Web-based Document Management Systems in the Construction Industry

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Introduction

- Introduction – Fragmentation in construction industry

- Background – Researches and government reports in construction communication
  - Latham Report (1994)
  - Egan (1998)
  - Tang Report (2001)

Web-based Document Management Systems in the Construction Industry

- Increase use of computers

- Scale of projects

- Internet (web-browser) as the platform for information, goods, services and a means of communication.

Objectives and Measures

- Background information

- Usage and Experience

- System used

- General Satisfaction Level

- General view after using the Collaboration Systems

- Average drawing approval time on projects with and without using the technology

Advantages Of Adopting

The Collaboration Technologies

- Accountability and traceability

- Project Management and Communication

- Document Management, storage and retrieval

- Handover & Commissioning and operation and maintenance

- Perceived advantages of adopting the collaboration technologies

- Benefits associated in the design process

Obstacles

- **Technical**
  - *Too many software in the market to choose from*
  - *Not easy to "mark up"/add notations to electronic drawings*
  - *Reliability on service provider*

- **Behavioural**
  - **IT literacy on site**
  - **Resistant to change**

- *Cost related*
  - *Cost of adopting the ssoftwares/systems*
  - *Additional manpower required to facilitate the use of it*
  - *Add additional cost to the overall project vs time and printing saved*

- **Organizational Barriers**
  - *Who decide which brand to use?*
  - *Approval time*

- **Legal Barriers**
  - *Security*
  - *The need of paper?*

Conclusion

- that construction practitioners in Hong Kong are starting to adopt the new systems with only limited experience on these collaboration technologies
- efficiencies might not be as easy to be realized by the industry when we are still at an early stage of adoption
- Hong Kong Government needs to investigate the possibility to offer assistance to the industry for the implementation of these systems in order to achieve the recommendations in the "Construct for Excellence" report (Tang, 2001).
- A lack of standardization of the codes and systems.

Recommendation

- Government assistance and initiatives
- Exchangeable information
- Advancement of technology over time
- Contingency plan for system shortfall
- Change of industry attitude and practitioners' behavior
- Project owner – Project 'champion"
- Which system?
- Courses in universities

Further Research

- Further measurement and research on the benefits, particularly on the counterbalance on the cost and time saving against the cost of investing in the technology is suggested.

- research on the portfolio of benefits for the adoption of collaboration technologies is suggested in order to bring the construction industry forward to the next step in information technology

Conclusion

- it is clear that these system will enhance the communication with the project team in the construction industry. The enhance communication, will lead to time saving, better quality of work and cost savings.

- only limited experience on these collaboration technologies.

- The efficiencies might not be as easy to be realized by the industry at this early stage of adoption. Further research on this topic is strongly recommended to continuously measure the benefits obtained by implementing new information technology to the construction industry in Hong Kong.