

# A Collective Intelligent Platform to Support Cancer Champions

## Welcome to the fifth issue of the LifeChamps Newsletter!

We are pleased to announce the publication of the fifth issue of the LifeChamps newsletter.

LifeChamps is a 3-year Research and Innovation Action (RIA), running from 2019 to 2022, funded under Horizon 2020. Its focus is on delivering a smart, personalised, and secure platform that will monitor health outcomes and address cancers' comorbidities of older cancer survivors by preventing long-term side effects and improving Quality of Life (QoL).

The LifeChamps project aims to support and deliver the highest care

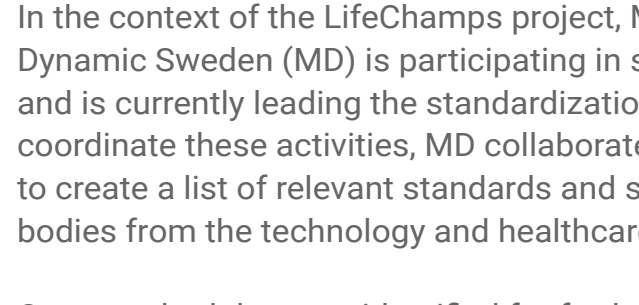
and QoL to older cancer patients, their caregivers, and clinicians, using emerging developments in the fields of Big Data, Data Analytics, and Artificial Intelligence. Furthermore, LifeChamps' objective is to disrupt Big Data modelling, analysis, and aggregation under a novel context-aware data-intensive and large-scale analytics framework towards delivering person-centred care solutions for three different types of cancer (breast cancer, prostate cancer, and melanoma), most prevalent in the older age.

Vision statement:

We believe in a society where ageist stereotypes and discrimination against older adults will be eliminated from the clinical practice.



## Massive Dynamic Sweden leading LifeChamps Standardisation Activities



In the context of the LifeChamps project, Massive Dynamic Sweden (MD) is participating in several tasks and is currently leading the standardization activities. To coordinate these activities, MD collaborated with all partners to create a list of relevant standards and standardization bodies from the technology and healthcare sectors.

One standard that was identified for further consideration is the SS-EN 17398:2020 Patient involvement in healthcare - Minimum requirements for person-centred care (CEN/TC 450). This European standard, which has the status of a Swedish standard, was developed by Gothenburg's University Centre of Person-Centred Care in Sweden and chaired by Axel Wolf. The technical secretariat for the standard's development is the Swedish Institute of Standards (SIS). The standard was approved by the European Committee for Standardization (CEN) in 2020, which brings together the National Standardization Bodies of 34 European countries.

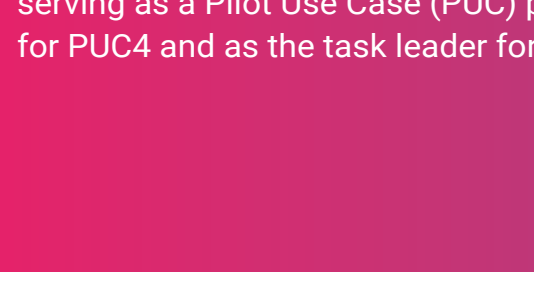
As part of the LifeChamps project's standardization contributions, AUTH collaborated with the Greek standardization body ELOT to translate the standard into the Greek language. Translating standards into national languages may promote quicker adoption.

Furthermore, MD is currently investigating how to use the standard as a tool to evaluate the patient involvement activities that were conducted during the project for the purpose of informing the designing of a healthcare app, retrospectively, MD is working with the pilot partners, APC, and AUTH on this effort. The results will be communicated to the Standards committee, and a communication channel has already been established.

In addition to the patient involvement in healthcare standards, MD is exploring the potential standardization of patient-reported outcome measures (PROMS) specifically for the context of geriatric oncology in collaboration with UoG and AUTH.

To learn more about MD's partners, visit MD's website at [www.massivedynamic.se](http://www.massivedynamic.se). You can also see the partner's team [here](#).

## UoG's Contribution to LifeChamps H2020 Project



The University of Glasgow (UoG) plays a critical role in the LifeChamps project, serving as a Pilot Use Case (PUC) provider for PUC4 and as the task leader for the

'Small Scale Pilots for Training Data Collection' task. Our team at UoG has contributed significantly to the project's design and has provided consultation on the requirements and specifications of the PUC analysis. Additionally, we have led on co-production efforts, the identification of Patient Reported Outcome Measures (PROMs) and Patient Reported Experience

Measures (PREMs) and have published academic research related to the project.

Moving forward, we will continue to support all work packages with our clinical and research expertise in cancer care, in collaboration with clinical experts from the Beatson West of Scotland Cancer Centre.

