Fine margins

Delivering financial sustainability in UK construction

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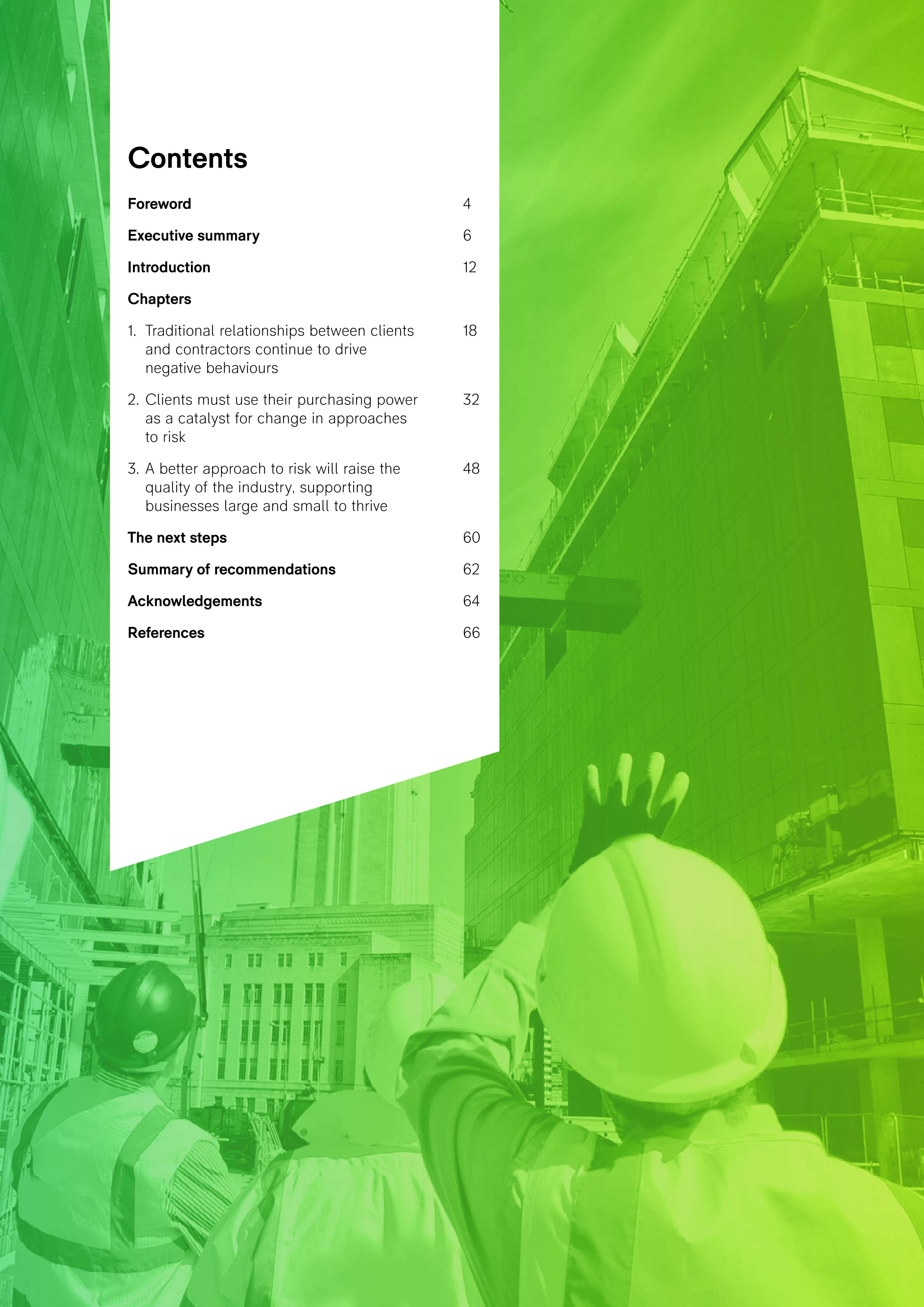
Infrastructure and Energy



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Foreword

There are few UK industries quite as ever-present as construction. The places we call home and our places of work, the transport infrastructure we use daily, the energy and power networks we rely on: the construction industry acts as the literal foundation for much of our economy.

But when construction goes wrong, communities suffer. Essential facilities like hospitals are delayed. Too few houses get built where they are most needed. Vital transport connections are abandoned, obstructing growth across the UK.

The reality is that the construction business model is not fit for purpose. Many of its challenges are of the industry's making. Adversarial behaviours built up over many decades by clients and contractors used to 'battling it out'. Problematic approaches to risk allocation and procurement resulting in missed opportunities to get things right first time. Conversations focusing on price rather than value, pitting businesses against each other rather than encouraging them to collaborate.

Compounding this, three and a half years of political uncertainty have ground down confidence, support and investment in UK construction, creating an operating environment that is short-termist and unsustainable.

And yet there is consensus among businesses about how to do things better. Government can play its part; introducing policy change that will improve behaviours across the industry, stimulating collaboration and growth. As a major client, it can lead the way in intelligent procurement behaviours. With its new majority it has a mandate to green light construction and infrastructure projects that will deliver promised investment in every part of the UK and meet commitments to 'level up' the country.

But the industry itself must step up too. It is business's investment in skills, technology and innovation that will rapidly improve the industry's impact on the environment and create a safer, future-proofed built environment. Adopting the recommendations in this report will strengthen the long-term financial sustainability of the industry, paving the way for a brighter future for the UK construction industry and everyone who relies up on it.

Josh Hardie
Deputy Director-General, CBI

Executive summary

The construction industry is a vital part of the UK economy. New research conducted for this report shows that **every £1 spent on UK construction creates £2.92 of value to the UK.** The industry employs 2.3 million people directly – supporting over 3 million more indirectly – and construction activity contributes 6% of GVA.

There is a huge opportunity to build on this, making this vital industry more productive, more efficient and more environmentally friendly. A more productive industry has the potential to deliver £30bn more in output every year. To do so requires investment. Yet with average margins at the industry's largest firms in the red, and construction routinely suffering more insolvencies than any other sector, the money needed is hard to find.

In investigating why the operating environment is so precarious, the CBI Construction Council has looked at the role that risk management plays in the fortunes of UK construction. Poor risk allocation between clients and contractors prevents construction projects from being procured and delivered successfully, and the prevailing industry structure leaves major contractors and their subcontractors especially vulnerable to risk.

Presently, liability for risks that are larger than any one business can absorb remain with tier one contractors for up to 12 years. At such fine margins, this presents a persistent existential threat to businesses, even in good times. When projects go wrong, the impact is felt throughout the industry: investment in skills halts, old habits resurface, and – worst – thousands of businesses cease to exist.

CBI members in the construction industry agree that allocating and managing risk is one of the biggest contributing factors that prevents firms from making the sustainable margins needed to invest in their businesses and the wider sector. On major construction projects, planning and pricing costs for materials, labour and time can be challenging. It is made more difficult when the effort and expertise required to accurately and appropriately allocate construction risk is overlooked by clients. This leads to overly optimistic or under-informed estimates of the cost and time impact of different risks should they arise across a project. The resulting commercial agreements leave little room, or budget, for putting things right.

A rethink of the accepted wisdom in the industry's business model is needed. As this report sets out, a series of behaviour changes are required across the industry to tackle the problem with risk and move towards a financially sustainable future. This is both a call on businesses to break from poor habits, and on clients to bring new behaviours to the table. Intelligent procurement, putting contractors on a stable footing and unlocking investment throughout the supply chain will speed up the transformation of the industry that business, government and the public wants to see.

Even at a time of anaemic productivity growth across the economy, construction industry productivity has grown at an average rate far below most others. This must change. Better risk management will lead to many more projects being delivered on time and to budget, fewer disagreements ending in legal action, and greater trust between businesses. This healthier environment would support businesses to accelerate investment that can lift productivity, generating huge benefits for the economy. Research by Oxford Economics commissioned by the CBI for this report estimates that if productivity – measured as output per worker – grew just two percentage points per year above the baseline forecast, the potential annual value of UK construction industry output could be **£30bn higher** by the end of the next decade: an increase of more than a fifth, without increasing costs.

To deliver this kind of growth, and to go further, the industry must climb out of its productivity rut. Virtually half of the current roles in the construction industry are classed as 'manual' occupations,[1] and there are limits on how much more efficiency can be squeezed from such jobs. Additionally, labour shortages are more likely to constrain growth in the next decade: almost a third of the workforce are approaching retirement age, with 32.3% of workers (around 765,000 people) aged 50 or older.[2] Proposals for a new UK immigration system mean the industry should expect some level of reduction in the availability of migrant workers to plug this gap.

This challenge can be met, by channelling investment into reskilling workers in manual occupations, and scaling up the adoption of skills to make better use of technology, digital techniques and modern methods of construction. Creating this more productive, higher skilled and higher wage industry is achievable – if businesses have the liquidity and long-term financial sustainability to invest in training, technology and innovation now.

Traditional relationships between clients and contractors continue to drive negative behaviours

Too often, clients approach risk management by transferring as much as possible to contractors and the supply chain. Driven by a lack of technical understanding, and third-party advice obtained with the aim of saving capital costs, this leads to plans that fail to forecast the full nature of risks that will have a material impact on a project's time and cost. The transactional operating model, developed largely by clients and their advisers, drives cost assumptions, prices and the allocation of risk before contractors and the supply chain get involved. The ability to have open conversations is constrained, and businesses turn inward, creating a protective culture that frequently leads to litigation. In this environment, the full weight of construction project risk typically sits with tier one contractors who remain responsible for the project's delivery, while firms that do not carry risk benefit from a more sustainable and higher level of margin.

If the industry is to rebalance this equation so that all firms are able to make a secure return, early contractor engagement and a move away from hurried, single-stage tenders is paramount. This will enable clients and contractors to better design and plan projects in partnership before work gets underway, leading to project risk being fairly allocated and priced.

To get away from a focus on lowest price, businesses want to accelerate a shift in mindset from celebrating turnover to championing sustainable profitability. The trend is emerging: following too many painful losses accepting work at low prices, many contractors are no longer chasing revenue to showcase success, but ensuring each project delivers a sustainable level of margin. This can be supported by the changes recommended here. To help embed this culture, clients should be looking to reward robust financial strength when assessing the businesses they work with.

Recommendations

- A body such as the Construction Leadership Council – or the CBI – should monitor the relationship between margin and revenue to track the trend in the industry.
- Businesses should be prepared to challenge or walk away from contracts when bidding. Business leaders and boards should think strategically about the long-term planning and shareholder management required for such an approach.
- Public and private sector clients should refrain from amending standard risk clauses in construction contracts.
- Design and build procurements must engage contractors early enough to influence project design before it is signed off.
- The use of single-stage procurements should be discouraged in major construction projects above a specific value. The CBI suggests £10m as a threshold and will consult with industry on this proposal.

