KONVENSYEN STRATEGIK PENGURUSAN ASET KERAJAAN (KONSPAK) 2014

Masjid Al Haram & Abraj Al Bait Towers Makkah Asset and Facility Management

18 September 2014

Al Borj International







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SECTION 1

PROJECT INTRODUCTION

PROJECT LOCATION





COMPLEX CONSTRUCTION HARMONIOUSLY INTEGRATING MODERN DESIGN WITH CULTURAL AND RELIGIOUS ATTRIBUTES



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King Abdul Aziz Endowment project is a Design-Build-Operate-Transfer commercial and residential complex consisting of seven towers with a Gross floor area of over 1.5 million square meters, making it the largest concrete built up structure in the world.

Acknowledging tradition and heritage, King Abdul Aziz Endowment project offers visitors to Makkah the most modern facilities and amenities available while respecting the proximity to Masjid Al Haram.

PROJECT INTRODUCTION – "MASJID AL HARAM"



Building	: "Masjid Al Haram", Makkah, K.S.A	
Building Owner	: Government of KSA	
GFA	: Current : After Expansion	: 3.9 Million Sq ft : 5.0 Million Sq ft
Building Served	: a) Mosque : b) Ka'bah : c) Well of Zamza	am
Capacity	: 2.5 Million pilgrims (after expansion)	

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Aerial view of Masjid Al Haram

PROJECT INTRODUCTION – "ABRAJ ALBAIT TOWER"









SECTION 2

OUR CHALLENGES & EXPERIENCE AT ABRAJ AL BAIT



- Changes in user requirements due to change in design intent resulting in major reworks in design and construction
- Change in design requiring change or adjustment in some systems or equipment
- Initial delay in handover resulted in having overstaffing and increased operational cost
- Limited local experienced CIFM service providers resulted in having many service providers, overlapping scopes and operational gaps
- FM services provided concurrent to construction and infrastructure completion



Lack of FM involvement in the design and construction stage led to:

- Increase in cost and additional manpower requirement
- Partial handing over in phases due to commercial and demand requirements
- Delay in handover of systems and equipment
- Operational challenges
- Solution 2018 Action Asset registry 3 Action 2018
- Incomplete Technical Library due to delay in collecting related handover documentations

OUR CHALLENGES & EXPERIENCE AT ABRAJ AL BAIT (cont..)

Contractual challenges

- Non comprehensive outsourcing service
- Service scope and quality standard not defined
- Challenge to maintain service at required level
- ✤ Higher service rates

Recruitment challenges being in Makkah

- High demand with low supply of technical skilled workers
- Project in Makkah requires specific religious regulations
- Limited experienced FM local resources

Complex FM operational planning to manage peak seasons in Makkah (Ramadan and Hajj)





OUR CHALLENGES & EXPERIENCE AT ABRAJ AL BAIT (cont..)



Managing service providers was difficult because there was no initial measurement standards

- Not being able to measure the performance initially risked having shorter asset life span
- Difficulty in operating, maintaining, controlling and managing the facility
- Unable to have an accurate budget for FM services
- Challenge in managing large number of staff from different nationalities, languages and cultures



CHALLENGES OF HAVING MULTI NATIONAL WORKFORCE WORKING IN HARMONY



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SECTION 3

LESSONS LEARNT ON IMPORTANCE TO INCORPORATE FM DURING DESIGN & CONSTRUCTION STAGE

LESSONS LEARNT ON IMPORTANCE TO INCORPORATE FM DURING DESIGN & CONSTRUCTION STAGE

7 MAJOR LESSONS LEARNT

- 1. Incorporate FM in the planning stage
- 2. Handover Plan
- 3. Standardized Policies and Procedures
- 4. Best Practices
- 5. Enterprise Resource Planning (ERP)
- 6. Technical Library
- Implement CIFM by engaging competent FM service provider







IMPORTANCE OF INCORPORATING FM AT PLANNING STAGE

- Very important to Plan, Budget and Align design, construction with FM requirements prior to start of any project
- Based on our experience and challenges faced, we believe the return on investment from investing in FM in the design and construction stage is greater than the cost that will be incurred if this is not done
- Minimizing costly modifications to systems during operation phase
- Energy & Cost Saving by implementing the right systems and assets
- Optimizing space management and occupancy opportunities leading to improved space efficiency and increased revenue

LESSONS LEARNT ON IMPORTANCE TO INCORPORATE FM DURING DESIGN & CONSTRUCTION STAGE

HANDOVER PLAN

- Pre-agreed Handover Policies and Procedures
- Defined Areas to be Handed over with agreed Time Frame
- Defined Equipment and System to be Handed over with agreed Time Frame
- Agreed Transition Schedule from Construction to Operation
- Ensure handover drawings and documentation are updated and approved by consultant
- Appropriate endorsement of green building products





LESSONS LEARNT – STANDARDIZED POLICIES & PROCEDURES



STANDARDIZED POLICIES & PROCEDURES

- Clear policies and procedures lead to:
 - Clear and defined Roles and responsibilities
 - Improved quality of service
 - Improved efficiency in operation
 - Clear directives and objectives
 - Standard guidelines
 - Guided performance monitoring
 - Continuous improvements



LESSONS LEARNT – APPLYING BEST PRACTICES

BEST PRACTICES

- Transformation of work culture and mind set from corrective to proactive culture
- Clear, Defined scope and responsibility leading:
 - Benchmarking performance
 - Improved Communication in operation
 - Improved efficiency in service
 - Improved quality of service (Satisfied Clients)
 - Faster response & service time
 - Cost reduction
- 🗻 Customer Focused Approach





LESSONS LEARNT – ENTERPRISE RESOURCE PLANNING (ERP)

ENTERPRISE RESOURCE PLANNING (ERP)

- Systematic & Standardized transformation of information from construction to FM operation
- Efficient and smooth control of deliverables and responsibilities
- Single point of contact, operation centralized help desk
- Minimized labor intensive works through automation of tasks
- Increase productivity and improve response time
- Information communicated and shared is standard and unified
- Real time data allowing accurate reporting and calculated performance measurement





LESSONS LEARNT – TECHNICAL LIBRARY

TECHNICAL LIBRARY

- Centralized Information Centre
- Effective standardized and systematic data management system
- Updated and structured documentation
- Easy retrieval of records, history and report
- Precise Forecasting and Capital Expenditure information
- 🗻 Performance Worth
- Strategic evaluation and decision making
- Tool to support accurate reporting

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IMPLEMENTATION OF CIFM CONCEPT

- Appoint competent and experienced Facility Management organization
- Change management culture, from corrective to proactive
- Customer Service and Client Focused
- Reformance Management: Introducing KPIs to measure and manage performance
- Implementation of QMS (Policy, Procedure & Certification)
- Knowledge Transfer via training

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COLLABORATION WITH MALAYSIAN EXPERTISE





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SECTION 4

OUR ACHIEVEMENTS

OUR ACHIEVEMENTS

10 KEY ACHIEVEMENTS:

- 1. Set up Quality & Information Management System
- 2. Implemented CIFM leading to new business opportunities
- 3. Create a proactive culture
- 4. Implementation of ERP system
- 5. Set up centralized technical library
- 6. Development of FM Contract
- 7. Establish centralized single point of contact
- 8. Improved Space & Property management
- 9. 20 % reduction in manpower
- 10. 15 % reduction in contract values

