Topic:
BIM & AEC

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BIM – Why Some Companies Have Adopted It and Why Others Have Not

By Bob Garrett, Marketing Director, Excitech Ltd

Why is it that while industry pundits continue to promote the benefits of moving from general-purpose CAD tools to 3D (or Building Information Modelling, or Object-oriented Design or whatever term a particular organisation decides to use), some organisations continue to question their value? Are we, as an industry, simply putting out too many mixed terms and messages or is there a fundamental reason for its slower-than-expected adoption? To try to puzzle out the reasons, in September last year **Excitech** carried out a telephone and web survey of 127 customers and contacts within the UK CAD community. Respondents fell into three categories, the **'enthusiastic investors'**, the **'toe-dippers'** and the **'happy just as we are'** brigade.

The jump from designing on drawing board to designing on computers represented one of the most dramatic shifts in any work discipline. (Just compare that to writing this article - once I would have written it by hand, then probably with a typewriter, then a word processor and now a PC. Designers, however, took one huge leap straight from paper to pixels.)

The new generation of tools require an even bigger mind shift. Instead of drawing point-to-point to create a shape, designers can now simply draw a pipe that knows it is a pipe because it's a specific building services tool, and that also knows how it interacts with other pipes. This intelligence is at the heart of Building Information Modelling **(BIM)**.

In the survey we aimed to identify the following factors. Firstly, had the organisation moved on from general purpose CAD tools? The three options were: "Yes", "No" and "To An Extent". Depending on the answer they were then asked:

1) If you moved on what were the key factors driving that decision and what benefits have you gained?

2) If you have not moved what factors prevented you and what needs would have to be addressed before you would consider it again? Or

3) If you have only moved some departments/individuals, why is that and what needs would have to be satisfied to make the next step?

The Enthusiastic Investors

The Enthusiastic Investors gave 3D as the most common reason to move forward (60%). They were looking for faster design and design changes as well as drawing and visualisation production and co-ordination (40%). Overall, it seems that all these key factors have been realised. Visualisation production results in fact far exceeded expectation. '3D' however underperformed. Areas that have had higher than expected gains are analysis/schedule features and risk reduction. Other key areas are the ability to directly link to GIS databases and survey instruments, etc. The web results differed from the telephone results in that '3D' was seen as less of a driving force.

Key Factors For Those Who Adopted Discipline-Specific Software
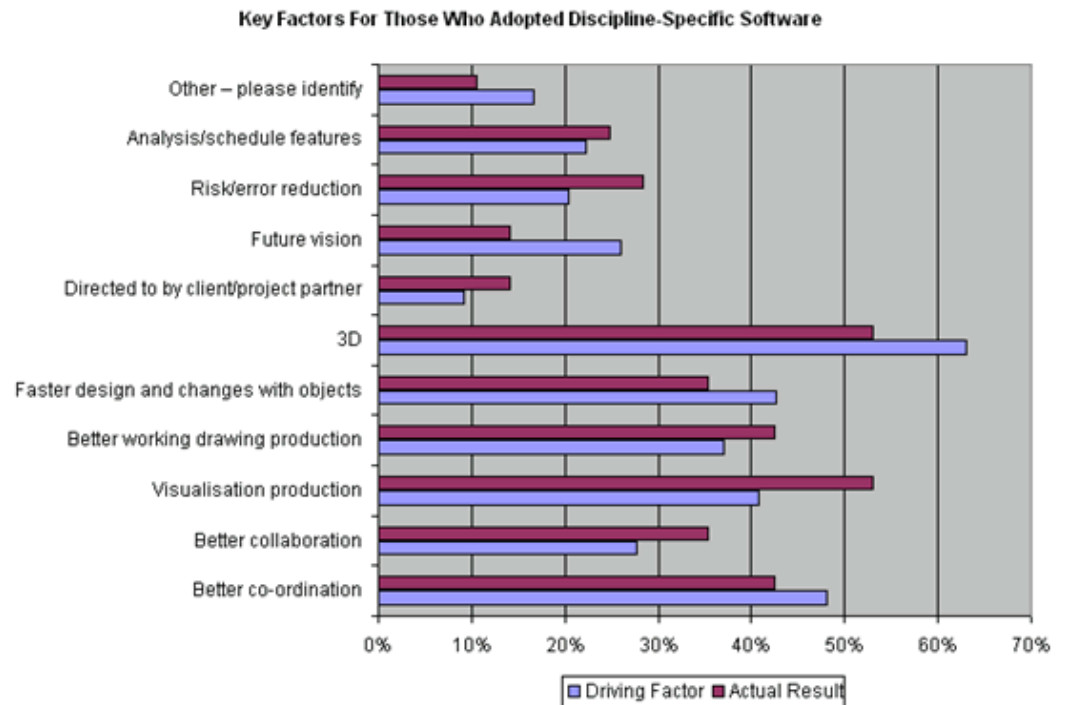
Happy Just as We Are

