# Chapter V
# Tailoring CoBIT for Public Sector IT Audit:
## An Australian Case Study

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## ABSTRACT

*This chapter examines the potential to use an audit program based on the Control Objectives for Information and related Technologies (CoBIT) framework for IT audit within a public sector audit office. It documents research that derives, implements and evaluates such a program with the cooperation of the public sector audit office in an Australian state.  Additionally a comparison of the study results was undertaken with those of Guldentops, van Grembergen and de Haes (2002), Liu and Ridley (2005) and the European Organisation of Supreme Audit Institutions (EUROSAI) IT Working Group CoBIT Self-assessment Project. The results suggest that the CoBIT-derived instrument was effective for IT audit, and was able to be tailored to the needs of Tasmanian state public sector organization, when evaluated against a number of criteria.*

## INTRODUCTION

Information technology (IT) facilitates the actions of most organizations in both the public and private sectors. Its near ubiquitous status has lead to a significant change in the practice of auditors. Previously when computers were not as prevalent auditors generally chose to work "around" the technology. That is, activities and documents were scrutinised prior to entry into the computer system, and output from the system was also examined. Auditors chose not to involve

themselves with the inner workings of information systems. Gradually, as computers become more prevalent auditors began to incorporate them into their daily practice, using computer aided audit techniques (CAATs). Finally, when the technology became an integral part of the way in which society functioned, auditors were forced to examine the ways in which the technology impacted on both the financial data, which had been their traditional focus, and the organization in a broader context. To guide the effective use of IT in organizations, practitioners and academics developed a comprehensive framework called the Control Objectives for Information and related Technologies (CoBiT). The CoBiT framework links IT and business objectives and provides guidance on how best to audit information systems.

The CoBiT framework (now in Version 4.1) is widely used internationally for IT control and audit. Although a body of practitioner literature exists, the CoBiT framework has been subject to little academic scrutiny, particularly regarding its usefulness for IT governance and audit. The framework is large, and has associated with it a comprehensive set of Audit Guidelines. However, the constraints of public sector audit offices make it difficult to implement these audit guidelines in full. Consequently, there has been interest in tailoring the framework to a size that is more appropriate for implementation. To do so requires decisions on which components of the control framework should be retained, and which to omit. Appropriate tailoring will retain the components of the framework that make IT audits more relevant and meaningful in the local context.

This chapter presents a case study of a CoBiT implementation for IT audit, documenting a research project that built on the very small body of international academic research involving the CoBiT framework. The study utilises the results of research conducted by Gerke and Ridley (2006) to develop an IT audit instrument that is subsequently tested within a state government audit office in Australia. The implementation is then subject to evaluation and the results compared to those obtained in previous international and national CoBiT assessment studies.

## BACKGROUND

The background section considers IT-related frameworks, before reviewing relevant literature on the CoBiT framework and examining the setting for the study.

### IT-Related Frameworks Including CoBiT

IT frameworks are used to "facilitate effective IT governance" (Warland & Ridley, 2005). The IT Governance Institute (ITGI) states the primary goal of IT frameworks to be the development of a set of best practices concerning IT processes and controls within an organization as well as a scale to rate them (ITGI, 2000c, p. 10). A number of IT-related frameworks has been referred to within the practitioner literature. The most common include CoBiT, the Information Technology Infrastructure Library (ITIL), the Integrated Capability Maturity Model (CMMi), Six Sigma and the International Standards Organization (ISO) Standards number 17799 and 9000 (Anthes, 2004; Spafford, 2003; Violino, 2005). Each framework has been derived to meet a specific need, and the more commonly used ones continue to evolve to meet practitioner requirements. It is not the intention of this chapter to provide an in depth discussion of the strengths and weaknesses of IT frameworks. This has been done well in the practitioner literature, with articles by Anthes (2004) and Violino (2005; 2006) providing overviews of numerous frameworks.

The CoBiT framework was selected for use in this research as it was derived specifically to guide the practice of IT audit and is used extensively throughout the public and private sectors for this purpose. The next section provides more information on the CoBiT framework.

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