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INTERIOR DESIGN AND CONSTRUCTION PROJECT MANAGEMENT: PERFORMANCE AND PRODUCTIVITY IN MALAYSIAN BUILDING INDUSTRY

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ABSTRACT

The practice of Interior Design (ID), Architecture, Mechanical & Electrical and Facilities component drawings such as conceptual design and construction drawings would need to be integrated and coordinated between the consultants and the contractor drawings. All related drawings are required to be resolved and agreed upon, so as not to cause obstacles at the actual construction site and to improve the business performance in terms of time and cost of the project. A further review of the performance measured in the interior design construction industry also indicates that productivity is an inadequate measure for identifying improvement targets and control activities. The use of a more holistic set of measures is recommended in order to ensure more relevant and timely information. The purpose of this study is to explore the integration and coordination of the respective consultants' involvement in the project construction management that will help clients on timing and costing of the projects. The lack of coordination between multidisciplinary scope of work within project construction managements in interior, architecture, and other related fields will increase time and cost of the ID Construction projects (IIDA Report, 1998).

Keywords: interior design, multidisciplinary, coordinated and construction management

INTRODUCTION

Construction management is the act of planning, organizing and overseeing the various tasks involved in a construction project. It is performed by individuals known as project managers, who represent the builder or contractor hired to perform the work.

Construction management is a complex task that changes drastically from one project to another. Employees working in this field will find that the requirements and processes of management will constantly shift depending on the specifics of the project. Most construction projects begin with some level of conception, design and implementation. Whether the project is a new fence in your back yard, renovations or the erection of a multi-million dollar shopping mall, construction management will be necessary. The initial idea, concept or theory for a project can come from scientists, research laboratories or engineers. The concept typically goes through a design phase where drawings, flowcharts and cost calculations are generated. Finally, the coordination and management of the various and numerous disciplines involved in building and implementing the project are done through Construction Management.

Interior Design as a profession has gained prominence in the construction industry in Malaysia. The complexity and the nature of buildings being constructed in this region has forced design consultants and construction companies looking into Interior Design works as a specialised consultancy. The small number of Interior Design Professionals in the industry has led to dependence on architectural and engineering consultants taking over this crucial role in executing interior projects. This created a renewed demand for locally-trained Interior Design Professionals. Construction Project Management is a core area being given renewed importance by design consultancies and the construction industry in a deadline-oriented market. Though engineers have had a traditional forte in the area of Construction Project Management; Architects and Interior designers have slowly made inroads into this area in the past few decades. Interior Designers specialising as construction project managers are in demand all over the world. The education sector has responded to this demand through programs in design education that focuses in Construction Project Management. The paper looks into the relevance of Construction Project Management in the Interior Design and construction industry in Malaysia and how these practices will save time and cost to the client specifically.

LITERATURE REVIEW

In this study, the Project Management and Construction Process consists of planning and execution, so the planning processes

performed to establish the total scope of the effort which is to develop objectives of the Interior Design Management and Constructions, and develop the course of action required to attain those objectives. The planning processes of the project management and construction plan of the project documents will be used to carry out the construction project.

i. Project Planning Stage.

The scope of work sets the parameters and constructability review for the construction project and identifies the work to be done, the scope describes the building layout, site of work, site work, number of rooms, number of floors, types of materials, dimensions, special equipment, storage requirements and other as specified by respective consultants (Jackson, 2010). Contract Review is to ensure that the company understands customers' needs and has the capacity and capability to meet those needs (Li, 2000). The researcher noticed the most problems in Malaysian construction project associated with a project contract were not specifying on the coordination works between the contract parties. Therefore, the Project Manager (PM) is having extra works which is to read all the consultant drawings for reviewing and further construction works.