70% of those who hadn't moved also cited 3D as the key reason: they had no desire for it. When asked what most needs to be resolved or addressed before they moved up, the answer was again '3D'. Just why is this? Maybe "3D" is desired but not as currently presented. This seems to be supported by comments made regarding its expected complexity and cost of learning to use it. This is reinforced by scores for concerns referring to software cost, complexities, implementation cost and being too busy. However, the web results only put 3D as the key reason in 25% of respondents. This is interesting as the web survey prompted respondents with a list of potential answers. Does this point to the fact that 3D is a broad-brush term without a specific-enough meaning?

Key Reasons For Not Moving to Discipline-Specific Software
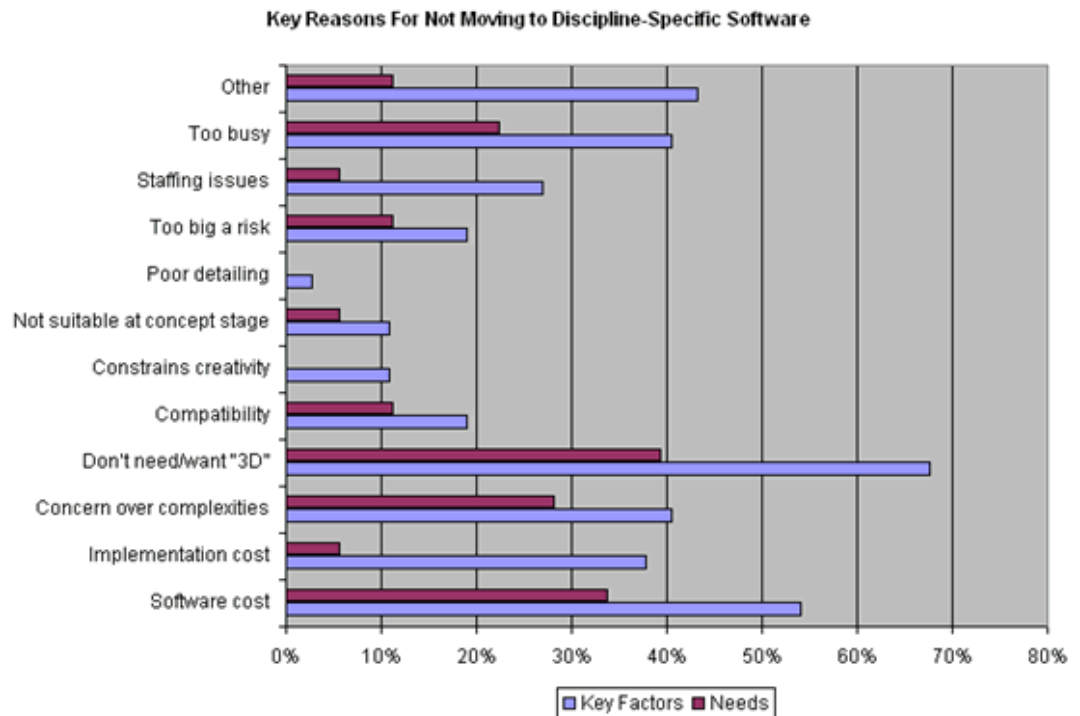

