



Construction's product information problem

Weak product data and inconsistent identification:
the risk to safety, compliance and delivery

Independent research commissioned by GS1 UK and conducted by Barbour ABI



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Foreword

Product information in construction has been a problem for a long time. Most people in the sector know it. Data is hard to find, often out of date, stored in formats that do not connect to anything and maintained with no clear sense of ownership. When something goes wrong, the audit trail is thin. When a product is substituted, the evidence that it was equivalent is often missing. When a project finishes, the record of what was actually built is frequently incomplete.

What has changed is that regulation is now catching up with the problem. The gap between where the sector is and where it needs to be is getting harder to ignore.

That is what prompted us to commission this research. Working with Barbour ABI, we spoke to more than **300 construction professionals** and **15 senior industry figures** to get an honest picture of where things stand. The findings do not make comfortable reading. Awareness of the Building Safety Act is near universal, yet only **one in five** people say they fully understand it. **Nine in 10** have heard of the 'Golden Thread', but just **14 per cent** understand what it actually requires. Readiness for Construction Products Reform and Digital Product Passports is lower still.

The gap between awareness and readiness is the central issue this report addresses. It is not a technology gap. The tools exist. What is missing is consistency in how products are identified, how information is structured, how it is shared between systems and organisations and how it is kept current as buildings change and requirements evolve. Without that consistency, the 'Golden Thread' risks becoming a document store. Substitutions go unverified.

Accountability drifts across the supply chain until nobody is clearly responsible.

This report sets out to describe that problem honestly, draw on the evidence and point to practical responses. It is intended to give those making decisions across the sector a clear view of the risks, what better looks like in practice and what needs to change if product information is to support safer, more accountable and more efficient delivery.

The sector knows it needs to improve. What it needs now is to turn that into consistent practice, at a pace that matches the regulatory and commercial pressure it is under. That will require coordination, clearer guidance and a willingness to treat product information not as something that sits in the background, but as a core part of how buildings are designed, delivered and managed.

That shift is overdue. This report sets out why it matters and where to begin.



Iain Walker

Director of industry engagement
GS1 UK

About GS1 UK

GS1 UK is part of GS1, the global not for profit organisation that develops and maintains standards for identifying, capturing and sharing information about products, assets and locations.

GS1 standards provide a common way to identify products and locations and exchange structured information consistently between organisations and systems.

In construction, this supports interoperability and helps product information remain linkable and auditable over time, even when data is held in different platforms.

www.gs1uk.org



Executive summary

Weak product information in construction is no longer a background inefficiency. As regulatory expectations rise, it is becoming a material risk to safety, compliance and project delivery.

Our research shows that while awareness of regulatory reform is high, understanding and readiness remain low.

- **98 per cent** report awareness of the Building Safety Act, yet only **21 per cent** fully understand it
- **9 in 10** know the concept of a 'Golden Thread' of information, but only **14 per cent** fully understand its meaning

Weak audit trails and unclear accountability compound these readiness gaps, make it hard to show why products were selected, record on site changes, or prove substitutions were equivalent, which leads to version drift over time.

- There is an over-reliance on static documents
- **48 per cent** say the way the industry manages construction product information is highly disorganised

Practical solutions are available. The sector needs consistent product identification and structured, interoperable information that can be accessed, exchanged and checked over time, including as requirements evolve.

GS1 standards, underpinned by Global Trade Item Numbers (GTINs), provide a globally recognised unique identifier that allows

product information to be accessed and verified consistently across systems. The authoritative product data itself remains with manufacturers and other verified data holders.

These identifiers can support BIM-enabled workflows, 'Golden Thread' information and upcoming Digital Product Passports (DPP) by making product information easier to reference, exchange and verify across different parties and systems.

GS1 standards are proven in the retail and healthcare sectors demonstrating the potential value of standardised identification and scanning in improving visibility and reducing waste. For example, over a two-year period, the NHS Scan4Safety programme reported savings of **140,000 hours** and reduced inventory costs by approximately **7.42 per cent** across six NHS Trusts.

- **70 per cent** see the potential of GTINs to help identify and trace products used on site

Despite the available tools, progress remains uneven. Nearly half (**47 per cent**) believe construction lags behind other industries in transparency and traceability, while **60 per cent** say poor product information management hinders progress.

The consequence is clear. Weak product information increases safety and compliance risks, as well as productivity and financial drag: **52 per cent** link limited digitalisation to inefficiencies and significant revenue loss.

A more accountable, efficient future is within reach if we build the right data foundations.

70 per cent say urgent reform is needed to improve product information management, yet **36 per cent** highlight a lack of clear direction on how to digitalise.

By improving the consistency and structure of product information, the industry can

make performance and compliance data easier to access, trace and validate across the building lifecycle. This in turn will aid the achievement of challenging delivery ambitions.

Taken together, these findings point to a clear shift. Digital product information is becoming a regulatory and operational requirement. The core challenge is not the availability of technology, but consistency in how products are identified and how information is structured and shared. Organisations that act early will be better prepared to manage risk, demonstrate compliance and deliver with confidence.

21%



fully understand
Building Safety Act

14%



fully understand what
'Golden Thread' means

48%



say construction
product information
is highly disorganised

70%



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and trace products
used on site

47%



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say urgent reform is
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36%



highlight a lack of
clear direction on
how to digitalise

1. Major headwinds in construction

The UK construction industry faces major regulatory change.

It took the Grenfell Tower tragedy for government to introduce stronger legal requirements through the Building Safety Act. The Act requires a maintained 'Golden Thread' of information, stronger product data practices, new responsibilities, oversight, and accountability to protect residents and improve safety. It places trust, transparency and compliance at the forefront of the construction industry.

Voluntary industry-led initiatives complement the law. Schemes such as the CPA's Code for Construction Product Information encourage suppliers to provide accurate, accessible product data to those who specify, install and use products.

The Government's Construction Products Reform is intended to bring all construction products into a more consistent regulatory regime. It proposes new initiatives relating to the provision of clear accessible information,

such as improved access to test results and fire safety reports, as well as Digital Product Passports (DPP).

A key weakness is product information management. Accurate, up-to-date product information is often hard to find which can lead to incorrect product specification. Previous reform attempts, including the Farmer Review of UK Construction¹, have seen limited success.

Amid major regulatory change, GS1 UK commissioned Barbour ABI to assess how product information is currently managed in UK construction, and to identify the challenges and opportunities for the sector.

Our research suggests change is underway, but many organisations are not yet ready for the level of regulatory and data discipline that is required. Leading industry voices agree that the industry is slow to evolve.



"I would always describe this industry as a supertanker... it doesn't move quickly it edges forward. It doesn't move dramatically."

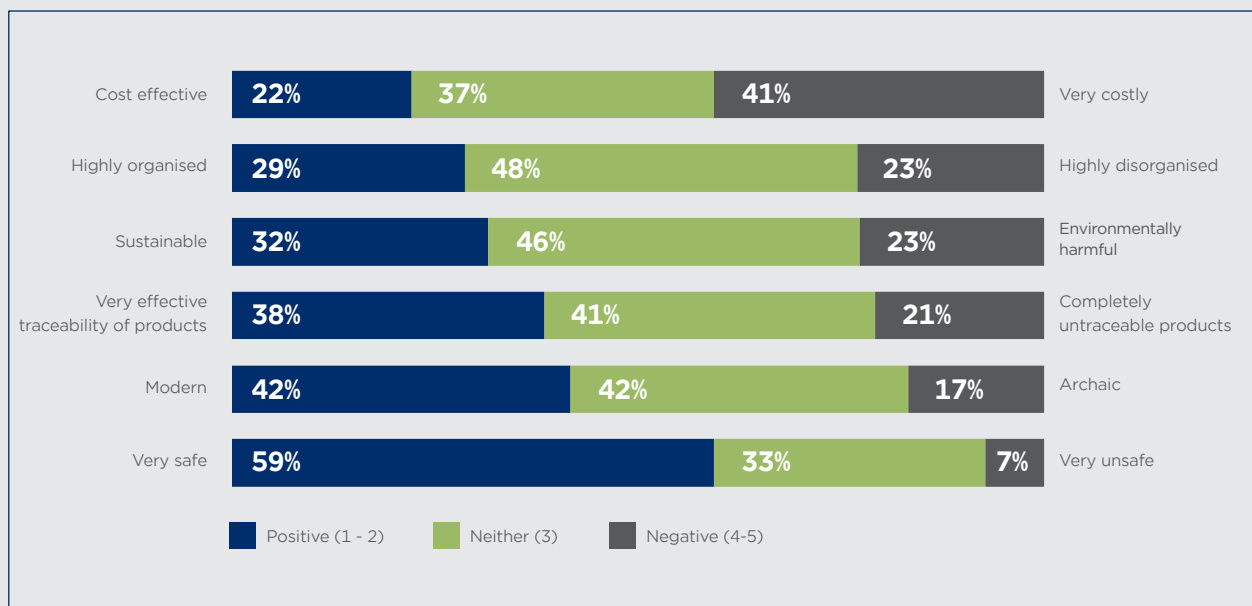
John Newcomb

CEO

Builders Merchants Federation (BMF)

¹Modernise or Die, The Farmer Review of UK Construction Labour Model, <https://www.constructionleadershipcouncil.co.uk/wp-content/uploads/2016/10/Farmer-Review.pdf>, October 2016

Perceptions of the built environment



Q. Thinking about the whole lifecycle of a building project, including the design, construction and use of assets, where do you think the built environment is on the scale below (1 to 5 where 1 is positive and 5 is negative) for each trait?
 Base: 317 respondents



A sector not ready for upheaval: awareness vs. readiness vs gaps

Our research assessed awareness, understanding and readiness across four regulatory drivers and uncovered consistent gaps between awareness of regulation and readiness for it.

1. The Building Safety Act

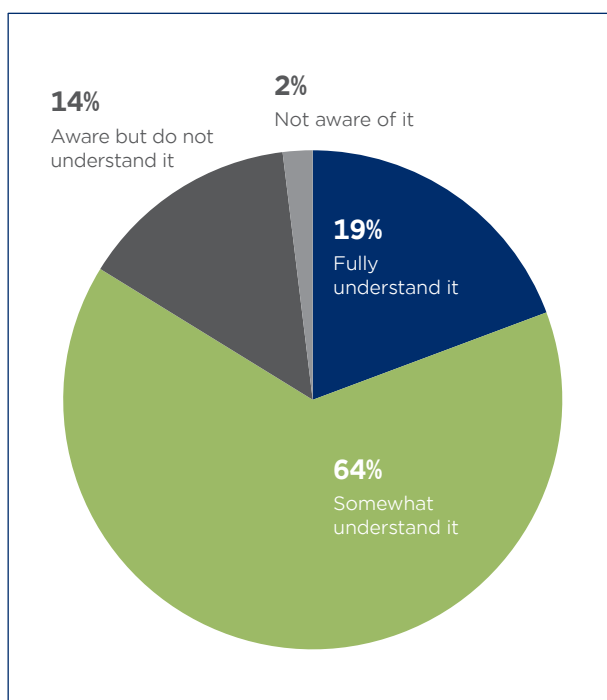
The Building Safety Act applies to all organisations undertaking building or design work and depends on manufacturers, suppliers and distributors providing accurate, consistent, construction product information.

