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**FEMaLe**

Call/Topic: Digital transformation in Health and Care

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## Legislation

Legislation H2020 Framework Programme – Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020) (OJ 347, 20.12.2013, p. 104).

Euratom Research and Training Programme (2014-2018) – Council Regulation (Euratom) No 1314/2013 of 16 December 2013 on the Research and Training Programme of the European Atomic Energy Community (2014-2018) complementing the Horizon 2020 – The Framework Programme for Research and Innovation (OJ L 347, 20.12.2013, p. 948).

H2020 Specific Programme – Council Decision 2013/743/EU of 3 December 2013 establishing the Specific Programme Implementing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020) (OJ L 347, 20.12.2013, p. 965).

Rules for Participation (RfP) – Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 of December 2013 laying down the rules for the participation and dissemination in Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020) (OJ L 347, 20.12.2013, p.81).

Financial Regulation (FR) – Regulation (EC, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the European Union (OJ L 298, 26.10.2012, p.1).

Rules of Application (RAP) – Commission Regulation (EC, Euratom) No 1268/2012 of 29 October 2012 on the rules of application of Regulation (EC, Euratom) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union (OJ L 298, 26.10.2012, p.1).

# Finding Endometriosis using Machine Learning: FEMaLe SYNERGY ACTION PLAN

## INTRODUCTION AND STRUCTURE

Synergies in projects come in many forms and have multiple aims, which is why the FEMaLe Synergy Action Plan (SAP) is a key WP9 deliverable, setting up a comprehensive action plan to systematically ensure synergies between FEMaLe internal and external partners, such as existing and relevant networks, projects, clusters, platforms, and EU bodies.

Synergies will help in spreading FEMaLe's results to a broader audience, but they will also enable FEMaLe to learn from other projects' findings, frameworks and experts.

The present FEMaLe SAP summarizes the planning and monitoring of activities related to D9.3, serves as a reference document among FEMaLe Consortium partners and ensures the same underlying understanding of the definition of 'synergy'.

Furthermore, to secure keeping up to date with the action plan for the synergies.

The document is structured with the following chapters:

- Strategy: The Eighth P's of FEMaLe Synergies
- Activities: FEMaLe Synergy Action Plan
- Actions: FEMaLe Partner Synergies So Far
- FEMaLe Codes of Conduct
- Appendix

## 1. STRATEGY: THE EIGHTH P'S OF FEMALE SYNERGIES

Synergy originates from the Greek word *synergos*, which means working together and achieve more than is possible separately.<sup>3</sup> In popular terms, synergy is defined as  $1 + 1 = 3$ , since synergies are business measures that increase the value of the combined business entity more than the sum of its separate units.

As stated, synergies in projects can come in many forms and have multiple aims, but given the objectives, scope, and framework of FEMaLe, we aim to coordinate activities considering current on-going projects or related initiatives and further investigate on the possibility of defining joint actions for synergies.

The synergies will help in spreading the FEMaLe's results to a broader audience but also to learn from other projects' findings, frameworks, and experts. Synergy creation in FEMaLe can be divided into 8 levels of P's:

1. *Project* (Framework)
2. *Partners* (Consortium)
3. *Projects* (Collaboration)
4. *Professionals* (Advisers)
5. *Patients* (Experts)
6. *Practitioners* (Alliance)
7. *Policymakers* (Action)
8. *Public* (Awareness)

### Ad 1. Project – The Half Double Framework

FEMaLe utilizes the Half Double framework, which aims to produce double the impact in half the time.

The Half Double framework establishes a higher degree of communication, collaboration, and co-creation between all key stakeholders, such as the work package team, the project manager, and the project owner.

The Half Double framework is a synergy-based framework, which promotes continuous communication, collaboration, and co-creation. This creates an environment to increase synergy.

By utilizing the collaborative nature of the Half Double framework, the FEMaLe consortium believes that we can create more value.

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<sup>3</sup> Michael Goold and Andrew Campbell, "Desperately Seeking Synergy", *Magazine* (September–October 1998); <https://hbr.org/1998/09/desperately-seeking-synergy> Accessed 19 April 2021.

## **Ad 2. Partners – FEMaLe Consortium**

FEMaLe contains many skilful, insightful, and experienced partners.

To utilize and take advantage of those resourceful partners, we will create synergy by collaborating, co-creating, and exchanging knowledge between the FEMaLe partners and their existing networks, project, clusters and platforms, and EU bodies.

Synergy creation is a shared responsibility in the FEMaLe consortium.

In FEMaLe, we prioritize building bridges between internal and external stakeholders to create synergy. We will do this by firstly uncovering the specific abilities the consortium partners possess. In this way we will have a greater chance of forming synergies by utilizing the multiple abilities the consortium partners and stakeholders hold.

In addition, FEMaLe will create an external Expert Advisory Board and an Ethics Advisory Board. These advisory boards will synergize by assisting and facilitating the decisions made by the general assembly.

Furthermore, it is stated in D2.1 that FEMaLe partnerships emphasize creating an accepting and open environment for all genders and ethics. This opens the opportunity to create synergy by learning and generating reflection for all societal actors, such as researchers, citizens, policy makers, business, third sector organisations, etc.

## **Ad 3. Projects – H2020-SC1-DTH-2020-1**

FEMaLe will activate the collaboration of the H2020 consortia and partners engaged in projects that ended in 2019 or 2020 - they will be invited as ‘Alliance Partners’. Synergies can be created by using the resources already produced by and in ongoing projects.

