RICS Perspectives on BIM – more than buildings

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The language of measurement

- Did you really mean that? Just what do you want it for? Fitness for purpose...
- Geo-speak
- Valuation, construction, geospatial survey
- What does BIM bring to the party?

The elephant in the room - 1
The BIM Challenge - Industry

Acceptance

Naysayer:
“Fallible”
“Expensive”
“Moving goal posts”
“The next fad”

Trailblazer:
“Paradigm shift”
“Essential Investment”
“Standards are set”
“Future proof”

A human challenge

“Dealing with people is probably the biggest problem you face, especially if you are in business. Yes, and that is also true if you are a housewife, architect or engineer.”

Dale Carnegie
Is BIM relevant to all?

Member’s Locality
- 30% UK
- 70% International

Member’s Business
- 50% SMEs
- 50% Corporate

Our challenge – connecting the dots

Global Wealth
- 30% Real Estate
- 70% Other

BIM
- Time
- Tech
- Quality
- Cost
- Risk
- Sustainability
- Payment
- Cost Data
- Procurement
Who’s afraid of the big bad wolf?

“QS’s scared of BIM!!”

Who’s afraid of the big bad wolf?

Table 2: Inter-related subjects that contributes to barriers in implementing BIM

<table>
<thead>
<tr>
<th>Key variables</th>
<th>Frequencies</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>16</td>
<td>26.2</td>
</tr>
<tr>
<td>Time</td>
<td>10</td>
<td>16.4</td>
</tr>
<tr>
<td>IT (software, hardware, computer)</td>
<td>14</td>
<td>23.0</td>
</tr>
<tr>
<td>Readiness</td>
<td>9</td>
<td>14.8</td>
</tr>
<tr>
<td>Knowledge</td>
<td>5</td>
<td>8.2</td>
</tr>
<tr>
<td>Technology</td>
<td>5</td>
<td>8.2</td>
</tr>
<tr>
<td>Information</td>
<td>2</td>
<td>3.3</td>
</tr>
</tbody>
</table>
Talk about benefits

DPoW

Project delivery  Business benefits

DPoW
Capex & Opex cost data sets

- Line Drawings
- Object Models
- Time - Schedules
- Cost Plans / Estimates
- Operation / Maintenance LCC, Carbon, Water, etc

2D 3D 4D 5D 6+D

- Standards
- Consistency
- Efficiency
- Better decision making

BIM – the RICS experience
Scan to BIM – vender challenge

The Results

Gross Internal Floor Area

Raw data gives a cost variance of 27% *
Actually <10% on a like-for-like basis
The elephant in the room - 2

- Measurement

- BIM - vender challenge

- 'the spatial integrity of the BIM model was a key issue'

- 'the initial specification of the model is paramount'

- 'there’s needs to be a consistently accurate and continual input to the model'
RICS output and guidance

- BIM implementation guide
- 5D BIM Surveyor
- QS Protocol
- BIM Manager Certification

RICS – BIM output

Figure 10: BIM usage at various project stages

figure 11: BIM across the project lifecycle
RICS – BIM output - India

Table 7: Views of respondents

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Trimble Tekla</th>
<th>Trimble Vico</th>
<th>Nemetschek Vectorworks</th>
<th>Bentley Microstation</th>
<th>Shenzhou</th>
<th>Graphisoft ArchiCAD</th>
<th>Autodesk Revit</th>
<th>Autodesk Naviswork</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.4%</td>
<td>5.6%</td>
<td>0.6%</td>
<td>10.7%</td>
<td>37.7%</td>
<td>8.2%</td>
<td>40.5%</td>
<td>79.2%</td>
<td></td>
</tr>
</tbody>
</table>

RICS – BIM implementation guide

Figure 42: BIM Execution Plan
BIM–GIS –CAD - clash of the titans

The BIM – CAD – GIS concept

BIM as infrastructure

Figure 52: Concept Stage Modelling and Analysis at a District Level (Source: Autodesk)
BIM–GIS –CAD - clash of the titans

RICS research – understanding Green infrastructure Kuala Lumpur
Conclusions – technology is king

Thank you

Any questions?
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