In general for efficient work performance, the process of sequencing which have identified all the activities that need to be performed on construction project can be done by engineering program (Jackson, 2010). Schedule development is the process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule (Conchu´ir, 2010). Scheduling helps manager and it seems to him like a compass. The budget estimation is important of forecasting and redirecting cost and expenditures of a project. In these stages the PM is more concerned on the time and cost on the project that he handled e.g. to ensure time and cost to the client benefit.

ii. Project Execution Stage

In this stage, PM aspects should control the whole construction project. A Material management is a scientific technique, concerned with Planning, Organizing & Control of flow of the

works from their initial design to the construction stage. It has some benefits to ensure right coordination drawings for construction. Every aspects of construction project performance must be monitored, tracked, and recorded to ensure that the project plays out according to planning stage, and has a reasonable chance of meeting the project goals for time, cost, and quality. Tracking the deviations will help to identify problem areas to choose the correct or prevent actions (Lock, 2004). The on-site management of a construction project involves great amounts of paperwork, even for relatively small projects, the documentation must be done to ensure communicate directions, questions, answers, approvals, general information and other material to appropriate members of the project team (Bennett, 2003) The point of view of the change must be controlled by change order which is contains a brief explanation of the nature of the change and whether it is initiated by the contractor or the owner and its relation with scope of project (Levy, 2010). It is important the process of quality control primarily deal with issues relating to the requirement conforming to the plans and specs by using quality tools to insure consistency in quality (Jackson, 2010).

Consultants	Drawings	Drawing For Construction
Civil and Structure	C&S: Logistic, Building Orientation, Road Foundation and Building Structure	Coordinated Drawing Status 'A' (Phase 1)
Architecture	Building Layout plan, space planning and reflected ceiling	
Mechanical	Plumbing, Air-Condition layout and Schematic design	Coordinated Drawing Status 'A' (Phase 2)
Electrical	Electrical, lighting layout and Schematic design	
Interior design	ID Space Planning, Floor Finishes, Reflected Ceiling, Special lighting, built in cabinet, Loose Furniture, Furnishing & Equipment arrangement	
Others specialist:	Specialist drawing: CCTV, Signage, Audio Visual,	

Figure 1: Basic drawing from Consultants involvement in Class a Project: Malaysia Construction Industry

The coordination of the drawings as Figure 1 is shown that from all consultants need to be coordinated and getting status 'A' e.g. for construction, so that, the contractor would construct the building which follow the program schedule as agreed. From this research the time and cost of the building would be benefited to the client during handing over the building on time.

CONSTRUCTION MANAGEMENT AND PROJECT DEVELOPMENT'S SUCCESS

In an industrial setting, the larger the project, the more important it is to involve construction management early in the process. After the initial concept has been developed and designed,

Interior Designer, architects, engineers and other consultants usually define the scope of work, which is reviewed by the construction manager and his team. They then outline a course of action and begin construction.

Management is simply defined as "planning, directing, controlling and co-ordinating of individual, group or organizational goal and objectives with the ultimate aim of achieving maximum benefit". In the view of Baridam (2002) management literally means getting things done through and with people, which has to do with the planning and directing of effort towards a common objective. The traditional functions of a manager reflect the activities involved in managing, planning, decision-making, organizing, staffing, leading, motivating and controlling.