Clients must use their purchasing power as a catalyst for change in approaches to risk

The change in behaviours will only work if leading players are part of an industry-wide culture shift. As the procurers of construction and infrastructure projects, major clients need to use their purchasing power to incentivise better behaviours from their suppliers, and exhibit better behaviours of their own, prioritising collaborative procurement and breaking with the problematic culture of the past.

A key part of this is to accelerate the work being done to measure and reward 'whole-life' value delivered through construction projects. This goal should be at the heart of procurement, kicking the habit of squeezing costs to save money in the short-term.

To jumpstart the client-led change, the government's Outsourcing Playbook should be embedded across central government departments and applied to all large Building and Civil Engineering works contracts. To mirror this in the private sector, widely-used suites of standard construction contracts should be updated to reflect expected behaviours of intelligent clients.

Recommendations

- Effective early engagement with businesses is paramount. Major public and private clients should ensure they design their procurement processes with a distinct 'first' stage, so that early engagement can support risks to be identified, priced and allocated, before a second competitive process stage is undertaken.
- It is essential that public and private clients make a credible and consistent assessment of balance sheet strength during the first stage of a procurement process. The measures in this report are suggested as a framework for this assessment.
- Where clients and contractors cannot agree on a risk sharing position during early engagement, they should utilise a gain/pain share approach to incentivise appropriate allocation of risk between parties.
- Major public and private sector clients must produce a clear and robust evaluation of whole-life benefits of a project and share this with suppliers before tendering begins, so that contractors are able to price risk management costs transparently against the asset's whole-life value.
- The government should provide further financial support and resources to the Construction Leadership Council so that efforts to create an industry-wide definition of value, and performance benchmarking tools to measure it, can be accelerated.
- To take full advantage of the hard work and business engagement that has gone into it, the next iteration of the Outsourcing Playbook should be seen as mandatory for public sector Building and Civil Engineering projects above a specific value. The CBI suggests £10m as a threshold and will consult with industry on this proposal.
- This would have the effect that public sector Building and Civil Engineering works contracts do not include uncapped liability clauses. The NEC, JCT and PPC suites of contracts should similarly remove such clauses.

A better approach to risk will raise the quality of the industry, supporting businesses large and small to thrive

A better approach to risk would pave the way for positive cashflow throughout the supply chain, enabling a swift reduction in the use of retentions and speeding up payment. Better cashflow will increase trust between firms, reducing the industry's dispute culture.

More importantly, it would also enable businesses to invest more money in new technologies and explore innovative solutions to challenges, realising a much-needed increase in productivity.

This would deliver dual benefits to the UK: creating a higher performing built environment and strengthening UK construction companies domestically and on the global stage. That higher performance converts to economic growth: Oxford Economics research for this report suggests the construction industry could deliver an additional £30bn in value to the economy by 2029 with just a two percentage point increase in productivity above baseline. On a more sustainable footing, businesses can play their fundamental part by investing in the new skills and technologies needed to deliver the ambition of the Construction Sector Deal.

More sustainable margins are vital here. The UK average for profitability across all industries is 17.9%.[3] In 2018, the largest 100 contractors in the industry made an average margin of 2.6% on a combined turnover of almost £67bn, the equivalent of £1.74bn.[4] Improving margins could therefore unlock hundreds of millions of pounds more, which could be spent on research and development, training and technology. If average margins across industry were to increase by half, reaching 3.9% for the top 100 contractors, this would create from those firms alone an additional £870m that could be re-invested, more than double the amount currently spent by construction firms on R&D.

Recommendation

- Public sector procurement guidance should prohibit the practice of holding retentions on public contracts by clients or by suppliers. The NEC, JCT and PPC suites of contracts should be updated to specifically prohibit their use.

“On a more sustainable footing, businesses can deliver the ambition of the Construction Sector Deal.”

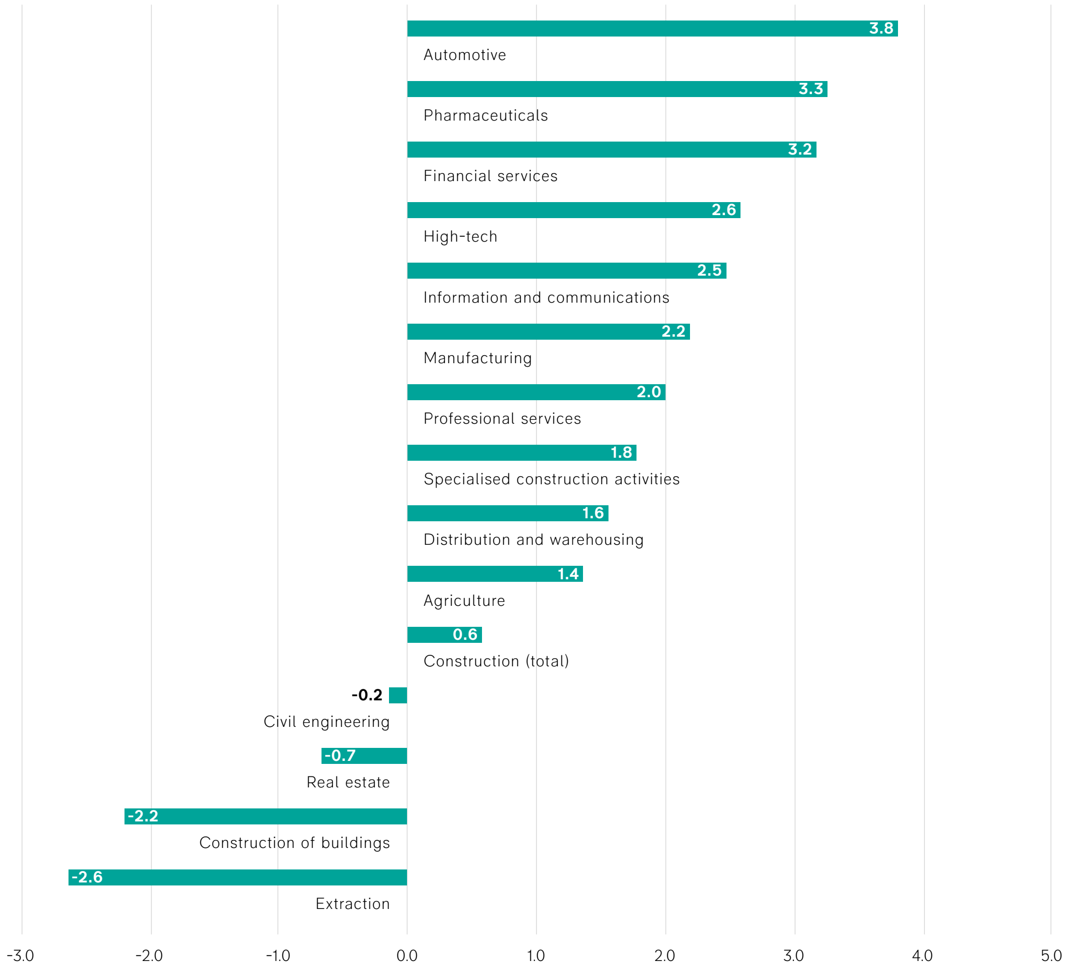
Introduction

A long time coming

In 1994, Sir Michael Latham published the seminal report into the UK construction industry *'Constructing the Team'*. By implementing the recommendations in the report, the industry would see huge benefits. "The prize is enhanced performance in a healthier atmosphere. It will involve deeper satisfaction for clients. It will lead to a brighter image and better rewards for a great industry", Latham wrote.

Twenty-five years on, that prize remains unclaimed. While UK productivity at a national level has grown more slowly in that time than other leading countries[5] including the US, France, Germany, Australia, Japan and Canada, the UK construction industry's own performance has effectively been flat. The industry's Compounded Annual Growth Rate (CAGR) shows how limited productivity has been in UK construction and civil engineering over the last 25 years.

Figure 1 UK sector productivity growth 1995-2017 (CAGR, %)



Source: ONS

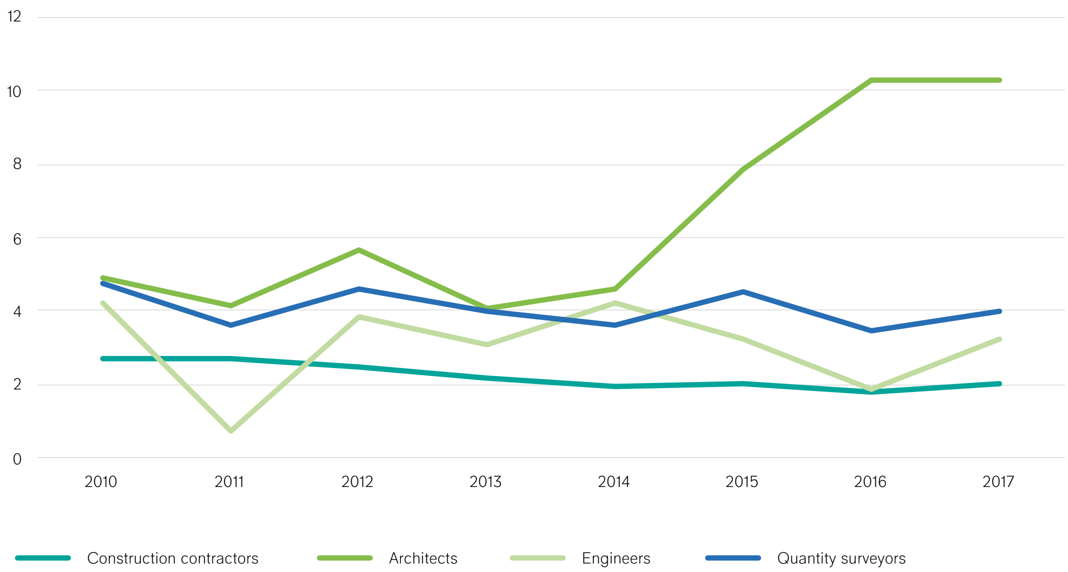
The need for change has been thrown into sharp relief by the high-profile collapse of Carillion in January 2018, at the time the second largest UK construction contractor by turnover. Carillion's was the latest in a series of failures in the last 10 years, including ROK in 2010, Mouchel in 2012, and Longcross in 2015, while Interserve was placed into a pre-pack administration in 2019 despite group revenues of almost £3bn. Across the industry, the impact effect has been just as stark: in the 12 months to Q2 2019, the construction industry suffered 3,100 insolvencies.[6]

The visibility of the collapse, and the knock-on impact, has exacerbated an already challenging environment for construction firms, operating in an industry struggling with a persistent reputation problem: put simply, construction businesses are often not seen as trusted, innovative and responsible companies. Yet much of the public and media attention paid to the industry has already shifted. Despite the market losing a leading player, competitors have not benefitted and remain under pressure. The consequences continue to be felt by specialist contractors and smaller suppliers. To many who have been in the construction industry for a long time, the landscape looks very similar to that which Sir Michael Latham described.

