PROJECT FINAL REPORT

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Project acronym: FICHe

Project title: Future Internet Challenge eHealth

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Table of Contents

4.1 Final publishable summary report

4.1.1 Executive Summary

The aim of the Future Internet CHallenge eHealth (FICHe) project has been to challenge European startups to develop innovative applications in the eHealth market building upon the FIWARE technology, i.e. FIWARE generic enablers, specific enablers and/or domain specific platforms (www.fiware.org). Open call for startups was opened in September 2014, and as a result, 80 out of 300+ applicants were selected to enter FICHe. Through three phases and altogether 6.24 MEUR funding, the startups were able to develop their ideas into successful new eHealth solutions. FICHe provided SMEs and startups technical training, business coaching and living labs for testing with end users. As outcome there are 19 market-ready prototypes built on FIWARE technology, 12 of them already on market, and additionally 19 new Proof of Concepts.

The combination of funding, coaching and tangible outputs have contributed to the acceleration of the development of the SMEs' solutions. During FICHe SMEs and startups focused more strongly on European markets. Different coaching sessions, business webinars and events as well as pitch deck consultants have sharpened SME's view on the business potential beyond the borders of their countries. As for international markets, thanks to the living labs, SMEs and startups have been able to test and validate the technology as well as business model and get in touch with the international customers. According to SMEs, testing and validation is the first requirement that an e-Health startup should accomplish in order to have access to the international markets. For the companies that were closer to the market entry, timing of field testing was perfect and boosted the final development, market entry planning, and early customer validation. As a result the developed eHealth solutions will improve the clinical and financial outcome as well as empower the patients. They solutions will e.g. increase the quality of care, improve diagnosis and engage patient thus make healthcare more cost-efficient.

The most successful companies in terms of fundraising have been *Psious*, *Horus* and *Andaman7*, who raised ~€3 million EUROS in total, while some companies received other funding such as SME instrument. Not all of the companies were ready or interested in the investor rounds, but on the other hand achieved new growth by increasing the number of paying consumers (patients) and new healthcare customers (clinics/hospitals). New growth implied also the creation of new jobs: Top20 FICHe SMEs and startups created altogether ~150 new jobs during the program.

All Top20 SMEs and startups implemented FIWARE enablers in their eHealth solutions. In general the added value of FIWARE technology comes from providing a large set of components (enablers) ready for use and an active community which supports and maintains it, all mostly free of charge.

4.1.2 Project context and objectives

The aim of the Future Internet CHallenge eHealth (FICHe) project is to challenge European small and mid-sized enterprises (SME) and startups that develop innovative applications and businesses in the eHealth market building upon the available FIWARE technology, i.e. FIWARE generic enablers, specific enablers and/or domain specific platforms (www.fiware.org). The most promising and innovative proposals complying the requirements of each phase were selected by an Independent Review Committee (IRC) to continue to the next phases. 80 teams entered the first phase with grant of 15 000€, 40 continued with 50 000€, and 20 finalists entered the third and last phase, receiving 152 000€. In addition to direct funding SMEs and startups received technical training and business coaching, and tested their solutions in field labs with end users.

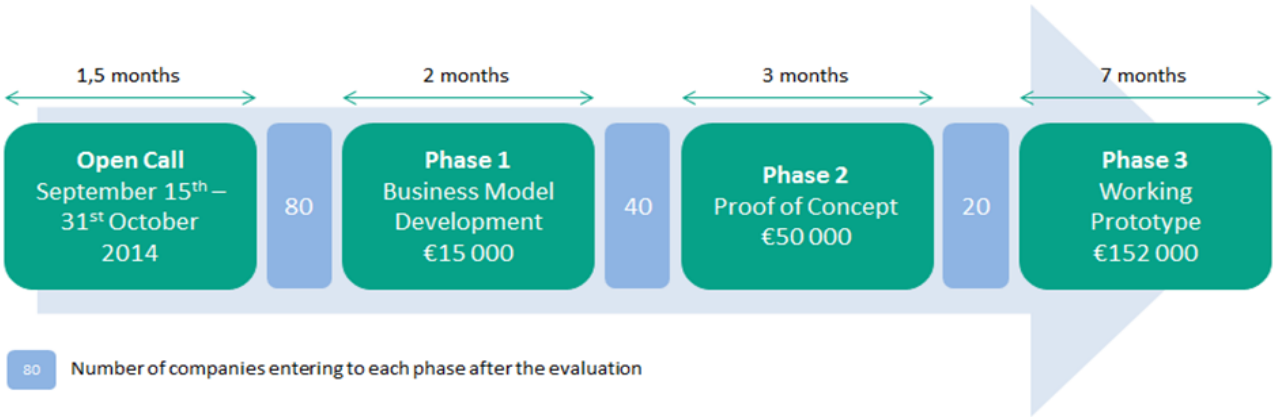


Figure 1: The process of FICHe accelerator project

Open Call

The objective of Open call phase was to promote FICHe open call and FIWARE technologies at least in 15 EU countries and in the Pitch Event. The goal of the promotion was to attract at least 500 SMEs and startups and receive a minimum of 200 applications to FICHe and finally to select up to 80 participants to the FICHe phase 1. The target was to have the call open for two months and open in the pitch event, held in connection with FI-PPP project event to ensure maximum participation and to minimise the costs. The companies to enter FICHe were selected by Independent Review Committee (IRC), which contained five members and was well balanced.

Phase 1

The main objectives of the phase1 were to support SMEs and startups to mature their idea to a business model and collect 80 business models to be reviewed and validated by IRC and select 40 out of 80 to continue to the phase 2. One of the aims was to organise three bootcamps in three different locations. The bootcamps included 1) technical, 2) business model and 3) user involvement and user experience workshops and coaching. Finally 80 business models were evaluated by (IRC) and 40 best ones were selected to the phase 2.

Phase 2

The main objectives of the phase 2 were to support SMEs and startups to build Proof of Concept (PoC) and collect 40 PoC to be reviewed and validated by IRC and select 20 out of 40 to continue to the phase 3. The aims were to provide the training activities and coaching vided to the companies in order to move their business model into the PoC. Five (5) training sessions to be organised: three (3) online and two (2) onsite. Finally 40 PoC were evaluated by (IRC) and 20 best ones were selected to the phase 2.

Phase 3

The main objectives of the phase 3 were to support SMEs and startups to turn their PoC into a working prototype, test the prototype in the field lab (Living Lab) and collect 20 prototypes. The aim was to provide coaching in order to support SMEs and startups to develop their PoC into working prototype build on FIWARE technology. Each of participants was appointed at least one coach from the consortium. One of the important objectives was to test all prototypes in the living labs with real end-users. The field test trials (living labs) were managed by three (3) ecosystem partners of the consortium, supported by local business partners. Finally, to organise the closing event at the end of the project to disseminate the deliverables and present participants to the stakeholders.

4.1.3 Main Results

4.1.3.1 Open Call

In the Open call phase the main results were: 1) over 300 applications from over 30 countries all over the Europe and 2) the selection of 80 best participants to enter the FICHe accelerator program.

Promoting the call

The FICHe open call was opened for submission of ideas on September 15th 2014 and closed on October 31st 2014. The call and FIWARE technologies were promoted in several EU countries. Although some promotion activities were started already in June, FICHe was massively promoted in September and October.

Furthermore, the FICHe Pitch event was held in September 16th 2014 in Munich. The event was combined with FI-Star and ECFI2 events in order to get maximum exposure. As SMEs and startups felt that travelling to Munich was too expensive and time consuming, the event was recorded. All information and presentations/videos were made available in an online repository. The recordings were completed viewed 700+ and hit 12 000+ times. Open call documents were downloaded 2000+ times by the end of the call.

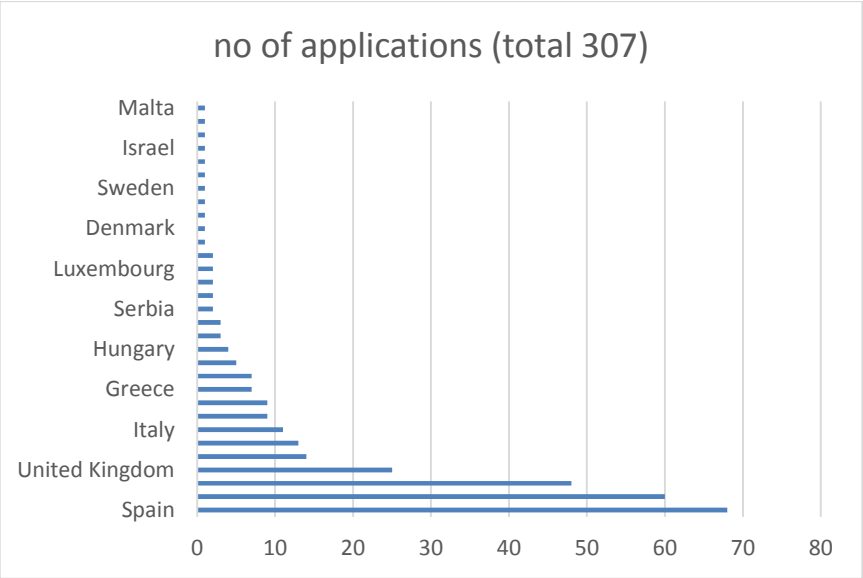
Figure 2: FICHe team promoting in ECFI2

FICHe consortium hosted or participated in ~40 events including five (5) FICHe webinars. The events were mainly targeted to SMEs and startups in health sector, but the other FIWARE sectors were also covered. To reach the targeted SME and startup population throughout Europe, several promotional partners were asked to spread the message about FICHe. In total 21 partners signed the letter of support to FICHe, but numerous others also started to communicate about FICHe, without a formal letter of support. Partners that are worth mentioning regarding their EU reach include eHealth Twitter account of the European Commission (@EU_eHealth – 11.000+ followers), International Society for Telemedicine and eHealth, Poznan ICT Cluster, Health 2.0 Europe and chapters, HealthStartup, ECHAlliance, and F6S.com among many others. Moreover, FICHe shared newsletters, articles, news, tweets, etc. through ~20 different channels and social media. The main communication channels that worked best for FICHe were events were Twitter and F6S. We had also some good coverage on other media (including print), but the most impact came after events, big Twitter accounts tweets and F6S messaging.

Evaluation of the applications and result of the open call

The Independent Review Committee (IRC) was selected in August. Over twenty candidates were proposed. After a thorough analysis, a well-balanced committee of five persons from different countries and backgrounds was selected. The candidates were following: Timo Haikonen (FI), Eero Vallström (FI), Alberto Serrano (ES), Michel van Schaik (NL) and Chris Film (NL). A separate FICHe specialist (Franck LE Gall, FR) was recruited to assist in the evaluation of the FIWARE aspect of the proposals. Together they possessed all necessary skills, experience and character to do the evaluation in a proper way. The committee also supported the writing of the evaluation guide for participants for all phases.

By the end of October we received 308 applications from 31 countries. Top5 countries were Spain (22%), Finland (20%), The Netherlands (16%), UK (8%), and Ireland (5%).



Picture 1: Received application per country

Due the high number of applications, the selection to the phase1 was split up in a preselection and the final selection. The highest scoring preselection applicants were fed to the FIWARE assessment to start up the final selection pipe line (see Figure 3 below).

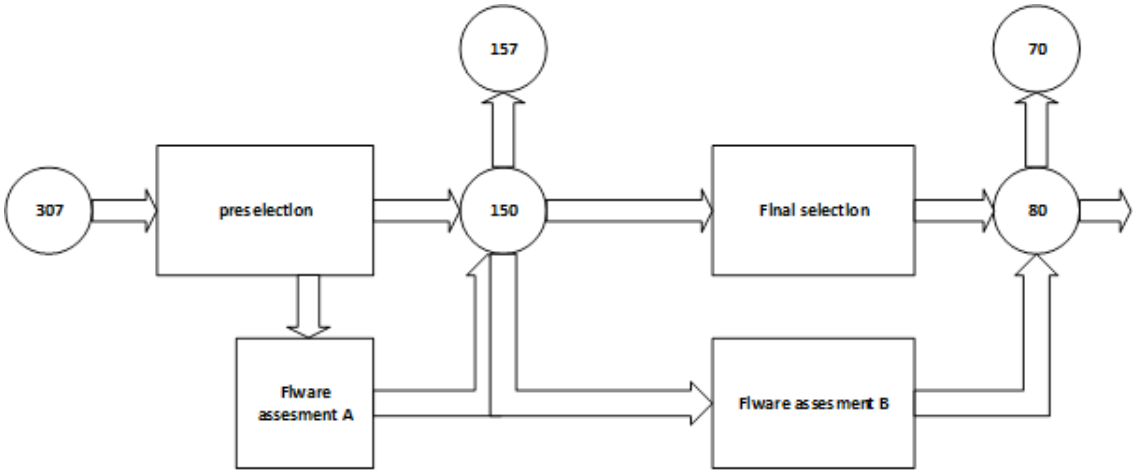


Figure 3: FICHe evaluation process

In the final selection teams of two reviewers assessed each application. A FIWARE specialist performed a separate FIWARE evaluation. If there was insufficient use of FIWARE technology within a proposal, the proposal was disqualified as a whole, as the technology was one of the knock out criteria. Reviewers evaluated the proposals considering four criteria, which were weighted differently.

Table 1: Weight of the main criteria

Weight main criteria	Open Call
Technical excellence (viability and sustainability)	20 %
Use of FIWARE technology	20 %
eHealth solution (market opportunity and business model)	30 %
Team (entrepreneurship, experience and ambition)	30 %

As a result of evaluation Top80 (26%) applicants were selected out of 308 applications. TOP 5 countries of selected applications were Spain (33%), The Netherlands (20%), UK (10%), Poland (6%) and Finland (5%). 80% from the selected companies were startups (<500kEur revenue (2014)) and most of the applicants were application developers or service providers. 30 ideas had completely new approach being disruptive. 54% of selected applicants had 2-5 team members and 65% of applicants had two or more years' experience. The main target market was business to business (80%).

