



# FACILITIES MANAGEMENT AND THE BUSINESS OF MANAGING ASSETS

DANNY THEN SHIEM-SHIN & TAN TENG HEE

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Danny Then Shiem-Shin and  
Tan Teng Hee



First published 2013

by Routledge

2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Simultaneously published in the USA and Canada

by Routledge

711 Third Avenue, New York, NY 10017

*Routledge is an imprint of the Taylor & Francis Group, an informa business*

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*British Library Cataloguing in Publication Data*

A catalogue record for this book is available from the British Library

*Library of Congress Cataloging in Publication Data*

Then, Danny Shiem-Shin.

Facilities management and the business of managing assets / Danny Then Shiem Shin and Tan Teng Hee.

p. cm.

Includes bibliographical references and index.

1. Facility management. 2. Strategic planning. I. Hee, Tan Teng. II. Title.

HF5547.2.T44 2013

658.2--dc23

2012028048

ISBN13: 978-0-415-27494-4 (hbk)

ISBN13: 978-0-203-49709-8 (ebk)

Typeset in Galliard

by Taylor & Francis Books



Printed and bound by CPI Group (UK) Ltd, Croydon, CR0 4YY

# Facilities Management and the Business of Managing Assets

The importance of facilities management to the effective operation of all businesses is now widely accepted. Where there continues to be debate is what constitutes a successful approach, and how much attention it should be given within an overall business plan.

Drawing on both research and current practice, this book provides a systematic, innovative and business-focused approach to the management of facilities assets. The reader will discover why and how to use facility assets to achieve business goals and strategies for aligning them as a resource.

Striking a balance between management and technical aspects, the book covers:

- the basics of facilities asset management and the key elements of a systematic management approach;
- the key supporting capabilities for facilities management as a business function;
- a framework for considering strategic alignment of facilities assets and associated services with business needs; and
- the role of life-cycle asset management and its contribution to business resource management.

The message of this book and the benefits it can bring to businesses everywhere make it essential reading for executives as well as facilities managers. Its detailed explanations of all the key concepts involved, and lists of recommended further reading, also make it an excellent resource for those new to the industry and for students of property or facilities management.

**Danny Then Shiem-Shin** is Joint Coordinator CIB Working Commission W070 for Facilities Management and Asset Maintenance. Danny's academic career spans over three universities (Heriot-Watt University, Queensland University of Technology and Hong Kong Polytechnic University) where he developed postgraduate programmes in facilities management in departments with a focus on construction/property management and building services engineering. He has published and presented more than 70 papers internationally and co-authored *Facilities Management and the Business of Space* (2001).

**Tan Teng Hee** is an electrical engineer with 37 years' experience in electrical engineering, maintenance and facilities management across a diverse range of facilities including a large cultural centre, military facilities, hospitals, university campus, and government and commercial office buildings. He worked for the public and private sectors in Malaysia and Australia. Currently he is a facilities management advisor and lectures as a visiting lecturer.

# Foreword

*Everything you ever wanted to know about 'facilities management' but were afraid to ask* would have been an alternative title for this book. Facilities management (FM) is a complex subject and does not lend itself to sound bites or elevator pitches. The term is often misapplied to a whole range of activities – from janitorial services to equipment maintenance.

Prof. Danny Then and Tan Teng Hee successfully set out not only a comprehensive explanation of FM for the uninitiated corporate director, but also how a strategic approach to the management of physical assets has a very real impact on the bottom line of an enterprise.

Just as facilities management is often a euphemism for outsourcing, so asset management is often erroneously thought of as a separate discipline from facilities management. In fact, facilities management requires an integrated approach to managing assets, resources and information, the procedures for which need to be absolutely aligned if an organization desires ultimate efficiency in its business support services. Whether the perfect solution is arranged in-house, outsourced or more likely a mixture of both depends on the specific requirements of each organization and the nature of the assets to be managed.

The title of this book cannot fully convey its rich insights into the methodology and processes required in managing facilities – not only the built and physical assets, but also the context of how best to support the objectives of an enterprise, whether in the private or public sector. For anyone seeking to understand the value proposition of facilities management, the co-authors of this book explain in clear terms the complexity of the subject, supported by understandable diagrams and comprehensive references.