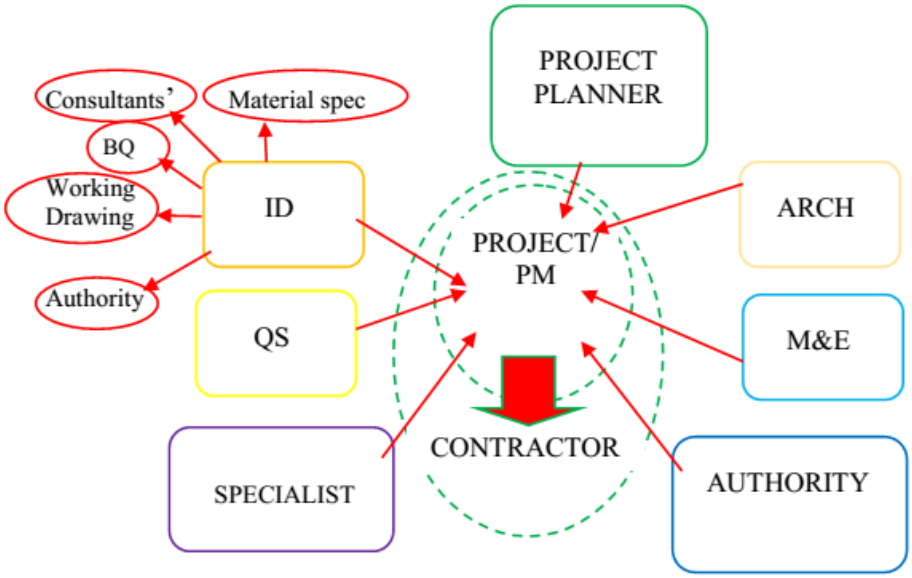

Figure 2: Interior design (ID) position in Construction Industry

These functions constitute a circle of action in which each component leads to the next. Since building development project execution involves a consortium of various professionals; Architect, Engineers, Quantity Surveyors, Interior Designer, Project Planners etc, it will be disastrous if there is no one to co-ordinate their interest and roles as major stakeholders, together with other non-professionals and the client. The right man to do

the job is the project manager. Project Management involves the proper activities of all these professionals and non-professionals such as co-ordination, programming, budgeting and monitoring their activities during the development process. The sequential steps in project management include:

- Objectives of the project.
- Task required to completing it.
- Duration of projects.
- Cost target of the projects
- Plan the most efficient organization of tasks.
- Re-evaluate tasks relationships and schedules and finally carry out the project.

The above success criteria as of Figure 2, exercises call for successful project implementation by the utilization of proven management techniques of planning, organizing, directing and control. The owner may engage a Project Manager (PM) to provide professional construction management services and to provide advice to the owner including cost, schedule, safety, the construction process and other considerations as well as to ensure the requirements of the construction contract are met (Bennet, 2003). Therefore Contract Review is to ensure that the company understands customers' needs and has the capacity and capability to meet those needs (Li, 2000). Logistic planning is also used from a material flow perspective depending on critical activities that constrain the material handling, storing method, providing internal and external transport plans, placements suggestion, and production sequences (Linden, 2009).

The important aspect of control is communication which is critical to the success of construction management project teams; better communication leading to more positive outcomes by using some communication skills (Done, 2004). The meetings bring people together on a weekly basis so as to share important information, allow discussions, resolve problems, review progress and make on-the-spot collective decisions.

Construction management is therefore, justified as means of avoiding the ills inherent in building development, the entire construction industry and production sectors of the economy and for which reasons most projects fail, collapse or are abandoned.

The project managers (PM) role arises from the need for a technical expert to take charge, control of events on the project implementation process, someone who understands the coordinating, controlling, and directing the efforts and activities of the professional team and the physical problems of implementation process with the needs in the decision-making process

The successes of any project implementation process in the construction management of all sectors depend largely on the project manager's concept: the strict monitoring of time, cost, material, quality and environmental constraints.