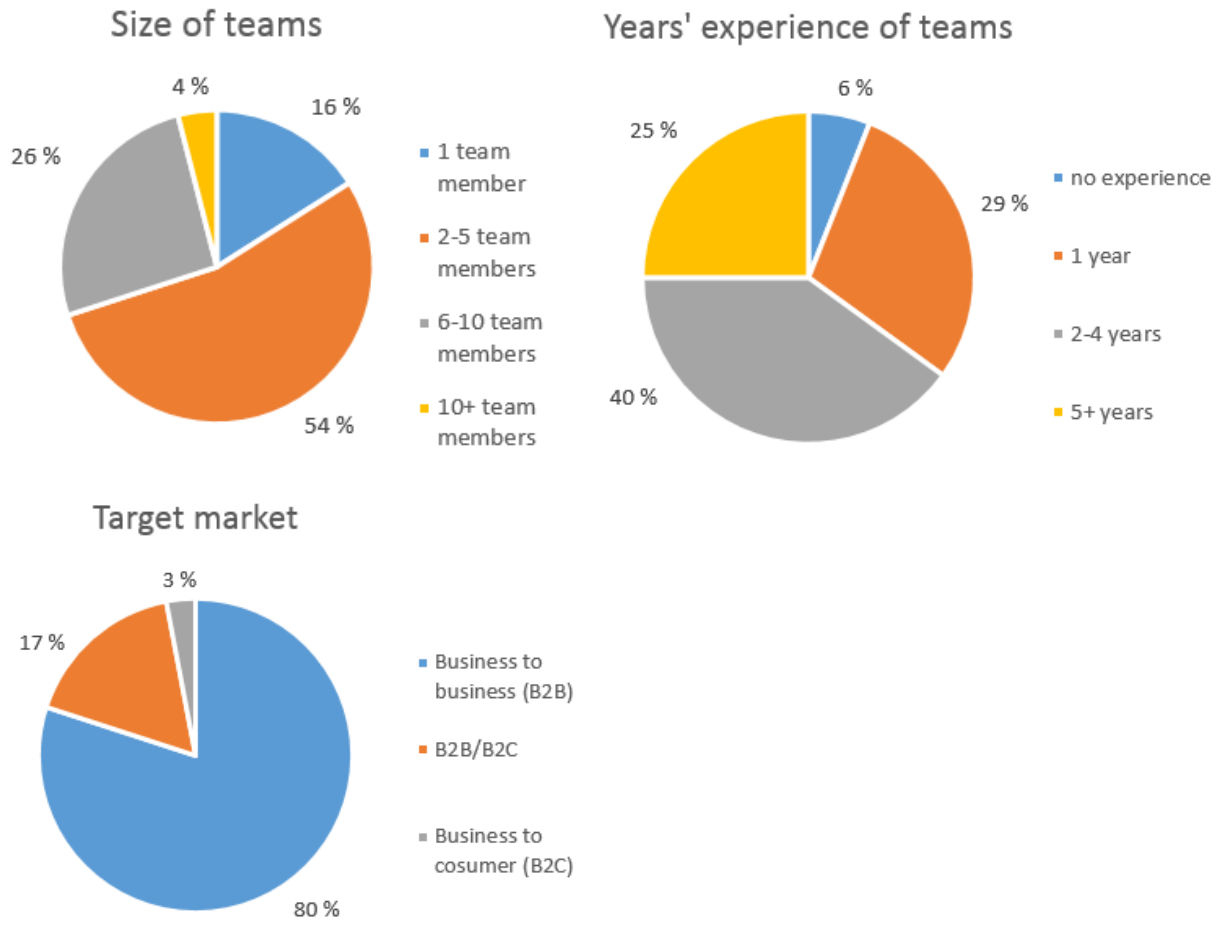


Figure 4: Statistics of Top 80 FICHe SMEs and startups
(Source: FI-IMPACT based on data provided by the accelerators, April 2016)

In the Table 2, TOP80 companies and their countries are shown.

Table 2: TOP 80 companies

NAME	COUNTRY
17rabbits, www.17rabbits.com	Netherlands
AC-Gen Reading Life, http://www.ac-gen.com/	Spain
Amiko | Health Management made Easier, www.amiko.io	Italy
Andaman7, www.andaman7.com	Belgium
Andiamo, www.andiamo.io	United Kingdom
Betawerk, www.betawerk.nl	Netherlands
Bloei NL, www.bloei.nl	Netherlands
BlueOnShop, http://blueonshop.de	Germany
Braci Ltd., http://braci.co/	United Kingdom
Clinical Graphics, www.clinicalgraphics.com	Netherlands
Creoir Oy, www.creoir.com	Finland
Crossing the Mirror, http://crossingthemirror.com/	Spain
Descansare Sleep, http://descansare.com	Spain
digital worx, https://www.digital-worx.de/home/	Germany
DOTSOFT S.A., www.dotsoft.gr	Greece
E-ASSYST, www.e-assyst.nl	Netherlands
EigenZorg - Clients regain control, https://www.eigenzorg.com/	Netherlands
Epooq 2.0 + 3D models of historic items, www.epooq.net	Finland
E-sites, www.e-sites.nl	Netherlands
EUROB CREATIVE, http://www.eurob.com/	Spain
Fabulyzer, http://www.fabulyzer.com/	United Kingdom
Family Monitor (Familie Monitor), www.familiemonitor.nl	Netherlands
FIVE FLAMES MOBILE, www.fiveflamesmobile.com	Spain
FysioPal, www.elitac.org	Netherlands
GeoActio, www.geoactio.com	Spain
Hapticore, www.hapticore.com	Netherlands
HealthApp, http://bcnhealthapp.com	Spain
Horus Technology, http://horus.technology	Italy
Hygea Salud y Nutricion, www.vitadieta.es	Spain
Ideable Solutions, www.ideable.net	Spain

iEHR.eu, http://iehr.eu	Poland
IG.COM, http://www.igcom.it	Italy
Inbiolab ItoM, http://inbiolab.com	Netherlands
IncreaseTime, http://www.increasetime.pt	Portugal
Inmote MedTech – Woundmonitor, www.inmotemt.nl	Netherlands
INNOCV SOLUTIONS, www.innocv.com	Spain
InnovEduHealth	Italy
Integrated Systems Design & Development, http://www.isddweb.com/	Spain
Introme Ltd / MeRelation, www.introme.fi	Finland
ITIOX, www.itiox.com	Spain
ITTI, http://www.itti.com.pl/	Poland
Karisma Kidz, www.karismakidz.co.uk	United Kingdom
Keinoby	Spain
Labcup, www.labcup.net	Ireland
LIME Technology, www.lime-technology.gr	Greece
Magicbox interactive, www.magicbox.es	Spain
Medbravo, www.medbravo.org	Spain
Metack, www.metack.com	Poland
Mind Myths, http://mindmyths.eu/	Ireland
Mint Labs, www.mint-labs.com	Spain
MotionChart, www.motionchart.com	Estonia
My People Care, www.MyPeopleCare.eu	Ireland
My Sex Doctor, http://mysexdoctor.org	United Kingdom
MYSPHERA, http://mysphera.com/en/	Spain
NETICTECH S.A., http://www.netictech.com	Poland
NeuroAtHome, www.neuroathome.com	Spain
NeuroDigital Technologies, https://www.neurodigital.es/	Spain
NewHealth Collective, http://newhealthcollective.com	Netherlands
OurPath, www.ourpath.co.uk	United Kingdom
Oviva, http://oviva.ch	Switzerland
Oy ProWellness Ltd, www.prowellness.com	Finland
Pantavision (Panatomy), http://www.panatomy.com/	Germany
PentaTech Ltd, www.pentatech.pl	Poland
Pflegeprotokoll / CareProtocol, http://www.pflegeprotokoll.de	Germany

PLANET MEDIA, http://planetmedia.es	Spain
PLUX - Wireless Biosignals, S.A., http://www.plux.info	Portugal
Psico Smart Apps S.L., www.psious.com	Spain
Px HealthCare, www.owise.nl	Netherlands
RenalHelp, http://myrenalhelp.com	Spain
Scyfer, www.scyfer.nl	Netherlands
Sentimoto, www.sentimoto.com	United Kingdom
Social Diabetes, http://socialdiabetes.com	Spain
Synappz Medical Apps, www.synappz.nl	Netherlands
Taniwa Soluciones, S.L., http://www.taniwa.es/	Spain
TheMarketsTrust, http://themarketstrust.com	Luxembourg
Trendalyze Decisions,	United Kingdom
TripMedic - Great Care When You're Away, www.tripmedic.com	Malta
UMANICK, www.umanick.com	Spain
Wellness Telecom S.L., www.wtelecom.es	Spain
XIM, http://www.xim.ai	United Kingdom

4.1.3.2 Phase 1 – Business model

The main results of the phase1 were: 1) three bootcamps and two training webinars to support participants in technical and business issues as well as understanding users, 2) one-to-one online support for relevant topics and 3) the selection Top40 companies to continue to the phase 2.

In the end of December 2014 the Top80 SMEs and startups were selected. A part of the enrolment process the sub grant agreement was made by the University of Oulu. The 80 selected companies were asked to sign the sub grant agreement and prove their SME status. SMEs were asked to send at least a SME check list provided by EC, financial status information, and certificate of legal existence which were checked and approved by coordinator. FICHe made a few changes to the selected companies as all of them were not eligible (2) or they withdrew (3) from the program for different reasons. The final amount of participants who signed the sub grant agreement was thus 79.

Bootcamps

The aim of the bootcamps was to provide such knowledge to the companies that they were able to create the first version of the business model based on the idea with which they applied for FICHe. Bootcamps were organised in three different locations: Amsterdam, Murcia and Oulu. All the bootcamps included technical (FIWARE), business model and user involvement training, user experience workshops as well as one-to-one coaching. The coaches were in different areas of expertise such as business, health, FIWARE and user experience.

Figure 5: User workshop at Oulu bootcamp (BC), Coaching session at Murcia BC and training session at Amsterdam BC

The feedback was gathered from participants right after the bootcamps ended. The feedback was mainly positive with average satisfaction of 4,15 (scale 1-5). 57 answers were received out of 80, thus the result can be considered relevant.

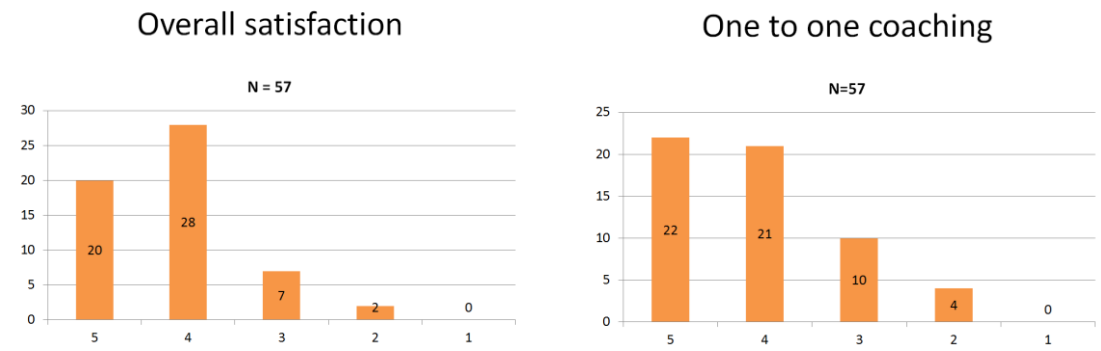


Figure 6: Overall satisfaction and coaching feedback
(Source: FICHe questionnaire for Top 80 companies, February 2015)

Webinars

Two training webinars (Lean Startup and FIWARE) for supporting participants in the development of their business model were organised. The topics were chosen on the basis of the questions that the coaches received during the bootcamps and the phase 1. *Lean webinar* was held by Business Developer Matti Rusila, University of Oulu. In the webinar Lean Startup methodology was introduced to the FICHe participants. *FIWARE* webinar was held by FIWARE experts, Netherlands organization for applied science (TNO) and Stefano de Panfillis, EU FIWARE coach. The webinar gave instructions to the FICHe participants for deploying FIWARE in their own applications.

One to one online support

During the bootcamps each of the coaches discussed with a number of participants. Before the end of phase 1 there had been several follow-up contacts between the coaches and the participants, mainly through e-mail.

Bootcamp organizers (BusinessOulu (BOU), TICBioMed (TBM) and Stichting zorgInc. (ZIC)) were nominated as main contact points for SMEs to receive support in any issues regarding FICHe program.

Due to the high Spanish representation, TICBioMed supported Spanish participants in all issues in their own language. As BusinessOulu was the leader of the work package, they were actively answering general questions and posting information to companies in F6S. In addition, the University of Oulu (OUL) supported the SMEs in sub grant agreement and funding issues.

As FICHe participants in the beginning of the project had only very limited knowledge of the FIWARE technology and its possibilities and limitations, most of the companies needed very detailed and thorough coaching. The questions received from SMEs i.a. showed that there were unresolved issues concerning the lack of guarantee on FIWARE technology sustainability. As some of the questions needed consultancy of a FIWARE specialist, the participants were arranged an opportunity to 'book' a "FIWARE fifteen"; fifteen minutes one-on-one coaching with the FIWARE expert Franck LeGall. These sessions were set up via Skype or phone. Approximately 40 participants used this opportunity.

Evaluation of business models and the result of phase1

By the end of February 2015 79 business plans and description of the use of FIWARE technology were collected from participants. Based on the mentioned deliverables the evaluation of phase 1 was performed by the IRC. They ranked each proposal on the set (weighted) selection criteria.

Table 3: Weight of the main criteria

Weight main criteria	Phase 1
Technical excellence (viability and sustainability)	20%
Use of FIWARE Technology	20%
eHealth solution (market opportunity and business model)	30%
Team (entrepreneurship, experience and ambition)	30%

Each proposal was assessed separately by two IRC members. The proposals were distributed for review to IRC members using an automated neutral lottery system. No IRC member with a conflict of interest participated in the assessment of a proposal. After all proposals were scored and ranked, the IRC had a final discussion on any anomalies in the preliminary ranking and scoring table. The use of FIWARE Technology was assessed by a FIWARE specialist.

As a result of the evaluation the best 40 participants were selected for the phase 2. Top3 countries were Spain (35%), Netherlands (15%), UK and Germany (10%). The mixture of small teams and big teams and the experience in the teams remain almost the same: 48% of selected applicants had 2-5 team members and 61% of applicants had two or more years' experience. The main target market was business to business (85%), while zero company's targeting to the business to consumer were selected.