There is near universal awareness (**98 per cent**) of the Building Safety Act, but only **one in five** respondents say they fully understand it.

Worryingly, of those aware of the Act, just **21 per cent** report that they are completely ready to meet its requirements.

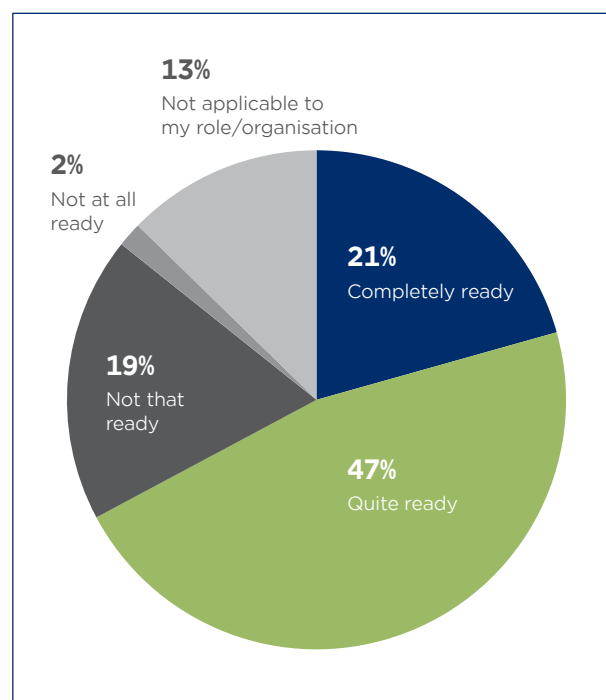
Much confusion stems from a lack of understanding of ownership and accountability.

Awareness and understanding of the Building Safety Act



Q. Prior to the survey today, how would you rate your understanding of the following pieces of regulation, or aspects of them?
Base: 259 respondents

Industry readiness for the Building Safety Act



Q. Thinking about [the Building Safety Act], how ready is your organisation to meet the requirements that apply to it?
Base: Respondents aware of the Building Safety Act (189)

“I’m completely supportive of (the Building Safety Act) ... it has been uncomfortable and challenging for many, while the industry is gaining experience in providing the required level of clear and timely evidence of its compliance, and while the regulator evolves its processes to respond to submissions in a timely manner. However, this will ultimately drive better practices that deliver better outcomes that are fundamentally necessary.”

Trudi Sully

Industrialised construction director
Mott MacDonald



2. The 'Golden Thread'

The 'Golden Thread' is a legally mandated, digital 'single source of truth' that tracks a building's design, construction and safety data throughout its lifecycle to ensure accountability and structural integrity.

Awareness of the 'Golden Thread' is high – nearly **nine in 10** construction professionals have heard of it – but understanding is limited.

Nine years after Grenfell, only **14 per cent** say they fully understand the 'Golden Thread' requirement, **51 per cent** have some understanding and **23 per cent** have merely heard of it.

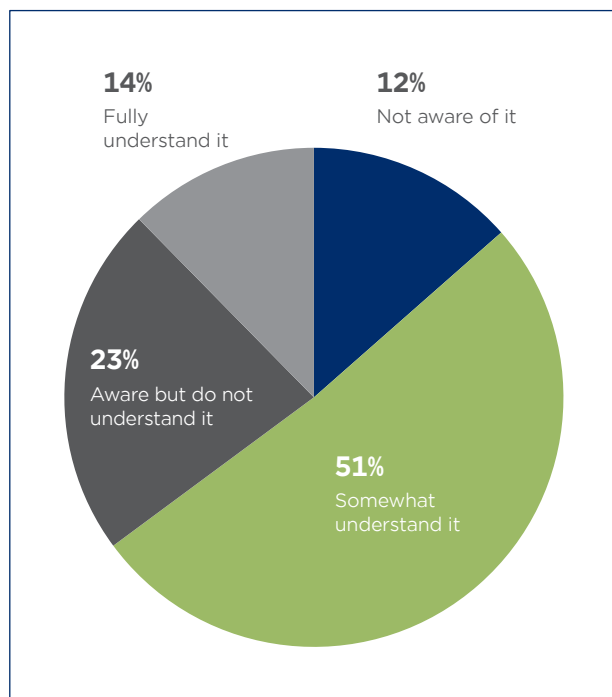
Low levels of understanding make proper implementation, compliance and maintenance challenging.

In addition, industry readiness for the implementation of the 'Golden Thread' is poor: of those aware of it, only half (**54 per cent**) say their organisation is completely or quite ready. Challenges include:

- The volume of information to manage and maintain
- A lack of system interoperability
- Uncertainty over the 'right level' of information detail

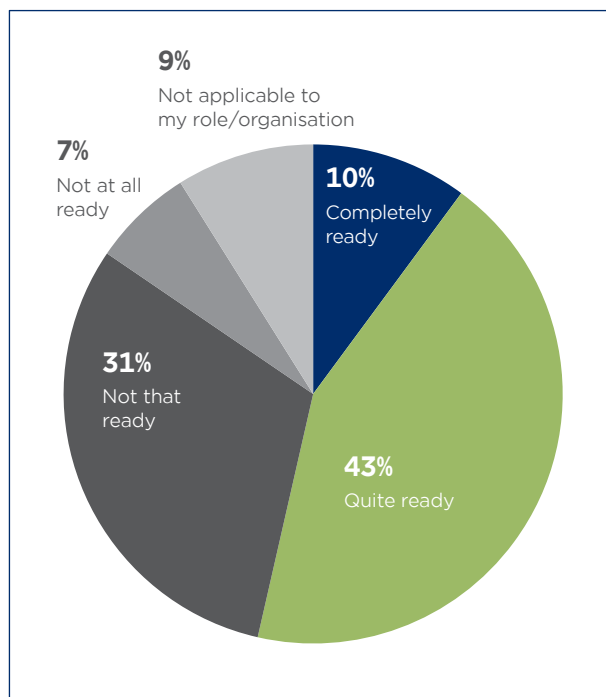
Without effective implementation, the 'Golden Thread' risks becoming a document store rather than a reliable, queryable record.

Awareness and understanding of the 'Golden Thread'



Q. Prior to the survey today, how would you rate your understanding of the following pieces of regulation, or aspects of them?
Base: 259 respondents

Industry readiness for the 'Golden Thread'



Q. Thinking about [the 'Golden Thread'], how ready is your organisation to meet the requirements that apply to it?
Base: Respondents aware of the 'Golden Thread' (168)

3. The Construction Products Reform

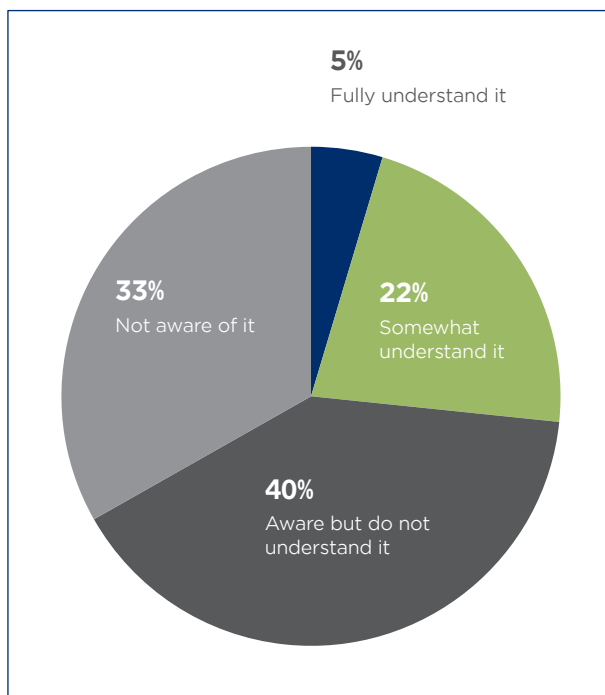
The UK Government's 'Construction Products Reform' proposes a package of wide-ranging changes to the regulatory regime for construction products to enhance safety, strengthen testing and enforcement and rebuild public trust.

Our research found comparatively low awareness and understanding of the Construction Products Reform. Two-thirds of respondents (**67 per cent**) had heard of it – mostly those from larger organisations – but only **27 per cent** reported at least some understanding of it.

Only a third of respondents (**33 per cent**) reported organisational readiness for the Construction Products Reform.

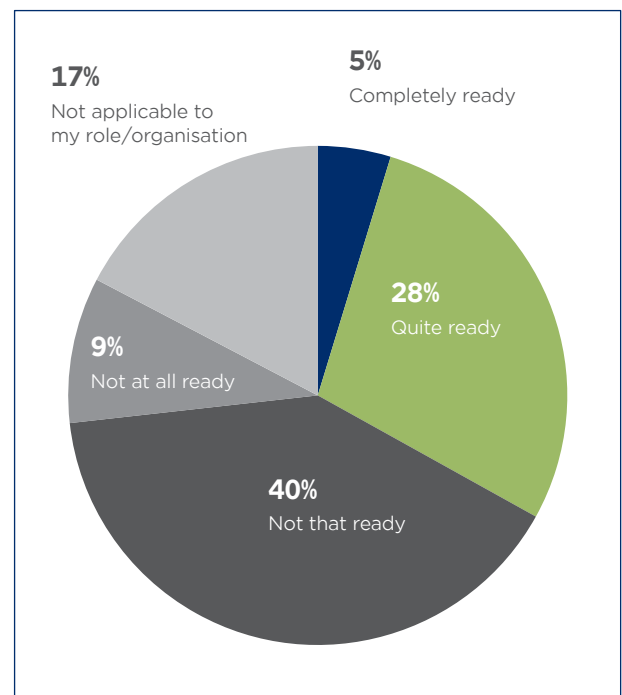
This is unsurprising: key details of the legislation are still emerging and are unfinalised. As requirements become clear, construction will need to build its understanding and readiness to implement and comply with the new legislation.

Awareness and understanding of the Construction Products Reform Paper



Q. Prior to the survey today, how would you rate your understanding of the following pieces of regulation, or aspects of them?
Base: 259 respondents

Industry readiness for the Construction Products Reform Paper



Q. Thinking about [the Construction Products Reform Paper], how ready is your organisation to meet the requirements that apply to it?
Base: Respondents aware of the Construction Products Reform (127)

4. Digital Product Passports

Digital Product Passports (DPPs) are digital records that store detailed information about a product, such as its materials, performance and recyclability. They help construction professionals track product compliance, improve safety and support a circular economy.

Industry experts generally view Digital Product Passports as a welcome addition that will raise construction standards and practices and strengthen sector-wide organisation and accountability.

