



ASSISTED LIVING TECHNOLOGIES FOR THE HEALTH TOURISM SECTOR

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PROJECT UPDATE

*ALHTOUR project partners came together for the first time in Lisbon at the **European Workshop** on the 8 and 9 March 2016. This meeting also represented the kick-off event of the Alhtour project. The objectives set for the workshop was firstly to analyse the research and innovation needs of the Lisbon University and its territory in view of setting up a Health Tourism Living Lab; and secondly to share relevant best practices of the three "leading partner Institutions" and their territories, in reference to active ageing, the use of assistive technologies and health tourism.*

The workshop, in which partners and stakeholders from Portugal, Belgium, the Netherlands and Italy took part, was very successful. Various interesting presentations were given on research and innovation activities undertaken and experiences from different Living Labs, such as the healthcare living lab 'InnovAGE living lab', located in Leuven, and the 'Academic Collaborative Centre on Care for Older People', a Living Lab in the southern part of the Netherlands, focusing on ageing and long-term care and aiming at a structural multidisciplinary collaboration between research, policy, education and practice.

This was followed by discussion and work in three working groups to further analyse needs, opportunities and challenges towards the setting up a 'Living Lab for Assistive Technologies for the Health Tourism sector'. Each of the working groups focused on one of the three topics considered crucial for the achievement of such Living Lab, i.e. health technologies, health and innovation in care and active ageing and tourism.

*During this first period partners also took part in a series of **transnational onsite visits** carried out in Portugal, Leuven, Maastricht and Italy to study and analyse, directly onsite, the best practices already shared in the European workshop, to get a deeper knowledge and practical insight into the different Living Labs.*

*Discussion, exchange and study visits have allowed the University of Lisbon to complete its **SWOT analysis** designated to help assess and identify its R&I needs. You can read more about the outcomes of the SWOT analysis on page 6.*

*Finally, partners have also carried out a series of **academic symposiums** whose aim was to exchange and transfer knowledge and experience, to mutually share the different onsite experiences and to define specific agendas for research and innovation transfer in each of the project's key sectors. On page 8 you can read more about the academic symposiums.*

Enjoy reading!

Alhtour Project Team

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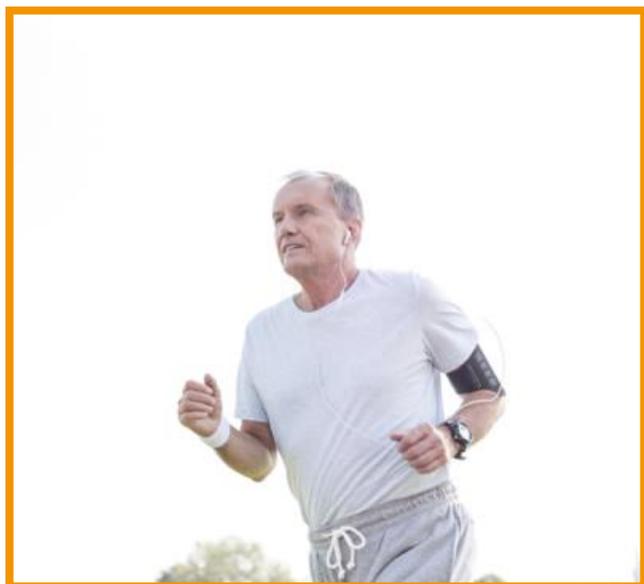
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A longer life expectancy and a greater propensity to travel have gradually increased the importance of silver tourism, becoming a major opportunity for new jobs and growth. The increasing number of older travelers has resulted in a growing demand for tailor-made tourist services for senior people: services able to combine leisure activities and accommodation facilities with appropriate personal assistance. Recent developments in assisted living technologies offer important contributions in responding to these challenges.



'ALHTOUR – Assisted Living technologies for the Health TOURism sector', is a European project financed by the Horizon 2020–Twinning Programme. It aims to step up and stimulate scientific excellence and increase capacity for innovation in technologies for independent living, to be applied to the health tourism industry.

In particular, the project is linking the University of Lisbon with three internationally leading research Institutions through a knowledge transfer process, to prepare for the set-up of a 'Health Tourism Living Lab' in the Lisbon area, identified as a key driver for territorial development.