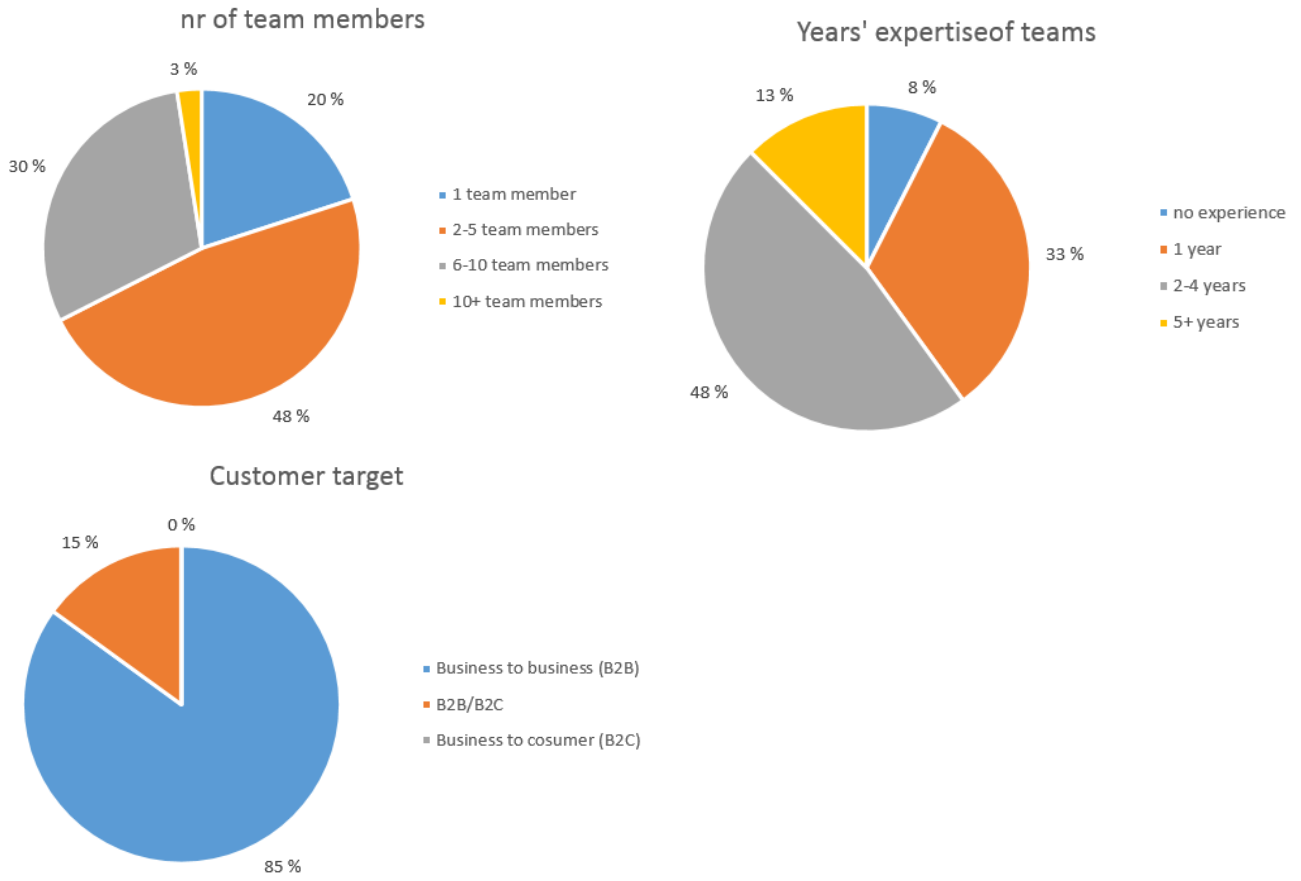


Figure 7: Statistics of Top 80 FICHe SMEs and startups

(Source: FI-IMPACT based on data provided by the accelerators, April 2016)

In the Table 4 TOP40 companies and their countries are shown.

Table 4: TOP40 companies

NAME	COUNTRY
AC-Gen Reading Life, http://www.ac-gen.com/	Spain
Amiko | Health Management made Easier, www.amiko.io	Italy
Andiamo, www.andiamo.io	United Kingdom
Betawerk, www.betawerk.nl	Netherlands
BlueOnShop, http://blueonshop.de	Germany
Clinical Graphics, www.clinicalgraphics.com	Netherlands
Descansare Sleep, http://descansare.com	Spain
digital worx, https://www.digital-worx.de/home/	Germany
Fabulyzer, http://www.fabulyzer.com/	United Kingdom
HealthApp, http://bcnhealthapp.com	Spain

Horus Technology, http://horus.technology	Italy
Hygea Salud y NutriciÃ³n, www.vitadieta.es	Spain
Ideable Solutions, www.ideable.net	Spain
iEHR.eu, http://iehr.eu	Poland
Inbiolab ItoM, http://inbiolab.com	Netherlands
LIME Technology, www.lime-technology.gr	Greece
Magicbox interactive, www.magicbox.es	Spain
Medbravo, www.medbravo.org	Spain
Mind Myths, http://mindmyths.eu/	Ireland
Mint Labs, www.mint-labs.com	Spain
MotionChart, www.motionchart.com	Estonia
MYSPHERA, http://mysphera.com/en/	Spain
NETICTECH S.A., http://www.netictech.com	Poland
NeuroAtHome, www.neuroathome.com	Spain
NeuroDigital Technologies, https://www.neurodigital.es/	Spain
OurPath, www.ourpath.co.uk	United Kingdom
Oviva, http://oviva.ch	Switzerland
Pantavision (Panatomy), http://www.panatomy.com/	Germany
PentaTech Ltd, www.pentatech.pl	Poland
Pflegeprotokoll / CareProtocol, http://www.pflegeprotokoll.de	Germany
PLUX - Wireless Biosignals, S.A., http://www.plux.info	Portugal
Psico Smart Apps S.L., www.psious.com	Spain
Px HealthCare, www.owise.nl	Netherlands
Scyfer, www.scyfer.nl	Netherlands
Synappz Medical Apps, www.synappz.nl	Netherlands
Taniwa Soluciones, S.L., http://www.taniwa.es/	Spain
TheMarketsTrust, http://themarketstrust.com	Luxembourg
Trendalyze Decisions, http://trendalyze.com	United Kingdom
TripMedic - Great Care When You're Away, www.tripmedic.com	Malta
UMANICK, www.umanick.com	Spain

4.1.3.3 Phase 2 – Proof of Concept

The main results of the phase 2 were: 1) three training webinars and two on-site trainings, 2) individual online coaching and 3) the selection of Top20 companies to continue to the phase 3.

In the end of March Top 40 SMEs and startups were selected. Enrolment was completed by sending signed sub grant agreement to the FICHe project Coordinator, University of Oulu. All 40 participants enrolled to the phase 2, although one company withdrew during the phase due to severe FIWARE issues, the number of participants having completed the phase thus being 39.

Trainings and coaching

Participants received online and on-site training in order to move from their business model into the Proof of Concept (PoC).

Three on-line training Webinars (Living lab and user experience, FIWARE technology, Proof of Concept) for supporting participants in development of Proof of Concept were organised. The topics were chosen on the basis of analysis done in the phase 1. Each session had duration of nearly 2 hours and all webinars were recorded and were available for FICHe participants on the internet.

Living Lab and User experience Webinar was led by Felice de Charro and Gijs van Rijn, from the Amsterdam Economic Board (AEB). In the webinar, awareness on the living lab efforts to be made and to get the participants fully prepared to set up a well-organized living lab were created. Also a first introduction on user involvement methods and Living labs of FICHe partners was presented. *FIWARE technology Webinar* was led by Michael van Bekkum, TNO and Franck Le Gall, FICORE. In the webinar, main focus was to address FIWARE related questions. *Proof of Concept Webinar* was led by Oscar van Dijk, Dutch eHealth Fund Management (DEH). The Q&A session was organised in order to provide the information needed by the participants to deliver the information requested for the evaluation of the phase 2, especially all information related to the PoC.

Two on-site training events focused on eHealth and business issues and especially pitching were organised. The first on-site training event was organised in conjunction with the eHealth week in Riga (May, 11-13 2015) in order to leverage all available resources and count with e-health experts to attend the Riga eHealth week as well as provide networking opportunities for the FICHe participants. The event was important training, promotion and networking opportunity for participants.

Training session was focused in maximizing value and the agenda was derived from the critical points identified in the on-line training sessions. Topics of general interest were addressed via talks, but there were slots allocated for questions and debate. Besides, the session was used for *induvial coaching* to support the development of the participants' PoC. Each participant had access to all coaches and possibilities for one- to-one coaching but, in order to make sure all participants received, at least, two hours of business and e-health market coaching, a preliminary matchmaking was done prior to the event and meetings were already scheduled. FICHe counted with 10 coaches with expertise in the eHealth sector from the business perspective but also from the Healthcare organizations point of view as well as users' involvement.

Figure 8: Training session and individual coaching sessions

In addition to the FICHe training, the exhibition space were to showcase the solution and usage of FIWARE technology were organised. The FICHe booth was also included in the VIP exhibition tour promoting the FICHe project and its 40 participants to European Commissioner for Health & Food Safety Vytenis Andriukaitis.

Figure 9: overview of the FICHe booth and European Commissioner for Health & Food Safety Vytenis Andriukaitis meeting the FICHe team

A questionnaire was launched after the Riga event in order to collect feedback of the FICHe participants. All of them answered the questionnaire and the results are presented in the Figure 10.

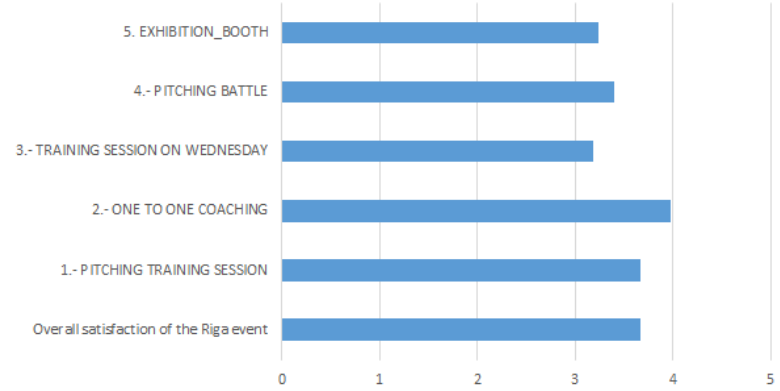


Figure 10: Results of the feedback questionnaire for the Riga event
(Source: FICHe questionnaire for Top 40 companies, May 2015)

The *second onsite training event*, focused on pitching, was merged with the phase 2 evaluation event, organised in Amsterdam (July 16-17, 2015) with a two-fold aim:

1) to prepare participants for pitching their product for different stakeholders
2) to perform a comprehensive evaluation as the selection process played significant role in this phase the grant being of EUR 152.000 for the qualified participant.

FICHe consortium provided individual online **coaching** for all 40 participants to complete and submit the PoC. At least one coach from the consortium was appointed to each participant. FICHe coaching

methodology counted two types of coaches: 1) *Mentors* were responsible for to identify the needs of the participants, to match the participant and the expert coach on the basis of maximized value according to the needs and weaknesses of participants as well as the future implementation plans as well as to follow-up and to analyse the progress of the project. 2) *Expert coaches* from different areas of expertise were identified to provide concrete advice to the participants. Despite the fact that no face to face meetings were budgeted for the coaching, the RIGA event was organised in such a way that face to face meetings were possible to provide individualised support to the participants, as that was the common need of all participants.

Evaluation of the Proof of Concepts and result of the phase2

By the end of June 2015 39 documents and videos of PoC as well as FIWARE implementation document were collected from participants. Furthermore, each participant made preliminary plan for the phase 3 in order to transfer smoothly to the phase 3.

Unlike the first two evaluations rounds, in the end of the phase 2 all the PoCs were assessed by all IRC members. Reviewers evaluated the proposals considering three criteria, which were weighted differently (presented in Table 5).

Table 5: Weight of the main criteria

Weight main criteria	Phase 2
Proof of Concept (PoC) Video	20%
Value Proposition	40%
TEAM (entrepreneurship, experience and ambition)	40%

IRC members used all deliverable documents from the phase 1 and phase 2 for their preparation for the pitching days, where the final evaluation was made. The PoC videos were scored before the pitching session. The value proposition and the team were scored at the end of each individual pitching/Q&A session during the pitching days in July. The Value proposition criterion was divided to three elements: value for users and healthcare, feasibility of the solution and competitive advantage. The team criterion was divided to also three elements: experience and skills, financial commitment and ownership as well as technological capacity.

Use of FIWARE was not scored in this phase, but if the FIWARE was not implemented, or the implementation deviated strongly from the FIWARE implementation plan as submitted at the end of the phase 1, FIWARE evaluator(s) could have disqualified participant from the phase 3. For the FIWARE assessment a pre-assessment was made by the technical experts of the FICHe team and during the Q&A session a FIWARE and a FISTAR representative discussed the solutions with all the candidates and gave to them recommendations for further development.

As a result of the evaluation the best 20 SMEs and startups were selected for the phase 3. Top 3 countries were Spain (35%), Netherlands (25%) and UK (10%). The main target market continued to be business to business (90%) and the focus areas were divided to 14. This is illustrated in the Figure 11 below.

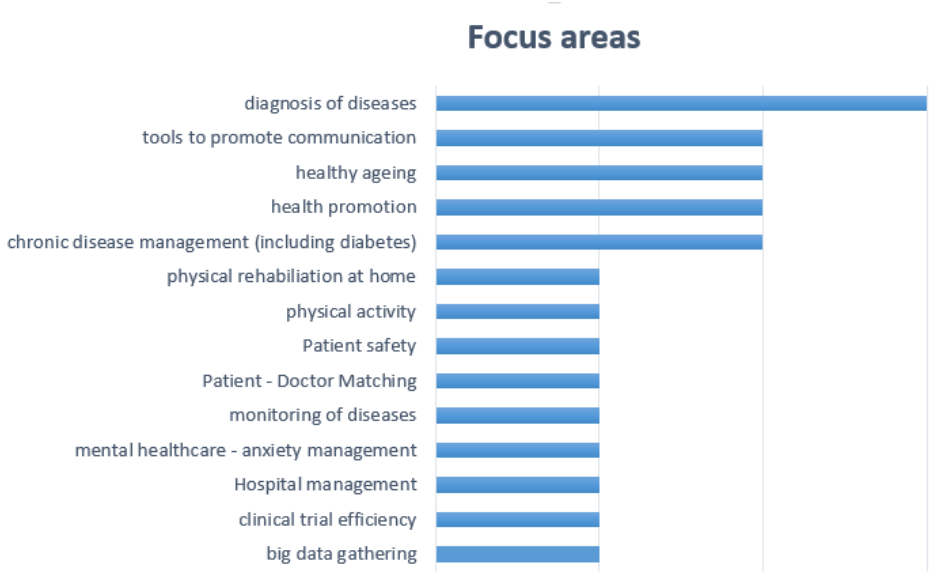


Figure 11: Focus areas of FIHCe Top 20 SMEs and startups

(Source: FICHe questionnaire for Top 20 companies, April 2016)

In the table below, Top 20 companies, their countries and solutions are described.