## LifeChamps Events – The Highlights

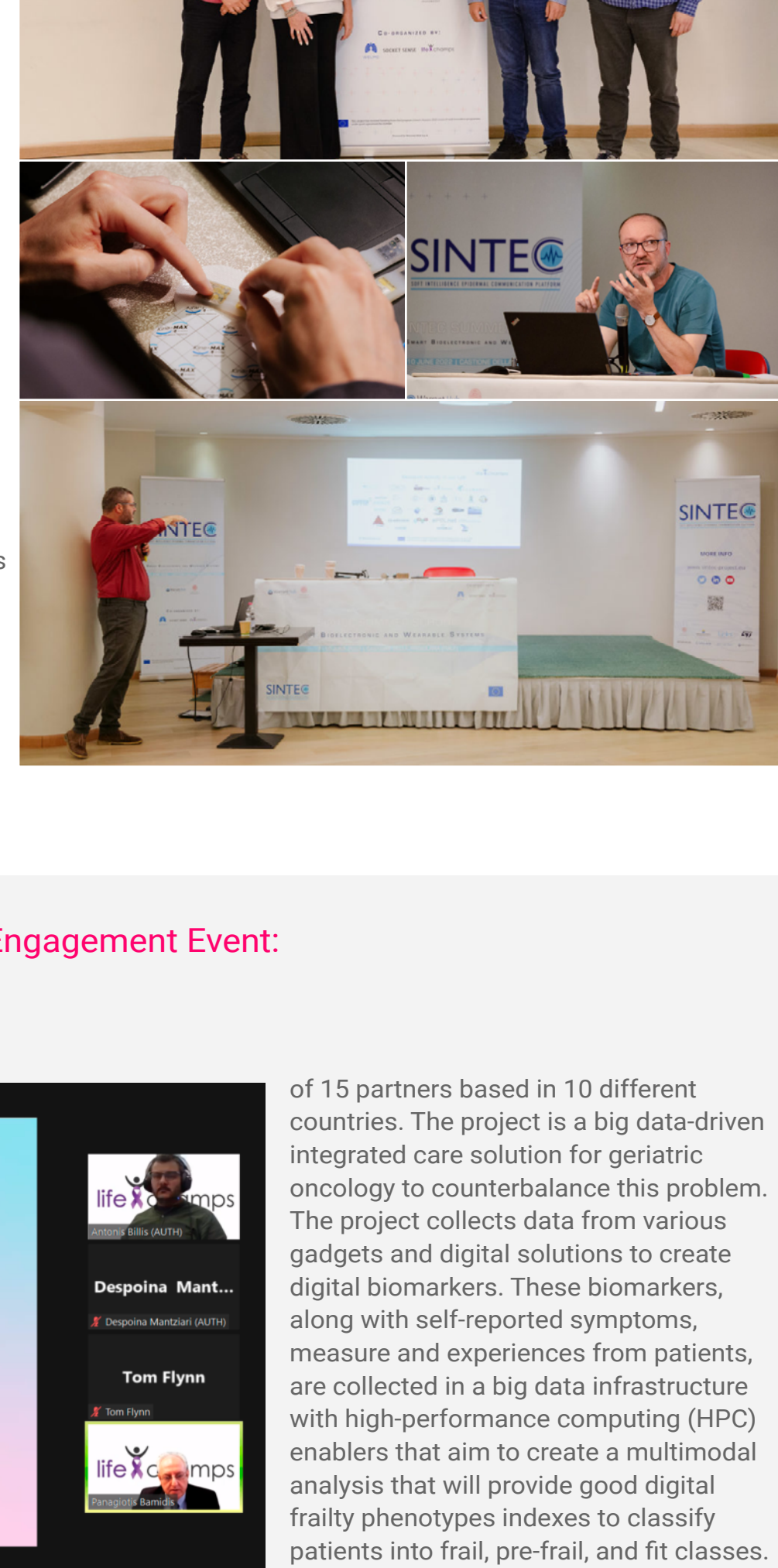
### SINTEC Summer School 2022

The SINTEC School "Smart Bioelectronic and Wearable Systems" was co-organized by the LifeChamps Project and took place from June 7th-10th, 2022 in Bergamo, Italy. The summer school was attended by Dr. Antonis Billis, the Scientific Coordinator of the LifeChamps Project, and Juan Carlos Naranjo, the Senior Technical Project Manager at MYSOPHERA partner. The main aim of this three-day event was to showcase the novelties that the SINTEC project will bring to the wearable sensor sector.

