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21.04.2022

Call for applications: Apply now for the NTN

Innovation Booster on the theme of MyPhysio@Home

Creative minds and experts from the private, public and academic sectors with an interest in various fields such as data science, physiotherapy, game design, UX design, entrepreneurship, etc. are invited to participate in one or more ideation sessions which will take place on **9 June 2022, from 9am to 5pm, as well as on 16 June and 23 June 2022**. All sessions will be organized face-to-face in Lausanne. The Haute École de Santé Vaud (HESAV) will be the Theme Leader.

Apply here until 27 May 2022 to participate in one or more sessions of this important challenge, which will be led by the Haute École de Santé Vaud (HESAV) and will look at the following aspects:

> "How to design and implement a remote approach based on movement biofeedback and gamification in collaboration with stakeholders (physiotherapists, patients) for them to use mobile applications in their daily practice / lives? And which mechanisms will maintain this motivation over time?"
>
> "How can we use, value and/or monetize the data collected to make senior participants within our community benefit most?"
>
> "After considering the first two axes, which economic model would be suitable to ensure the implementation of the approach in practice?"

Context

Technological progress in the field of tele-rehabilitation progressively offers more and more relevant solutions as a complement to standard rehabilitation therapy and as highlighted during the current pandemic of COVID-19. Moreover, and not only in times of social isolation, home-based exercise programs can be powerful preventive measures to counteract functional decline and falls.

Home care for rehabilitation predominantly concerns elderly individuals and is often aimed at fall prevention and functional lower-limb rehabilitation. Fatal falls and fall-related injury show high incidence rates in seniors worldwide and are a major public health problem. With regards to orthopedic rehabilitation, over 40 000 hip and knee arthroplasties are placed each year in Switzerland mainly due to osteoarthritis. These incidences will continuously increase due to the aging population. After hospital discharge, elderly individuals have difficulties to perform the recommended home exercises due to lack of guidance and stimulation, or fatigue and pain. Camera systems or wearable sensors, particularly inertial measurement units, offer precise measurements of movement performance and good reliability at low cost. Existing applications for fall prevention or orthopedic rehabilitation lack motivational components such as gamification which favor attention and adherence to exercise programs notably in elderly individuals often lacking self-efficacy.

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