Refurbishment set to take off in Malaysia

By JAN YONG

EXPERT VIEWS: What does refurbishment entail and what is the current scene in Malaysia? NST RED asked a panel of experts to give their views

The four experts are:

1. Dr Tan Loke Mun, Director of ArchiCentre Sdn Bhd and Past President of PAM (Persatuan Akitek Malaysia).
2. Associate Professor Dr Syahril Nazam Kamaruzzaman, Deputy Dean (Research & Development), Faculty of the Built Environment, University of Malaya.
3. Associate Professor Dr Azlan Shah Ali, Deputy Dean (Higher Degree), Faculty of Built Environment, University of Malaya.
4. Dr Kamarul Syahril Kamal, Building Conservator, Department of Building, Faculty of Architecture, Planning and Surveying, University Technology MARA (Perak).

RED: What are the current problems associated with refurbishment of old (not necessarily heritage) properties in Malaysia?

Dr Tan: Some of the current problems can perhaps be summarised under these headings – financial, technical and emotional. Financial – refurbishment usually involves available finances. It’s not easy to get bank loans specifically for refurbishments. In addition, there will not be revenues from the property during the refurbishment period. Technical – some buildings are quite old and the services such as air conditioning, plumbing and electrical can be complex to change. Structural changes are also more complicated compared with new constructions. Emotional – people grow used to their surroundings and find it hard to improve and change.

Dr Syahrul: The lack of technical knowledge in repairing, renovating and maintaining old buildings. There are practically not much skilled labour and technical experts in refurbishment methods and techniques. All refurbishment jobs involve both repair and upgrading works requiring an understanding of building materials, choosing appropriate tools and specifications, introducing new technologies as well as compliance with regulations.
When an old building is converted, aspects on building services are normally refurbished according to functionality without taking into account energy efficiencies or sustainability issues. Owners will consequently be faced with escalating costs with each successive refurbishments.

**Dr. Azlan:** The main problem with refurbishment of buildings in Malaysia is the limited amount of information available. The uncertainty of information for design works depends on the condition of the existing building structure. Frequently, there are cases where structural information for buildings in archive documents such as reports, as-built drawings and manuals are not properly documented, incomplete or missing. Some of the available data is inaccurate because of modifications made throughout the life cycle of the building which were not recorded. This situation induces the designers to issue inaccurate designs because much of the information is based on their ‘gut feeling’. As a result, many modifications of design need to be made by the contractor during the construction stage.

As information communication technology (ICT) has become so advanced, this often necessitates complete refurbishment of the existing building to install features such as new workstations and infinite access floors related to ICT stations.

**RED:** In Malaysia, why do people refurbish their properties and which types of properties are the ones refurbished most frequently?

**Dr. Syahrul:** The principal reason for refurbishment is to maximise income or asset value (Gold & Martin, 1999). The alternative to refurbishment is to demolish an existing building and build a brand new one. This, however, is costly in monetary and sustainability terms as planning permission will have to be sought, particularly if a change of use is involved. Not all refurbishment work will be financially viable and every case requires individual assessment.

The main reasons for refurbishment are as follows:

1. To meet modern standards, or to meet changing demands of buildings such as hotels, offices, airport terminals, retail premises, leisure and entertainment facilities and educational and health care buildings.
2. The upgrading in standards or conversion to new uses, of the whole or parts of industrial buildings, with production continuing in the area or adjacent areas.
3. Rearrangement of public services facilities with stringent operational safety requirements, such as railway stations (both surface and underground), where the provision of the services must be continued during refurbishment.
4. The conversion of buildings of extant use such as warehouses, mills, abandoned railway stations, large residential properties to new uses such as hotels, offices, exhibition halls and residential apartments.

Refurbishment is undertaken for a number of reasons ranging from the need to improve poor conditions to achieving current needs of occupants as well as the market. Advantages of refurbishment over new-build include potentially lower capital cost, shorter completion times and avoidance of planning constraints which must be imposed on a new build.

The refurbishment of buildings in its many forms including conversions, rehabilitation, alterations, improvements and repairs is not new. What is new, however, is that social, economic, technological and environmental forces have added impetus to demand. Since there is a huge demand for spaces and limitation towards providing new build especially in the large cities such as Kuala Lumpur, Penang and Johor Bahru, most of the old buildings have been refurbished and converted into offices, museums, hotels and exhibition centres. This pattern is expected to grow in years to come.

