FACILITIES MANAGEMENT PRINCIPLES

by CHONG KAR YUN
Brief Intro

- 20 yrs in FM started from Tech Officer
  - 6 yrs in operation
  - 4 yrs in management include BD
  - 4 yrs in strategic planning
  - 3 yrs in event management & brand marketing
  - 5 yrs in reengineering consulting and training
Brief Intro

- Qualification
  - dip in electrical engineering
  - Cert in Chartered Institute of Marketing
  - Gdip in Strategic Management (HULL)
  - ACTA train the trainer
  - BCA Green FM Trainer
  - Master FM
Objectives of Course

- Introduction to facilities management
  - What is Facilities Maintenance Management?
- Scope & Role of Facilities maintenance management
- Planning & Project Management
- Performance of FM
  - What is the expectation of your contractors in maintenance?
Objectives of Course

• Value & Risk Management
  • Do you think there is a need for Strategic Planning in FM and what is strategic planning.

• Business Continuity FM
Objectives of Course

1. Give clearer understanding of Facilities Management in Singapore
2. Scope of work and Client Expectations
3. Organizing and Planning Facilities Management Operations
4. Quality Control and Performance Measurements
5. Maintenance Management Operations & the Changing Climate
Chapter 1

1. Origins of Facilities Management & Definitions
   a. Originated primarily out of USA around 1982-3 with the formation of IFMA (USA)
   b. UK picked up around 1985
   c. Singapore around 1987/88
Chapter 1

1. Defining Facilities Management
Fragmented and confusing even after 20 yrs of implementation.

Interpretation on work scope and responsibilities differentiate within the industry depending on the sector of the industry we are serving.
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- Construction industry: involve only after completion of construction
- Designer / Architect: information on owners requirement for some projects or can be ignored totally
- Property owner: cost center and not contributing to the bottom line
- FM department: never part of the decision chain, not motivated, not appreciated
Recognition of Facilities Management

Client interest only on the service provider ability to

a. enhance its non core business activities
b. provide good support services to main activities
Chapter 1

Emergence & Growth of FM

Maintenance Management

a. organizing various repair & maintenance activities within the organization
b. managing those activities for control and improvement
c. mainly done in house with little outsourcing
<table>
<thead>
<tr>
<th>Service</th>
<th>Department</th>
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<tbody>
<tr>
<td>Engineering Works</td>
<td>engineering</td>
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<td>Cleaning Works</td>
<td>admin dept</td>
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<td>Landscape works</td>
<td>admin dept</td>
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<tr>
<td>Car Park Management</td>
<td>accounts &amp; finance</td>
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<tr>
<td>Human Resources</td>
<td>HR dept</td>
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Chapter 1

Emergence & Growth of FM

Facilities Maintenance Management arises due to

a. lack of proper organization of MM
b. lack of definitive goals & direction of the department
c. increasing cost and risk in business management
d. change in financial management model & business operational requirements
FM

Engineering Works

Cleaning Works

Landscape works

Car Park Management

Human Resources

Facilities dept

accounts & finance

HR dept
Chapter 1

Recent Recognition of FM, especially in critical installation such as
a. Medical facilities
b. Airport
c. Financial institution
d. Military installation
in that they are vital for resources optimization and cost escalation control
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Growth of FM (outsourcing)
Due to the complexity and size of business growth, the demand for outsourced FM grow as organization needs

- to control cost of operations,
- improve resources efficiency,
- transfer risk of support services, etc.
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Example
Recent incidents in MRT
a. SMRT
b. Maintenance done in house
c. Ops cost increase
d. Standard decrease
e. Risk increase
f. Incurred Loss via penalty
Chapter 1

Complexity? Does Anyone here do all these?

a. Technical knowledge
b. Management know how
c. Market situation analysis
d. Strategic Planning
e. Financial Planning
f. Quality Control
g. Customer Service
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Growth Sector

Most international company & industry will outsource their Non Core Biz to enhance their group’s performance especially

a. airports
b. hospitals
c. financial institutions
d. property developer
Chapter 1

Why?
Outsource agent has superiority to in house

- Domain knowledge
- Economy of scales for services/parts etc
- HR mobility to ensure core biz success
- Guaranteed outcome service agreement
- Cradle to Grave cost management
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What is FM then?
Various Definition of FM but the most definitive and reflective of the essence of FM is

“The practice of coordinating the physical workplace with people and work of the organization, integrating the principles of business administration, architecture and the behaviour and engineering sciences (Becker 1990)”
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Early Developments arise from the limitation of FM in meeting business needs which leads to further development into

a. Strategic FM: focus on all aspects of biz support function & integrate FM to biz strategy

b. Operational FM: focus on detail operational activities to keep biz functioning
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Biz & FM relationship

