

UDC 004

OPEN SOURCE APPROACH TO PROJECT MANAGEMENT SYSTEM

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Managing large projects and involving different groups of people and complex tasks can be challenging. The solution is to use Project management software, which allows more efficient management of projects.

The project management (PM) has got detached from standard management disciplines for some last decades and has evolved into an independent one. The need for PM emerged as the economic situation has become relatively stable. In a state of transition PM cannot be applied so successfully as unstable environment situation isn't being given good forecast, and as a consequence, risks may appear here. According to the DEX [Data Exchange Specification], the definition of a project is: to take a plant, to do something; an intention; the first drawing or first ideas about something that is to be made or to be put into execution. Although, current practice identifies the project itself with the work to be completed but according to business planning activity business requirements and project management are separated from the project itself. PM requires a degree of professionalism, which increases simultaneously with increasing project complexity. The increasing number of factors involved in running a project, high values and limited resources turn everything into a highly complex activity [1].

Project management software market encloses a lot of products. From all there, a free or open source (OS) is considered to be a special category, being perfect for small business. A reason is the fact that such business actually do not **need** to buy huge project management software, but to understand the value of a well-founded project management. This free software generally provides only basic functionality such as time lines rudimentary, PERT charts, or Gantt charts. In terms of costs accounting line their offer is weak, particularly for the risk management and customer support.

Some client-server software project management is more specialized in niche areas. They are more targeted to desktop software and offers rich features such as the Gantt and PERT charts, risk management, Critical Path Analysis, EVA, accounting and resource utilization.

Sophisticated online web-based enterprise-wide project management solutions allow project members to report task evolution and report the details of their progress online. This, in turn, allows the project manager to readily understand the status of the various participants and to focus on the issues that are most important. There are web-based solutions that can be operated from anywhere in the world. This means that everyone from top management to the frontline workforce can access project-related information anytime. Outside subcontractors as well as customers, can log onto their relevant separate part of the project and get to track it. All other modules there are usually useful considering the timesheet modules, project calendars and email notification, helping the manager to monitor and to be proactive about both costs and time deadlines.

As it was mentioned in the introduction to this paper, a PM must provide modern software tools for planning, organizing, managing and collaborating within and across teams in order to reach the project goals and objectives. Classical solutions, offline and standalone are not good enough for these tasks, as they do not offer modules collaboration and as the communication between project members is made difficult. Web-based PM software comes with collaborative tools that facilitate fast and efficient management of tasks and activities. It is more comfortable to work with Web-based applications, so the increasing number of Web-based alternatives is not a surprise. When a company chooses to use online PM software, maybe it is because it does not want an application hosted on a server hosting company being paid as a monthly subscription. Some companies want to install software on their own server, assuming all responsibility for IT matters arising from there. A few years ago installing and configuring a Web server database and associated scripting language (e.g., Apache, MySQL, PHP), that was able to support an online software was a relatively difficult task that required the presence of an IT specialist. But currently there are OS application packages like XAMPP, WAMPP that make these tasks simpler to reach, even for a person who has a minimum IT knowledge.

Why should we choose open source software project management solutions? There are different levels of complexity for PM software, priced between 30 and 20.000 dollars or more. However, not everyone has the budget necessary to start with a PM commercial solution, such as Microsoft Project or something similar. Microsoft Project is undoubtedly a powerful tool for PM, an incredibly capable application, but often too complex

and exclusively targeted to the project manager. Similar situation can be encountered with Office package, 80% users using only 20% of the many features of Microsoft Project [2].

