



PHOTOGRAPHY: JULIE KIM

INFORMATION OVERLOAD?

WITH VAST QUANTITIES OF DATA NOW CENTRAL TO THE WAY THE INDUSTRY COMMUNICATES AND COLLABORATES, CM CALLED TOGETHER A PANEL OF EXPERTS TO EXPLORE THE EFFECT OF THE INFORMATION EXPLOSION. **JAMES KENNY** REPORTS

As the industry shifts to daily use of BIM and the sheer volume of daily information is increasing, how do construction companies cope with this and what should the industry be doing to manage information overload?

This was the topic of discussion at a roundtable event held at *Construction Manager's* offices in September, sponsored by construction and engineering project management software company



Newforma develops, sells and supports project information management software for architecture, engineering and construction firms worldwide. Its key features include: visual context sharing for construction info, document control, live collaboration, submittals, specification indexes, link building model elements, web-based markup, RFI, and many others.

The panel, standing, from left:

John Adams
Head of BIM services, BIM Strategy

PT Andrew de Silva (Das)
Associate director, David Miller Architects

Peter Trebilcock
Head of architecture, ESA Capita

Toby Sortain
Senior BIM manager, ISG

Cathy Stewart
Director, Cathy Stewart Associates

Garry Fannon
Head of BIM, Willmott Dixon

Steve Faulkner
Associate director, Elliott Wood structural engineers

Seated, from left:

Nicolas Maari
Partner and head of architecture, Pellings

Paul Daynes
Regional director – UK & Northern Europe, Middle East, Newforma

Antonio Dazzo
Architect, Darnton B3 Architecture

Newforma. The debate ranged over topics such as where the information explosion is coming from and how and why companies are coping with it.

Chaired by *CM* editor Denise Chevin, the panel explored the impact of poor collaboration in a world of information overload, and how technology can help to improve construction efficiency.

Denise Chevin, editor, *Construction Manager*: With the industry ever changing, we want to know how big a problem you think data overload is, and how this might be impacting on project teams.

Paul Daynes, regional director – UK & Northern Europe, Middle East at Newforma: Our company is really focused on information management. We look at the way in which you manage information, by keeping information in situ. And then effectively indexing that information – to enable you to find the information you want in the first place and then form relationships between those information sources.

So we have this huge information explosion and that's really manifested itself by being able to make changes more rapidly and easily, using systems like Revit. It's really all about how we're communicating, and what tools we're using to communicate with. It's things like huge amounts of email flooding our inboxes. What do you do with it? How do you gain value from that? These are all issues in how we undertake our project delivery much more efficiently.

Peter Trebilcock, head of architecture, ESA Capita: Prior to joining the business earlier this year I was the UK design and BIM director for Balfour Beatty, so BIM and data have been on my agenda for a number of years.

You all know Amazon, Apple and Google. Amazon, the largest provider

of cloud infrastructure services, and the largest internet company by revenue. Apple, the largest information technology company by revenue. And Google, they argue, is the most valuable brand in the world. They've all got something in common: they're very good at managing, harnessing and utilising data.

I think the big difference with the construction industry is that we're still coping with housekeeping. We're still trying to get the enabling done. We haven't tapped into the potential value of this data: the value to customers, the value of the commercial basis, the value culturally and the value to the consumer. We're still trying to manage the emails and get the pipelines.

PT Andrew de Silva ('Das'), associate director at David Miller Architects: We do a lot of residential, and we do a lot of schools – and also leisure and offices at the moment – and I guess we've been using data and BIM tools for quite a long time.

What we're finding is that the data is there, but actually trying to get it from the client – or to educate the client as to what data they need at the right time – is a big issue. We work with a lot of local authorities who have ambitions of declared BIM Level 2. But they literally don't know what that means.

So it's very difficult for the teams that we work with to actually deliver. We could deliver the lot – everything or nothing. And that's going to be one of the key things – so we don't over-produce the data in the first place, we just use what we need at the right time.

Antonio Dazzo, architect, Darnton B3 Architecture: We deal with a variety of projects in commercial and the residential sector mainly. I've been using BIM for about ten years, and I've been at the company five. And I would say we've probably been using it for about

six, mainly using Revit. A lot of clients want you to produce a BIM model, but they're not making use of that information once the project is complete. And they're not taking ownership of the model. It's quite difficult to know how much information to include. There needs to be a clearer approach from the start – of what exactly is required. That's also dependent on what type of procurement route you take.

Garry Fannon, head of BIM, Willmott Dixon: How does big data affect my teams? Well, very little at the minute, if I'm talking about my project teams. Are they influenced by big data? No, because as an industry, I think we're quite immature: we've not gone fully digital yet. Only at that point, when the coalface is digital, we can get real-time feedback on quality, on health and safety, on product. ▶



“It's really all about how we're communicating, and what tools we're using to communicate with”

**Paul Daynes,
Newforma**

When that's fed back into the process, it gives us that power to make really informed decisions: informing our architects about good and bad detailing, informing our procurement managers about good and bad supply chain, and individuals in that supply chain who produce bad work. At that point, when you've got real quality big data, that will allow us to produce better buildings going forward.