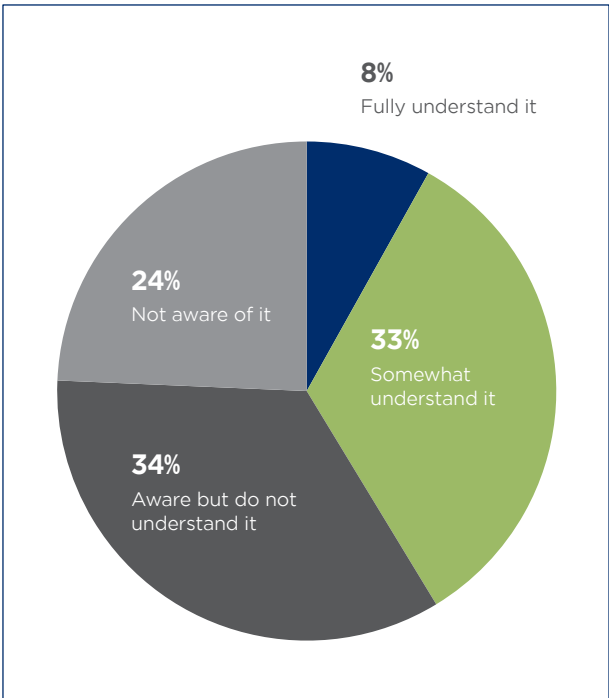
Awareness and understanding of Digital Product Passports is low. Only **41 per cent** of respondents reported fully or somewhat understanding them. This is not surprising. Digital Product Passports are not yet a legal requirement in the UK.

However, they are referenced within the Construction Products Reform and are due to come into force within the EU during 2026.

Digital Product Passports will require consistent identification and structured information to support transparency and traceability across the supply chain.

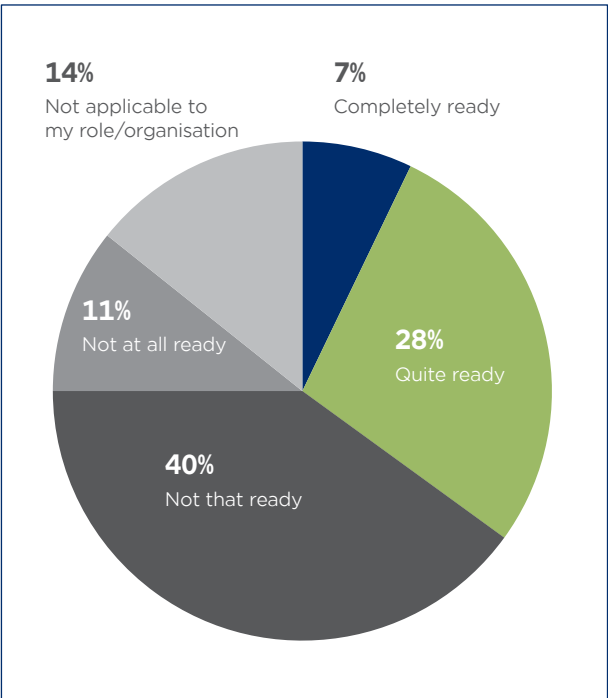
The proportion of respondents who indicate they are either completely, or quite ready for Digital Product Passports is low, at **35 per cent**. Predictably, those who are ready for them are manufacturers and other suppliers.

Awareness and understanding of Digital Product Passports



Q. Prior to the survey today, how would you rate your understanding of the following pieces of regulation, or aspects of them?
Base: 259 respondents

Industry readiness for Digital Product Passports



Q. Thinking about [digital product passports], how ready is your organisation to meet the requirements that apply to it?
Base: Respondents aware of digital product passports (140)

Many recognised the role that common identifiers can play in meeting the information requirements behind Digital Product Passports. GS1 standards are one established approach for providing globally unique identifiers that can be used to link product information consistently across systems.

In the following case study, Adam Turk and his colleagues at Siderise, share how their investment in PIM and Digital Asset Management (DAM) systems delivered a range of benefits, including positioning them to better meet future digital and regulatory requirements.

Case study: Creating a single source of truth with a PIM and DAM



Adam Turk, Lee Nichols, Penny Howell-Jones and Reshma Roodurmun, Siderise.

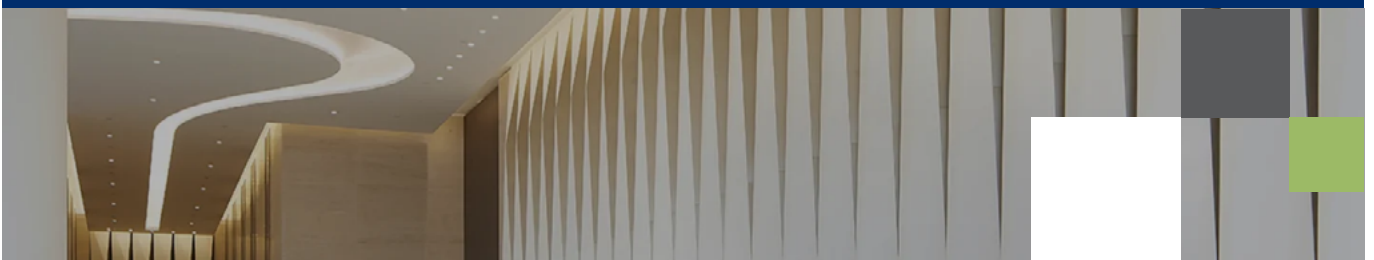
Siderise, a manufacturer of fire and acoustic insulation, replaced fragmented collateral and slow, manual PDF workflows by building a bespoke Product Information Management (PIM) system linked to a Digital Asset Management (DAM) platform and their website. We spoke to them to understand the impact.

The team's goal was a single source of truth for technical, environmental and installation data. "From a business perspective, it's what we would consider 'one source of truth'," said Lee. "We are heavily involved with the CCPI (Code for Construction Product Information), so we needed the PIM in place to support product assessments". The PIM automatically generates datasheets, links visual assets to products, supports regional variants and publishes live, traceable links into specification packs and handles regional product variations.

The result: faster product launches, simpler market expansion, controlled, auditable distribution of assets to partners and significantly reduced manual effort and documentation errors.

Although Digital Product Passports were not anticipated when the PIM was built, the platform now provides a strong foundation for Siderise to meet those future obligations. They don't yet use GS1 identifiers in the PIM but are exploring them: "From the European requirements, we understand that unique identifiers like barcodes are required. That's why we've been looking at what GS1 UK have got available," Lee explained.

Overall, the PIM/DAM investment has given Siderise a robust platform to accelerate commercial activity and adapt to upcoming digital and regulatory demands.





2. The weak spot

The construction sector's core vulnerability is weak product information management and traceability.

People, processes and technology are misaligned. As a result, fragmented data, poor interoperability and uneven regulatory understanding create weak audit trails, accountability gaps and a higher risk of inappropriate substitutions.

Weak audit trails and accountability gaps

Gaps in audit trails and accountability make it difficult to track product selection, changes and substitutions. Addressing this starts with improving how construction product information is created, shared and maintained.

This approach carries clear risks. Static documents can become outdated quickly as products, standards and regulations change, creating version drift and weakening auditability.

Our research shows the industry continues to rely heavily on static electronic documents and PDFs to communicate product information.



“Most people in the industry, in their hearts must know that we’ve been taking risks. But a lack of effective systems and policies has too often left those on the ground feeling powerless to push back against the constant pressure to hit time and cost targets and call out issues.”

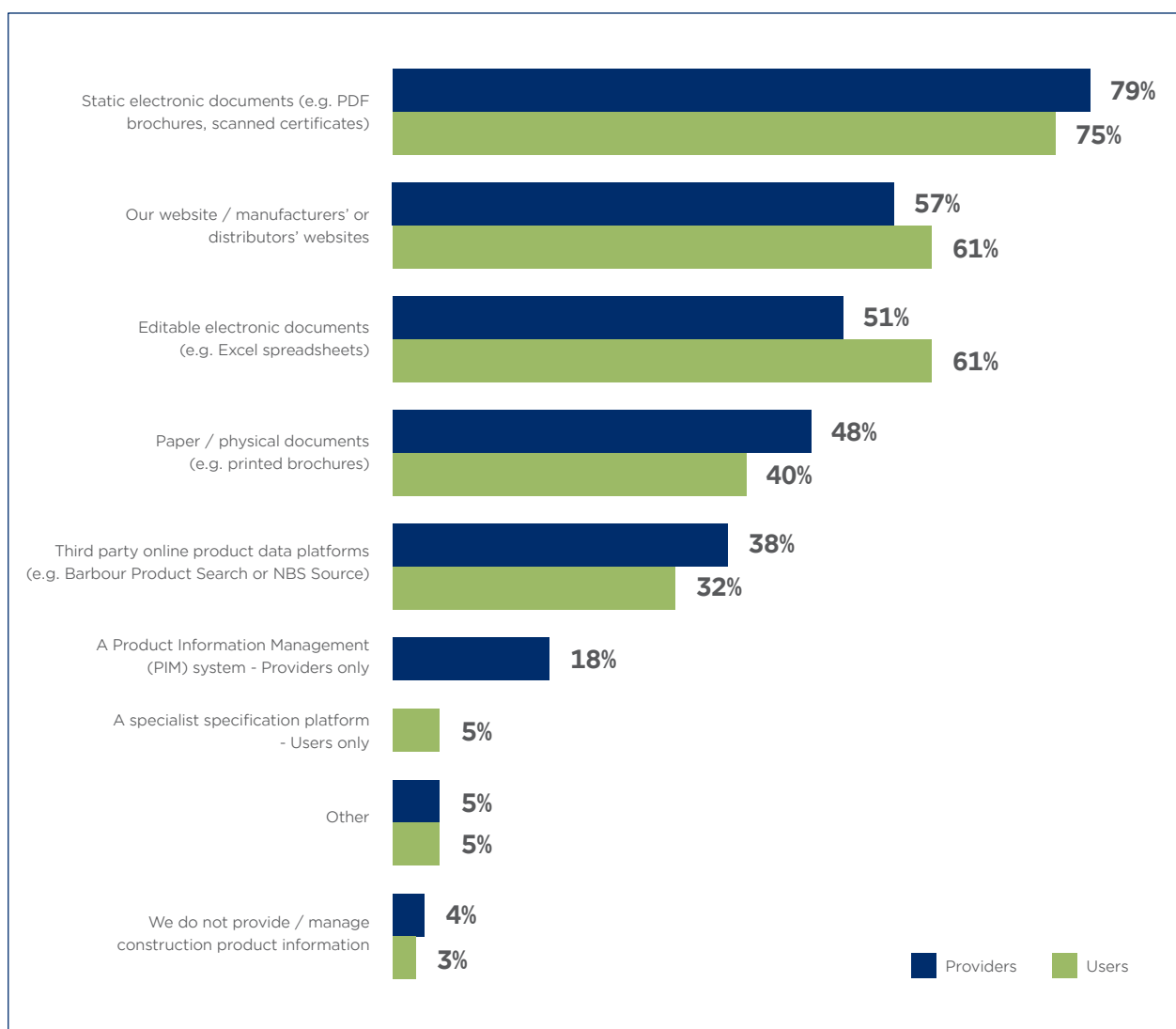
Brian Green
Industry analyst

61 per cent of users want editable electronic product data but just **51 per cent** of providers offer it.

A Product Information Management (PIM) system can help manufacturers centralise and share accurate technical and compliance product information to the people and platforms that need it during design, specification and procurement, thanks to a unique identifier and common formatting.

However, there is limited adoption. Fewer than **one in five** providers of construction product information (**18 per cent**) reported using a PIM system, despite its growing importance in a more regulated and data-driven industry.

