

# Housing Conference 2002

## Brief Notes of the Questions and Answers Sessions (Q & A)

*The following are the brief notes of the Q & A for the speakers at the Housing Conference 2002. The answers represent the views of the speakers themselves, but not that of the Hong Kong Housing Authority.*

### Questions for and answers provided by *Alan CRANE*

Question raised by Vincent W.S. TONG of Housing Department

**We just learnt the success story and progress made by you in reforming the construction industry in UK. Could you tell us the major challenges you have encountered in the course of reform?**

**Answer:** The most difficult area is with regard to people. We are talking about a real cultural change in people's attitude and technique. In an organizational establishment, there are usually about –

- 30% - 40% who are willing to change;
- 25% - 30% who can not change due to their training, education background etc.;
- 25% - 30% who will not change, enjoy the adversarial way of working but pretend that they are going along with the reform.

Such people should be identified and removed from the organization

Question raised by a staff member of Housing Department

**What is the primary aim of the rethinking process? Is there any example which demonstrates what are being achieved in the new process but which cannot be achieved in the traditional projects? Has there been any major turnaround of the construction industry proposed?**

**Answer:** The primary aim is to bring about radical improvement in the industry's performance, a change of culture, by doing things differently both in process and technology, by above all focussing on the needs of the customer- who is not always the same as the client. There are over 200 examples - the Demonstration Projects which I spoke about, details of some of which can be obtained from the website. In my presentation you will see a summary of the performance benchmark results for

the Demonstration Projects compared with the normal, current industry performance. The industry is changing- there are some significant examples of Clients, contractors, specialist subcontractors and designers who are moving ahead with this change programme. However, the "Rethinking Construction" Report made clear that it would take a minimum of 5 years before any significant overall industry improvement was evident.

Question raised by Peter H. Y. WONG, HA Member

**How do you assure contractors who have innovative ways to tackle a problem can retain proprietorship over their ideas and that they are not then available for use by the owner for his future projects without reward to the originator of the idea? This applies to originators of ideas if they are to share with others.**

**Answer:** You cannot be sure of this. The whole basis of "Rethinking Construction" is that clients and their suppliers (incl contractors) will establish longer term relationships to their mutual benefit; that they will achieve the real benefits of innovation by refining ideas generated on one project by follow up projects. If they do what you suggest, then no contractor will innovate with them again - they will be the ultimate loser. In any case, innovations only remain discrete to the originator for a relatively short time. With the numbers of parties involved with projects, and the fact that people move around, things only stay secret for a short period. Clients have to be wise enough to recognise the benefits of sticking with a supplier who is innovative.

Question raised by Robert TSOI of the Construction Industry Task Force

**Is there a construction workers registration system in the UK? What about training? Do they pay income tax?**

**Answer:** Yes there is - the Construction Skills Certification Scheme (CSCS). This is a voluntary, industry scheme based upon achievement of recognized NVQ (National Vocational Qualification) skill levels, around which most training programmes are now based. A compulsory part of each and every skill level is Health & Safety training.

Whilst the scheme is voluntary, an increasing number of Clients and contractors are insisting on CSCS qualified operatives and first line supervision. For example, the Major Contractors Group have given notice to all their subcontractors that only

registered CSCS qualified people will be allowed on their sites beyond the end of 2002.

Yes, we all pay income tax - those who operate on a self employed basis have tax deducted from their payments; those who are directly employed are taxed under the PAYE system. And our tax rates start at a basic 20% rising to 40%!

Question raised by Kevin YEUNG of Housing Department

**For those clients with demonstration projects, have they paid extras during and after competition? M4I has much emphasis on technical and contract management aspects. Does it cover the aesthetic / building form / usage pattern and inject innovation?**

**Answer:** No, there is no charge for being a Demonstration Project. Of course attendance at Cluster meetings, keeping data, measuring performance etc takes people time and therefore costs money - but the payback in terms of improved performance is of course much greater. Yes there is emphasis on process and procurement, as well as relationships. But quality of design, building form and usage are important factors in this. The philosophy is that these factors will only be really achieved economically if the whole team is contributing in an integrated way. Remember my 1:5:200 slide?

