# Classification of Application Services for Personal Wellbeing Information Management

## Juha Mykkänen[a], Mika Tuomainen[a], Pekka Muukkonen[b], Timo Itälä[c]

[a] *HIS R&D Unit, University of Eastern Finland, Kuopio, Finland*
[b] *Department of Information Technology, University of Turku, Turku, Finland*
[c] *SoberIT, Aalto University, School of Science and Technology, Espoo, Finland*

## Abstract

*Personal information management has been proposed as an important enabler for individual empowerment in relation to wellbeing and health information. In the MyWellbeing project in Finland, a citizen-driven concept of "Coper" and related architectural and functional guidelines have been specified. We present the classification of identified application services to support personal wellbeing information management.*

### Keywords:

Citizen empowerment, Service-oriented architecture, Standards, Personal health records, Interoperability

## Introduction

In healthcare, the transition of health care system from provider-centric to patient-centric or consumer view has been seen both necessary and inevitable. This requires empowering individuals to better manage their own wellbeing and health care and enabling them to communicate more easily with their care providers. Personal Information Management (PIM) solutions have been suggested to promote this. The MyWellbeing (OmaHyvinvointi) project is a national-level R&D initiative in Finland which focuses on citizen using different kinds of services electronically and in the real world. The initial focus is on applications concerning health and wellbeing, but also other areas such as insurance, housing and day care for children are considered, in a holistic conceptual framework.

## Materials and Methods

The objective of this work was to specify a service-oriented functional architecture for the Coper and to identify modular SOA (service-oriented architecture) services for personal wellbeing management solutions. A classification of different types of services for personal wellbeing information management was also pursued. The work is based on literature and standards survey, documented experience from citizen eService development projects in Finland and internationally, and results from nine workshops of the project. Several existing components and products as well as interoperability standards were positioned in relation to the architecture.

## Results

The architecture is based on the *dual model* of services: the citizen or customer has the right to receive a copy of documents from provided wellbeing services. Based on the results of the workshops and surveys, a total of 62 services were identified. They were positioned and classified into basic types which share many functional, platform, information or interactivity requirements (See Figure 1). The classification is generic, and all services were located in one of the service classes.

Core functionalities, personal information repository and user interfaces are basic building blocks of Coper. Identified types of SOA services include presentation, platform, information source, and added value services. Platform services include information, communication and user management services. In addition, added value services are grouped into personal, community, knowledge and provider collaboration services.
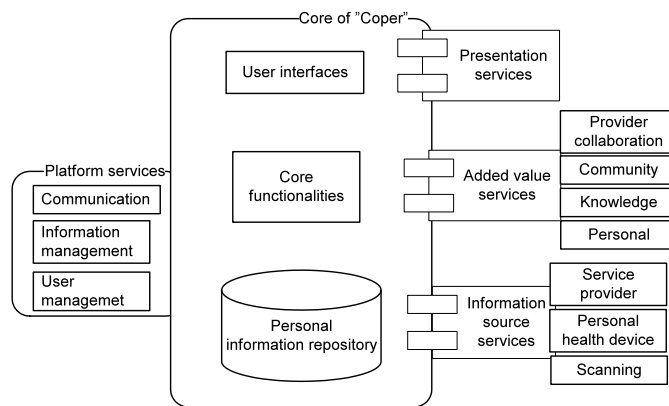


*Figure 1 - Classification of services supporting personal information management.*

## Address for correspondence

Juha Mykkänen, University of Kuopio, HIS R&D Unit, P.O.B. 1627, Fi-70211 Kuopio, juha.mykkanen@uku.fi