Methods used to provide, manage and access construction product information



Q. Which of the following do you use to provide and manage / access, review and record construction product information?
Base: Providers = 168; Users = 137

A sector in disarray

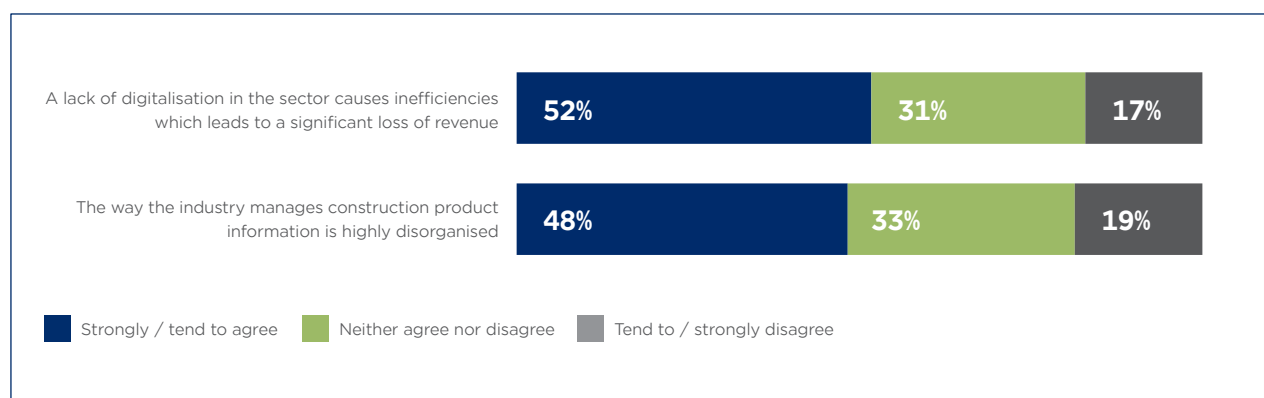
Nearly half of respondents (**48 per cent**) believe the way the industry manages construction product information is highly disorganised. Industry experts report the same: product data lacks cohesiveness and users often lack influence, control or assurance over the information.

Poor digitalisation hits the bottom line.

52 per cent report inefficiencies that cause significant revenue loss, rising to **69 per cent** among large companies.

Standards can help organisations meet regulatory requirements and consistently share interoperable data, saving both time and reducing avoidable rework.

Perceptions of managing construction product data in the built environment



Q. To what extent do you agree or disagree with the following statements about construction product information?
Base: 317 respondents



Substitutions erode control

Product substitution is common in construction projects. In the CPA's Marketing Integrity Group survey, **84 per cent** of respondents² reported being aware of a specified product being substituted. It is one of the sector's most frequent uncontrolled risks.

Substitution is not inherently wrong, but it requires careful assessment. Historically, substitutions often occurred without clear evidence that alternatives met the required performance criteria. Documentation of changes is frequently missing or inadequate.

Consistent product information is essential to compare alternatives and protect performance.

“Our argument is this: product substitution is itself not unhealthy. You might design a building that you don’t build for two years, and during that time, things change, products develop and evolve. What you need to do is be able to determine for what performance basis was that product chosen and can you be sure that the product you’re going to replace it with performs at least as well in all of the key areas... you should only be able to do that if... you know you can trust the (product) information.”

Adam Turk

CEO, Siderise

Chair, Construction Products Association (CPA)



People, process and technology are misaligned

Of the three pillars of digitalisation identified by experts - people, processes and technology - it is people and processes that remain the principal challenge.

Our research shows cultural shifts and improved safety perceptions have taken place since the Building Safety Act but further progress is needed to embed.



We've got a number of key topics that are at the forefront of the change that is happening at the moment. I would put building safety top of the list because clearly what we saw... when Grenfell happened was completely avoidable and just utter shame on the industry. The behaviours that were mapped out were appalling, but for quite a few of us, not a surprise. We have had that trend for the last 30 or 40 years. Other big issues are about sustainability and... making sure that the industry actually does not injure anyone, including people in the industry, is a huge topic as well."

Peter Caplehorn

Chief executive

Construction Products Association (CPA)



Aligning skills, behaviours and workflows is essential to fully embed change and realise the benefits of digitalisation.



"I think we've already proved that the technology is there to do this. This is all about people and process in my personal opinion... People [are] number one because you still rely on people to make sure the process is run effectively and number two the process because the process needs to be a balance between operational efficiency and data capture."

Robert Barbour

Data integration & insights director

Travis Perkins

Smaller players risk being left behind

The industry is characterised by a particularly high proportion of small companies. Small and medium-sized enterprises (SMEs) make up **99 per cent**³ of the sector and often struggle to keep up with regulatory changes and digitalisation. Limited resources, skills shortages and financial instability leave them exposed and typically push digital reform down the priority list.



“The construction industry, by its very nature, is very fragmented. [There are] lots and lots and lots of SMEs – more than you would typically see in an industry of this size. And getting the message to those smaller companies and also for those smaller companies to have the resource to undertake some of the changes is a significant challenge.”

Adam Turk

CEO, Siderise

Chair, Construction Products Association (CPA)



Industry experts warn many SMEs risk being left behind, on both digital transformation and regulatory reforms designed to improve safety and transparency. Within their report into the Building Safety Act, BESA identified a similar gap between legislative change and awareness among smaller firms⁴.

³Barbour ABI, *Small businesses in the construction industry*, <https://store.barbour-abi.com/small-businesses-in-the-construction-sector/>
⁴BESA, *The Building Safety Act: Turning Awareness into Action*, <https://www.thebesa.com/building-safety-act/industry-report>



3. Building the foundations for consistent product information

Data standards enable the consistent identification, capture and sharing of product data across stakeholders improving traceability, procurement, logistics and project coordination.

This section explains how identifiers and standards can help construction, using GS1 standards and Global Trade Item Numbers (GTINs), as an established example.

What are GTINs and standards and how do they work

GTINs are unique, internationally recognised product identifiers that allow products to be tracked and referenced worldwide across different sectors.

Long established in retail, these identifiers are typically embedded within barcodes or QR codes, allowing them to be easily scanned and linked to structured product information, such as descriptions, dimensions and manufacturer details. In construction, they can be used to link to certification information, installation instructions and performance data.

GS1 standards extend beyond product identification. They provide a common framework for data exchange. Global Location Numbers (GLNs) are used to identify organisations and sites,

while Serial Shipping Container Codes (SSCCs) identify logistics units such as pallets or shipments. Together, these standards enable a consistent and interoperable approach to managing information across the supply chain.

Using GTINs and standards can support traceability, reduce errors associated with manual data handling and improve efficiency.

As construction continues to digitalise, standards can reduce complexity, increase transparency and enable more efficient digital workflows.

Even where GTINs are not yet mandated, regulatory and market expectations are shifting toward structured, traceable product information.

Data standards unlock lifecycle benefits

Within our research, industry voices identify GTINs as a valuable addition to construction, recognising the role unique identifiers can play in strengthening accountability and traceability across the supply chain.

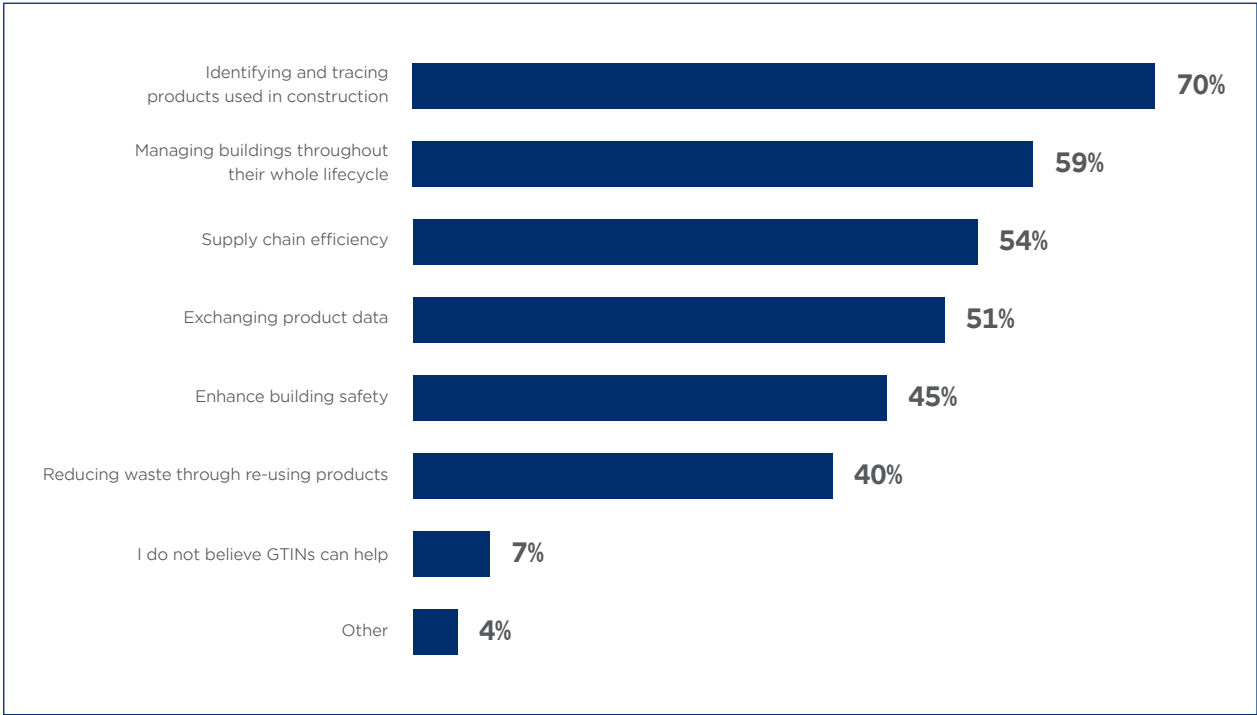
Experts link GTINs directly to the ‘Golden Thread’ and Digital Product Passports, as well as considering them enablers of stronger quality assurance through clearer product verification.

Survey respondents echoed this.

The majority (**93 per cent**) of respondents see value in GTINs, recognising the benefits they offer, including for:

- Identifying and tracing products used on site
- Managing buildings throughout their whole lifecycle
- Improving supply chain efficiency

Benefits of using Global Trade Item Numbers (GTINs)



Q. Thinking about Global Trade Item Numbers (GTINs), as unique identifiers for products and materials, which of the following do you think GTINs could help with? (Please select all that apply.)
Base: 244 respondents

Learning from other sectors

Our research suggests GTINs and GS1 standards are underused in construction, with respondents citing a lack of knowledge about them as the main barrier to their use.

Yet GTINs are well-established and widely adopted. They have been used in UK retail since 1977 and in healthcare supply chains for over 20 years. The standard is now used by over **two million businesses worldwide**; experience the construction sector should draw on.

At that scale, organisations have seen improvements in inventory accuracy, recalls and data exchange through automated scanning and standardised identifiers.

Industry voices acknowledge the long established role of GTINs, noting their fit with manufacturing and distribution activities, international recognition and relatively low implementation costs.



“In my view, the GTIN is not an expensive service to pay for, so it does not place a large financial burden on manufacturers.”

Margaret Fitzimmons

CEO

Electrical Distribution Association (EDA)

In 2020, GS1 UK published a report⁵ assessing the efficiency gains from applying GS1 standards to digitalise inventory management, based on a two-year evaluation of six NHS trusts. The report found **140,000 hours** saved and a **7.42 per cent** reduction in inventory costs, driven by improved stock control and visibility.