The reactivation of the collaboration will enhance knowledge exchange for all Alliance Partners and will further add value to the results generated by already ongoing projects in the same H2020 call.

Furthermore, the synergies between FEMaLe and the Alliance Partners will help spread the Project's results to a broader audience but also help acquire knowledge from other Project's findings.

The scanning for projects within the H2020 call (H2020-SC1-DTH-2020-1) has found 15 projects. At this point we have already established contact with 10 of the projects, of which 9 were interested in collaborating. Most of the ongoing H2020 projects have just started and their activities are far from being completed.

Additionally, the projects are still in the process of developing their activities and/or elaborating on their deliverables, planning events and dissemination. The list of all 15 projects can be viewed in the Appendix.

#### **Ad 4. Professionals**

*Professionals* will be invited to join FEMaLe and create synergies. The External Expert Advisory Board (EEAB) will be appointed and steered by the FEMaLe Executive Board. The FEMaLe Coordinator (Ulrik Bak Kirk) will ensure that a non-disclosure agreement is executed between all FEMaLe Beneficiaries and each EEAB member, write the minutes of the EEAB meetings and prepare the implementation of EEAB's suggestions. The EEAB members will be allowed to participate in General Assembly meetings upon invitation but have not any voting rights. The EEAB will assist and facilitate the decisions made by the General Assembly regarding subject matters.

The Ethics Advisory Board (EAB) will be appointed and steered by the FEMaLe Executive Board. The FEMaLe Coordinator (Ulrik Bak Kirk) will ensure that a non-disclosure agreement is executed between all FEMaLe Beneficiaries and each EAB member, write the minutes of the EAB meetings and prepare the implementation of the EAB's suggestions. The EAB members will be allowed to participate in General Assembly meetings upon invitation but have no voting rights. The EAB will assist and facilitate decisions made by the General Assembly regarding ethics.

#### **Ad 5. Patients**

*Patients* are the reason for the existence of FEMaLe, we are here for them and to learn from their collective experiences and use our community channel to spread the knowledge about endometriosis.

#### **Ad 6. Practitioners**

*Practitioners*, such as general practitioners (GPs) and surgeons, can create synergy due to the experience they have with patients and teach us endometriosis at the patient level.

#### **Ad 7. Policymakers**

*Policy makers* have the unique capability to introduce the FEMaLe findings to the broader public as legislation and thereby improve the quality of life of those suffering from endometriosis.

#### **Ad 8. Public**

*The Public* needs to know that endometriosis exists and that when one suffers from endometriosis it is not just 'that time of the month'. A shift in perception is necessary. Here, a high degree of synergy can be achieved by being able to mass communicate to the public via influencers on social media.



## **FEMaLe Beneficiary SurgAR's List of Experts and Advisors**

### **EXTERNAL EXPERT ADVISORY BOARD (ENDORSED MEMBERS)**

Horace Roman	<a href="#">Link to profile</a>
Jörg Keckstein	<a href="#">Link to profile</a>
Marina Kvaskoff	<a href="#">Link to profile</a>
Hélder Ferreira	<a href="#">Link to profile</a>
Caterina Exacoustos	<a href="#">Link to profile</a>
Mario Malzoni	<a href="#">Link to profile</a>
Krystel Nyangoh Timoh	<a href="#">Link to profile</a>
Arnaud Wattiez	<a href="#">Link to profile</a>
Michael Mueller	<a href="#">Link to profile</a>
Mohamed Mabrouk	<a href="#">Link to profile</a>
Engin Oral	<a href="#">Link to profile</a>
Gernot Hudelist	<a href="#">Link to profile</a>
Gaby Moawad	<a href="#">Link to profile</a>
Ceana Nezhat	<a href="#">Link to profile</a>

### **ETHICS ADVISORY BOARD (ENDORSED MEMBERS)**

Yasmine Candau	<a href="#">Link to profile</a>
Fauconnier Arnaud	<a href="#">Link to profile</a>

### **SPECIAL ADVISERS (SCIENTIFIC & BUSINESS COMMUNITIES, ETC.)**

Yves Bayon	<a href="#">Link to profile</a>
Jacques Donnez	<a href="#">Link to profile</a>
David Redwine	<a href="#">Link to profile</a>
Dan C. Martin	<a href="#">Link to profile</a>
Chrysoula Zacharopoulo	<a href="#">Link to profile</a>
Giry Claire	<a href="#">Link to profile</a>
Kathy Huang	<a href="#">Link to profile</a>
Sofiane Bendifallah	<a href="#">Link to profile</a>

## 2. ACTIVITIES: FEMALE SYNERGY ACTION PLAN

The FEMaLe Synergies Action Plan (SAP) engage all the 11 WPs systematically, per their respective focus areas. This means that, among all identified, selected, and targeted initiatives, each WP Leader and Team connects with them in conjunction with the objectives of their WP, respectively. To facilitate the process, the selection process of initiatives follows a practical set of criteria, which are globally defined by the pertinence of the initiative considering:

- **WP1 IMPACT** shift-driven action and sustainability plan
- **WP2 CODE** ethics, gender, inclusion, RRI and Open Science
- **WP3 PHENOTYPE** clinical and psychosocial phenotyping
- **WP4 OMICS** risk classification and subtypes
- **WP5 BIG DATA** digital health monitoring and the Lucy App
- **WP6 DIAGNOSIS** surgical phenotyping using machine learning
- **WP7 VISUAL** augmented reality to improve laparoscopic surgery
- **WP8 DIGITAL** self-management program
- **WP9 BEACON** dissemination, communication and synergies
- **WP10 GOVERNANCE** management, financial, risk and quality
- **WP11 ETHICS** ethics requirements

The FEMaLE SAP acknowledges a global consensus on the fact that to envisage and generate synergies, individuals and institutions must develop with an innovative mind-set, which may be globally summarized by a set of guidelines aiming at structuring the concept of synergies, in particular:

- a) Linking strategic thinking on research and innovation actions (RIA) and development, connecting the strategic scientific and innovation components with the objective of FEMaLe.
- b) Practicing a systemic approach to engaging, connecting and empowering actors, knowledge building and instruments.
- c) Recognising and implementing the most promising opportunities of synergies between pertinent focus areas, considering the local and regional realities.
- d) Synergies between monitoring mechanisms to uptake from tailored action plans and implementation practices and to deliver evidence-based information as to their applicability, transferability, value, efficiency and impact.

The aims of the FEMaLe SAP are to structure and foster the creation of synergies to maximize impact on endometriosis for patients, practitioners, professionals, projects, policymakers, the public etc.

To that end, the FEMaLe SAP proposes a strategic framework that is highly and structurally embedded in the project's structure and work plan:

	Activity	JUNE	JULY	AUGUST	SEPT	OCT	NOV	DEC	Lead
		14-28	1-15 ; 16-31	1-15 ; 16-30	1-15 ; 16-31	1-15 ; 16-30	1-15 ; 16-31	1-15 ; 16-31	
1	All FEMaLe partners have signed NDA.								All FEMaLe Beneficiaries
2	Initial mapping conducted to provide an overview of potential synergies.								Lead: EQUIP
3	Assessment of potential synergies performed to links across projects.								Lead: EQUIP
4	Deep mapping conducted to provide an overview of potential synergies.								All FEMaLe Beneficiaries
5	FEMaLe SAP meetings held to plan the monitoring of ongoing and future synergies.								Lead: EQUIP
6	Online/offline engagement activities to recruit and retain FEMaLe Experts either at local/regional levels or national/pan-EU levels, and either as host/organiser or facilitator/participant.								All FEMaLe Beneficiaries
7	Ensure frequent networking activities with recruited participants between engagement activities.								All FEMaLe Beneficiaries
9	Contribute to the definition of the next FEMaLe SAP activities to start on 1 January 2022, either with suggestions of activities of observations on suggested activities by another partner.								All FEMaLe Beneficiaries

### 3. ACTIONS: FEMALE PARTNER SYNERGIES SO FAR

#### IAAD says...

... we have identified 57 Turkish-based actors so far from a variety of sources, yet specially on the disease of endometriosis, as such, for ML and other related ICT-based environments. We are currently identifying a colleague to lead this part. Once we have an understanding on how synergies would effectively proceed, we will engage all identified actors.

#### Aarhus University says ...

... in WP3, we are currently preparing a consensus study, and hoping to include patients from Hungary, Turkey, UK, France and Denmark. To do so, we have reached out to FEMaLe partners from all these countries to ask them to help us in the recruitment process.

#### University of Oxford says ...

... we contribute our knowledge of questionnaire and survey design in the field of endometriosis to WP3, whilst we are also committed to contribute digital surgical videos towards WP6 and WP7. We have also included Prof Andrew Morris, professor in statistical genetics, to contribute methodological knowledge to WP4, and to the wider FEMaLe consortium.

#### Semmelweis University says ...

... we are actively involved in WP3, WP5, WP6, and WP7. In WP3, we supported to development of the 'baseline questionnaire', and in WP5, we are currently developing the new Lucy application for iOS and Android, including the baseline questionnaire module and the translations. In WP6 and WP7, we started collecting the dataset, and at the same time, the post-operative dataset (of laparoscopic semantic annotated images) is being continuously collected.

#### 'Together it's easier' For Women's Health Foundation says ...

... the existing Lucy App was co-created by Yourcode Lab and 'Together it's easier' For Women's Health Foundation. In WP5, we will support the longitudinal study facilitated by the Lucy App in Hungary. In WP9, we will implement FEMaLe's communication strategy in Hungary to publicize and promote the project and bring visibility to all dissemination. We have a Facebook group for women with endometriosis and their family as well in which women can talk about the difficulties of endometriosis, sharing good practices and also the experts have presentations online two times a month. We are the member of ESHRE, ESGO Engage and The World Endometriosis Organisation (WEO), and we have excellent partnership with other NGOs worldwide, so we would like to work together with more NGO during this project.

#### RTU says ...

... we have contacted a local company, *Longenesis*, for allowing us to access anonymized patients' profiles for enhancing machine learning dataset quality in WP5. We are constantly advertising project-related tasks to gather novel solutions from colleagues, especially data scientists.

## 4. FEMaLe CODES OF CONDUCT (CC)

FEMaLe has a strict Code of Conduct (CC), where all Consortium Partners must sign a non-disclosure agreement (NDA) before collaboration and data sharing.

