LIVING LAB PROJECT AWARD 2017

– Project descriptions –

European Network of Living Labs

European Network of Living Labs

Table of Contents

How to Vote 1

Category: Smart Cities 2

1. Danish Oudoor Lighting Lab, Lighting the Future of Smart Cities 3

2. KPT Scale Up 5

3. ROAN BY SEYISCO 7

4. Smart Parking Application 9

Category: Health 11

5. Integration of Wearable Devices and Personal Health Records for Health Promotion Services 12

6. CrossCare Project 18

7. CAPTAIN 20

8. The Waiting Room of the Future 22

9. HEALERBIT 25

Category: Open Innovation 27

10. Innolabs 28

Category: Culture 30

11. MEDAIA - Open Innovation Platforms of Media Industry 31

12. ImmersiaTV 34

Category: Culture, Technology & Science 41

13. Cloud Smart Digital Signage Platform 42

Category: Public Sector Innovation & Wellbeing 44

14. Seniori365.fi 45

Category: Citizen Driven Innovation 47

15. LiveCities, the crowdsourcing platform for open city innovation challenges 48

Category: Sustainability & Circular Economy 50

16. OVAM circular economy Living Lab support 51

Category: Technology & Science 53
17. Workshop on Intelligent Machines: Theory and Applications 54
18. ENIS Industrial-Academic Forum 2017 (ENIAF'2017) 56
19. Ocean Heritage 58
Category: Internet of Things 60
20. Virtual Lifeguard 61
Category: Gaming 63
21. GameLab 64
Category: Smart Grid & Energy 66
22. Linky by Makers (LbM) 67
Category: Tourism 69
23. Bird Flyway 70
Category: Social Media 72
24. ModaSky 73

How to Vote

- In December 2017 we opened the second round of the Living Lab Project Award – following the successful publication of the first publications. We have received 24 project applications.
- We invite you now to vote for a project of your choice.
- Vote for the project of your choice via this link: https://bit.ly/2GwNuGz
- Voting closes on Sunday 29 April 2018, the winner will be known in May 2018 and will receive a free ticket to the OpenLivingLab Days.

European Network of Living Labs

Category: Smart Cities

1. Danish Oudoor Lighting Lab, Lighting the Future of Smart Cities

Living Lab: DOLL

Host Organisation: Gate 21

Country: Denmark

Why. What is the aim of the project?

The digitalization of urban space (Smart City) are paving the road for new business models, improved resource optimization and better services in urban areas. But the rapid technological developments are moving so fast, that it poses a challenge for decision makers, who needs support to ensure their cities are ready for digital conversion. The purpose of DOLL Living Lab is to bridge the gap between technological needs and opportunities, to create a neutral basis for decision makers and the market where new solution models for smart urban development can be sought, developing collaborations across the value chain. It is possible, for example, to reap an energy saving of up to 75% simply by switching from traditional street lighting to LEDs and using intelligent light control. There are also benefits to be made in areas like intelligent waste management, climate adaptation, smart parking and traffic optimization, plus air quality and noise monitoring.

What. What is the project about?

DOLL Living Lab is Europe's leading facility for testing and demonstrating intelligent outdoor lighting and other Smart City solutions. In its 160-hectare urban area in Albertslund, Greater Copenhagen, decision makers and buyers from around the world can test and demonstrate solutions on a 1:1 scale over 12 km of road where more than 130 different Smart City and lighting solutions are installed. All solutions are connected to digital networks, including NB-IoT, LoRa WAN, Sigfox and Wifi. International delegations visit DOLL Living Lab with the aim of better understanding the digitization of urban spaces. In January 2018 alone, we hosted Greater Stavanger (Norway), Aix en Provence (France), Antwerp (Belgium), Swiss Rail (Switzerland) and Linnkøbing (Sweden). DOLL has created an ecosystem where startups, as well as small, medium and multinational companies, can come together to innovate and collaborate.

How. Methodology

A unique feature of DOLL Living Lab is that we have brought together so many different partners in one testing and demonstration environment. This allows for exchanges between producers, knowledge institutions and public administrations, who all gain valuable feedback. The number of companies and organizations now contributing to the Living Lab has skyrocketed: as of January 2018 it includes more than 50 partners, with more on the way. For many of the manufacturers, DOLL Living Lab is a focal point for their latest technological advances, working as a showcase that helps attract visitors from all over the world. Meanwhile, public decision-makers is getting proper prerequisites to invest in the most suitable solutions. And the fact that several solutions is demonstrated side-by-side in the same field, helps to provide greater transparency and clarity about the unique features of each solution.

Impact: Main outcomes

1) DOLL Living Lab offers municipalities and regions the best possible opportunities for investing in the right solutions. For example: in Denmark alone, 100,000 tons of CO2 can be saved annually through smart street lighting. So far, two thirds of the country's municipalities have visited DOLL, in addition to delegations from more than 100 cities and 38 different countries.
2) DOLL has created a unique platform for experience exchange between actors, as well as a critical mass that encourages common development and innovation.
3) DOLL fosters the development of new sustainable solutions and encourages traditional lighting and pole production industries to expand their product ranges to carry technologies for intelligent urban development. This makes it possible to deploy network infrastructure and intelligent urban space solutions into existing inventory with economic efficiency.

2. KPT Scale Up

Living Lab: Kraków Living Lab

Country: Poland

Why. What is the aim of the project?

In Poland there is need of high innovative solutions for industry and start-ups are capable to take that role. However the Industry 4.0 and smart city are markets with hard entry level and risk. The solution to this problem is the KPT ScaleUp. It is a residential 13-week acceleration programme for small companies working on innovation for industry and smart city. The main focus of the programme is to support start-ups that have reached at least a prototype of a B2B product with know-how, mentoring, sales and marketing advisory. In order to verify and adjust their products to market demands and client expectations. The main objective is to establish direct cooperation between R&D units in big companies and product developers in start-ups, delivering tailored solutions for big companies and scaling up start-ups. Thanks to facilitating product implementations and ensuring 250k PLN equity free support per start-up. The goal is to increase the cooperation between start-ups and large entrepreneurs for commercialization and implementation of innovations.

What. What is the project about?

The KPT ScaleUP connects large companies representing industry sector (such as Kraków Airport, Siemens, Woodward, ES System, Astor and others) with small, agile, innovative teams. That way of working between big companies and start-ups sets a new standard of developing innovative businesses by combing joint forces, openness, creativeness and fresh attitude. It forms for start-ups the opportunity to come across a reality of implementation of their services on large scale companies level. On the other hand it brings a lot of benefits to the big companies which can easily and at low-costs test new innovative solutions without modifying all technological processes. Thanks to that close collaboration of product developers and sales and marketing specialists on both new solutions and services can be verified at the very beginning without causing additional costs and time consuming. The decision making process is based on fact based evidence and innovative products decisions are much easier to make and to implement due to optimised product development and validation processes.

How. Methodology

The project is based on the Living Labs collaborative and holistic methodology both to engage multiple perspectives and initiate true collaboration between different stakeholders: 23 small companies, 13 industry partners, R&D, design specialists, more than 20 mentors and the end users of the products. The various scopes of the products make the programme very multidisciplinary: from intelligent bird detection systems to the intelligent, solar benches. No matter the topic or the scope of the product the solid iterative and perspective of the programme enables valid process of product development. Beginning with quick contextual and ethnographic research upon the needs and expectations toward the service, dynamic prototyping of next ideas and valuable evaluation of the upcoming product versions both with the clients and the end users.

Impact: Main outcomes

Outcomes:

- 5 technology solutions have been implemented in real industry environment.
- More industrial companies start to be interested in taking part in acceleration programme as a partner.
- Creating the active ecosystem for various businesses.

Impact:

- Huge influence on big companies mindset for cooperation with start-ups.
- During the mid-programme conference: Industry Innovation Day, we have demonstrated the best practices in front of national agencies and regional authorities responsible for creating strategies and tools for RIS.
- More than 200 start-ups applied for the programme.

3. ROAN BY SEYISCO

Living Lab: Başakşehir Living Lab

Host Organisation: Başakşehir Municipality

Country: Turkey

Why. What is the aim of the project?

The aim of the project is to improve the quality and speed of road maintenance for citizens and for government / public authorities by using available technologies and available vehicles that belong to public authorities. By using this innovative solution developed by "Seyisco" the citizens will travel more safely and municipalities will deal with road maintenance problems much more faster and hence improving citizen satisfaction from municipality services. The name of the solution is called "ROAN" (Road Surface Analyzer) and it is expected to lower Municipality Maintenance Costs and improve travel safety

What. What is the project about?

The "ROAN" solution by the startup company Seyisco is about improving Citizens Life Quality by improving road safety. While doing this they are aiming of using the already used public vehicles such as Rubbish Trucks or patrol vehicles that provide other services to public authorities. By using these vehicles and technology all road damages can be easily recorded and sent to maintenance planning departmence of public bodies. Especially this solution is believed to be effective in countries and cities with low budgets and build low quality roads and changing weather conditions spoil road surfaces very quickly.

How. Methodology

The "ROAN" solution is using already available public authority vehicles which have special daily routes within the city. These vehicles are like Rubbish Collection Trucks, Public Transportation Buses, Patrol Vans. The main technology used is by attaching a Photography and Video recording equipment under the vehicle and using image Processing and GPS Data. All road damages are sent to maintenance planning departmence of City Authorities together with location data. The date time of the data provided is recorded so the planning can be

made according to seriousness of maintenance and the duration of the time passed since informing authorities

Impact: Main outcomes

1- Providing an effective tool to municipalities to imrove travel quality of citizens and reduce accidents due to road damages.
2- Reduction of costs required for road maintenance and improvememnt of maintenance speed of road damages.
3- Creating happier citizens which will turn to positive votes for mayors.

4. Smart Parking Application

Living Lab: Başakşehir Living Lab

Host Organisation: Başakşehir Municipality

Country: Turkey

Why. What is the aim of the project?

The aim of the project is to implement a system and application that can provide parking space information to drivers over their mobile devices or car devices with a highly reliable accuracy. By proving this smart parking tool few things will be achieved:

(i) Drivers will be able to locate empty parking slots immediatly by looking at their mobile devices.

