Scope

Modern, health and sports related, ICT systems have the ability to acquire considerable amounts of real-time data from the human body on a 24/7 basis using technology that recently has become available. Potentially these personalized and context-aware technologies can, amongst many other things, help to:

a) better understand relations between peoples vitality and their behavioral patterns in daily life related to an active lifestyle (including but not restricted to sports)

b) better understand relations between actual (sports) achievements and activity patterns before, during and after sports

c) better understand the contextual motives shaping active behavior (both socially as well as physically)

This will not only provide new opportunities to improve people’s vitality, prevention, and sports performance but it will also, by recognizing the onset of a health crisis at an early stage, enable early detection- and slow down the possible onset and ameliorate the impact of possible injuries and (chronic) diseases. This can give people adequate information to gain control over their (potential) disorder and manage their personal health state with much greater effectiveness than previously possible, at a fraction of the cost of traditional, curative intramural care.

Vision

The ambition is to establish, together with partners, a Vitality Research Centre where wide ranges of recreational sports- and vitality related data are:

a) Acquired on a 24/7 basis for groups of people requiring/appreciating this

b) Analyzed using state-of-the-art data analytics

c) Integrated into a standardized framework

d) Used to design personalized support for the use of sporters, coaches/trainers as well as for researchers active in the above fields.

Research challenges

a) The acquisition of activity related data from individual people in “everyday life” related to their health and wellbeing.

b) The analysis of this data and translation into scientific models that provide insight in the underlying patterns.

c) The design and validation, in context, based upon these models, of new propositions that will improve the health and wellbeing of these people.

Scientific staff involved

Core team:

Prof. Aarnout Brombacher (BPD – ID) RP leader Quantified self

Prof. Steven Vos (BPD - ID) 
Designerly solutions for vital people

Prof. Wijnand IJsselsteijn (HTI – IE&IS) 
Human Technology Interaction

Prof. Pieter van Wesemael (AUDE - BE) 
Healthy cities

Project examples

Philips Flagship Philips & TU/e Continuous personal health

Marathon Eindhoven (partner since 2013): analyzing and supporting the behavior before, during and after the event especially for (starting) recreational runners

Inspirun: personalized coaching for recreational runners based upon individual activity data

Bouncers: the use of social media techniques to analyze and improve physical activity patterns in social groups

Social Stairs: analysis of physical activity patterns in an office building for use of the design of motivational interventions