RIBA Enterprises surveys - a survey

Paul Swaddle
NBS Business Solutions Consultant

ICIS Delegates’ Assembly 2014
Tallinn, Estonia
Introduction

Amazing insight & fascinating trends
RIBA Enterprises conduct a range of surveys and generate annual reports

- Drivers
- Scope
- Methods
- Topics in detail
  - Key findings
- Involvement
Drivers

Why conduct surveys?
Distinct forms of RIBA Enterprises surveys

- Internal use

- Customer Satisfaction Survey
- Market research
Distinct forms of RIBA Enterprises surveys

- Internal use
- Publication
  - Industry
  - Press
  - Context

NBS survey: The BIM that will bring us together

17 April 2014 | By Joey Gardiner

NBS' annual BIM survey suggests that uptake of the collaborative technology has risen sharply over the past year. But is it really becoming the industry norm?
Data validation and extraction: The challenge beyond geometry

Dave Monshwite
Associate Director - Building Information Modelling,
Turner & Townsend Cost Management

Since the previous NBS National BIM report in 2013, Turner & Townsend have seen a rapid acceleration in both understanding and application of BIM in all our operating sectors. Across our global business we encounter every variant of BIM, ranging from 600,000 tonne offshore vessels to luxury car showroom rollouts.

Many are surprised to find that BIM is not new to our Cost Managers - BIM has been a fundamental part of how Turner & Townsend has operated for many years now, using techniques and toolsets developed in our Natural Resources sector where the concepts of data management, validation and extraction are commonplace.

From our experience, we know that good data and information management is the key to unlocking the real benefits of BIM, but the sheer diversity of the design team approaches, objects and platforms is still the real challenge facing quantification from BIM.

Measuring the welds on the complex pipework of a gas platform in Toronto differs significantly from that of the mass concrete underpinning of a station concourse in Birmingham, but the datasets we interpret could have been authored in the same way, or federated from multiple sources, each with their own idiosyncrasies.

Variations in the way authoring platforms treat objects or export neutral formats, such as Industry Foundation Classes, can have a significant effect on our ability to interpret and extract data with the consistency we need to apply for procurement.

Every time a different practice then applies their own ‘standard’ to the upstream data, we have to start from scratch, and often it is this that drives the behaviours of the QS practitioner toward the traditional paper-based outputs.

The use of information to make commercial and operational decisions is a key activity at...
Distinct forms of RIBA Enterprises surveys

- Internal use
- Publication
- Commissioned
Scope

What topics do we cover?
Focus on subjects integral to the modern construction industry

- BIM
- Specification
- Sustainability
- Contracts & law
Making results freely available to public and profession

Target audiences:
- Construction professionals (NBS)
- Manufacturers (RIBA Insight)
- Wider industry
Method

Ensuring best practice
Qualified market research team

- Market Research
- Society expertise
- Experience
- Quality

Adrian Malleson
Head of Research, Analysis and Forecasting, NBS
Digital survey and analysis

- Call for responses
- Web-based tools
- Data analysis
  - Confidence intervals
  - Significance testing
  - Error rates
Topic: BIM

NBS National BIM Report
First survey data 2010, first report published 2011

Use, awareness, understanding, requirements, skills
Key findings: 2014

- Tipping point in adoption
- Majority use/intention
- Measurable benefits
- BIM training needs
- Work to be done to meet 2016 Level 2 UK mandate
**Key findings: 2014**

Projected use of BIM among those aware of it

<table>
<thead>
<tr>
<th>In five years’ time we will use BIM</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>86%</td>
<td>94%</td>
<td>93%</td>
<td>95%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In three years’ time we will use BIM</th>
<th>82%</th>
<th>90%</th>
<th>91%</th>
<th>93%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>In one year’s time we will use BIM</th>
<th>62%</th>
<th>75%</th>
<th>77%</th>
<th>81%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>We currently use BIM</th>
<th>31%</th>
<th>41%</th>
<th>43%</th>
<th>54%</th>
</tr>
</thead>
</table>

Percentages exclude those unaware of BIM or unsure of their answer
Infographics

Retweeted by George Mokhtar

Stefan Mordue @StefanMordueNBS - Apr 23

Our latest NBS 2014 #BIM survey infographic ow.ly/w4ydS

Retweeted by allister lewis and 2 others

Stephen Hamil @StephenHamilNBS - Apr 23

As is now the tradition, a top infographic illustrating our @thenbs bim report - BSL2014 - thenbs.com/images/bim/NBS... pic.twitter.com/1tCVC69seW

Retweeted by Claire Bowles and 1 other

Casey D Rutland @CaseyRutland - Apr 23

"@TheNBS: Take a look at out National #BIM Survey 2014 Infographic ow.ly/w4ydS" #UKBIMCrew
Topic: Specification

NBS Specification Survey
Focus:

- Plans of Work
- Specification timeline
- Attitudes
- Methods
- Integration / BIM
- Future
Key findings: 2014

- Specification & BIM
- Digital linkage
- Whole timeline benefits
- Future specification will integrate disciplines
- Current lack of collaborative working
- Information management
Overall, when you write specifications, which of the following processes describe how you do it?