**Dr. Azlan:** Refurbishment works become an alternative when a building has reached the end of its service life, or fails to perform as required in its use. Refurbishment is however, influenced by a building’s physical deterioration, and obsolescence such as change in use, economic
change, investment decisions, historical value and change in condition. A
survey on reasons why Malaysians refurbish their property shows that
the most important reason for refurbishment was due to 'functional
rearrangement of space use' and 'to add functional comfort to a
building'. Refurbishment due to building obsolescence is more common
than deterioration. The majority of Malaysian buildings are refurbished
due to obsolescence, before the end of the building lifecycle. A survey of
1,000 refurbishment projects (buildings) in Malaysia indicates that
residential and office buildings are identified as the most frequent types
of buildings being refurbished at over 60 per cent of total projects.

RED: Give an indication of the cost and time required for
refurbishment?

Dr Azlan: It varies depending on types of building and scope of projects.
The majority of refurbishment projects suffer from delays and escalating
costs. Refurbishment projects are normally characterised by taking more
time than estimated during the design and construction stages. This is
due to the high degree of uncertainty in defining the scope of work.
Often, new information is discovered during the period of construction,
which require changes in design. As a result, the designers need to do
additional work, which requires more time to complete.

Dr Kamarul: Refurbishment work usually can be divided into 3 major
components:
1. Structural elements of the buildings - beams, columns, roof and
   foundation.
2. Architectural elements of the building - door, windows, staircase, wall,
   ceiling, floor including their finishes.
3. Mechanical and electrical parts including sanitary appliances.

RED: With so many new property developments in Malaysia, will
refurbishment grow?

Dr Tan: The time is right to refurbish older properties in Malaysia. The
recent increase in property prices has actually made it more viable and
attractive to spend money on older properties without over-capitalising
on them. In addition, many older properties are located in quite valuable
strategic locations and so it makes sense to try to keep those properties

Dr Syahrul: Building refurbishment is becoming an increasingly viable
alternative to new-build with many 1960s and 1970s buildings now at the
end of their lease and ready for renovation. Today, as never before,
there is a widespread awareness of the need to refurbish existing
buildings and to modernise, with emphasis on up-to-date methods to
accommodate modern building services and energy saving techniques
as well as meeting the sustainable agenda. It is certainly believed that in
the next few years, there will be a spate of building refurbishments in the
Malaysian market.

Dr Azlan: Definitely. My research shows trends that building owners
prefer to refurbish due to several reasons. However, there is no
comprehensive and accurate data on the value of refurbishment work in
Malaysia. Most local authorities do not have complete database on the
actual number of refurbishment works being carried out. The only
available data has been compiled by the Malaysian Construction Industry
Development Board (CIDB). The data shows that repair and
maintenance works, which is normally used by practitioners as a guide
on the value of refurbishment work, accounted for 2 per cent of total
construction output in 2002. It rose up to approximately 20 per cent in
2010. This indicates that the demand for refurbishment projects in this
country is high and is growing rapidly. The data however, does not
include illegal renovation works carried out by house owners or
unregistered contractors. Therefore, the actual value of refurbishment
works is probably much larger.

RED: What are the risks involved in refurbishment and how to
manage them?

Dr Tan: All construction and renovation works should be insured during
and after construction. Risks are higher if you plan to refurbish a larger
building section by section or floor by floor where people might still be
occupying and using other parts. Proper safety planning and insurance
are a must. A good team of professional architect and engineers should be employed and contractors must have a good track record for such works.

Dr. Syahrul: In order to successfully undertake refurbishment projects, a holistic understanding of building is highly required.

Dr. Azlan: The refurbishment works would be more difficult if the scope of work involves demolition and stabilising the existing structure. Refurbishment works involving alteration of the existing building structure often require installation of shoring and temporary supports which are sensitive and difficult tasks. It also usually involves many procedures of investigation such as probing and destructive testing by the structural engineer, which may result in the destruction of architectural finishes. It is the responsibility of the designers and contractors to ensure that new structural design and temporary supports used are sufficient to accommodate the necessary loading during the commencement of alteration works.

RED: What are current attitudes and perceptions towards refurbishment?
Dr. Syahrul: Preservation and conservation as well as refurbishment of buildings in Malaysia are relatively new practices in the built environment. The level of knowledge in implementing refurbishment works is also very limited.

Dr. Azlan: From the view of construction management writers, refurbishment projects are identified as more risky and complex than new-build projects which makes them more difficult to manage. The problem mainly derives from the lack of information available to perform a task, especially during the initial stage of the projects. From the client/building owner’s point of view, refurbishment will cost more compared to new-build projects. The building owners are often uncertain of their needs during the initial stage of the project resulting in many changes in design requirements throughout the refurbishment project period.