The role of risk in this environment

It is well documented that margins in the industry are tight. In 2019, analysis found that the 10 largest UK contractors by revenue made an average negative profit margin of -0.1%, compared to an average of 2.6% across the top 100 firms.[7] This actually represented an improvement in a trend at the UK's largest contractors that had been on a worrying downward trajectory: the previous position in 2018 was -0.9%.[8] Nevertheless, despite this modest improvement last year, the figures illustrate that conditions continue to be challenging, with contractors feeling the squeeze more acutely than many other businesses.

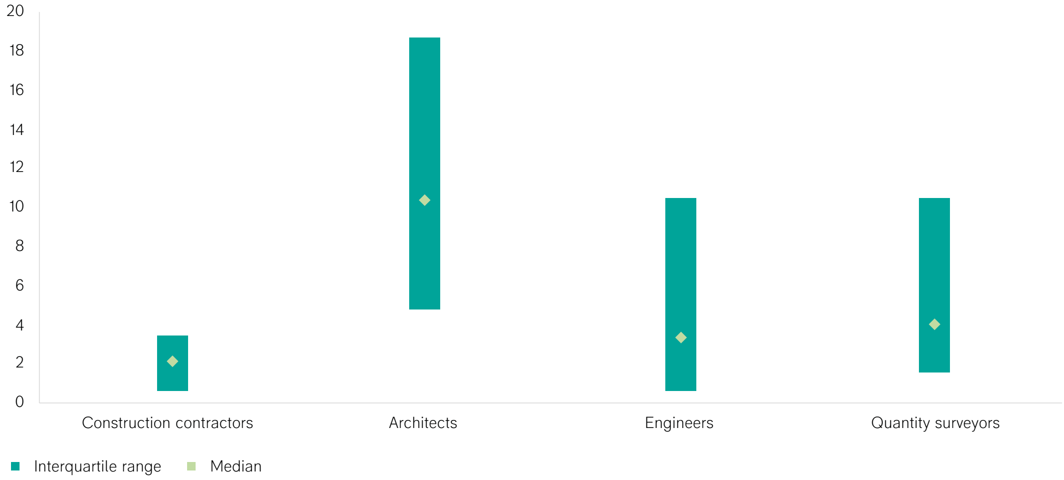
Figure 2 Median profit margins by firm type, 2010-2017 (%)



Source: BVD/Oxford Economics

This is seen, below, in average margins at some of the largest firms in different disciplines across the construction sector. Despite contractors typically holding the majority of risk on which the success or failure of construction projects depend, the financial gain for doing so is constrained. Yet key players whose input is also critical to the success of a project, such as architects, engineers and quantity surveyors, tend to benefit from better margins, on average, and certainly potential for greater reward.

Figure 3 Average margins (median and interquartile range) at largest firms (%)



Source: BvD, Oxford Economics

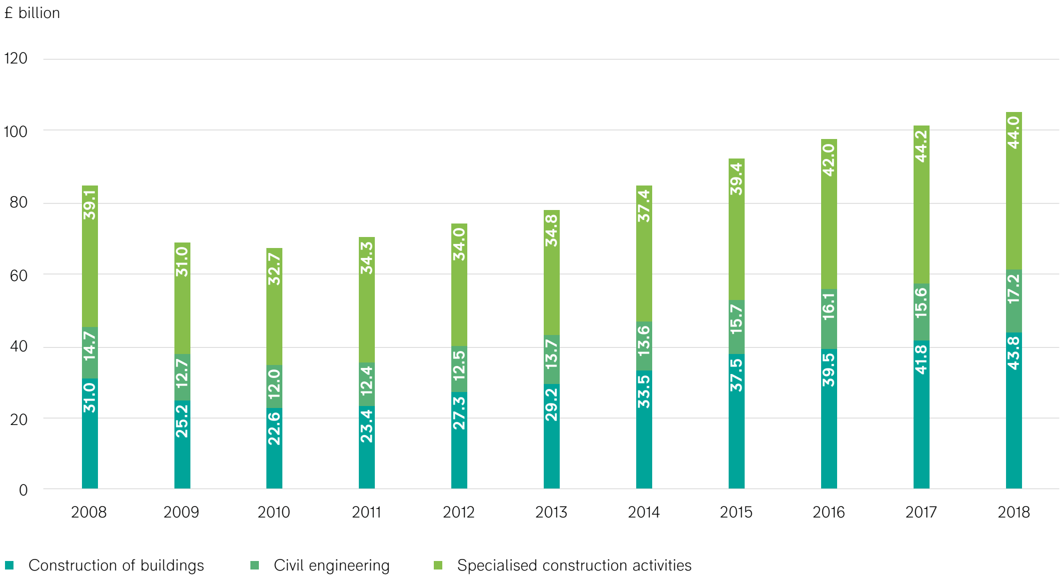
The frequency with which construction projects are hampered by factors like poor risk mitigation is incredibly sobering. Data by nPlan, a construction project delivery and risk consultancy that uses machine learning to improve outcomes, found that across its database of over 250,000 projects **more than 90% of construction projects experience some level of delay greater than 10%** beyond the planned schedule.[9] Most often, this is due to the cumulative build-up of a high volume of small tasks within a project each experiencing an issue resulting in a short delay.

Better allocation of risk is paramount. Effectively, 'better allocation' would begin with a clearer understanding of risks by construction clients, resulting in: more of the risk profile being held by clients themselves; greater sharing of risk between clients and contractors in a gain/pain share arrangement; or that contractor tenders which build in appropriate costs for taking responsibility for major risks are considered fairly.

Why change is needed now

Despite its problems, construction's contribution to the UK economy continues to grow following the financial crash. But in the persistently tough operating environment, even well-run contractors can be one significant loss-making contract or disputed payment away from meeting their financial obligations to supply chain partners, staff or debtors. The consequences when planned construction and infrastructure projects are late or go unbuilt – lost jobs, slower economic growth, unrealised social impact – can be severe.

Figure 4 Gross Value Added to UK economy by construction activities (£bn)



Source: ONS Annual Business Survey, 2018

The industry's fundamental impact to the UK in economic, employment and environmental terms means there is an imperative to act now. To be clear, this is not a plea for higher fees for the same services, never mind funding shareholder dividends or increase executive bonuses. The challenge for the industry to revolutionise the way it builds will not, it is clear, be met without fundamental, deep change to the industry's business model. Perhaps most importantly, construction has just 30 years to reverse its significant contribution to carbon emissions and find a way to deliver a net-zero built environment. None of these ambitions can be met without business investment – but such investment will not come forward if those same businesses are losing money.

Figure 5 Number of people in employment supported by construction

Source: Oxford Economics

These are some of the country's largest firms, collectively employing many thousands of people, at the head of supply chains that employ hundreds of thousands more. These are key suppliers delivering the public sector's fundamental social and transport infrastructure and utilities, as well as underpinning the homes and buildings at the heart of thriving urban centres and communities across the UK.

Figure 6 Construction contribution to GDP (2017)

Source: Oxford Economics

This impact transfers into real economic value for the UK. Analysis by Oxford Economics shows that every £1 spent on UK construction creates £2.92 of value to the whole economy. What could the industry be worth to the UK if a major transformation is achieved?

To begin to answer that question, the government published a Construction Sector Deal in 2018 that set out a framework for transforming the construction industry. It calls upon the government and business to collaborate in the transformation, with both sides taking on specific responsibilities for delivering the 'deal' to move the sector to a bright future. The pace of change facing the industry, according to the Sector Deal, "demands a construction sector that is the best in the world."[10]

The CBI and its members agree. To get there – to play their part – businesses need a sustainable operating environment in which to build a bright future. Creating a step change in the way risk is managed will be a critical first step on a path to a financially sustainable, world-leading UK construction industry.

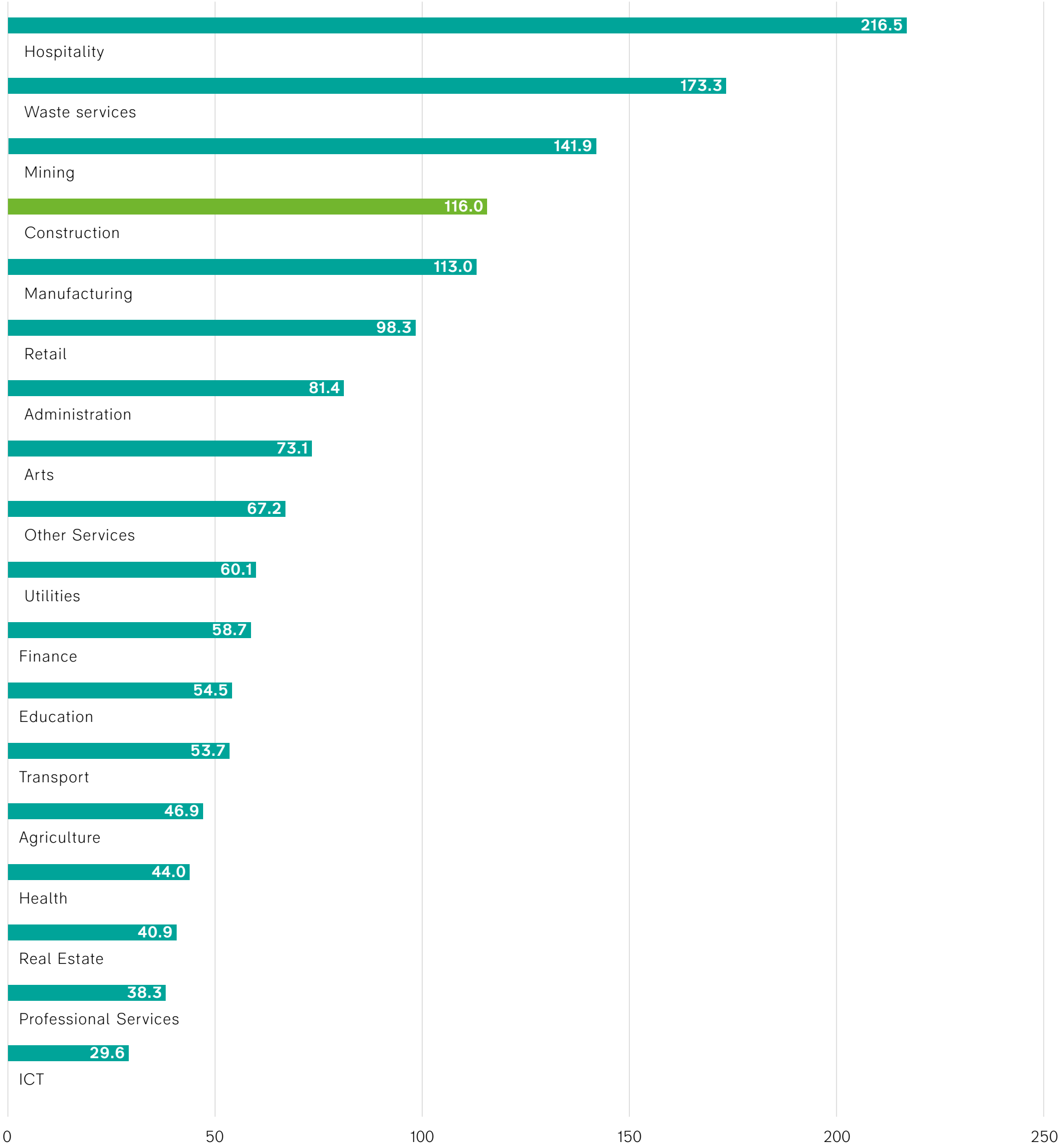
Traditional relationships between clients and contractors continue to drive negative behaviours

When risks become reality and projects go badly wrong, the blame game begins

From businesses going bust to extreme weather or a change in government, the prosperity and sustainability of the construction industry is often at the mercy of numerous financial, political, environmental and legal developments. On a project-by-project basis, risk can manifest in a myriad of technical, safety, environmental or capability issues.