This is made possible by the multidisciplinary cooperation among the four participating partner universities and the continuous involvement of local stakeholders with the ultimate goal of providing concrete examples and demonstrations of how synergies between research excellence and different business sectors can promote innovation and socio-economic territorial development.

PROJECT IDENTITY	
Full Title	Assisted living technologies for the health tourism sector
Acronym	ALHTOUR
Grant Agreement number	692311
Financing authority	European Commission
Programme	Horizon 2020 – Work Programme 2014-2015
H2020 section	Spreading Excellence and Widening Participation
Call/Topic	Twinning – H2020-TWINN-2015
Type of action	Coordination & Support Action (CSA)
Duration	1 January 2016 – 31 December 2019
Budget	Total budget: 1.175.205,00 € EC financial contribution: : 1.175.205,00 €

PARTNERSHIP



University of Lisbon – Portugal is the largest research and education institution in Portugal with 18 schools and around 50.000 students. In recent years the University has invested in a number of collaborations with leading research-intensive institutions to strengthen its research capacity in the field of health and technology. Alhtour project is involving researchers from the Institute of Social Sciences, the Faculty of Medicine, the Faculty of Sciences, the Faculty of Human Kinetics and the Institute of Technology.



Catholic University of Leuven – Belgium is one of the largest and oldest (1425) university of the country, counting for around 56.000 students of whom 10.000 are foreign students. As a leading European institution in health technologies and a co-founder of the League of European Research Universities (LERU), it offers a wide variety of international bachelor's and master's programmes, all supported by high-quality, innovative, interdisciplinary research. In the framework of the Alhtour project, the University contributes with innovative methods and practical solutions in the field of health technologies and Living Lab methodologies.



Maastricht University

University of Maastricht – The Netherlands is the most international and youngest university in the Netherlands, currently counting 16.000 students of which 45% come from abroad. It is a leading institution in active ageing, health and wellness, and entrepreneurship education. Researchers at the University of Maastricht work in multidisciplinary teams and in close cooperation with international institutes, business and industry. The University is contributing to the Alhtour project with excellence in active ageing, health and innovation in care.



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UNIVERSITY OF MACERATA

University of Macerata – Italy is one of the oldest universities (1290) in Italy with 13.000 students enrolled in different programmes. It is the only Italian university that focuses exclusively on Socio-economic Sciences and Humanities (SSH) and is a leading institution in legal-socio-economic aspects related to active ageing and tourism. The University contributes to the project with advanced multidisciplinary research, amongst others, on elderly people's health conditions, innovative and entrepreneurial attitudes among young people, and with strategies to boost elderly tourism flows.

*The partnership is supported by an **Innovation and Sustainability Advisory Board**, composed of accomplished experts in the field of health tourism, health technologies, active ageing and Living Labs. Its main task is to monitor project performance, to advise and provide recommendations for strategic direction and quality improvement.*

SUMMARY OF THE SWOT ANALYSIS

Discussion, exchange and study visits carried out in this period have allowed the University of Lisbon to complete its SWOT analysis. The SWOT analysis will help to assess and identify its R&I needs and to prepare an Action Plan for the establishment of a Living Lab (referred to as the HEALx-Lab in the report) for the development of assistive technology products applied to the health tourism sector in the Lisbon region.



The SWOT analysis is organised in four sections:

1. In the first section, University of Lisbon clarifies what they mean by 'health tourism' and circumscribe the universe for the development of assistive technology products in this sector.
2. In the second section, it looks for strengths (and weaknesses) of the installed research and innovation capacity (research laboratories, research lines and the innovation capacity) at the University of Lisbon that can support the development of assistive technology products. This analysis is restricted to its faculties and institutes involved in the ALHTOUR consortium.
3. The University then looks into the context under which the Living Lab will operate, in order to identify opportunities (and threats) for the development of the Living Lab. First, with the view of identifying what are the possible needs that the Living Lab will respond to, they review the demand for health tourism services in Portugal. They then look at the installed innovation capacity in the region, and at the key regional clusters with which the Living Lab is expected to interact with.
4. In the fourth and final section they review the main findings of their exercise and discuss how these should shape the development of an Action Plan for the creation of the Living Lab.

