
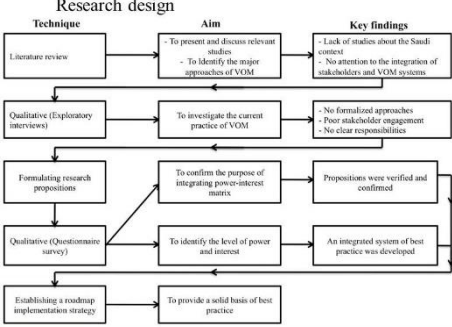
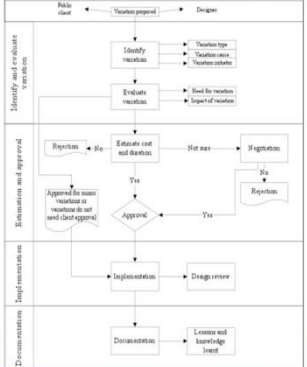
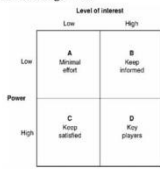
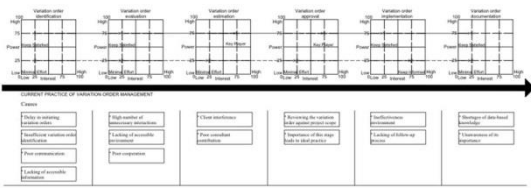


Focus group presentation

<div style="text-align: center;">  <p>Butter management for variation orders in the Saudi public construction industry in the design stage</p> <p>By Jawad Alsuliman</p> </div>	<p>Introduction</p> <ul style="list-style-type: none"> •Hardly possible to deliver a construction project without VO (Ssegawa et al., 2002). • Even in well-planned projects, change might be necessary (Araim and Pheng, 2007) • Change is “fact of life” for construction projects (Revay, 2002). <p>Research problem</p> <ul style="list-style-type: none"> • Variation orders affect the progress of construction projects • Variation orders in the design stage always lead to poor performance (Oladapo, 2007). • The design stage is with high likelihood of variations occurrence (Motawa, 2007).
<p>Variation orders in the Saudi construction industry</p> <ul style="list-style-type: none"> • Variation orders are the major cause of failure in construction project performance. • Cost overruns due to variation orders equal 6% to 10% of the original contract value. • Design errors are considered as the most important cause of variation orders. • Clients are dissatisfied because of the high percentage of variation orders due to design errors. <p>Research aim</p> <ul style="list-style-type: none"> • “To better manage variation orders in the Saudi public construction projects in the design stage” <p>This aim will be achieved by engaging clients and consultants effectively during the process of VOM throughout different methods.</p>	<p>Research limitation</p> <ul style="list-style-type: none"> • This study deals with variation orders in the Saudi construction industry in the design phase. • This study is limited to public building construction projects • This study deals with public sectors in Saudi Arabia that adopt traditional procurement route • This study focuses on governmental organisations as clients and consultancy firms as consultants <p>This workshop aims:</p> <ul style="list-style-type: none"> • To test the model’s effectiveness, clarity and applicability. • To discuss and validate what success the experts think to have. • To discuss the barriers of the model implementation. • To discuss how could the model be improved.
<p>Research design</p> 	<p>Exploratory interviews</p> <ul style="list-style-type: none"> • Exploratory interviews were carried out to investigate the current practice of variation orders in the Saudi construction industry. • Research sample was 23 participants from public sectors and consulting firms. <p>Main finding</p> <ul style="list-style-type: none"> • No formalized approach to manage VO. • Saudi construction industry adopts the basic principles of any VOM system (<i>identification, evaluation, estimation, approval, implementation and documentation</i>). • Poor stakeholder engagement • No clear responsibilities for the design parties.
<p>Current conceptual framework</p> 	<p>Linking the stakeholder engagement and VOM process</p> <ul style="list-style-type: none"> • Literature review pays no attention to stakeholder engagement during the process of variation order management. • Engagement of stakeholders throughout project activities is one of the critical factors of success. • Stakeholder power-interest matrix was selected as a method to engage the stakeholders to better manage VO. 

Level of power and interest in the current practice and causes of poor performance



Research propositions

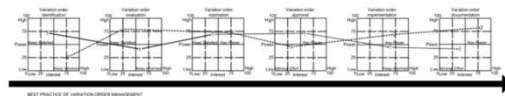
- Three research propositions were formulated.
 - *An appropriate level of stakeholder engagement in the current practice of variation order management leads to the greater success of the management of variation orders.*
 - *Integration of stakeholder power-interest matrix and the basic principles of variation order management system would lead to best practice of VOM.*
 - *Applying a system that identifies the level of power and interest for the involved stakeholder would better manage variation orders.*
- The propositions aimed to confirm the significance of integrating the stakeholder mapping and VOM process.

Questionnaire survey

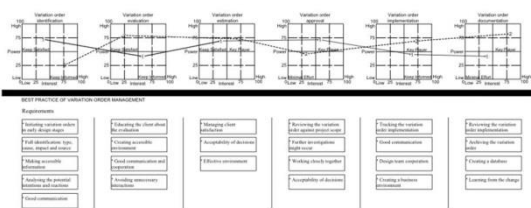
- To verify and confirm research propositions.
- To identify the level of power and interest for public clients and design consultants during the stages of VOM.
- To integrate the basic principles of VOM and stakeholder mapping to develop a best practice.
- **Survey sample** was 217 respondents (87 clients and 130 consultants).

Main findings of the quantitative method

- Research propositions were verified and confirmed.
- Stakeholders were located and positioned in the power-interest matrix.
- Best practice was developed.
- The responsibilities of stakeholders were determined.



How to make the best practice happen (causes, requirements and actions)



1 Public client
2 Design consultant

Implications of the best practice

- It clarifies the stakeholders' responsibilities
- It determines the appropriate level of stakeholder engagement
- It reduces the quantity of the unnecessary interactions by public clients
- It improves the communication and relationship among the stakeholders.
- It assists the stakeholder to avoid conflicts and disputes.
- It assists to speed up the time of variation order implementation.

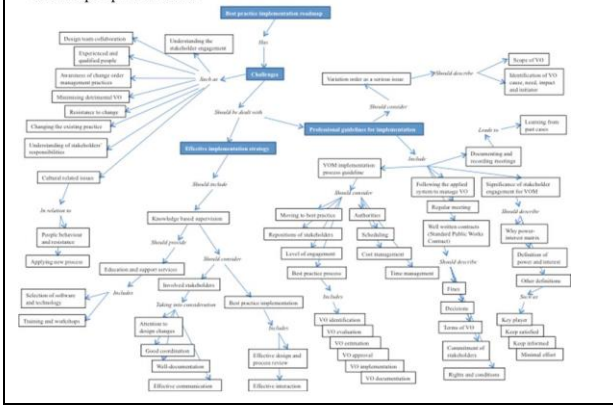
Need for roadmap implementation strategy

- Developing best practice alone cannot influence the required changes (Bernstein and Pittman, 2004).
 - It is widely recognised that organisations have gaps between what they know and what they do (Pfeffer and Sutton, 2000).
 - There is a concern that the integrated system may fail to work out.
- So, It was imperative to design a roadmap to successfully implement the best practice.

Designing the best practice implementation roadmap.

- Three categories were identified:
 - *Challenges identified in implementing best practice*
 - *Need for an effective implementation strategy*
 - *Need for professional guidelines*

Roadmap implementation:



Thank you for your attention

Any Questions