(ii) The less time spent for space search means less carbon emmission, less traffic congestion and less stress for drivers.

(iii) With this system there is no need for lights or posts for each parking lot but on the contrary simple sensors fixed to the floor make the investment cost cheaper.

What. What is the project about?

PARKTR is a smart parking system. It resolves one of the biggest problems of big cities: traffic congestion. PARKTR sends the location of empty park spaces closest to the driver via smart phone application or electronic boards. The models placed in park spaces can be used for 3-4 years with no requirement of replacement or technical care. Humidity, pressure sensors can be integrated to system to report weather and road conditions to drivers. When implemented in certain areas, PARKTR can also be used to follow current traffic information. Implementing the system is very cheap and quick. You just screw down the covered sensors on the floor of the parking lot and load the site on to the platform.

How. Methodology

Vehicle users are the main stakeholders of the system. For the Users the only thing they need to do is download the application and register themselves to the system. The other stakeholders are Municipalities which need to reduce traffic congestion while improve speed

of providing parking space to citizens. Also car park operators (private or shopping centers) need vehicle users to come and fill their parking lots or make life easiers for vehicle users to park. As Başakşehir Living Lab we are doing a pilot test in a real environment at Başakşehir Living lab parking lot since November 2017 in order to ensure the system is functioning reliably. In the process we use car owners of Başakşehir Living employees and stratups and visitors.

Impact: Main outcomes

1- User Friendliness : We have tested the product / system and mainly the application. The application is simple to use and shows you the empty spaces but doesn't give directions to reach this location.
2- Simplicity of installing the system. We have seen that installing sensors and platform is only a matter of minutes and is very cheap.
3- Reliablity of the system - We have found out that the sensors can stop functioning due to wheather conditions, especially if temperatures are around 0 degrees.

European Network of Living Labs

Category: Health

5. Integration of Wearable Devices and Personal Health Records for Health Promotion Services

Living Lab: Living Labs Taiwan

Country: Taiwan

Why. What is the aim of the project?

Aim of the project

This project aims to help people access and document their health data through wearable device featuring health management to encourage health awareness and a more proactive participation in health promotion. Targeting at elderly people, this project validates the health-enabling innovative service model using ComCare as a platform. It is a three-fold integration comprising: 1.) data collected via wearable sensors, 2.) health management IoT cloud, and 3.) personal health record storage (also known as ©My Health Bank, an integrated healthcare service launched by National Health Insurance Administration, Ministry of Health and Welfare in Taiwan since 2014).

Background

World population aging has become a global phenomenon. According to the United Nations, world population will reach 9.8 billion by 2050. The percentage of older people (chronological age of 60 or more) in the global population is expected to reach 21% by 2050, which means one out of every five persons is an elderly. The pace of aging is accelerating and pervasive. The decline of fertility rates also contributes to aging population. The United Nations points out that about 40% of the elderly live alone or with their spouses. It has become increasingly common and the ratio will grow steadily should world population aging continues. It goes the same in Taiwan.

Problems

Taiwan's population has aged drastically and the healthcare expenditures soared. The "old age population dependency ratio" has already surpassed "young age population dependency ratio" in February, 2017. Based on the Census conducted by Ministry of Interior, the total number of elderly people who need health and long-term care is projected to exceed 400,000 in year 2018. As the average life expectancy prolongs, greater demands for medical and

healthcare resources are expected for individuals, families, and the society as a whole. Some of the universal challenges tackled by all countries related to aging are financial burden and manpower shortage. In terms of finance, Taiwan government can fine-tune its long-term insurance program based on tax system (as applied by UK, Denmark, Netherlands) or insurance system (as applied by Germany, Japan, and Korea). With regard to manpower, smart technologies applying artificial intelligence, such as AI robot, open up new options other than family members and caregivers who provide health care to the elderly.

Project Objective

The above mentioned global trends in population aging and corresponding solutions are viewed from government's perspective. Nonetheless, this project intends to take a more personal approach by delaying the pace of aging and physical degradation in the elderly people. Following Taiwan government's national policy of long-term health care program and promotion of "My Health Bank", the rationale behind this project is "prevention over cure". The design of this project encourages the elderly to regain control over their health and envision their desired healthy lifestyle in the near future. As such, this project focuses on two pillars, prevention of long-term care and reduction of hospitalization. Through ComCare, a health data integration platform equipped with wearable device and IoT cloud, it provides the elderly people with easy access to their personal health data and promote a healthier lifestyle. The field experiments took place in several public senior daycare centers in rural areas as well as private-owned facilities. The elderly people, their family members and the caregivers were able to monitor the elderly's physiological measurements through data visualization during the process.

What. What is the project about?

Carried out at rural senior daycare centers in central Taiwan, ComCare health-enabling service model provides guidance on personal hygiene and health. It also gives the elderly themselves and their caregivers direct access to daily physiological indices, medical histories, prescription records, medical exams and tests, etc. Smart bracelets were provided to the TA (target audience--the elderly people) in this project to keep track of their heart rates, daily activities and durations, step counts, etc. In the meantime, body weight, blood pressure, and body temperature were measured and automatically uploaded to the platform for close observation. The "ComCare platform" provides the caregivers an easy access to monitor the elderly people's health condition. It also helps adult children to keep track of daily movements and habits of

their aging parents and show their care and concern. Most importantly, it enables the elderly people to regain control of their health management and promote healthy behavior.

Project Procedure

Project procedure was explained and instruction on the use of wearable device was demonstrated to the TA on the first day.

Project Summary

- - Length of Living Lab trial: 12 weeks
- - Number of Participants: 69 persons
- - Average age of the participating elderly: 78.8
- - Informed Consents were signed by all participants before signing up for the program.

- Smart devices: Smart bracelets and physiological measurement equipment, including sphygmomanometer, thermometer, and body weight scale. Notification will be made upon error.

- Physiological measurements include: blood pressure, body weight, body temperature, step count, heart rate, etc. as benchmark indicators of health promotion and chronic disease management.

- - Safety management: The smart bracelet also serves as ID recognition tool thus ensure participants' safety.

- - Questionnaires were completed and analyzed at the end of the program to generate knowledge of participants' subjective change towards quality of life and evaluate Technology Acceptance Model (TAM). The connection of smart bracelets and physiological measurement equipment (sphygmomanometer, thermometer, weight scale) is deployed and initiated. The smart bracelets automatically collect heart rate, step count, blood pressure and upload the data to the ComCare platform. Once sync with the card reading equipment, the smart bracelet's identity recognition feature allows the data to be uploaded automatically without caregivers' transcription. ComCare also provides step count challenge and score ranking to attract participation. The elderly can share their scores with each other and see whether they are in good shape.

How. Methodology

Methodology

- Health and Physical Assessment: With the help of the wearable device and IoT network to collect activity (movement) records and physiological measurements (blood pressure, body temperature, body weight, heart rate), the caregivers are fully aware of the elderly's health condition. A nursing care plan can be designed based on the collected data and past medical records to help prevent the "Triple H", hypertension, hyperlipidemia, and hyperglycemia.
- Health Service Notification: ComCare platform provides real-time monitoring of the elderly's physiological signals (bio-signals), the corresponding hospital will be notified upon detection of abnormality. Integrated cooperation among cross-field professionals ensures an interactive and instant health care and provides tracking and reporting service.

Stakeholder Engagement

Yunlin County in central Taiwan has the second highest aging index in 2017. Gukeng Township in Yunlin has taken an active role to participate in this project with the hope to get more technology resource and assistance in their long-term care programs. Currently the long-term care program provides multiple services such as home care, community care and institutional care. The participating institutes include Yunlin Touliu and Huwei Daycare Centers, Yunlin Gukeng Senior Learning Center, Yunlin Gukeng Tea House, and Gukeng Fude Temple. The elderly go to the above places to be looked after or hang out during day time and go home at night. They have volunteered to participate in this project.

Test Fields

Test Fields include: Yunlin Touliu Daycare Center, Huwei Daycare Center, Yunlin Gukeng Senior Learning Center, Yunlin Gukeng Tea House, and Gukeng Fude Temple. (4)Participants There were 69 users in this project coming from five different institutes, and the age average is 78.8 years old. They were provided with smart bracelets to record their physiological measurements including heart rate, blood pressure, and step count. The collected data were automatically uploaded to the IoT cloud for monitoring and storage. Participants from Yunlin Gukeng Senior Learning Center, Yunlin Gukeng Tea House, and Fude Temple wore bracelets 24 hours per day. Participants from Yunlin Touliu and Huwei Daycare Centers left their smart bracelets to their caregivers before they went home at 5 PM. All the data collected were

uploaded to ComCare Platform to be stored with other information such as the medical histories, prescription records, medical exams and tests in "My Health Bank". It not only allowed the caregivers to monitor TA's physiological data as a whole but also enabled the caregivers to have an overall view of the elderly's health condition. From family member's viewpoint, the adult children can keep tracks of the daily movements and habits of their aging parents and show their care and concern.

Impact: Main outcomes

This project aims to encourage health management and reach the ultimate goal of health promotion. Through the integration of ComCare platform, the wearable device, and the IoT cloud, the elderly, their family members, and the caregivers can have immediate access and monitor the elderly's physiological indices at all times. The project outcomes are described as below. In short, it is able to promote autonomous health management, improve health literacy, stimulate healthy behavior, provoke health awareness, and achieve the ultimate goal of health promotion.

1. Encourage the elderly's autonomous health management and health promotion With the help of the bracelets, the elderly became aware of their own physical indices and fitness. They were all eager to see their own readings when they showed up at daycare centers. They would discuss fervently among themselves and remind each other if the reading appeared to be abnormal. The atmosphere was lively and enjoyable. Step count challenge was designed to encourage physical activities and incorporate into elderly's daily routines. It is obvious that the smart application have a positive effect on the elder persons in promoting their health awareness and lead to healthy behavior.
2. Enable the caregivers to monitor the elderly people' health data at all time with easy access. Approximately 45% of the elderly's family members do not live together but care enough to participate in this program. They would like to offer assistance in developing the tool that helps to get to know their elderly family members better. The visualized infographics on ComCare Platform provide direct monitoring on the elderly's physical condition. It avoids the fuss of constant reminder to the elderly and provokes closer interpersonal relationships among family members. It is recommended that family members be included in the future experiments as well to interact with the elderly and provide feasible suggestions in designing innovation services for the elderly.

