.

T3.1 Testing and running of innovative SMEs support programme in E-Health

Catalogue of international training modules - Amiens Cluster drafted the first version of the Catalogue of Training Modules and all project partners have since then offered feedback to produce improved iterations. Here is the final, bespoke list of training modules we have conducted, informed by the preferences of the SmartHealth SME winners' specification sheets listing the topics they would like to learn about:

- 12th February 2020: Health and care market and value proposition; Support and Refund (workshop)
- 4th March 2020: Customer Relationship and Procurement (webinar)
- 25th March 2020: How to set up a company and funding opportunities; EU transition & regulations; Data protection (webinar)
- 23rd April 2020: Innovation with the users (webinar)
- 14th May 2020: Co-development (webinar)
- 11th June 2020: Supply chain & distribution channels in the context of COVID-19 (webinar)

For each session, we had different speakers from France and England contrasting the approach in both countries. By doing so, we raised the awareness of these core topics to the SmartHealth SME winners in a cross-border and bespoke way, expanding their learning opportunities to encompass essential tips, policies, challenges and regulations so that they

can better access the market across the Channel. All training session presentations were followed by a dedicated time for networking and Q&A responding to individual queries.

A Training Workbook summarising all training provided throughout the entire cross-border SmartHealth Training Programme was prepared in French and English by the SmartHealth partnership and circulated to all winning SMEs in July 2020.

Specification Sheet - Amiens Cluster drafted the first version of the specification sheet and all project partners have since then offered feedback to produce improved iterations. Following all Kick-Off Meetings between a Healthcare establishment and SmartHealth winner SME, the SME was asked to compete the specification sheet to declare their interest in the training modules as well as their preferred frequency and modality for future meetings with their assigned healthcare establishment

Implementation Plan - Amiens Cluster drafted the first version of the implementation plan and all project partners have since then offered feedback to produce improved iterations. An implementation plan was created and used by SmartHealth SME Winners' Project Officers (Annika Brogaard Maczka and Manon Perret) to track the winning SMEs' attendance at webinars, workshops and meetings.

Checklist - Amiens Cluster drafted the first version of the evaluation process check list and all project partners have since then offered feedback to produce improved iterations. The Check List has been completed for all SmartHealth winners to make sure they are eligible to this programme.

Evaluation Guide - Amiens Cluster drafted the first version of the evaluation guide and all project partners have since then offered feedback to produce improved iterations. The Evaluation Guide details the responsibilities for each Project Officer and describes the process through which they will support and monitor the SmartHealth winner SME throughout the project.

Evaluation of support programme - Feedback forms from SmartHealth events have been wholly positive so far. An e-survey was carried out in July/August 2020 to check and evaluate the overall impact of the SmartHealth programme to the SmartHealth winners and Healthcare establishments. Surveys were prepared in both languages and a results summary prepared (shown later in this report) by the SmartHealth partnership.

CI No.27 Private Investment Matching support in innovation or R&D Projects (MP)
We are on track to fulfil CI No. 27. SEHTA have contributed €32,622.13 euros thus far (target of €34,741.64): €2,493.66 for Claim 1, €5,997.99 for Claim 2, €9,301 across Claim 3.1 and Claim 3.2 and €10,090.22 for Claim 4.

EPM have contributed 15,190.00 euros thus far (target of €18,470.05): €3,679.22 for Claim 1, €3,679.22 for Claim 2 and €4,024.50 for Claim 3 and €5,096.65 for Claim 4.

Main achievements

- Across 3 calls, 16 applications were received, 14 SMEs were awarded SmartHealth winners (7 UK and 7 FR) and two international award ceremonies were held.
- 8 cross-border meetings (via teleconference) were held between SmartHealth winning SMEs and their allocated healthcare establishments.
- The cross-border support programme comprised of 9 modules and was summarised into a bilingual Training Workbook (which was reported as good or very good by 83% of SmartHealth winning SMEs.)
- 3 healthcare regulatory affairs documents were released and are available to download on partners' websites.
- 5 newsletters were released and distributed via the Partners' memberships.
- The evaluation showed that 83% of SmartHealth SME winners (across both UK and FR) were satisfied or somewhat satisfied with the support received through SmartHealth and 67% of SmartHealth winners intend to continue collaborating with their assigned healthcare establishment.

Contribution to horizontal principles

Sustainable Development

We ensured that our Smarthealth project complies with the European environment legislation, in particular to the 5 key areas of resource efficiency, climate change resilience, green infrastructure, sustainable procurement using standards such as EMAS and ISO14001.

These principles were during the implementation of our project through the following actions:

- As much information as possible was delivered electronically through e-newsletters, e-healthcare regulatory updates, tweets (using #EUSmarthealth), Facebook and LinkedIn.
- All paper used for feedback forms, leaflets, sign-in sheets and other hard materials were secured from local sustainable sources.
- Events and workshops were held in locations that are easily accessible by public transport e.g. London and Lille, to minimise the use of the private car. Most of the training sessions were delivered via webinars and an online Training Workbook provided online.
- Food and drink offered at events and workshops were sourced locally with ample vegetarian and vegan options.
- Travel to meetings with Directors of Healthcare establishment were via public transport or car-shares.