The Toe-Dippers

So what about those who had started to make a move but had not continued this throughout their organisation? They stated that the software was not available or suitable for all departments, particularly in areas such as engineering and building services. Some felt multi-disciplinary teams or projects did better sharing general purpose software. However while 75% said it was not suitable, nearly 65% also said they identified it as an area where there was a need. The other answer which jumps out is the desire for lower

cost software. This is hardly surprising given that they have started adoption but not yet completed it! Other reasons include time constraints (they are still rolling it out or they are currently too busy), implementation costs and concerns over compatibility or extra complexities. Three other factors featuring for nearly 40% of respondents were: difficulty in getting staff, implementation costs and not having found it beneficial - note though the last is again a need.

Reasons For Not Extending to All Areas
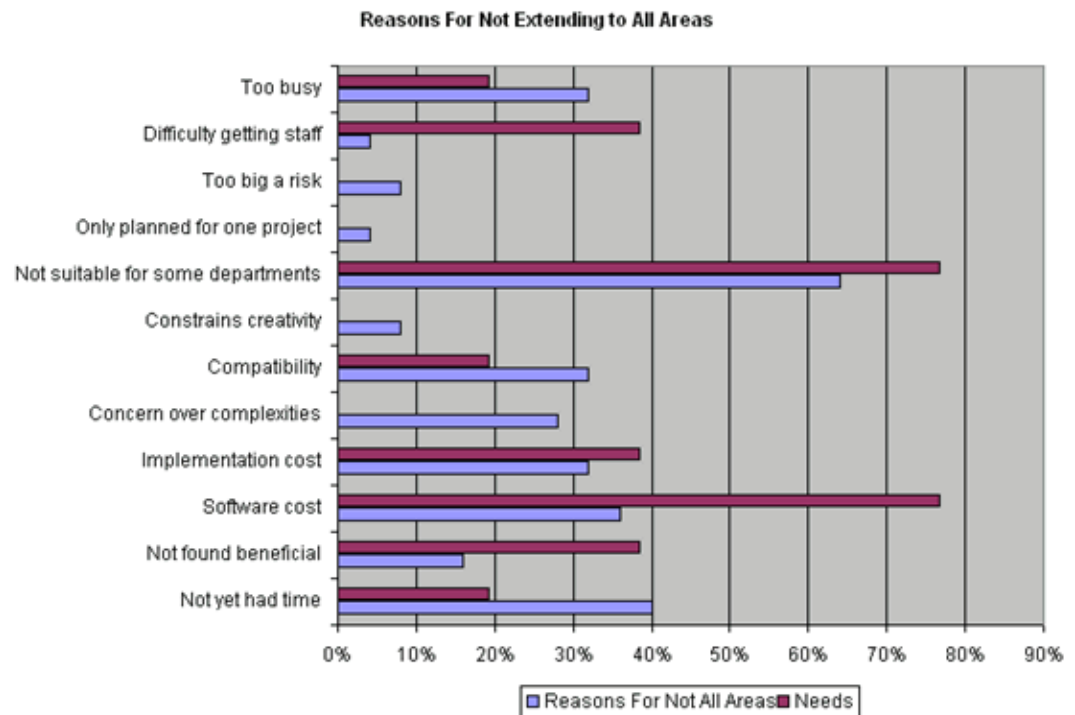
 Sales of these discipline-specific CAD applications continue to grow rapidly, in some cases at hundreds of percentage points per year. We know there is a need. So what is holding up the undoubted process of switching? In our experience implementation of BIM does require careful planning to minimise disruption and maximise return on investment. We also believe that it is crucial to look at overall business and design processes. The industry also needs to be much clearer in its definitions of this new generation of tools so that customers and software producers can speak a common and easily understandable language.

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