3. Save time, money and manpower The smart devices used in this project, namely, sphygmomanometer, thermometer, weight scale and smart bracelets communicate via Bluetooth. Transmitting via the integrated repeater, the smart devices upload data to ComCare Platform upon completion of measurement. This feature greatly reduces the workload of the caregivers and avoids manual transcription errors. The caregivers responded the human-machine ratio has reached one machine per person currently, therefore allowing the elders to improve brain and hand- eye coordination through the use of mobile phones or tablet devices. It helps to improve elderly's daily skills and delay physical and mental degeneration.

6. CrossCare Project

Living Lab: LiCalab

Host Organisation: LiCalab VZW

Country: Belgium

Project Description

The overall goal of the CrossCare project is to bring healthcare innovations faster to the market. There are two main reasons why the CrossCare project was established

(1) more than 25% of all EU-citizens will be aged over 65 years old in 2030, adding a lot of pressure on the healthcare systems in Europe (budget, quality, accessibility). In this sense, innovative products and services are needed to cope with this demographic and societal challenge.

(2) 98% of all EU companies are SMEs. But only 4,4% of the EU-funding goes to SMEs. With CrossCare we want to help SMEs in applying and receiving EU-funding for R&D.

The project gives support to SMEs in Flanders and the Netherlands in developing innovations for the Healthcare market by offering both funding and Living Lab services. SMEs can apply for funding up to 100.000€, so can submit project proposals with a maximum budget of 200.000€ for covering R&D activities. Similarly, all SMEs receive Living Lab support from at least 1 Flemish and 1 Dutch Living Lab. In this way SMEs are able to explore the healthcare ecosystems in 2 cross-border countries at the same time, so they enlarge their market potential. For every SME selected by CrossCare, a tailor-made service package was designed. Services can range from co-creation sessions with different types of end-users to live testing & validation and business modeling. Depending on the kind of innovation Living Labs may include patients, GPs, specialists, nurses, diarist, physiotherapists, elderly living at home or elderly living in nursing homes amongst others. The methodologies used differ from project to project, because they are based on the needs of the SMEs.

Impact: Main outcomes

From April 2016 until now 160 unique SMEs applied to CrossCare, and 19 innovation projects are running at the moment. In March 2018 a pitch event for investors is planned, so the SMEs can attract extra investment money if needed for completing their road to market.

SMEs expectations regarding Living Lab services are measured. IMEC is the 7th partner in CrossCare. All SMEs are asked to complete a questionnaire before they start the project. When the innovation project is finalized, the SMEs complete again a questionnaire. The TOP-3 of services expected by SMES based on a zero measurement with 17 SMEs:

(1) Recruitment of test persons
(2) Co-development and user feedback on the innovation
(3) Insight in regulations & reimbursement processes in both countries.

7. CAPTAIN

Living Lab: Thess-AHALL, PAILLON

Country: Greece, France

Why. What is the aim of the project?

Captain uses micro projectors to provide a smart home assistant for older adults whenever and wherever it is needed, leaving their cozy place as it is when there is no need. All home interfaces turn into tangible interfaces, enabling older adults to interact with the environment. The projectors turn off as soon as CAPTAIN detects that the older adults do not need any help, allowing them to enjoy their cozy place. The project is an H2020 project and is built on co-creation principles. To achieve that, CAPTAIN builds a network of stakeholders and older adults (relying on the network of the involved living labs) and combines co-creation with agile developments methodologies.

What. What is the project about?

We all know how important is for seniors to live at their homes as long as possible, performing their daily activities with high confidence. However, retaining their physical, cognitive and social well-being remains a challenge. A lot of solutions have been proposed over the last years. However, some of them seem to be feasible only in lab settings. Other solutions renovate their homes, which then look like future homes, not reminding their cozy place. Captain, an H2020 project coordinated by AUTH, attempts to transform their homes into a smart assistant, using micro projectors to provide a smart assistant whenever and wherever it is needed, based on their activity. Leaving the environment without changes when there is no need. All surfaces become tangible interfaces for personalized information and reminders. Projecting an app on the table or a book on the wall when they go to bed.

How. Methodology

CAPTAIN combines the living labs' power with the agile development techniques. CAPTAIN elicits requirements until 6 months before the end of the project. To do so, CAPTAIN builds a network of stakeholders and older adults which is the only source of requirements. When new

features of the CAPTAIN system are ready, the living labs invite stakeholders from their network to interact with the CAPTAIN system and give their feedback. The feedback is then sent to the technical partners, prioritizing the requirements lists. When the new features are ready, a new sprint takes place. To start early enough, and before a prototype is ready yet, a 360 video of how the final solution is envisaged was captured. The stakeholders interacted with this video to give their initial feedback on the idea. On this first sprint, they were invited to come up with new use cases. For the hardware design, projected augmented reality technologies were used to depict the devices design and let them choose how the device will be.

Impact: Main outcomes

1. Radically new HCI: CAPTAIN introduces new tangible interaction means, based on Projected Augmented Reality in AAL Environments
2. Stakeholders community: Relying on the living labs' power, CAPTAIN's builds the "CAPTAIN Stakeholders' community"
3. Agile requirements elicitation: the "Stakeholders' community", will be the only official source of requirements towards continuous co-creation throughout the project.

We have also some videos:

https://www.youtube.com/watch?v=Lc0nMgPg490

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

8. The Waiting Room of the Future

Living Lab: Future Self and Design Living Lab

Country: Australia

Why. What is the aim of the project?

Research has shown that current waiting rooms attribute the weight of time loss to the waiting party with a focus on efficient medical and service processes. The perception that time is squandered in waiting rooms, securing timely appointments, and waiting for an appointment has become synonymous with non-emergency healthcare. A survey of 1360 Australians found that 44.1% avoid going to the doctor because they were "too busy", 31.3% don't go because it is "too hard to get an appointment", and over 50% perceived it would be "somewhat difficult" to "impossible" to make an appointment with a GP that suited them. These results affirm that lengthy wait and lead times are not just a mild inconvenience, but a barrier to healthcare. Unsurprisingly, the 'wait' also has a significant impact on patient satisfaction, dropping as perceived waiting time increases (Yeddula, 2012- in particular when the patient is waiting for unknown reasons, with anxiety, in discomfort or in an unproductive state (Karaca, 2011). Offering little in the way of distractions by restricting smart phone usage or by only providing a handful of dated gossip magazines also misses an opportunity to create a more relaxing environment. Such service offerings are not competitive anymore as clients can chose their health care providers freely.

What. What is the project about?

ACCESS, Health and Community approached Swinburne University's Future Self and Design Living Lab to come up with a new waiting room concept – "the Waiting Room of the Future" to reinforce the reputation of ACCESS, Health and Community (A,H&C) as an innovative and best practice service provider for the community. Due to a change of law in Australia health care providers see themselves now in a very competitive market. A,H&C our Living Lab partner wanted a waiting room that has an appealing interior design, feels save and private - in short makes patients feel comfortable. Preliminary research showed that to achieve this goal this was not only a question of an interior design solution as originally requested because a waiting

room hosts many different patients with various needs and multiple services. The project needed to understand current communication and information flows between staff and their patients, and proxemics (analysis of peoples movement and location in spaces) in order to design this space. The end goal was to create:

- A set of typical Personas an scenarios outlining the interplay of patients, staff –their feelings and goals, technology interactions and interior design
- Design guidelines which will support community care settings in the future. Visualisation of the most pressing current problems and create future use scenarios The diverse and complex landscape of the standard community waiting room involved several stakeholder groups and reached out into the lives of patients and medical processes alike, well beyond the physical space of the room.

How. Methodology

The project was approached with a Living Lab methodology combining co-design, interior architecture and technology development to come up with a holistic solution combining the spatial, social and technological layer in the waiting room. The data collection consisted of a Probe Photo Kit (SnapIT*) for and focus group with staff, a survey and matching exercise with new and established patients (N=96) in the waiting room, a design studio with interior architecture students and a best practice analysis of waiting room technology conducted by Communication Design students. All methods had a focus on the emotional goals of clients and staff and how these could lead to innovative solutions. In order to communicate the richness and complexity of the data and ideas, but also the variety of solutions to A, H & C three complementing outcomes were produced: A spatial design concept taking in consideration the history of the building (heritage listed), a prototype for health self-management and an animation displaying the main barriers for clients called "ACCESS ME NOT".

Impact: Main outcomes

- A spatial design concept has now been refined and handed over on technical drawings specification level. The proposed design of the waiting room will be realised by A,H&C in 2018.
- Technology recommendations in terms of self-management as a refined prototype

- It was the animation in particular (https://youtu.be/HNhsXSA39o4) that enabled the CEO to understand the emotions of the clients and be used as a tool to communicate some of the service barriers to ACCESS staff and decision makers. The CEO of ACCESS commented on the animation: " I could understand how the patients feel. I have never seen something like it. I showed it to the board […] and staff and we had a laugh."

Also see:

https://www.surveymonkey.com/create/?sm=4_2Bzk7WrmHPKkeRlOPunUte5FxFMD57DMm9rCcKIwcJ2KNVXZsiYqTDL9sUGjDkwj

9. HEALERBIT

Living Lab: Başakşehir Living Lab

Host Organisation: Başakşehir Municipality

Country: Turkey

Why. What is the aim of the project?

The objective of Healerbit project is to provide a quick Sole Plate to people who especially need to wear orthopedic shoes and have feet problems. The name of the product is "Stepbit". The project uses photography, image processing, 3D printing technologies to produce the best fit sole plate of peoples feet. The aim is to put this technology in big shoe sales stores so that people buying shoes can put the best fit sole into the shoes that they are willing to buy. The process needs to be quick and cheap enough for the investment to be recovered for the shop owner. There is a mobile application for healerbit that helps in photography and image processing.