Although it is written with the focus on managing assets – infrastructure, buildings, plant and equipment, furniture, in fact anything that has a tangible and/or monetary value to the organization – it also covers the many interrelated processes and systems in the wider field of FM.

The authors represent a combination of a respected academic and an experienced practitioner, with a rare mix of research, practical and technical experience accumulated over many years. This book not only demonstrates their depth of understanding of the subject matter, but also imparts their knowledge in a practical and logical format for readers to follow and implement in their management

role. Their experience is not restricted to a narrow view of the subject of asset management, but reaches international best practice in the field of facilities management and technical and technological advances, all of which is conveniently referenced here.

Advances in technology applications and business improvement processes, aligning practical issues with business objectives, asset utilization and life-cycle planning are all covered here, making the book an invaluable handbook for the manager, a guide for the executive and a textbook for the student.

Lionel Prodgers

Director

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# Preface

The focus of this book is drawn from the perspective of facilities as a business resource with some unique characteristics. As high-value and long-life assets with significant operating and other costs, they deserve effective management in order to optimize their contribution to organizational objectives as well as to manage their costs and risks. Effective management should occur not only at the operational facilities management level but also at more senior management levels. With this in mind, we have identified as our primary intended audience senior managers at corporate level who wish to develop a more detailed knowledge of facilities asset management without necessarily delving into the specific processes and methods involved in operational management. At the same time, practising facilities managers will also find this a useful reference on the scope and key elements of facilities asset management that can guide their development of operational processes, systems and methods to suit their needs.

The contents of the book have been deliberately kept at a level that covers the main points of the various aspects of facilities asset management, but in sufficient detail to enable understanding and stimulate further enquiry as desired. It is hoped that such understanding would encourage more interactive dialogue between senior managers and their facilities managers and lead to better facilities and business outcomes. While we believe we have covered the subject matter in sufficient depth and scope, the book makes no claim to be a comprehensive resource on facilities management. Moreover, it was not intended to be one.

There is growing recognition of the need to improve the integration of facilities management within the broader context of managing organizational resources towards the achievement of strategic objectives. We have therefore endeavoured as much as possible to draw the links between facilities and business in an effort to emphasize the impact and contribution of facilities to business outcomes and the need for a structured and effective framework to manage them.

Much of the material that sets the scene for our discussions in the book has been drawn from the works of others, referenced accordingly. The rest of the material, which forms the bulk of the book, is drawn from our collective knowledge and experiences in the academic sphere on one hand and practical experience in the field of facilities and asset management on the other. Each has complemented the other, enhanced through interchange of ideas with other

practitioners and perusal of related literature over many years in different countries. Any weaknesses or gaps in the concepts, frameworks and presentation are our responsibility alone.

Our acknowledgements and thanks go to the many friends, colleagues, clients, fellow practitioners, students and staff in industry (both public and private sectors) and academia with whom and from whom we have had the opportunity to discuss, debate and learn, over the 30-odd years that we have been operating in this field. A special thank you to Palm (Akrapong Katchamart) for his critiques and assistance during his short attachment at Hong Kong Polytechnic University. Our acknowledgements also go to our publishers who have been very patient and understanding over the period that it has taken for this book to take shape and substance.

Finally, but not least, our heartfelt thanks to our respective families who have been very supportive of our literary aspirations and tolerated with good humour the inevitable hours spent at the keyboard and buried in books and papers.

Danny Then Shiem-Shin and Tan Teng Hee  
June 2012



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# 1 Introduction

The creation of suitable workplace environments to support employees in performing their tasks is becoming a key issue for many organizations faced with constant change. Extraordinary change has already occurred, and will continue to impact on our lives and work, in such areas as technology, demography, work methods and the environment – both locally and globally. As far back as the 1980s and early 1990s, a number of research reports in the area of real estate and facilities management in North America, Europe and the United Kingdom highlighted a growing awareness of the critical role of corporate real estate assets and the need for more effective management (Zeckhauser and Silverman 1983, Veale 1989, Avis, Gibson and Watts 1989, Lloyd 1992, Arthur Anderson 1993, Jorroff *et al.* 1993, Then 1994, Apgar and Bell 1995, Gallup 1996). The global financial crisis in recent years has forced most organizations to optimize their scarce resources to meet business objectives. The need to align business resources to core business requirements has resulted in taking a more strategic view of their organizations' operational needs. This book is our attempt to provide a clear framework for senior corporate managers to consider facilities and assets issues as an integral component of overall strategic business planning.