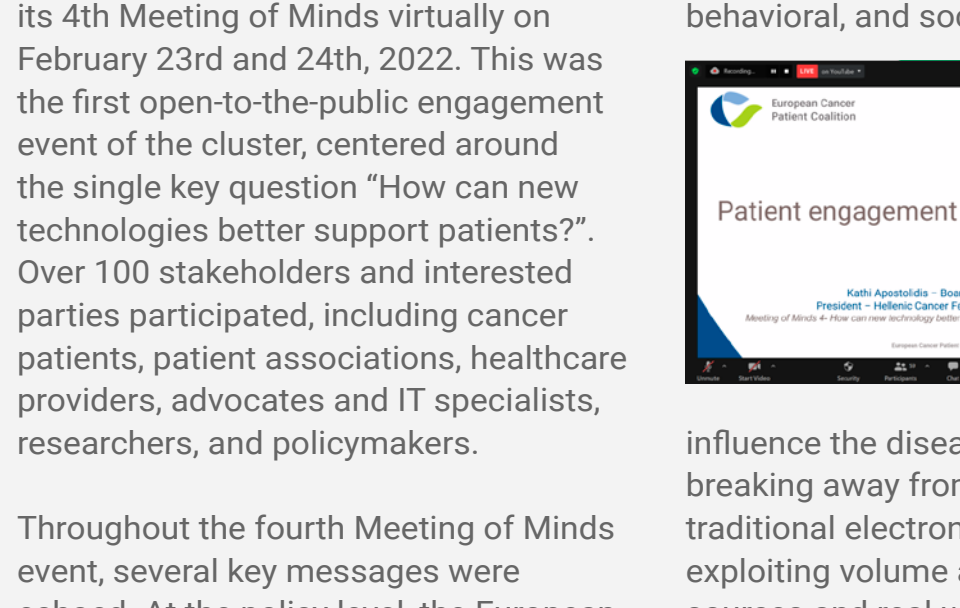
During the event, speakers presented how classic PCB technology can be transformed into a stretchable smart patch and how this sensor can communicate with the latest IoT technologies. They also explained why this innovative research can be useful for healthcare and sport monitoring.

On Day 1, the focus was on the progress made in PCB and Printing Technology to Smart Bioelectronics and Wearables. On Day 2, interesting sessions were held regarding Smart Bioelectronics and Wearables for Sport Monitoring. On Day 3, the LifeChamps H2020 project had a strong presence in the "Smart Bioelectronics and Wearables for Monitoring Health Parameters" thematic session. Dr. Antonis Billis presented the LifeChamps sensing platform and the project's digital biomarkers for monitoring the quality of life of older cancer survivors.

The SINTEC Summer School was a fascinating voyage into the many possibilities that smart devices open for healthcare science. It was also a great networking and liaison opportunity for the LifeChamps project.

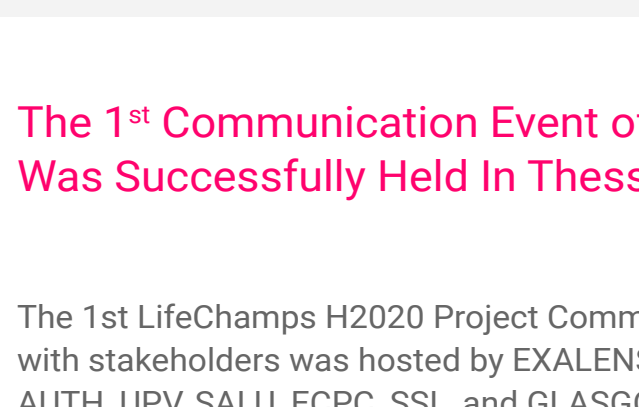


### MoM 4 – Report on The 1st Open To The Public Engagement Event: LifeChamps Was There



The Cancer Survivorship – All for Well-being Cluster, which is a liaison initiative of research & innovation projects LIFECHAMPS, ONCORELIEF, MENHIR, PERSIST, QUALITOP, CLARIFY, ASCAPE, REBECCA, CAPABLE, and FAITH, organized its 4th Meeting of Minds virtually on February 23rd and 24th, 2022. This was the first open-to-the-public engagement event of the cluster, centered around the single key question "How can new technologies better support patients?". Over 100 stakeholders and interested parties participated, including cancer patients, patient associations, healthcare providers, advocates and IT specialists, researchers, and policymakers.

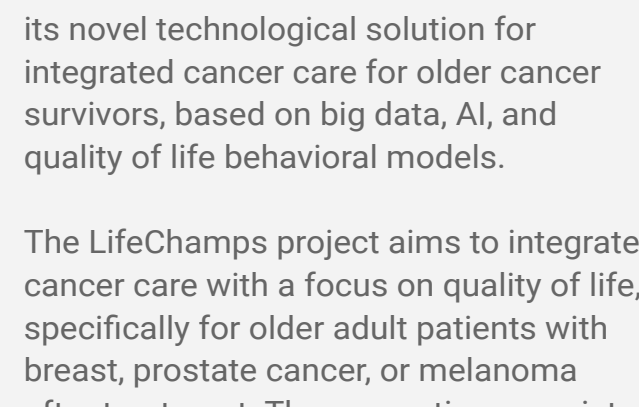
Throughout the fourth Meeting of Minds event, several key messages were echoed. At the policy level, the European Commission explained that the European



Beating Cancer Plan has been activated, and the EU has initiated a program for cancer research that aims to improve the lives of more than 3 million people by 2030 through prevention, cure, and better quality of life for those affected by cancer, including their families.