The implications are frequently severe. Construction has one of the highest insolvency ratios across the UK economy and in the 12 months to Q2 2019, saw more than 3,000 businesses become insolvent.[11]

Exhibit 1.1 Rate of insolvencies per 10,000 firms by sector (2017)



Source: ONS (2018)

This volatility has a major impact on industry confidence, which is further exacerbated by planned major projects being delayed or cancelled. In June 2018, the government decided not to go ahead with a £1.3bn tidal power scheme in Swansea. Cross-country rail electrification schemes have been scrapped. In April 2019, it was announced that London's Crossrail project, one of the most high-profile and celebrated infrastructure projects in Europe, would be delayed by two years.[12] The much-needed HS2 scheme, on which billions has already been spent since the first phase of work began, has been subject to a new review and only received a 'green light' this month.

Such uncertainty on projects going ahead does not support either the clients who are procuring them, or the companies delivering them. In this environment, it is understandable that those backing projects need to protect their investments. But when clients remain intent on keeping initial costs low, 'offloading' as much risk as possible, this increases the chances of something going wrong first-time round. Construction businesses believe there is a fundamental shift in thinking required to avoid problems repeating – acknowledging that this shift must take place within both contractors and clients.

Inappropriate transfer of risk is frequently cited as "one of the main concerns of… doing business with government" and is consistently raised by the National Audit Office as an issue with government contracts.[13] CBI businesses have suggested previously that this is a consequence of underinvestment in commercial skills within the public sector,[14] which the government is now addressing. Equally, though, the CBI Construction Working Group involved in this report note that the same challenge exists across the private and regulated sectors.

Working together, clients and contractors can understand, mitigate and manage the range of risks. But very few risks can be removed entirely from the process – particularly at the contracting and scoping phases of construction work. Understanding and pricing risk is therefore a critical and essential part of delivering construction work, requiring a balance of expertise on both sides and shared responsibility in managing the risk of planning, costing, designing, and constructing a world-class built environment.

Too often, clients approach risk management by 'offloading' it onto private sector businesses

CBI members report that the consistent approach to risk by major industry clients is to 'offload', passing as much as possible on to large contractors and leaving the liability and financial cost for managing risks to those companies. In the public sector, particularly, shifting risk onto suppliers is viewed as an attractive way to reduce up-front costs to the public purse – and avoid them further down the line.

This is driven by the industry's traditional tiered business model, often referred to as a 'transactional' environment, which has only been exacerbated in recent years by wider financial challenges in construction. Government investment, for example, is still lower than where it was a decade ago,[15] driven by a focus on reducing the capital costs of public expenditure. In 2018, CBI research found that across the public sector marketplace, almost two-thirds (60%) of businesses felt that public clients awarded contracts solely on a basis of lowest cost, despite an attempt to reduce this approach.[16] The Most Economically Advantageous Tender criteria, an evaluation applied to procurements across the public sector, has become synonymous with driving down costs, despite the intention being to achieve the opposite.[17]

During the slow economic recovery since the 2008 crash, to avoid laying off high numbers of staff or significantly downsizing operations, construction firms have maintained cashflow by securing work at lower prices, with some CBI members finding contracts being tendered at cost-price. In order to win work in this environment, businesses have bet against risk by accepting full liability, or pricing the likelihood and expected cost of risk too cheaply in order to reduce their overall bid prices for clients. This behaviour can repeat, with contractors transferring inappropriate levels of risk down through the supply chain.

For their part, many clients have typically not engaged in robustly assessing what such behaviours might mean for their project should something go wrong. In the decade since the crash where economic growth has stagnated, clients have become used to bidders who will take on risk at the lowest possible price. Contractors, meanwhile, have perhaps become accustomed to accepting contracts with overly weighted risks due to the infrequency with which they happen. While it is in the short-term interests of clients to offload the financial burden of risk to the firms they contract, rather than allocate it proportionately, the impacts run far deeper. It is more likely to entrench adversarial rather than collaborative working relationships. It reinforces the transactional and protective business model that breaks down trust within the supply chain.

Case Study: The collapse of Carillion

The disastrous consequences of an environment where contracts are priced – and bid for – at unrealistic low costs were borne out in the collapse of Carillion early in 2018. An optimistic approach to revenue growth led to many construction projects being taken at a price that didn't reflect the scale of the potential risks involved. Despite revenues of £4.6bn in 2016, it was widely reported that the impact of defects and weather-related delays on four projects in the UK quickly added up to a pressure on costs during 2017 that Carillion could not sustain. The firm collapsed with a pension deficit of around £2.6bn, owing its supplier businesses more than £2bn, despite forecasting revenues close to £5bn for 2017.[18] In 2018, the Official Receiver forecast that the liquidation's net loss would cost the taxpayer £148m, but this was revised down in 2019 to an estimated £62m.[19]

The ramifications were and continue to be felt through the industry. Thousands of employees lost their jobs; hundreds if not thousands of businesses that were owed money will not receive it; and major government suppliers working directly with Carillion are footing the bill on public sector schemes, such as on the Aberdeen bypass, where the two partner businesses that were carrying out the scheme in a joint venture with Carillion have lost more than £175m between them.

In the worst cases, should things go badly wrong and a key company collapses, the client is ultimately left to foot the bill and start again. Not only does this result in a significant financial cost to the client, it also adds delays to the programme timeline, creating an additional and substantial socio-economic cost. The collapse of Carillion resulted in two hospitals in Birmingham and Liverpool, which were planned to be completed in 2018, being delayed until 2020 and 2021 respectively.[20] While the cost is quantifiable, there is arguably a far greater social impact to public health and people's lives – with a two-to-three-year delay to improved health services that would benefit two of the UK's biggest cities.

At the time, many construction businesses stepped in to support the services and people affected. Across the industry, firms provided jobs for those who were suddenly out of work, while the CITB set up a hub to find new opportunities for apprentices who'd been impacted. Other businesses came forward to take on contracts, ensuring continuity of vital public services and taking on unfinished projects.

Nonetheless, contractors have acknowledged they have a role to play in avoiding future collapses of this scale. Many are taking a strategic step in a determinedly different direction. Several businesses on the CBI's Construction Council have spoken publicly about taking decisions to focus on growing profit margin, rather than growing revenue, as part of operating sustainably.

Recommendation

- The CBI recommends that the industry adopts this strategic focus. A body such as the Construction Leadership Council – or the CBI – could monitor the relationship between margin and revenue to track the trend in the industry.

Naturally, the objective should be to see average margins rising to a more sustainable level. The recommendations in this report set out the behaviour and policy changes that can support this goal. Making this relationship visible and measured, more of a going concern for businesses, government and observers, would assist in spotting underlying trends in the financial health of businesses and the industry at large that point to longer-term performance. The shortcomings of solely measuring and celebrating turnover are discussed below: a shift is required from shining the spotlight on turnover as a mark of strong performance to operating profit as a mark of sustainable performance.

Responsible operating, with regard for the impact on supply chains and partner businesses, also requires exercising caution when negotiating and entering into contracts, and CBI's members in the construction industry agree that this will mean, on occasion, turning down contracts that present unmanageable risk allocation or insufficient financial reward for accepting high levels of risk.

The CBI recognises that in complex commercial procurements it is rarely possible for clients and suppliers to agree a guaranteed margin. However, one business has taken an approach internally of setting a minimum expected margin from the work it carries out to identify contracts they may turn down. The business is prepared to walk away from contracts where the margin is markedly below that minimum level, or if they find the client is unwilling to work with the contractor towards achieving a sustainable margin.

Other CBI members are taking similar steps. One major contractor on the CBI Construction Council has withdrawn from bidding for four contracts worth a combined £680m in recent months because of unrealistic price expectations or onerous terms imposed by the client. A separate contractor has stepped away from contracts totalling £143m in the last year, while another specialist firm has walked away from four contracts worth £41m in total due to client expectations around prices.

While this approach may reduce the number of tenders a contractor may bid for – and therefore win – it clearly increases the rate at which they will find contracts that deliver a sustainable return. CBI member feedback suggests that there has been very little complaint towards this approach. But critically, this can only deliver real change in the industry if it becomes the norm, rather than the exception. If other contractors 'let the side down' and engage in cost-price bidding, clients will continue to expect, eventually, to find a business willing to take on too much risk.

Recommendation

- Businesses should be prepared to challenge or walk away from contracts when bidding. Business leaders and boards should think strategically about the long-term planning and shareholder management required for such an approach.

The 'offloading' of risk is driven by a lack of commercial and technical understanding of the risks involved

CBI members in construction have concerns that positive conversations about risk management with private and public clients remain difficult. Over recent parliaments, the government's commercial capability has been hard hit during a period of budget tightening.[21] This has been a long-running concern for businesses operating in the public sector, and while a welcome announcement in 2018 set out how the government would be rolling out commercial training to 30,000 contract managers in the civil service,[22] the fruits of this programme have been slow to materialise.

Such challenges lead to problems during the procurement process, as public sector construction contracts often come to market with incomplete, vague or missing information – detail that should be considered essential if contractors are to understand the nature of the procurement. In practice, the lack of technical understanding and commercial capability means risks are not properly accounted for at the contracting stage of projects or programmes of work.

In producing this report, CBI members have noted that several central government departments are reliant on staff whose role is primarily to save money to manage complex contractual negotiations, which is a key driver of risk being extensively handed off by clients to businesses. Over the last decade, the public sector has accounted for around 30% of the value of new orders,[23] so government purchasing behaviours have a significant impact on procurement practices across the industry.

Contractors have also noted an increase in the public sector purchasing contract management advice from third parties to counter the gap in in-house expertise. While this approach brings commercial knowledge and experience into the contract design process, it often does so at a stage before the contractors who will construct an asset and take on associated risks have been engaged. Too often, estimates of outturn cost (the 'final construction bill') and outturn programme (the 'total time spent building') are sought from third parties who ultimately do not carry liability for any cost or time impact on clients' projects, arguably having little incentive to get such estimates correct. Indeed, the best-case scenario is often welcomed by the client as it paints the most positive picture.

