

Breaking the Logjam

Four professionals, four documents. Working towards real change across the built environment sector.

Why, after a generation of initiatives, numerous reports, trade shows and conferences galore, is our sector still unmodernised? Over the last four years a group of professionals have been trying to answer this question. They are the Plain Language Guide Editorial Board of the IET's Built Environment Panel.

"If we are going to progress the change agenda, we need new thinking," says Patricia Massey, one of the four strong board and Digital and Technology Manager at the electrotechnical trade association BEAMA. "So many initiatives have been thrown into the pot, that people are getting confused and focussing on nothing. We must start thinking a little more about what is going on."

Su Butcher agrees. Su trained as an architect, she is the scribe of the group and is very focused on communications. "We need to understand what is holding businesses back," she says. "Particularly SMEs who make up the vast majority. We need to see them as customers, and the customer is saying, What's in it for me?"

Setting out the State of the Nation

Butcher and Massey first met through the UK BIM Alliance where Massey provided standards expertise. She has served on numerous BSI and CEN committees and is now Chair of PEL/69, the British Standards Institute group for electric vehicles. Butcher was a non-executive at the Alliance, brought in during 2017 to help get the organisation's structure off the ground. Within a year, she had been asked to lead a working group

looking at construction product data. Butcher set up the Product Data Working Group of 12 volunteers and produced a report, "A Fresh Way Forward for Product Data: State of the Nation". UK BIM Alliance, 2018. <https://www.ukbimalliance.org/a-fresh-way-forward-for-product-data/> The report explains why data about products does not travel through the construction cycle. It argues that product data is fundamental to a modern digital future for the built environment, yet major elements are missing, such as standards, naming conventions, hosting transparency and security.

It was clear that the report wasn't going to get the traction they had hoped. "When you write honestly about a problem, it can have some downsides," says Butcher. "The state of the nation report was well received, and we still get contacted by people who think it was ground-breaking, but its frankness, particularly in a heavily commercialised topic such as product data, was hard for some to accept. We might have answered the question why, but we didn't say what needed to change at a practical level."

"Some of its messages are still relevant today", Massey adds. "We still don't have structured product data, and whilst the data standards are now there in EN ISO 23386 and 23387, the sector does not know how to use them. We needed to go back to the industry again and focus on what it needs."

Rick Hartwig, Built Environment Lead at the IET, and Paul Surin of manufacturer Wienerberger (now at IBM), were both part



of the Product Data Working Group and wanted to take things forward. Hartwig, Surin and Massey persuaded Butcher to have another go, and the Plain Language Guide Editorial Board was born.

The Board is part of the IET's Built Environment Panel, which provides strategic advice to Government, responds to consultations, delivers thought leadership and develops position statements and other materials. Part of the IET's charitable remit, the Panel's work must be impartial and free from commercial influences, which has been ideal for such a sensitive topic.

Digitisation Guide for Manufacturers

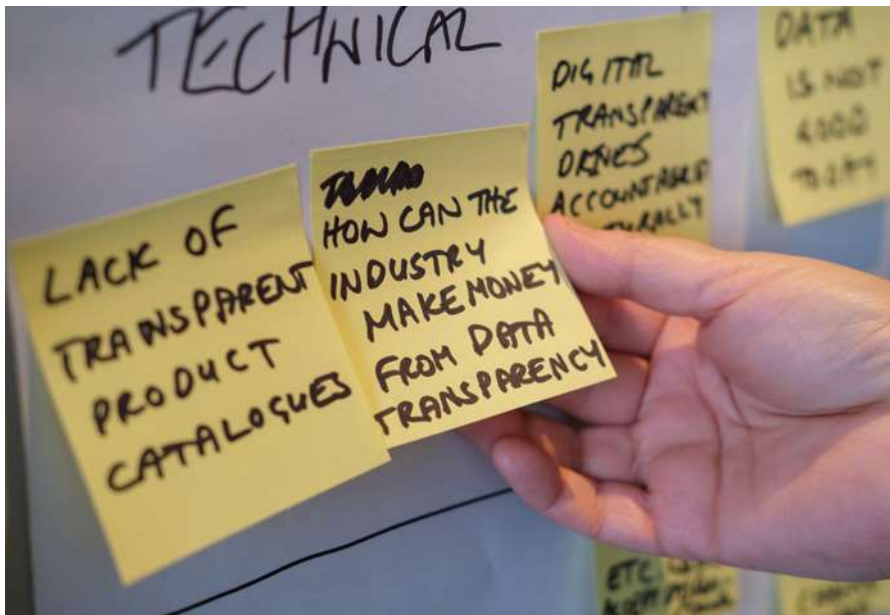
Hartwig asked his Editorial Board to produce a plain language guide for construction product manufacturers that would explain what digitisation is and how manufacturers can digitise. "You can't expect a manufacturer to provide reliable data to the construction industry if they haven't got their own systems in order". Too many manufacturers are following analogue and flawed information processes or operating multiple unconnected data sources.