Dr. Kamarul: If we use the term refurbishment, most Malaysians are not aware of it because they are more used to the term ‘renovation’. Public awareness about refurbishment is still poor especially when it involves heritage buildings. Most contractors don’t follow the guidelines and there is still a lack of inspection and law enforcement by the local authorities.

RED: What is the developer’s role in refurbishment?
Dr. Tan: Developers should start looking at preservation or conservation of heritage properties not just as CSR (Corporate Social Responsibility) exercises but actually as part of their business plans. These older properties usually have great locations and by acquiring and improving them for new modern uses can become valuable assets and also provide developers with recurring income. This is evident from the examples of older cities like London, Paris and even Melbourne.

Dr. Syahrul: Developers must be able to to ensure that the new development is in harmony with, and does not change the unique character of those precincts. They must improve properties in ways which will not distract from their cultural significance and to encourage recycling and adaptation of obsolescent buildings of architectural, historical or social significance to new uses.

RED: Who are the main people involved in refurbishment work?
Dr. Azlan: From my research, we identified seven parties, namely the architect, mechanical & electrical (M&E) engineer, structural engineer, client, contractor, quantity surveyor and specialist. However, much also depends on the size of the projects and scope of work. Sometimes, the contract value is large but the scope covers only upgrading of the air conditioning system to save on energy usage. So, only the M&E engineer, contractor and specialist will be involved.

RED: Give an indication of what the price appreciation is like after refurbishment?
Dr. Syahrul: As far as I am concerned, there are no specific empirical
studies conducted to tabulate the appreciation value. Minor
refurbishment works such as redecorating and replacement of equipment
will ensure that the current value of the property is maintained. On the
other hand, major or complete refurbishment works might see the
property price appreciating by as much as 80 per cent.

RED: What is the procedure when embarking on refurbishment
works?

Dr Azlan: For non-heritage buildings, the procedure is similar to a new-
built project. The new design needs to be submitted to the respective
local authority for approval before work on site can commence.
Depending on the types of procurement approach used, the client will
appoint a refurbishment contractor on the advice of the consultant
(architect/engineer).

Dr. Syahirri: It is understood that refurbishment works can be very
complicated especially involving old buildings. The more unknown
problems are hidden in a building, the more the costs are likely to
escalate. Knowledge of the form of construction, the condition and the
construction history of a building is very much necessary.

Some initial and additional steps need to be taken when conducting
refurbishment works on top of the normal procedures for new-builds.

Document Gathering - Construction drawings would be the most
relevant information to look at if available. Building histories can also be
gathered from old maps, prints and other documents.
Building Condition Survey or Monitoring- Examining the building in detail
can yield lots of information on historic development and its current
condition. It can be done with the assistance of tools such as binocular,
measuring tape, ladders and etc. Monitoring can be done by making
observations over a period of time.

Non Destructive Test - This enables you to take a broad overview
very quickly. There are numerous tools available such as borescope and
endoscope for keyhole observations in cavities enabling visual records.
Closed circuit television can be used to make surveys of drains while
metal detectors can be useful in locating reinforcements in masonry.

Consultation - Most local authorities or government agencies have
offices to advise on old buildings and it will usually be sensible to consult
with them.

RED: In your opinion, how can Malaysia improve on its
refurbishment industry e.g. incorporate new preservation
techniques or technology?

Dr Tan: GBI Malaysia (Green Building Index) has a tool called the GBI
Existing Building Rating Tool specifically to help modernise and improve
older properties. It can be downloaded free from the GBI website and if
you follow the criteria step-by-step, you will likely end up with a
modernised and environment-friendly building. You can also appoint a
professional architect to advise you.

RED: What is the architect’s role in refurbishment?

Dr Tan: The professional architect can advise you on what can and
needs to be done. He will also propose and put together the full team of
required consultants to ensure that the project is properly designed,
managed and supervised from start to completion. Upon finishing the
project, the professional architect will also issue the requisite CCC
(Certificate of Completion and Compliance) for the building to commence
occupation and use.
Batu Gajah court house - before refurbishment.

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said:
In need indeed thank you
8 June 2012

said:
Safety aspect is the vital issue and my research confirmed that we are far
behind in this respect. Ass. Prof. Sr. Dr Ahmad Ezanne Ulum FSPU Shah Alam
8 June 2012