Amid rising costs, tight tender prices and investor caution, what could similar gains mean for construction?

Construction materials represent around **36 per cent** of total project costs⁶.

In 2025, total new construction output was estimated at **£141.8 billion**⁷, implying that expenditure on construction products amounted to around **£51.0 billion**.

By way of illustration, a comparable **7.42 per cent** reduction in product-related costs would equate to a potential saving of approximately **£3.8 billion** per year.

Amid rising costs, tight tender prices and investor caution, savings of this scale could make a meaningful contribution towards improving project viability and overall sector productivity.

⁵ GS1 UK, *Scan4Safety report*, <https://healthcare.gs1uk.org/scan4safety/>

⁶ Piecyk M., J. Allen, A. Woodburn, *Construction Logistics Briefing Report*, <https://www.csrfa.ac.uk/wp-content/uploads/2021/12/CUED-C-SRF-TR-15-Construction-Industry-SRF-Report-Final-Draft.pdf>

⁷ Barbour ABI, *Construction Forecast Bulletin GB 2026 – 2030 Edition*, <https://store.barbour-abi.com/report/construction-forecast-bulletin-2026-editions/>



4. Construction has a long way to go

Nearly three-quarters (**72 per cent**) agree that digitalisation is essential to the future of the built environment.

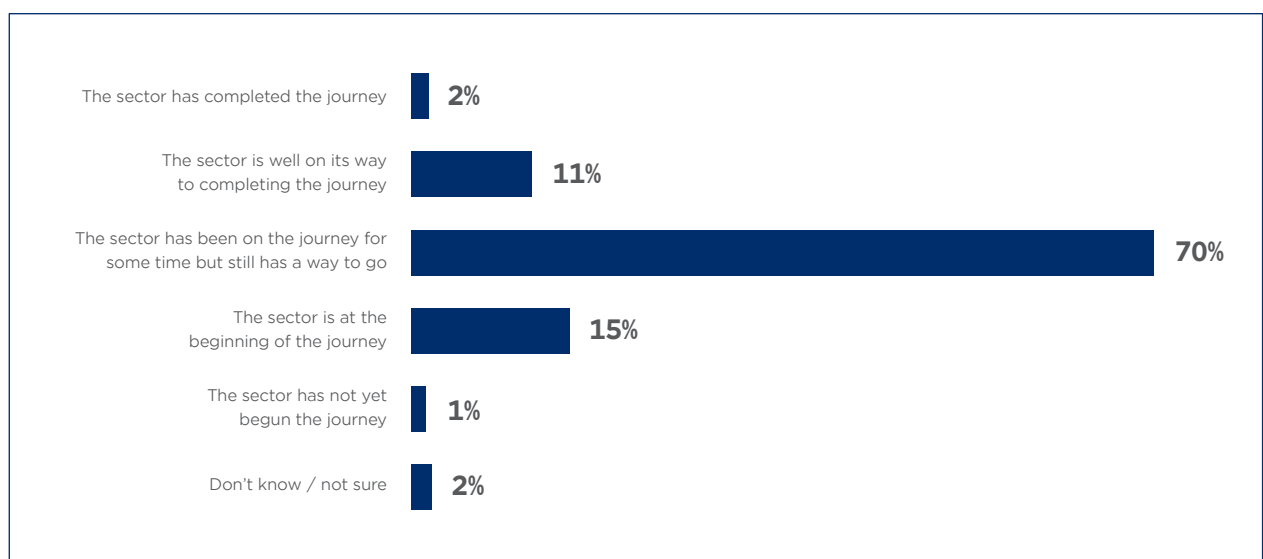
Digitalisation and the future of the built environment



Q. Thinking about the future of the built environment sector, how strongly do you agree or disagree with the following statements?
Base: 279 respondents

For most respondents (**70 per cent**), the sector has been on the journey to digital transformation for some time, but only **2 per cent** consider it complete.

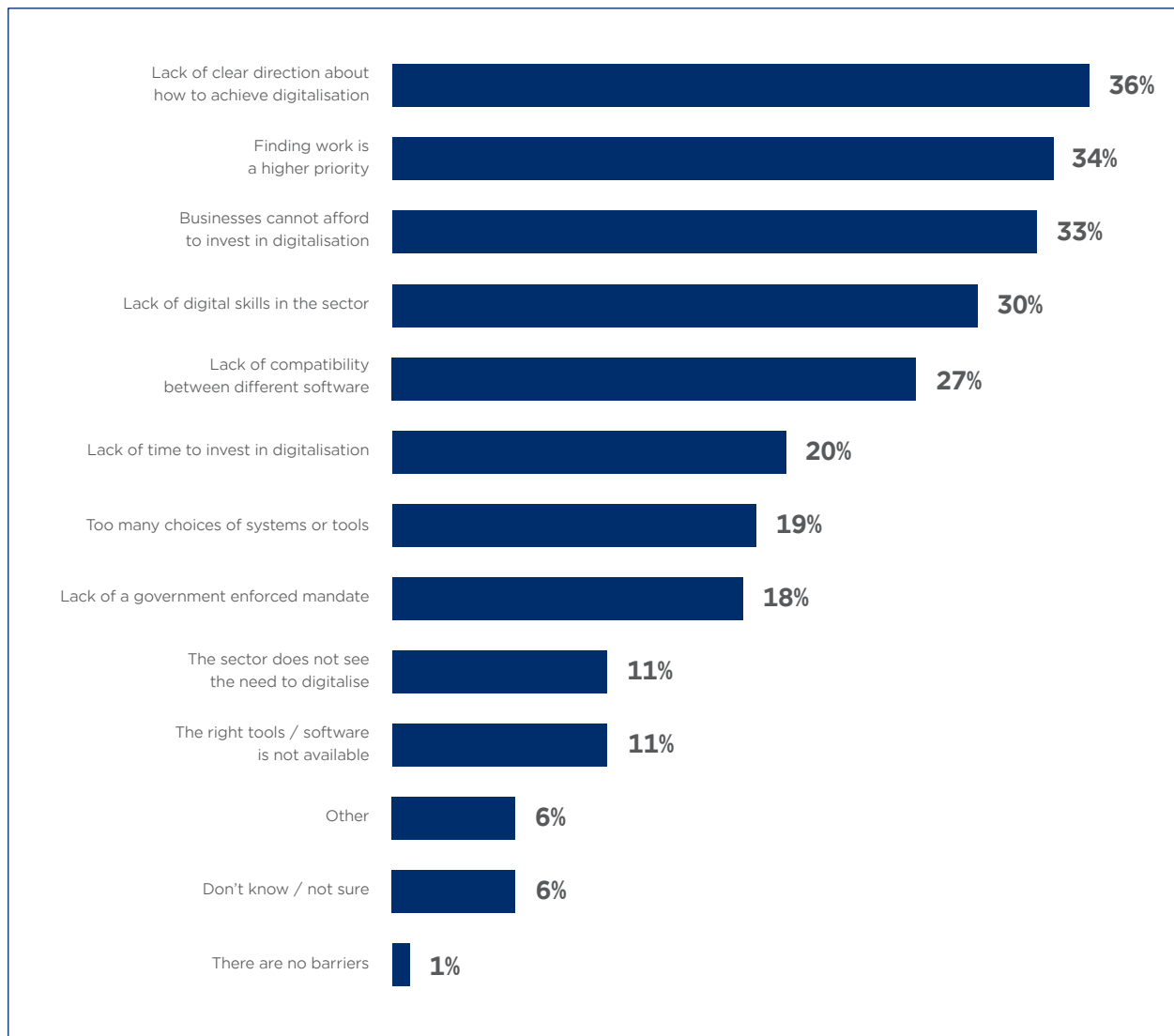
The journey to digital transformation



Q. In recent years it has been said that the built environment sector is on a 'digital transformation journey'. On the whole, where on that journey do you think the sector is?
Base: 317 respondents

The path to digital transformation is uneven: **99 per cent** of respondents report barriers to digitalisation. The main obstacles are a lack of direction, deprioritisation, cost concerns and skills gaps.

Barriers to digitalisation



Q. What are the main barriers, if any, to digitalisation in the built environment sector?
Base: 317 respondents

Firms need clearer guidance and support. The priority is support in creating structured product information with persistent identifiers so it can be accessed and checked over time.

Using common standards reduces duplicated work, ensures consistent product information and improves collaboration. GS1's global standards for product identification, data sharing and traceability offer a practical alternative to costly bespoke systems, and GS1 UK provides guidance, tools and hands-on support to help organisations adopt these standards and sustain progress.

Such support can enable specialised solutions that are unique to construction.

“Our products end up invisible, like lots of construction products. Once the building’s finished, you can’t see it, which is why we have been working with (GS1 UK) on our RFID system, which is exactly the same GTIN information, just encoded in a different format. That means that you can read it without having to be able to visually see the label.”

Chloe Donovan

Managing director and co-founder
Natural Building Systems

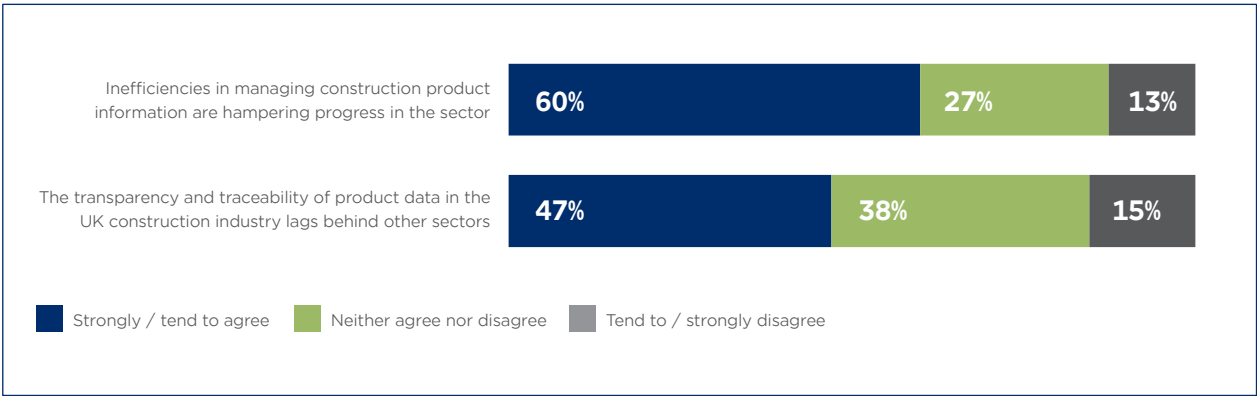
Sector faces financial loss and reduced productivity

Failing to improve digitalisation and product information practices risks operational, financial and reputational harm.

Three out of five survey respondents (**60 per cent**) report that inefficiencies in managing construction product information are hampering progress.

Almost half (**47 per cent**) believe UK construction lags behind other sectors on product transparency and traceability. These findings, alongside evidence from other sectors, underscore the need for action.