The FEMaLe CC guidelines are intended to form a basis to aid to responsible and informed decision-making – not to substitute it. It is an aspirational code – not a prescriptive one.

The FEMaLe CC is based on a synthesis of the contents of many existing professional and ethical codes of practice, together with current legal requirements in the EU.

The FEMaLe CC is not designed to pre-empt more detailed codes developed by specific professional associations, academies, or funding agencies. On the contrary, it is hoped that it will provide an aid to the refinement of such codes and the development of new ones where they do not already exist.

The purpose of the FEMaLe CC is not to create new requirements or restrictions on the conduct of research, but to protect researchers from unprofessional or unethical demands and to raise awareness of ethical issues and spread existing professional good practice, enabling the development of a research with common standards that are transparent and universally agreed.

Such common standards are a prerequisite for partners entering FEMaLe on the basis of clear mutual understandings and expectations.

The FEMaLe CC is based on fore main principles.

- Upholding scientific standards.
- Compliance with the law.
- Avoidance of social and personal harm.
- NDA before collaboration.

FEMaLe Experts should maintain the highest standards of behaviour in the performance of their duties by:

- Fulfilling their role as outlined in their written role description to a satisfactory standard.
- Performing their role to the best of their ability in a safe, efficient and competent way.
- Following FEMaLe's policies, procedures and instructions or directions reasonably given to them.
- Acting honestly, responsibly and with integrity.
- Treating others with fairness, equality, dignity and respect.
- Meeting time and task commitments and providing sufficient notice when they will not be available so that alternative arrangements can be made.
- Acting in a way that is in line with the purpose and values of FEMaLe and that enhances its work.

- Communicating respectfully and honestly at all times.
- Observing safety procedures, including any obligations concerning the safety, health and welfare of other people in line with training provided to volunteers.
- Directing any questions regarding FEMaLe’s policies, procedures, support or supervision.
- Keeping confidential matters confidential.
- Exercising caution and care with any documents, material or devices, containing confidential information and at the end of their involvement with FEMaLe returning any such documents, material in their possession.
- Seeking authorisation before communicating externally on behalf of FEMaLe.

FEMaLe Experts are expected NOT to:

- Bring FEMaLe into disrepute, including use of email, social media, engaging with media etc.
- Seek or accept any gifts, rewards, benefits or hospitality in the course of their role.
- Engage in any activity that may cause physical or mental harm or distress to another person, such as verbal abuse, physical abuse, assault, bullying, or discrimination or harassment on the grounds of gender, civil status, family status, sexual orientation, religion, age, disability, race, etc.
- Be affected by alcohol, drugs, or medication which will affect their abilities to carry out their duties and responsibilities while FEMaLing.
- Provide a false or misleading statement, declaration, document, record or claim in respect of FEMaLe and FEMaLers (employed FEMaLe staff).
- Engage in any activity that may damage property.
- Take unauthorised possession of property that does not belong to them.
- Improperly disclose, during or after their involvement with FEMaLe ends, confidential information gained in the course of their role with FEMaLe.

Where a FEMaLe Expert is found to be in breach of the standards outlined in this FEMaLe CC or any of FEMaLe's other policies and procedures this may result in the FEMaLe Expert's position being terminated.

Notwithstanding the foregoing, FEMaLe Experts should note that FEMaLe may terminate a FEMaLe Expert's position without cause.

FEMaLe Experts acknowledge that no employment relationship is created in the context of their role with FEMaLe.

## 5. APPENDIX

Project	Coordinator	Partners	Objective
<p><b>SimCardioTest</b>  <b>Simulation of Cardiac</b>  <b>Devices &amp; Drugs for in-silico</b>  <b>Testing and Certification.</b>  <a href="#">Link.</a></p>	<p>Institut National De Recherche  Eninformatique et  Automatique (FRA)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. University de bordeaux (FRA)</li> <li>2. Universidad pompeu fabra (ESP)</li> <li>3. Universitat politecnica de valencia (ESP)</li> <li>4. Simula research laboratory as (NOR)</li> <li>5. Insilicotrials technologies srl (ITA)</li> <li>6. Sorin crm sas (FRA)</li> <li>7. Exactcure (FRA)</li> <li>8. Boston scientific scimed inc (US)</li> <li>9. Virtual physiological human institute for intergrative biomedical research vzw (BEL)</li> </ol>	<p>Cardiac modelling has dramatically gained maturity over the last decades, with personalisation to clinical data enabling validation. We selected a number of cardiac devices and medicines where CM&amp;S is mature enough and that represent the most common cardiac pathologies, to demonstrate a standardised and rigorous approach for in-silico clinical trials. SimCardioTest will bring a disruptive innovation by creating an integrated and secure platform standardising &amp; bridging model simulations, in-silico trials, and certification support. This environment will go beyond the state-of-the-art in computational multi-physics &amp; multi-scale personalised cardiac models.</p>
<p><b>BRAINTEASER</b>  <b>BRinging Artificial</b>  <b>INTElligence home for a</b>  <b>better cAre of amyotrophic</b>  <b>lateral sclerosis and multiple</b>  <b>ScLERosis.</b>  <a href="#">Link.</a></p>	<p>Universidad politecnica de madrid (ESP)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Universita degli studi di padova (ITA)</li> <li>2. Fciencias.id - associacao para a investigacao e desenvolvimento de ciencias (POR)</li> <li>3. Universita degli studi di torino (ITA)</li> <li>4. Instituto de medicina molecular joao lobo antunes (POR)</li> <li>5. Servicio madrilenno de salud (ESP)</li> <li>6. Fondazione istituto neurologico nazionale casimiro mondino (ITA)</li> <li>7. Preduzece za informacione tehnologije i elektronsko trgovanje belit doo (SER)</li> <li>8. Insilicotrials technologies srl (ITA)</li> <li>9. Echalliance company limited by guarantee (IRE)</li> <li>10. The european brain council aisbl (BEL)</li> </ol>	<p>Patients have to manage alternated periods in hospital with care at home, experiencing a constant uncertainty regarding the timing of the disease acute phases and facing a considerable psychological and economic burden that also involves their caregivers. Clinicians, on the other hand, need tools able to support them in all the phases of the patient treatment, suggest personalized therapeutic decisions, indicate urgently needed interventions.</p> <p>BRAINTEASER will implement a system able to guarantee cybersecurity and data ownership to the patients; will provide quantitative evidence of benefits and effectiveness of using AI in health-care pathways implementing a proof-of-concept of its use in real clinical setting.</p> <p>BRAINTEASER will integrate large clinical datasets with novel personal and environmental data collected using low-cost sensors and apps.</p>