What. What is the project about?

In Turkey their nearly 2 million people who have flat feet (flat sole) and heel spurs. But people cannot find easy solutions to comfort their walking and use of shoes they buy. With healerbit people with these type of foot problems will be able to find a quick solution at shoe shops without the need to going to a orthopedist. In order to reach this goal the startup has developed the high quality image processing technology of the foot of a person by taking 5 photos of the foot from different sides. Once the image is processed as a 3D drawing the sole plate is easly printed on a 3D printer. The person who has tested the sole can get as many as printed at the shoe shop and try the sole plates at the shop. At the moment the soles are printed in the incubation center and agreements are being made with shoe companies for trying out the companies.

How. Methodology

The main stakeholders of the project are mainly customers who have (i) Flat foot, (ii) Heel Spur and (iii) who have standing/balance disorder. The methodology used for the customers

has been to gather people with foot disorders and go through the process of photography, image processing, 3D printing and testing of the final output "sole plate" on the person with the foot disorder. This has also been tried in one shoe shop which sells orthopedic shoes. The results have been promising but the startup needs to develop a business model for convincing shoe retailers to make investments in the system.

Impact: Main outcomes

1- Comfortable Walking with the independent "Sole Plate" - Any person can carry a sole plate with them and use it in any shoe they are going to wear because the sole plate is exactly a copy of your actual sole.
2- Price is not very cheap. It is more expensive than Scholl but it is believed the quality and functionality of the sole is greater.
3- A Business Model is required for sustaining the technology developed and sustaining customer purchase.

Category: Open Innovation

10. Innolabs

Living Lab: Apulian ICT Living lab

Country: Italy

Why. What is the aim of the project?

Through the Innolabs Programme, Puglia Region aims to use the Living Lab approach applying the experimentation of innovative solutions at the real-scale, oriented to the resolution of specific problems of social relevance. In particular, as ACTlab, Puglia Region aims to act on strengthening and raising the quality of the Technology Readness Level of innovative solutions demand based, in order to determine greater added value for smart communities building and for the competitiveness of SMEs involved in a context of Open Innovation 2.0 based on user experience centered processes. Innolabs identifies a new generation of innovation policies that could stimulate:

- the support for emerging social and environmental challenges that require more public policies able to connect the needs of the territory and innovations of products / services;
- the spread of digitalization as an engine of the "intelligence" of local communities;
- the creation of long connection networks to facilitate the circulation of knowledge even beyond the territorial dimension.

What. What is the project about?

Puglia Region will fund in the next two years a number of Open Innovation Communities planning aggregation within the Innolabs proposal in which are present: one or more SMEs developing innovative solutions; as a Research Laboratory: one or more subjects registered in the Partner Living Labs catalog in the research laboratories category; as End User: public administrations and socio-economic subjects active on a local scale capable of triggering innovation policies based on strengthening active participation of citizenship in its territory (Municipalities, public bodies, organizations representing collective and social needs, Associations of consumer protection, one or more subjects active in the technology management and exchange (Regional Technological Districts, Centers of Competence, Networks of Regional Laboratories, Public-Private Partnerships, as well as subjects active in

the economic, productive and services sectors production (Regional Productive Districts, Business Networks, Economic Associations).

How. Methodology

The engagement of stakeholders should include the following activities: a. analysis and understanding of the final user even through specific co-design phases; b. definition of the model of interaction between the different actors involved; c. prototyping and customization of solutions; d. testing of new technologies in real applications that meet actual needs of the final User; e. demonstration and presentation in demo public lab mode of prototype solutions developed, also in order to make them usable by additional communities of interested users; f. analysis for the economic exploitation of the results obtained from the experimentation.

Impact: Main outcomes

Innolabs Programme collected and funded 52 Communities proposal challenging social innovation needs related to the folloiwing sectors:

I. Environment, Security and Territorial Protection
II. Culture and Tourism
III. Renewable and Competitive Energy
IV. Electronic government for the PA
V. Health, Wellness and Social-Cultural Dynamics
VI. Education
VII. Creative and Digital Economy
VIII. Transportation and Sustainable Mobility

The Communities involve 269 stakeholders and in particular more than 200 SMEs.

Category: Culture

11. MEDAIA - Open Innovation Platforms of Media Industry

Living Lab: TAMK Living Lab

Country: Finland

Why. What is the aim of the project?

The objective of the MEDAIA project (1/10/2015-31/10/2017) was to develop open innovation in a media business and urban innovation context. This was to be achieved by carrying out 13 small-scale pilot projects, i.e. experiments that demonstrate new collaboration models between universities, companies, the public sector and other organizations. Background studies were also conducted. The project was coordinated by TAMK UAS (lead partner) and Metropolia UAS in partnership with Yle, the Finnish Broadcasting Company. At Tampere, the project focused on developing open innovation activities at Mediapolis that is a recently established media center in Tampere. In the Helsinki region, the project activities aimed at piloting cooperation and co-creation models between universities, public sector, companies and citizens. The Finnish media industry has faced economic downturn due to digitalization and international competition. There is a need to develop new collaboration models that exploit new business opportunities in the media field

What. What is the project about?

Research of MEDAIA revealed a lack of competencies in agile innovation, and therefore, increasing the skills in rapid innovation processes became the main goal of the project. Instead of a big water-fall project 13 small-scale projects were conducted. This was done by adopting the philosophy of the experimental culture that fosters failing as inherent element of development. As described by innovation practitioner Anssi Tuulenmäki, the difference between piloting and experimenting is as follows: an experiment is something that is supposed to fail and a pilot is something that is supposed to succeed. The goal of an experiment is to quickly test whether something works, e.g. are there potential customers for an idea. Therefore, failing is also valuable because it helps to stop or change the project in the very early phase. For Living Lab Award 3 experiments executed by TAMK in 2017 are introduced:

1) VR Proto Sprint,
2) Immersive Fan Experience and

3) Crowdfunding workshop.

They all experimented agile collaboration models between companies and TAMK.

How. Methodology

The experiments adopted agile methodology.

- VR Proto Sprint: 4 companies provided challenges for 4 student teams to be solved in 5 days. The Google Design Sprint method was adapted. The objective was to network Mediapolis Campus with VR-Tech companies. (See http://bit.ly/MEDAIA, p. 31-36).
- Immersive Fan Experience: The objective of the experiment was to understand how VR can be utilized for enhancing the customer experience. Finnish Broadcasting Company, TAMK and two SMEs collaborated together to shoot a 360° video scene in a New Day TV series studio set. A user test event was organized for the fans of this very popular TV show. (http://bit.ly/MEDAIA, p. 37-44.)
- Crowdfunding workshop: 4 companies from creative industries worked together with media students to develop crowdfunding campaigns. Their method was Lean Customer Development. The 4-day workshop aimed at finding a brand and a campaign message that brought company narratives, key persons and business models, and the goals of the campaign itself together. (http://bit.ly/MEDAIA, p. 22-30).

Impact: Main outcomes

Over two years' time, 54 companies participated in different MEDAIA activities and 21 of them participated in the experiments of MEDAIA. In addition, over 20 other organizations, including the cities of Tampere and Helsinki, other universities, NGOs and consultant partner companies, were also involved in the experiments. Main outcomes: - Agile innovation concepts and methods are in use in the participating universities - Networking with companies and competence building for Agile open innovation - Networking with companies and competence building in the XR field The impact: e.g. three new RDI-project based on the MEDAIA experiments started at TAMK, new large XR-event that collects a public business developer, companies and universities is under preparation in Tampere, 2 persons found full-time employment.

The final publication of the MEDAIA-project can be uploaded from TAMK Publications: http://bit.ly/MEDAIA.

The video of the VR Proto Sprint: https://www.youtube.com/watch?v=wn4t3P3we6Q

12. ImmersiaTV

Living Lab: Immersia TV Living Lab

Country: Belgium/Barcelona/Porto

Why. What is the aim of the project?

The majority of European TV consumers now watch TV programs in a multi-display environment. Second screens -mostly smartphones, tablets or laptops- are generally used to check information not directly related to the events in the TV content being watched. As a result, the attention of the audience is generally divided between these different streams of information. Broadcasters have tried to orchestrate all these different rendering platforms to complement each other consistently. However, their success is limited, and this limited success is due, at least in part, to the very different formats in which information is delivered (web-based texts, mobile apps, traditional broadcast television, etc.).

In this context, the arrival of immersive head-mounted displays to the consumer market introduces new possibilities, but also poses new challenges. Immersive displays impose radically different audience requirements compared to traditional broadcast TV and social media. In addition, immersive displays challenge the conventions of traditional audiovisual language. For example, cuts between shots, which constitute the very basic fabric of traditional cinematic language, do not work well in immersive displays. From a user perspective, omnidirectional TV offers a new user experience and a different way of engaging with the audiovisual content. In parallel, the evolution of digital broadband streaming and capture devices has transformed the production and delivery of omnidirectional video from an experimental proof of concept to an industrial possibility.

In addition, recent advances in computer graphics have blurred the line between 3D synthetic content -animation movies and videogames- and omnidirectional video streams. Between January 2016 and June 2018, ImmersiaTV will create a novel form of broadcast omnidirectional video, content production and delivery that offers end-users a coherent audiovisual experience across head mounted displays, second screens and the traditional TV set, instead of having their attention divided across them. New forms of digital storytelling and broadcast production will be created that deliver an all-encompassing experience that

integrates the specificities of immersive displays, and the feeling of "being there", within the contemporary living room.

This novel kind of content will seamlessly integrate with and further augment traditional TV and second display consumer habits. The audience will still be able to watch TV sitting on their couch, or tweet comments about it. However, by putting omnidirectional content at the centre of the creation, production and distribution processes, the audience will also be able to use immersive displays to feel like being inside the audiovisual stream. Instead of using second screens as a way to display complementary information (for example, twitter feeds with a hashtag related to the TV program), we will use second screens as a means to extend the traditional TV shot.

In other terms: we will give the user the freedom of extending the default field of view through his tablet. In addition, through head mounted displays, the end user will experience not only a fully immersive omnidirectional field of view, but also more specific shots, rendered through "portals" to highlight shots and details particularly relevant for the events being broadcasted.

