



Minicase studies on real-life CoBIT® applications that can be used as small exercises in undergraduate and graduate classes

IT Governance Institute®

The IT Governance Institute (ITGI) (www.itgi.org) was established in 1998 to advance international thinking and standards in directing and controlling an enterprise's information technology. Effective IT governance helps ensure that IT supports business goals, optimises business investment in IT, and appropriately manages IT-related risks and opportunities. The IT Governance Institute offers symposia, original research and case studies to assist enterprise leaders and boards of directors in their IT governance responsibilities.

Information Systems Audit and Control Association®

With more than 35,000 members in more than 100 countries, the Information Systems Audit and Control Association (ISACA®) (www.isaca.org) is a recognised worldwide leader in IT governance, control, security and assurance. Founded in 1969, ISACA sponsors international conferences, publishes the *Information Systems Control Journal*®, develops international information systems auditing and control standards, and administers the globally respected Certified Information Systems Auditor™ (CISA®) designation, earned by more than 35,000 professionals since inception, and the Certified Information Security Manager® (CISM®) designation, a groundbreaking credential earned by 5,000 professionals in its first two years.

Disclaimer

The IT Governance Institute, Information Systems Audit and Control Association [the "Owner(s)"] and the authors have designed and created *COBIT in Academia* and its related publications, titled COBIT® *Caselets*, COBIT® *Student Book*, COBIT® *Case Study: TIBO*, and COBIT® *Presentation Package*, (the "Work"), primarily as an educational resource for educators. The Owners make no claim that use of any of the Work will assure a successful outcome. The Work should not be considered inclusive of any proper information, procedures and tests or exclusive of other information, procedures and tests that are reasonably directed to obtaining the same results. In determining the propriety of any specific information, procedure or test, the educator should apply his/her own professional judgement to the specific circumstances presented by the particular systems or information technology environment.

Disclosure

Copyright © 2004 IT Governance Institute. All rights reserved. This publication is intended solely for academic use and shall not be used in any other manner (including for any commercial purpose). Reproductions of selections of this publication are permitted solely for the use described above and must include the following copyright notice and acknowledgement: "Copyright © 2004 IT Governance Institute. All rights reserved. Reprinted by permission." *COBIT in Academia* may not otherwise be used, copied, or reproduced, in any form by any means (electronic, mechanical, photocopying, recording or otherwise), without the prior written permission of the IT Governance Institute. Any modification, distribution, performance, display, transmission, or storage, in any form by any means (electronic, mechanical, photocopying, recording or otherwise) of *COBIT in Academia* is strictly prohibited. No other right or permission is granted with respect to this work.

IT Governance Institute

3701 Algonquin Road, Suite 1010
Rolling Meadows, IL 60008 USA
Phone: +1.847.590.7491
Fax: +1.847.253.1443
E-mail: research@isaca.org
Web sites: www.itgi.org and www.isaca.org

ISBN 1-893209-96-2

COBIT in Academia

Printed in the United States of America

ACKNOWLEDGEMENTS

IT GOVERNANCE INSTITUTE WISHES TO RECOGNISE:

The Board of Trustees

Marios Damianides, CISA, CISM, CA, CPA, Ernst & Young LLP, USA, International President
Abdul Hamid Bin Abdullah, CISA, CPA, Auditor General's Office, Singapore, Vice President
William C. Boni, CISM, Motorola, USA, Vice President
Ricardo Bria, CISA, SAFE Consulting Group, Spain, Vice President
Everett C. Johnson, CPA, Deloitte & Touche LLP (retired), USA, Vice President
Howard Nicholson, CISA, CRN Solutions, Australia, Vice President
Bent Poulsen, CISA, CISM, VP Securities Services, Denmark, Vice President
Frank Yam, CISA, CIA, CCP, CFE, Focus Strategic Group Inc., Hong Kong, Vice President
Robert S. Roussey, CPA, University of Southern California, USA, Past International President
Paul A. Williams, FCA, MBCS, Paul Williams Consulting, UK, Past International President
Emil D'Angelo, CISA, CISM, Bank of Tokyo-Mitsubishi, USA, Trustee
Ronald Saull, CSP, Great-West Life and IGM Financial, Canada, Trustee
Erik Guldentops, CISA, CISM, Belgium, Advisor, IT Governance Institute

The Development Team

Erik Guldentops, CISA, CISM, University of Antwerp Management School, Belgium (Chair)
Roger Debreceny, Ph.D., FCPA, University of Hawaii, USA
Steven De Haes, University of Antwerp Management School, Belgium (Project Manager)
Roger Lux, Farmers Insurance Group, USA
John Mitchell, CISA, CIA, CFE, LHS Business Control, UK
Ed O'Donnell, Ph.D., Arizona State University, USA
Scott Summers, Ph.D., Brigham Young University, USA
Wim Van Grembergen, Ph.D., University of Antwerp Management School, Belgium

Expert Review

José Carrillo Verdún, Ph.D., Facultad de Informática, Universidad Politécnica de Madrid, Spain

TABLE OF CONTENTS

Purpose of This Document5

Caselet: Union National Bank.....6

Case Description6

Teaching Notes6

Extra Information6

Questions.....7

 Suggested Solutions7

Caselet: Lux Insurance Brokers8

 Case Description8

 Teaching Notes.....9

 Case Background9

 Extra Information.....10

 Questions.....12

 Suggested Solutions12

Caselet: Phoenix Electric Provider.....17

 Case Description17

 Teaching Notes.....18

 Extra Information.....18

 Questions.....19

 Suggested Solutions20

Bold titles are contained in this sample.