The risk to the public

If this commercial environment deters contractors from bidding for public sector contracts, the innovation brought by businesses into public construction works risks being diminished. Research by the *Financial Times* and OpenOpps suggested that, in 2018, almost one in four public sector contracts were awarded without a competitive tender.[24] The data showed 23% of contracts were awarded to a sole bidder, a jump from 15% two years earlier. With the lack of competition in the tender process likely to dampen a focus on quality and innovation, the end users of public sector contracts suffer poorer outcomes.

It is not just the public sector where contractors come up against clients that reduce ownership of risk as the means of lowering capital expenditure. In the private sector, while contractors do find greater commercial capability in negotiating with 'blue chip' clients, this can come with a more aggressively adversarial approach to cost control, particularly by passing risk on to contractors and suppliers.

Contractors delivering construction and infrastructure projects acknowledge the effectiveness that cost control can play in inspiring competitive tendering and innovation. But driving down capital costs before engaging the firms who are able to offer technical, evidence-based advice on risk management poses a real threat to the success of construction projects. In all likelihood, once tendering begins, a gap will emerge between the price clients are expecting to pay, and the valuation from the businesses contracted to manage the risk.

The challenge is exacerbated by the hugely varied nature of risks that differ for every individual project, which could include anything from:[25]

- Geological conditions of construction site
- Accuracy and specificity of client brief
- Collapse of supplier businesses
- Political factors
- Fluctuating cost and/or availability of materials
- Labour costs
- Site accidents
- Bad weather

Given that major projects are rarely uniform, and each site, brief and outcomes are different, amending risk clauses to account for project-specific risks is par for the course. It is amending to transfer more of the commercial and legal risk to contractors that is problematic. Taken together, this increases the length and complexity of contracts, usually New Engineering Contract (NEC) and Joint Contracts Tribunal (JCT) documents, with clients adding numerous clauses to create the contractual means to 'offload' the liability for a variety of risks onto contractors and subcontractors.

The extent to which this affects the contracts themselves has been borne out by CBI members' own analysis:

- A CBI member that analysed 10 recent contracts across the public and private sectors found that each contained on average **87 amended or additional clauses**, which typically extended each contract by 37 pages, more than doubling the contract length.
- Another cited a JCT contract with an additional **34 pages of amendments**;

The consequence of creating lengthier, more complex contracts brings its own challenges to both the client procuring construction works and the businesses delivering it. Moving away from standard forms of contract reduces the ability of clients to purchase repeated services efficiently, because multiple clauses have been amended for one specific project or programme, and cannot be used in future instances. Furthermore, the amending process takes time, and creates the need for more negotiation. This makes the procurement process costlier and more inefficient, with contracts requiring a fresh approach each time, even when similar assets or works are procured.

Notably, the construction industry has taken the initiative to be clearer on contract terms that it finds unhelpful to constructive working relationships with clients. Build UK has published new Contract Terms guidance for businesses, which identifies six specific terms that are recommended to be avoided.[26]

Government has recognised this in its capacity as an industry client, explicitly noting in the Construction Sector Deal an ambition to use unamended contracts.[27] By making good on that ambition, the government has an opportunity to remove the barriers that complex and adversarial contracts create to sustainable construction, and play a leading role in proving the benefits so that major clients in the private sector can follow suit.

Recommendation

- Public and private sector clients should refrain from amending standard risk clauses in construction contracts.

The lack of commercial and technical understanding could be improved by making procurement routes simpler and more consistent

Businesses in construction have concerns that improvements to allocating and managing risk won't be realised without tackling wider, cultural issues in approaches to procurement. The focus by government on commercial upskilling, for example, is welcome, but if expertise and capability does not develop as part of an industry-wide shift, then the benefits will only be felt inconsistently.

Different procurement methods deployed by clients in purchasing construction projects too often fail to appropriately account for the financial and time implications of potential risks. Contractors find that this is caused either because pragmatic, open discussions with clients are not held early enough in the contract negotiation stage, or, as mentioned above, the parties whose expertise will be required during the construction phase are not engaged at the point when a client is allocating risk responsibility and budgets, with that falling to parties who are not accountable for a project's outturn cost and programme.

This is a characteristic of 'design and build' construction contracts, where typically a client prepares a brief for businesses to do both the design and the build. The focus for contractors bidding for design and build contracts is primarily on submitting a price for delivering the brief. The industry has noted an increase in the 'target cost' approach here, where clients and contractors agree a financial target and share the savings gained or the overspend. The 'target cost' allows for a more flexible negotiation than a fixed price agreement. However, agreeing a realistic and attractive target cost still requires that clients either hold significant experience and knowledge of projects themselves, or carry out appropriate market engagement and due diligence on risks and their associated costs with contractors.

It is this process that is frequently overlooked: in assessing the merits of 'design and build', the CBI Construction Working Group suggested that in practice, substantial discrepancies between the design and its execution frequently emerge once the construction programme is underway, causing delays, disputes and potentially a breakdown of relationships.

When not used effectively, design and build contracts shut out contractors and suppliers from the design phase, meaning the opportunity for clients to understand and mitigate potential risks in their initial design is overlooked. Allowing sufficient time for risk analysis to take place is essential. Without it, on large scale projects the impact on cost and programme can quickly be compounded due to the range of specialist expertise required, for which little to no engagement with businesses has taken place ahead of the design being signed off by the client.

During the construction phase, risks may arise that can be addressed by changing the design, choosing alternative means of construction or by pausing the programme to find a solution. Clearly, however, this will bring about increased costs or delays to the project's timeframe, meaning a difficult contractual renegotiation to resolve which party bears the additional cost. In such a scenario, both parties are negatively impacted by the lack of risk consideration during the design and build procurement process.

The CBI's contractor members are also keen to highlight similar problems in 'single-stage' procurement. A single-stage procurement typically sees one competitive tender process for a project that the market and suppliers have not been involved in before bidding, meaning the brief can be limited in detail, risks have been optimistically priced, and cost and time schedules have already been established without consulting the parties who will be responsible for meeting them.

While the single-stage approach is often the quickest to move a client's project from procurement to the construction phase, it also results in risk management being neglected at critical points in the process. Without involving contractors before putting out a tender, clients miss the opportunity for potential risks to be identified, scoped and properly priced by those with the experience and expertise to do so. By only enabling contractors to undertake this exercise during the bidding phase, when a fee and delivery schedule are already set, the single-stage approach compels bidders to undervalue the cost of potential risks in order to reduce the overall bid price, increasing their likelihood of making a loss on the project.

The impact this has on margins is borne out by evidence from the Construction Council members, outlined in the table below. Members' experience shows the challenges of operating sustainably when it comes to single-stage compared to two-stage procurements: where companies have lost money on single-stage contracts, they far outweigh the size of losses on two-stage contracts.

2014-2019: losses	Single-stage	Two-stage
Business A: example losses	-7.0%	-6.0%
Business B: example losses	-16.8%	-7.6%
Business C: example losses	-7.6%	-1.0%

This has a major impact through the supply chain. Single-stage and design and build contracts require that contractors make assumptions about the costs and solutions provided by subcontractors and specialist firms, with little opportunity for the supply chain to contribute innovative ideas or assist in improving design through value engineering beforehand. The result is that contractors and suppliers engage in adversarial discussions to either keep fees down or transfer unrealistic risks to businesses that are not capable of absorbing them. The nature of this approach quickly erodes trust and goodwill between construction firms.

The missed opportunities to scope and mitigate risk are only exacerbated further where there is limited capability in or understanding of the procurement and contract design process itself. Where short procurements are carried out by clients, this serves to simply squeeze the time available to bring expertise into the design process, and conduct appropriate risk analysis and allocation.

Clients do not win in this scenario either. In the majority of cases where single-stage and design and build approaches are used, the failure to engage suppliers early on leads to a lack of clarity of what the client wants built, an overoptimistic expectation of when it can be done – and the price at which it can be achieved. The result is typically a need to change design, push back deadlines or increase budgets.

Recommendations

- Design and build procurements must engage contractors early enough to influence project design before it is signed off.
- The use of single-stage procurements should be discouraged in major construction projects above a specific value. The CBI suggests £10m as a threshold and will consult with industry on this proposal.

The question is how this could be achieved in practice in a competitive and free market. One way is contractors voting with their feet and not bidding for contracts they would otherwise be expected to tender for. One recent example is a Highways England single-stage procurement for a £1.25bn tunnelling project, which received no individual bids from major UK contractors, according to *New Civil Engineer*.[28] Instead, three joint ventures made up the tender shortlist.

In the public sector, government has the power to set guidelines on when to use single-stage procurements. The Cabinet Office, for example, could work with strategic suppliers, an industry trade association or an expert business panel to create a set of tests for procurements to meet before a single-stage procurement can be conducted.

“Engaging with the market early means clients can lean on the expertise of contractors who have successfully delivered past projects.”

Clients must use their purchasing power as a catalyst for change in approaches to risk

By focusing on early contractor engagement, clients can spearhead a move to a risk-controlled construction environment

The industry recognises that the very nature of construction and the often unique requirements of each project means there is not a one size fits all procurement approach that public sector or private sector clients should adopt. However, there are several common characteristics that do contribute to a better understanding and allocation of risk, and the impact this has on improving outcomes for clients – alongside a secure level of return for contractors and the supply chain.

In looking at procurement processes for infrastructure projects specifically, The Infrastructure Forum recommended that government should adopt two-stage frameworks more widely,[29] echoing similar calls by the CBI in 2019 in *Markets for Good.* Construction businesses agree that multiple stage procurement routes such as two-stage tenders and frameworks go a long way to tackling some of the biggest challenges to managing risk. However, there is scope for these to be more effective.

Clients will often use the first stage of a two-stage process to pre-qualify a shortlist of contractors who could deliver a project, conducting initial discussions about design and construction, risk management and early cost scoping. On the basis of demonstrating at this stage the ability to deliver the brief, successful firms are moved on to the second stage.

Construction firms are clear that a distinct first stage is necessary in order for clients to be transparent about available budget, and in return, contractors to provide fair and accurate information to validate the client's anticipated cost plan. Without that input here, third-party cost advice can lead to a mismatch in client expectations and reality. When the first stage in the procurement process works well, parties come together in an open and collaborative dialogue to discuss the project brief and set expectations around contract terms. They can identify, plan for and price the risks that might arise during the project fairly and constructively. This allows for transparency, drives fair competition, and provides clients with confidence on the delivery, cost and timeframe for the asset.

A genuinely well-run process like this should also give confidence to both sides that the second stage of a procurement will reflect the conversations and information from the first stage. CBI members have provided anecdotal evidence of having valuable discussions with clients at a first stage of a procurement, only to find that very little of the discussions are reflected in the second stage. This is in neither the clients' nor contractors' interests.