When a project manager needs software to improve collaboration or planning of a small project, he may choose simpler solutions for PM. Forexample, one can choose software collaboration features and simpler planning such as Microsoft Outlook, SharePoint and Visio to solve problems. When, however, managers are challenged with large projects, planning or collaboration work may exceed the possibilities of normal software. In this situation some PM system is required and free and OS software (OSS) can be probably a good choice. The ticketing system and the management tasks are comprehensive, even if it has many forms. This is probably due to the fact that these applications are written by Web developers who understand the importance of a comprehensive system management tasks. This, online PM applications, by contrasting to commercial OS, are noted through a detailed task management. Commercial applications, on the other hand, are distinguished by attention to detail in the user interface. From simple presentation sites or portals, to collaboration and information complex sharing, in dynamic pages, from public administration and education to advertising, business, commerce and other services, OSS has proved to be an alternative worthy to take into account [3] [4]. The above-mentioned reasons are among the main reasons that led us to choose this particular category of software, with its many distinctive features and to achieve the present article.

Sustaining the idea that a Free/OS PM software (OSMPS) is an almost essential commodity to keep business and/or working life running smoothly in our days and to face the challenges of new economy [5], we will expose in the subsequent part of this paper an overview of OSPMS solutions. There is a process of identifying the best PM software for an organization. This is a necessary part from adoption an OSS (Fig. 1), as shown in documentation of governments which found that open source software alternative and open source platforms offer significant potential benefits to their governmental agencies and to their wider community [6] [7]. A review or a deep comparison of OSPMS solutions performances and features is difficult to be highlighted enough in a single paperwork. Thus, it will be the subject of a future research paper. For the current paper we decided to present the OSPMS solutions grouped by the criterion “web-based” and “desktop”, because we believe that it is a defining element for choosing the most appropriate solution. In addition to a brief presentation of applications, we have considered the identification of features such as Collaboration, Project Portfolio Management, Resource Management Planning, Project Scheduling, Risk and Issue Tracking System, Document Management, Help / Support and platforms (operating systems) on that they can run.

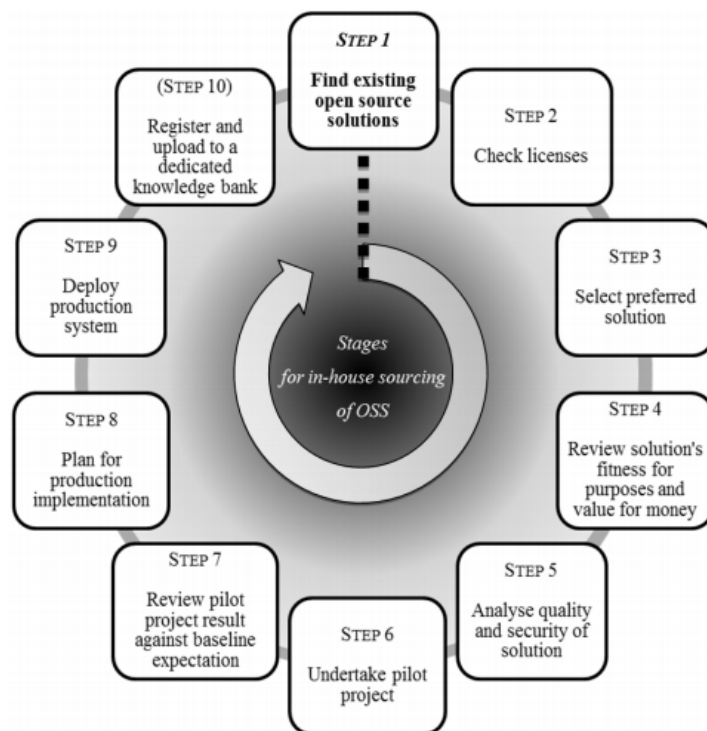


Fig. 1. A model workflow for in-house sourcing of OSS products [6, 7]

PM software market is rich in OS solutions that are able to provide similar functionality or even superior to commercial solutions. One of the main advantages of OSPMS is their availability on various platforms and operating systems, a fact that is very important in circumstances where there is a worldwide trend of increasing use of OS operating systems, usually for security and cost reasons. Most OS solutions are 100% compatible or supports import files in formats specific commercial software, so migration from commercial solutions to the OS is easy, while maintaining the consistency if necessary collaboration and file sharing firms using commercial solutions of PMS.

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