<p><b>ALAMEDA</b>  <b>Bridging the Early Diagnosis and Treatment Gap of Brain Diseases via Smart, Connected, Proactive and Evidence-based Technological Interventions.</b>  <a href="#">Link.</a></p>	<p>Institute of communication and computer systems (GRE)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Ethniko kai kapodistriako panepistimio athinon (GRE)</li> <li>2. Wellics ltd (UK)</li> <li>3. Ey advisory spa (ITA)</li> <li>4. Fondazione italiana sclerosi multipla fism onlus (ITA)</li> <li>5. Universitatea politehnica din bucesti (ROM)</li> <li>6. Spitalul universitar de urgenta bucesti (ROM)</li> <li>7. Norges teknisk-naturvitenskapelige universitet ntmu (NOR)</li> <li>8. Unisystems luxembourg sarl (LUX)</li> <li>9. Wise angle consulting sl (ESP)</li> <li>10. Catalink limited (CYP)</li> </ol>	<p>Direct costs of brain disorders make up for 60% of the total costs – which EBC estimated at 800 bln€/year in Europe.</p> <p>At European level, this health budget far exceeds that of cardiovascular diseases, brain diseases and diabetes together.</p> <p>ALAMEDA will research, develop and exploit the next generation of personalized AI healthcare support systems that improve the rehabilitation treatment of Parkinson’s, Multiple Sclerosis, and Stroke (PMSS) patients.</p>
<p><b>TIMELY</b>  <b>A patient-centered early risk prediction, prevention, and intervention platform to support the continuum of care in coronary artery disease (CAD) using eHealth and artificial intelligence.</b>  <a href="#">Link.</a></p>	<p>UNIVERSITEIT AMSTERDAM (NETH)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Ruprecht-karls-universitaet heidelberg (GER)</li> <li>2. Biotronik vertriebs gmbh &amp; co. Kg (GER)</li> <li>3. Idryma technologias kai erevvas (GRE)</li> <li>4. Private universitaet witten/herdecke gmbh (GER)</li> <li>5. Stichting katholieke universiteit brabant (NETH)</li> <li>6. Iem gmbh (GER)</li> <li>7. Fundacion instituto de investigacion marques de valdecilla (ESP)</li> <li>8. Servizo galego de saude (ESP)</li> <li>9. Capemed ee (GRE)</li> <li>10. Semdatex gmbh (GER)</li> <li>11. Technische universitaet dresden (GER)</li> <li>12. Medizinische universitat graz (AUS)</li> </ol>	<p>TIMELY is a platform that provides AI-powered apps and dashboards and decision support tools assisting patients and clinicians to personalize healthcare based on risk evaluation, outcome prediction and tailored interventions.</p> <p>The platform will be developed based on a functional platform for interoperability with electronic health records and security mechanisms, to ensure information completeness and continuity and to simplify data sharing.</p> <p>AI in TIMELY, built with big retrospective datasets of &gt;23.000 CAD patients, will constantly monitor and evaluate risks and will indicate any deviation from defined therapy goals or unfavorable changes as well as propose proper interventions.</p>



