OPPORTUNITIES AND CHALLENGES IN BUILDING REFURBISHMENT SECTOR

Dr Azlan Shah Ali, University of Malaya
Dr Ismail Rahmat, Universiti Teknologi MARA

1.1 Introduction

Refurbishment is fast becoming one of the most important sectors of the Malaysian construction industry. Physical deterioration, building obsolescence and the demand for sustainable construction are the three main factors that contribute to the growth of refurbishment sector. In the 25th Annual General Meeting of the Chartered Institute of Building Malaysia, Dato’ Michael Yam, the president of the institute at that time, highlighted the growing importance of refurbishment sector. He suggested that more building contractors should be involved in it.

However, managing refurbishment projects is demanding because of their inherent complexity and uncertainty. In addition, the structure, occupational pattern, contractual arrangement and training in the construction industry are preoccupied with new construction. Compared with new build, refurbishment needs a more flexible and integrated approach. Modifying the management process slightly to cater for a successful refurbishment work is simply not sufficient. A fundamentally new approach is needed based upon an analysis of the managerial demands that refurbishment presents.

1.2 The growth and opportunities in refurbishment sector

Many old buildings in Malaysia have deteriorated, that is, the physical quality of the building is slowly declining and not performing the way it was intended. Large stocks of buildings especially in the Malaysian cities have been underutilised, wrongly used or have become dilapidated. The deterioration of the buildings exerts pressures on both public and private building owners to refurbish their buildings. During the present economic recession, building owners are pressured to conserve resources. During this time, many of them began to recognise the value of their existing building. The shortage of land and the explosion in land prices especially in the Klang Valley discouraged many property owners from buying land and building new buildings. These make refurbishment a more attractive option.

Technological, social, location, legal, aesthetic, image and environmental changes have also contributed to buildings becoming obsolete and disused. Technological change shortens the functional life of buildings at an increasing rate, which requires modernisation of services on those buildings. This is especially true for shops and offices. Many shopping complexes and offices built in the 60’s and 70’s that provide landmarks to Malaysian cities have been refurbished. These buildings were refurbished because of their historical and cultural values. The pressures from social and preservationist groups which are in favour of keeping national heritage buildings, has also contributed to the growing demand for refurbishment. In addition, sustainable construction, which results from a growing environmental awareness to save natural resources, has become a common theme between practitioners and academics in the Malaysian construction industry. They are likely to promote refurbishment, which would help to boost the growth of refurbishment sector in Malaysia.

Figure 1: The Trend of Construction Output in Malaysia
Source: Malaysia, CIDB (2007)

Figure 1 shows the total construction output in Malaysia from year 2004 to 2006 steadily falling. In year 2004, the Malaysian construction industry recorded its highest output worth almost RM 53 billion. The output mostly consisted of residential and infrastructure construction activities. However, the output of the local construction industry started to decline in 2005 and 2006. This was mostly due to reduced government spending in the construction sector. The sector anticipated achieving an output worth more than RM 50 million in 2007 due to bigger government allocation in the construction industry, especially for the repair and maintenance sector.

Figure 2: Refurbishment Projects Output in Malaysia

In contrast, the output of refurbishment sector during the same period increased sharply except for 2004 when the output declined (Figure 2). However, refurbishment activities picked up in the following year, the overall construction output showed a slight decrease. This was due to the government policy of putting more emphasis on repair and maintenance activities, rather than on new construction projects. The trend is expected to continue in the future since more money has been allocated for repair and maintenance in the Ninth Malaysian Plan.
In the 9th Malaysia Plan, the government forecasted that the construction sector would have an average growth of 3.5 percent per annum, compared with only 0.5 percent average growth during eighth Malaysian Plan. One of the largest allocations is for the construction sector, in which the government will inject almost 19 billion Ringgit Malaysia during the next five years. This allocation includes provision for infrastructure, building, and maintenance projects. The development plan allocation for repair and maintenance works increased from RM 296 million during the Eighth Malaysian Plan to RM 1079 million in the Ninth Malaysian Plan (Malaysia, 9th Malaysian Plan, 2006). Hence, it is expected that refurbishment work will become more important in the future.

In year 2006 refurbishment constituted 16 percent of total Malaysian construction output (CIDB, 2007). However, many refurbishment projects carried out are unreported, especially those undertaken by house owners who have carried out illegal renovation works. Therefore, if this figure is taken into account, the actual value of refurbishment works in this country should be higher.