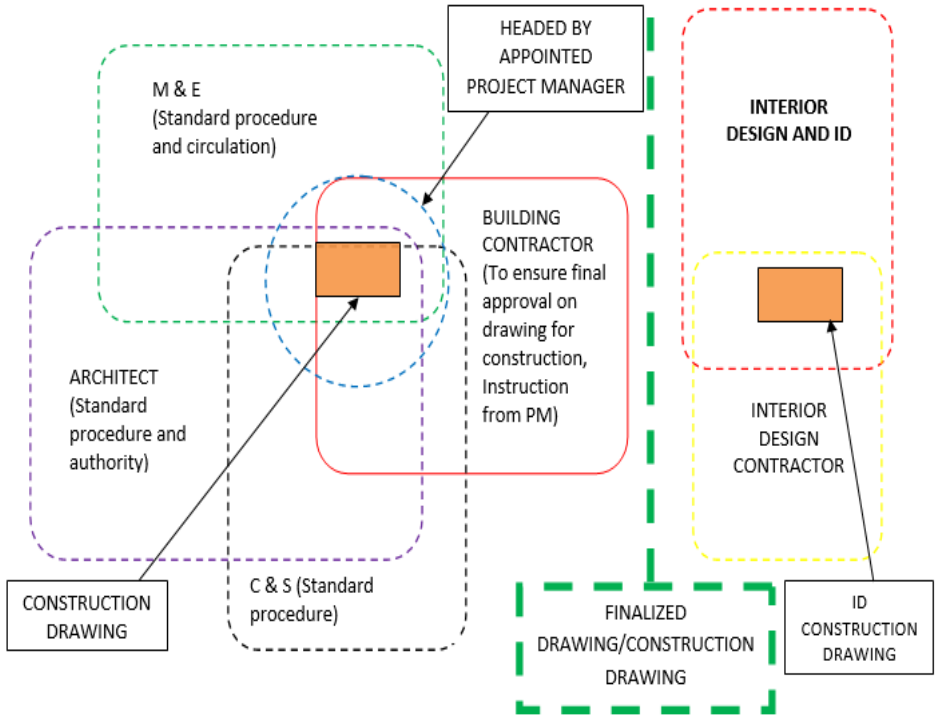

Figure 3: Current Practice - Construction drawing is excluded from Interior Design drawing.

Figure 3 is the chart of the works done as current practice which are the works to be finalized before ID scope of work and ID construction management could start the works. There are a lot of matters to be considered involving time and cost to the client or owner of the project.

The view of the change must be controlled by change order which contains a brief explanation of the nature and whether it is initiated by the contractor or the owner and its relation with scope of project (Levy, 2010). It is important the process of quality control primarily deals with issues relating to the requirement conformances to the plans and specs by using quality tools to ensure consistency in quality (Jackson, 2010).

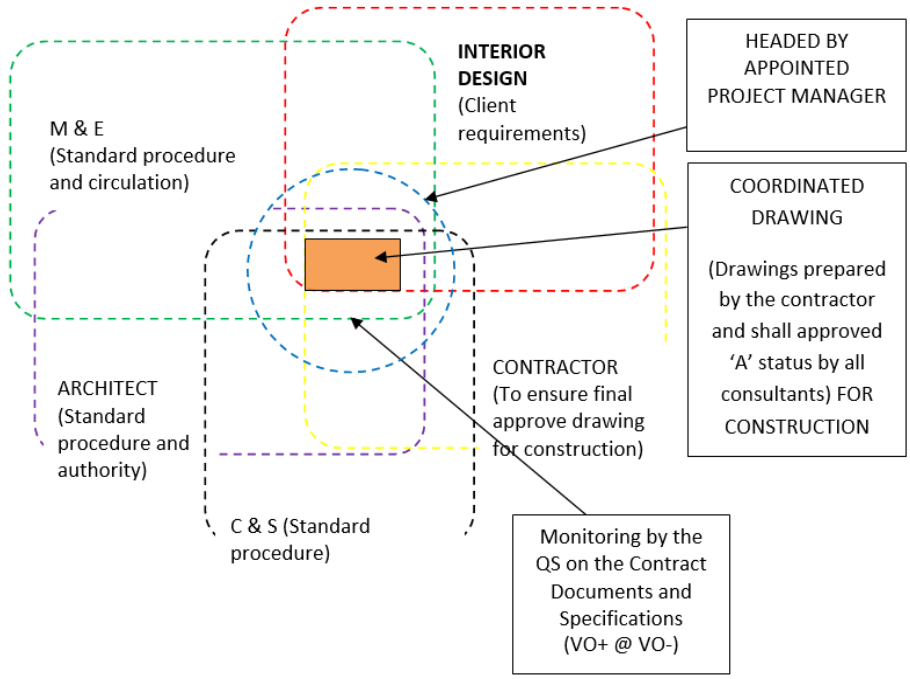

Figure 4: Proposal Practice - Coordination drawing with coordinated drawing for construction

