

BEYOND

- The main input of QS in BIM is the development of 5D BIM which involves 'the integration of design with estimating, scheduling and costing, including generation of Bills of Quantities , and derivation of productivity rates and labour costs' (an extract from the website of 'Faithful & Gould, UK' on BIM).
- Within the Malaysia context, we are presently a long way off in such development.
- If a proposed roadmap leading towards achieving 5D BIM were to be drawn out, it must involve the inputs from all disciplines in the consultancy industry e.g. Architect, C & S Engineer, M & E Engineer and Q.S. via the representation of their respective Institutions e.g. PAM, IEM, and RISM, the contractor organization via the representation from MBAM, and the representation from JKR and CIDB. Only through the collaborative efforts from the aforesaid organizations can lead to success in the implementation of 5D BIM – a tall order indeed !
- The following is a proposed roadmap :

TASK

- Phase 1 comprises :

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| A. | Compile a comprehensive (though not necessary exhaustive) object libraries (some of which may be based on suppliers' details but which have to be BIM compliance) in Revit software; |
| B. | Establish a standard coding system for all types of materials , labour and plants used in Malaysia; |
| C. | Produce integrated and coordinated architectural, structural drawings and M & E drawings using Revit; |
| D. | Produce a new SMM (perhaps based on the NRM2 from RICS, UK; or Construction Electronic Measurement Standards, Singapore) with the aims of establishing a standard set of codified item descriptions and also of making automatic production of B.Q. easier ; and |
| E. | Produce a library of 'built-up' rates i.e. rates broken down into materials, labour, plants & profit & overhead for all items in the standard set of codified item descriptions as mentioned in Item D above (perhaps based on Laxton's Library ,UK) ; |

ACTION

- PAM
- PAM, CIDB, JKR, MBAM, and RISM
- IEM, PAM
- RISM
- RISM

TASKS	ACTION
<ul style="list-style-type: none"> Phase 2 comprises : <ul style="list-style-type: none"> A. Research into the interface between the 'Quantities' produced by QTO (Quantities Take-Off),one of the software in the Autodesk Building Design Suite, and the codified item descriptions (produced in Phase 1) to automatically generate the BQ in the new SMM format. 	<ul style="list-style-type: none"> RISM
<ul style="list-style-type: none"> <ul style="list-style-type: none"> B. Research into the interface between the BQ thus generated and the library of 'built-up' rates (produced in Phase 1) to automatically generate the materials, labour and plants scheduling and also the priced BQ. 	<ul style="list-style-type: none"> RISM

Conclusion
<ul style="list-style-type: none"> In conclusion, QS plays a vital role in the successful implementation of 5D BIM. It may seem a bit too ambitious to implement the above proposed roadmap. However, I believe that it is important to make a start and the best organization to do so should be JKR as firstly, they have the whole team of professionals e.g. Architect, C & S Engineer, M & E Engineers and QS at their disposal, secondly, they already have the standard BQ and 'built-up' rates and thirdly, they can be easily compile the 'object libraries' based only on the standard government buildings under their care (I understand that they are already embarking on this exercise). Last but not least, I would leave you with the most important question ,i.e. Once the 5D BIM has been achieved, will the QS become redundant ?