

# PHS2020

## Roadmapping Personal Health Systems: Scenarios and Research Themes for Framework Programme 7th and beyond

PHS2020 aims at producing a policy-oriented Research and Technology Development roadmap for future ICT-supported Personal Health Systems, focusing on technological developments and applications, but also taking into consideration broader societal trends and issues.

### Objectives of the Project

European countries are facing today the tremendous societal challenge of delivering more and better quality healthcare, while engaging in cost containment given the increasing constraints on public budgets, at the time when healthcare systems are under a great deal of pressure as a result of an ageing population and of other structural factors. While healthcare is probably one of the most information intensive activities in our advanced information and knowledge based economies, information flow and usage is under-optimised and the health sector is the least connected in terms of the latest ICT achievements. Therefore, there is a great potential to help healthcare systems cope with this societal challenge by leveraging ICT through the development of eHealth solutions in general. A potential important contribution can come from Personal Health Systems (PHS).

The PHS concept envisages a new generation of eHealth tools (such as wearable, portable or implantable systems) that empower patients and healthy individuals to manage their health status. PHS facilitate the monitoring of health

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parameters, like vital body signs, at any location (home, work or on the move), in order to help patients manage or treat their diseases efficiently, at their preferred environment. PHS can also assist individuals in remain-

ing healthy, e.g., by supporting lifestyle management for prevention of diseases. PHS are in the hands of the individuals, but also connected to care centres via telemedicine links. In this way, they also provide health professionals with improved monitoring and diagnostic data, to help them offer better care to their patients.

PHS2020 aims at producing a policy oriented RTD roadmap for ICT supported Personal Health Systems. PHS2020 analyses the state of play of existing technologies and applications and elaborates scenarios on possible new emerging ones, taking into account broad societal trends, including user demands, business aspects, etc. The final outcomes are:

- To identify and characterize the key research challenges to be addressed during FP7 and beyond in order to deliver the promises of ICT supported Personal Health Systems;
- to provide an action oriented implementation plan describing the timing and instruments to be deployed to support the most important future research themes;
- to support and inform the management and planning of R&D Portfolio of the EU as well as Member States in the field of Personal Health Systems.

### Project Description

In order to achieve the final roadmap, the project has: a) established a state of play in the field of PHS; b) extracted from the state of play trends leading to the elaboration of four different future scenarios; c) systematically compared the state of play with the scenarios to identify gaps that need to be addressed to support the desirable elements of the scenarios and counter the less desirable ones; d) associated to the gaps various themes for Research and Technology Development (RTD) and/or for other kind of actions; and e) developed these themes into five Roadmaps.

In order to achieve these ambitious goals, a multi-tier approach has been adopted: a combination of desk research and meta-analysis of existing data and scenario building and roadmapping consultation.

PHS2020 has established a standing Expert Support Committee (ESC), meeting five times over the duration of the project to evaluate, comment and validate the deliverables produced. In addition, four consultation workshops and one final validation conference are held. Thus, a total of 10 consultation events are organised, engaging a very large number of experts and stakeholders covering all the relevant expertise and sectors (healthcare institutions and professionals, ICT industry and technology experts, academia, policy making bodies, experts of broadly defined socio-economic relevant topics).

A final Book summarising the intermediate and final results, and disseminating the project findings at a high level, is being published.

## Expected Results & Impacts

The impact of the PHS2020 Support Action can be identified both in terms of immediate project outcomes, and of broader awareness of the potential of PHS. In fact, the project has identified five areas for future technological research on PHS:

- Infusing (Bio)medicine into PHS;
- Intelligent PHS data processing;
- New generation of PHS sensors;
- User-inclusive PHS interfaces;
- Advances on Lab-on-Chip for PHS.

For each of the areas above, PHS2020:

- Developed user-friendly graphic roadmaps and an action oriented implementation plan describing the timing and instruments to be deployed in the next years;
- Advanced meta-proposals for helping to address the implementation gaps identified.

In addition, since in developing roadmaps the process is almost as important as the end result, a side product of the roadmap is also an increasing consensus among PHS interested practitioners and stakeholders concerning:

- The definition of Personal Health Systems (achieved in a cooperative and iterative process with the Commission and the experts and stakeholders involved);
- The current state of play in the field of PHS applications;
- A common vision for PHS in the future, and on what kind of research will be needed to fulfil and exploit the entire potential of PHS.



### PHS2020

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### KEYWORDS

Personalised health, Personal Health Systems, Roadmap, eHealth, Future research themes