- Project Partners' travel across the Channel for Steering Committees was via Eurostar, which is significantly more environmentally friendly than planes.
- The feedback survey was sent and completed by SmartHealth winners and healthcare establishments online.
- All SmartHealth project documents are available to download from Partner's websites

Equal opportunities and non-discrimination

The partnership is committed to preventing discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation and will promote the project in accordance with European and national requirements which apply to INTERREG.

Attendance checklists were used for all events and workshops to help to ensure that no beneficiaries are excluded from participation in the activities on the grounds listed above and that the needs of all groups are taken into account.

This project meets the requirements of the Disability Discrimination Act by ensuring that all venues hired for events and workshops are accessible for those with physical disabilities. The Training Workbook is available for those who are hard of hearing and webinar recordings for those who have visual issues.
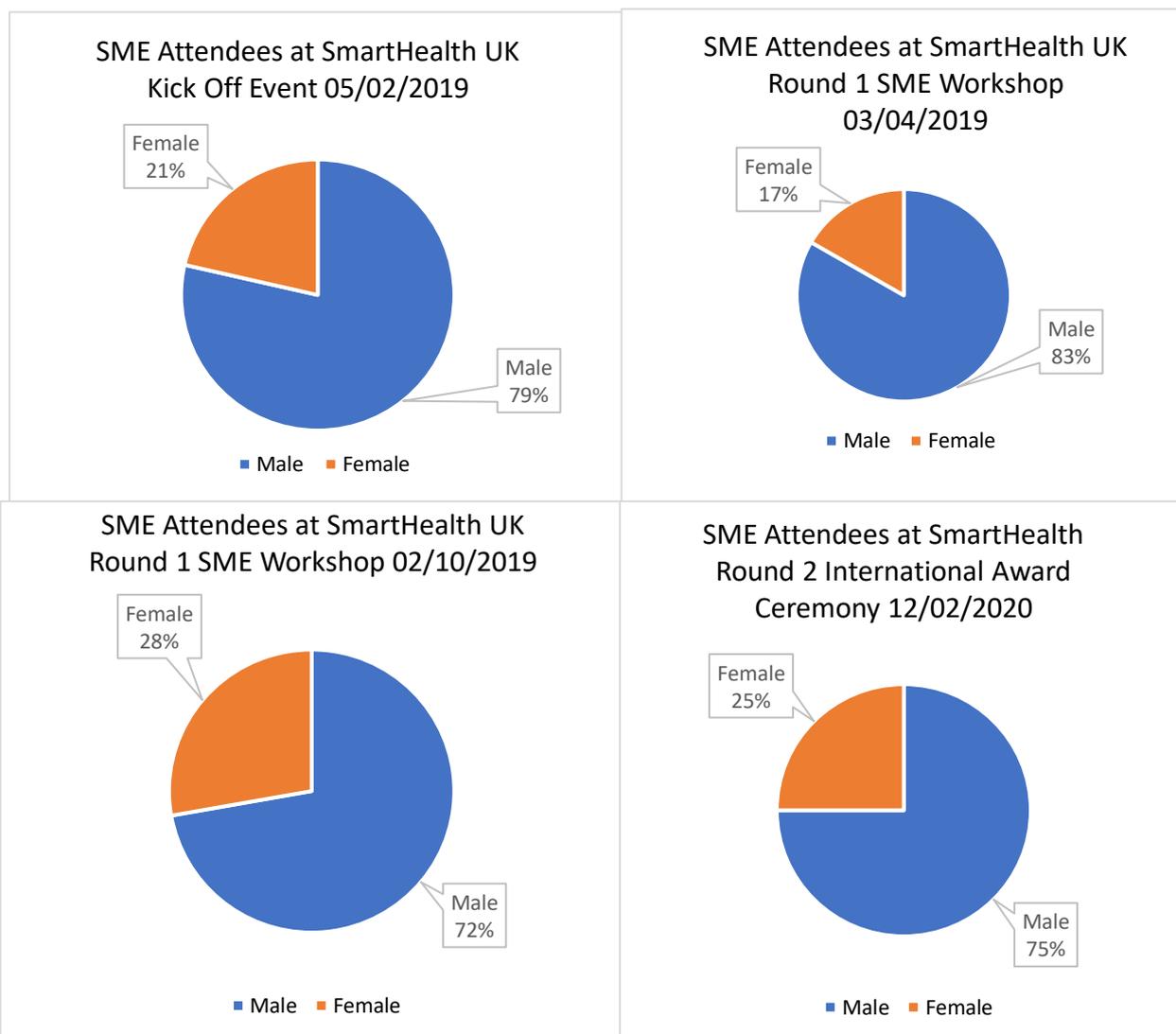
Equality between men and women

Our Smarthealth Project actively supports equal opportunities and this vision was applied in every aspect of the implementation of this project. Both men and women were targeted for the information gathering in the identification of clinical needs and business awards.

All SmartHealth communication material is gender neutral. Positive steps were taken to encourage female-owned organisations to engage in the business awards. This is evident in that an equal number of men and female-owned organisations applied and were successful during Round 1.

Please see below some pie-charts depicting the gender distribution of attendees at SmartHealth events.