By engaging with the market early, clients can lean on the expertise of contractors who have delivered construction and infrastructure projects previously, receiving the information needed to make sure different risks in a forthcoming project are appropriately identified, understood and costed, at a stage when budgets and timelines for delivery can still be negotiated and finalised. CBI construction members see this as an essential step to avoid poor risk allocation and management, which leads to expensive cost and time overruns once work has begun.

Recommendation

- Effective early engagement with businesses is paramount. Major public and private clients should design their procurement processes with a distinct 'first' stage, so that early engagement can support risks to be identified, priced and allocated, before a second competitive process stage is undertaken.

To ensure delivery, clients can build further security into the procurement process by assessing suppliers' balance sheet strength

Done well, early market engagement will deliver significant cost and time savings over both the construction phase and operational lifetime of an asset. Given the potential benefits, clients should consider how early engagement can be in achieved in a way that reduces the burden on bidders before contracts are awarded, so as to ensure a high quality of competitive bids. The CBI Construction Working Group noted that firms frequently spend hundreds of thousands of pounds in putting together bids for large projects, only to then not be shortlisted at a first stage. Selecting contractor shortlists in a way that ensures both rigorous appraisal of risks, and a fair competition once shortlisting has taken place, is critical.

Contractors want to see clients adopt a more pragmatic approach to financial assessment during procurement. For clients, making an objective and separate appraisal of balance sheet strength offers greater security when shortlisting firms. Balance sheet assessments do take place, and clients in both the private and public sectors often apply industry stress tests. However, CBI members' experience is that the frequency, competency and consistency of these practices varies wildly.

Where financial assessments are being made, checks can often be an indifferent exercise based on annual accounts, which could be up to two years out of date, depending on when the company last reported: private companies are only required to report annually, though public companies do report more frequently. Either way, recent history shows that the figures reported in annual accounts can hide a truer picture. What's needed is a move towards practices that offer a better guide to financial strength.

As an example, the Sandwell and West Birmingham Hospitals NHS Trust set a requirement that contractors bidding to complete the Midland Metropolitan Hospital, which was left unfinished after the collapse of Carillion, must have an annual turnover higher than £534m, double the estimated contract value before VAT.[30] The NHS Trust effectively used a financial benchmark as security against the likelihood of having to underwrite another business failure.

However, in and of itself, turnover isn't a direct guide to balance sheet strength: a business could still be losing money on its turnover regardless of the size, which would not be a secure choice for a client. Contractors therefore suggest that clients should be looking at a range of other, more instructive items to determine balance sheet strength.

The CBI suggests that the following metrics and approach to analysis should be considered fundamental to balance sheet assessments:

Profitability

What it is: A business's **operating margin** at year-end or period-end over recent financial reports.

View to take: A consistent positive margin suggests a sustainable approach to operating. A consistently negative margin indicates problems that quickly need addressing. A combination of both may be explained by exceptional charges or one-off costs, but would still require further scrutiny.

Net cash / debt position

What it is: A business's **cash** or **debt** position at year-end or period-end over recent financial reports.

View to take: A business's average net cash / debt position should be evaluated. A consistent positive net cash position (higher liquidity than short and long-term debts) suggests a sound underlying financial performance. A consistent or widening positive net debt position (higher short and long-term debt value than current liquidity) may indicate financial vulnerability.

Working capital ratio

What it is: The ratio of a business's current assets to current liabilities. Generally, a ratio of between 1.0 and 2.0 is considered to be secure.

View to take: A ratio of less than 1.0 suggests problems could arise if a business were to experience reduced income or to invest heavily, and therefore impact its ability to meet short-term liability obligations. A ratio of higher than 2.0 suggests a business may be sitting on cash rather than investing in operations, staff, technology and so on. As the UK construction industry experiences peaks and troughs of output, this ratio can indicate how a business is set up to deal with such changes.

There are other balance sheet items that can be useful to assess. **Return on capital employed** provides a metric that points to how well a company utilises its capital invested in people, equipment and assets, giving a profitability figure that indicates the return a company receives for every £1 invested. Though this metric should not be viewed in isolation, generally the view is the higher the return, the more profitable a business's performance relative to the capital invested.

Additionally, some businesses believe the value related to **Goodwill** as a proportion of total assets on a company balance sheet should be assessed. Because it is an intangible asset that cannot be reliably or comparably measured across separate companies, a large amount of goodwill on a business's balance sheet should not suggest or indicate financial strength. The challenge is that goodwill cannot be realised or converted to cash, unlike tangible assets, which could be an indicator of risk should the business need to find liquidity fairly urgently. However, the emphasis and risk placed on goodwill is also subject to other financial and business factors, which may mitigate any concern about the level of goodwill appearing on a balance sheet.

CBI members also feel that an increasing focus on **Payment Practices** could be assessed as part of a business's financial strength. Government has recently introduced this approach for some government contracts: companies bidding for public sector contracts worth more than £5m per annum must have their payment practices assessed. A business paying the majority of its invoices within agreed terms, and in a reasonable timeframe, demonstrates its ability to manage cashflow without detriment to its suppliers. Furthermore, it goes some way to ensuring a business's reported cash position at the period-end or year-end is not 'window dressed' by a high cash position that will be released shortly after a financial report. Reviewing this data over time will indicate whether a company's ability to pay to agreed terms is improving or worsening. The latter would most likely indicate other financial problems.

None of these should be used in isolation to assess financial strength, but reviewing a range of metrics like these is critical in helping clients determine whether a contractor is financially capable of managing and delivering the overall project. The weighting given to these metrics and level at which they are determined to be acceptable by a client will depend on the overall project value and the risk profile, but the step should be considered essential for large construction and infrastructure projects. **If nothing else, clients should avoid simply using the size of a company's turnover as a proxy for financial strength.**

CBI members recommend going further. Even if assessing a multitude of balance sheet factors, clients must employ more rigour than simply looking at a snapshot of financial performance. As has been documented with recent high-profile contractor failures, a balance sheet can appear robust at a single moment in time while obscuring underlying challenges. A more thorough assessment requires commercial staff to review performance on key balance sheet metrics over several reporting periods. As public and private businesses report with different frequencies, this could be a consecutive set of annual accounts or consecutive set of financial reports. This allows clients to assess a trend of financial performance over a longer period of time, giving further reliability to the assessment of balance sheet strength.

For joint ventures (JVs), where two or more parties set up a new legal entity to bid for a project, clients will be required to determine the venture's structure regarding its financial strength. Typically, a JV would agree a risk-sharing position and apportion liability within the group. At a minimum, it should be possible to determine the above metrics for individual companies within a JV so that a client can assess the strength of the JV as though looking at one balance sheet. To support clients in those assessments, it will be essential for joint ventures to be transparent about their risk-sharing position.

By using balance sheet information as part of an objective assessment of contractors in the first stage of a procurement, clients can certify that the shortlist of businesses have the financial strength to underpin their capability and expertise required to deliver the project. This enables clients to use the second stage of a procurement process as a value-led competition based on criteria that focus on a contractor's ability to deliver greater value, such as environmental impact, benefit to local supply chains, commitment to innovation, and apprenticeships and training opportunities created.

CBI members have identified how this step could play out in the procurement process:

1. Clients invite expressions of interest in an upcoming project, offering a high-level brief and target cost. This should not be the client's absolute budget;
2. Clients assess balance sheet of interested parties before shortlisting;
3. A shortlist of around four preferred bidders is created;
4. Clients and bidders conduct a transparent conversation about cost and risk assumptions in the high-level brief;
5. Clients create a more detailed brief based on the round of conversations, and begin the second stage of competitive tendering with shortlisted firms.

For this to work in practice, there are several obligations on contractors too. They must, for example, enter conversations about delivery in open and constructive good faith, offering the genuine benefit of their experience and expertise. To the best of their ability, contractors must themselves engage key suppliers to support making transparent cost assumptions, promoting the involvement of the supply chain early, and enabling more open dialogue between businesses. A responsible client should be taking a close interest in the role played by different businesses through the supply chain.

Recommendation

- It is essential that public and private clients make a credible and consistent assessment of balance sheet strength during the first stage of a procurement process. The above measures are suggested as a framework for this assessment.

What does this mean for SMEs?

At first glance, this may appear to present a problem for smaller firms having access to contract opportunities. Small and medium sized firms make up the vast majority of businesses in the construction sector, and the government has a target to increase the proportion of public sector money spent with SMEs to one third of direct and indirect spending by the end of 2022.[31]

However, this is less a viewpoint about the size of business but clients and contractors carrying out due diligence on financial robustness where it may present a risk to project completion. It is rare, for example, that a business with a turnover of under £50m is resourced sufficiently to deliver a construction contract of that value, or higher. It is in both parties' interests to ensure that contractors are able to deliver what they say they can; if they are not, problems arising further down the line could cause a business to go under, a client's project to hit delays – or both.

SMEs would not lose out under this approach. Well-run businesses of any size should welcome the opportunity to use their financial strength as a competitive advantage to winning contracts. This is good practice regardless of contract size. For example, businesses that are best-placed to deliver a £5m contract may well be small to medium sized firms. There is little harm in clients using an assessment of balance sheet strength as part of due diligence into suppliers for contracts of all sizes.

Additionally, parts of the industry have raised questions about government's spend targets with SMEs, because it could necessitate that public sector clients build large numbers of relationships with supply chain firms that would normally be channelled through a main contractor. This would firstly place a greater administrative burden on public sector commercial teams; it may also expose smaller and specialist businesses to ways of working which are unfamiliar, burdensome or complex. To mitigate this while still integrating SMEs more centrally into delivering projects is one of the benefits of the 'alliancing' approach to construction projects, discussed later.

In embracing the challenge of mitigating risk effectively, clients must recognise the necessity to consider taking a fair share of a project's risk profile

Compounding the industry's business model issues, construction has been beset by persistent image challenges, with perceptions of cost overruns and significant delays, poor quality products and the disruption associated with construction works still firmly influencing the public and business eye. At a more strategic level, however, CBI members from regional SME housebuilders to major contractors with billion-pound turnovers suggest that this contributes to a pervasive lack of trust in construction firms more widely, maintaining adversarial relationships between clients and their contractors.

Part of the challenge this presents for the construction industry is that costs are seen as something to be contested. Businesses have a duty to fairly and accurately provide prices for services that clients require, and open, early conversations about cost plans can ensure both parties are able to do this in a transparent and constructive manner. Businesses also have a responsibility to firmly refuse contracts that make unreasonable low-cost demands, rather than accepting contracts that have a high chance of producing a loss.

In discussing the difficulties this causes in effectively pricing and managing risk as part of cost conversations, CBI member businesses have suggested that certain insurance models offer a way to align the financial interests and risk exposure of both clients, key suppliers and other strategic parties. For instance, Integrated Project Insurance (IPI) incentivises all those involved in an 'alliance' – a project team that would include clients, contractors, designers and specialist suppliers, for example – to collaborate on creating a solution to the client's brief by rewarding all parties under a gain-share (or pain-share) model.

