

# Chapter XXIV

## Evaluation of a Migration to Open Source Software

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### ABSTRACT

*The chapter discusses the adoption and assimilation process of open source software as a new form of information technology. Specifically, the case reports a general positive attitude towards the widely used technology, the OpenOffice.org suite for office automation. Nevertheless, it shows the difficulties of the first early adopters to lead the innovation process and push other users. Different usage patterns, interoperability issues, and, in general, the reduction in personal productivity typical of the early phases of adoption are also remarked. The aim of this chapter is to give the reader an overview of the adoption process by means of the analysis of quantitative and qualitative data gathered during real world experimentation, and to shed some light on how empirical data can corroborate or challenge the existing literature about open source software and technology adoption.*

### INTRODUCTION

Open source software (OSS) and open data standards (ODS) have emerged in recent years as a viable alternative to proprietary solutions. There are many cases in which the adoption of OSS has proved advantageous for companies deciding to adopt it in replacement or in conjunction with

closed source software (CSS). Unfortunately, at our knowledge, these studies often report only about server-side migrations or give very little empirical evidence of the benefits of the new solution. Among case studies that report successful transitions on the desktop side we can surely mention as pioneers the Extremadura, Munich, and Vienna case studies (Marson, 2005; Lande-

Table 1. Large deployments of OSS inside public administrations

Region	Clients to migrate	Side	Distribution
Extremadura	80000	Desktop/Servers	gnuLinex
Munich	14000	Desktop	Debian
Vienna	7500	Desktop	Wienux (Debian/KDE)
Largo, FL	900	Desktop/Servers	Linux KDE 2.1.1

shauptstadt München, 2003; Stadt Wien, 2004). All these cases have in common the intention of a large migration inside a single public administration (PA). Furthermore, the migration to OSS in all these cases has been already performed or is in the process of being deployed. We summarise the most famous deployments in Table 1, three are European, while one is U.S.-based.

One of the most remarkable deployments of OSS on the desktop side is surely the one of the Extremadura region in Spain, recently installing 80,000 Linux systems, 66,000 for the educational system and 14,000 for administrative workstations. The local administration even created their Linux distribution called gnuLinex<sup>1</sup>. According to their IT department, the savings have been of the order of €18M (Marson, 2005). Another case of success is the one of the city of Largo, FL (USA) where the migration has involved 900 clients; the savings have been estimated in \$300,000-\$400,000 (Miller, 2002). The migration of the city of Munich and the one of the city of Vienna are currently underway (Landeshauptstadt München, 2003; Stadt Wien, 2004). As the delay of the Munich migration seems to demonstrate, a transition to OSS is not a process to underestimate. There are also cases where the proprietary solution has been considered more convenient, like the city of Nürnberg, where according to their own migration study, the transition from Windows 2000/Office 2000 to Windows XP/Office XP was considered as €4.5M cheaper than the transition to Linux/OpenOffice.org (Stadt Nürnberg, 2004).

Another case of interest that emerged recently is the decision of the state of Massachusetts to abandon closed data standards (CDS) in favour of ODS, in particular to adopt the open document format for office automation documents exchange activities starting from January 2007 (Massachusetts State, 2005). According to the Organization for the Advancement of Structured Information Standards (OASIS) the purpose of the format is “to create an open, XML-based file format specification for office applications” (OASIS, 2005). Following this case and the increasingly requests coming from the European Commission to reduce e-government barriers, Microsoft decided to open the formats supported by its office automation suite in the upcoming months (Palmer, 2005).

The goal of this chapter is to provide an insight on two different experimental migrations to OSS inside European PAs. In particular, we don't consider a full migration, but the introduction of OSS in the office automation field. Throughout a constant monitoring of the software employed, we derive some indications on software usage that can be useful to provide more information on the migration process and the adoption of OSS.

In the next sections, we will provide first an overview of the existing literature about technology adoption and then start reviewing the experimentation details providing background information about the two Public Administrations involved. The last part will be devoted to the discussion of the results.

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