This project demonstrates a novel approach for the recording, broadcast and display of omnidirectional video. There already exist industrial methods to capture and edit omnidirectional video, as well as omnidirectional video content distribution. However, the existing approaches focus on delivering pre-recorded omnidirectional video streams, with little or no narrative-oriented editing. In other terms: existing approaches try to deliver the images as captured, implicitly associating realism with improved feeling. In ImmersiaTV we fully embrace the need for high-quality omnidirectional video, but we recognize the need to create a novel audiovisual language addressing the specifics of immersive displays, within the contemporary, and multi-display, living room.

What. What is the project about?

ImmersiaTV will pilot an innovative end-to-end system covering the entire audiovisual value chain to enable a novel form of creative audiovisual storytelling based on omnidirectional video. The project encompasses immersive production tools, support for omnidirectional cameras, adaptive content coding and distribution mechanisms, and immersive head-mounted display (HMD) & second screen visualisation. ImmersiaTV demonstrates the use of its end-to-end system in real production and distribution scenarios via 3 pilots addressing both on-demand and live content delivery.

To demonstrate the feasibility of this novel approach for the creation, production, broadcast and display of omnidirectional video, ImmersiaTV has the following objectives:

- *Objective 1:* The creation of a new immersive cinematographic language where the specificities of immersive displays are taken into account. The delivery of a produced omnidirectional video stream combining several video sources in a coherent way imposes the revision of the traditional conventions of broadcast television. To achieve this objective, the content formats currently available in the market are analysed and end-user demands are studied (i.e., what does the audience expect), and a novel format design that matches the market offer and the audience's expectations is proposed. These production scenarios have to enable the implementation of a novel cinematographic language and the delivery of a novel experience based on live omnidirectional broadcast. We also address the professional user demands that are needed for this novel audiovisual content creation, both for offline and live production scenarios, targeting specifically the future exploitation of the related production tool.
- *Objective 2:* To extend the production pipeline to create omnidirectional content for a multi-platform environment. The aim is to assemble the production toolset necessary to efficiently produce immersive content that can be consumed across affordable immersive displays (head mounted displays), second screens (smartphones and tablets), and the traditional television set. This requires to assemble a Production Toolset to produce content integrating omnidirectional video streams within a carefully constructed narrative structure, across our target devices, both for offline omnidirectional content production and live omnidirectional content production. It also requires implementing a home receptor which can combine several omnidirectional video streams and deliver them across devices, integrating the production choices, integrate the input of the user (head movements, tablet movements or gestures, etc.) as well as manage appropriately the timing of scenes and events and the synchronisation across devices.
- *Objective 3:* Re-design the distribution chain to address the specific technical challenges that omnidirectional content imposes in terms of capture, compression, distribution, reception, and rendering. The aim is to integrate existing capture devices and emerging coders, decoders and distribution technologies in an iterative process, in order to deliver at the end of the project the necessary components to stream near-real time interactive omnidirectional content. First, a multi- stream multi-display on-demand streaming service is delivered, involving several synchronized video streams

(both omnidirectional and not) to the end-user, allowing him or her to have a coherent experience through several platforms (TV, tablets and head mounted displays). In a second stage, off-the-shelf omnidirectional live broadcast is provided. Current broadcast infrastructures assume specific formats, unfit for omnidirectional content. Therefore, specific strategies are needed to stream omnidirectional video live within the existing content delivery infrastructure. For example, it needs to be reformatted in a rectangular frame to meet the requirements of current codecs, but these transformations introduce geometric distortions. The last stage consists in developing a smart live omnidirectional streaming. The smart integration of innovative codecs, targeted geometric transformations and advanced stitching should allow the real-time adjustment between the best possible end-user experience and the bandwidth limitations, by defining regions of interest within the omnidirectional video streams, steering the parameter settings of the video encoding based on the feedback of objective quality metrics.

- *Objective 4:* Maximize the quality of the end-user experience, across devices, and within the technical limitations of existing production structures, distribution facilities and reception devices to create an optimal immersive experience. Different user iterations with both end-users and professional users will take place during the project, in order to create an optimal immersive user experience in line with the defined user expectations and requirements. - Objective 5: Maximize the impact of the ImmersiaTV solutions within the ecosystem of content creators, broadcasters, and consumers to ensure ImmersiaTV has a determining impact on the European and global audiovisual market. The overall conditions for successful exploitation of the proposed solutions are determined, such as productization, standardization, additional stakeholder involvement etc. and optimal go-to-market strategies for each of the stakeholders are identified.

How. Methodology

The overall methodological approach of ImmersiaTV is the living lab methodology. A user-centred design approach is followed and all relevant stakeholders are involved throughout the development process, ensuring a bottom-up approach. An iterative and incremental approach for user and technical evaluation is applied, built around 4 production pilots. Through the incremental approach of the pilot methodology, the role and intensity of the user varies and

by so maximizing the input and feedback. The 4 pilots demonstrate how the novel omnidirectional video production is delivered across immersive displays, traditional TV and second screens. The insights gained in each pilot feed the following iteration and allow detecting bottlenecks. While the focus of the first pilot is on an offline production scenario (documentary), the focus of the second pilot is on a live production scenario (live sports event). In the third pilot iteration, both pilots will be further refined in two advanced pilot scenarios: advanced immersive documentary and advanced immersive sports.

- *Pilot 1:* Immersive documentary: This pilot demonstrates the on-demand delivery of an immersive experience based on omnidirectional video, delivered across household devices: a head mounted display, a television and second screens. Among the established content formats that are produced offline, a documentary has been chosen because it is the one format where traditional TV experiences impose a tension between on one hand, giving the end-users footage that is as close as possible to the reality "as it is" and, on the other hand, the need to involve the viewers in a narrative which relates to them.
- *Pilot 2:* Immersive live sports event: This pilot demonstrates the live delivery of an immersive experience. Using the experience and insights of pilot 1, ImmersiaTV developed a more engaging live experience using omnidirectional video to give the viewer the experience "as if she/he was there". Of all live sports coverage available, cyclocross has been selected because of its possibilities to show the sport as if you were actually on the track or one of the spectators at the race.
- *Pilot 3 and 4:* Advanced immersive on demand scenario and advanced immersive live scenario: The third and fourth pilot demonstrations will be defined with the lessons learnt in the 2 previous ones, together with improvements in the different components of end-to-end distribution chain. It consists of 2 sub-pilots: a refined iteration of the offline scenario targeted in the first iteration, and a refined iteration of the live broadcast targeted in the second iteration. For the different pilots and intermediate smaller user iterations with the developed proof of concepts, different evaluation activities take place with different types of users. In this project we distinguish between two groups of users: residential users (TV viewers), who will be the end-user of the developed ImmersiaTV applications, and professional users (creative TV program makers, directors,...) who will use the ImmersiaTV applications to create omnidirectional TV experiences for TV users. Both groups of users are iteratively

involved throughout the research process in order to create an optimal user experience.

A mixed methods research approach is applied, combining quantitative and qualitative research methods as well as specific QoE subjective experiments. A similar set-up is applied for every pilot, going from controlled lab tests, over semi-controlled testing to an open pilot. Each pilot starts with controlled lab tests, as the developed prototype is often too immature to test in a more open setting. The second phase is the semi-controlled setting in which friendly user tests (often people with a certain connection to the project) and closed group testing takes place (a larger group of selected respondents can test in a semi-controlled environment). The final phase is the open living lab test, where the proof of concept is much more mature and the demonstrators will be publicly available online for everyone to test.

Impact: Main outcomes

The value proposition of ImmersiaTV is to deliver a novel form of immersive experiences which can be shared with established consumption habits of traditional TV and second screen users, and take advantage of the possibility of broadcasting, omnidirectional, high dynamic range, and high-resolution video both on-demand and live scenarios. To serve this goal, two pilots that demonstrated a novel approach for the recording, broadcast and display of omnidirectional video have been successfully executed.

- A set of ready-to-use tools was developed for creating new immersive audiovisual experiences at the different stages of the value chain, including format production, omnidirectional video capture, production tools, signal distribution and home display and interaction.
- For pilot 1, an immersive documentary was created which follows the the daily life of a young football player and his family, all this done using immersive content for a head-mounted display and a tablet and regular directive video. "Dragon Force: The Making of Future Heroes" (ca. 10 min.) follows the daily life of David, a young Portuguese athlete who joined Dragon Force, FC Porto football school, to pursue his dream of becoming a successful football player. During his busy, hard-working days, the documentary presents his family, his friends and the dedication of this 14-year-old dreamer. The created software tools were evaluated by a broad range of professional users and the documentary was viewed and evaluated by more then 100 end-users in different European countries.

- For pilot 2, the end-to-end ImmersiaTV workflow was deployed on the field during a cyclocross competition in Belgium in January 2018 and the live production tool was used to create the interactive end-user experience. The cyclocross was captured live with several 360° video cameras in the field extending the traditional broadcast directional camera set-up. All omnidirectional camera streams and the directive TV output signal were synchronised with each other. The omnidirectional streams were gathered in the live director's tool where a preconfigured omnidirectional scene set-up enabled the content creator to direct the streams to multiple devices displaying the content to the end user. On the HMD or tablet a similar scene set up is preconfigured giving the end user the ability to be their own director.

In the coming months, pilot 3 and 4 will be executed, further refining on the one hand the ready-to-use tools to create immersive audiovisual experiences at the different stages of the value chain, and on the other hand further refining the end-user experience interaction with the content. An open online platform will be created that makes the developed content formats publicly available for everyone.

Category: Culture, Technology & Science

13. Cloud Smart Digital Signage Platform

Living Lab: Başakşehir Living Lab

Country: Turkey

Why. What is the aim of the project?

The aim of this Digital Signage Project is to enable public or private companies and agencies to be able to manage their outdoor digital advertisement boards more effectively, more cheaper and much more faster than traditional methods. All of these outdoor advertisement boards are management from a central management console which enables advertisers to push information any time and for any duration defined on the platforms. The content created by departments and agencies can be edited and uploaded when ever their is a need to change the content or the timing during the day. Because the management is easier targeted marketing becomes more easy and effective for corporations and public authorities such as municipalilities.