According to Cleland (1975) a project is termed successful if it passes four success test criteria i.e. the time criterion – completed on time; the cost or money criterion – completed within budget; the effectiveness criterion – completed in

accordance with the original set performance and quality standards; and client's satisfaction criterion – accepted by the intended users or clients whether the client is internal or from outside the organization.

Construction Management with Consultant's Responsibility

Lackman (1987) has discussed the different tools available to a project manager to achieve success. These include work breakdown structures, client information sheets and project plans, among others. The early development of strategies, philosophies and methodologies of project implementation has been stressed (Kumar, 1989) as the most important factor in achieving success.

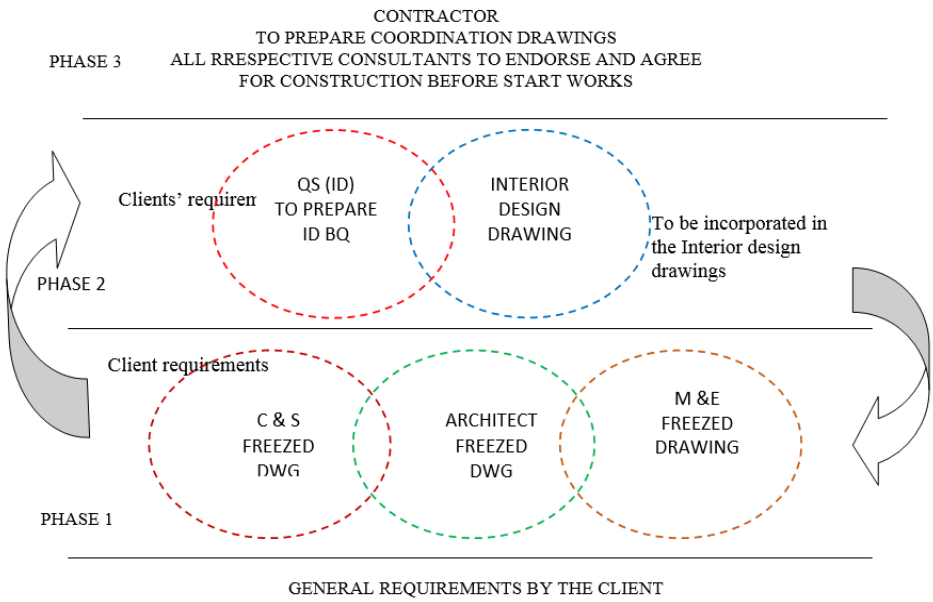

Figure 5: Phases Status of drawings of consultants before Interior Design took place

Kumar (1989) suggested that by gathering sufficient information and being aware of project considerations methodologies which are specific to a certain situation, as such

well-defined strategies will assist in providing a satisfying and successful implementation of a project.

The concentration on techniques may be considered as the 'hard' issues in construction management. They are the easily measured and the concepts of time and cost. Other writers have incorporated what might loosely be called people skills alongside these more administrative functions. These people skills are 'soft' issues in management. For example; Randolph and Posner N, Posner, (1987) and Jaafari (1990), stressed personal, technical and organisational skills as being necessary to help control projects and achieve successful results.

This would suggest that the focus for success in both spheres should lie with the project management team and would tend to exclude the client from any role in project success, contradicting the earlier assertion that the early decision making on a project dictates success. The client is responsible for these decisions and therefore has an important role in determining success. The completion of a project requires from a variety of groups including the project team and the end user. Each party has a role in defining and determining success. They all have specific tasks and responsibilities that they must fulfil in order to achieve success (Kumar, 1989). The client/end user is expected to be the main party concerned about the success of the project. The project team will shape the implementation of the project. It is important for the team to employ the correct management techniques to ensure that planning, controlling and communication systems are all in place.

