



Open source solutions in public health services

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Abstract

Introduction: Open source is a concept related to freedom. The user is free to:

- Run program anywhere with any purpose and for ever
- Study the source, and even adapting it to our own needs
- Redistribution
- Improve the software code and publishing those improvements

All these freedoms are guaranteed by a license.

The main reason for open source are ethical (“software is knowledge, and knowledge must be distributed without fences”, Free Software Foundation), and practical (“open source offers technical and economical advantages”, Open Source Initiative).

Open source in Public Administration allows for independence of vendors, avoiding giving priorities to specific companies, and also makes easier the adoption of standards. It also makes easier maintaining data and information in open formats and access. Public Administration is a big consumer of software, and when they promote the generation of free software, they make it available to citizens at no cost, like Molinux in Castilla-La Mancha.

In order to promote the use and implementation of open source software in Public Health Services of Castilla-La Mancha (SESCAM), a Centre for Innovation in Open Source in Healthcare (CISOS) was created in 2005.

Esculapio: This project has allowed computerization of over 250 primary care centres in Castilla-La Mancha, including access of electronic patient records.

Hospital information systems (HIS): Several actions have been performed, like migration of HP/UX to Linux in HP-HIS, and use of Enterprise 3.0 AS, Kernel 2.4.21-SMP and Software Cluster RedHAT with 8 support nodes. A very significant increase in performance has been observed after that change.

Extended Enterprise Processes (EAI): The EAI acts as a communication system that allows that different information systems can work integrated with flexibility and platform and geographical independence. Based in BIE v6.0.5, available in SourceForge, SESCAM has created a new integration solution called HIGEIA.

Centres of Innovation on Information technology (CITIs): Advanced telecommunication and software development solutions are studied, tested and implemented in these centres, where physicians from specific medical specialties and engineers work jointly in hospitals, coordinated by the central R+D+I unit in Toledo. Nowadays the following CITIs have been created: Dermatology, Pathology, Nuclear Medicine, Gynaecology, Gastroenterology, Ophthalmology, and Cardiology.

Projects forge: All these institutional projects are coordinated with an enterprise application integrator open source. This is necessary for planning, personalizing, integration (also with external systems).

Compromise with the future: The compromise of the SESCAM with open source include the growing of CISOS and CITIs activities, a electronic health record based in open source solutions, including a study of viability for PACS.