At the research and innovation level,

notable points were made regarding how technology will support clinicians, how personalized medicine's tailor-made prevention and treatment strategies are key to fighting cancer and improving patients' well-being, how psychological, behavioral, and social factors may



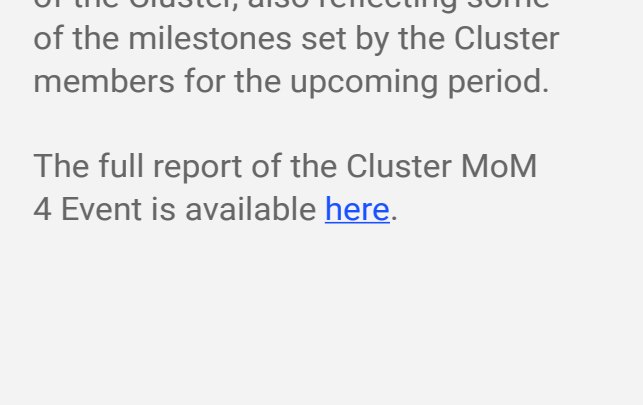
influence the disease process, and how breaking away from relying only on traditional electronic health records and exploiting volume and variety of new data sources and real-world data can improve our research potential and provide cost-effective and efficient health care.

The LifeChamps H2020 project was represented by the AUTH partner, specifically Prof. Panos Bamidis and Scientific Coordinator Dr. Antonis Billis, who presented the LIFECHAMPS R&I framework and its novel technological solution for integrated cancer care for older cancer survivors, based on big data, AI, and quality of life behavioral models.

The LifeChamps project aims to integrate cancer care with a focus on quality of life, specifically for older adult patients with breast, prostate cancer, or melanoma after treatment. The consortium consists

of 15 partners based in 10 different countries. The project is a big data-driven integrated care solution for geriatric oncology to counterbalance this problem. The project collects data from various gadgets and digital solutions to create digital biomarkers. These biomarkers, along with self-reported symptoms, measure and experiences from patients, are collected in a big data infrastructure with high-performance computing (HPC) enablers that aim to create a multimodal analysis that will provide good digital frailty phenotypes indexes to classify patients into frail, pre-frail, and fit classes.

Furthermore, on the same day of the Cluster event, a round table with cancer patients & patient association representatives was organized, coordinated by APC and ECPC, LifeChamps project partners. Dr. Panos Papachristou (APC Coordinator & PI) guided the discussion in the round table, asking the representatives to highlight -according to their experience the importance of patient engagement in research & clinical trials. Alma Zois Thessaloniki (Women with Breast Cancer



Association), an associate partner of LifeChamps in Greece, also participated.

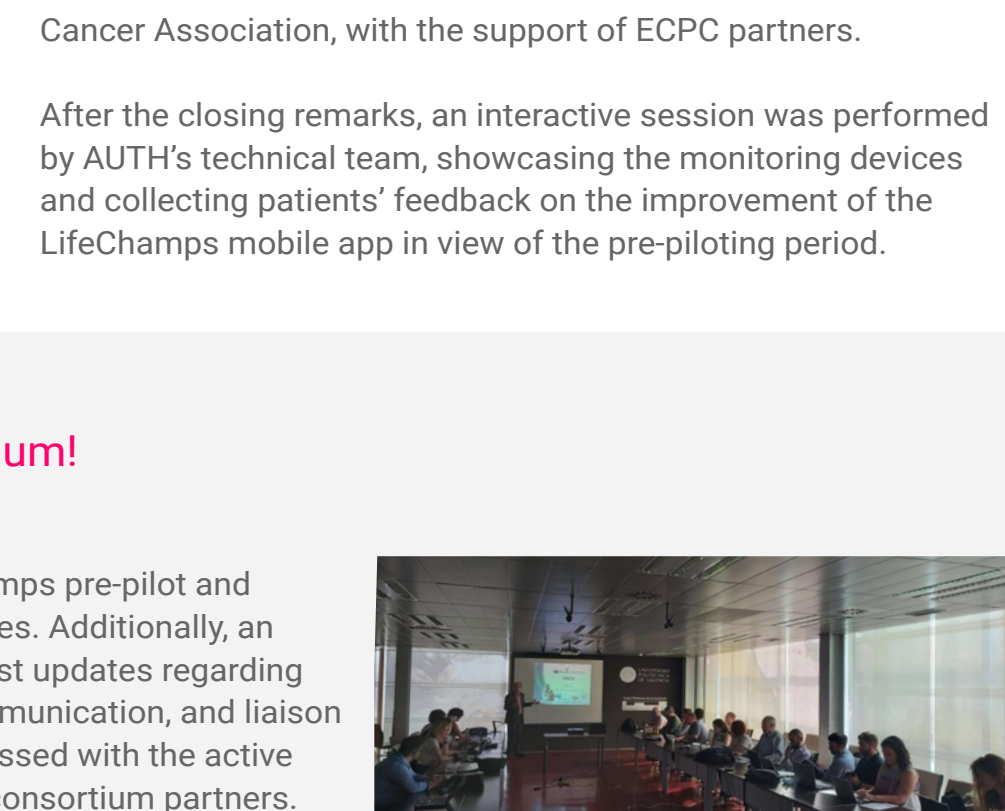
On Day 2, ECPC keynote Kathi Apostolidou gave a passionate speech on the role of patients in R&I, particularly on their motivation to participate in patient-centered clinical and other research initiatives. Finally, in the closing of the event, Dr. Antonis Billis from AUTH moderated an open session, presenting the aims & scopes of the Cluster, also reflecting some of the milestones set by the Cluster members for the upcoming period.

