FINAL
PROJECT REPORT

Please send this report ELECTRONICALLY to the Central Management Unit (CMU) as well as a copy to the National Contact Persons (NCPs) of the coordinator and project partners

The coordinator of the project must submit this report within 60 calendar days after the final date of the project, on behalf of the consortium.

If you have any additional question,
please contact the AAL CMU at CMU@aal-europe.eu,
or your NCP (see details on www.aal-europe.eu/aal-ncp)

Report date	31/06/2012

PUBLISHABLE PROJECT INFORMATION (TO BE USED BY AALJP)

1A. PROJECT

Project full title	Physical Activity Monitoring for Aging People
Project acronym	PAMAP
Project No.	AAL-2008-1-162
Project Website	www.pamap.org
Project duration	•Starting date: 01/07/2009 •Termination date: 30/06/2012
Coordinator's name and details	Full name: Prof. Dr. Didier Stricker E-mail address: Didier.Stricker@dfki.de Telephone number: (+49) 631-20575-3510

1B. PROJECT PARTNERS

No.	Partner organisation name	Partner org. acronym	Type*	Project costs: Public grant in Euro	Project costs: Partner own contribution in Euro
1 (coord.)	German Research Center for Artificial Intelligence GmbH	DFKI	RTD	605.167 €	212.626 €
2	INTRACOM TELECOM	ICOM	Large	600.000 €	300.000 €
3	University of Compiegne	UTC	RTD	252.512€	158.652€
4	TRIVISIO Prototyping GmbH	Trivisio	SME	446.574 €	251.197 €
5	Centre Hospitalier Universitaire de Rennes	CIT-INSERM	END USER	224.464 €	-

**Please select one of these options: SMEs, Large, END USER, RTD, other*

1C. PUBLISHABLE PROJECT RESULTS SUMMARY *(1 PAGE)*

In this section, please present the results of your project, including the following information:

A daily balanced physical activity is essential for an active retirement; it represents a fundamental indicator of good health and life quality, and it is an important factor in primary and secondary prevention of diseases, as well as, in rehabilitation. These arguments are documented in various medical studies. However, the daily physical activity is far below the recommended level, especially among the elderly population. Moreover, elderly are often not used to physical activity practice.
PAMAP has therefore developed an ICT-based system for accurately monitoring and promoting the physical activity of elderly in both specific structures and in daily life at home for both private (primary prevention) and professional use (secondary prevention and rehabilitation). The purpose of this system is to enable better supervision of therapies and success measures, and encourage elderly to improve their level of physical activity. The PAMAP technology is expected to support a shift from institution-centered healthcare services to personal and personalized healthcare, and to bring forward self-management and independence of elderly.
The PAMAP system consists of four major self-contained components: Body-worn sensory equipment (miniature inertial sensors, heart rate monitor) and a mobile processing unit are used to acquire information. Innovative information processing technology has been developed to extract the relevant parameters of physical activity. Motivating user interfaces provide instant feedback and guidance during exercising and should encourage elderly to improve their level of physical activity and learn associated good practices. An Electronic Health Record and Care Management application with web and i-TV interfaces enables management, sharing and reviewing of collected activity data, and facilitates healthcare professionals in the maintenance of a comprehensive medical record of their patients, and in the establishment and follow up of personalized rehabilitation and physical activity plans for them.
Two key innovations of PAMAP are (1) providing a holistic way of physical activity monitoring by supporting monitoring, guidance and follow-up of typical aerobic activities to promote cardio-vascular health and strength exercises to improve or maintain strength and balance and (2) supporting personalized monitoring adapted to the elderly population. Hence, fit and healthy elderly can profit from the PAMAP technology, as well as, i.e. cardiac or functional patients, who represent a high percentage of cases in the elderly population.
A clinical study based on individualized exercise programs for fit and healthy elderly, cardiovascular and functional disease patients has been carried out at the end users' site (November 2011 to June 2012). Altogether 30 subjects (10 cardiovascular, 10 functional, 10 fit and healthy) between 60 and 85 years participated. Technical evaluation of the algorithms and the components working together, evaluation of feasibility and usability of the user interfaces, and evaluation of the system in terms of helping the user in his involvement in regular and long term physical activity is under treatment during the period of preparation of this report.