SME Attendees at SmartHealth UK Kick Off Event 05/02/2019

Female 21%
Male 79%

■ Male ■ Female

SME Attendees at SmartHealth UK Round 1 SME Workshop 03/04/2019

Female 17%
Male 83%

■ Male ■ Female

SME Attendees at SmartHealth UK Round 1 SME Workshop 02/10/2019

Female 28%
Male 72%

■ Male ■ Female

SME Attendees at SmartHealth Round 2 International Award Ceremony 12/02/2020

Female 25%
Male 75%

■ Male ■ Female

Contribution to programme indicators

The related INTERREG programme indicator for SmartHealth is: 1 Number of innovative products, processes, services, or systems conceived and produced. Health is one of the 'smart specialisation' field of the Channel programme and digital is one of the 'key enabling technologies'.

This project has also addressed some of the uncertainties around EU transition as early signs indicates a potential impact on trade between France and the UK. SmartHealth informed stakeholders on health regulatory affairs with the aim of making an appreciable contribution to re-strengthening and ensuring the continuity of trade relationship across the Channel.

Added value of cross-border collaboration

- Establishment of an International Smarthealth Team sharing knowledge, experience and resources in the field of SMEs support in the field of E-health. Every SmartHealth winning SME as well each SmartHealth Partner has gained an even better understanding of the health and care system on the other side of the Channel from participating in this project.

- Conception and design of an innovative SME support programme comprising of 9 international modules.

- International Business Awards, rewarding cross-border SMEs addressing hospital needs.

- Cross-border co-development: matchmaking between English/French SMEs in the award process and during the Award Ceremonies.

- Cross-border partnerships: matchmaking between SMEs and healthcare professionals across the channel to address their clinical challenges.

- Joint publications of Health Regulatory Affairs updates affecting SMEs in the INTERREG area in the context of EU transition.

Communication activities

e-shots – Five SmartHealth newsletters have been created and disseminated to the SmartHealth Partners' networks via e-shots. All newsletters were also uploaded onto the Partners' websites.

Emails - Prior to every training session, personal email invitations were sent out to every SmartHealth winner. Kick-off and follow-up meetings with SmartHealth winning SMEs were scheduled via email and regular catch-up calls were held via Skype.

Dissemination webinar – To maximise coverage of the successes, impact and lessons learnt from this project, a dissemination webinar was held on 13/10/2020. 35 people registered for this event and 2 Case Studies (Alpha MD and Mind Over Matter, detailed below) presented to talk about their experiences participating in our SmartHealth project.

Case Studies

Collaboration with a French Healthcare Establishment - Alpha MD


INTRODUCTION: Alpha MD is a healthcare and life sciences consultancy developing a digital solution called Liberate Health. Prior to participating in the SmartHealth programme, Alpha MD were seeking healthcare contacts and information regarding the French market to expand their international commercial opportunities.

E-HEALTH INNOVATION: Liberate Health is a doctor/patient facing app that is successfully being used in the USA and will be on the UK market within a year. The doctor uses one of the 140 slide packs in the app to educate the patient about their condition and the doctor can both write and speak into the app – all of the consultation is recorded and personalised. The doctor then e-mails the consultation to the patient so that the patient can review the consultation as many times as they wish. This ensures advocacy and adherence and is especially effective and important for the elderly, those with carers and patients with low levels of health education.

IMPACT FROM SMARTHEALTH PROGRAMME: Alpha MD was a Round 3 SmartHealth winner addressing Clinical Care statement 21 ("Non-verbal tool for hospital patients"). Douglas Barrett and Amita Panwar (pictured below) were presented with a trophy at the Award Ceremony in Lille and attended all of the training workshops. They participated in multiple meetings with Calais Hospital to discuss the potential for running a pilot post-COVID. Douglas Barrett gave a presentation during the SmartHealth dissemination webinar to broadcast their positive experience working with Eurasante and Calais Hospital, as well as all the lessons they learnt from attending the training sessions.
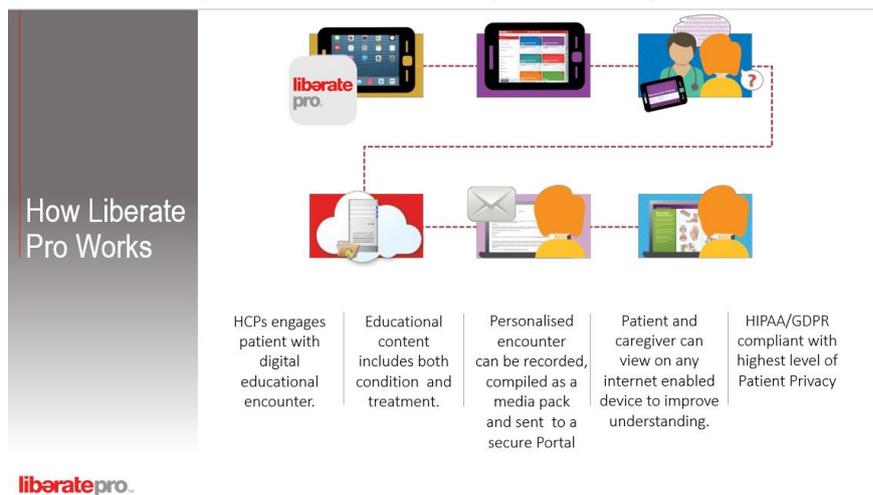
Collaboration with a UK Healthcare Establishment - Mind Over Matter Medtech

INTRODUCTION: Mind Over Matter is an innovative medtech and consultancy SME with a mission to progress portable and non-invasive neuroimaging technologies from the lab to routine clinical use for point-of-care determination of brain health. Their vision of the future is where entire society has significantly greater conviction and a much more effective approach to healthy ageing.

