

healthyMe mobile and iCare portal: Lifestyle interventions management and privacy-abiding data sharing with carers

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Keywords: Healthy Ageing, Activity Coach, Data Sharing, mHealth, Self Management, Positive Behavioural Change, Behavioral and Lifestyle Interventions, Caregiver, Interventions Manager System, Goal Setting

Abstract: This demo will showcase 1) the modules of the healthyMe smartphone application, 2) the iCare portal and 3) the Interventions Manager Service (IMS), all of which were developed as part of the H2020 SmartWork project. The **healthyMe smartphone application** is the main mobile entry point for the users to collect and visualise physiological, activity and lifestyle data. It is multi-lingual (English, Danish, Portuguese) and is available on Android and iOS. Each module (steps, sleep, heart rate, food diary, weight, exercises) has its own widget, presenting the collected data in daily, weekly and monthly overviews. The integration of external devices supports automatic retrieval of data on physical activity, sleep and heart rate (via the Fitbit integration) and body weight (via Withings integration). The food diary allows users to manually track their food intake, which raises their awareness of the total amount of energy consumed. The office-friendly exercise widget presents a library of video-guided exercises that have been recorded in collaboration with healthcare professionals. The videos allow users to safely perform physical exercises at home or at work at the time of their best convenience. The integrated filter allows the user to select exercises by body parts (shoulders, neck, back, arms, legs). The virtual coach “Amelia” guides users through the application, starting with an intake dialogue through which users can set their activity goals. Depending on their actual level of physical activity that is tracked later on, the goal is automatically adjusted. If a person is less active, the step goal will be adjusted and increased if a person reached their step goals. To prevent demotivation, the automatically adjusted goal is always slightly higher than was reached in the previous week and hence likely to be achievable for the person. The **iCare portal** is a service that allows (in)formal carers to support the older office worker reaching their health goals. Strong focus is placed on privacy and control in that the office worker can configure within the healthyMe service which data they want to share, from which period of time and with whom. After configuration, summaries of health-related information collected within the healthyMe service are visualised in a web-based portal. This way, the carer can monitor the health status of the office worker and provide support for the self-management of health conditions. The **Interventions Manager Services (IMS)** is a centralised component within the SmartWork platform that acts as a smart message hub for triggered interventions. From the back-end service side, the IMS can be called if any of the smart services developed within SmartWork decides that some intervention should be triggered. From the client side, the IMS lets the SmartWork client applications register themselves to be notified of triggered interventions. Through the IMS, all smart services have a single entry-point for delivering intervention triggers, and all client applications have a single entry-point for registering to receive triggers. Another motivation for the single entry-point was to avoid overloading the user with multiple notifications of triggered interventions at the same time. Currently, only one intervention is delivered at a given time, and in the future more sophisticated intervention prioritisation mechanisms can be implemented.

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ACKNOWLEDGEMENTS This work is supported by the SmartWork project, funded by the European Commission within H2020- DTH-2018 (Grant Agreement: 826343).