Table 6: TOP20 companies

Company	Country	Solution
Andiamo	United Kingdom	3D printing orthotics service for children with special needs. http://www.andiamo.io/
Betawerk	Netherlands	IncoSense Smart is an incontinence care system that provides insight and forecasts to enable a more effective and efficient incontinence care process. http://www.betawerk.nl/
Clinical Graphics	Netherlands	OMAX (Objective Measurements of Arthritis in X-rays) is an online image analysis system that automatically detects osteoarthritis on X-ray images. http://www.clinicalgraphics.com/
HealthApp	Spain	Mobile application for the treatment of eating disorders. http://bcnhealthapp.com/
Ideable Solutions	Spain	Kwido, multi-device platform for the care of elderly people. http://www.ideable.net/
Inbiolab	Netherlands	hARMONIC, miniaturized respiratory monitor based on EMG. http://inbiolab.com/

Medbravo	Spain	Provides hospitals with clinical trial tools to streamline the referrals of cancer patients to clinical trials. http://www.medbravo.org/
Mind Myths	Ireland	Online mindfulness platform for promotion of wellbeing. http://www.mindmyths.eu/
MySphera	Spain	Making hospitals smart through location of patients and assets and process visibility. http://mysphera.com/en/
NeticTECH	Poland	medVC is a remote collaboration solution for medical professionals allowing real-time audio-video communication and the usage of specialised medical tools. http://www.netictech.com/
NeuroAtHome	Spain	Gamified software platform to deliver physical and cognitive therapy. http://www.neuroathome.com/
OurPath	United Kingdom	A multi-platform diabetes management ecosystem. 6-week online lifestyle programme to prevent T2D. http://www.ourpath.co.uk/
Oviva	Switzerland	A technology-enabled medical nutritional therapy (MNT), applying technology to improve patient experience, care efficiency and effectiveness. http://oviva.ch/
Pantavision	Germany	A web based, diagnostic support software for interactively viewing anatomic and pathologic imagery. http://www.panatomy.com/
PLUX	Portugal	Physioplux TRAINER combines a wearable Electromyography (EMG) muscle band-aide together with a smart phone home application designed to allow a patient to correctly perform repetitive motor relearning exercises at home.d i http://www.plux.info/
Psico Smart Apps	Spain	Virtual environments for the treatment of anxiety disorders. http://www.psious.com/
Px Healthcare	Netherlands	OWise breast cancer is a mobile health platform specifically designed for people with breast cancer. It offers a range of useful tools and all the information patients needed during their treatment. http://www.pxhealthcare.com
Scyfer	Netherlands	Deep learning platform to detect degenerative brain disease in 3D-MRI. http://www.scyfer.nl/
Tripmedic	Malta	Multilingual service matching international patients with healthcare practitioners. http://www.tripmedic.com/
Umanick	Spain	Biometric software for patient identification with fingerprint, iris, face, and voice recognition and HIS/EMR integration. http://www.umanick.com/

4.1.3.4 Phase 3 – Working prototype

The main results of the phase 3 were: 1) support provided to SMEs and startups to develop their PoC to the market ready working prototypes as well as to create go-to-market strategy and 2) support and knowledge provided to set up living lab ie. test their solutions with end users.

Participants delivered by October 1st, 2015 the Description of Work for Phase3 (DOW), which became part of the sub grant agreement. After the approval of DOW the sub grant agreement was sent to the participants. All Top20 SMEs and startups enrolled to phase3 by sending signed agreement to the FICHe project Coordinator, University of Oulu.

FICHe services

FICHe provided the tailored support services for the participants. Based on interviews with European accelerator programs and incubators combined with lessons of the Lean Start-up method framework was developed. The framework of the phase 3 illustrated in the Figure 12 below was used to structure the process while still maintaining flexibility as all participants had different challenges at different times. The phase 3 was divided into three periods: Preparation, Action and Results.

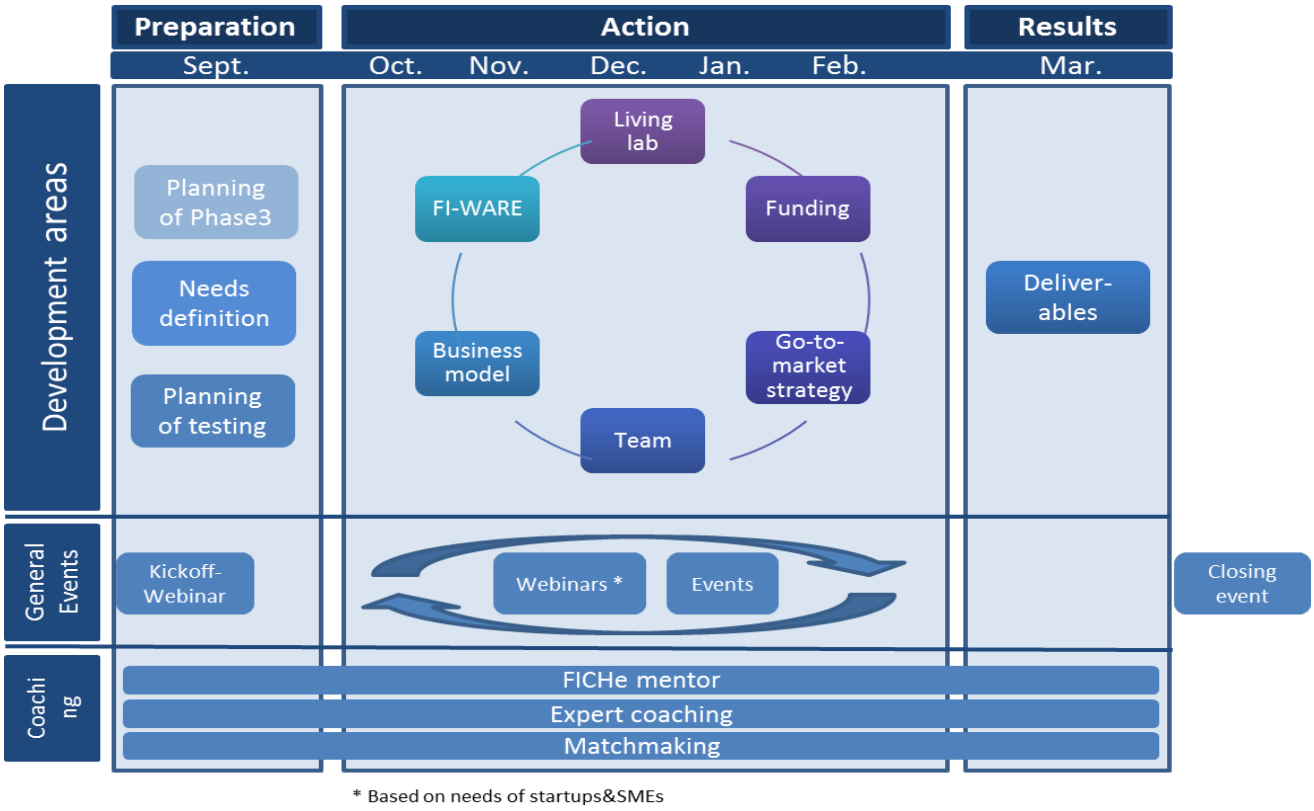


Figure 12: Framework - Phase 3 approach

During the preparation period participants defined the work to be done in the phase 3 and prepared their living lab field testing. FICHe provided the tailored support for the participants in the areas of: mentoring, expert coaching, webinars, events and matchmaking.

The action period started in September and continued until the end of February 2016. In this period participants focused on six different development areas: Living Lab, Go-to-Market, Business model, Funding, FIWARE, and Team.

Finally in the results period participants delivered the end deliverables.

Mentoring and expert coaching

The participants were matched with a mentor based on their needs. The mentor was 'the hub to knowledge' and responsible for matching participants and suitable expert coaches.

The mentoring activities evolved around regular online one-to-one meetings. During the subsequent meetings, information about the activities and reviews took place, as well as reminders for the FICHe webinars and events, making sure that the companies are aware and able to participate in them. Furthermore, the mentor coached on the activities that have to be done in the phase 3 and monitored the progress against DOW. There were 19 mentors during the phase 3 of the FICHe project. The mentors were from the consortium.

Expert coaching was provided through community of experts. Identification of the expert coaches started already in the phase 2. All coaches provided their support by voluntary basis or they were consortium members. 29 FICHe experts and FI-Business community were included to the expert coach community, which was divided into three main expert areas:

1. FIWARE experts: specific attention to FIWARE issues and monitoring progress on FIWARE. Experts were mainly from consortium or FICORE project.
2. eHealth, Business and Living Lab experts: specific attention to eHealth, or Business, or Living Lab issues. Experts were mainly from the consortium.
3. FI-Business experts: Focus on business issues

Most important values of mentoring by top20 were the following: Focus 45%, Experience 50%, Network 25% and Other 1.

Webinars, events and matchmaking

Participants were interviewed by the mentors regarding the most important topics of which they would like to gain more expertise. Based on these topics the following Webinars were organised: Living Lab, Access to (European) Grants, CE certification and FDA approval, and How to fund your business and how to engage Angel & Venture Capitalist.

Altogether 6 events were (co-)organised in the phase 3. The events were targeted to Top 20 participants and FIWARE community. The events (3) for Top 20 participants were focused on the FICHe specific topics e.g. field tests in the living labs, while FIWARE community events (3) were focused on building a community, which will help participants after FICHe accelerator program ends. The community events were organised together with other FIWARE accelerator programs. Furthermore, FICHe companies participated FIWARE community events offered by other accelerators.

A questionnaire was sent in May 2016 in order to collect feedback of the FICHe participants. All of Top20 SMEs and startups answered the questionnaire and the results are presented in the Figure 13.

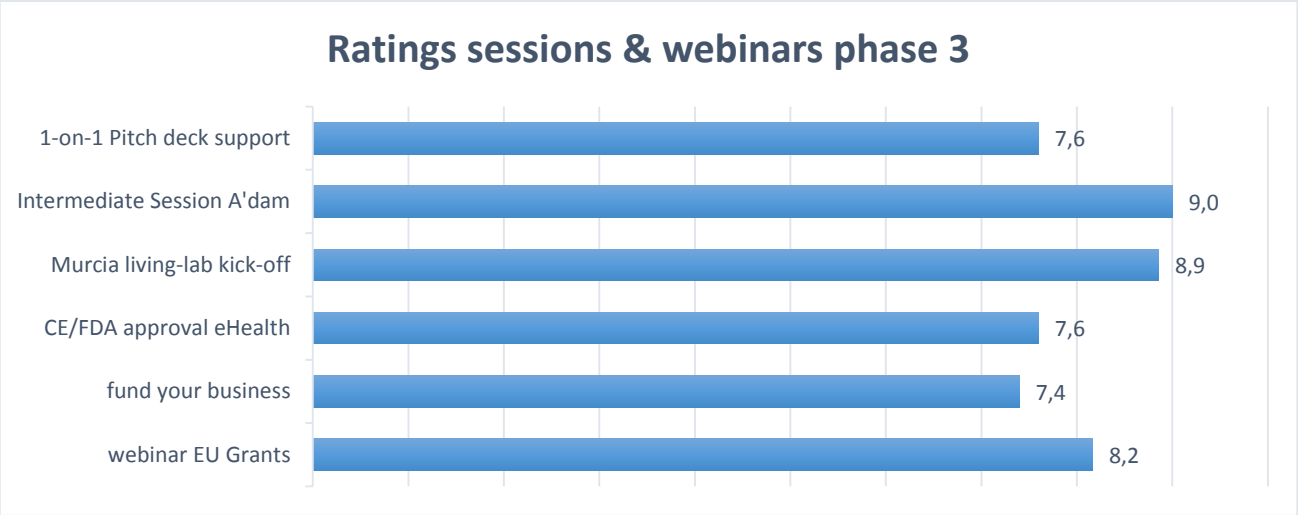


Figure 13: Results of the feedback questionnaire from Top20
(Source: FICHe questionnaire to Top 20 companies, May 2016)

FICHe provided different kind of matchmaking possibilities to the companies: 1) Matching participant with Top Companies/Key public players in eHealth sector for Partnership or access to important first buyer, 2) Matching participants with VC/angels looking for investment opportunities within eHealth, and 3) Investor meetup in FICHe Closing event. The consortium facilitated the matchmaking. For instance, at the closing event 30+ investors joined, at Startup2Scaleup 15 digital health investors joined.

Field trials (living labs)

FICHe provided three living labs for participants to test their products with real end-users in the real-life environment. The living labs had three focus areas: Business to business (Amsterdam), healthcare (Murcia) and consumers (Oulu). In the preparation of the phase 3, the needs of living labs were analysed (e.g. end user (consumer, patient, business), type of healthcare, preferable country) and first meetings with the living lab providers were organised to start collaboration. Although FICHe provided their living labs for the use of participants, many participants decided to organise their own living labs in preferable country, only exception was Murcia living lab, which was used intensively with 7 companies.

Because setting up a healthcare living lab was known to be time-consuming, preparations started already during the phase 2 of the FICHe project. The healthcare living lab was built in Murcia, Spain. The Living lab of Murcia consist of 9 areas of Health with 10 Hospital and 85 Primary Health Center. In this project the solution of SMEs and startups were tested in three hospitals, one primary health center and six mental health centers. In the hospital named la Arrixaca, which is considered the flagship Hospital in the Region of Murcia, two solutions were tested.