Rather than placing liability for a specific risk with individual companies, the IPI model shares the overall risk and associated costs between parties.[32] Under this approach, businesses are aware of their maximum financial exposure at the outset and encouraged to collaborate so that efficiency and cost 'gains' are shared between them. The insurer covers the cost of any risks arising to an agreed cap.

There is evidence that this type of approach works. In 2011, Cabinet Office commissioned a New Models of Construction Procurement (NMCP) working group to trial and report on three new approaches to procurement in construction, aimed at making efficiency and cost savings. The models were Integrated Project Insurance, Cost-Led Procurement, and Two-Stage Open Book. The three models share many characteristics that contractors are calling for, including early contractor involvement; a rigorous approach to risk mitigation and allocation; outcome-focused incentives for suppliers; and multiple-stage tender processes.

The group concluded in 2017 that both Cost-Led and Two-Stage Open Book models were proven to deliver on those aims, and earlier this year, recommended that Integrated Project Insurance be trialled on two further projects having successfully delivered savings on its trial project.[33] The New Models of Construction Procurement archive of case studies details 17 projects delivering cost-savings of between 6% to 26%.[34]

The case studies provide evidence that committing to early contractor involvement and fair allocation of risk has delivered valuable savings against both cost and time benchmarks for clients. Government therefore has an opportunity, as the construction industry's largest client and as policymaker, to further embed the use of these procurement routes in a way that has a lasting impact for the whole industry, paving the way for private and regulated sector clients to follow.

This type of approach avoids the need for onerous risk transferring through the supply chain, which leads to expensive disputes when things go wrong and firms try to apportion liability. Risk transferring of this nature also causes its own issues that threaten the success of the overall project, because in practice, the cost and time impact of many risks are far more substantial than the majority of businesses involved can cover.

The number of businesses that can be held back is significant. Contractors on the CBI's Construction Council have researched across recent projects just how many businesses can be involved in a supply chain. For contracts between £50m – £100m in value, these frequently leverage a subcontractor base of between 40-60 additional firms per project. During the project, the responsibility for mitigating risks falls to the business carrying out specific works or services. Though the liability has been contractually transferred from the client through the supply chain, in practice it is greater than many businesses within the supply chain have the financial position to withstand.

To avoid this scenario, clients, as the budget holders, and their key contractor negotiate the risk liability between the two parties, often to the detriment of their own working relationships and increasing pressure on margins. While using an insurance product approach to cover such eventualities needs to be a project by project decision, there are clear benefits when discussions of risks and associated costs prove too challenging to negotiate.

Recommendation

- Where clients and contractors cannot agree on a risk sharing position during early engagement, they should utilise a gain/pain share approach to incentivise appropriate allocation of risk between parties.

Construction procurement should incentivise businesses to work collaboratively – with clients and with each other – towards outcomes that are focused on 'whole-life' value

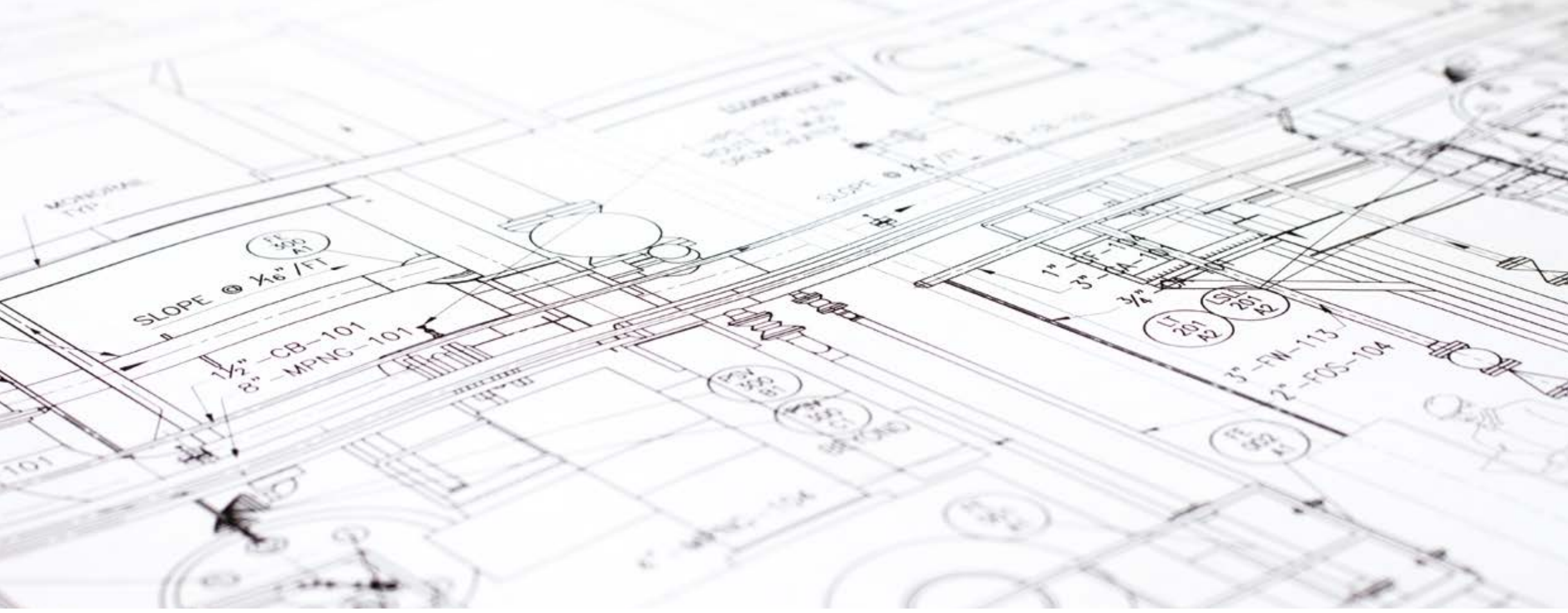
The need for the construction industry to move from a transactional business model to one which values the achievement of outcomes over the 'whole-life' of an asset – during its design, construction, operation and end of life phases – has been sharpened by high-profile problems over recent years, and the subsequent impacts which include: unfinished public sector projects, supply chain firms that have lost money, and workforce jobs lost. Low margins that hamper investment, productivity and sustainability are not a new phenomenon. But there is, as a result, a lot of work being undertaken to evolve the construction industry business model.

'Procuring for Value', a strategy published by the Construction Leadership Council's Supply Chain and Business Models working group, recommended in 2018 that government create a standard definition of 'value' and drive adoption of the criteria across public sector procurers including central government departments, local authorities, and arm's length bodies.[35] Alongside this, the Infrastructure and Projects Authority (IPA) is looking to overhaul government procurement of infrastructure so that it 'procures for growth' against a newly defined set of cost and performance benchmarks through its Transforming Infrastructure Performance (TIP) programme launched in 2017.

The challenge is to ensure that incentivising clients and contractors to work towards delivering 'whole-life' value over an asset's operational lifetime also delivers cost efficiencies. This was acknowledged in a 2012 report by government's Procurement/Lean Client Task Group, which noted that the Integrated Project Insurance, Cost-Led Procurement, and Two-Stage Open Book public sector models focus primarily on the efficiency of capital costs at the outset of construction projects, and "in contemplating the longer term there is significant risk that the whole-life benefits may not be realised."[36]

It is vital that public and private sector clients get this balance right. The impact of the country's built environment is felt for decades, if not hundreds of years, meaning financial, environmental and safety considerations need to be made at the outset. The cost of doing so, however, requires a higher capital expenditure than many clients, in a transactional business model, are prepared to counsel.

In 'Procuring for Value', the Construction Leadership Council outlines the objective of creating a cross-industry definition of 'value', which would include whole-life considerations. Benchmarking and recording data that can help identify the attributes of 'whole-life value' needs to begin with an industry-wide understanding of 'value' and outcomes, so that success can be robustly and clearly determined.



Constructing Excellence has been collecting and publishing data on construction KPIs for some years, measuring performance metrics such as satisfaction from clients and users, safety and training of staff, predictability of delivery, and energy and waste created in construction.[37] While these are all valuable metrics for monitoring industry's performance, few of the metrics consider the forward-looking 'whole-life' value of what is built.

Clients, contractors and supply chain firms all recognise that predicting and measuring the costs of operating an asset, and the value created from an asset once in use, is time consuming, costly and unpredictable – made more difficult by a lack of available, and common, historical data. More problematic is the exercise itself: it is difficult to make predictions about the performance of an asset over a period of decades, from maintenance issues and possible failures to the changing requirements of asset users, and the intensity of their use.

However, the International Construction Measurement Standards Coalition has recently published its second edition[38] of costs standards, which aim to bring consistency and harmonisation to measuring and anticipating construction costs over the lifetime of the project. The CBI's construction members are supportive of efforts like this, as greater data on construction costs gives construction and infrastructure project clients, investors and owners a clearer financial context in which to consider capital expenditure. Adopting a consistent methodology and a framework for measuring costs also means a more consistent foundation on which to assess 'whole-life value' outcomes.

The behaviours of an asset owner become increasingly important in identifying what is considered 'whole-life value'. Setting the project brief and expectations from businesses involved, the owner can specify outcomes from what is being procured that contribute to an expanded definition of value. For example, this might include:

- Environmental impact in construction and during operation
- End of life recycling, re-use or disposal
- Economic impact created within local communities
- Training programmes that creates career opportunities
- Cost-in-use

The challenge for the industry is that this is not uniform across all construction procurements – in each project, some aspects of value will be more important than others. The value created by an inner-city school will differ to the value of a new B-road: the quality of life for school pupils will be paramount but the economic impact will take longer to measure; a new road may unlock immediate economic benefits to an entire town. It becomes essential, therefore, for clients to be specific and transparent about what outcomes are expected, and how they will be measured.

Case Study: Project 13

Project 13, a blueprint for a new business model for delivering infrastructure projects, outlines the requirements of the 'asset owner' that moves beyond those of a more traditional client. The model suggests that the owner, responsible for operating the asset, should be looking to drive the optimal lifetime performance of the asset, requiring the best possible construction and maintenance. The asset's budget holder – the investor – should be using the budgetary scope to incentivise suppliers to work towards achieving the same outcome. The principles in the Project 13 approach place a responsibility on clients to understand how allocating risk effectively at the outset of projects can drive cost and performance gains over the whole-life of an asset, and encourages them to accept more of the risk profile as they stand to benefit from the successful delivery of their asset.

There is little to prevent clients in the public and private sectors across all areas of construction adopting the same principles. The goal with Project 13 is to precipitate an industry-wide shift in the construction business model, promoting the 'enterprise' approach, which shares fundamental principles to 'alliancing'. One of the benefits for clients and contractors that engage with this approach will be more effective collaboration to scope, allocate and mitigate risks in a way that ensures they are appropriately funded and shared. Doing so vastly reduces the chance of problems arising that have not been planned for, avoiding the need for unwelcome increases in budget, delays or disputes.

