

# Data Management

## Issues, Challenges and Opportunities

Mira Kartiwi  
Akram M. Zeki



IIUM PRESS

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

# **DATA MANAGEMENT: ISSUES, CHALLENGES AND OPPORTUNITIES**

---

## **Editors**

Mira Kartiwi  
Akram M. Zeki



**IIUM Press**

**DATA MANAGEMENT: ISSUES, CHALLENGES AND  
OPPORTUNITIES**

Published by:  
IIUM Press  
International Islamic University Malaysia

First Edition, 2011  
©IIUM Press, IIUM

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without any prior written permission of the publisher.

Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Bibliography p.  
Includes Index

ISBN

ISBN: 978-967-418-084-3

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM  
(Malaysian Scholarly Publishing Council)

Printed by:  
**IIUM PRINTING SDN. BHD.**  
No. 1, Jalan Industri Batu Caves 1/3  
Taman Perindustrian Batu Caves  
Batu Caves Centre Point  
68100 Batu Caves  
Selangor Darul Ehsan

## TABLE OF CONTENT

---

1. DATA QUALITY ASSESSMENT ON INTERNAL SYSTEM IN XYZ DIVISION OF TELECOMMUNICATION COMPANY: A CASE STUDY IN INDONESIA Muharman and Mira Kartiwi .....	1
2. DATA MANAGEMENT ISSUES: A CASE STUDY OF IIUM DIGITAL LIBRARY Alfi Khairiansyah Machfud, Jawdat Ahmad Khatib, Khodashev Aslanbeck and Mira Kartiwi.....	15
3. DATA MANAGEMENT CHALLENGES IN BANKING INDUSTRY: BUSINESS PERSPECTIVE Adebiyi Lookman Ademola and Mira Kartiwi.....	29
4. DATA MANAGEMENT IN HIGHER EDUCATION, THE CHALLENGES AND THE SOLUTIONS: RECOMMENDATION AND TOOLS Johara Ghazali and Mira Kartiwi.....	35
5. DATA QUALITY MATURITY IN INFORMATION TECHNOLOGY DIVISION (ITD): AN EDUCATION ORGANIZATION Muhammad Rabiul Hasan and Mira Kartiwi.....	43
6. DATA STEWARDSHIP: A CASE STUDY OF CENTRE OF LANGUAGE AND PRE-UNIVERSITY ACÀDEMIC DEVELOPMENT (CELPAD) Ismail Mahmud, Kairo, Johara Ghazali, Rifhan bt. Abdul Ghafir and Mira Kartiwi .....	57
7. THE CHALLENGES OF DATA MIGRATION CASE STUDY OF UNIVERSITY PUTRA MALAYSIA (UPM) Hanan Abdullah A. Fatani, Ikhlas Fuad Zanzami, Nuha Abdullah H. Zammarah and Mira Kartiwi.....	69

16. DATA MANAGEMENT CHALLENGES IN RETAIL INDUSTRY Fauzan Alfariti and Mira Kartiwi .....	151
17. TROPICAL CROPS PLANTING RECOMMENDATION SYSTEM Siti Safura Yasmin Sahibin and Akram M. Zeki .....	157
18. EMPLOYING MACHINE LEARNING ALGORITHMS TO EXTRACT ISLAMIC KNOWLEDGE Kawther A. Aldhlan, Ahmed M. Zeki and Akram M. Zeki .....	161
19. A WEB DATA MANAGEMENT APPLICATION FOR EDUCATION SECTOR: A KICT ONLINE REGISTRATION SYSTEMS FOR FINAL YEAR PROJECT Muhamet Abdullahu and Mira Kartiwi.....	169
20. LOGISTIC DATABASE SYSTEM Akram M. Zeki and Wan Zarith Nadia bt. Wan Zahari .....	177
21. DATA OWNERSHIP CHALLENGES IN DISASTER MANAGEMENT Mira Kartiwi, Rasheed Muhammed and Muna A. Ali.....	185

# **13. ASSESSING DATA QUALITY MATURITY LEVELS: A CASE OF THE INFORMATION TECHNOLOGY DIVISION (ITD) AT THE INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA**

---

Golooba Moses, Nakkazi Rukia and Mira Kartiwi

## **ABSTRACT**

Nowadays, more and more organizations are realizing the importance of their data, because it can be considered as an important asset present in nearly all business organizational processes. The quality of data contained in the enterprise information systems has significant impact, both from the internal business decision-making perspective and the external regulatory and shareholder obligations. In this paper we assess data quality maturity in IIUM's Information Technology Division (ITD), using a Data Quality Maturity Model. Findings indicate that ITD is at the second level of data quality maturity i.e. the organization performs some limited data analysis and data correction activities, but there is no enterprise – wide support for data quality improvement. In this paper we suggested a number of factors that must be addressed by ITD to improve the performance, most importantly we recommend the drafting of a comprehensive enterprise-wide data quality improvement policy.

## **13.1 INTRODUCTION**

Low quality data bring several negative effects to the business users such as dropping of customer satisfaction, high running cost, inefficient decision making process, and sluggishness of the corporate strategic performance