Table 1 shows that refurbishment projects contributed an average output of more than RM 5400 million per annum over the last four years. The growth of refurbishment activities since year 2003 indicates that refurbishment sector in this country is growing and is becoming one of the important sectors in the Malaysian construction industry.

<table>
<thead>
<tr>
<th>Years</th>
<th>Project Volume RM (million)</th>
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<tbody>
<tr>
<td>2003</td>
<td>5579</td>
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<tr>
<td>2004</td>
<td>3436</td>
</tr>
<tr>
<td>2005</td>
<td>6313</td>
</tr>
<tr>
<td>2006</td>
<td>6350</td>
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<tr>
<td>Average Value</td>
<td>5420</td>
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*Source: Malaysia, CIDB (2007)*

1.3 The challenges of managing refurbishment projects

Despite its growing importance, the subject of the management of building refurbishment has been relatively ignored. The focus of research and teaching in the built environment in Malaysian universities is mainly directed to new build. Gaining knowledge and improving the management skills in this area is therefore difficult for practitioners, unless they have the opportunity to be involved in refurbishment works. The lack of books and published manuals on refurbishment compel many of them to manage refurbishment work by intuition or trial and error. This is unfortunate, because refurbishment is generally considered more complex and more risky than new build; therefore, they need to be managed differently. Lack of understanding of the nature of refurbishment works makes many designers and constructors to manage them in an inappropriate way. Therefore, it is not surprising that cost and time overruns are very common in refurbishment projects.

The inherent complexity and uncertainty of refurbishment are cited by many construction management writers to be the main reasons for the poor performance. Because of the uncertainty, the refurbishment contractors often let the primary objectives of cost, time and functional performance to be flexible. This means that there are no fixed targets. The problems in refurbishment projects are often underestimated and the final account frequently rises unacceptably beyond original estimates. The clients usually have to accept the time and cost variations in refurbishment projects. Undeniably, many clients who carried out refurbishment would not be happy with this situation.

Unfortunately, due to their lack of knowledge in refurbishment, the clients may set some conditions that become the contributing factors for poor performance of refurbishment projects. Clients often supplement the primary objectives, i.e., cost, time and quality with secondary objectives such as minimal disruption to the operation of the building. The importance placed on the secondary objectives is one main factor that contributes to the cost and time variations of refurbishment projects.

Many contractors found that to achieve specified quality of construction in refurbishment projects challenging, especially for refurbishment projects of listed buildings of high historical value. In such projects, finding skilled craftsmen who can execute fine plaster work and wood carving is difficult. Many craftsmen are already old. Furthermore, in some projects, matching new construction materials with the original ones is also difficult. Many materials needed are no longer in production.

Designing functional, economical and aesthetically pleasing building is much easier for new build than refurbishment projects. For new build projects, the design team starts fresh, and progressively builds up, revising and refining their designs. The design team is free to choose the specifications, the layout and the details of the building components. In refurbishment projects, assessing the conditions of the existing building is a difficult task because the structures could have deteriorated or altered throughout its life. The options are constrained by the conditions of the existing building and the designers have to produce a design that is compatible with it.

Project uncertainties make it difficult for refurbishment managers to obtain comprehensive and accurate design information needed for communication and design in many refurbishment projects. The scope of work is usually unclear and ill-defined. Often the design team daily discover new problems that need quick solutions but do not have the experience to deal with them. Thus, the productivity of the members of the design team often varies from day-to-day. Insufficient information and frequent changes in design require increased effort for coordination. These do not only prolong the design process but also may increase the level of conflict among the members of the design team.

This problem is further compounded when the clients have no experience and are not sure of what they want from the refurbishment work. In many refurbishment projects, some key decision makers in the clients’ organization are too busy
to be involved in the design process. These problems could be reduced if the design team is skillful in asking questions to identify the client needs. The design team must also take extra effort to consult colleagues and outside sources including the occupants. However, this is frequently not done. This leads to architects producing incomplete and inaccurate design, which requires many changes during construction. Hence, the design process, which should end before bidding, has to be extended and carried out concurrently with the construction phase. This makes it difficult for the contractor to plan and control the progress of the work. To overcome this problem, integration of the design and construction teams through close contact and good communication is needed. However, this is difficult to achieve because the design process involved many specialized participants who have different objectives and priorities.