## 1.1 Facilities and assets

The first challenge in writing a book on facilities management is establishing a clear structure and meaning for the terms that are frequently used throughout the book. This is, first, to achieve consistency and, second, to reduce any confusion that the reader may experience when different terms with similar meanings are used interchangeably. For example, 'assets' and 'facilities' are often used interchangeably. In this book we have chosen to use 'asset' as a general term referring to a business resource that has a financial value and is capable of providing some form of benefit (e.g. a financial return or a service) to the owner and users.

Figure 1.1 illustrates the structure that we have chosen to use as the basic building block of the terminology in this book.

In the context of this book, the term 'facility' refers to a group of buildings, the site or land on which they are located and the site improvements supporting the buildings. Consistent with this approach, we refer to places such as schools,

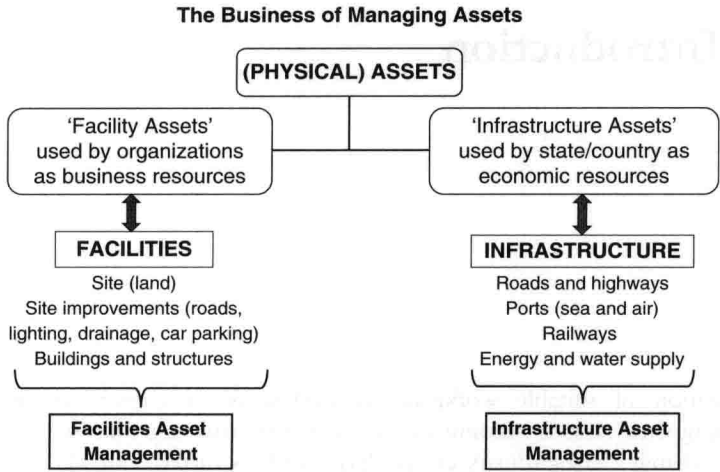


Figure 1.1 Facilities and infrastructure

military bases and hospitals, etc. as ‘facilities’. An office building is referred to as an ‘office facility’ and a manufacturing plant is referred to as a ‘manufacturing facility’. A portfolio consists of a group of facilities owned or operated by an organization (Figure 1.2). For example, a Department of Health will own or operate a portfolio of medical facilities. Roads, highways, ports (sea and air), railways and energy and water supply are referred to as ‘economic infrastructure’. Both ‘facilities’ and ‘economic infrastructure’ are ‘assets’ or ‘physical assets’ as a generic group. By adopting the title *Facilities Management and the Business of Managing Assets*, we have intentionally drawn the boundaries of the book around facilities and the assets that make up the facilities. Undoubtedly many of the strategies and processes referred to in this book would apply equally well to economic infrastructure. However, in general, the management of economic infrastructure is outside the scope of this book.

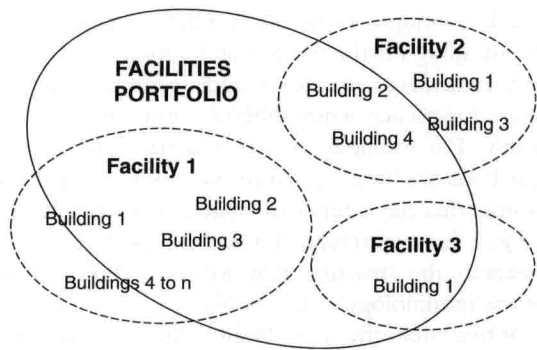


Figure 1.2 Facilities portfolio concept

## 1.2 A corporate perspective of facilities and assets

The business environments of both public and private sectors dictate the changes in the size and configuration of facilities portfolios based on the dynamics of demand and supply and the prevailing economic conditions which influence the supply of capital for investment and sustainability of operating costs. The public sector is a major owner and user of facilities as a platform for the delivery of services to the community. Health, defence and education sectors alone account for a significant portion of the total public sector portfolio. There has been an ongoing focus on public sector organizations optimizing their utilization of facilities and improving their management in pursuit of organizational cost efficiencies and in response to the challenges of constraints on capital funding opportunities to meet the growth in service demand. Similarly, the private sector is constantly under pressure to reduce costs and increase profitability and shareholder value. Facilities, as capital assets and operational cost-centres, will therefore also be subjected to closer scrutiny in terms of their capital value, operating costs and overall performance in contributing to the achievement of business objectives. Consequently there is a growing recognition of facilities as a business resource and the need for management from a business perspective rather than relegating their management to the domain of technical professionals operating at arm's length from the core business (NRC 2004, Apgar 1995, Then 1994).