The full report of the Cluster MoM 4 Event is available [here](#).

### The 1st Communication Event of The LifeChamps Project Was Successfully Held in Thessaloniki

The 1st LifeChamps H2020 Project Communication Event with stakeholders was hosted by EXALENS and supported by AUTH, UPV, SALU, ECPC, SSL, and GLASGOW, and took place on June 14th, 2022, in Thessaloniki, Greece. The aim of the event was to inform both the local stakeholder community, including experts and cancer patients, about the latest developments in the project. The event was split into two parts. The first session, which was held in English, was more technical and focused on the project's technological solutions. Partners AUTH, SALUMEDIA, and UPV presented the latest updates to the mobile app for patients and the clinicians' dashboard to representatives from academia and industry.

The second half of the event was held in Greek and involved the active participation of Greek patient associations, older cancer patients, and their caregivers. During a joint session, AUTH, APC, and UoG introduced the LifeChamps' real-life Pilots in Clinical and Home Environment. Additionally, Ms. Kati Apostolidou, President of the ECPC and president of the Hellenic Cancer Federation - ELLOK, gave a keynote speech on the importance of patient engagement in clinical trials. She also moderated a Round Table discussion on the same topic, with the active participation of clinicians from Genimatas &



Papageorgiou Hospitals and patient association representatives from ELLOK and Alma Zois Thessaloniki - Women with Breast Cancer Association, with the support of ECPC partners.

After the closing remarks, an interactive session was devised by AUTH's technical team, showcasing the monitoring devices and collecting patients' feedback on the improvement of the LifeChamps mobile app in view of the pre-piloting period.

### 6th Plenary Meeting for The LifeChamps Consortium!

The LifeChamps Consortium held their first physical plenary meeting in two and a half years on the 20th to the 21st of June in Valencia, Spain. Hosted by the Universitat Politècnica de València-UPV and Hospital Universitario La Fe - HULAFE partners, for the meeting was a great opportunity for the partners to present the project's main accomplishments and discuss its overall progress. Productive discussions took place among all participants, focusing on the project's status and progress since the last plenary meeting, including project management, technical work, and dissemination activities.