- I re-use specifications that I’ve written for other projects: 75%
- I collect information from manufacturers and put it together: 71%
- I copy and paste from previous specifications: 66%
- I write my own specifications from scratch: 59%
- I ask manufacturers to write specifications for me: 52%
- I use specification templates: 38%
- I use a specification template that includes proprietary information: 31%
Topic: Law

NBS Construction Contracts and Law Survey
Focus:

- Contract forms
- Disputes
- Procurement
- Appointment
- Pricing
- Collaboration
Key findings:

- Increased need for contracts which facilitate BIM and collaboration
- More respondents in dispute (time, value)
- Prevalence of bespoke contracts and appointment documents
<table>
<thead>
<tr>
<th>Contract Type</th>
<th>Used at all:</th>
<th>Used most often:</th>
</tr>
</thead>
<tbody>
<tr>
<td>JCT Contracts</td>
<td>60%</td>
<td>48%</td>
</tr>
<tr>
<td>NEC Contracts</td>
<td>38%</td>
<td>22%</td>
</tr>
<tr>
<td>Bespoke contract</td>
<td>26%</td>
<td>9%</td>
</tr>
<tr>
<td>FIDC Contract</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>Other suite of contracts</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>SBCC Contracts</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>ICE Engineering Contracts</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>JCLI contracts</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>PPC2000 Contracts</td>
<td>6%</td>
<td>2%</td>
</tr>
</tbody>
</table>
During the construction phase of the project, which of the following matters did you find to be the most difficult or recurrent in 2012?

- Assessment of delay and extension of time:
  - Client: 44%
  - Contractor: 63%
  - Consultant: 48%

- Employer variation:
  - 33%
  - 50%
  - 54%

- Contractor’s variation:
  - 26%
  - 20%
  - 34%

- Scheduling and construction programmes:
  - 43%
  - 26%
  - 28%

- Slow pace of construction:
  - 32%
  - 14%
  - 29%
Topic: Sustainability

NBS Sustainability Survey
Focus:

- Industry definitions
- Environment
- Ecological, social, economic
- Aspects of sustainability
- Assessment methods
- Product certification
Key findings:

- **Difficult to define**
- **Multiple priorities:**
  1. Health
  2. Waste
  3. Water use & pollution
  4. Air pollution
  5. Community
  6. Operational carbon
  7. Ecosystem
  8. Recycled materials
  9. Transport
  10. Embodied carbon

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**Views on sustainability**

People define ‘sustainability’ in different ways and we wanted to find out what people mean when they refer to it. Therefore, we asked people to tell us, in their own words, how they define sustainability. The definitions people gave varied widely, but common themes did emerge. Sustainability was widely understood to be about safeguarding the future:

- “Saving the planet for future generations.”
- “Balancing the needs of today with the ability to maintain the environment for tomorrow.”
- “Managing resources responsibly so that the earth can continue to support human life.”

People strongly associated safeguarding the future with minimising the use of non-renewable resources, particularly energy:

- “Reduce the environmental impact and use of finite resources.”
- “Less raw material usage, less energy consumption.”
Topic: BIM

NBS International BIM Report
Focus:

- Verify state of BIM in different countries
- Examine attitudes and adoption rates
- Impartial, reliable data about international BIM
- Produce annual report
Participants:

- UK
- Canada
- New Zealand
- Finland

Our thanks to Digicon, Masterspec and Rakennustieto for running the surveys in their countries.
Key findings:

**Awareness of BIM**
- United Kingdom: Awareness and currently using BIM
- Finland: Awareness and currently using BIM
- Canada: Awareness and currently using BIM
- New Zealand: Awareness and currently using BIM

**BIM is the future of project information**
- United Kingdom: 74% agree
- Finland: 78% agree
- Canada: 86% agree
- New Zealand: 80% agree

**Are you using BIM?**
- United Kingdom: Today, 1 year's time, 3 year's time, 5 year's time
- Finland: Today, 1 year's time, 3 year's time, 5 year's time
- Canada: Today, 1 year's time, 3 year's time, 5 year's time
- New Zealand: Today, 1 year's time, 3 year's time, 5 year's time
What are the main barriers to using BIM?

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of expertise</td>
<td>54%</td>
</tr>
<tr>
<td>Lack of standardised tools and protocol</td>
<td>39%</td>
</tr>
<tr>
<td>Lack of collaboration</td>
<td>37%</td>
</tr>
<tr>
<td>Cost</td>
<td>34%</td>
</tr>
<tr>
<td>Liability concerns</td>
<td>12%</td>
</tr>
<tr>
<td>Don’t see benefit</td>
<td>14%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>12%</td>
</tr>
</tbody>
</table>
Getting involved

Call for participants
Getting involved:

- We would value your involvement
- Core questions are required for comparison, but survey can be localised and expanded
- Hosting responses
- Top-level analysis
- Localised output
### Which institutes or associations do you belong to?

<table>
<thead>
<tr>
<th>Organization</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provincial Engineering Association (APPEGGA, OPEGA, etc)</td>
<td>46%</td>
</tr>
<tr>
<td>Association of Consulting Engineers of Canada (ACEC)</td>
<td>35%</td>
</tr>
<tr>
<td>Other</td>
<td>33%</td>
</tr>
<tr>
<td>Canadian Construction Association (CCA)</td>
<td>17%</td>
</tr>
<tr>
<td>Provincial Technologist (CCTT by province)</td>
<td>14%</td>
</tr>
<tr>
<td>Construction Specifications Canada (CSC)</td>
<td>13%</td>
</tr>
<tr>
<td>Royal Architectural Institute of Canada</td>
<td>4%</td>
</tr>
<tr>
<td>Canadian Homebuilders Association</td>
<td>3%</td>
</tr>
<tr>
<td>Canadian Institute of Quantity Surveyors</td>
<td>1%</td>
</tr>
<tr>
<td>Interior Designers of Canada (IDC)</td>
<td>0%</td>
</tr>
<tr>
<td>Canadian Society of Landscape Architects (or Provincial equivalent)</td>
<td>0%</td>
</tr>
</tbody>
</table>
Thank you

paul.swaddle@thenbs.com