Question raised by Ada FUNG of Housing Department

**In the Movement for Innovation, does it mean survival of the fittest, thereby weeding out smaller business enterprises and the weaklings who cannot change? Has the "Radical Change" changed everybody?**

**Answer:** No, nothing to do with size of the enterprise- indeed some of the keenest participants are small companies. But yes, those who do not or will not change will be left behind- clients, peers etc will not want to work with those who cannot provide what they want. No, everyone has not changed yet- see my response to "staff member of Housing Department".

Question raised by Ada FUNG of Housing Department

**You mention about the Whole Life Cost of 1:5:200 (60 for housing) in UK for capital:maintenance:occupation. Is there any solution to reducing the cost of occupation? What scientific monitoring system do you adopt?**

**Answer:** The solution to reducing cost of occupation includes:

1. Understanding the client's business and the way it functions incl. The interrelationship of people
2. Understand the time period that the Client is planning for- don't cater for 50years if he may only need it for 10.
3. Understand whether initial capital costs are more important to the client than running costs, or vice versa.

Design the facility around the above and you have a good chance of success. The figures I gave you were based upon some initial research- we are trying to develop a definitive design quality indicator to measure this pre, during, and post construction.

Question raised by Ada FUNG of Housing Department

**The NEC (Partnering) and PPC 2000 include express commitments of co-operation and acting in a spirit of mutual trust. What is the legal status of such wordings? Are there any legal pitfalls?**

**Answer:** There is no direct case history defining this in legal terms - yet! However, most lawyers perceive little problem in establishing clearly where a party has not been co-operative. Yes there are pitfalls- it is absolutely imperative to include within the Agreement the precise partnering arrangements and commercial deal details. Both NEC X12 and PPC 2000 are formatted specifically to enable you to do this. But it is essential to get experienced legal advice, at least when you start out and through your first project- the best people I know in Hong Kong are Li Brandt & Co.

Question raised by Ian COCKING of Simmons & Simmons

**Was new legislation a necessary part of the revolution? (e.g. the statutory adjudication and payment scheme or on safety.)**

**Answer:** No, there has been no new legislation related to "Rethinking Construction", nor do I think it necessary. The adjudication and right to payment schemes preceded it, but undoubtedly are a help. There has been a need of course, as I mentioned in my presentation, for Government to change their procurement rules and procedures; thus to enable procurement based on value and quality and not just on lowest price. Without that then there is no chance of success.

Alan Crane, Movement For Innovation, UK  
(Official website <http://www.m4i.org.uk> )

**Question for and answer provided by**  
*Thomas HO*

Question raised by Ada FUNG of Housing Department

**We admire the success of your achievements in the case studies you presented. Have you encountered any major problems during project implementation? Any if so, how did you solve them?**

**Answer:** The major challenge is to get the partnering spirit from top to bottom. It requires time and persistence.

**Question for and answer provided by**  
*Stephen LEE*

Question raised by Ada FUNG of Housing Department

**On construction innovation for public housing, how would you take it further for non-standard design?**

**Answer:** After many years of hard work, Housing Department has developed the now very efficient, high quality and very cost competitive construction method i.e. the large panel wall form, precast facade and the panel wall system. All this good experience shall be preserved in the non-standard design. Further innovation in the direction of more prefabrication is promising and the concept of dry construction shall be further explored.

**Question for and answer provided by**  
*Mike MOIR*

Question raised by Ada FUNG of Housing Department

**Comparing the cost of building in Japan and HK, what would you recommend HK to adopt? Such as delayering the use of Quantity Surveyors?**

**Answer:** Let me start by saying that I have nothing against Quantity Surveyors. I think the problem lies with the basic principles of the design/construction interface that we adopt in Hong Kong and the standard form of building contract that we use.

The contractor led approach adopted in our project in Tokyo produced much more meaningful value engineering in which costs were examined on a more detailed basis than the approach of using rates from recent tenders adopted by in HK. The design consultants in HK do not generally look closely enough at economy and buildability and very few contractors have the in-house design capacity needed. Thomas Ho recommends what he calls "second stage partnering" which involves the contractor in the early stages of design. I fully agree with this but we need to develop an industry practice and form of contract that would allow this to happen.