<p><b>IN-4-AHA</b>  <b>Innovation Networks for Scaling Active and Healthy Ageing</b>  <a href="#">Link.</a></p>	<p>SIHTASUTUS TALLINNA  TEADUSPARK TEHNOPOL (EST)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Eit health scandinavian clc (SWE)</li> <li>2. Asociacion cluster saude de galicia (ESP)</li> <li>3. Civitta eesti as (EST)</li> <li>4. European regional and local health authorities asbl (BEL)</li> <li>5. Sihtasutus poliitikauuringute keskus praxis (EST)</li> <li>6. Proud engineers ou (EST)</li> <li>7. Kaakkois-suomen ammattikorkeakoulu oy (FIN)</li> <li>8. Universidade do porto (POR)</li> </ol>	<p>The project focuses on the engagements of existing and needed mechanisms to empower the EIP on AHA ecosystem and the cross-border scale-up of tested and ready-to-use applications towards healthcare.</p> <p>This may lead to the need for change in ecosystem operations to gain the success with mHealth solutions for AHA, more smart age-friendly homes for longer independent living or chronic disease management.</p>
<p><b>e-VITA</b>  <b>European-Japanese Virtual Coach for Smart Ageing</b>  <a href="#">Link.</a></p>	<p>UNIVERSITAET SIEGEN (GER)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Age platform europe (BEL)</li> <li>2. Diozesan-caritasverband fur das erzbistum koln ev (GER)</li> <li>3. Delta dore sa (FRA)</li> <li>4. Engineering - ingegneria informatica spa (ITA)</li> <li>5. Fraunhofer gesellschaft zur foerderung der angewandten forschung e.v. (GER)</li> <li>6. Assistance publique hopitaux de paris (FRA)</li> <li>7. Istituto nazionale di riposo e cura per anziani inrca (ITA)</li> <li>8. Institut mines-telecom (FRA)</li> <li>9. Institut fur angewandte informatik (infai) ev (GER)</li> <li>10. Institut fur experimentelle psychophysiologie gmbh (GER)</li> <li>11. Universita politecnica delle marche (ITA)</li> <li>12. National university corporation tohoku university (JAP)</li> </ol>	<p>The virtual coach will detect preventative potentials and risks in the user's daily living environment by collecting data from external sources and non-intrusive sensors and will provide support through natural interactions with 3D-holograms, emotional objects, or robotic technologies using multimodal and spoken dialogue technology, advanced knowledge graph representations and data fusion.</p> <p>Interoperability and data privacy will be guaranteed using FIWARE and a federated data AI platform.</p>

<p><b>WARIFA</b>  <b>Watching the risk factors: Artificial intelligence and the prevention of chronic conditions</b>  <a href="#">Link.</a></p>	<p>UNIVERSITETSSYKEHUS ET NORD-NORGE HF (NOR)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Universitatea de medicina si farmacie carol davila din bucuresti (ROM)</li> <li>2. Universitetet i tromsø – det arktiske universitet (NOR)</li> <li>3. Universidad de las palmas de gran canaria (ESP)</li> <li>4. Universitetet i oslo (NOR)</li> <li>5. Munster technological university (IRE)</li> <li>6. Ciaotech srl (ITA)</li> <li>7. Netsun software srl (ROM)</li> <li>8. Consiglio nazionale delle ricerche (ITA)</li> <li>9. Universidad rey juan carlos (ESP)</li> <li>10. Sensotrend oy (FIN)</li> <li>11. Melanomforeningen (NOR)</li> </ol>	<p>This project aims at defining a general personalised early risk prediction model that will be used to support individual preventive measures as well as early intervention.</p> <p>New digital tools are designed to empower both citizens and patients. Further, the impact of new digital tools on healthcare pathways are investigated.</p> <p>Three scenarios are included:  1. Chronic sun damage and skin cancer;  2. Late complications of diabetes mellitus;  3. The four main lifestyle risk factors in noncommunicable diseases.</p>
<p><b>SMILE</b>  <b>Providing digitalised prevention and prediction support for ageing people in smart living environments</b>  <a href="#">Link.</a></p>	<p>SYKEHUSET INNLANDET HF (NOR)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Sintef as (NOR)</li> <li>2. Tellu iot as (NOR)</li> <li>3. Norway health tech (NOR)</li> <li>4. McMaster university (CAN)</li> <li>5. Cloud diagnostics canada ulc (CAN)</li> <li>6. Region Sjælland (DEN)</li> <li>7. Kobenhavns universitet (DEN)</li> <li>8. Appinux a/s (DEN)</li> <li>9. Stichting smart homes (NETH)</li> <li>10. Stichting tantelouise (NETH)</li> <li>11. Tendertec hellas monoprosopi idiotiki kefalaiouxiki etaireia (GRE)</li> <li>12. Stichting health clusternet (NETH)</li> </ol>	<p>SMILE has 6 main objectives:</p> <ol style="list-style-type: none"> <li>1. Identify the needs and preferences of older people while living in their home environments.</li> <li>2. Undertake co-creation of easy-to-use digital solutions with older people and novel methods to involve people with dementia.</li> <li>3. Develop a smart AI-based system (Digital Care Facilitator and Conversational Agent) to proactively support older people in daily living.</li> <li>4. To provide acceptable digital solutions when these solutions are introduced into older peoples lives.</li> <li>5. Evaluate the SMILE package to assess replicability and scalability in enhancing living spaces supporting independent, active and socially inclusive living for older people.</li> <li>6. Build Europe-Canada cooperation in replicating, scaling and extending the results of SMILE to benefit the very heterogeneous populations of older people in our societies.</li> </ol>