The living lab of Murcia (Servicio Murciano de Salud (SMS)) contacted Top 40 participants to identify their needs of different areas of healthcare, and match them with hospitals. 14 companies out of 40 were seen as suitable for testing their solution in the Murcia living lab, however only 7 out of 14 was

selected to the phase 3 (Top 20). Finally SMS matched selected companies with clinical leaders who acted as mentors in the phase 3 in Murcia Region. In general terms the companies have valued very positively the opportunity to work in the real environment under the tutelage of the SMS and their professionals.

One of the three official FICHe living labs, OULLabs services and especially the online user involvement platform PATIO www.patiolla.fi, was offered for the use of the all FICHe companies and in particular for the companies being coached by the University of Oulu and Business Oulu. Two participants published a questionnaire regarding their solution at PATIO. Moreover, OULLabs' UX specialist carried out two UX evaluations of eHealth solutions of FICHe participants (MIndMyths and OurPath). In addition, Oulu University Hospital opened their test lab facilities for public in October 2015. This opportunity was shared with the top 20 companies of FICHe. One company was interested to test their product in this testing environment. The comprehensive test case has been planned to be conducted in this real healthcare environment involving medical specialist and patients after FICHe project. Moreover, the experts of the OULLabs were consulted by the mentors as well as participants.

For the business to business approach in Amsterdam it was essential to find the right healthcare organizations and hospitals for a living lab. The mentors brought in their experience, network and connecting skills to be as effective as possible for the companies. Issues were discussed frequently between the Dutch mentors. According to one company, Clinical Graphics, mentorship has helped them in overcoming collaboration challenges. One of the companies set up a living lab at a care institution in Amsterdam and other companies got advice regarding setting up field tests in other living labs close to Amsterdam. Scyfer and Clinical Graphics worked together in a Living Lab for one hospital after advice by their mentor. The results were good and they continued collaboration and found their potential launching customer, Bergman Clinics in the Netherlands.

Closing event

The closing event of FICHe was organised in conjunction with Health 2.0 Europe in Barcelona in order to leverage all available resources and count with key stakeholders in digital health that will attend the event as well as provide networking opportunities for companies. The event is one of the leading digital health startup and investor event. The event attracted 600+ delegates and over 30 digital health investors from across Europe. During the promotion of the event a lot of attention was raised for FICHe as partner and the co-hosting as closing event.

As FICHe partnered with this conference, the premium exhibition space was offered to Top20 SMEs and startups to showcased their solution and usage of FIWARE technology. The 20 booths were positioned close to the drinks and lunch area, which assured that there was enough traffic and attention for the companies. Many startups commented that they had opportunity to talk to potential partners and customers in the event. The FICHe portfolio booklet made for the event was spread among the conference delegates.

Figure 14: Exhibition area

Three FICHe startups were selected - HealthApp, MintLabs and UMANICK - among the over 100 applications to pitch front of the investor in EC2VC meeting. All three companies pitched in front of investors and received valuable feedback.

Figure 15: EC2VC event – HealthApp, Umanick and MintLabs

Furthermore, SMEs and startups had also an opportunity to apply to present their solution on the main stage throughout the conference. From the FICHe startups HealthApp, MedBravo, MindMyths, MintLabs and MySphera were selected to present. Their presentations were scattered throughout the two days and presented in between in-depth sessions to maximize attention.

4.1.4 Impact

4.1.4.1 Potential impact

Impact on FICHe SMEs and startups

Top 20 SMEs and startups valued the most beside of the FICHe's funding, the network expansion, support received from the mentors and feedback received from real users in living labs.

- *Networking* with other SMEs and the connections provided with FICHe consortium were seen as most valuable. SMEs and startups expanded their networks considerably: close collaborations with other FICHe startups, a good insight of European startups, new connections to investor forums and eHealth entrepreneurs across Europe. Participating in big European business and networking events, such as the eHealth week in Riga and Health 2.0 event in Barcelona as well as the presence in media were seen very important and helped companies to get their solutions to the market. The FICHe and FIWARE VIP programs have been a quality recognition that have helped companies on the sales.
- The *support and guidance from mentors* was also highly appreciated, especially support on the growth process, helping to set up a living lab and sharing the eHealth knowledge and funding opportunities, have had great impact to the companies.
- All companies valued the outcome of the *living lab testing* of their solutions in a real environment significantly high. The living lab was seen as an essential part of the product development, especially a way to get the product market ready. Moreover, the living lab works as a reference for future marketing and sales, as it offered a real customer feedback, from customer who has deployed the solution. In some cases, living labs have become part of SME's sales strategy: set up a small living lab with new customer, and then expand the solution to the whole hospital and the rest of the healthcare organization.

By being part of the FICHe program SMEs and startups gained significant growth. The most successful companies in fundraising were Psious, Horus and Andaman7, who raised ~€3 MEUR in total, while some companies received other funding such as SME instrument. However, not all of the companies were ready or interested in the investor rounds, but achieved new growth by increasing the number of paying consumers (patients) and new healthcare customers (clinics/hospitals). New growth implied also the creation of new jobs. Top20 FICHe SMEs and startups created ~150 new jobs during the program. As outcome there are 19 market-ready prototypes built on FIWARE technology, 12 of them already on market, and additionally 19 new Proof of Concepts.

Impact on the EU eHealth market

The combination of funding, coaching and tangible outputs have contributed to the acceleration of the development of the SMEs' solutions. During FICHe SMEs and startups focused more strongly on European markets. Different coaching sessions, business webinars and events as well as pitch deck consultants have sharpened SME's view on the business potential beyond the borders of their countries. Furthermore, through all phases of FICHe program SMEs and startups have been asked to continuously revise their business model. Due to this, they have been able to generate validated business hypothesis. MySphera, for example, moved to a cloud model, which made their system

more scalable, easier to install and maintain in the foreign countries. As another example, PLUX tested reoccurring revenue stream models in the different markets.

FICHe has supported SMEs to create links to SME instrument funding, and helping to fund the development of the key missing parts of the solution needed for international funding & markets. Furthermore, FICHe has been a general boost as it has accelerated the overall process and planning as well as bringing the team members closer together and fostering the visibility of the product.

As for international markets, thanks to the living labs, SMEs and startups have been able to test and validate the technology as well as business model and get in touch with the international contacts. According to SMEs, testing and validation is the first requirement that an e-Health startup should accomplish in order to get access to the international markets. For the companies that were closer to the market entry, timing of living lab testing was perfect and boosted the final development, market entry planning, and early customer validation. Most SMEs typically fell behind on their product development schedule - not because they were slow but because they kept on adding new features - but the FICHe framework kept them on the pace allowing them to develop a rapid prototype and validate the solution with real users.

13 out of the Top20 companies have been able to identify untapped business opportunities while participating in FICHe accelerator program. For instance, the companies have:

- developed additional features to their solutions
- leveraged rapid prototyping in order to start cooperation with another health service provider
- found new markets for health monitoring by adjusting the solutions to new scenarios/markets
- gathered new development ideas both with patients and therapists
- got a bigger project with several hospitals
- found processes in the hospital that they didn't think about before, where their product could be applied, therefore bringing new opportunities in the near future

Regarding funding, FICHe program itself has been essential seed funding allowing the startups to set off the ground but also, FICHe consortium was able to connect SMEs with relevant VCs. Some of the SMEs are already in their first investment round, and had come across the 3 phases of FICHe, which has increased their reliability and business potential in the eyes of the investors.

Impact on EU Healthcare

The eHealth solutions developed during FICHe have empowered the patients as well as improved the clinical and financial outcome. The companies' solutions among others increase the quality of care and improve diagnosis and engage patient thus making healthcare more cost-efficient. The following examples describe the impacts more detailed:

Empowering patients by service deployment and patient engagement

- Allows elderly people and their caregivers be in contact with caregivers in order to deploy easily eHealth services for patients - *Kwido, multi-device platform for the care of elderly people*
- Enables all those involved in the clinical decision making process to fully understand where they are in a care pathway and what the next steps are, thus enables to create the right interventions (currently orthotics) at the right time – *3D printing orthotics service for children with special needs*
- Patients are offered access to clinical research beyond hospital or geographical boundaries. Tool maximises the matching of patient demand with the clinical trial offer. – *Clinical trial tool (cancer)*
- Provides information where patients are at the moment, thus increases patients and family satisfaction and allows more comfortable waiting time while patient is with professional. – *Real-time location system for hospitals*
- Allows to gain access to expert medical professionals from anywhere in the world. Patients from rural areas can be remotely treated by a clinical doctor from the city, without having to travel – *medVC, remote collaboration solution for medical professionals allowing real-time audio-video communication*
- Patients have demonstrated to be more empowered and engaged using OWise eHealth solution. 9/10 patients recommend it to other patients as do 9/10 clinicians, who detect quick improvements in the emotional wellbeing and the dialogue they can have with patients. – *Owise, mobile health platform (breast cancer)*
- Delivers more effective service to the citizens, by supporting them more closely using the technology developed by spending less money on the medical treatment than traditional approaches – *A technology-enabled medial nutritional therapy (MNT)*
- Citizens can use their own CT scans and turn this into 3D models, that give power to the patients – *Deep learning platform to detect degenerative brain disease in 3D-MRI*
- Engages the citizen in rehab to better manage their own rehabilitation process with a more cost effective and still achieve better outcomes, by performing the motor relearning at home with guided videos and feedback – *Physioplux TRAINER, a wearbale Electromyography (EMG) muscle band-aide and smartphone application*

Better financial and clinical outcomes by efficiency, optimization and better treatment delivery

- Via mobile application patients are more aware of the illness and are more engaged to the therapy. Due to that reduces the cost of the treatment and increases efficiency about 20% - *Mobile application for the treatment of eating disorders*
- Facilitates access to treatment, measurement sessions while they happen and makes this information available to clinicians regardless of location. This ensures that outcomes improve and can be done at a fraction of *cost – Gamified software platform to deliver physical and cognitive therapy*

- Improvements in weight and activity levels that are associated with a 50% reduction in T2D risk - this is associated with an around $2000 saving per year per patient (average cost per T2D patient is $4k/year in EU) – *A multi-platform diabetes management ecosystem*
- Avoiding harm by wrong identifications in the healthcare processes and avoiding second victims – *Biometric SW for patient identification*
- Provides information faster, thus accelerates diagnostic time and delivery of health service, saves 10-15% according to tests, resulting in remarkable increase in turnovers (cuts costs) – *A web based diagnostic support SW*
- Knowing exact number of patients and times spent of patients in different areas and states of the process, helps to detect bottlenecks and reduce Length of Stay (cost reduction) and allows to increase patient throughput (revenue increase) - *Real-time location system for hospitals*
- Savings on incontinence materials, which currently are thrown away because change has been too early. Secondary, insights and forecasts to enable a more effective and efficient incontinence care process – *IncoSense Smart, an incontinence care system*
- Delivers greater patient-empowerment while also collects patient-reported outcome data. Both have a great impact on the efficiency and effectiveness of health care. Clinical outcomes are improved by the direct use of our application by patients as well as by the insights generated from the real-time, real-world patient reported outcomes – *Owise, mobile health platform (breast cancer)*

Value of using FIWARE technology

All FICHe Top20 SMEs and startups implemented one or more generic and/or specific FIWARE enabler in their product. They indicated the added value of FIWARE as medium-high to high. By three of the SME's the value was perceived to be low due to the poor quality / immaturity of the enabler they wanted to use and the effort they had to put into modifying the enabler to meet their specific requirements.

In general the added value of FIWARE technology comes from providing a large set of components (enablers) ready for use and an active community which supports and maintains it, all mostly free of charge. Easy prototyping and testing and incremental development with enriching functionality is facilitated this way. This can considerably shorten the time and lower costs needed for development, and thereby also shorten the time to market.

FIWARE technology led to smoother integration of artefacts and communications and deployment of IoT. Faster development of prototype versions and final product was enabled because of available software building blocks. Use of FIWARE also promises better scalability and easy linking to Big Data storage and analysis. The open nature of enablers allow to create a product capable of interacting with external systems as it offers open and standardized APIs and keeps products flexible.

To benefit from this added value the enablers must fit into the scope of the company and product. Also future development of the products will have to prove what the real added value is on the long-

term. Implementing FIWARE was greatly stimulated by the funding of development costs (under the condition of FIWARE enabler use) received through the FICHe accelerator.

On a critical note one could argue that this top-technology could have been available with less investment than that which was used for the current FIWARE infrastructure.

The following strengths and weaknesses of FIWARE technology were mentioned by the FICHe top-20 participants:

Table 7: FIWARE Strengths and Weaknesses

(Source: FICHe questionnaire for Top 20 companies, April 2016)

Strengths	Weaknesses
Availability of a broad range of enablers	Complex big picture
Easy scalability, good APIs	Some enablers are not very actively used - small community, little documentation, few versions
Smoother integration	dependency of 3rd parties to maintain enablers (outside FIWARE community)
All features of the FIWARE universe available as (micro) services	service interruptions and connectivity issues with node
Improved technology	lack of information, support, maintenance and validation
Generic plug&play character	some enablers too early stage and not ready for commercial use
Interoperability of the components	poor documentation and version control of some of the components
Components deliver out of the box functionality	Not always updated with latest technologies
Cloud computing capabilities	Quota restrictions
Spare system administration tasks	FIWARE Lab lacks the stability to be used as production platform
Already developed stack ready to use most for free	Only few commercial FIWARE providers available
Community that is around FIWARE, i.e. big companies, core stakeholders and SME-users	No link with existing user ID systems (facebook, linkedin, google, etc)
Common technological platform - towards a Single Digital Market	Quality varies widely among the enablers
Open/open source and flexible	Ownership and sustainability uncertain
Easy to add large and tested components	

The availability of FIWARE experts was generally appreciated, but 7 out of the Top20 companies indicated they had made limited or no use of the expert network. Those who had contact indicated they found there was broad experience and they were advised on making the right choices for certain enablers and components for their specific product. Mostly the responses were quickly available. The

experts also helped with implementation, practical issues and workarounds and tried to comply with the need for certain computing resources.