John Adams, head of BIM services, BIM Strategy: In terms of information and big data, we don't know what we're looking at yet. If we think this is big data, we've got another think coming: we don't define what we want, we don't define what we're going to do with it. And then, the project team throw everything they possibly can at the hope of delivering something that smells a bit like Level 2.



Above: Construction Manager editor Denise Chevin (far right) chaired the roundtable debate



“What is quite interesting is what is going to happen when we are run by millennials, because they work in a completely different way”

Cathy Stewart,
Cathy Stewart Associates

We're currently not defining what we need to do, so we're doing everything. And it's quite messy at the moment. All of that data is getting captured but not in any kind of ontology that we can interrogate, and do anything like Google or Apple are doing with their data. We're wasting our data at the moment. And if we're going to waste tiny data, what are we going to do with big data?

Chevin: Big data, in the context of the construction industry, is what?

Adams: Everything you could possibly know about any artefact or any project in a defined set of terms. So you can pull that all together and ask it questions. So, a window - where it came from, who produced it, what's the lead time, what does it weigh: all of that information. Unless we start structuring that in ways that people can interrogate, it's just data that we've put into a model, that the client is not going to use. So we need to

put it in an order that we can interrogate, and then we can ask questions.

Chevin: So data is driving a wedge between the different people in the supply chain, and the design team. Are we collaborating as well as we should?

Toby Sortain, senior BIM manager, ISG: It comes down to communication. And it just takes time for people to engage and have that conversation, and understand each other. There is an over-reliance on email, especially on live projects.

On any project where they have the opportunity to meet someone face-to-face, to have a quick meeting, you can get so much done, rather than sending that email and copying ten people that don't really need to know. So I much prefer to pick up the phone, to have a meeting, to get agreement on how we're moving forward, I think it is extremely important. ▶

“The data is there, but trying to get it from the client – or to educate the client as to what data they need at the right time – is the big issue”

**PT Andrew de Silva,
David Miller Architects**



Daynes: “Collaboration” is a very open word, isn’t it? By its nature, collaboration does naturally increase exposure. Equally, it reduces risk, because you’re more in control of the decisions being made. But you need to log what was said, who said it, what was the output. So I think email is still important and will continue to be important.

The intelligence that you can perhaps

“When the coalface is digital, we can get real-time feedback on quality, on health and safety, on product”

**Garry Fannon,
Willmott Dixon**

put around email to drive other work-flows is also quite an interesting view. You know, how can you use email to trigger a whole set of actions. It’s certainly one of the areas Newforma looks at. So, collaboration is very big.

Adams: I think email is one of the biggest mistakes our industry ever made. It soaks up so many hours of our time. It came in to replace letter-writing. Now, most of the stuff in your inbox – no one would ever write a letter to tell you that. What I’ve been doing is trying to get things out of the inbox. If it’s conversational stuff it goes to Slack. If it’s process stuff, it goes to Trello. Try and use apps that break down this megalith.

Email’s an immature and broken model for communication. How many times a day do you write “Hi, such-and-such”? You’d never do it in a text message. “Hi this”, “hi, that”. “Yours sincerely”. Spell “sincerely” wrong, spellcheck it, put it right. We’re just wasting our time.

Getting email out of our industry as far as we can will take a lot of the information trouble out of the day job.

Chevin: The younger generation of people – no one ever uses email.

Daynes: It’s messaging.

Cathy Stewart, director, Cathy Stewart Associates: I’ve been doing some work recently on diversity, and what is quite interesting is what’s going to happen when we are run by millennials. Because it’s going to be different. They work in a completely different way. What else is it that they’re going to be able to bring to this forum, and how is it going to change our industry?

Instead of traditional resources – you go to the university, you get your grad out from surveying or architecture – maybe we should be looking further afield, being a bit more innovative about who we want to bring into our industry.

Trebilcock: It may be something the generation coming up will demand. And there will be vendors who can connect with it, and enable these systems. You get the new generation – that school leaver coming in with his iPad and his smartphones. He’ll say, “I’m not working here. I can get a better job down the road that’s connected.” So, I think we’re going through that transition period.

Nicolas Maari, partner and head of architecture, Pellings: I think what’s also quite interesting is that we all agree that collaboration is very useful, and we’re moving in that direction.

But I’m not entirely convinced the clients agree. A lot of our end clients – local authorities – had their budgets cut, and a lot of them don’t see the value in BIM and all this information-managing. A lot of them just see the end product – and they don’t see that all this collaboration helps make the whole process smoother.

Dazzo: I think there is also a reluctance from architects and consultants to embrace BIM. They might see it as “Oh, it’s going to be time consuming from the start” for a small project. People need to open their mind or be educated about the benefits. Not just clients but architects, structural engineers, M&E consultants. That mindset needs to change.

Steve Faulkner, associate director, Elliott Wood structural engineers: That is changing. I think there has been a huge change over the last few years. People have started to see the real benefits of BIM. Now, I would say 75% of architects’ models we receive are Revit models.

I think the industry particularly – well, in the UK – are pushing the message out there, trying to get it out to SMEs. So that people do realise that they’re going to be left behind if they don’t start picking it up. ●