CLINICAL NEED: With dementia being the most-feared disease for 68% of people in the UK aged 50+, rising to 86% in people with a close relative with the condition, its devastating nature, for both the individual experiencing the cognitive decline and their friends and family, means there are clusters around every ageing individual with extremely strong desire to prevent their loved one experiencing cognitive decline.

E-HEALTH INNOVATION: A behaviour change app that helps users build lifelong healthy habits that reduce their risk for developing dementia in the future by up to 50%. The app encourages the user to do at least one small step a day to promote lifelong healthy habits, e.g. reduce/stop smoking, more physical exercise, learn something new, socialise more. The steps suggested are personalised to the user's individual dementia risk and readiness for change, allowing users to progress towards healthier behaviours at speed they can manage. Overall, the user can see their progress as their dementia risk factors change from red to green.

IMPACT FROM SMARTHEALTH PROGRAMME: Mind Over Matter was a Round 1 SmartHealth winner addressing Clinical Care statement 6 ("Promote healthy lifestyle choices"). Dr Melissa Kapoor (pictured) were presented with a trophy at the Award Ceremony at MedFIt in Lille and her junior employee Emma Porter attended most of the training workshops.

Mind Over Matter has worked alongside its French partner Integrative BioComputing (IBC) for consultancy clients using their shared computing coding skills. They attended a meeting with Portsmouth Hospital (Dr Anoop Chauhan) to discuss the potential of writing a grant application together and have remained in close contact since.

Dr Melissa Kapoor gave a presentation during the SmartHealth dissemination webinar to broadcast her positive experience collaborating with IBC and Portsmouth Hospital and the lessons her junior staff learnt by attending the training webinars.

COVID-19 Pandemic

Smarthealth was an opportune programme for supporting the development of innovative e-health products at a time of a pandemic. With more and more people now being stuck at home due to lockdown restrictions, the use and implementation of e-health solutions has surged. A new approach to healthcare is needed in these unprecedented times and digital tools have a significant role to play in helping us better prepare for similar scenarios in the future. Digital health technologies need to be front and centre, not just in times of disease outbreak, but in the future, too.

Challenges

In March 2020, COVID-19 lockdown restrictions began across UK and France. This impacted the SmartHealth programme in the following ways:

- All physical events and workshops e.g. 3rd Steering Committee, dissemination event and training sessions had to be rescheduled and reorganised using online delivery methods.
- SmartHealth Healthcare Establishments had to focus all their time and energy into fighting the pandemic. As a result, Victor Pauchet Hospital and Amiens Picardie Hospital dropped out of the programme and Graham Care and Surrey and Sussex NHS Trust were unavailable for follow-up meetings with the SmartHealth SME winners. Consequently, fewer kick-off and follow-up SME-Healthcare Establishment Meetings took place than initially planned.

Solutions

We adapted our SmartHealth deliverables in the following ways to mitigate against these COVID-19 impacts:

- Training sessions, dissemination event and 3rd Steering Committee were held via teleconference using Webex and documented using screenshots and audio recordings.
- SME-Healthcare Establishment Meetings were rescheduled once the Directors were available and took place online rather than in person. Consequently, all SmartHealth SME winners except Cievert and Oscare had a Kick-Off Meeting with their assigned healthcare establishment.

Evaluation

SmartHealth Evaluation Survey SME Winner Results

100% of UK SME respondents (3 SMEs) were satisfied by the working relationship with their assigned healthcare facility, facilitated by our SmartHealth project. In comparison, no FR survey respondents provided an answer regarding their relationship with partner healthcare facilities ("ne peut pas répondre").

All of the UK survey respondents (3 SMEs) were satisfied or somewhat satisfied by the level of support received through their participation in our SmartHealth project and additionally all UK SMEs reported satisfaction of the added value working transnationally. On the other hand, 67% of FR SmartHealth winner respondents (2 SMEs) were somewhat satisfied by the level of support received under the SmartHealth programme and 33% (1 SME - Oscare) reported that they were rather dissatisfied. This is because Oscare found the programme 'too theoretical' and unfortunately the meeting with their partnered healthcare establishment (Portsmouth Hospital) did not take place due to COVID-19. 67% of FR SmartHealth winner respondents (2 SMEs) reported they were somewhat satisfied by the added value of working transnationally. Oscare did not provide an answer. Overall, as shown in **Figure 1**, 83% of SmartHealth SME winners (across both UK and FR) were satisfied or somewhat satisfied with the support received through SmartHealth.
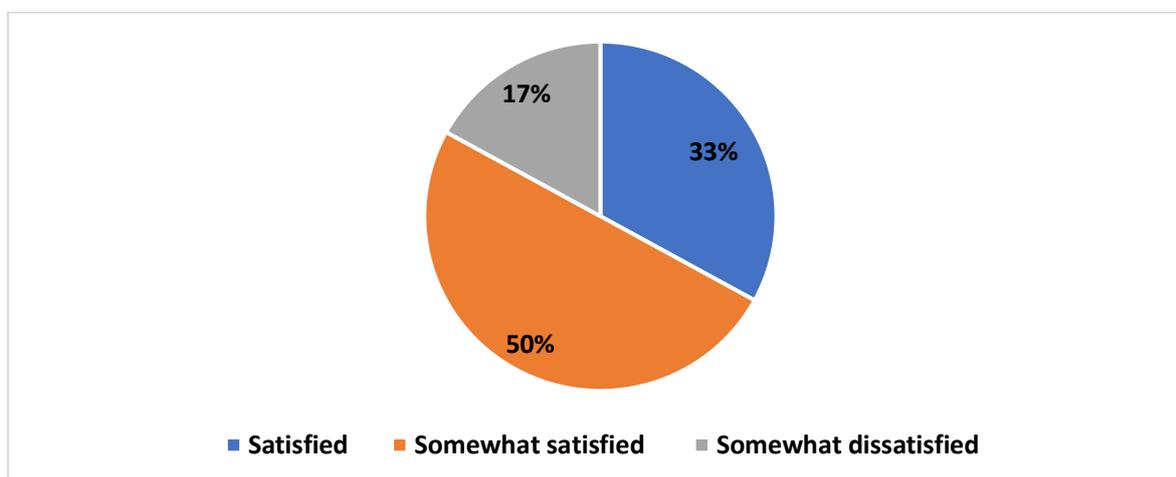
Figure 1: SME satisfaction with the Level of Support Received through the SmartHealth Programme

