

## RESEARCH PARTNERS



## APPLICATION PARTNERS



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WWW.REACH2020.EU

REACH  
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## TARGET USERS

REACH represents a solution that seeks to reduce Long Term Care (LTC). It does this by serving as a personalized system for promoting and monitoring the activity of elderly citizens in order to reduce their risk of loss of function and associated morbidities. Evidence from numerous rigorous studies demonstrate that increased levels of physical activity substantially improves health in older adults. In highly industrialized countries, where people are living longer, the levels of chronic health conditions are increasing and the levels of physical activity are declining.

REACH adopts a proactive strategy of detection and prevention by targeting the elderly for whom engagement in physical activities is crucial to their continued independent living. At the same time, by exploiting ambient integrated monitoring, analytics and intervention sensitive to time and location, effective and intervention in the form of motivation feedback, mobilisation, rehabilitation and gamification is enabled.

Based on the large body of recent studies and in particular the European SHARE study, we estimate that the target group of older citizens in European societies who may be able to engage in and gain from the REACH monitoring and activation platform is between 15% and 25% of the  $\geq 65$  population.



## SOLUTION

The project abbreviation stands for Responsive Engagement of the Elderly Promoting Activity and Customized Healthcare. The proposal for this project was developed in 2015 and submitted under pillar 3 of H2020 in societal challenge 1 Personalized Healthcare (PHC). In the European consortium with 17 partners from higher education institutions and industry, the four EuroTech Universities along with the industry partners (including leading European health care technology, rehabilitation, and care and hospital firms) build the core of this project. The total grant amounts around 6 Million Euros.

During the four year's life span of the project, the consortium will work on modular, personalized medical and ethical acceptable solutions integrated in and around buildings (clinical environments, rehabilitation settings, care homes, and home care), which allow an intelligent prediction (considering both personal medical history as well as real-time gathered data from a series of embedded sensors) about the health status of people/patients. Based on forecast and analytic algorithms REACH will allow to provide novel, personalized interventions (customized services, products, and equipment for mobilization and rehabilitation, physical activity, training, food and nutrition, mobility, and patient motivation).



## IMPACT

REACH integrates, extends, and augments the capabilities of existing products and services from the eHealth, wearables, rehabilitation and data analytics markets based on its innovation potential.

A key target is to allow for an economic exploitation of REACH's outcomes (knowledge, products, services, etc.) through Philip's HSDP. REACH's will strengthen Europe's foothold in health care ICT-platforms and platform compatible offers in general and make Europe a world leader in prevention targeting ICT-platforms and offers.

In order to ensure an efficient exploitation of the three outlined major outcomes of REACH, the project intensively address "soft aspects" as privacy, security, ethical, legal considerations, and usability issues to ensure that acceptability and sustainability of these solutions.



## METHOD

The consortium will begin with an in-depth analysis of requirements and particulars involved in the deployment in a naturalistic use-case environment in Lyngby-Taarbæk Municipality in Denmark. Project-internal sub-groups will approach the analysis from a different area of expertise and focus (e.g., Business and Economic perspective; Data Analytics and Recommender Systems perspective; Motivation and Acceptance perspective; Sensing and Monitoring, Rehabilitation Technology perspective). Then key aspects of REACH will be tested in controlled laboratory environments to ascertain the proper operation of the subsystems in development. Following successful laboratory experimentation, the consortium partners will deploy the resulting prototypes in Pilot use-case environments to further develop and test-deploy REACH's verified sub-systems in use-case relevant scenarios.

The REACH Work Plan was constructed such that the objectives and impacts can be systematically and successfully carried out. The project is broken down into 9 distinct Work Packages (WPs).