Perceptions of managing construction product data in the built environment



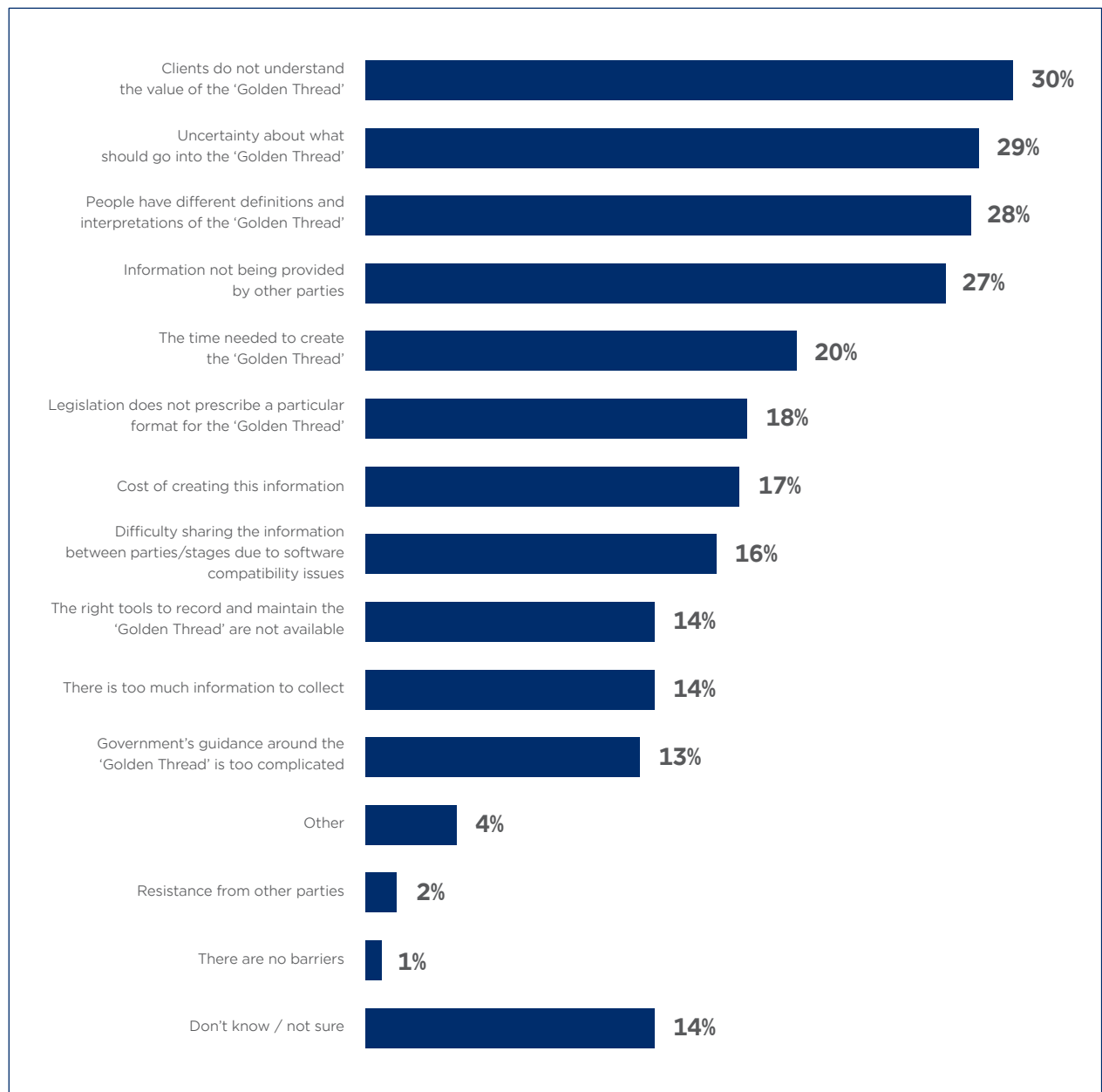
Q. To what extent do you agree or disagree with the following statements about construction product information?
Base: 317 respondents

Sector exposed to safety and compliance risks

The Building Safety Act's requirement for a permanent 'Golden Thread' of information has accelerated digitalisation within construction, but many firms still struggle to comply.

But as the chart below shows, there are many barriers to implementation.

Barriers to creating and maintaining the 'Golden Thread' of information

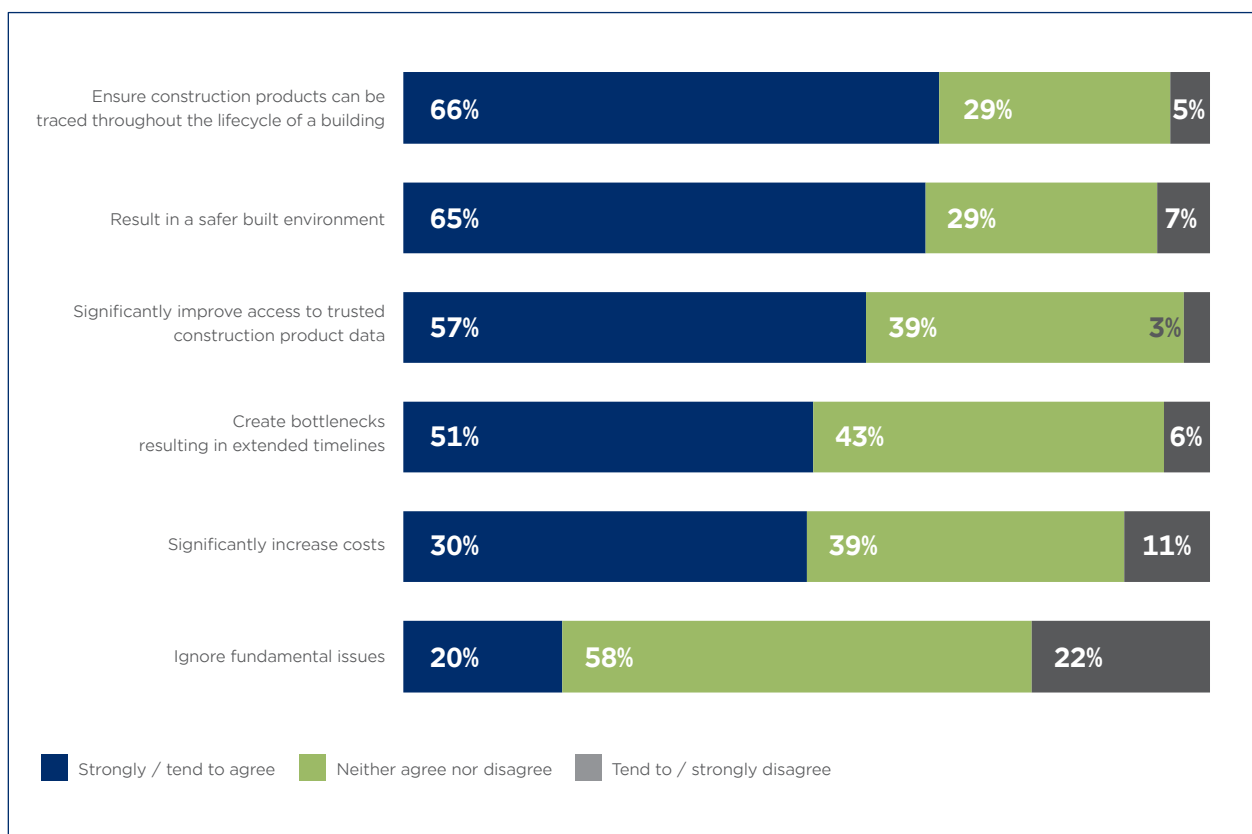


Q. What are the main barriers, if any, to creating and maintaining the 'Golden Thread' of information?
Base: 263 respondents

The Construction Products Reform proposes changes that will disrupt current working practices.

About half of respondents express concern that the reforms could delay projects (**51 per cent**); and significantly increase costs (**50 per cent**).

The extent to which respondents agree the proposed reforms within the Construction Product Reform Paper will...



Q. In this question we would like you to consider the 'Construction Products Reform Paper' which sets out a proposed package of reforms in relation to construction products. To what extent do you agree or disagree with the following statements? The proposed reforms will...

Base: Respondents aware of the Construction Products Reform Paper (122)



Industry leaders argue that stronger, more transparent enforcement, including publishing enforcement actions, would create the clear consequences of non-compliance needed to accelerate adoption. Legislation and mandates help but must be paired with coordinated, sector-wide collaboration.

SMEs need targeted support

Smaller organisations, which form much of the sector, face the biggest barriers to digital transformation. Although **70 per cent** say the sector has been on the digital journey for some time, industry experts caution that progress is not as linear or straightforward as that figure suggests.

Larger companies and those with strong ethical commitments are often further advanced while many smaller organisations – limited by budgets, skills and competing priorities – are often only beginning. Industry experts attribute this gap mainly to cost and capacity constraints rather than resistance to change.



“Most of our members... are SME businesses... and they naturally tend to focus on the short-term survival issues rather than long-term structural changes.”

John Newcomb

CEO

Builders Merchants Federation (BMF)

Without targeted support many SMEs risk being ‘left behind.’ GS1 UK supports organisations of all sizes to explore and adopt GS1 standards, with guidance and peer learning available through the network.

Chloe Donovan of Natural Building Systems provides an SME’s perspective on the benefits and challenges of adopting GS1 standards.



Case study: An SME's adoption of GS1 standards

Chloe Donovan, Natural Building Systems.

Natural Building Systems is a small UK start-up founded in 2019 that manufactures bio-based, low carbon building panels. From the outset they combined a materials-first approach with a deliberate focus on digital tools to scale production, ensure quality and improve traceability across the product lifecycle. Managing director Chloe Donovan, along with her co-founder, led the company to adopt standards and systems to make their panels easier to identify, manage, specify and reuse.

Facing an industry marked by fragmented information flows and growing regulation, the company initially relied on internal coding systems and spreadsheets but needed a more robust, standardised approach to product identification, data sharing and labelling.

They needed a consistent way to identify products, manage inventory, prevent information drift across online listings, and ensure long-term traceability — all without adopting bespoke, proprietary systems that would impede interoperability.

GS1 standards became the central solution for Natural Building Systems. The company registered GTINs (Global Trade Item Numbers), developed a structured product library, and integrated those identifiers into a cloud ERP to manage inventory, production and finance. Adopting GS1

barcodes met their early needs for inventory control, while QR codes powered by GS1 provided installer and customer-facing access to product information. However, construction products present unique physical constraints — labels can be hidden or damaged when panels are installed.

To address this the company explored GS1 encoded NFC (Near Field Communication) technologies before piloting GS1 encoded RFID (Radio Frequency Identification) labels. RFID uses radio-wave tags to track items even when labels are obscured, and NFC (a short-range form of RFID) lets smartphones tap to read GS1 data.

Their pragmatic tagging strategy now combines a GTIN plus two RFID labels per panel (one external, one internal), and QR codes powered by GS1 for customer-facing content, ensuring durability, scannability



“Ultimately for us, the GTIN is the backbone of our systems. It’s what enables us to consistently ID our products across all systems. Whatever solution or physical label you go with, the GTIN is effectively the underpinning system that brings it all together.”

Chloe Donovan
Natural Building Systems

and richer digital links. They also trialled integrations with platforms like Circuland to link product data into Building Information Models (BIM) and an AI chatbot trained on ring-fenced product data hosted by GS1 UK to answer frequently asked questions.