Similarly, 83% of SME respondents (across UK and FR) were satisfied or somewhat satisfied with the quality of meetings, workshops or webinars offered under our SmartHealth project.

6 out of 9 SmartHealth Training Sessions were found to be useful or somewhat useful by all SMEs and no more than 1 SME found the remaining 3 Training Sessions as not so useful (see **Figure 2**). Health and care market and value proposition was ranked as the highest rated Training Session (of those that attended the session, 80% ranked it as very useful and remaining 20% as somewhat useful).
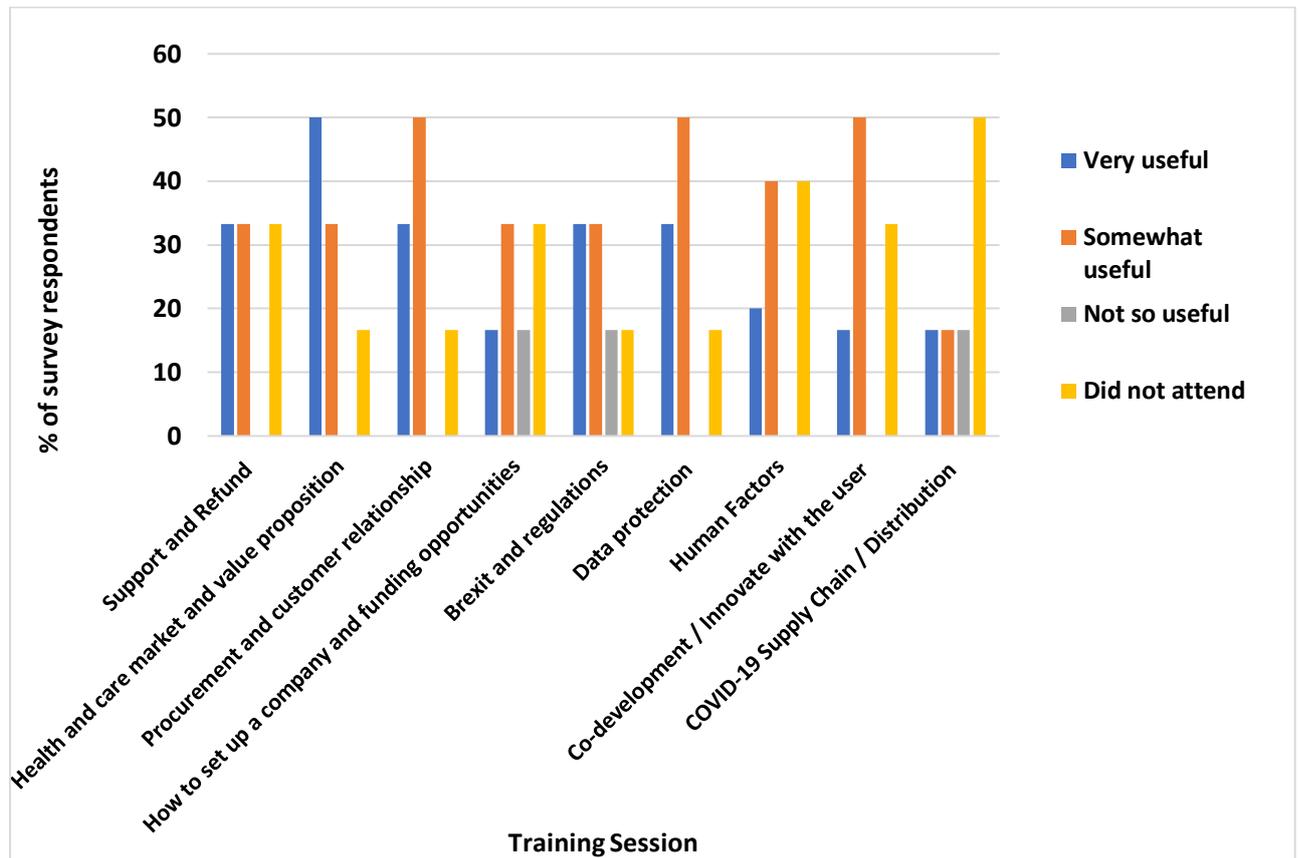

Figure 2: The usefulness of SmartHealth Training Sessions ranked by SME's.

