LEARNING FROM BEST PRACTICE
QLASSIC IMPLEMENTATION IN
CONSTRUCTION PROJECTS

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Content

• Progress and perception of QLASSIC implementation

• Case study of successful application of QLASSIC in construction projects

• Learning from Best Practices

• Discussions
The Malaysian QLASSIC Initiative
The Response

449 Projects by 2017?
Learning Best Practice: The Case Study

Twelve (12) pilot projects

QLASSIC Scores >70%

QLASSIC assessment 2016-2017

Objective 1: Cost implications of the application of QLASSIC

Objective 2: Implications to the project management process

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Findings 1: Implications to the Project Management Process

- To find out the average tendency of the cost implications with each QLASSIC element

- Statistical Analysis - Median and Standard Deviation (SD)

- **Findings:**
  - There is less than 3% cost increase when QLASSIC is applied
  - Cost increase is due to appointment of skilled labour only for the QLASSIC applied elements of the project

<table>
<thead>
<tr>
<th>QLASSIC Element</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<tbody>
<tr>
<td>Reinforced Concrete Structures</td>
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<tr>
<td>Formwork</td>
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<tr>
<td>Rebar and reinforcement</td>
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<tr>
<td>Precast concrete</td>
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<tr>
<td>Pre-stressed concrete</td>
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<tr>
<td>Tests for concrete</td>
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<td>Structural Steel Works</td>
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<tr>
<td>Steel components</td>
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<td>Metal decking</td>
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<tr>
<td>Steel protection and tests</td>
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<tr>
<td>Architectural Works: Internal Finishes</td>
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<tr>
<td>Floors</td>
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<td>Internal walls</td>
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<td>Window</td>
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<td>Car park / car porch</td>
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<td>Mechanical And Electrical Works</td>
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<td>External Works</td>
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<td>External drains</td>
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<td>Court</td>
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<td>Fence and gate</td>
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<td>Swimming pool</td>
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<td>0.6245</td>
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<tr>
<td>Electrical substation</td>
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<td>0.62247</td>
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<tr>
<td>Guard house</td>
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<td>0.6245</td>
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<tr>
<td>Rubbish bin / collection centre</td>
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Average 1.2991

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<tr>
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<th>4</th>
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Findings 1: Implications to the Project Management Process

**INCEPTION/CONCEPTUAL STAGE**
- Feasibility Study / Need Statement
- Appoint Consultant
- Site Investigation
- Project Planning (Project Objectives)

**DESIGN DEVELOPMENT STAGE**
- Client’s Brief/Need Statement
- Detail Design
- Conceptual Design
- Detail Cost Estimate
- Authorities Approval/Planning Permission
- Value management/Elemental Cost Analysis

**TENDERING STAGE**
- Specifications
- Tender Documentation
- Tendering
- Tender Evaluation
- Tender Award

**CONSTRUCTION STAGE**
- (Construction Site Management) Time
- Cost
- Quality
- Health & Safety
- Environment
- Project Monitoring
- Contract Administration

**PROJECT HAND OVER STAGE**
- Testing & Commissioning
- Project Handover
- Defects Liability Period (DLP) Management
- Final Account

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Findings: Implications to the Project Management Process

INCEPTION / CONCEPTUAL STAGE

Best practice for appointing consultants?

“There should be a special provision to consider the appointment of consultant who are conversant on QLASSIC”

“The Resident Architect or Engineer especially, should have the experience, understanding and knowledge on QLASSIC because they are the ones who will determine the specification and quality of the project”

Best practice for establishing the Clients Brief/Need Statement?

“Clients should have their own QMP for consultants and contractors to refer to”

“QLASSIC should be considered and included in the Clients Brief/Need Statement to remind the consultants of the QLASSIC requirements”

Should there be any consideration of QLASSIC in the preliminary Estimate?

“The preliminary estimate to include cost associated to QLASSIC application”
Findings 2: Implications to the Project Management Process

DESIGN DEVELOPMENT STAGE

Any differences in the development of detail design?

“Consultants needs to be detail in the detail designs to avoid problems of quality”

Any differences in establishing the project specifications?

“Specifications needs to be prescriptive, clearly spelt out to underline the project level of quality”

“Use of such term as ‘...To the Satisfaction of the S.O.’ is not helpful and can be misleading”

Are there any differences in authorities’ approval?

“No difference”

“But, if it is included as a requirement ... will compel all parties to be more serious in considering QLASSIC”
Findings 2: Implications to the Project Management Process

TENDERING STAGE

Any differences in the preparation of the Tender Document?

“Requirement for QLASSIC need to be incorporated in the Tender Document”

“Incentives and penalty for QLASSIC score achievement needs to be spelt out”

Any suggestion for improvement in the tendering process?

“If possible, only QLASSIC savvy contractors should be invited for tendering”

“The tendering process can follow the existing procedures and guidelines set”

How should tenders be evaluated and awarded?

“We should be on the lookout for contractors who have and don’t have Quality Management System (QMS)”

“Look at their performance record”
CONSTRUCTION STAGE

What should be seriously be considered when controlling the quality of workmanship done by the contractor?

Contractors:
“*The contractors must have their own quality policy (QMP) to implement the project*”

“*Contractors must have experienced and knowledgeable supervisors to control/monitor quality*”

“*Tool Box meetings to emphasise quality is very necessary to impress the quality standard expected; “Samples and mock-ups are necessary to provide example of the quality expected”*

Client & Consultant:
“*Consultants should be competent to monitor the quality of work done by contractors*”

“*The quality assessment should also be conducted by the Client’s/Consultant’s own internal Quality Assessment and Control (QA/QC) team to monitor work quality*”

“*Quality report and monitoring should be a key agenda in construction meetings*”
Findings 2: Implications to the Project Management Process

DEFECTS LIABILITY PERIOD STAGE
Are there any difference in the way defects are managed during the Defects Liability Period (DLP)?

“Pre-QLASSIC assessment should be undertaken before the actual QLASSIC assessment are carried out”

Any difference in the way defects are managed during the Defects Liability Period (DLP)?

“Yes, there is significant reduction of defects, especially finishes during the DLP”

Any cost savings to the contractor during the DLP compared to a project when QLASSIC is not applied?

“There should be but is quite minimal……. Have never calculated”

How can cost savings be achieved?

“From lesser defects and re-work”
Conclusion

- **Lessons Learnt** - very minimal increase in construction cost with QLASSIC application

- **Best practice to improve QLASSIC application:**
  - Guidance, training and re-training of Clients & Consultants:
    - Inception, Design Development, tendering, Construction, Defects Liability Period (DLP) Management
  - Guidance, training and re-training of Contractors:
    - Construction, & Defects Liability Period (DLP) Management

- **Insights to why the low traction of QLASSIC application**

- **Necessity to continually review and re-learn to effectively promote the application of QLASSIC in Malaysian construction projects**
Thank You