The outcomes for this SME have been significant. As Chloe puts it: “Ultimately for us, the GTIN is the backbone of our systems. It’s what enables us to consistently ID our products across all systems. Whatever solution or physical label you go with, the GTIN is effectively the underpinning system that brings it all together.” With GS1 standards as the backbone, Natural Building Systems reduced internal debate over naming and version control, replaced manual checks to improve inventory accuracy, tightened quality control via unique serialisation and enhanced traceability for circular reuse.

GS1 UK membership also brought access to a peer network, steering groups, and best practice scaled for SMEs, whilst GS1 UK’s turnover-based pricing kept the standard affordable.

Natural Building Systems’ phased rollout, GTINs and barcodes first, then adding RFID, QR codes and system integrations shows a practical SME route to adopting GS1 standards and achieving interoperability, traceability and market credibility.

Relying on GS1 UK’s framework and community support helped them prioritise robust tagging and targeted integrations over recreating identification systems, better positioning the business for future regulatory requirements and to achieve its circular ambitions.





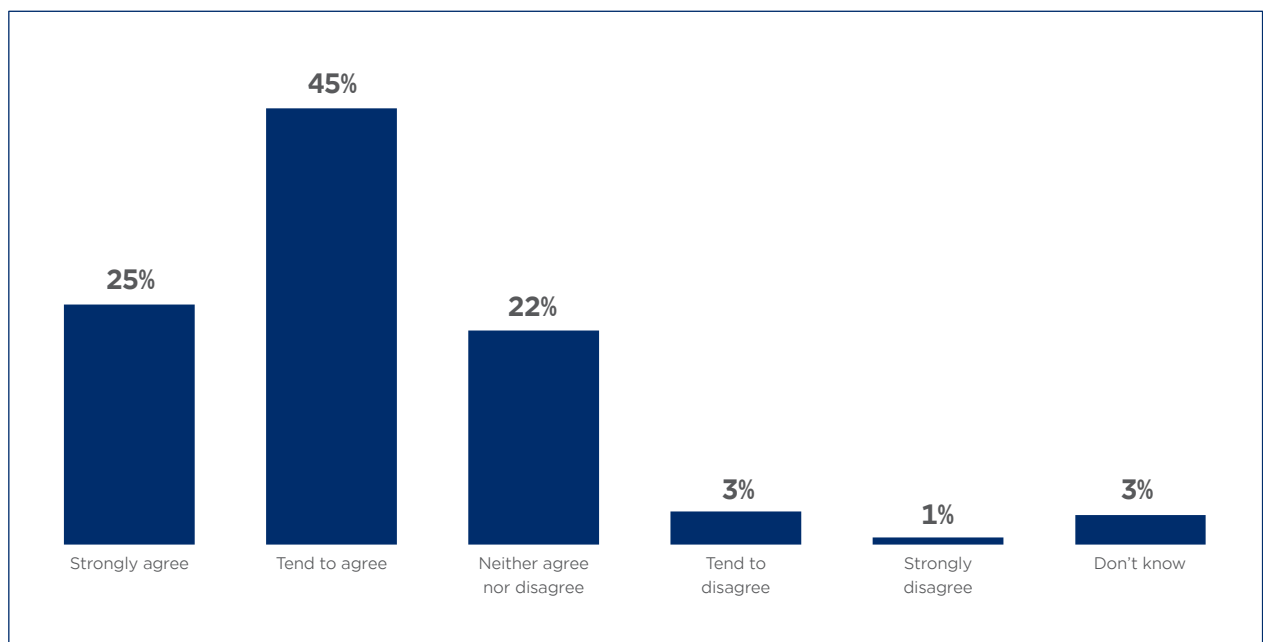
5. A more productive future

Construction is at a crossroads. Technology can deliver gains in safety, compliance and productivity but fragmented, inconsistent and outdated product data is blocking progress. Without improvements in information quality, structure and access, regulation and digitalisation will fall short.

Urgent reform is needed

Momentum for change is strong. **Seven out of 10** survey respondents believe urgent reform is needed to improve the management of product information within the built environment.

Urgent reform is needed to improve the management of product information within the built environment



Q. How strongly do you agree or disagree with the following statement? 'Urgent reform is needed to improve the management of product information within the built environment'

Base: 260 respondents

But if data problems persist, demonstrating compliance and enabling effective regulatory oversight will be compromised. Reform programmes will struggle to deliver their intended impact.

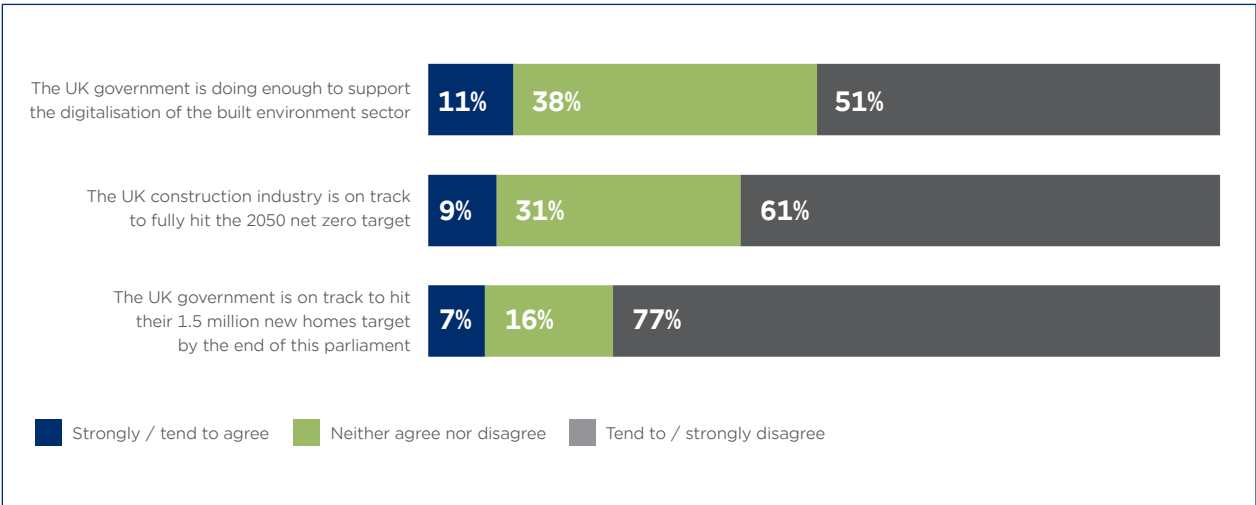
The ‘Golden Thread’ depends on consistent, structured and interoperable data. Without this it risks becoming a static archive rather than a reliable, usable record. Poorly organised or inaccessible product information prevents timely checks, weakens auditability and increases the risk of non-compliance.

Failing to act puts delivery and climate goals at risk

The Government has set challenging housing and Net Zero targets for the built environment, intended to stimulate growth, address undersupply and promote sustainable development.

Only **9 per cent** of respondents believe the sector is on track for Net Zero and just **7 per cent** think the target of **1.5 million** new homes this parliament will be met.

Perceptions of the future of the built environment sector



Q. Thinking about the future of the built environment sector, how strongly do you agree or disagree with the following statements?
Base: 279 respondents



Fragmented, inconsistent information and adoption failures put these national ambitions at risk. Decisions will be delayed, schedules pushed back and costs will rise. The expected efficiency gains from digitalisation and process improvements will be harder to realise.

SMEs: the sector's greatest vulnerability

The industry is highly fragmented, creating ongoing risk. Uneven adoption of improved product information practices creates gaps in compliance and accountability across the supply chain.

Without targeted, practical support from the Government and the wider industry, these gaps risk leaving a significant portion of the sector behind and undermining efforts to improve safety, performance and delivery.

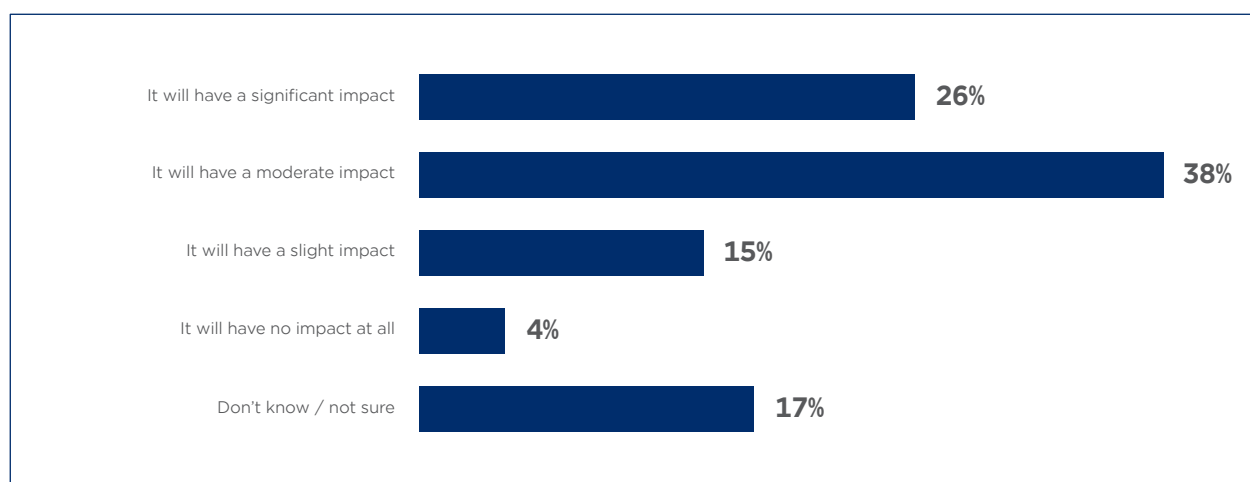
A practical path forward

Change is within reach. The technologies for digitalisation already exist. The main barriers lie in people, processes and prioritisation, not technical capability.

Support for data standardisation and unique identifiers is strong.

The remedy is clear and achievable.

Unique identifiers (such as GTINs) role in solving the existing product information issues within the built environment



Q. To what extent do you believe that a unique identifier such as a GTIN will be an important part of the solution to the existing product information issues within the built environment sector?

Base: 239 respondents

Wider use of common data formats, unique identifiers, structured records and interoperable systems removes blockages, enables automated checks and faster decision making.

Evidence from other sectors demonstrates the potential impact. For example, in healthcare, the adoption of GS1 standards contributed to a **7.42 per cent** reduction in inventory costs. Similar efficiency gains in construction could represent a material

opportunity, but the immediate priority is to provide auditable product information that supports compliance and scalable delivery.

