Chapter XXVIII
When Local Governments Choose Open Source Technology[1]

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ABSTRACT

This chapter examines empirically, the intended and unintended consequences that occur when a local government chooses to migrate away from a proprietary software technology such as Windows, and adopt a free/open source (FOSS) technology alternative. Motivation driving the process is also considered. Drawing on a comparative case study of 4 European cities, the research finds evidence that migration to FOSS is driven by a strong desire to maintain control over a municipality's IT infrastructure and that organizational change can be an important unintended consequence of the policy.

INTRODUCTION

A growing number of local governments as diverse as Austin, Texas and Paris, France have opted to migrate at least some of their cities' computer operating systems and software applications from proprietary software to so-called Free/Open Source Software (FOSS) alternatives. FOSS is a generic term for software that is non-proprietary, can be reviewed by large numbers of users, and can be revised and shared free of charge. Most of the attention devoted to FOSS centers on the policies of private companies (Fink 2002, Kerstetter *et al.,* 2003), national governments (Weber 2004; Karaganis and Latham 2005; Comino, S. and F.M. Manenti, 2005), and supra-national governments such as the European Union (Ghosh 2005; Cukier 2005; Gonzalez-Barahona 2006). This chapter focuses on local governments and tries to answer empirically two relatively simple questions: first, why does a local government turn to FOSS?; and second, what, if any, are some of the intended and unintended consequences that occur when a local government shifts from pro-

prietary software to FOSS? The research draws on data collected from a comparative case study of four European cities, each of which adopted a policy to migrate away from Microsoft Windows and toward a FOSS-based operating system, and replace proprietary software applications with open source equivalents.

The chapter is exploratory rather than explanatory. In comparing four cases, the objective is to develop theories about the adoption of FOSS by local governments; theories which future research may be able to test through large-scale N studies of local governments. The cities include Vienna, Munich, Schwäbisch Hall, and Treuchtlingen. They range in size, type of organizational structure and complexity (See Table 1). With the exception of Vienna, all are located in the south-west region of Germany. Each city had previously used a version of Microsoft Windows. Each city adopted a policy which committed the municipal government to migrate to the Linux operating system

along with FOSS applications. And, although all are committed to migrating to FOSS, they differ in their approach and strategy, and in terms of where they are in the implementation stage.

A comparison of four European cities is clearly insufficient to capture all the issues associated with the adoption of open source technology by local governments. FOSS is an international phenomenon that is as prevalent and important in emerging industrial powers such as China, India, and Brazil, as in advanced industrialized countries (Wong 2004; Kim 2005; Sharma and Adkins 2006). The issues and challenges developing countries confront are likely to be very different than those in advanced industrial regimes (S. Weerawarana and J. Weeratunge 2004; Dravis 2004). Notwithstanding such limitations the study seeks to move the scholarship beyond a single case study by comparing the experiences of four local governments. And, while all are located in Europe, they are considered leaders in the adoption

Table 1. Cities in the study

	Background	Approach	Year Adopted	Status
Treutchlingen	Pop. 13,000 located in south-west Germany.	Mandated switch; operating system and applications	2001	Complete
Schwäbisch Hall	Pop. 36,000 located in south-west Germany	Mandated switch; operating system and applications	2001	Complete
Vienna	Pop. 1.6 million; 16,000 PCs and 800 laptops; located in Austria	Voluntary and incremental approach; Focus on platform independence	2001	Several thousand use FOSS applications; 500 PCs completely switched
Munich	Pop. 1.3 million; 14,000 PCs; located in southern Germany	Mandated switch; operating system and applications	2001	3 of 17 departments complete

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