The FIWARE community enabled the accelerator program and offers support, not only with technical experts, but also for instance with business experts. Within the community there are a lot of opportunities for knowledge transfer among startups struggling with similar problems and networking opportunities with other stakeholders. Value of the FIWARE community is also experienced positively because of the possibility to be in direct contact with the developers of the enablers, however sometimes there was no reaction because the development team was no longer active. It seems that some enablers have quickly developed over the last year, which increases usability. FICHe companies have even contributed to the development of FIWARE technology by implementing new features to the FIWARE components. A large and active community is a condition for the technology to keep pace with latest trends i.e. in big-data and other topics. High quantities of information from the community were sometimes experiences as a bit overwhelming. The community platform offers possibilities to find partners or collaborators. The community thrives by giving and returning information, support, technical input, etc. among all stakeholders. Furthermore, a strong community adds a layer of creativity and collaboration that could even further drive innovation.

Value of using Living labs in the development of eHealth solutions

The living lab has been as a unique chance e.g. for a clinical validation and testing of innovative eHealth solutions in hospitals and clinics.

For the companies, the living lab helped to detect problems, fix technical bugs, and optimize the solution as well to improve the product. Moreover, the living lab kept the pressure on the development of the solution. For example, some companies made major improvements based on the usability and reliability findings. 7 of the 20 companies felt that the living lab phase was a true reality check which brought them back on the track of the patient and market needs. Nevertheless, due to the short time, some SMEs, hadn't got the opportunity to incorporate user feedback from the living lab into their products, although had the chance to make several iterations of improvements based on feedback of internal testers or friends. For SMEs living lab also gave the opportunity to learn a lot about the public health sector and its technology.

> *"It has helped us on detecting problems on our solution and fixing technical bugs. We have learned a lot about the public health sector and its technology."*
>
> (Source: FICHe questionnaire for Top 20 companies, April 2016)

> *"We realized that the problem articulated by clinicians in the earlier phases was the wrong one and we had to change direction to solve the underlying problem"*
>
> (Source: FICHe questionnaire for Top 20 companies, April 2016)

> *"Living lab had a very large impact on the product especially around product reliability and usability, and required several major product iterations."*
>
> (Source: FICHe questionnaire for Top 20 companies, April 2016)

Almost all top 20 companies will continue to use the living lab approach in their product and solution development. This will allow them to further improve their capabilities with the help of real environment and receive advice by the professionals and patients. As a result of the Murcia living labs, some of the companies also are at the starting point of a final future acquisition.

> *"Living Lab has been essential for us for fixing our solution. We will continue using living labs to continue testing and proving the benefits of our solution in the future, with the same technology as well as with new developments."*
>
> (Source: FICHe questionnaire for Top 20 companies, April 2016)

> *"The Living Lab process (user testing and refinement) is essential in any development process, we will be continuing to do this in the future."*
>
> (Source: FICHe questionnaire for Top 20 companies, April 2016)

> *"Absolutely critical. We will always involve users throughout the development process."*
>
> (Source: FICHe questionnaire for Top 20 companies, April 2016)

Another important value gathered through Living Lab has been the media coverage in Spain that has been given to the solutions being tested. Visibility was great on various radio and television channels, and especially the participation of the Minister of Regional Health helped to disseminate FICHe in various health forums in the country of national and international importance. One of the solutions has been awarded as the best solution in the world in the field of RFID technology in Orlando, USA by the prestigious magazine RFID journal, which was also noticed in media.

4.1.4.2 Main dissemination activities

During the FICHe project the main communication channels were Twitter, F6S and Web portal. On Twitter with 564 followers, 658 tweets were published and were mentioned and retweeted 1000+ times. On F6S, with 2435 followers, the open discussion group was maintained throughout the project. Relevant announcements (FICHe, FIWARE and/or eHealth related) have been posted to this group. With the announcement of the selection of the 80/40/20 participants, the press releases were issued and shared with the relevant EU media and through official FICHe Twitter as well as consortium partner's channels. Several media such as eHeathNews.eu, Digitalezorg.nl, Tehnopol.ee, HealthITSpace.eu, Health20con.com among others published the press releases. FICHe website

www.digitalhealthstartup.eu, Mobilize.io, LinkedIn and media channels of the partners were used to promote FICHe events, activities and milestones. Articles were published on the websites. In addition, the portfolio, a 50+ page booklet containing the startup portfolio, project partners and FIWARE was made. The booklet is available also in digital form: http://bit.ly/23vODh9

FICHe was echoed in the press especially in Spain, Murcia region, particularly since the start of the Living Lab field trials, with a press cover and occupying the front pages of the newspaper with the largest circulation in the region. Moreover, there was a lot of exposure created via radio, newspapers and television in Murcia.

To gain more attention to the SMEs and startups, FIWARE technology and FICHe project, the project partners managed to leverage multiple events. FICHe was promoted in various event such as ECFI 2 and 3, eHealth Week in Riga, and Health 2.0. During the closing event as well as during the Startup2Scaleup event, the FICHe startups were exposed to digital health investors.

4.1.4.3 Exploitation of results

FICHE has produced a wide variety of exploitable resources (assets) during the project lifetime. Initially identified assets are, among others, the F6S platform and its SMEs/stakeholder profiles, the consortium expanded database of eHealth contacts, the webinars, etc. They represent the competitive advantage of FICHe. Compiling the exploitation activities, in particular, the Business Model validation and optimization activities was followed by a conceptual approach in Phase 3. In addition, the experience gained about the FIWARE technology will be used in future research and development ventures.

The FICHe Project has allowed the consortium to identify the main target customers and beneficiaries from the key stakeholder types: SMEs, healthcare organizations, investors, etc,

The development of the concept of the living lab has been really successful and next step will be how to implement the methodology developed in FICHe in a formal approach within the regional healthcare institutions in Murcia. Consortium partner SMS is working on the continuity of the FICHe consortium and the possibility of developing a new joint project through exploring new calls. Considering the companies and their solutions SMS supports them beyond the project and in some cases has formalized new ways to cooperate and in others cases is interested to acquire the solution.

The University of Oulu has used the submissions and results of the FICHe companies for disseminating results through academic papers and reports. For example, The Centre for Health and Technology conducted an analysis aiming to create a systematic process for the support of companies in achieving funding and clients in Europe and beyond.

BusinessOulu will continue mentoring the companies in Oulu region. Mentoring has been seen as an effective method to help companies to grow. Business Oulu will also use the contacts and network created during the project to seek further cooperation possibilities. Oulu region will also keep

developing Living Labs in order to enable testing in authentic circumstances for national but also international companies.

SDZ will use the gained experience, network and learnings in future ventures and projects in the near future: a new digital health accelerator will be launched mid-2017 where experience and network of the FICHe project (and GET project) will be leveraged. In fall 2016, a digital health startup hub will be launched in Utrecht (NL). This hub will offer network, knowledge and a field lab to EU digital health startups. The hub will be part of the iHub (FIWARE) network across Europe and will organize year-round events, trainings and workshops. During the project a lot of coaches joined the FICHe project. In 2016 SDZ will start with Digitalhealth.expert coaching network for digital health startups from Europe. This will be done in co-operation with CoachAdemy, one of the FIWARE startups (FINODEX). The website DigitalHealthStartup.eu created for FICHe will be maintained by SDZ.

Regarding the use of FIWARE, despite of the challenges and uncertainty the most of the SMEs (Picture 22) stated that they will keep on adding FIWARE in their solutions and, even, plan to further develop the software created in FICHe. Some SMEs mention that FIWARE is not quite there yet and needs to build a more solid foundation. Also, in the eHealth sector, SMEs are concerned about security risks with relation to the holding of Medical data based on technology which required them to take the legal burden. This could imply that for new products alternatives need to be explored. Nevertheless, current products will work with FIWARE, and keep on using it if FIWARE remains as a stable and competitive technology backed by an expanding open-source community.

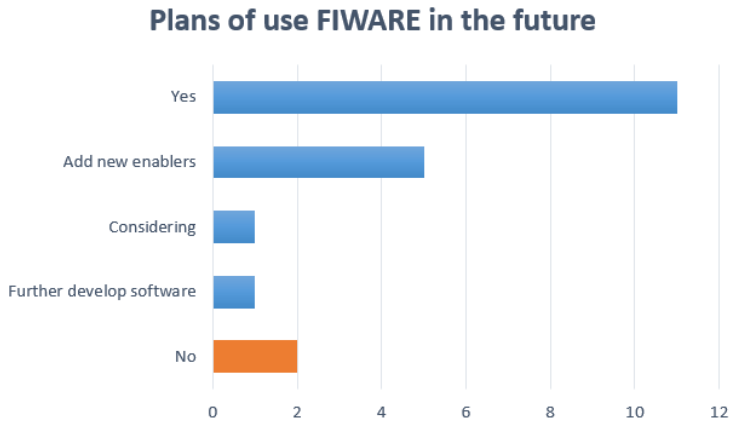


Figure 16: Plans of use FIWARE in the future
(Source: FICHe questionnaire for Top 20 companies, April 2016)

The consortium will continue disseminating FICHe results such as FIWARE technology and encouraging results of living lab field testing and acceleration process in order to spread best practices and speed up the market entry of new innovative solutions.

4.1.5 Contact details

FICHe
Future Internet CHallenge eHealth

http://digitalhealthstartup.eu/

FICHe project Coordinator:

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Stichting ZorgInc, The Netherlands – Jildou Steensma jildou@zorginc.nl

Stichting Amsterdam Economic Board, The Netherlands - Jeroen Maas j.maas@amecboard.com

TNO, Then Netherlands – Marian Schoone marian.schoone@tno.nl

TIC BioMed, Spain – Myriam Martin myriam.martin@ticbiomed.net

FFIS de la region de Murcia, Spain – Fernando Alvarez fernandoj.alvarez@ffis.es

Section A (public)

A1: Not applicable, the project did not produce any scientific publications.

This section includes two templates

- Template A1: List of all scientific (peer reviewed) publications relating to the foreground of the project.
- Template A2: List of all dissemination activities (publications, conferences, workshops, web sites/applications, press releases, flyers, articles published in the popular press, videos, media briefings, presentations, exhibitions, thesis, interviews, films, TV clips, posters).

These tables are cumulative, which means that they should always show all publications and activities from the beginning until after the end of the project. Updates are possible at any time.

TEMPLATE A1: LIST OF SCIENTIFIC (PEER REVIEWED) PUBLICATIONS, STARTING WITH THE MOST IMPORTANT ONES										
NO.	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers[2] (if available)	Is/Will open access[3] provided to this publication?
1										

[2] A permanent identifier should be a persistent link to the published version full text if open access or abstract if article is pay per view) or to the final manuscript accepted for publication (link to article in repository).

[3] Open Access is defined as free of charge access for anyone via Internet. Please answer "yes" if the open access to the publication is already established and also if the embargo period for open access is not yet over but you intend to establish open access afterwards.

TEMPLATE A2: LIST OF DISSEMINATION ACTIVITIES								
NO	Type of activities[4]	Main leader	Title	Date/Period	Place	Type of audience[5]	Size of audience	Countries addressed
1	Webpage	BOU	*Information of FICHe*	*2014*	BusinessOulu (web)	All	Web	Finland
2	*Networking, Seminar*	*BOU*	*Midnight Pitch Fest*	*10/06/2014*	*Oulu*	Industry, Policy makers	*100*	Finland
3	Seminar	zorgInc.	*Seminar Wij zorgen, SIGRA, Board: naar langer en gelukkig thuiswonen in de wijk*	*12-13/06/2014*	Amsterdam	Industry	60	Netherlands
4	Networking	zorgInc.	*Zorg2025*	*19/06/2014*	Amsterdam	Industry, startups	80	Netherlands

[4] A drop down list allows choosing the dissemination activity: publications, conferences, workshops, web, press releases, flyers, articles published in the popular press, videos, media briefings, presentations, exhibitions, thesis, interviews, films, TV clips, posters, Other.

[5] A drop down list allows choosing the type of public: Scientific Community (higher education, Research), Industry, Civil Society, Policy makers, Medias, Other ('multiple choices' is possible).

5	Media	DEH	*Financieel Dagblad*	*8-2014*	Netherlands	Industry	50.000	Netherlands
6	Presentations, networking	OUL	*Autumn Forum of Center for Health Technology*	*20/08/2014*	Oulu	Industry	30	Finland
7	Presentations, networking	OUL	*Technopolis Business Breakfast*	*21/08/2014*	Oulu	Industry	108	Finland
8	Presentation material	OUL	*FICHe presentation*	*22/8/2014*	Technopolis website (web)	All	Web	Finland
9	Press release	OUL	*FICHe (Future Internet Challenge eHealth) funds service and product development of SME´s and startups´*	*9-2014*	*University of Oulu / CHT news (web)*	Scientific community, Industry	Web	Finland
10	Conference	OUL	*Open Living Lab Days*	*1/09/2014*	Amsterdam	Scientific community, Policy makers, Civil society, Media	150	Europe
11	Conference	SDZ	*AAL Forum, Bucharest*	*1/09/2014*	Bucharest	Scientific , Industry	75	Europe
12	Networking	SDZ	*Health2.0 Amsterdam meetup, Amsterdam*	*1/09/2014*	Amsterdam	Startups	50	Netherlands
13	Press release	OUL	*FICHe - Future Internet Challenge eHealth funds SMEs and startups 6.24 M€!*	*2/9/2014*	University of Oulu / CIE news (web)	Scientific community, Industry	Web	Finland

14	Networking	zorgInc.	*Incubator - Health Tech - Co-creatie sessie*	*4/09/2014*	Nieuwegein	Startups	50	Netherlands
15	Press release	BOU/OUL	*With the Future Internet Challenge eHealth you can get up to 217 000 euros!*	*5/9/2014*	Kuopio innovation (web)	All	Web	Finland
16	Press release	OUL	*FICHe accelerator launches its open call in September for eHealth SMEs and Startups across Europe*	*8/9/2014*	University of Oulu / CIE news (web)	Scientific community, Industry	Web	Finland
17	Press release	SDZ	*ISFTEH: open call*	*9/9/2014*	Online	Industry, Scientific community	5.000	Global
18	Presentation, networking	SDZ	*FICHE Open call Event*	*16/09/2014*	Munich + online	Industry	700+ / 2000+	Europe
19	Conference	SDZ	*ECFI 2*	*17-18/92014*	Munich	Industry, Policy makers, Scientific community, Civil society, media	300+	Europe
20	Press release	SDZ/TBM	*Email blast EU SME eHealth competition*	*18/9/2014*	Online	Startups	1.500	Europe
21	Press release	SDZ	*http://www.ehealthnews.eu/industry/4064-are-you-a-sme-*	*18/9/2014*	Europe	All	15.000+	Europe

			or-startup-in-ehealth-apply-now-to-future-internet-challenge-ehealth-fiche					
22	Press release	SDZ	*http://www.healthitspace.eu/groups/viewbulletin/13-are-you-a-sme-or-startup-in-ehealth-apply-now-to-future-internet-challenge-ehealth-fiche?groupid=8*	*18/9/2014*	Europe	All	15.000+	Europe
23	Networking	SDZ, TBM	*EU eHealth Marketplace*	*22/09/2014*	Brussels	Industry, Policy makers, Scientific community, Civil society	100	Europe
24	Presentations, networking	BOU, OUL	*FICHe Event in Oulu*	*23/09/2014*	Oulu	Industry	60	Finland
25	Press release	SDZ	*http://www.ehealthnews.eu/industry/4072-future-internet-challenge-for-ehealth-smes-and-startups-across-europe*	*24/9/2014*	Europe	All	15.000+	Europe