"Manufacturers are businesspeople," says Surin. "They need the case for change to be made – they need to know what the ROI will be. The guide shows how digitisation can be financially beneficial for a manufacturer, not just for others in the supply chain."

Digitisation for construction product manufacturers - a plain language guide. The Institution of Engineering and Technology, 2021 <https://www.theiet.org/product-manufacturers>. Taking manufacturers back to first principles, setting out a strategic approach based on a tried and tested process proved in several companies. The guide includes advice on working with third party tech companies and consultants.

Why Haven't We Modernised?

Once published, the team turned their focus to a more helicopter view of the



sector. Five years after Grenfell, a nagging question remains – why isn't the industry modernising? Despite some fine outlier initiatives, very little has changed in the last decade across much of the sector. Meanwhile we face three of the biggest challenges of our age – climate change, building safety and the digitisation imperative.

The board approached the horse's mouth direct to ask 100 senior business leaders, many from SMEs, to a day-long round table event at Savoy Place in London. Over 60 attended from across the built environment, manufacturing, housing, construction, property, trade associations and government. They were joined by representatives from other sectors and government, and the round table was facilitated by Gill Kernick, Transformation Director at Arup University and author of a seminal book on Grenfell.

A report of the discussions on that day will be published in the autumn, and it doesn't pull any punches. "We spent the day with a group of people who all know that there are problems, and that change has to happen, but who are prevented in so many ways from breaking through," says Massey. "It was refreshing to realise that so many of our frustrations are shared."

Bringing the Tech Experts Together

"There is one audience we haven't mentioned yet," points out Hartwig, "the tech advocates. They need to get talking, particularly across sectors, when we face challenges like the decarbonisation of all buildings."

In 2021 Hartwig introduced Neil Thompson of the Construction Leadership Council to Rab Scott of The Advanced Manufacturing Research Centre at the University of Sheffield. Thompson and Scott had both joined IET volunteer panels, and they had a common interest, Digital Twins.

The manufacturing sector and the built environment sector are both developing digital twins, but in different ways. Without communication between the two, they will create siloed markets, with different language, and won't be able to address cross-sector issues. Thompson, Scott and Hartwig set up a working group to write a white paper on how instead, these specialists could come together and align.

The Apollo Protocol will be published in August. It makes the case for a meeting of minds and the creation of a common language and framework for Digital Twins, born out of an exploration of each sector's experience. Two other members of the Editorial Board, Butcher and Surin, are part of the core team who wrote the paper.

Four Documents, Four Audiences

At the end of 2022, four documents will have been produced:

1. a problem specification for a BIM audience,
2. a detailed guide for construction product manufacturers,
3. a position paper aimed at government and policy makers, and
4. a proposal for a cross sector collaboration.

What comes next? Hartwig is unsure. "Whatever we do next will focus on the digital journey our sector needs, and in a plain language way," he says.

"There is far too much noise in our sector. We're trying to speak quietly." 🗣️

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Gill Kernick with Rick Hartwig, Patricia Massey, Su Butcher and Paul Surin