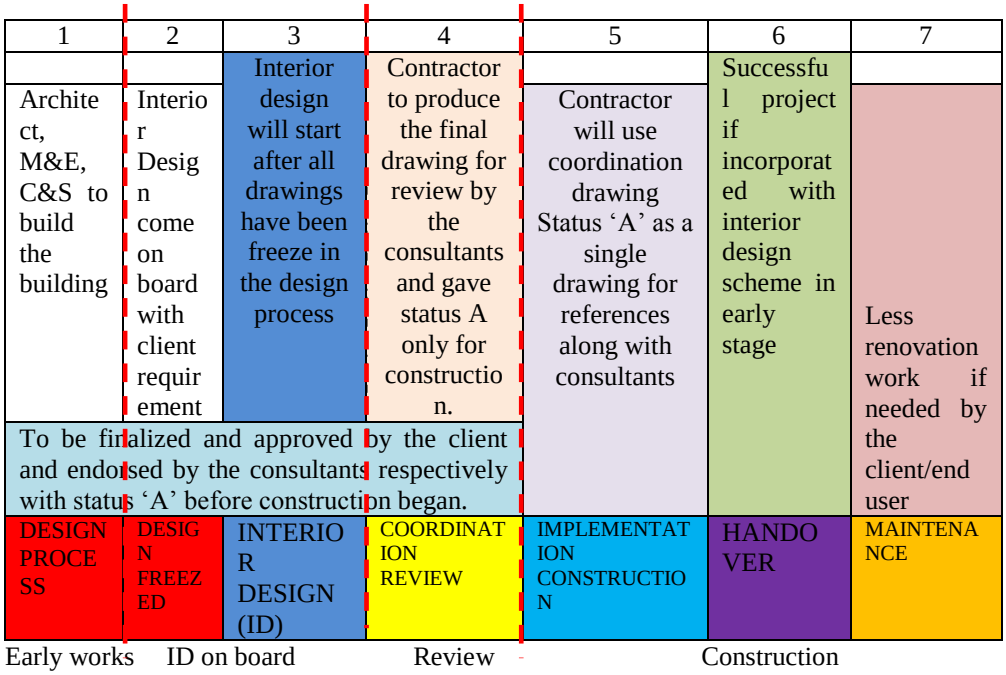

Figure 6: Scope of works of construction management in a project

Without these systems, the co-ordination and control of all groups and resources within the team is difficult. The orientation of the project team will be towards the task rather than the people. This will be particularly true as deadlines for achieving work are stressful and become paramount in people's thinking. The scope of interest here will be the completion of work and delivery of the project. The diagram in Figure 4, illustrated how each of the parties previously identified, interact with the project during this lifecycle. It also highlights the role of a new group - that of third parties.

There are various third parties who could influence the development and use of a project. These include: statutory authorities, both local and national; the media; environmental groups and the general public.

CONCLUSION

This paper has highlighted the Interior Design (ID) construction management process between consultants and contractor process, and also the confusion that can arise from the common use of these terms. It has also attempted to highlight how the objectives of a project and the construction management are different and how the emphasis of achieving specific and short-term targets compared to the wider aims of a project. The conclusion is that to make the interior design construction management team totally responsible for success would appear to be unappropriated and that the client should take an increased interest in the development and use of the project. The approved ID drawings shall be considered and finalized, with the drawing for other consultants being coordinated and produce construction drawing to combine as a single construction drawing and construction management for reference by all consultants and the contractor.

Finally, one must always bear in mind that successful construction management techniques will contribute to the successful achievement of projects, but construction management will not stop a project from failing to succeed. The right project will succeed almost without the success of construction management.

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