26	Presentation	TBM	*Workshop FI-PPP accelerators (AMETIC)*	*24/09/2014*	Madrid (Spain)	Industry		Spain
27	Press release	BOU	*Info of FICHe*	*23/9/2014*	BusinessOulu (web)	Industry, policy makers, media	Web	Finland
28	Networking	DEH	*Dutch Health Innovation bootcamp in Silicon Valley*	*25/09/2014*	San Francisco	Industry	100	Netherlands
29	Presentations, networking	OUL/BOU	*FICHe Event for startups*	*30/09/2014*	Oulu	Industry	30	Finland
30	Presentations, networking	OUL	*EU Financial instruments for SMEs info event (health sector)*	*30/092014*	Oulu	Industry	60	Finland
31	Presentations	SDZ	*Virtual roadshow Health2.0 Meetups across*	*sep-oct 2014*	Online + several cities	Startups, Industry	500	Europe
32	Conference	SDZ	*Mobile Health 2014, Utrecht NL*	*1/10/2014*	Utrecht	Industry	500	The Netherlands
33	Presentation	BOU	*Digital Health revolution*	*1/10/2014*	Helsinki	Industry, Policy makers	50	Finland
34	Article in local newspaper	OUL/BOU	*Article of FICHe project*	*1/10/2014*	Oulu (Kaleva)	All	370.000	Finland
35	News in local radio	OUL/BOU	*Regional news*	*1/10/2014*	Oulu (Yle)	All	200.000+	Finland
36	Article in local newspaper	OUL/BOU	*CIE vetää Oulussa EU:n terveysalan ideointikisaa*	*1/10/2014*	Kaleva online (Web)	All	370.000	Finland

37	Social media	SDZ	*Thunderclap campaign*	*1/10/2014*	Online	All	Reached 20.000	Online
38	Social media	SDZ	*Email blast F6S*	*1/10/2014*	Online	Startups	1.500	Europe
39	Presentation, flyers, joint booth	BOU	*Innovative Cities (TEKES) kick off Event*	*2/10/2014*	Tampere	Industry, Policy Makers	300	Finland
40	Presentation	BOU	*CreatiFi Event in Helsinki*	*8/10/2014*	Helsinki	Industry	70	Finland
41	Flyers	OUL	*Message to VINNOVA*	*13/10/2014*	online	Industry		Sweden
42	Presentation	TBM	*Evento FIWARE multisede: participación de los proyectos aceleradores (Secretaría de Estado de Teleco (SETSI)*	*15-19/10/2014*	Las Palmas de Gran Canaria, Sevilla y Valencia (Spain)	Industry		Spain
43	Presentations, networking	OUL/BOU	*FICHe Event in Oulu*	*21/10/2014*	Oulu	Industry	40	Finland
44	Presentation	TBM	*OPORTUNIDADES PARA PYMES EN INTERNET DEL FUTURO*	*21/10/2014*	Valladolid (Spain)	Industry		Spain
45	Presentation	TNO	*Dutch Design Week, session CreateHealth*	*22/10/2014*	Eindhoven	Industry, Policy makers, Scientific community, Civil society	80+	The Netherlands
46	Presentation	SDZ	*FICHe workshops in Tallinn*	*22/10/2014*	Tallinn	Startups, Industry	20 +40	Estonia

47	Presentation	TBM	*Jugar esSalud*	*23/10/2014*	Asturias (Spain)	Industry		Spain
48	Press release	OUL	*FIWARE Accelerator Programme gathered over 3000 applicants*	*11-2014*	*University of Oulu / CHT news (web)*	Scientific community, Industry	Web	Finland
49	Presentation	TBM	*ACELERADORAS DE INTERNET DEL FUTURO OPORTUNIDADES PARA PYMES*	*3/11/2014*	Malaga (Spain)	Industry		Spain
50	Press release	OUL	*FICHe accelerator open call attracts over 300 European eHealth SMEs and startups*	*7/11/2014*	University of Oulu (web)	Scientific community, Industry	Web	Finland
51	Press release	OUL	*FICHe accelerator open call attracts over 300 European eHealth SMEs and startups*	*7/11/2014*	University of Oulu / CIE news (web)	Scientific community, Industry	Web	Finland
52	Press release	SDZ	*Results open call*	*10/11/2014*	The Netherlands	All	25.000	The Netherlands
53	Press release	BOU/OUL	*Tens of finnish companies applied to EU's FICHe-accelerator programme*	*11/11/2014*	BusinessOulu (web)	All	Web	Finland
54	Press release	SDZ	*http://www.ehealthnews.eu/industry/4125-fiche-open-call-attracts-over-300-*	*11/11/2014*	Europe	All	15.000+	Europe

			european-ehealth-smes-and-startups					
55	Press releases	OUL	*Kymmenet eHealth-yritykset hakivat FICHe-ohjelmaan*	*12/11/2014*	University of Oulu (web)	Scientific community, Industry	Web	Finland
56	Press release	OUL	*Article of FICHe project*	*12/11/2014*	Epressi.com media portal (Web)	Media	Web	Finland
57	Press releases	OUL	*FICHe accelerator awards 80 European eHealth SMEs and startups*	*28/1/2015*	University of Oulu (web)	Scientific community, Industry	Web	Finland
58	Press release	OUL	*Neljä suomalaisyritystä jatkoon FICHe-ohjelmassa*	*28/1/2015*	University of Oulu/OULLabs news (web)	Scientific community, Industry	Web	Finland
59	Article in local newspaper	OUL/BOU	*Article of FICHe project*	*28/1/2015*	Local news paper / Oulu-lehti	All	100.000	Finland
60	Article in local newspaper	OUL/BOU	*Ter-veys-tek-no-lo-gian kiihdyttämöön neljä Suomesta, niistä kolme Oulusta*	*28/1/2015*	Kaleva online (Web)	All	370.000	Finland
61	Press release	BOU/OUL	*Four finnish companies reached Phase 1 in FICHe accelerator programme*	*29/1/2015*	BusinessOulu (web)	All	Web	Finland

62	Press release	OUL	*FIWARE Accelerator Programme gathered over 3000 applicants*	*2-2015*	*University of Oulu / CHT news (web)*	Scientific community, Industry	Web	Finland
63	Press release	OUL/BOU	*FICHe nurturing new companies*	*2/2/2015*	Nordic life science news (web)	Industry	Web	Europe
64	Press release	SDZ	*ISFTEH: first 80*	*5/2/2015*	Online	Industry, Scientific community	5.000	Global
65	Presentation	SDZ	*Med-e-Tel, Luxembourg*	*1/02/2015*	Luxembourg	Industry, Scientific community	500	Global
66	Conference	zorgInc.	*Innovation for Health*	*5/02/2015*	Amsterdam	Industry	800	Netherlands
67	Bootcamp	zorgInc. et al.	*FICHe Bootcamp Amsterdam*	*6/02/2015*	Amsterdam			Europe
68	Tradefair	SDZ	*Zorg&ICT (HealthIT tradeshow), Utrecht NL*	*1/03/2015*	Utrecht	Industry	9.000	The Netherlands
69	Article FICHe @ehealthWeek	SDZ	*Digitalezorg.nl Magazine #3*	*1/4/2015*	The Netherlands	All	5.000	The Netherlands
70	Conference, , exhibition	OUL	*Smart City seminar*	*4-6/5/2015*	Oulu	Industry	300+	Europe
71	Conference	TBM, SDZ	*eHealth Week 2015*	*11-13/05/2015*	Riga	All	2.500+	Europe
72	Press release	OUL	*FICHe showcased 40 startups during eHealthWeek in Riga*	*15/5/2015*	University of Oulu / CIE news (web)	Scientific community, Industry	Web	Finland
73	Networking	zorgInc.	*zorg2025*	*1/07/2015*	Amsterdam	Industry, startups	80	Netherlands

74	Press release	SDZ	*Finalists*	*25/7/2015*	The Netherlands	All	25.000	The Netherlands
75	Press Release	SDZ	*Mobile Doctor: finalists*	*27/7/2015*	The Netherlands	All	10.000	The Netherlands
76	Press release	SDZ	*ISFTEH mailing : finalist*	*29/7/2015*	Online	Industry, Scientific community	5.000	Global
77	Press release	SDZ	*Mobile DOctors: Scyfer*	*30/7/2015*	The Netherlands	All	10.000	The Netherlands
78	Press release	OUL	*FICHe eHealth accelerator enters final phase with 20 companies*	*3/8/2015*	University of Oulu / CIE news (web)	Scientific community, Industry	Web	Finland
79	Article Deutsches Ärzteblatt	SDZ	*http://www.aerzteblatt.de/pdf.asp?id=172027*	*18/9/2015*	Germany	Professionals, Industry	350.000	Germany
80	Congress	SMS	*I eHealth Meeting & Big data*	*23/09/2015*	Bilbao	Sanitary professionals	150	Spain
81	Article in eHealth magazine: 5 Dutch startups	SDZ	*Digitalezorg.nl Magazine #4*	*25/9/2015*	The Netherlands	All	5.000	The Netherlands
82	Press note replicated in several newspapers	SMS	*SMS hosts a Living lab with seven Spanish companies to develop innovative ideas in e-Health*	*28/09/2015*	Región de Murcia	All	50.000	Spain
83	Presentation	OUL	*eHealth workshop*	*11-2015*	Tallinn, Estonia	Scientific community, Industry	50	Europe
84	Conference	SDZ	*ECFI3*	*4-5/11/2015*	Hamburg	All	200+	Europe
85	Networking	SDZ/Zorginc	*Dutch FIWARE Node meeting*	*26/11/2015*	Utrecht	Industry, Startups	25	The Netherlands

86	Press Article in main pages and cover page at festive edition	SMS	*SMS tests virtual reality, tele-medicine and mobile apps*	*08/12/2015*	Región de Murcia	All	300.000	Spain
87	Press release	OUL	*FICHe finalists will meet in Barcelona*	*1-2016*	*University of Oulu / CHT news (web)*	Scientific community, Industry	Web	Finland
88	Radio talk (interview 1 hour)	SMS	*A tu Salud (Radio Online Murcia): FICHe Project at SMS Living Lab*	*13/01/2016*	Región de Murcia	All	5.000	Spain
89	Press release	SDZ	*http://www.ehealthnews.eu/industry/4208-fiche-accelerator-awards-80-european-ehealth-smes-and-startups*	*2/2/2016*	Europe	All	15.000+	Europe
90	Radio talk (interview 1 hour)	SMS	*A tu Salud (Radio Online Murcia): FICHe projects about Oncology*	*03/02/2016*	Región de Murcia	All	5.000	Spain
91	TV news	SMS	*Regional news*	*16/02/2016*	Murcia & Spain TV	All	300.000	Spain
92	Article in main medical press	SMS	*MySphera, patient monitoring in different areas of the hospital*	*17/02/2016*	Spain	Sanitary professionals	50.000	Spain
93	Article in main medical press	SMS	*Murcia progress in implementing 7*	*22/02/2016*	Spain	Sanitary professionals	50.000	Spain

			prototypes of electronic health					
94	Article Mindmyths	SDZ	*http://www.thejournal.ie/vr-development-ireland-2641856-Mar2016/?r_dir_d=1*	*6/3/2016*	Ireland	All		Ireland
95	Congress	SMS	*National Congress of Health Information Society*	*9-10/03/2016*	Madrid	Sanitary professionals, industry & policy makers	300	Spain
96	Congress	SMS	*National Congress of Chronic Patient*	*7-8/04/2016*	Madrid	Sanitary professionals, industry & policy makers	300	Spain
97	International award	SMS	*RFID Journal award 2016: Best IOT project in the world*	*5/05/2016*	Orlando (Florida, USA)	Sanitary professionals, industry & policy makers	1.000	USA
98	Conference, exhibition	SDZ	*Closing event/ Health 2.0*	*10-11/5/2016*	Barcelona	Industry	600+	Europe
99	Video	TBM	*Video of FICHe story*	*10-11/5/2016*	#myFIWAREstory: FICHe (web)	All		Europe
100	Interview	OUL	*Health 2.0 Barcelon - Interview Satu Väinämö, FICHe project*	*11/5/2016*	Healthcare Media portal (web)	Industry, media		Europe
101	Press release	SDZ	*http://www.ehealthnews.eu/download/publications/4841-fiche-*	*20/5/2016*	Europe	All	15.000+	Europe

			digital-health-startup-portfolio					
102	Media	zorgInc.	*Rabo Zorgscoop*	*6-2016*	Netherlands	Industry	40.000	Netherlands
103	Conference	zorgInc.	*Startup2scaleup event*	*7/6/2016*	Amsterdam	startups/scale ups/VC/politic s	300	Europe
104	Conference	DEH	*eHealth week 2016*	*8-10/6/2016*	Amsterdam	Industry	2.300	Europe
105	Congress	SMS	*National Congress of Family Medicine Society*	*9-11/06/2016*	A Coruña	Sanitary professionals, industry & policy makers	400	Spain
106	Press release	SDZ	*http://www.ehealthnews.eu/industry/4423-fiche-ehealth-accelerator-enters-final-phase-with-20-companies*	*27/7/2016*	Europe	All	15.000+	Europe103
107	Press release	SDZ	*http://www.icthealth.nl/nieuws/nieuwsitem/article/fiche-ehealth-accelerator-kondigt-de-20-finalisten-aan.html*	*27/7/2016*	The Netherlands	All	5.000	The Netherlands

108	Seminar, presentation	OUL	*Autumn forum of Center for Health and Technology (CHT)*	23/8/2016	Oulu	Industry	30	Finland
109	Congress	SMS	*Congress of National Oncologist Society: 4 articles/lectures accepted (about Medbravo)*	*26-28/10/2016*	Madrid	Sanitary professionals, industry & policy makers	150	Spain

Section B (Confidential[6] or public: confidential information to be marked clearly)

Part B1

Not applicable, the project did not produce any patents, trademarks or registered designs.