All (100%) of UK SME winner respondents had their expectations met or exceeded by the SmartHealth training programme. On the other hand, 33.3% of FR SME respondents did not have their expectations met by the SmartHealth training programme, with 66.7% not providing an answer. **Figure 3** below demonstrates that expectations were met or exceeded by 50% of survey respondents across UK and FR survey respondents. 17% of respondents' expectations were not met and 33% could not provide an answer. This suggests that they entered the programme with no expectations.
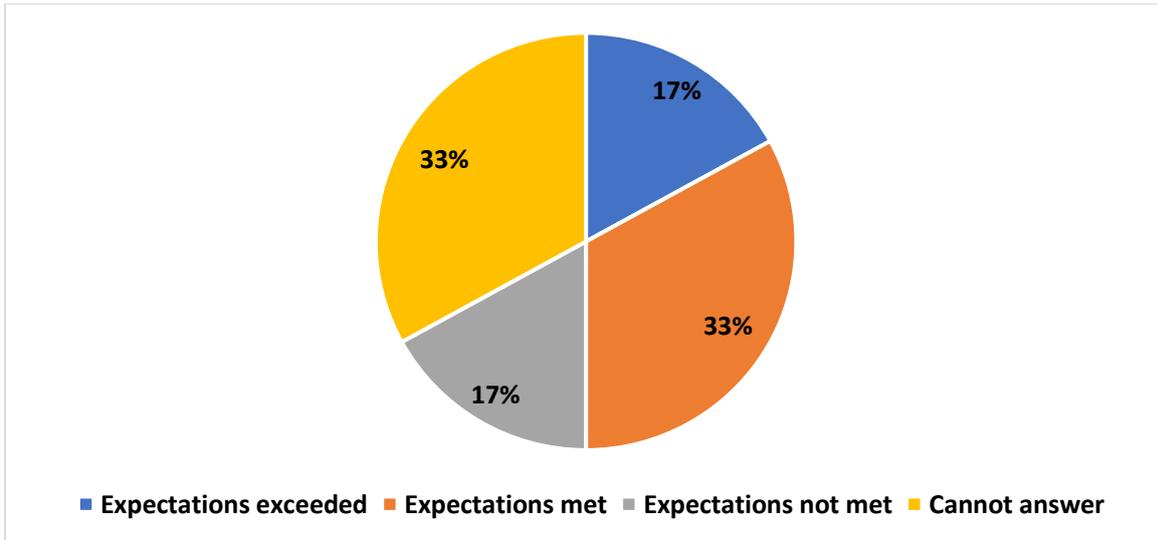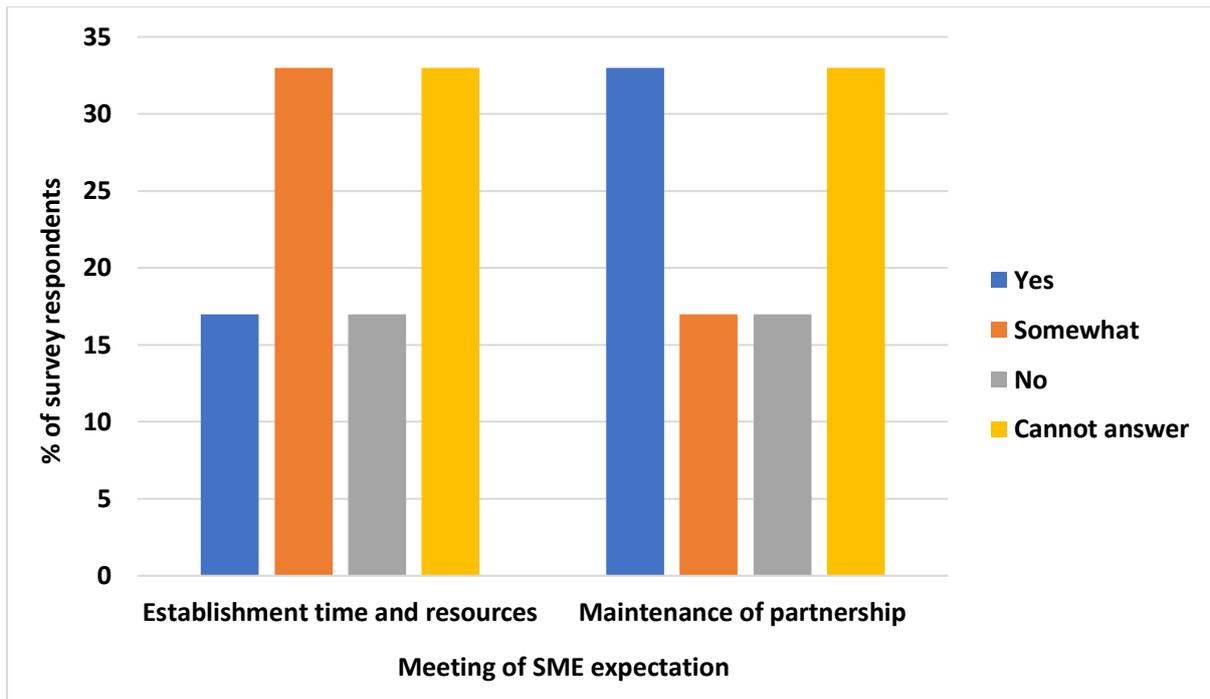
Figure 3: Meeting of SME expectations around the SmartHealth Training Programme
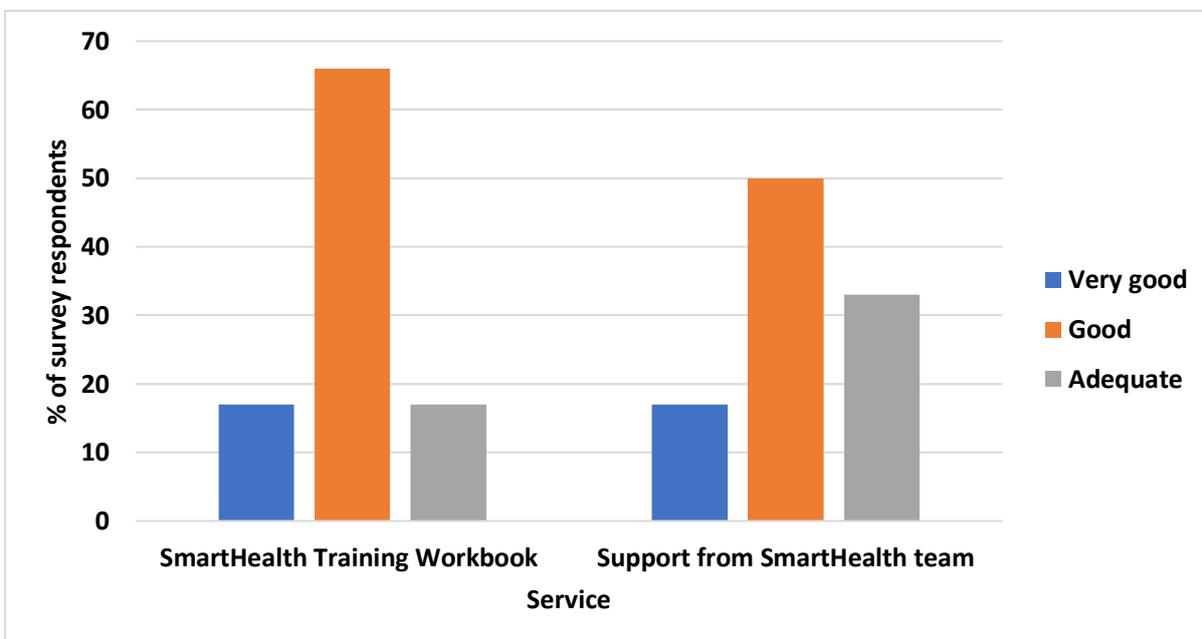
Figure 4: Rating of specific SmartHealth services