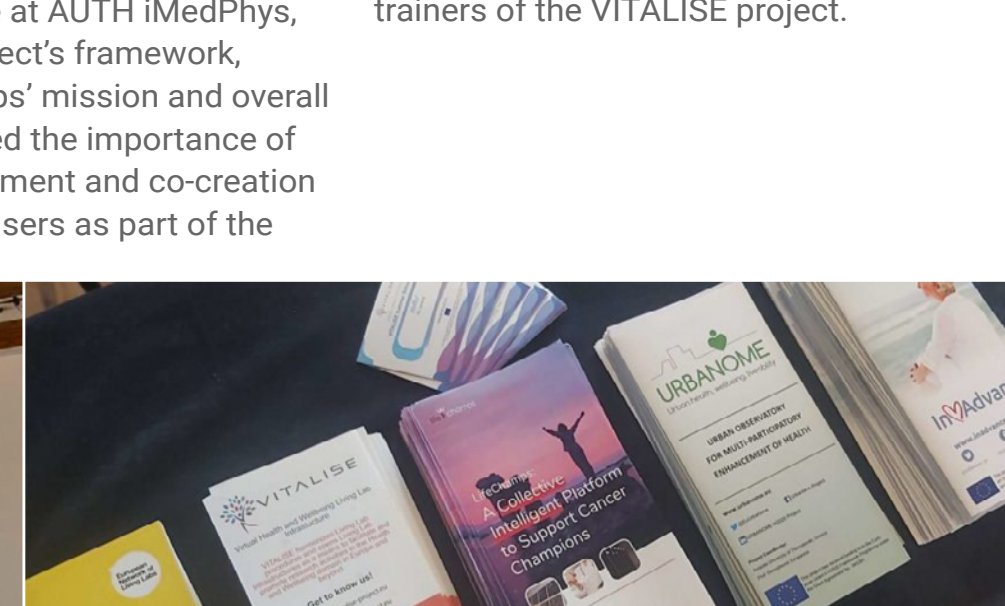
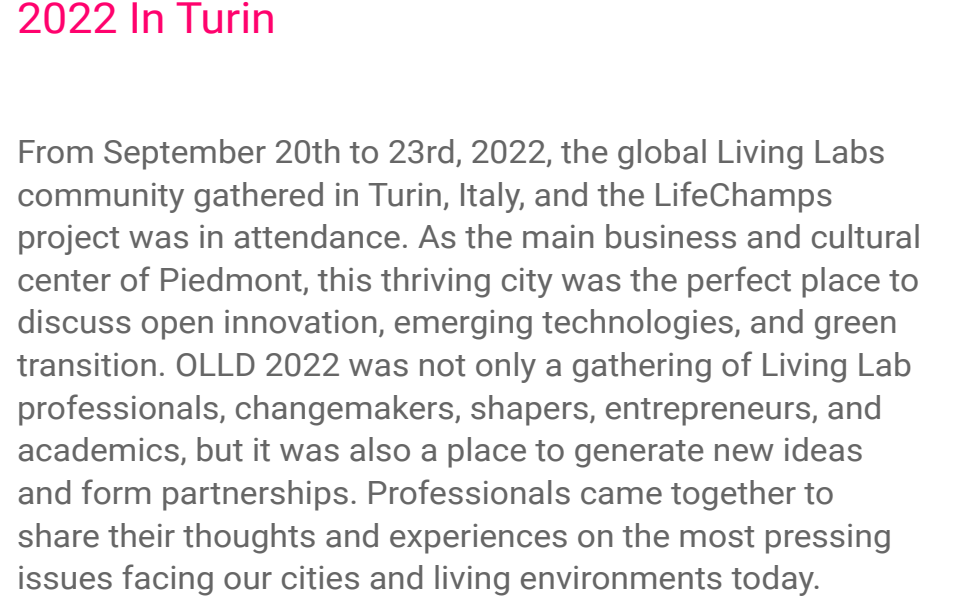
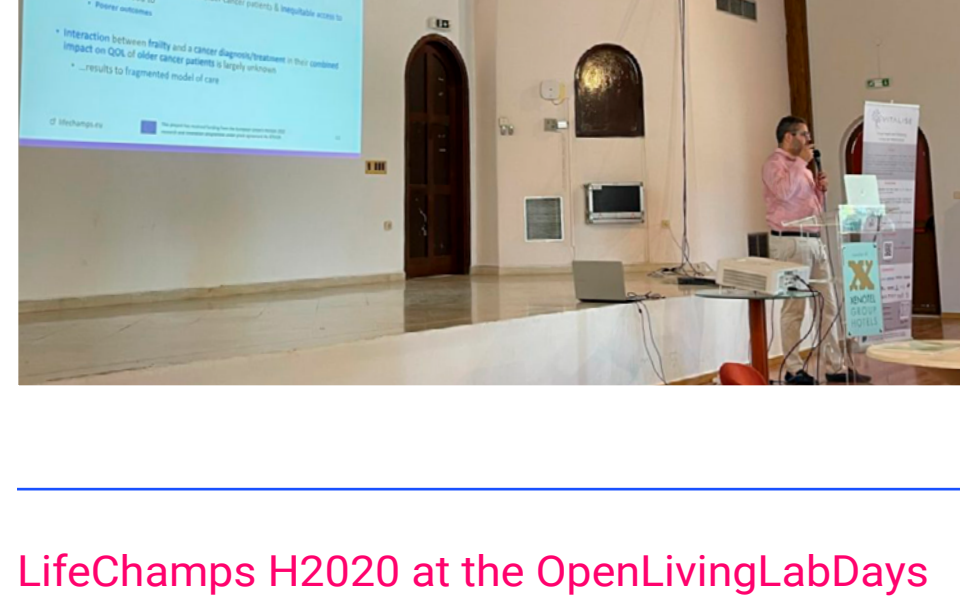
The first day of the plenary meeting focused on demonstrating the project's technology and resolving any issues that may arise during the piloting phase. On the second day, the focus

was on the LifeChamps pre-pilot and real-life pilot activities. Additionally, an overview of the latest updates regarding dissemination, communication, and liaison activities was discussed with the active participation of all consortium partners.