### **Questions for and answers provided by *Hiroyuki NAKAGAWA***

Question raised by a member of the audience

**How does the unit construction cost compare between a building designed for and constructed with the FACES/SEIJU (SACS) and a building conventionally designed and constructed?**

**Answer:** We have several variations of the automated construction system to fit individual condition of projects. Therefore, the cost for the system totally depends on those circumstances. As the guideline, approximately 1 to 2% of overall construction cost would be estimated as net addition according to our past experiences. In the event of re-use that system for the typical buildings, the above additional cost could be reduced due to depreciation for the equipments.

Question raised by Vincent W. S. TONG of Housing Department

**Presumably the pre-cast and pre-fab work will be done off site. Please advise the size of the off-site plant in terms of area to cope with the requirements of the project**

**Answer:** Pre-cast products for our HDB project would be procured from 4 manufacturers. They have more than 200,000m<sup>2</sup> of area in their factories.

**Question for and answer provided by**  
*John NG*

Question raised by a member of the audience

**In looking at the concept of in-fill building design, will aspects of supply chain management be studied? In particular, what is the implication to the infrastructure if large amount of huge prefabricated units be transported across the border?**

**Answer:** Substantial amount of materials would be delivered to site as part of the pre-finished modules prefabricated in factory. As such normal delivery of other materials like tiles, WCs, doorsets, etc. to site would be much reduced. Supply chain will be studied but it is not anticipated that supply chain management on site would be critical. Rather site logistics in delivering, handling and installing the prefabricated modules would be important to smooth out construction and minimize storage area on site.

On one hand the number of prefabricated modules is substantially increased. On the other, the delivery of individual materials to site would be much reduced. Also waste materials to be transported off site would also be reduced. There may even be an overall reduction of transportation.

Off site prefabricated modules may be locally produced without imposing any cross border traffic. Should the prefabricated factories be in the Mainland, transportation of prefabricated modules could be made by barges to Hong Kong and then by container trucks to site. Even if they are to be transported across the border by container trucks, serious problems are not anticipated as the modules would be of normal container size and could be transported by normal container trucks just like precast facades are currently transported.

**Questions for and answers provided by**  
*SO Yau-chi*

Question raised by K.K. LO of the Hong Kong Polytechnic University

**In the project of pre-cast bathrooms for public housing with Housing Department, what were the problems that you have encountered during the course of partnering with Housing Department? Technically and/or administratively.**

**Answer:** The precast bathroom project was, in its own way, a successful partnering exercise. We did not do or get as much as we would like. This was due to the fact that we had the long lead time for approval and implementation of any new proposal in mind thus not making a wholesale revision to the original design. The negotiation was a lengthy process but as discussed in my presentation, the Design and Standards Section had been flexible in making changes to suit the new product. Given a freehand, the precast bathroom could have been incorporated in the design from the beginning, a even better end product would have been achievable.

Question raised by Suzanne H.L. HUI of Housing Department

**In earlier presentation, we have seen prefabricated bathroom/toilet in Japan. Why 'in the context of Hong Kong and Housing Authority', precast concrete bathroom instead of prefabricated bathroom is proposed? Is there any reason (beyond making business) behind this decision? Is there any advantage of precast bathroom above prefabricated bathroom?**

**Answer:**

One of the constraints which we have to consider was the necessity of the final product needed to adhere to the original design as much as possible as we are trying to fit a new concept into an existing design. The considerations covered not only the layout but also other aspects such as the feel of the bathroom in respect of the finishes. The prefabricated bathroom such as fiberglass or fabric reinforced concrete currently available had also been examined. However, they are found to be normally made of thin sections hence has a hollow feeling. This was not believed to be acceptable by the Hong Kong end-users. Furthermore, the use of lightweight concrete allows the traditional habit of the users of putting shelves or bookcases on the wall without the use of special fitting devices.

The End