SmartHealth SME winners reported no negative feedback on specific SmartHealth services, as displayed in **Figure 4**. The large majority of SMEs reported services as good, in particular the training workbook was reported good or very good by 83% of SMEs and the following feedback was provided in the open comments section at the end of the survey:

"The training workbook was great! I recommend this resource being on all programmes of this type."

Figure 5: Meeting of SME expectations regarding partner healthcare establishment

Figure 5 above demonstrates the meeting of expectations regarding SME's partnership with their assigned healthcare establishment. Expectations were met by approximately half of SME respondents. 67% of SmartHealth winner respondents (4 SMEs) intend to continue their collaboration with their partner healthcare establishment following SmartHealth project end and 33% (2 SMEs) could not answer. The following feedback was given regarding the future of their collaboration with their SmartHealth partner healthcare establishment:

"We have made some very good contacts with the team at our partner healthcare establishment which are helping us with the R&D of our technologies."

"We will start a pilot with them (partner healthcare establishment) once we finalize the protocol."

"We would like to discuss our product in more detail with them (partner healthcare establishment)."

In response to the question: "Please describe the impact that COVID-19 has had on your SmartHealth project, if any", we received the following responses:

"Accelerated external interest in Docobo's offering"

"Our project and pilot with the healthcare institute got delay due to COVID"

"COVID-19 has meant that interactions with our healthcare establishment collaborators have been virtual and currently testing of our technologies is paused. The services received from SmartHealth have been extremely supportive and worked excellently with COVID-19 social distancing measures. The webinars have been very useful as we have been able to attend more of them because they have been online and great organization and emailing of when they will be has meant we haven't missed any! Equally the training workbook that was emailed to us has been an excellent resource to reflect back on the sessions and keep in our records for use after the programme ends. "

"Fewer in-person meetings and therefore less network effect"

"The collaboration with the partner institution did not take place"

In response to the following question: "What type of support will you need to take you through to the next stage of development for your company and innovation?" we received the following answers:

"Continue the dialogue with the French partner who has offered local support to Docobo. Docobo has started the process to translate the platform into French in readiness for the next step"

"Funding opportunities"

"Financing of our technologies is key. Also, maybe some more support forming collaborations to test our technologies in different healthcare settings e.g. care homes"

"Funding"

