

# New interactive app encourages users to adopt healthier lifestyles

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Credit: Ketut Subiyanto from Pexels

The EU PRECIOUS project is harnessing the power of smartphones to help users better track their fitness and encourage healthier lifestyle options.

The project has developed a [smartphone app](#) that will form the primary component of a comprehensive preventive care system to promote healthy lifestyles and help in the fight against Non-Communicable Diseases (NCDs). Most NCDs are indeed preventable through changing four behavioural risk factors: smoking, physical inactivity, [excessive alcohol consumption](#) and an unhealthy diet. The primary challenge though is to not only encourage individual to adapt their lifestyles for the better but also to permanently maintain such changes.

The PRECIOUS app will help to motivate individuals by including an element of gamification into their efforts to adopt healthier lifestyles. Recently, gamification, or the use of game design elements in nongame contexts, has been widely and successfully used to provide motivating experiences in a variety of situations, from learning a new language to studying for formal exams. At the centre of these game-like experiences, is the fact that they exploit the psychological need for satisfaction and as the user achieves goals this need is met. The user then becomes motivated to achieve more goals to continue meeting this psychological need.

By adopting this approach to achieving health goals, the PRECIOUS project team has constructed a personalised system that adapts to the users' specific aims and preferences with the end goal of aiding the user to reduce their risk of developing Type 2 diabetes and cardiovascular diseases. The system collects information about the user from a variety of devices and applications (sensors) that are designed to measure key [risk factors](#) including food intake, physical activity, stress levels, sleep patterns and environmental conditions. Links between these key lifestyle aspects will then enable the system to build an overall picture of the users' health status, which would then be summarised within the app and used to suggest appropriate lifestyle changes and targets.

Moreover, the project partners have also understood how important the

setting of appropriate goals is for individuals' to maintain their motivation. Therefore, the app is programmed to avoid making suggestions that go above the user's own stated goals and their readiness to change, as doing so could result in a loss of confidence. The app also utilises motivational imagery and language to maintain the confidence and determination of the user to achieve their goals.

The project team are now considering the best means of further commercialising the technology. The app has now been released on the Android platform, and the team are currently finalising tests in order to decide which are the best sensor devices to integrate into the overall system. For example, trials have shown that a wearable chest belt is the best device in terms of results and comfort for monitoring an individual's heart rate.

Additionally, a pilot trial has now begun in Barcelona, Spain, with adult obese pre-diabetic patients, who will use the PRECIOUS Android app on a daily basis. The project team will be evaluating participants' overall satisfaction and acceptability of the PRECIOUS system, with a particular emphasis on the motivational and gamification elements, and whether these are a truly feasible solution for making and maintaining healthier lifestyle choices. The results of the trial will allow the project team to decide on whether to make any final modifications to the system before the project's scheduled end in October 2016.

**More information:** For more information, see [www.thepreciousproject.eu/](http://www.thepreciousproject.eu/)

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