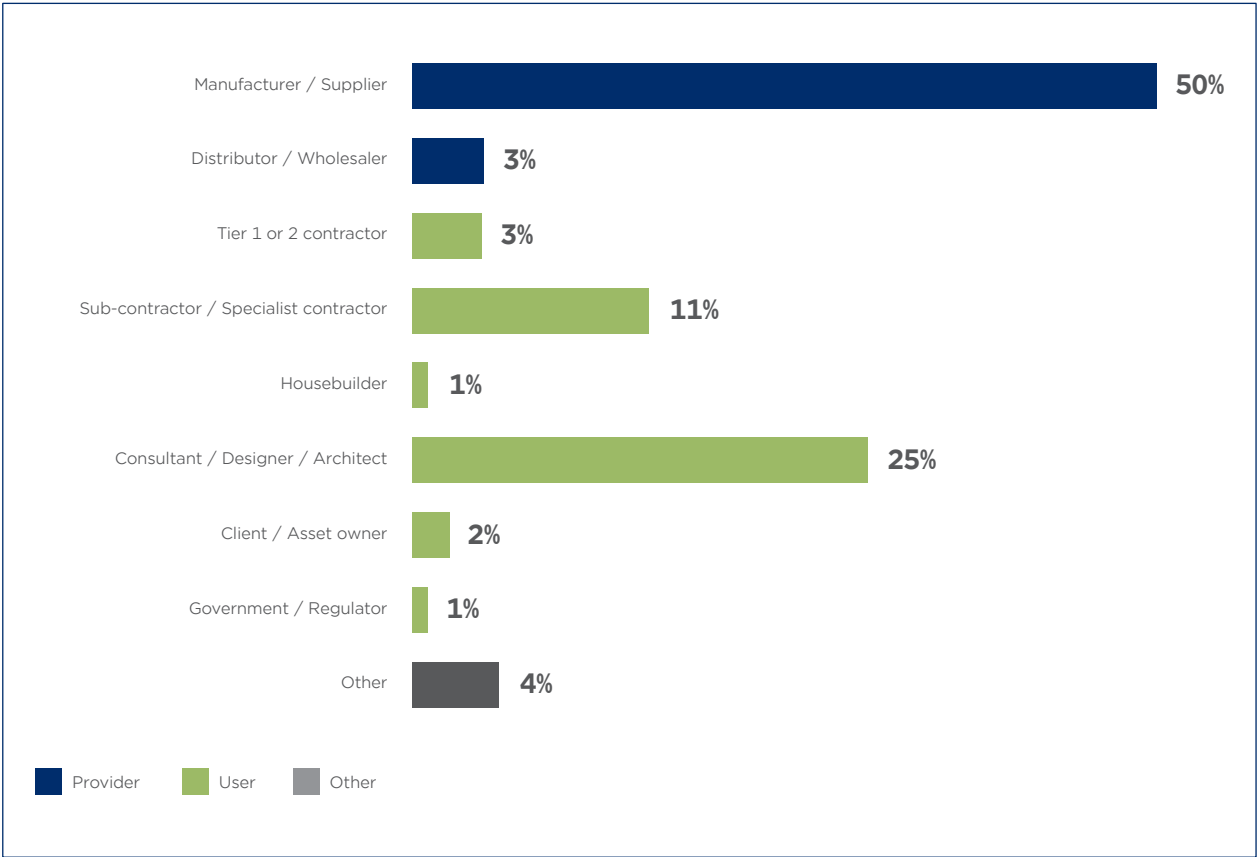
As regulatory expectations increase and digitalisation accelerates, consistent product identification and interoperable information are becoming a practical requirement. Shared standards provide a proven route to improving transparency, reducing inefficiencies and building a more accountable and productive industry.

About the research

This report is based on an online survey of 317 UK construction professionals (conducted between October 2025 and January 2026), and 15 in-depth one-on-one interviews with senior construction professionals from a range of organisations. Each interview lasted approximately one hour and was carried out via Microsoft Teams in September and October 2025.

Survey respondents came from a wide variety of organisations: 53 per cent work for providers of construction product information (manufacturers or distributors) and 43 per cent use product information in their roles (consultants or contractors).

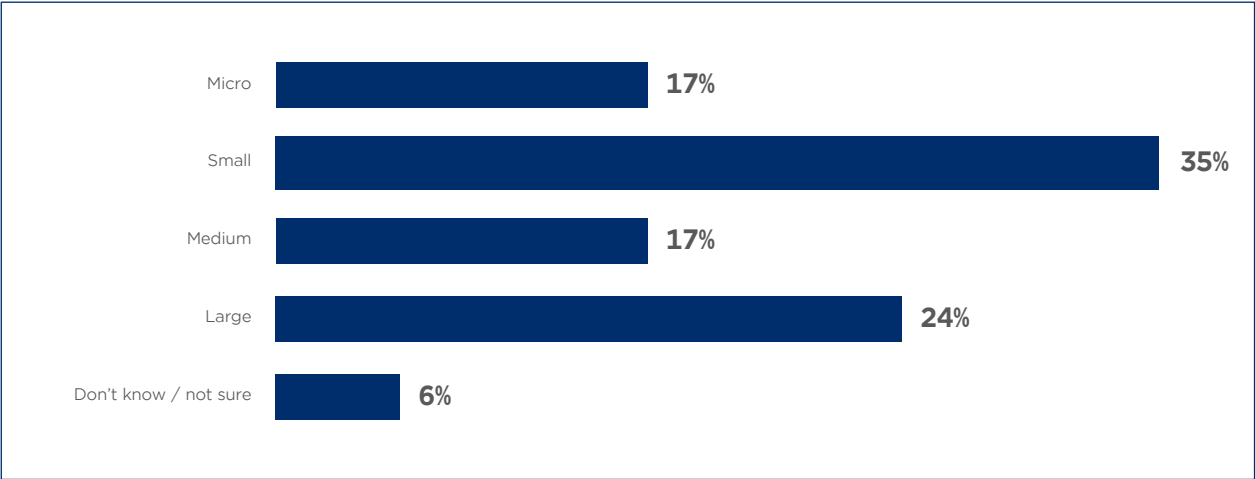
Primary role of organisation



Q. How would you best describe the primary role of your organisation?
Base: All respondents (317)

All organisation sizes were represented, with the most common being small organisations.

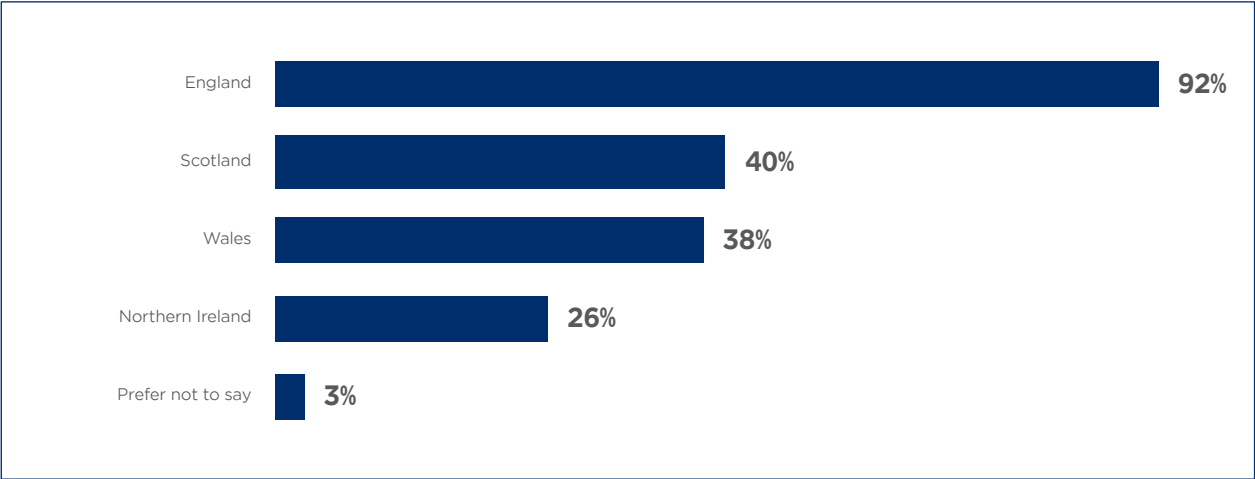
Size of organisation



Q. What is the size of your organisation (as defined by the UK government)?
Base: 281 respondents

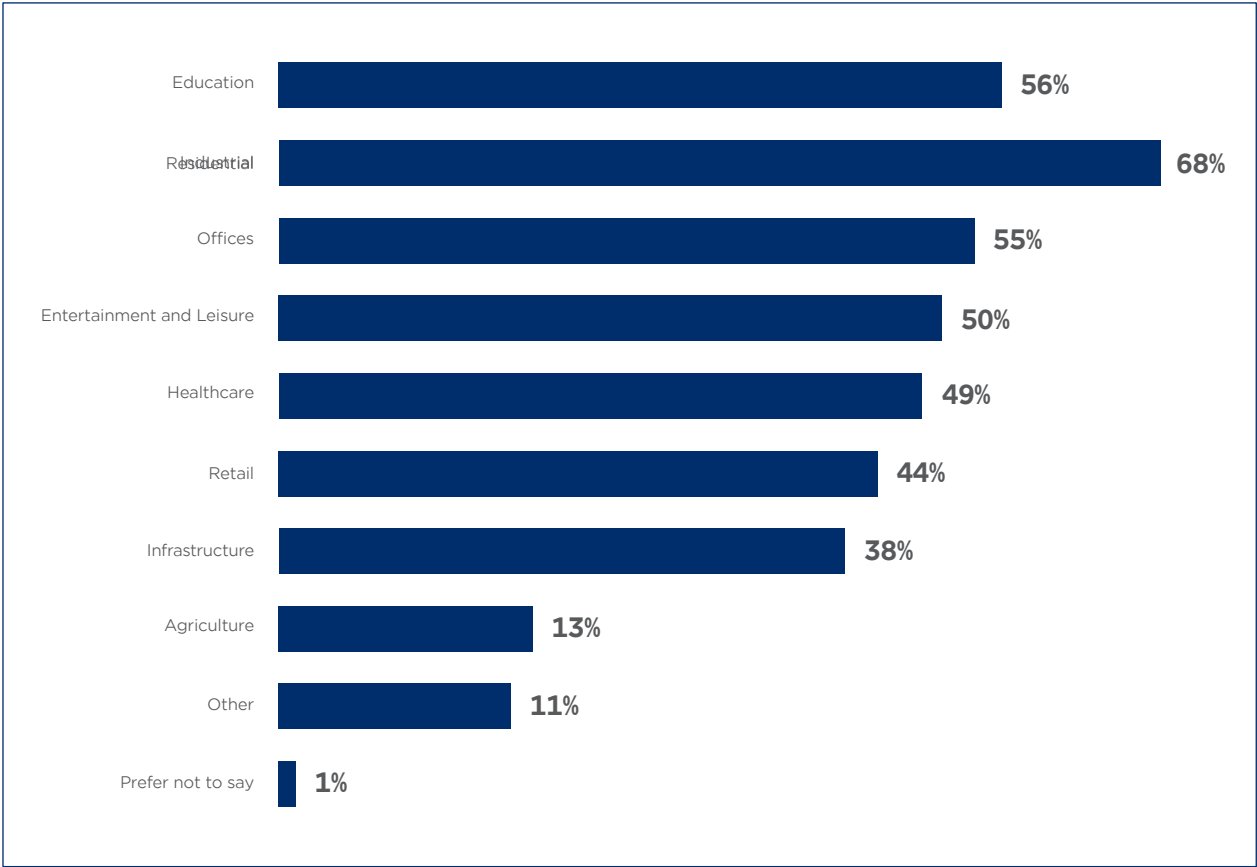
These organisations operate across the UK, in a variety of sectors.

Operating regions



Q. Which regions do you operate in? (Please select all that apply.)
Base: 239 respondents

Which of the following sectors does your organisation operate in?



Q. Which of the following sectors does your organisation operate in? (Please select all that apply.)
Base: 215 respondents

Throughout the report there are instances where percentages do not add up to 100 per cent. This is due to rounding to whole numbers, or where respondents could provide more than one answer.

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