**SmartHealth Evaluation Survey Healthcare Establishment Results**

100% of SmartHealth healthcare establishment survey respondents were satisfied or very satisfied by the level of communication with their SmartHealth Project Team Members (see **Figure 6** below). Additionally, 100% of SmartHealth Healthcare establishment respondents reported that value has been added to their establishment by establishing transnational relationships. One healthcare establishment reported additional benefits to their collaboration as being:

"Greater appreciation of the potential for digital working."
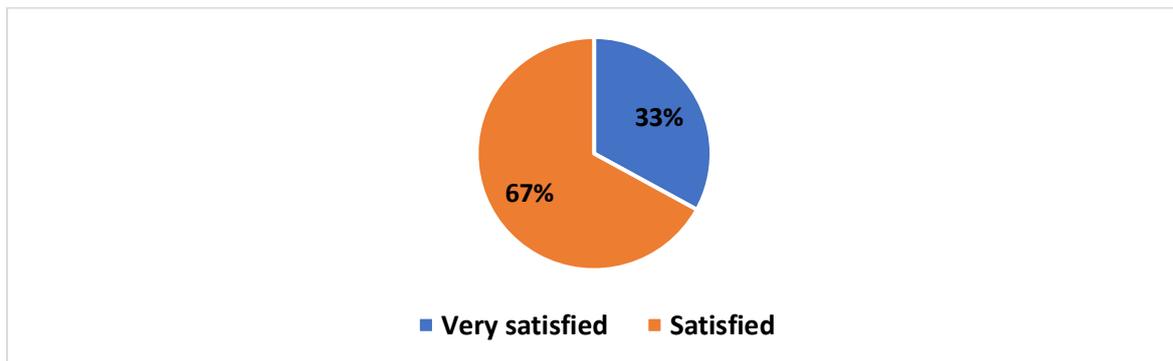
Figure 6: Healthcare Establishment Satisfaction with Communication with SmartHealth Project Team Members

66% (Graham Care and Calais Hospital) stated that they would be happy to participate in the event of a follow-up programme (please see **Figure 7** below).
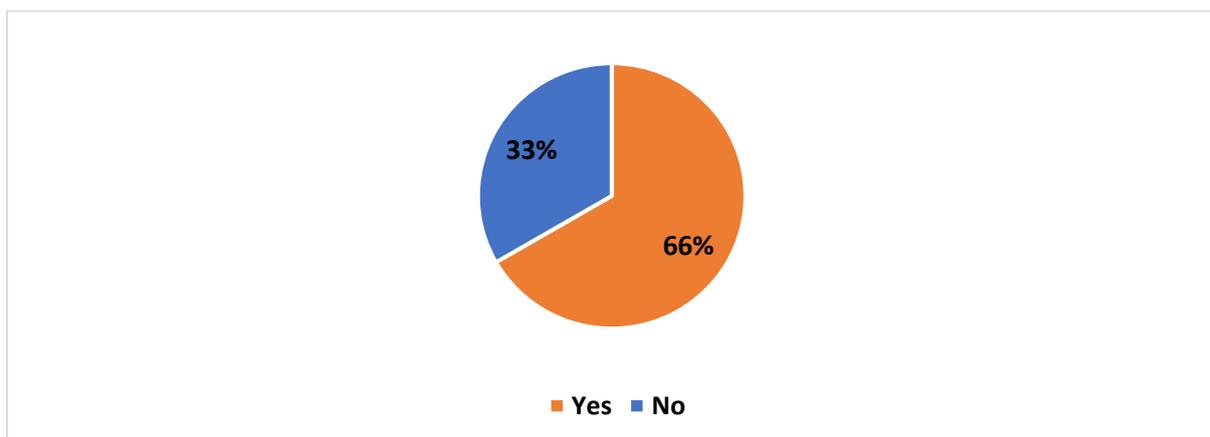
Figure 7: SmartHealth Healthcare Establishment participation in potential follow-up programme

Future outlook

Individually and collectively, the partners are committed to carry on supporting the creation of new products and services in the field of E-health and care. The relationships established during these past 2 years and the methodology of work with the identification of clinical needs and access provided to international markets shall be embedded. The lessons learnt during the bespoke, cross-border training programme will be mainstreamed into the work of each respective partner.

The relationships formed during this micro-project will continue after the Interreg funding is finished. For example, the SmartHealth SME winners and Healthcare Establishments will remain in close contact with the Project Partners. We anticipate that the SmartHealth SME winners will attend our own respective events and workshops and potentially collaborate with us again in the future in other projects due to our broad knowledge across the health and care sector. Additionally, our evaluation shows that Graham Care and Calais Hospital are more than happy to work with us again and so will build upon this strong working relationship to form even more clinical contacts.

SEHTA, Eurasante and EPM hope to participate in a legacy project together because our working relationship is solid and efficient. The impulsion of the partners will lead to future innovative cooperations between clinicians and businesses and make the transition and ensure a continuity post-EU transition.

With regards to the replicability of the programme, since the evaluation showed that the training workbook was very popular we hope to implement this deliverable in a potential legacy international project.

GLOSSARY

E-health	Digital products for health and care
INTERREG	Inter-regional co-operation
SME	Small and Medium size Enterprises
SmartHealth	Smarthealth Project co-funded under the INTERREG Channel programme 2014-2020

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