What. What is the project about?

The project is in its startup phase at the moment. During 2017 the platform was tested in Başakşehir Living Lab, and after beta tests it was tested in a medium sized shopping center which was generally successful. Following these tests and corrections and Başakşehir municipality having problems in managing all their digital boards distributed around in Başakşehir it was decided by the Living Lab to promote the platform to Başakşehir Municipality. As of November 2017 Başakşehir Municipality decided to give the Management of their Digital Advertisement Boards to our Startup SmartLabs. Since 2 months the Municipality is pleased with the performance and effectiveness of their public information sharing process.

How. Methodology

The platform consists of following items

1- A program that records, feeds, retrieves and edits all information or advertisements according to their planned times

2- An interface for customers to upload information and for the administrator to manage the system
3- Cloud Management Panel/Console for only one administrator required
4- Flexible Editor
5- Ready pre-prepared Templates
6- Unlimited Design Areas Involving users is done in 2 ways.
   a) As mentioned above the first user group was Başakşehir Living Lab personel to see if their are any bugs.
   b) The main users of this product are Companies which would like to share information or do advertisement. The first user was the Management of a medium sized Shopping Center which where trying to push information over the digital borads over the Shopping Center. The test lasted for few months and know is continously used by the Shopping Center Management
   c) Finally as the owner of our Living Lab the Municipality has decided to support the Startup by being a User and Feedback provider for the platform

Impact: Main outcomes

Simple and Effective Management of Digital Boards of Agencies or Public Authorities. At the moment the results are positive and IUsers of the platforms are able to push more information in a more targeted way

- Easy To Design and Edit Content - With the available templates and free design areas on the platform life has become easier for advertising content developers and agencies
- Lower Information Sharing and Advertisememnt costs - Using Cloud SAAS and Templates it has become cheaper to manage the advertisement process.

Category: Public Sector Innovation & Wellbeing

14. Seniori365.fi

Living Lab: www.senior365.fi

Host Organisation: Laurea University of Applied Sciences

Country: Finland

Why. What is the aim of the project?

www.seniori365.fi is a digital service that is at the moment free for users and all service providers. It promotes health, social activities and wellbeing of elderly and their families. There are many different kinds of service providers (almost 300) who offer services and/or products for home environment. Users can find useful articles and other information to cope at home more easily and use wellbeing services. For example, they can exercise by using activity videos, have many different entertainments like digital stories of elderly and games and have links to many other digital services and medias.

The overall aim of the innovation project was to develop a digital living lab environment for elderly people, their carers and close ones to create, test and offer new innovative services for elderly people to cope at home longer safely and actively. Developing virtual environment allows for better coverage and more cost-effective ways of serving and interacting with seniors. All useful information, service providers and activities are available in one place easily.

What. What is the project about?

www.seniori365.fi benefits all stakeholders. It is highly regarded as a very useful internet service among users, experts, students and companies. It has explored value for the Espoo region stakeholders as elderly citizens, multidisciplinary students, SME wellbeing companies, private and municipality organizations like sheltered housing, domiciliary care, 3rd sector etc. It networks private and municipal sectors easily and cost effective way. Seniori365.fi works as an excellent learning environment for students who create content, marketing and acquiring new service providers (wellbeing companies) to the service. Because this service meets social needs and contribute better quality of life for elderly it attracts many partners to co-opetate and co-finance it. Because students are the main content providers it is very cost effective way to maintain and develop the service. It has inspired co-operation between different stakeholders in elderly care field.

How. Methodology

During years 2012-2015 students gathered information of the worries and needs of elderly. They learned what seniors needed to cope at home more easily. By using that knowledge the idea of a new digital service came out. The service was developed by using the models and many tools (customer journey, user profiles, mind maps, 635 analyses) of Service Design and Innovation methods in co-creation process with students of Laurea UAS, users and experts. During the developing process seniors tested www.seniori365.fi many times and the changes were made to the web page's structure, usability, visual outlook and content design. Seniori365.fi was launched in Sebtember 2015. After that Seniori365.fi has been available for users. Several usability tests has been made by students together with users (elderly people and carers). Based on test results the service has been further developed.

Impact: Main outcomes

- Seniori365.fi create wellbeing for eldelry people to cope at home more easily safely.
- Seniori365.fi reduces the need for municipal aid by increasing demand for private services. It offers business opportunities for private SME wellbeing companies and student co-operatives. It enhances student entrepreneurship.
- Seniori365.fi has been used educative purpose for Laurea UAS and its partners in elderly field. It offers multidisciplinary students of Laurea UAS a new way to study in Digital Living Lab environment and test and develop their competencies.

Category: Citizen Driven Innovation

15. LiveCities, the crowdsourcing platform for open city innovation challenges

Living Lab: Barcelona Laboratori

Host Organisation: Institut de Cultura de Barcelona (ICUB)

Country: Spain

Why. What is the aim of the project?

The LiveCities platform is a digital social innovation project co-funded and developed within the Barcelona Laboratori ecosystem. The app provides a channel where people can post challenges or projects they want to work on and connect with people that are interested in contributing either with an idea, resources or their abilities. Citizens are able to

1- explore the cities' challenges and projects by searching keywords, "skills" tags or categories of interest;
2- get involved in projects of their interest;
3- share their talent or resources to collaborate with the community;
4- be up to date with community events, activities and workshops; and
5- propose challenges or projects and crowdsource for services, people or resources.

What. What is the project about?

LiveCities provides a digital collaboration environment that enhances the value of innovation by connecting people to share resources, data and knowledge to solve together the challenges that concern them. LiveCities allows cities to

A. take advantage of digital to establish new channels to connect people and encourage innovation in all levels of society;
B. provide a systemic and collaborative model for democratizing innovation processes in the city;
C. provide a channel to disseminate projects and activities to encourage citizens involvement and active citizenship;
D. provide the first meeting point for citizens, the city hall, cultural entities, the private sector, universities and research centers to collaborate in projects together.

How. Methodology

LiveCities engages citizens to contribute in open city innovation projects, while helping the public administration to disseminate activities. The platform is conceived as a tool for co-creation, by building relationships between people to scale-up complex interactions within the quadruple helix open innovation framework: bringing together citizens, academia, industry and public administrations. LiveCities is an open source project led by 8Wires, a young Barcelona-based startup, and is currently in incubation in the framework of the Barcelona Laboratori. A functional prototype is already available, and a living lab pilot involving the local community is slated to start in Spring 2018. The project's open source philosophy empowers the local developer community to be involved in improving the software and adapting it to use cases tailored to support the city's innovation ecosystem.

Impact: Main outcomes

The upcoming LiveCities pilot will co-create three use cases with the community: Citizen-led crowdsourced projects: Citizens want to run a project and need resources and volunteers to be a part of it. Open innovation challenges: A cultural institution makes an open call for the community to propose projects that tackle an urban problem. Citizen engagement: A public entity is offering digital capacity-building workshops for citizens and wants to maximize the engagement of citizens in these activities.

Category: Sustainability & Circular Economy

16. OVAM circular economy Living Lab support

Living Lab: Imec.Living Labs

Country: Belgium

imec
embracing a better life

Why. What is the aim of the project?

OVAM, the Public Waste Agency of Flanders, contributes to a healthier environment and hence a better quality of life by facilitating to the sustainable management of wastes and materials, soil remediation and the prevention of soil pollution. One of the key challeges for the future is to generate awareness regarding the possibilities of circular economy, waste recycling and cradle-to-cradle solutions. To this end, OVAM wants to share best practices to all relevant stakeholders and facilitate digital matchmaking for waste materials exchange and recycling. To this end, OVAM engaged with imec.livinglabs to explore the needs and wants of the different sectors and stakeholders and co-design digital tools and platforms to achieve their sustainability goals and ambitions.

What. What is the project about?

To this day, two Living Lab projects have been finished. The project 'Cirkeltips' consisted of the building of a platform to generate awareness and exchange best practices on sustainable waste management. This platform was co-created and co-designed with relevant companies and stakeholders to take into account actual needs and wants of the different sectors to enable a maximal diffusion and effectiveness of the platform. The eventual outcome is now online and consists of a platform that enables to consult their own company waste data and benchmark their performance with the sector they are active in, an online discussion forum to share best practices, and practical tips and tricks to increase sustainable operations and waste management. The project 'Symbiosis' looks at local waste streams in order to connect them with resource needs of other local companies. This coupling of supply and demand was done manually, but by constructing a digital platform OVAM wants to increase its reach and the number of successful matches to increase waste recycling. The Living Lab project tackled the challenge of linking the different datasets of the providers as well as the potential customers and the facilitating actors in the ecosystem.

How. Methodology

In both projects we included both waste producing and waste processing companies to abstract needs and wants via in-depth interviews. These insights were linked to internal workshops with the OVAM-project owners and expert interviews from knowledge institutes. For Cirkeltips, the exploration stage revealed that the initial assumptions regarding the platform were not correct so a significant pivot was made based on early end-user feedback. After this pivot, a co-design session was held with companies was held on the new direction that was taken. This resulted in an iterated platform being designed and being now online since December 2017. For 'Symbiosis' the inputs, collected during the exploration-stage, were used in co-design sessions with the companies which generated the primary requirements of the platform. During a follow-up project, the 'Symbiosis'-platform is being developed and the business model is being designed.

Impact: Main outcomes

The Cirkeltips-platform is now online (since December 2017) which allows all companies to benchmark their waste with their respective sectors, look for best practices and generate general awareness on more sustainable ways of coping with waste - The Symbiosis-platform will facilitate waste exchange between companies and significantly increase the number of matches between resource providers and seekers - In general, these projects contribute to a more sustainable way of manufacturing and waste management of Flemish companies.

Category: Technology & Science

17. Workshop on Intelligent Machines: Theory and Applications

Living Lab: Sfax Smart City Living Lab (SSCLL)

Host Organisation: ReGIM-Lab

Country: Tunisia

Why. What is the aim of the project?

