Chapter 1

Key Aspects of Free and Open Source Enterprise Resource Planning Systems

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ABSTRACT

This chapter introduces basic differences between Free/Open Source Enterprise Resources Planning systems (FOS-ERP) and Proprietary ERP (P-ERP), revisiting the previous work of Carvalho (2008). Taking into account that some years has passed and the economic downturn came, it updates key aspects of FOS-ERP under both vendor and adopter perspectives. Like its predecessor, this chapter contributes to broaden the discussion around FOS-ERP, showing that its differences from its proprietary counterpart go beyond the cost factor.

INTRODUCTION

Enterprise resource planning (ERPs) systems experienced an implementation peak during the pre- and post-Y2K periods, when most of the high-end adopters take their chance of substituting legacy systems implementing integrated management, in search for achieving competitive edge in their business areas (Church, 2008; Hendricks, Singhal & Stratman, 2007). After that period, the ERP market segment started to saturate and major ERP vendors started to seek for new business opportunities, in special towards small and medium-sized enterprises (SMEs) (Kim & Boldyreff, 2005).

At the same time it is also the case that Free/Open Source[1] ERP (FOS-ERP) systems are gaining a growing acceptance and consequently improving their market share. In a market study, LeClaire (2006) reported that FOS-ERP related

services were expected to hit about US$ 36 billion by 2008. If on one hand this is still unclear, given the difficulties of evaluating a market where many deployments are of a do-it-yourself fashion, or done by small consultancy companies, other effects can now be reported.

Robb (2011), states that FOS-ERP, together with the economic downturn is currently putting a pressure on P-ERP licenses, given that an "One IDC survey found high usage of open source enterprise applications; 9 percent of respondents already had an open source back office application deployed, while 7 percent of respondents were running an open source CRM application." In a market where big players hold approximately 10 percent of market share the open source phenomena is certainly helping to put P-ERP prices down, in special on the Small and Medium Enterprise segment. Robb (2011) goes further, affirming that open source "is the vanguard of a new wave of innovation. Consequently, many companies are looking for next-generation ERP solutions that have new capabilities and are easy to use and deploy.", confirming the key innovative aspect of FOS-ERP highlighted by Carvalho (2008). The reason for that is that most mature FOS-ERP projects, such as Compiere and ERP5, are less than one decade and a half old, meaning that they are based on more recent technologies and therefore don't need to provide backward compatibility to the old ones.

A controversial point is the way SME are adopting ERP. While Robb (2011), Carvalho and Johansson (2010), and Kimberling (2010) states that they tend to use Software as a Service (SaaS) solutions, in Harmon's (2010) opinion, SME "are not ramping SaaS as fast as large enterprises and are taking greater advantage of open source software." Apparently, besides the vendor lock-in problem, many SME are reporting that SaaS fees tend to rise after the first year of use (Lilly, 2010). Maybe the solution for this problem lives on business models such as the one used by the FOS-ERP ERP5 "Tio Live" version: it is a SaaS

solution that is free for basic use (inventory control, sales, human resources, CRM etc). If the adopter needs customization and/or personalized support, it has to pay, however, at any moment, the contract can be resigned, and the adopter organization can download all its code and data. Whether other FOS-ERP will follow this model is still an open question.

Given this increase on FOS-ERP importance, this chapter will highlight differences between FOS-ERP and P-ERP in terms of business models, selection, customization and maintenance, and identify the challenges and opportunities that they offer to stakeholders and developer communities.

WHAT IS KNOWN ABOUT FOS-ERP

The fact that only a small percentage of academic papers treat FOS-ERP specifically, as stated by Carvalho (2008) and Carvalho (2006), is still a reality. Although simply searching Google Scholar[2] cannot be considered as strict "scientific" results, the relation is that only approximately 0,7% of articles on ERP refer specifically to the term "open source ERP", when searching for articles published from 2009 onwards. By comparing this number with the ones presented by Robb (2011) and refered in the previous topic, a rough approximation if 10 to 1 can be found between the adoption level and the treatment by academics.

Again, these findings are not a result of a strict method for counting hits, however, it gives a notion of the distance between the practice and the research on FOS-ERP. A possible reason for this can also be the fact that FOS-ERP is a recent phenomena[3], and therefore deployments of this type of enterprise software are also recent, thus hardening the obtainment of data on them. This seems to be confirmed by doing the same search on IEEE and ACM digital libraries, which returns a dozen articles dealing specifically with this subject[4].

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