<p><b>LETHE LETHE (λήθη)</b>  <b>A personalized prediction and intervention model for early detection and reduction of risk factors causing dementia, based on AI and distributed Machine Learning</b>  <a href="#">Link.</a></p>	<p>FH JOANNEUM  GESELLSCHAFT MBH  (AUS)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Medizinische universitaet wien (AUS)</li> <li>2. Universita degli studi di perugia (ITA)</li> <li>3. Karolinska institutet (SWE)</li> <li>4. Terveyden ja hyvinvoinnin laitos (FIN)</li> <li>5. Alzheimer europe (LUX)</li> <li>6. Idryma technologias kai erevnas (GRE)</li> <li>7. Universiteit maastricht (NETH)</li> <li>8. Kaasa solution gmbh (GER)</li> <li>9. I2grow: innovation to grow srl (ITA)</li> <li>10. Stichting egi (NETH)</li> <li>11. Extra red srl (ITA)</li> <li>12. Infotrend innovations company limited (CYP)</li> <li>13. Combinostics oy (FIN)</li> <li>14. The lisbon council for economic competitiveness asbl (BEL)</li> </ol>	<p>Dementia has long been considered to be neither preventable nor treatable, but while the underlying illnesses are not curable, today we know that the disease course might be modifiable with good preventive interventions at an early time point.</p> <p>The Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER) showed a positive effect after a 2-year intervention targeting several lifestyles and vascular risk factors simultaneously.</p> <p>LETHE will go beyond and provide a data-driven risk factor prediction model for older individuals at risk of cognitive decline building upon big data analysis of cross-sectional observational and longitudinal intervention datasets from 4 clinical centers in Europe including the 11- years analysis of FINGER.</p>
<p><b>ISW In Silico World – Lowering barriers to ubiquitous adoption of In Silico Trials</b>  <a href="#">Link.</a></p>	<p>ALMA MATER  STUDIORUM -  UNIVERSITA DI  BOLOGNA (ITA)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Universiteit van amsterdam (NETH)</li> <li>2. Technische universiteit eindhoven (NETH)</li> <li>3. Universita degli studi di catania (ITA)</li> <li>4. Virtual physiological human institute for integrative biomedical research vzw (BEL)</li> <li>5. Sano centrum zindywidualizowan ej medycyny obliczeniowej miedzynarodowa fundacja badawcza (POL)</li> <li>6. Katholieke universiteit leuven (BEL)</li> <li>7. Insilicotrials technologies srl (ITA)</li> <li>8. Universite de liege (BEL)</li> </ol>	<p>The overall aim of the In Silico World project is to accelerate the uptake of modelling and simulation technologies for the development and regulatory assessment of all kind of medical products.</p> <p>This will be achieved by supporting the trajectory of a number of In Silico Trials solutions through development, validation, regulatory approval, optimisation, and commercial exploitation.</p>

		<ol style="list-style-type: none"> <li>9. Erasmus universitair medisch centrum rotterdam (NETH)</li> <li>10. Budapesti muszaki es gazdasagtudomanyi egyetem (HUN)</li> <li>11. Deutsches institut fuer normung e.v. (GER)</li> <li>12. Mimesis srl (ITA)</li> <li>13. Rsscan international nv (BEL)</li> </ol>	
<p><b>SIMCOR In Silico testing and validation of Cardiovascular Implantable devices</b> <a href="#">Link.</a></p>	<p>CHARITE - UNIVERSITAETSMEDIZIN BERLIN (GER)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Lynkeus (ITA)</li> <li>2. Biotronik se &amp; co. Kg (GER)</li> <li>3. Ecrin european clinical research infrastructure network (FRA)</li> <li>4. Institut fuer hoehere studien - institute for advanced studies (AUS)</li> <li>5. Institut fur implantattechnologie und biomaterialien ev (GER)</li> <li>6. Philips electronics nederland bv (NETH)</li> <li>7. Technische universiteit eindhoven (NETH)</li> <li>8. Technische universitaet graz (AUS)</li> <li>9. Universitatea transilvania din brasov (ROM)</li> <li>10. University college london (UK)</li> <li>11. Virtual physiological human institute for integrative biomedical research vzw (BEL)</li> </ol>	<p>SIMCor will address this challenge by providing manufacturers of cardiovascular implantable devices with an open, reusable, cloud-based platform for in-silico testing to accelerate development and regulatory approval of their products.</p> <p>The platform will support device validation along the whole R&amp;D pipeline: from initial modelling and in vitro experiments, to animal studies and device implantation and effect simulation on human cohorts.</p> <p>In particular, SIMCor innovative virtual cohort technology will allow to generate and expose new or existing devices to a range of clinically realistic and diversified anatomies and (patho)physiological conditions, also including extensive paediatric populations, meeting the critical need of testing devices in young patients.</p>
<p><b>BETTEReHEALTH Human, technical and political factors for better coordination and support of e-health in Africa</b> <a href="#">Link.</a></p>	<p>SINTEF AS (NOR)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Universitetssykehus et nord-norge hf (NOR)</li> <li>2. Universitetet i sorost-norge (NOR)</li> <li>3. Stichting digitalezorg.nl (NETH)</li> <li>4. Etablissementsa lievens lanckman (BEL)</li> <li>5. Universitetet i oslo (NOR)</li> </ol>	<p>BETTEReHEALTH will create open access registries by collecting information from African countries regarding e-health policies and existing e-health solutions.</p> <p>The registries will be used to identify best-practices and produce useful knowledge regarding e-health implementation.</p>