The WIMTA'29 Project focuses on theoretical and practical Artificial Intelligence work aimed towards the original goal of the Artificial Intelligence field: creating artificial systems with general intelligence at the human level and ultimately beyond. In particular, WIMTA is a national Workshop organized by SSCLL and supported by ReGIM-Lab where more than 70 PhD students and doctors meet to exchange research results and present technical innovation on all aspects of machine intelligence and linked data. The workshop aims to create a synergy of competences between researchers by presenting and discussing advances of their researches. It also tries to incite researchers to publish and encourages them to present and to develop their research works. The workshop itself is formed by 3 sessions: a Poster Session – PhD students presented 60 distinguished posters on their research work and three were selected as Best PhD Student Poster; an Oral Session – 30 PhD students have presented their thesis work progress and according to an Evaluation Committee, three best oral presentations were selected; and Hackathon on Deep Learning – 9 teams composed of 2 to 3 PhD students participated to develop a set of innovative applications result of the learnings acquired throughput the day.

How. Methodology

The WIMTA'29 was organized by SSCLL and ReGIM-Lab and supported by several IEEE Chapter in Tunisia. The involvement of these entities was by the participation of the chapter chairs of these units during three days of the workshop. They have been implicated in all sessions (Poster, Presentation and Hackathon on Deep Learning) as session chairs, evaluators and they have exchanged their experiences with young graduated student and researchers on Intelligent Machines. We list below the names of stakeholders engaged in this workshop: IEEE Tunisia Computational Intelligence Society represented by Dr. Mohamed Ben Halima IEEE Tunisia Computer Society represented by Dr. Ali Wali IEEE Tunisia Signal Processing

Society represented by DR. HIchem Karray IEEE Tunisia System Man & Cybernetics represented by Pr. Chokri Ben Amar IEEE Tunisia Women in Engineering represented by Dr. Boudour Ammar IEEE Tunisia Young Professionals represented by Dr. Wael Ouarda

Impact: Main outcomes

9 Innovative Prototypes:

1- Sm@rt Blind assistance
2- Sm@rt Surveillance Project using a Fusion between Multiple modalities
3- Sm@rt Speech Therapy
4- Sm@rt Riding Club to recognize Arabian horses
5- Sm@rt Parkinson Diagnosis using Deep Learning
6- Sm@rt Anxiety Diagnosis System using EEG Signal Processing
7- Sm@rt Citizens Understanding using Visual and Textual Shared data in Social Networks
   8. Sm@rt Lie Detection using Speech Processing
8- Sm@rt Information Retrieval in Historical Document in Tunisia

18. ENIS Industrial-Academic Forum 2017 (ENIAF'2017)

Living Lab: Sfax Smart City Living Lab (SSCLL)

Host Organisation: ReGIM-Lab

Country: Tunisia

Why. What is the aim of the project?

ENIAF'2017 is providing an opportunity for Academic and Industrial to exchange and to share their expertise. ENIAF'2017 is a national event where more than 30 Industrials and more than 300 students and Academics form Tunisia have meet to mind the Gap between them. ENIAF'2017 was a debate space through several oral presentations made by Industrials and some Young Graduate to share with student their stories of success. ENIAF'2017 was held at the National School of Engineers of Sfax on October 7th, 2017 ENIAF'2017 brings together young people to develop their creativity, design, and problem solving skills through challenging robot competitions and related technical activities.

How. Methodology

ENIAF is providing a forum for students, young researchers, professionals and international experts in the scientific community for identifying, encouraging and exchanging ideas on the state-of-the-art technology to enhance quality life of cityzens. ENIAF address six cross-cutting challenges to university-industry interactions: the growing disciplinary and time-horizon-related imbalances in federal R&D funding, barriers to university-industry interaction in service industries, the critical role of academic research in the advancement of information technology, the role of academic research in the regulation of industry, the impact of technology transfer activities on core university research and education missions, and the search for new pathways and mechanisms to enhance the contributions of academic research to industry.

Impact: Main outcomes

1- Sharing knowledge between research institutions and industry
2- Training sessions were held during the ENIAF and are provided by experts in order to provide students with the technical support needed to accomplish their projects.
3- Providing a debate space through several oral presentations made by Industrials and some Young Graduate to share with student their stories of success.

19. Ocean Heritage

Living Lab: Ocean Living Lab

Host Organisation: Association Ocean Living Lab

Country: France

Why. What is the aim of the project?

It fosters the exploitation of the Basque coastal and maritime cultural and environmental heritage as a driver for local and regional smart specialization and development, considering preservation of underwater hillsides through technological monitoring a support for cultural and economic empowerment. In the Basque Coast, the red seaweed Gelidium corneum forms extensive beds between 3 and 12 meters deep. Its flexible frond allows this species to live with strong ocean surf and its vertical perennial fronds enable the life of invertebrates and fish. In the last years dramatic changes have occurred: Gelidium fronds are thinner and depigmented becoming weaker in their ramifications and loosing lush till disappearing completely. There are large areas without this seaweed. These organisms are good indicators of the ecosystem health as they live attached to the substrata. They integrate the surrounding environmental conditions. Moreover, they are the base of the food chain. Countless species depend upon their health including humans.

What. What is the project about?

An interdisciplinary methodology to improve coastal and maritime cultural and environmental heritage has been improved, integrating a comprehensive framework of all the involved issues (history, cultural heritage, society, environment and climate changes, economy, tourism, sports and urbanisation), with citizens and stakeholders involvement. A study has been conducted in order to investigate the main causes of the decline of G. corneum. Its biochemical, physiological and morphological attributes in relation to light and temperature among others, like water temperature, were studied in a first phase. Transplant experiments of individuals, between 3 and 5 meters deep were carried out in order to stimulate different light conditions and stresses. The study is being broadened in order to investigate the interaction with other environmental, social and economic factors as the red seaweed Gelidium corneum is vital for the ecosystem.

How. Methodology

The overall concept underpinning the project is a multidisciplinary stakeholder and citizens-oriented (through their active participation in all phases of the project) and integrated approach to devise a set of solutions and policies in a comprehensive framework for the preservation and the management of the ocean and its ecosystem. The participation of local citizens, regional and local institutions and stakeholders is fundamental and they are continuously involved during the whole development of the project to make sure the tools respond to their needs and expectations for the effective achievement of the proposed objectives. Citizens are directly involved (different nationality, age, gender, education level, employment and interests) by using gaming apps to obtain useful inputor feedback, and to test scenarios following a Living Lab methodology.

Impact: Main outcomes

- Pilot lead by Ocean Living Lab using citizen-driven open methodology to foster measures to keep cultural and environmental heritage related to the Cantabric Coast alive as a best practice case on methodology for future Register of Good Safeguarding Practices.
- Go one step further in the configuration of an integral point of view for sustainable economic development from political, business and investigation scopes, specially aiming at the preservation of traditional local activities like fishing and seaweed cultivation.
- To deepen knowledge on the Cantrabian Sea environmental conditions, and more specifically on the underwater hillsides, focusing on the Gelidium corneum's monitoring, variables and mapping of seaweed areas.

Category: Internet of Things

20. Virtual Lifeguard

Living Lab: Ocean Living Lab

Host Organisation: Association Ocean Living Lab

Country: France

Why. What is the aim of the project?

The objective is the improvement of aquatic products in salvage through the inclusion of organic electronics, specifically improvement of a Man to Water system that improves the safety of recreational boats by stopping the engine in case the skipper falls into the water . The accidental fall of people to water is one of the main causes of death at sea. At the risk that it will go unnoticed and, consequently, the necessary relief will not be received, we must add that of suffering hypothermia due to prolonged stay in the water. The solution offered is a wireless bracelet that the pattern is placed on the wrist and is continuously connected to a device located on the boat. The devices that exist so far are very heavy, impractical, with a high price and of short duration. Through the incorporation of organic electronics we reduce the weight and energy consumption of the system and improves the practicality and design of the bracelet.

What. What is the project about?

The project has on the one hand the technological challenge of applying organic electronics in a marine salvage product for its improvement, assuming an improvement in efficiency and effectiveness, contributing to environmental sustainability. For this, we count on with the collaboration of two companies, Sotapatroi - expert in Man to Water systems, and Tectron - expert in organic electronics. The integration of organic electronics in objects allows obtaining functional surfaces electronically or photonically, three-dimensional, on all possible objects. They work like organic solar cells, or as flat printed batteries for miniaturized devices. And on the other, the testing and validation with potential users in a real environment: the Txingudi bay. The users to whom the solution has been focused have been older people - silver - being the group of users that suffer the most accidents of this type. In addition, taking into account the increase in this sector of the population that we will continue to attend, they represent a very powerful market niche. This task is led by Ocean Living Lab.

How. Methodology

The partners involved in the project are experts in TEIC and Living Lab methodology, which leads to the verification and continuous validation of the product throughout the project by the silver user community of Ocean Living Lab in the real environment of the Txingudi Bay. OLL has in its ecosystem of collaborators associations, foundations and cooperatives of eldery and disabled people like BidaOsoa, and is through them how we engage the silver community. What is more, we also count within OLL with all the network of stakeholders interested in the solution: water sports and nautic industry and associations, city councils and regional authorities, etc. Furthermore, being a trans-regional living between Basque Country (Spain) and Nouvelle Aquitaine (France), OLL offers the opportunity to validate the products or services at the same time under the regulations or requirements of two different countries, giving access to a bigger potential market

Impact: Main outcomes

- An intelligent and innovative system, especially aimed at the silver community, which offers security in recreational boats 24 hours 365 days a year: implementation of the product improvement with organic electronics in a real environment.
- Validation of the product with silver users: understand the motivations of the users, integrate the feedback of the users in the process of development and improvement.
- Validation of the product in two markets (Spain and France) at the same time thanks to the trans-regional ecosystem of the Ocean Living Lab (Basque Country - Nouvelle Aquitaine)

European Network of Living Labs

Category: Gaming

21. GameLab

Living Lab: Guadalinfo

Host Organisation: Consorcio Fernando de los Ríos

Country: Spain

Why. What is the aim of the project?