The findings of the SWOT analysis can be summarised as follows:

Strengths

A number of internal strengths, on which the University of Lisbon can build for the development of a Living Lab, refers to a set of relevant research infrastructures and research groups in areas that are directly relevant for the development of assistive technologies. The following key areas of expertise have been identified:

- Usability and accessibility of ICT products for individuals with functional limitations
- ICT and gaming solutions for maintaining human functioning and healthy lifestyles
- Technologies for early detection of mental health problems
- Assistive robotics
- Biosignaling technologies

The review also found that, despite gaps in collaborative research at the University there are important complementarities in the research being conducted around two topics: the role of nutrition and healthy life styles, particularly natural resources related activities (sea, wine, thermal waters).

Weaknesses

Despite showing a high level of insertion in international research networks, researchers at the University of Lisbon still struggle to take a leading role in international research consortiums. Also, a visible gap is research on ageing and tourism, necessary in supporting the development of assistive technology products for the health tourism sector. Even more critically, the review identified important gaps regarding the scientific knowledge transfer to the market, reflected by the relatively low number of patents being registered by the University. Poor entrepreneurship spirit in the graduate and post graduate community is also one of its weaknesses in this domain.

Opportunities

On the other hand, apart from a high growth potential of the health tourism sector, the review has identified important opportunities for the development of assistive technology products in three segments of the health tourism sector:

- People travelling to Portugal seeking medical treatments in which the country is price-competitive.
- Tourists looking to maintain their physical and mental well-being, those seeking thermal spas and thalassotherapy, areas where Portugal has important natural resources.
- The segment of foreign individuals who choose the Lisbon region as a secondary residence.

The study also highlighted the importance of tourist infrastructure (airports, spas, hotels, thermal spas) for the deployment of assistive technology products.

Furthermore, despite important gaps in the innovation potential of the regional economy, the Living Lab will be able to take advantage of the strong entrepreneurial environment, as evidenced by a high percentage of innovative SMEs, supported by a network of 16 incubators, accelerator programmes, FabLabs, co-working spaces and strong community of business angels and venture capital. In this regard the analysis also identified important opportunities for collaboration with local highly innovative companies working on ICT, mobile technologies, computer gaming and biosignaling technologies.

Threats

Although the entrepreneurial culture is gaining ground in the region, current important gaps must still be considered: a low level of innovation in the business sector and a low level of collaboration between the research system and local businesses. In addition to this the review has identified some policy/institutional barriers to innovation, such as the high costs of registering and maintaining patents and recent cuts in public funding for R&D.

The SWOT analysis will lay as a basis for the definition of the University of Portugal's research needs and in the definition of a strategic transfer programme which will help to lay the foundations of the Living Lab (HEALx-Lab).

OUTCOMES OF THE ACADEMIC SYMPOSIUMS

How can effective transfer of knowledge and experience take place?

Three International Academic Symposiums have been carried out in the month of June, September and November last year, each of which was dedicated to knowledge transfer in the specific field in which the respective partner organisation has its key strengths.

As such, the first symposium was carried out in Maastricht and focused on ***Innovation in healthcare***, the second symposium was then carried out in Macerata on ***active ageing and tourism in a multidisciplinary approach***, and the third one in Leuven, dedicated to ***health technologies***.

Not only knowledge transfer through discussion and presentations related to the specific topics took place, but also learning from transnational study visits, that researchers of the Alhtour consortium had gained directly onsite, could effectively be shared across the partnership and the research community.

In Maastricht, interesting seminars, living lab projects and discussions on two specific themes took place: Innovation in care and Redesign and quality of care. The symposium seminars were complemented by study visits where partners could learn about different cases of excellence where innovation had been brought to the health care sector in Maastricht. Partners could e.g. study and share onsite experience from the study visit at *La Valence*, which is a purpose built nursing home organised in small-scale homelike care units. It is part of a large care organisation providing long-term care, nursing homes and professional home care. Another interesting study visit was the visit to the *Arion group*, which is one of the most innovative companies operating in the international health care sector and which is a partner of a Dutch Living Lab.



In Italy, partners and researchers could share knowledge and experience on three specific topics: Health and silver tourism, Health technologies, and Gamification. Various interesting presentations and case studies were made, amongst others: "Traditional seaside holidays and slow sport: a breakthrough in tourism", "enhancing place branding reputation through wellbeing tourism: challenges and opportunities for rural areas", "Domotics in a human ecology theory perspective: a case study", etc. Various onsite visits were also carried out, e.g. to the *CreaHub*, which is a recently established incubator to promote successful entrepreneurship, or to the *Flying Farmers initiative*.



