PIPS Personalized Information Platform for Life & Health Services
FP6 IST 507019

The current situation of health services is characterized by the demand of high quality services, available to all social groups and Professionals.

PIPS is an e-Health integrated project aiming at the provision of innovative services to the citizen in his/her daily life. Services are personalized and based on preventive/predictive medicine, ranging from drug compliance to continuity of care and impact on life styles.

PIPS Project aims to create a new Health and Life Knowledge and Services Support Environment, improving current healthcare delivery models. The main objective is encompassing the entire set of business processes, professional practices and products applied to the analysis and preservation of the Citizen's well-being using the latest innovations in Information technologies. The project joins Healthcare Suppliers, Citizens, Public Organizations, Food/Drug Industry, researchers, Health Policy Makers, affected by the health status of individuals.

The scope is creating a dynamic knowledge environment giving added value feedback for personalized knowledge and services to improve public’s welfare.

PIPS results will enable:
- Professionals to deliver just-in-time personalized and prevention-focused Healthcare services compliant with the Citizen’s personal health state, preferences and ambient conditions
- Citizens to make informed decisions about therapies and nutrition at any time/place according to the real-time evaluation of their health state
- Healthcare Authorities to improve risk management of Healthcare systems - Actors in the Healthcare delivery value chain to get access to and generate valuable information, assuring the global sustainability of the system.

The technical infrastructure presents these significant core parts:
- Knowledge Management: the aim is transforming heterogeneous information sources in a trusted homogeneous valuable knowledge base
- Decision Support: the aim is using intelligent gents technology to generate new personalised user-oriented knowledge and support action
- Trust infrastructure: the aim is integrating security protocols to protect sensible information
- User interaction: the aim is integrating state of the art and new generation of multimedia personal assistance devices (e.g., home telecare equipment, internet enabled home appliances).

⇒ PIPS healthcare delivery model addresses societal challenges by facilitating the shift from treatment oriented medicine to prevention-oriented healthcare for individuals.
⇒ PIPS develops a health and life knowledge and service environment.
⇒ PIPS approach supports a dependable infrastructure to provide privacy and continuity of care.
⇒ PIPS helps to match the compliance issue by providing support tools to act over the prevalent causes of non-compliance (nonvoluntary, voluntary, abandoning treatment before completion), acting on motivation leverage.
⇒ PIPS provides a wide set of services to all the stakeholders to guarantee the integration across the healthcare value chain and the sustainability of all the system.
⇒ PIPS system will be validated by three levels of Users: Professionals, External Experts and End – Users, that will use the system, highlighting advantages conferred by the proposed approach, coherently with their respective IT literacy.

e-Services for Life & Health Unit

Engineering Awareness

The mission: To demonstrate the ethical, scientific, economic and technological feasibility of innovative personalized services, called “services for Life & Health”

Services for Life and Health provide the individual with personalized and specific information and help to understand the social impact of daily choices and behaviors. These services motivate the individual to follow a more ethical and eco-sustainable lifestyle.

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PIPS is an e-Health integrated project aiming at the provision of innovative services to support the citizen in his/her daily life.

PIPS aims to create a new Health and Life Knowledge and Services Support Environment, improving current healthcare delivery models using the latest innovations in Information Technologies.

Services are personalized on individual's profile and based on preventive/predictive medicine, developing innovative technological solutions, ranging from continuity of care to education and impact on life styles.

Virtual Assistant supporting the Person in every moment and in any environment, according to personal profile, supporting specific needs and exploiting appropriate leverages/strategies.

PIPS technological platform enable wide range of innovative services thanks to:
- Decision Support tools
- Knowledge management tools
- Trust models/tools (sensitive data privacy and protection, trust case)
- Risk management strategies
- Protocols for integration of smart health monitoring, product traceability devices and location-based services.

The impact of the PIPS Platform has been evaluated at the end of every implementation phase, considering the effectiveness of personalized information, the usability of solutions and the efficacy of use. The involvement of end users has been addressed in PIPS as a continuous process, influencing all the project activities.

A validation activity has been conducted in Italy and Spain with interviews with healthcare professionals in the domain of Nutrition and Cardiology. They strongly agreed on usefulness of PIPS system in helping and motivating people to comply better with therapies and in improving quality of life of the individual, even by improving doctor-patient communication.

Patients
Hundred of patients were interviewed between the months of December 2006 and June 2007 in different healthcare centres, among which Diabetes Unit of Hospital San Raffaele in Milan, Centro de Salud De Argüelles in Madrid, and a Dietetics Private Practice Clinic in Barcelona, evaluating different PIPS scenarios.

Patients in Diabetes Unit of Hospital San Raffaele in Milan were involved in the evaluation of the Strolling & Motivating Pilot. First results demonstrated that patients with Diabetes Type 2 need support for Physical Activity and PIPS technology is seen as a valid support. The 75% of the patients interviewed, after PIPS presentation, was more inclined to increase his physical activity participating to a structured Physical Activity program.

Demonstrators and Pilots were developed; spin-off and Clinical Trials were identified and defined. The Scientific achievements reached by the project have been annually evaluated by experts of European Commission as Excellent.

The project has been formally presented to the Press Conferences in Milan, Barcelona and Washington.