The development of apps and applied games during a weekend competition is not new. The availability of hackathons and game jams is vast, but they are often considered as an end themselves instead of a powerful tool to a broader objective. From a wider perspective our experience aims spark creativity and new training models as a mean to open new innovation tracks on young people. Those are the guidelines that rule the experience. In the early beginning, the GameLab conception and inspiration emerged from the organization of Gamejams based upon a methodology supported by an European initiative 'JamToday'. Engaging with local communities and stakeholders, private and public sponsors, participants and, more important, taking advantage of the Guadalinfo Living Lab network appeared the opportunity to merge both concepts, applied game jams 'for good' and the citizen driven lab concept, aiming to create this "living lab to face societal challenges through games", i.e. through creativity, open innovation and being open to the communities

What. What is the project about?

First step in the creation of the GameLab was engaging with the main developer and maker associations among Andalusia (South Spain). Once the participation of high tech profile users was ensured through the communities; main intention was to open the initiative in terms of diversity, age, gender and socioeconomic perspective, taking advantage of the capillarity of the Guadalinfo Living Lab network. Thus, this is how the 'narrative' of the project is traced: low skilled users are trained in basic game (creativity, narrative, graphic design) and videogame (Scratch) competences and prepared to share game jams with creatives, professional developers and experts. We are experiencing that novel users have the opportunity to create synergies, contacts and competences to spark vocations and evolve to a professional career. At this point, we can introduce the main objectives of the GameLab: 1)

Develop professional competences among end users 2) Cohesion among gamer communities 3) Boost different and innovative solutions to tackle societal challenges

How. Methodology

Currently, the GameLAB conception is running three main set of activities (called JAM-brella) to meet the defined objectives and purposes: 1) Trainning of low skilled end users. Training and dynamization activities are run in the Guadalinfo Living Labs in order to engage with novel users. A set of mini-jams in Scratch are also planned in each province for better preparing the programming and creativity competences of novel users. 2) Running game jams. Prior to the event, a workshop with the selected experts in the thematic is run to define the local challenges. Nowadays, 3 categories are considered in the jam: Professional (Unity), amateur (Scratch) and creative (board games). A gamification process is run in parallel with the coding hours aiming to boost networking and profiles exchanging among different groups and categories. 3) Community of communities dimension. Iterative design of the JAM-brella set of activities and common strategy revision. Every 6 months a workshop with the communities is run for better coordination and strategic definition

Impact: Main outcomes

From a management perspective, it is crucial to capitalize the activity. In our model of capitalization we mapped the initiative according to this four axis scheme: Scaling up. We can consider the GameLab as composed by 8 individual and local communities (each province). Each year it is projected to engage with new members and associations and to increase the dimension of the initiative Scaling out. At this moment the action is being scaled out to the rest of the territory, replicating the model to the other provinces. Policy learning. Lessons learned to iterate the evolution of the year-to-year strategy Policy transfer. Document the experience, evaluate the impact and concrete the vision and mission to transfer recommendations to regional policy makers. Among all the game jam events more than 45 games have been created, 60 experts have been involved, more than 50 people have been hired, specific workshops have trained more than 235 users and 3 magisterial presentations with successful professionals in the videogame sector have been organized.

Category: Smart Grid & Energy

22. Linky by Makers (LbM)

Living Lab: Lorraine Smart Cities Living Lab

Host Organisation: Université de Lorraine, ERPI Laboratory

Country: France

Why. What is the aim of the project?

The French public electricity distribution network (PEDN) is currently in a transition period with the implementation of its smart-meter program (Linky), created by engineers and focused on solving a huge technical stake. Nevertheless, there still a number of challenges that must be considered: Which technological, organizational, and societal innovations will emerge from Linky program? How many types of new users will appear? How to interact with them? Furthermore, the integration of the users occurs only at the phase of product launching, which is the end of the innovation process. Real-use situations are almost unknown yet. In the light of the difficulties encountered in implementing European smart meters, the Linky by makers-LbM project explores the development of a user-driven innovation supporting smart PEDN, and establishes the requirements of the design of a smart PEDN supported by citizens.

What. What is the project about?

Innovation driven by open communities (OC) has proven to have a significant potential. However, tools and methodologies enabling collaborative innovation involving OC, in the perspective of creating open hardware to solve societal issues, remains at the early stages. LbM project pinpoints the potentialities and challenges toward defining methods to better support a multi-stakeholders open source collaboration context. Here, we experimented a public driven project of the diffusion of smart-meters in France and their appropriation by open source communities, with the involvement of the university and a public industrial company. LbM seeks to study how these communities of users could develop in a collaborative manner, new products and services using the smart-meter as a support technology and transform it to a social innovation with 'active' acceptance supporting energy usage optimization

How. Methodology

To achieve this, according Living Lab approach, our research team designed a citizen research program involving academics, engineers from ENEDIS, the French electricity distributor, students and citizens as "makers". Indeed, our team also involves a French FabLabs network, asked to communities of makers, of different French FL, to create new products and services based on the information and new functionalities of the smart meter. Public events and FabLabs Network were implemented to promote the project. We used: our own digital platform supporting ideation; 2 digital collaborative platforms to communicate and share open source hardware. The project was supported by our innovation space: Lorraine Fab Living Lab (www.lf2l.fr) The value produced by the participants is not dedicated to the company but to commons (all the citizens) under the principle of the open hardware.

Impact: Main outcomes

Societal: This project, involving around 80 volunteers, shows the strong complementarity between Living Lab & FabLab supporting a geographically, culturally, technologically and temporally distributed PPPP Operational: Our project generates 30 new open hardware projects, 10 were turn into functional mock-ups. We identified potential economic developments with positive societal and sustainable impacts Scientific: Tools and Methods for Collaborative Innovation Projects Engaging open communities describe in a scientific paper at ICE / IEEE ITMC 2017 (https://hal.archives-ouvertes.fr/hal-01582548v1)

Category: Tourism

23. Bird Flyway

Living Lab: BIRD Living Lab

Host Organisation: Sociedad de Ciencias Aranzadi

Country: Spain

Why. What is the aim of the project?

Bird Flyway is a different way of travelling. Following birds on their migratory paths across Europe, travellers are in direct contact with nature. People have long been fascinated with the migration of birds. The incredible journeys of storks, swallows and geese are a source of curiosity and intrigue which awakens in us the desire to travel and share their routes. This is now possible with an initiative that combines nature and tourism: Birdflyway. Following the migratory routes of the osprey and the greylag goose, participants will visit some of most important natural areas in Europe and Africa. Both of these notable birds reproduce in the north of Europe. While the greylag goose winters on the Iberian Peninsula the osprey journeys to the west coast of Africa. By taking part in this adventure, the traveler will enjoy spectacular natural environments and get to know new cultures and all they have to offer in terms of art, architecture and gastronomy.

What. What is the project about?

Birdflyway is a wonderful journey which allows the participant to design and schedule their route according to their desires. There is no time limit in which the route must be completed and stages can be undertaken in any order. To show that the natural area has been visited some simple challenges must be met in each location. Completed stages are registered in the Birdflyway passport. Birdflyway begins in the north of Europe, in Scandinavia and the British Isles. The migratory route of the greylag goose begins in Scandinavia and crosses Europe until it reaches the Iberian Peninsula. Here it converges with the route of the osprey coming in from the British Isles. While the journey of the goose ends in Doñana, the osprey flies on, crossing the Strait of Gibraltar and reaching the west coast of Africa.

How. Methodology

The BirdFlyway provides a new type of nature tourism. Not only does the trip allow you to share experiences with other travellers, but it also gives you the opportunity to get to know the cultural heritage and the traditions of different places. Users must register in one of the centres involved in the project. Once this has been done, they can choose their first destination and visit it when they want. A series of simple challenges must be completed in each location to allow you to visit and get to know the most important places in the wetland and its surroundings, thus giving tourists the opportunity to visit places of special interest for the observation of birds or places of cultural and historical importance. When all the challenges have been met, a Birdflyway passport is stamped, thus demonstrating that the natural area has been visited and the stage completed.

Impact: Main outcomes

- The creation of an innovative tourism product that aims to implement a new trans-European naturalistic experience based on three fundamental pillars: the places (the natural environments that make up the route), the connection between European nature centers and people (travelers).
- Positive impact on local communities through the enhancement of the places on the route
- Contribute to sustainable tourism development in rural areas.

Category: Social Media

24. ModaSky

Living Lab: Başakşehir Living Lab

Host Organisation: Başakşehir Municipality

Country: Turkey

Why. What is the aim of the project?

The project is a single photo and video sharing platform and the first such platform in Turkey. Video sharing platforms YouTube, Vimeo, Dailymation, etc don't have photograph sharing. On Instagram 'da you cannot share long videos. Instagram doesn't have Web sharing functionality The platform lists sharings according to the Popularity by followers. Other social platforms don't have this functionality. It has a very easy and simple to use and easthetic interface so that people can easily become a member of the site and upload pictures or videos they would like to share with the members. They can also see the trends that are shared by other members

What. What is the project about?

The project is about developing, managing and growing a platform that photos and videos can be shared over a single platform in an easy to use way. The target audience of the platform are (i) corporations who wish to build a culture via photo and video sharing or (ii) companies, agencies, groups or individuals who are wishing to build their brands or (iii) For those who are trying to set certain trends and for those who are willing to follow and comment on trends or (iv) for people who are wishing to show skills and for those who are wanting to discover various skills by looking at videos or pictures.

How. Methodology

The ModaSky Team are a startup of Başakşehir Living Lab. The platform that is being developed is web based, and will also be on mobile. The team believes that for citizens who cannot use global programs and would like to use a simple single platform would be value adding for them. The methods we use for involving citizens is (a) Doing survey on our database of more than 5.000 citizens which involves citizens between 15-65 and (b)

performing alpha and beta testsin the same community that are willing to participate. Başakşehir Living-Lab acts as a coordinator and mediator between the startup and the users.

Impact: Main outcomes

1- The objective is to reach a large Turkish user community and become the leading Turkish brand in Social Trends followers of pictures and videos. The ultimate aim is to earn money from advertisements and from increasing the market value of the company
2- The second objective is to become a international brand that can gather interest from regional countries.
3- The third objective is to also make the platform a skill discovery and uploading platform.