Finally, in Leuven, three specific topics linked to health technologies were explored, namely: Activity of Daily Living Detection, Assistive Technologies for elderly and Human Computer Interaction/Serious Gaming. Several presentations were made on these topics amongst others : "Automatic Fall risk Estimation", "Detection of Food intake", "Robot

assisted care and Improving accessibility in mobile contexts", just to mention a few.

Different study visits were also carried out, both to the Division of Biomechanics (Department of Mechanical engineering), the Faculty of Kinesiology and rehabilitation sciences, and to the residential care centre Edouard Remy, situated in the heart of Leuven.



The three symposiums, full of interesting and innovative research outcomes, study visits - to gain deeper practical knowledge into specific topics-, and plenty of opportunities for exchange and discussion among partners and researchers (both guided and spontaneous) have allowed to define specific **agendas** for "research and innovation transfer".



A 4th academic symposium was finally organised in Lisbon where focus was put on **Living Lab methodology**. Several interesting Living Lab experiences were discussed with regards to its methodological approach, such as the Living Lab for Care of Older People situated in Macerata and the innovAGE, a healthcare Living Lab located in Leuven. An onsite visit was organised to

José Mello Residências e Serviços, a company focusing its activities on the development of assisted living and home solutions for the third age, having also two assisted living units.

The 4th symposium was an important concluding event for the three previous symposiums as it had the task to summarise and analyse the outcomes of the three research agendas previously defined in Maastricht, Macerata and Leuven, through an interdisciplinary approach. This made it possible to finally develop a plan for systematic knowledge transfer, to concretely support the prospected knowledge transfer process which shall leverage the University of Lisbon's academic excellence.

FACTS ABOUT TWINNING – HORIZON 2020

BACKGROUND

Horizon 2020 introduces specific measures for “**Spreading Excellence and Widening Participation**”. These measures are targeted at low-performing Member States in terms of research and innovation, and they will be implemented by the Member States most in need of the new Cohesion policy for the 2014-2020 programming period. **TWINNING** is one of these new specific measures for spreading excellence and widening participation.

OBJECTIVE

Twinning aims at significantly strengthening a defined field of research in a university or research organisation from a “Widening Country” by linking it with at least two internationally-leading research institutions in other Member States or Associated countries.

Twinning shall Enhance the S&T capacity of the linked institutions with a principle focus on the university or research organisation from the Widening Country; as well as help raise the research profile of the institution from the Widening Country as well as the research profile of its staff.

SPECIFIC CHALLENGE

The specific challenge is to address networking gaps and deficiencies between the research institutions of the Widening countries and internationally-leading counterparts at EU level. Driven by the quest for excellence, research intensive institutions tend to collaborate increasingly in closed groups, producing a crowding-out effect for a large number of promising institutions. This is the challenge that a specific Twinning action will try to address.

THE PARTNERS

Twinning exercises involve a minimum of three participants:

- ONE institution located in a Low Performing EU Member State/Associated country (applicant organisation and coordinator)
- A minimum of TWO additional partners coming from a EU Member States or Associated Country other than of the coordinating applicant.

EXPECTED IMPACT

- Increased research excellence of the coordinating institution in the particular field of research as a result of the twinning exercise.
- Enhancing the reputation, attractiveness and networking channels of the coordinating institution.
- Improved capability to compete successfully for national, EU and internationally competitive research funding.
- Illustrate quantitatively and qualitatively the expected potential impact of the twinning exercise within the coordinating institution (and possibly at regional/national level) based on indicators like expected future publications in peer reviewed journals, collaboration agreements with businesses, intellectual property, new innovative products or services.

"Widening Countries" are the countries that are ranked below 70% of the EU average of the composite indicator of Research Excellence and include the following countries:

EU: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia.

Associated countries: Albania, Armenia*, Bosnia and Herzegovina, Faroe Islands, Former Yugoslav Republic of Macedonia, Georgia, Moldova, Montenegro, Serbia, Tunisia, Turkey, Ukraine

*Armenia will become eligible as and when Association Agreement comes into force.

The Composite Indicator measures the Research Excellence at national level (with a corrective threshold of 70% of the EU average). It has been selected to distinguish those countries identified as "low R&I performing" or "Widening countries".



The Alhtour Bulletin addresses project partners and project stakeholders. It appears twice a year for the project duration in an e-mail circulation.

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