The theme of this book is centred on the concept of buildings as facilities assets and their role as one of the key business resources employed to deliver business outcomes (the others being human, financial and information technology resources). Optimization of the contribution of facilities as a business resource through the alignment of facilities assets and their management with the needs and objectives of the organization is fundamental to effective resource management (Then 2003, CoreNet Global 2004, Nutt 2004, Then and Tan 2010).

Given that both the public and private sectors grapple with similar issues, albeit with different business objectives, the material in this book is aimed at being of benefit to facilities and business managers in both sectors. This book is therefore aimed at public and private sector corporate-level business managers and professionals in the construction, property and facilities management industries who wish to better understand the role of facilities and the key aspects of facilities asset management that have business implications for both public and private sectors.

## 1.3 Facilities management

Facilities management has an important business support role which contributes to aspects of business such as risk management, productivity, recruitment and retention, maximizing the value of capital investments in assets, managing the costs of facilities and addressing corporate responsibility issues such as environmental sustainability and climate change. Thus, it is in the best interests of an organization to embrace facilities management as an important business support function that provides facilities solutions to satisfy business needs (Varcoe 1992, Then 1994, Lindholm, Gibler and Leväinen 2006, CRC 2007, i-FM.net 2011).



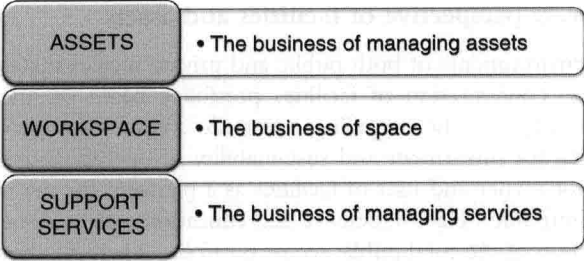
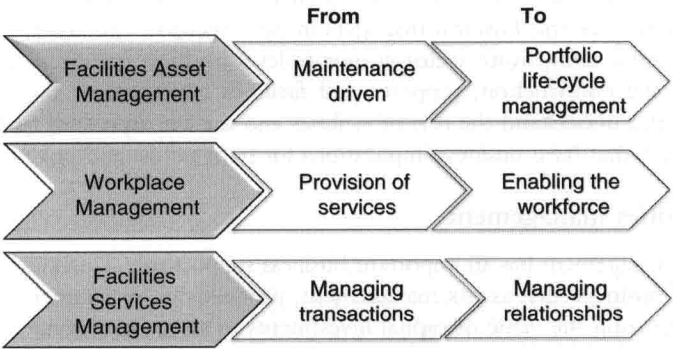


Figure 1.3 Management aspects in facilities management

There are many definitions of facilities management that have been proposed by professional institutions around the world (see Appendix 1). We have found them to be unhelpful from the business point of view, especially from the perspective of senior management, as the focus tended to be on required competences rather than what management should focus on. From our experience, the core of facilities management can be considered as management of three key related aspects of corporate facilities – assets, workspace and support services – all three of which are impacted by technological developments (Figure 1.3).

In relation to the three management aspects, the last two decades have seen major fundamental changes on the demand and supply sides of the facilities management market that have resulted in shifts in the management approach and focus, as shown in Figure 1.4.

The aspect of workplace management was the subject of another book by one of the authors, titled *Facilities Management and the Business of Space* (McGregor and Then, Arnold, 1999; Butterworth-Heinemann, 2001). This book aims to address issues and solutions relating to ‘the business of managing assets’ under the broad umbrella of ‘facilities asset management’.



*Providing appropriate facilities solutions  
to meet business challenges*

Figure 1.4 Changing management focus