PURPOSE OF THIS DOCUMENT

COBIT *Caselets* is a product of the IT Governance Institute (www.itgi.org), and part of *COBIT in Academia*. This document was developed in collaboration with a group of international academics and practitioners. These caselets provide three minicase studies on COBIT applications in real-life situations and are designed for use as small exercises (90-minute class period) in undergraduate and graduate classes on information systems management, information security management, auditing, information systems auditing and/or accounting information systems. The objectives of these cases are to:

- Provide a foundation for students to identify risks and control areas in a rich information technology environment
- Provide a means for students to relate risks and controls to particular COBIT control objectives
- Help students learn how to use the COBIT audit guidelines to identify appropriate procedures when developing methodologies for providing assurance over controls

Each of the cases is composed of two parts. The first part is a case description, which provides background on the case organisation and its IT processes and infrastructure. Next, the teaching notes supply extra background information for the instructor, potential questions for the students, and suggestions on answers from the students.

There are three other components that make up *COBIT in Academia*. The *COBIT Student Book* explains and illustrates all the COBIT components. The *COBIT Presentation Package* provides a PowerPoint deck of 80 slides explaining all the COBIT elements. The *COBIT Case Study: TIBO* applies COBIT knowledge in a real-life situation.

CASELET: UNION NATIONAL BANK

CASE DESCRIPTION

Union National Bank (UNB) has history on its side. With well-established roots, the 149-year-old community bank has a reputation for old-fashioned customer service. However, it has recently found itself competing not only with other well-established local banks but also with giant conglomerates. The bank attempted to compete on price by lowering fees, discounting loan rates and inflating deposit rates, while still offering its hands-on customer service, but management discovered that was a money-losing move and decided to try another strategy.

During the current fiscal year, the seven-branch UNB embarked on a major change in its processes, products and pricing to stay profitable and still retain its customer-centric reputation by acquiring a customer relationship management (CRM) package. The CRM solution allows UNB to look more closely at not only its big-picture financials but also its profitability by customer. Management segmented the bank's 37,000 accounts by profitability and drilled down into individual household information to get a view of spending and account activity. Management then fed all bank transactions into a single data warehouse, where they could be analysed later to pinpoint the most important products to its clients. The software alerts member service representatives (assigned to individual accounts) to life changes that may indicate an interest in another financial product. Recently married customers may be interested in mortgage services. Customers who are nearing 65 years of age may be interested in retirement products. The CRM solution also helps the bank remain on customers' good side by asking how and when to contact them. This increases the likelihood of a positive response to a sales pitch. The bank has achieved more than US \$1 million in efficiency gains, stemmed customer erosion and seen substantial revenue growth.

Management is using the CRM system tools to calculate the net profit of all its bank customers by analysing all associated costs and revenue associated with each customer's behaviour. Did customers visit tellers often or opt for less-expensive ATM and Internet transactions? How many cheques were they writing a month? Was there other revenue associated with customer accounts from optional services or extra fees? By using this tool, the bank was able to segment its customer base into high-value and low-value buckets. When the bank began to raise some of its rates and fees to pay for these high-tech services, it was able to protect its most profitable customers from the increases. Bank officials also began to create incentives to make the less-valuable customer segments more profitable to the bank—either by encouraging electronic banking or signing customers up for products that generated more revenue.

The CRM solution enables management to figure out what new products it can safely introduce without competing with its existing offerings. For example, UNB recently used the system to help roll out its new savings account program. It hoped the year-end, high-minimum, short-term, high-interest offering would attract lucrative new customers with more than US \$5,000 to invest. Management was able to use the CRM system to figure out how many accounts contained more than the minimum balance, the difference in rates of interest, and the potential financial loss if some or all of them switched to the new, higher rate account. Management could then balance that potential loss against potential new revenue.

TEACHING NOTES

EXTRA INFORMATION

This case was excerpted from an article by Stephanie Overby, "The Little Banks that Could," which was published in the 1 June 2002 edition of *CIO Magazine*. The design of the case is to illustrate the processes that

an organisation uses to align information technology solutions with strategic business objectives, manage the implementation of those solutions and monitor how well the solution meets performance objectives after systems are implemented.

QUESTIONS

You are the external auditor for UNB.

1. Employ the PO1 *define a strategic IT plan* COBIT process to:
 - a. Identify which of the PO1 control objectives are most appropriate for you to consider in designing your audit plan. Be prepared to justify your selection of the relevant control objectives.
 - b. For three of the control objectives that you chose in (a), employ the COBIT audit guideline for PO1 to develop a draft set of audit procedures to provide assurance on the achievement of these control objectives.
2. Employ the PO10 *manage projects* COBIT process to:
 - a. Identify which of the PO10 control objectives are most appropriate for you to consider in designing your audit plan. Be prepared to justify your selection of the relevant control objectives.
 - b. For three of the control objectives that you chose in (a), employ the COBIT audit guideline for PO10 to develop a draft set of audit procedures to provide assurance on the achievement of these control objectives.
3. Employ the M1 *monitor the process* COBIT process to:
 - a. Identify which of the M1 control objectives are most appropriate for you to consider in designing your audit plan. Be prepared to justify your selection of the relevant control objectives.
 - b. For three of the control objectives that you chose in (a), employ the COBIT audit guideline for M1 to develop a draft set of audit procedures to provide assurance on the achievement these control objectives.

Pages 8 through 20 deleted from this sample.