Biz operate in a build up environment and this environment pose a kind of burden/threat such as breakdown, power fluctuation, fire hazard, etc. FM faces challenges and new opportunities to contain and mitigate such issues via various strategic and operational means.
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Therefore, today FM needs to understand

a. the needs of biz and

b. integrate their needs into the strategies and plans of the maintenance management requirements thus

c. benchmarking at a level to satisfactory reduce the threat (RISK) of the environment to ensure Biz operations is sustainable.
Traditional FM

Biz Ops

- Gen Mgmt
- Acc & Fin Mgmt
- Marketing & Sales
- HR
  - Environmental & Car Park
  - Engineering
Evolving

Biz Ops

Gen Mgmt

HR

Acc & Fin Mgmt

Marketing & Sales

Engineering or Facilities

Environmental & Car Park

Engineering
Traditional FM Process

- EQPT
- PERIODIC MAINTT
- ADHOC MAINTT
- EXPRIED LIFESPAN
- BEYOND ECON REPAIR
- REPLACE NEW
- OEM STD
- $$

This diagram illustrates the traditional FM process.
Current Trend of FM

BENCHMARK

EQPT

PERIODIC MAINTT

EXPIRED LIFESPAN

REPLACE NEW

$$$-

ADHOC MAINTT

BEYOND ECON REPAIR

OEM STD

MAIN BIZ GOALS

GOALS

MAIN BIZ

OEM STD

$$$-

EXPIRED LIFESPAN

REPLACE NEW

BENCHMARK

EQPT

PERIODIC MAINTT

FUTURE TRENDS OF FM
Chapter 1

Main Biz Goals: Core Biz objectives
              Non Core biz objectives
Example: Data Backup Facilities...what is their biz Benchmarking:
              Level of comparison
              Industry best practices
              Commercial Proficiency
              Compliance to standards
Chapter 1

Biz Org Needs
what are they? what is involved?
see Unit 1-18
Chapter 1

Twist to FM

Referring to the above and the demand of competitiveness of today’s biz, FM has to manage all the assets and services that support the core biz of an organization leading to the new enhance role known as TOTAL FACILITIES MANAGEMENT
Chapter 1

Total Facilities Management

a. Plan, Design & Maintain Building/Assets
b. Manage Operations of Building/Assets coordinating with the operation of Core Biz
c. Optimize resources & operation efficiency including fitting out / upgrading
d. Quality assurance and Performance review to enhance the biz competitiveness
Strength

Weakness

Opportunity

Threat

Social Economics

Technology advancement

Human Expectation & needs

Competitors
Chapter 1

Facility manager is challenging as he/she is expected to be

a. Jack of all trades with substance to solve

b. Octopus multi-tasking and balance

c. Information counter on technology/solution/price/standards/etc.
Typical Organization Chart

- Management
  - Finance
  - Marketing
  - Operation
  - HR
    - QA / QC
    - Purchasing
    - Production
    - Facilities
      - Logistic
      - Delivery
      - Inventory
Typical Organization Chart

CONSTRUCTION

Finance  Marketing  Operation  HR

QA / QC  Purchasing  Technical  Facilities

Logistic  Delivery  Inventory
Total Assets Management

Operation management

BENCH MARK

EQPT

PERIODIC MAINTT

EXPIRED LIFESPAN

ADHOC MAINTT

BEYOND ECON REPAIR

REPLACE NEW

$$$$

MAIN BIZ GOALS

OEM STD
Green Facilities Management

- BENCH MARK
- EQPT
- PERIODIC MAINTT
- ADHOC MAINTT
- EXPRIED LIFESPAN
- BEYOND ECON REPAIR
- MAIN BIZ GOALS sustainability
- OEM STD
- $$ $$
- GREEN MARK
- OPTIMIZED Operation management

- REPLACE NEW
- GREEN MARK

Optimized Operation management
Framework for human asset development

1. Quality Management System
2. Asset Management System
3. Engineering Competence Building
4. Environmental Management System
5. Operational Process Excellence

IT management infrastructure

Measurement and Verification Framework (KPIs)

Framework for human asset development

TOP MANAGEMENT SUPPORT
Chapter 1 to Chap 2

FM & Construction? Where is the link?

Construction = New / Old / Retrofit
Constraints / Needs proposition to include in design
Maintenance Issue on materials selection
Advise on maintenance access
Review the proposed maintenance budget
Review assets quality & lifespan
Chapter 1 to Chap 2

Construction Group

FM support to const team

Design
Maint
cycle cost

Material Quality
& Availability

Capability & Capacity enable

Operation
Life
cost mgmt

Maint & Availability

FM Provides Holistic integration in whole life cycle for all types of assets

- Design
- Procure & construct
- Operate
- Maintain & improve
- Sell & dispose

Environmental cost

- Construct
- Planned Maintenance
- Unplanned Replacement
- Planned Lifecycle Replacement

Operations and Maintenance

Income
Chapter 1

FM is the function to better enable, yet enhance, the organization’s ability to meet its fundamental business objectives by coordinating all efforts relating to planning designing and managing building and their system, equipment and furniture to enhance the ability to remain competitively