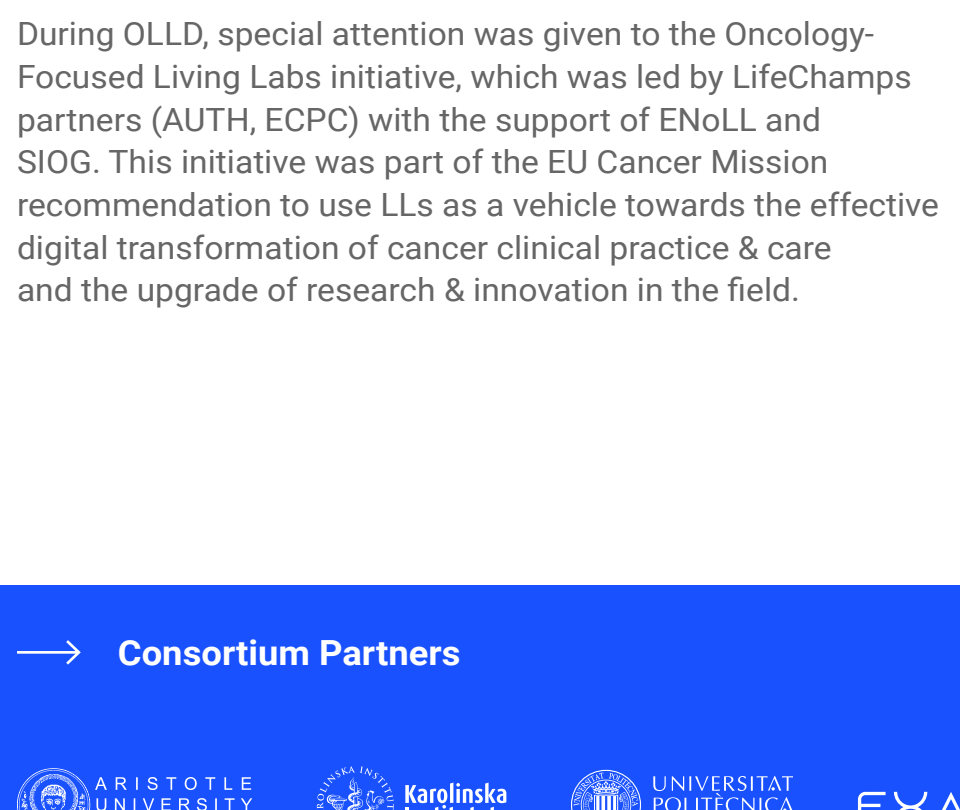
The LifeChamps H2020 Project was invited, alongside two other H2020 projects (InAdvance H2020 Project and URBANOME H2020), to participate in the first VITALISE H2020 Project Marathon School held on July 6-7, 2022, in Marathon, Greece. In a special session on successful case paradigms of Living Lab (LL) methods and tools in EU-funded R&I projects, the LifeChamps team demonstrated how it applies co-creation and LL methodologies in its research.

The LifeChamps team, represented by the AUTH partner, specifically Prof. Panagiotis Bamidis - LifeChamps Project Coordinator, Dr. Antonis Billis - LifeChamps Scientific Coordinator, and Despoina Mantziari - PhD Candidate & Research Associate at AUTH iMedPhys, showcased the project's framework, analyzed LifeChamps' mission and overall aim, and emphasized the importance of stakeholder engagement and co-creation of activities with end-users as part of the



### LifeChamps H2020 at the OpenLivingLabDays 2022 In Turin

From September 20th to 23rd, 2022, the global Living Labs community gathered in Turin, Italy, and the LifeChamps project was in attendance. As the main business and cultural center of Piedmont, this thriving city was the perfect place to discuss open innovation, emerging technologies, and green transition. OLLD 2022 was not only a gathering of Living Lab professionals, changemakers, shapers, entrepreneurs, and academics, but it was also a place to generate new ideas and form partnerships. Professionals came together to share their thoughts and experiences on the most pressing issues facing our cities and living environments today.