		<ol style="list-style-type: none"> <li>6. Association de la technologie de sante a sfax (TUN)</li> <li>7. Ghana health service (GHA)</li> <li>8. Jimma university (ETH)</li> <li>9. University of gondar (ETH)</li> <li>10. Health information systems programmes limited (MAL)</li> <li>11. Pelsmaecker paul (NETH)</li> </ol>	<p>The knowledge produced in registries, together with the input from the other activities will be synthesized into e-health policy roadmaps and strategic implementation plans for better e-health services for the four countries hosting Regional Hubs, but will also be of high relevance for other African countries.</p>
<p><b>iHELP</b>  <b>Personalised Health Monitoring and Decision Support Based on Artificial Intelligence and Holistic Health Records</b>  <a href="#">Link.</a></p>	<p>UNIVERSITY OF PIRAEUS RESEARCH CENTER (GRE)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Athens technology center anonymi biomichaniki emporiki kai techniki etaireia efarmogon ypsilis technologias (GRE)</li> <li>2. Leanxcale sl (ESP)</li> <li>3. Kodar ood (BUL)</li> <li>4. Innovation sprint (BEL)</li> <li>5. Engineering - ingegneria informatica spa (ITA)</li> <li>6. Siemens srl (ROM)</li> <li>7. Information catalyst sl (ESP)</li> <li>8. Universidad politecnica de madrid (ESP)</li> <li>9. The university of manchester (UK)</li> <li>10. Fondazione policlinico universitario agostino gemelli irccs (ITA)</li> <li>11. Marina salud sa (ESP)</li> <li>12. Karolinska institutet (SWE)</li> <li>13. Mediteinsky universitet-plovdiv (BUL)</li> <li>14. Taipei medical university foundation (TAIW)</li> </ol>	<p>The specific focus of iHELP is on early identification and mitigation of the risks associated with Pancreatic Cancer, based on the application of advance AI-based learning and decision support techniques on the historic (primary) data of Cancer patients gathered from established data banks and cohorts.</p> <p>This analysis helps to:</p> <ol style="list-style-type: none"> <li>(i) determine key risks associated with Pancreatic Cancer,</li> <li>(ii) develop predictive models for identified risks, and</li> <li>(iii) develop adaptive models for targeted prevention and intervention measures.</li> </ol> <p>Based on these developments, the project selects high-risk individuals that are invited to take part in the pilot activities or digital trials.</p>
<p><b>ROSIA</b>  <b>Remote Rehabilitation Service for Isolated Areas</b>  <a href="#">Link.</a></p>	<p>INSTITUTO ARAGONES DE CIENCIAS DE LA SALUD (ESP)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Servicio aragones de la salud (ESP)</li> <li>2. National rehabilitation hospital (IRE)</li> <li>3. Centro hospitalar e universitario de coimbra epe (POR)</li> </ol>	<p>Some pathologies like stroke, heart attack, COVID-19 or hip-replacement, may have a dramatic impact in the people health and well-being. Rehabilitation has the potential to reduce, and even reverse these impacts.</p>

		<ol style="list-style-type: none"> <li>4. El sitio de valdelatarra sl (ESP)</li> <li>5. Instituto pedro nunes associacao para a inovacao e desenvolvimento em ciencia e tecnologia (POR)</li> <li>6. Stichting international foundationfor integrated care (NETH)</li> <li>7. The decision group bv (NETH)</li> <li>8. Instituto para la experiencia del paciente sl (ESP)</li> <li>9. Ppcn.xyz aps (DEN)</li> <li>10. Municipio de penela (POR)</li> <li>11. Municipio de soure (POR)</li> </ol>	<p>However, it is a long, intensive in clinical resources, and painful process.</p> <p>Rehabilitation is already insufficiently used, and the ageing population is increasing its demand.</p> <p>Remote areas in some European regions face depopulation. It increases the need of age-related care, and that includes rehabilitation, while resources keep limited and inconveniences of traveling makes the treatment painful and even unfeasible.</p> <p>ROSIA proposes to generate a flexible and scalable value-based model of care, organized around self-management, or self-care. of rehabilitation at home, designed from a tailored integrated care model which optimizes the quality of care and the use of clinical resources. Also, a strong implication of the community is needed.</p>
<p><b>SimInSitu</b>  <b>In-silico Development- and Clinical-Trial-Platform for Testing in-situ Tissue Engineered Heart Valves</b>  <a href="#">Link.</a></p>	<p>4REALSIM SERVICES BV (NETH)  <a href="#">Contact.</a></p>	<ol style="list-style-type: none"> <li>1. Universita degli studi di palermo (ITA)</li> <li>2. Association pour la recherche et le developpement des methodes et processus industriels (FRA)</li> <li>3. Learthiker, scoop (ESP)</li> <li>4. Xeltis bv (NETH)</li> <li>5. Capvidia (BEL)</li> <li>6. Technische universitaet graz (AUS)</li> <li>7. Katholieke universiteit leuven (BEL)</li> <li>8. Istituto mediterraneo per i trapianti e terapie ad alta specializzazione srl - ismett srl (ITA)</li> </ol>	<p>SimInSitu is aiming to develop a sophisticated in-silico method to predict the short- and long-term behavior of in-situ tissue engineered heart valves by combing advanced tissue remodeling algorithms with personalized virtual heart modelling approach. The method will be specifically developed to predict the complex transformation process of biodegradable heart valves from the initially synthetic scaffold into a fully remodeled and functional valve.</p> <p>This transformation process is the core technology for a new generation of very promising biodegradable vascular device currently developed by Xeltis. ETR makes the use of animal derived tissue, which is used in the majority of commercially available bioprosthetic heart valves, obsolete and avoids thereby durability related issues and potentially minimized the need for reoperations.</p>