The applications for patents, trademarks, registered designs, etc. shall be listed according to the template B1 provided hereafter.

The list should, specify at least one unique identifier e.g. European Patent application reference. For patent applications, only if applicable, contributions to standards should be specified. This table is cumulative, which means that it should always show all applications from the beginning until after the end of the project.

TEMPLATE B1: LIST OF APPLICATIONS FOR PATENTS, TRADEMARKS, REGISTERED DESIGNS, ETC.					
Type of IP Rights[7]:	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Application reference(s) (e.g. EP123456)	Subject or title of application	Applicant (s) (as on the application)

[6] Note to be confused with the "EU CONFIDENTIAL" classification for some security research projects.

[7] A drop down list allows choosing the type of IP rights: Patents, Trademarks, Registered designs, Utility models, Others.

Part B2

Not applicable, the project did not produce any exploitable foregrounds.

Please complete the table hereafter:

Type of Exploitable Foreground[8]	Description of exploitable foreground	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Exploitable product(s) or measure(s)	Sector(s) of application[9]	Timetable, commercial or any other use	Patents or other IPR exploitation (licences)	Owner & Other Beneficiary(s) involved

In addition to the table, please provide a text to explain the exploitable foreground, in particular:

- Its purpose
- How the foreground might be exploited, when and by whom
- IPR exploitable measures taken or intended
- Further research necessary, if any
- Potential/expected impact (quantify where possible)

[19] A drop down list allows choosing the type of foreground: General advancement of knowledge, Commercial exploitation of R&D results, Exploitation of R&D results via standards, exploitation of results through EU policies, exploitation of results through (social) innovation.

[9] A drop down list allows choosing the type sector (NACE nomenclature) : http://ec.europa.eu/competition/mergers/cases/index/nace_all.html

4.3 Report on societal implications

Replies to the following questions will assist the Commission to obtain statistics and indicators on societal and socio-economic issues addressed by projects. The questions are arranged in a number of key themes. As well as producing certain statistics, the replies will also help identify those projects that have shown a real engagement with wider societal issues, and thereby identify interesting approaches to these issues and best practices. The replies for individual projects will not be made public.

A General Information *(completed automatically when **Grant Agreement number** is entered.*	
Grant Agreement Number:	632913
Title of Project:	Future Internet Challenge eHealth
Name and Title of Coordinator:	Satu Väinämö, Project coordinator, University of Oulu

B Ethics	
1. Did your project undergo an Ethics Review (and/or Screening)? * If Yes: have you described the progress of compliance with the relevant Ethics Review/Screening Requirements in the frame of the periodic/final project reports? Special Reminder: the progress of compliance with the Ethics Review/Screening Requirements should be described in the Period/Final Project Reports under the Section 3.2.2 *'Work Progress and Achievements'*	***No***
2. Please indicate whether your project involved any of the following issues (tick box) :	***YES***
RESEARCH ON HUMANS	
* Did the project involve children?	
* Did the project involve patients?	
* Did the project involve persons not able to give consent?	
* Did the project involve adult healthy volunteers?	
* Did the project involve Human genetic material?	
• Did the project involve Human biological samples?	
• Did the project involve Human data collection?	

* Did the project involve Human Embryos?	
* Did the project involve Human Foetal Tissue / Cells?	
* Did the project involve Human Embryonic Stem Cells (hESCs)?	
* Did the project on human Embryonic Stem Cells involve cells in culture?	
* Did the project on human Embryonic Stem Cells involve the derivation of cells from Embryos?	
PRIVACY	
* Did the project involve processing of genetic information or personal data (eg. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?	
* Did the project involve tracking the location or observation of people?	
RESEARCH ON ANIMALS	
* Did the project involve research on animals?	
* Were those animals transgenic small laboratory animals?	
* Were those animals transgenic farm animals?	
* Were those animals cloned farm animals?	
* Were those animals non-human primates?	
RESEARCH INVOLVING DEVELOPING COUNTRIES	
* Did the project involve the use of local resources (genetic, animal, plant etc)?	
* Was the project of benefit to local community (capacity building, access to healthcare, education etc)?	
DUAL USE	
• Research having direct military use	NO
* Research having the potential for terrorist abuse	No

C Workforce Statistics

3. Workforce statistics for the project: Please indicate in the table below the number of people who worked on the project (on a headcount basis).

Type of Position	Number of Women	Number of Men
Scientific Coordinator	2	4
Work package leaders	4	1
Experienced researchers (i.e. PhD holders)	3	6
PhD Students	3	
Other	13	28

4. How many additional researchers (in companies and universities) were recruited specifically for this project?	
Of which, indicate the number of men:	

D Gender Aspects

5. Did you carry out specific Gender Equality Actions under the project?	X	No

6. Which of the following actions did you carry out and how effective were they?

		Not at all effective				Very effective
❑	Design and implement an equal opportunity policy	○	○	○	○	○
❑	Set targets to achieve a gender balance in the workforce	○	○	○	○	○
❑	Organise conferences and workshops on gender	○	○	○	○	○
❑	Actions to improve work-life balance	○	○	○	○	○
○	Other:					

7. Was there a gender dimension associated with the research content – i.e. wherever people were the focus of the research as, for example, consumers, users, patients or in trials, was the issue of gender considered and addressed?

○ Yes- please specify

X No

E Synergies with Science Education

8. Did your project involve working with students and/or school pupils (e.g. open days, participation in science festivals and events, prizes/competitions or joint projects)?

○ Yes- please specify

X No

9. Did the project generate any science education material (e.g. kits, websites, explanatory booklets, DVDs)?

○ Yes- please specify

X No

F Interdisciplinarity

10. Which disciplines (see list below) are involved in your project?

○ Main discipline[10]: 3.3

○	Associated discipline[10]: 1.2	○	Associated discipline[10]:5.2

[10] Insert number from list below (Frascati Manual)

G Engaging with Civil society and policy makers

11a Did your project engage with societal actors beyond the research community? *(if 'No', go to Question 14)*	X ○	Yes No

11b If yes, did you engage with citizens (citizens' panels / juries) or organised civil society (NGOs, patients' groups etc.)?

- ○ No
- ○ Yes- in determining what research should be performed
- X Yes - in implementing the research
- ○ Yes, in communicating /disseminating / using the results of the project

11c In doing so, did your project involve actors whose role is mainly to organise the dialogue with citizens and organised civil society (e.g. professional mediator; communication company, science museums)?	○ ○	Yes No

12. Did you engage with government / public bodies or policy makers (including international organisations)

- ○ No
- ○ Yes- in framing the research agenda
- ○ Yes - in implementing the research agenda
- X Yes, in communicating /disseminating / using the results of the project

13a Will the project generate outputs (expertise or scientific advice) which could be used by policy makers?

- ○ Yes – as a **primary** objective (please indicate areas below- multiple answers possible)
- X Yes – as a **secondary** objective (please indicate areas below - multiple answer possible)
- ○ No

13b If Yes, in which fields? Public Health

Agriculture Audiovisual and Media Budget Competition Consumers Culture Customs Development Economic and Monetary Affairs Education, Training, Youth Employment and Social Affairs		Energy Enlargement Enterprise Environment External Relations External Trade Fisheries and Maritime Affairs Food Safety Foreign and Security Policy Fraud Humanitarian aid		Human rights Information Society Institutional affairs Internal Market Justice, freedom and security Public Health Regional Policy Research and Innovation Space Taxation Transport	

13c If Yes, at which level?

- X Local / regional levels
- ○ National level
- ○ European level
- ○ International level

H Use and dissemination

14. How many Articles were published/accepted for publication in peer-reviewed journals?	**0**
To how many of these is open access[11] provided?	
How many of these are published in open access journals?	
How many of these are published in open repositories?	
To how many of these is open access not provided?	
Please check all applicable reasons for not providing open access:	
❑ publisher's licensing agreement would not permit publishing in a repository ❑ no suitable repository available ❑ no suitable open access journal available ❑ no funds available to publish in an open access journal ❑ lack of time and resources ❑ lack of information on open access ❑ other[12]: ……	

15. How many new patent applications ('priority filings') have been made? *("Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant).*		**0**
16. Indicate how many of the following Intellectual Property Rights were applied for (give number in each box).	Trademark	**0**
	Registered design	**0**
	Other	**0**
17. How many spin-off companies were created / are planned as a direct result of the project?		**0**
Indicate the approximate number of additional jobs in these companies:		

18. Please indicate whether your project has a potential impact on employment, in comparison with the situation before your project:

X	Increase in employment, or	X	In small & medium-sized enterprises
❑	Safeguard employment, or	❑	In large companies

❑	Decrease in employment,	❑	None of the above / not relevant to the project
❑	Difficult to estimate / not possible to quantify		

19. For your project partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (*FTE = one person working fulltime for a year*) jobs:	*Indicate figure:* *150*
Difficult to estimate / not possible to quantify	❑

I Media and Communication to the general public

20. As part of the project, were any of the beneficiaries professionals in communication or media relations?

X Yes ○ No

21. As part of the project, have any beneficiaries received professional media / communication training / advice to improve communication with the general public?

X Yes ○ No

22 Which of the following have been used to communicate information about your project to the general public, or have resulted from your project?

X	Press Release	X	Coverage in specialist press
❑	Media briefing	X	Coverage in general (non-specialist) press
X	TV coverage / report	X	Coverage in national press
X	Radio coverage / report	X	Coverage in international press
X	Brochures /posters / flyers	X	Website for the general public / internet
X	DVD /Film /Multimedia	X	Event targeting general public (festival, conference, exhibition, science café)

23 In which languages are the information products for the general public produced?

X	Language of the coordinator	X	English
X	Other language(s)		

[11] Open Access is defined as free of charge access for anyone via Internet.

[12] For instance: classification for security project.

***Question F-10*:** Classification of Scientific Disciplines according to the Frascati Manual 2002 (Proposed Standard Practice for Surveys on Research and Experimental Development, OECD 2002):

FIELDS OF SCIENCE AND TECHNOLOGY

1. NATURAL SCIENCES

1.1 Mathematics and computer sciences [mathematics and other allied fields: computer sciences and other allied subjects (software development only; hardware development should be classified in the engineering fields)]

1.2 Physical sciences (astronomy and space sciences, physics and other allied subjects)

1.3 Chemical sciences (chemistry, other allied subjects)

1.4 Earth and related environmental sciences (geology, geophysics, mineralogy, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, oceanography, vulcanology, palaeoecology, other allied sciences)

1.5 Biological sciences (biology, botany, bacteriology, microbiology, zoology, entomology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences)

2 ENGINEERING AND TECHNOLOGY

2.1 Civil engineering (architecture engineering, building science and engineering, construction engineering, municipal and structural engineering and other allied subjects)

2.2 Electrical engineering, electronics [electrical engineering, electronics, communication engineering and systems, computer engineering (hardware only) and other allied subjects]

2.3. Other engineering sciences (such as chemical, aeronautical and space, mechanical, metallurgical and materials engineering, and their specialised subdivisions; forest products; applied sciences such as geodesy, industrial chemistry, etc.; the science and technology of food production; specialised technologies of interdisciplinary fields, e.g. systems analysis, metallurgy, mining, textile technology and other applied subjects)

3. MEDICAL SCIENCES

3.1 Basic medicine (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immunohaematology, clinical chemistry, clinical microbiology, pathology)

3.2 Clinical medicine (anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, dentistry, neurology, psychiatry, radiology, therapeutics, otorhinolaryngology, ophthalmology)

3.3 Health sciences (public health services, social medicine, hygiene, nursing, epidemiology)

4. AGRICULTURAL SCIENCES

4.1 Agriculture, forestry, fisheries and allied sciences (agronomy, animal husbandry, fisheries, forestry, horticulture, other allied subjects)

4.2 Veterinary medicine

5. SOCIAL SCIENCES

5.1 Psychology

5.2 Economics

5.3 Educational sciences (education and training and other allied subjects)

5.4 Other social sciences [anthropology (social and cultural) and ethnology, demography, geography (human, economic and social), town and country planning, management, law, linguistics, political sciences, sociology, organisation and methods, miscellaneous social sciences and interdisciplinary , methodological and historical S1T activities relating to subjects in this group. Physical anthropology, physical geography and psychophysiology should normally be classified with the natural sciences].

6. HUMANITIES

6.1 History (history, prehistory and history, together with auxiliary historical disciplines such as archaeology, numismatics, palaeography, genealogy, etc.)

6.2 Languages and literature (ancient and modern)

6.3 Other humanities [philosophy (including the history of science and technology) arts, history of art, art criticism, painting, sculpture, musicology, dramatic art excluding artistic "research" of any kind, religion, theology, other fields and subjects pertaining to the humanities, methodological, historical and other S1T activities relating to the subjects in this group]

FINAL REPORT ON THE DISTRIBUTION OF THE European Union FINANCIAL CONTRIBUTION

This report shall be submitted to the Commission within 30 days after receipt of the final payment of the European Union financial contribution.

Report on the distribution of the European Union financial contribution between beneficiaries

Name of beneficiary	**Final amount of EU contribution per beneficiary in Euros**
OULUN YLIOPISTO	292.490 (+ 6.235.420 for SMEs and startups)
DUTCH EHEALTH FUND MANAGEMENT BV	135.110
TICBIOMED TECNOLOGIAS DE LA INFORMACION PARA LA SALUD EN LA REGION DE MURCIA ASOCIACION	154.580
FUNDACION PARA LA FORMACION E NVESTIGACION SANITARIAS DE LA REGION E MURCIA – Linked 3rd party: Servicio Murciano de Salud	168.190
OULUN KAUPUNKI	122.740
STICHTING DIGITALEZORG.NL	235.380
ZORGINC.	171.620
STICHTING AMSTERDAM ECONOMIC BOARD	152.750
NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO	127.140