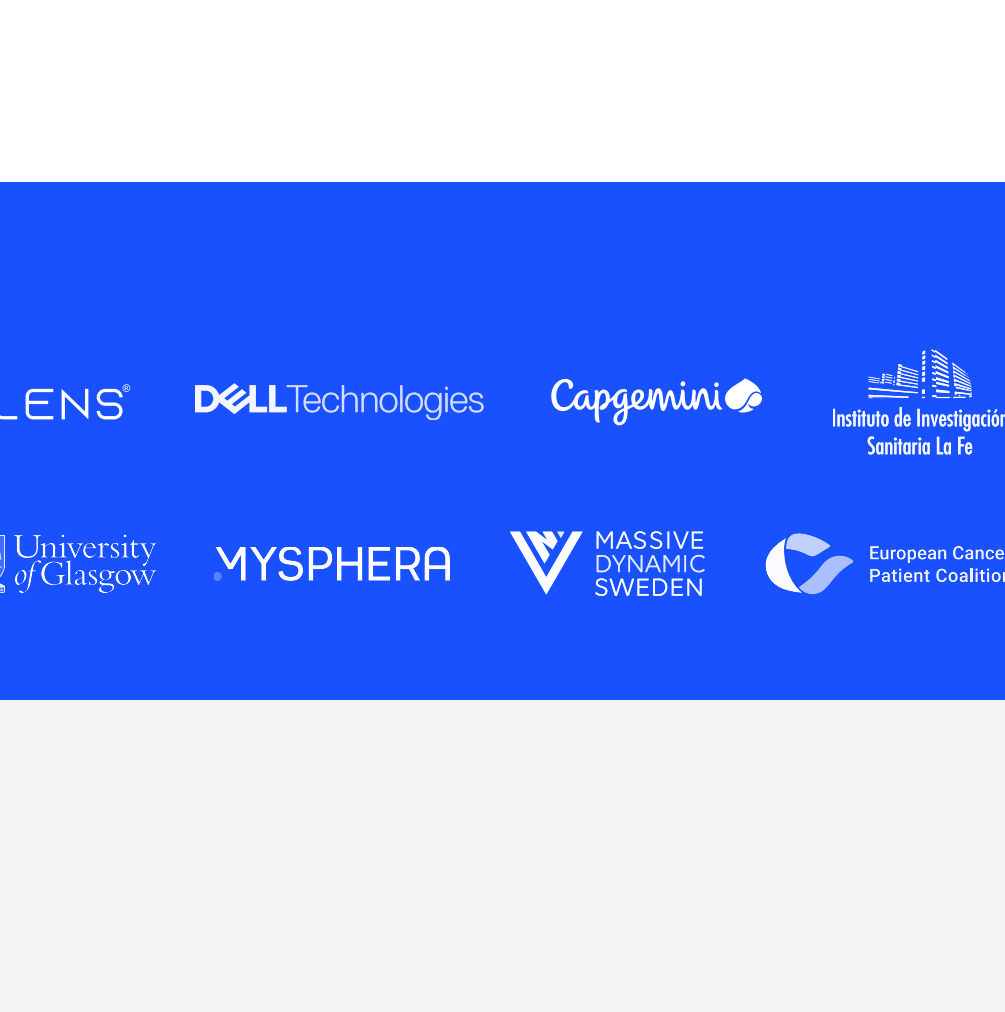
The LifeChamps project was represented by the AUTH partner, specifically by Prof. Panagiotis Bamidis - LifeChamps Project Coordinator, Dr. Antonis Billis - LifeChamps Scientific Coordinator & Despoina Mantziari - Ph.D. Candidate & Research Associate at AUTH iMedPhys Lab. The AUTH team had the opportunity to showcase the project's framework, analyze LifeChamps' mission, and discuss its overall aim.

During OLLD, special attention was given to the Oncology-Focused Living Labs initiative, which was led by LifeChamps partners (AUTH, ECPC) with the support of ENO LL and SIOG. This initiative was part of the EU Cancer Mission recommendation to use LLs as a vehicle towards the effective digital transformation of cancer clinical practice & care and the upgrade of research & innovation in the field.

### Technology Forum Thessaloniki/Beyond Expo 2022: Innovation and Industry Meet Research!

At the end of September 2022, LifeChamps partners AUTH (iMedPhys & DataLab research groups) & Exalens participated in two parallel technological exhibitions & forums, which took place physically in Thessaloniki: The Beyond Expo (29/09-1/10 2022) & the Technology Forum Thessaloniki (29/09/2022).

The Beyond Expo is the first international stage for Industry in South Eastern Europe, the Mediterranean, and the MENA region. The exhibition is designed to address today's needs and become the melting pot of the world's brightest minds, talents, and products. The central theme of BEYOND 2022 was AI technology and its various fields of application. During the two-day conference, internationally renowned speakers, round tables, workshops, and various presentations introduced the audience to the world of artificial intelligence and its impact on modern society and daily life.



Therefore, the Technology Forum aimed to present cutting-edge technologies to enterprises that could be used to produce innovative products and services. At both events, LifeChamps Research Associates from the AUTH DataLab Team, Ioannis Mavroudopoulos & Ilias Dimitriadis, showcased the LifeChamps project in specially designed booths while presenting the latest developments of the project and interacting with the local community of stakeholders.

### Consortium Partners



### Get in Touch

LifeChamps Project  
LinkedIn Group:  
LifeChamps: A collective intelligent platform to support cancer champions

Project Coordinator: Professor Panagiotis Bamidis — AUTH, Greece bamidis@auth.gr  
Scientific Coordinator: Dr. Antonis Billis — AUTH, Greece ampill@med.auth.gr

@LifeChampsH2020  
LifeChamps-H2020



This project has been funded by the European Union's Horizon 2020 Research and Innovation Program under grant agreement N° 875329.