The inadequacy of drawings and specifications from the architects makes it difficult for contractors to define the exact scope of work and to assess the technical problems in advance. Producing method statements and programmes and determining the actual time and cost of the works are often difficult. The contractor's bid is based on many assumptions and relies more on intuition and 'gut feeling' in the bidding process. Relying on assumptions and intuition, rather than definite knowledge, is the reason for a wider spread of bids in competitive tendering in refurbishment than in new build. It also underestimates refurbishment project costs, much more common than overestimates.

The project uncertainty and the fragmented nature of the construction industry encourage opportunistic behaviour among the many parties involved in refurbishment projects. Despite this, the various participants often concentrate on their own area of specialisation. The refurbishment project organisations often employ a procurement system that encourages further differentiation. The traditional contract system hinders early planning, because of the low rate of bid success. In addition, the contractors have no control over the sequence and timing at which bids are issued, and even less time over the awards of contracts. This leads to greater fragmentation of tasks in refurbishment projects. To reduce this problem, refurbishment projects must find contract strategies that integrate design with the construction process. The client must choose a suitable procurement system to allow integration to happen.

Within the sphere of refurbishment management, planning the job is the most difficult function facing refurbishment managers. The project uncertainty makes it difficult to determine actual time and cost of the works and in producing method statements and master programme. The complexity of refurbishment projects means that more detailed planning is required compared to new build projects of equal size. Without a detailed plan, monitoring the progress during construction would be difficult. The main issue in the planning and control process is how to integrate the key participants. Refurbishment firms have to find a way to provide effective formal channels of communications, reliable and accessible information, for staff about their jobs.

It could be argued that managing the construction process is important because it is where the greatest part of resources for refurbishment is allocated. During construction, demands for performance, i.e., cost, time, quality and the comfort of the occupants and the neighbours become acute. Major causes of project delays, cost overruns and conflicts usually occur during the construction phase. It is the most crucial phase affecting productivity in refurbishment projects. Effectiveness and efficiency during construction stage are the main criteria to measure the success of a refurbishment project.

The construction process of a refurbishment project requires a management approach that can handle the constraints on site. These constraints include access, dust, noise, vibration, restricted space, changes in programme due to new discovery, safety and other statutory regulations. The standard of accommodation for the occupants often deteriorates further during refurbishment work. The contractor needs to coordinate the use of space for occupants, storing building materials and scaffolding within the building.

The complexity of building, constructional works, technological developments and clients' demands over the years have resulted in specialization in refurbishment projects. The specialization of tasks, in which the project tasks are divided among specialist managers, caused differentiation. Because of this, many interfacing problems between the different specialists will occur. An example of interfacing problems is services work, which needs to be coordinated with structural work. In refurbishment projects, interrelated tasks, which require intense coordination, are many. To ensure that the tasks are coordinated, the specialists must be highly involved in the decision making process. This is because, to do those interrelated tasks, the specialists cannot process information individually.

However, to integrate the various specialists who have different attitudes, patterns of interpersonal communication, formal hierarchies, and time horizons are not easy. Some units reacted more to short-term problems than to long-term opportunities. The greater the differentiation in a project organisation, the more pressure to achieve integration.

To speed up information flow, having high communication skills is important for refurbishment managers. If the refurbishment managers could make themselves understood easily, misunderstandings and conflicts would be less likely to occur. Less time is spent on clarifying ambiguities. Modern communications, however, employ diverse media, formal and informal. Increasingly important is the use of information technology. Therefore, employing managers involved in refurbishment who are skillful and articulate in communicating through diverse media is important. However, many companies treat refurbishment projects as training ground for young managers who are not articulate.

The complexity and uncertainty of refurbishment projects require a flexible organization. Some might argue that this is not a major concern to refurbishment. Most refurbishment projects are carried out by small firms (1-7 employees) who populate the industry in great number. Small firms make up more than 90 percent of all firms operating in the industry. Small refurbishment firms are often more flexible. The problem of inflexibility mostly lies in large refurbishment firms. Even though most large firms are few and often focus in the new build market, some of them are involved or keen to be involved in refurbishment. In large refurbishment firms, the estimator, planning engineer, contract management and
Performance of refurbishment projects is critical to the economy and to maintain the competitiveness of the local construction industry in the UK. The local construction industry in the UK and the UK construction industry in general need to be competitive, efficient, and innovative to maintain their competitive edge.

Conclusions

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The construction industry in the UK and the UK construction industry in general need to be competitive, efficient, and innovative to maintain their competitive edge. This can be achieved through the implementation of refurbishment projects, which can contribute to the growth of the local construction industry. The need to maintain a competitive edge is crucial for the survival of the local construction industry in the UK.

References