Even with the more sophisticated practices in procurement outlined earlier, however, there is arguably no contractual approach in construction that fully incentivises businesses to deliver against whole-life outcomes.

One answer is that asset owners, recognising that they will benefit from the value delivered over time, accept a greater share of contractual risk during the construction phase, rather than passing it onto contractors and the supply chain. To ensure this is fair and appropriate, when clients are scoping and planning for potential risks and associated costs during the procurement phase, this should be considered against the value created over the lifetime of an asset, rather than only as a portion of the available capital. This creates the space for sensible discussions between clients and contractors about the need to adequately finance risk mitigation, supporting contractors in providing the best solutions for clients – and ultimately, the end users – rather than the cheapest.

Recommendations

- Major public and private sector clients must produce a clear and robust evaluation of whole-life benefits of a project and share this with suppliers before tendering begins, so that contractors are able to price risk management costs transparently against the asset's whole-life value.
- The government should provide further financial support and resources to the Construction Leadership Council so that efforts to create an industry-wide definition of value, and performance benchmarking tools to measure it, can be accelerated.

New procurement guidance must be swiftly embedded across the public sector to kickstart the client-led change

The Cabinet Office has recently published updated guidance in its Outsourcing Playbook that can support public sector procurement in creating an environment where risk is better managed to the benefit of clients and suppliers.

Contractors in the public sector feel that early engagement is imperative and the Outsourcing Playbook recommends that government procurers:

- Engage with the market early;
- Be ready to demonstrate…proposals have been informed by market health and capability assessments, and feedback from potential suppliers;
- Produce a 'should cost' model.

As discussed earlier, the requirements to engage the market early and for clients to produce a 'should cost' model substantially assist in bridging the gap between clients and contractors when it comes to assessing and understanding risk, and collaborating to mitigate them during the procurement process. This is particularly important when parties are aiming to arrive at a 'target cost', or when clients are under budget pressure: the contracted business is in a far stronger position to support delivering a project to its brief for a realistic cost when the client has done due diligence on expected risks and associated costs, and worked with contractors to bring expertise and advice into that process.

The Outsourcing Playbook also makes specific recommendations for public sector procurers regarding allocation of risk. It suggests three objectives:

- **Identification:** Studying the nature of the market, risk registers and lessons learned documents from related projects;
- **Quantification:** Assessing how likely, for example, based on past experience, an event is to occur and what the impact might be;
- **Allocation:** Compiling a risk allocation matrix that considers who is best placed to manage the risk (i.e. whether it is a contractor, government or joint risk).[39]

This guidance goes some way to meeting what are seen as shortcomings in procurement by both public and private sector clients. As well as specifying early engagement, the 'should cost' model requires that the procuring body considers and forecasts the total costs, including accounting for performance and operating a service or asset over its lifetime. Businesses believe that this approach to whole-life costs for construction projects is essential if the cost and allocation of risk is to be fair and appropriate.

Businesses are also supportive of the Outsourcing Playbook's plain direction on risk allocation itself. It will be vital that clients tackle the three objectives in partnership with contractors and suppliers, whose prior experience of delivering built assets and mitigating associated risks will bring valuable experience to the process. Specifically, the suggested aims in the Playbook: lesson learning; assessing the likelihood of risk; assessing the likely impact; and considering which party is best placed to manage risk.

Additionally, CBI members have agreed that the use of uncapped liabilities in contracts presents a major problem to businesses aiming to price risks for clients, so it is welcome that the Outsourcing Playbook makes a clear demand that government procurers "should not ask suppliers to take unlimited liabilities."[40]

The Outsourcing Playbook

Published in February 2019, the Cabinet Office's Outsourcing Playbook laid out detailed guidance which aimed to improve how government works with industry and the voluntary sector.

It included specific measures related to managing risk, piloting complex projects and engaging the market as early as possible, with a view to ensuring more public sector contracts are set up for success.

The Playbook is due to be refreshed in early 2020.

This could be established more widely to the benefit of the industry. Standard liability clauses in construction projects often require contractors to accept responsibility to 'make good' any issues for a period of up to 12 years, with no cap on the value of such liability, though those issues are, in all likelihood, impossible to predict at the time of a contract being drawn up. Even where they are capped, liabilities can often be so high as to pose the same threat as unlimited liability. In the current business environment such levels of liability represent a real threat to a company's operation, as an emerging issue could cause a sudden and significant financial challenge regardless of whether the business is in a position to manage it at the time it arises.

This is something that other industry bodies have noted. In a recent workstream, Build UK worked with clients, contractors and specialists to identify consistent contractual challenges that prevent parties collaborating and fair risk allocation taking place.[41] One specific suggestion, which CBI members would support, recommends that in drawing up contracts, clients "should not include uncapped (sub)contractor liability." The onus is equally on business to challenge contracts that do include them.

Rather than placing the burden on client-contractor negotiations to resolve this within every contact, this could be supported through the steering groups that are responsible for updating the JCT suite of contracts. The JCT Council should explore what would be required to update contracts to reflect concerns over uncapped liabilities placed on contractors and subcontractors, and engage across the industry, including the Constriction Leadership Council and other major trade bodies, to deliver this effectively. Likewise, the NEC Users Group should move to explore how this could be adopted in the NEC contract suite.

However, for all the valuable guidance in the government's Outsourcing Playbook, built on significant engagement and consultation with industry, there is a more fundamental problem. The Cabinet Office states that while the principles and rules of the Playbook are mandatory for all outsourcing projects, although it is "good practice for any procurement… the guidance is not mandatory for Building, Civil Engineering or Equipment projects."

This seems a shame. Without strengthening the mandate for procurers of construction projects in the public sector to follow the guidance, this will mean a real opportunity to achieve a decisive shift in attitudes to risk management, and the impact risk has on developing a financially sustainable industry, is being missed.

The Cabinet Office explicitly recognises that this is an important aim for public sector procurers, suggesting in the Playbook that getting risk allocation right will mean "suppliers being paid a fairer profit margin in return for the risk they are accepting and the commitments and investments they make."[42] Certainly, CBI members welcome this acknowledgement of the need to ensure a fairer balance between risk and reward. It seems therefore sensible that Cabinet Office should review the mandate for government bodies to follow the guidance in the Outsourcing Playbook, and broaden the scope to include construction works.

There is an additional challenge to overcome. CBI members report that government departments responsible for directing and embedding guidance across the public sector, such as Cabinet Office and HM Treasury, are failing to enforce the good practices outlined in documents like the Outsourcing Playbook, leading to inconsistent approaches to procurement and risk allocation.[43] The government must explore how to drive greater adoption of guidance that has been produced in collaboration with businesses, such as by strengthening the use of Cabinet Office Commercial Controls and penalising non-compliance, to ensure the benefits are felt.

Recommendations

- To take full advantage of the hard work and business engagement that has gone into it, the next iteration of the Outsourcing Playbook should be seen as mandatory for public sector Building and Civil Engineering projects above a specific value. The CBI suggests £10m as a threshold and will consult with industry on this proposal.
- The above recommendation would have the effect that public sector Building and Civil Engineering works contracts do not include uncapped liability clauses. The NEC, JCT and PPC suites of contracts should similarly remove such clauses.

"Businesses welcome the acknowledgement of the need to ensure a fairer balance between risk and reward."

A better approach to risk will raise the quality of the industry, supporting businesses large and small to thrive

Better risk management will unlock cashflow between businesses, swiftly reducing the use of retentions and speeding up payments

The CBI Construction Council has repeatedly drawn the link between improving management of risk and improving payment practices. Industry and government rightly recognise the need for payment practices to continue to be addressed, and the government has recently introduced policy interventions to support SMEs across the industry. Such measures include:

- Establishing the Small Business Commissioner in 2017
- Introducing the Payment Practices and Performance Reporting requirement for large businesses in 2017
- Strengthening the Prompt Payment Code's compliance board powers in 2018
- Publishing new policy guidance for public sector procurement teams on accounting for payment performance in September 2019
- The 2011 Construction Act also legislates against the notion of 'paying when paid' – a company paying onward fees only after receiving money owed to that company.

The substance of these measures is for the most part aimed at the performance of larger businesses, with the intended impact being to support the flow of money in a timely fashion to smaller businesses. While this is the correct direction for change, it is necessary to place that within the financial conditions across the industry. Where poor risk allocation results in main contractor margins being wiped out, the impact is equally felt by the supply chain, in some cases through payment. It benefits all parties for businesses to be able to generate a sustainable and reliable level of margin.

Firstly, in the short term, a sustainable margin means that contractors can be confident in the cashflow needed to make onward payments swiftly and in full. The CBI and its members recognise the damage late payment can cause to productivity and the trust placed in businesses, both between companies and by the public. Across all industries, late payment prevents smaller businesses investing in their staff and in technology, hindering day-to-day operating costs and holding back productivity improvements. The CBI has previously welcomed the move towards more transparent reporting of payment data to drive an improvement in practices and increase trust in business relationships.

Businesses are required to report on how quickly they pay all invoices on average, set out their standard payment terms, and provide a figure on how many invoices are paid late. This reporting is also required of public sector procurers, with one difference: the public sector is only required to report on undisputed invoices. To level the playing field and ensure change is happening transparently across the industry, the public sector and private sector reporting requirements on invoices should be aligned.

Yet the construction sector ranks particularly poorly for payment practices, and the picture is even tougher for smaller businesses. Almost half of SMEs – 45% – report that late payment is a major obstacle to success.[44] This compares to an average of 33% for SMEs across all sectors. Changing the traditional construction business model, where risk gets unequally transferred to contractors and down the supply chain, would stimulate major improvements in the industry.

In past examples of major contractor collapses, almost a fifth of firms owed money by the insolvent business will follow suit within five years.[45] While many large businesses will be among those owed money, this poses the greatest threat to SMEs, for whom a single sizeable unpaid bill could be enough to put them out of business. While they are at disproportionate risk from the failure of one large contractor, SMEs are by extension the group that stands to benefit the most from a step-change in the industry's performance on payment practices.

The CBI Construction Working Group also noted the need to tackle and eradicate the use of retentions – the practice of withholding a portion of the total fee until all work and activities are completed and certified – which continue to be too prevalent in the construction industry. The National Federation of Builders suggest that a rising use of retentions has hit contractors and subcontractors hard since the recession in 2008.[46]

In researching the issue with CBI businesses, the CBI has built up a picture of the use of retentions by clients and contractors, which has produced a clear sense of the impact on business. Contractors at the CBI consistently report a negative net position in respect of retention monies owed to them by clients, compared to retention monies owed to their supply chain. For several contactors, this amounted to a net position of between negative £4.5m – £23m in terms of the balance. In other words, some businesses were owed over £20m more in retentions by their clients than the money owed to their supply chain. Furthermore, CBI members estimated that the values owed to them amounted to between 1.8% and 4.5% of annual turnover.

Given that contractor margins can frequently be below the lower end of this range,[47] eradicating the use of client retentions would be a huge step to improve cashflow in the construction industry that would drive more confidence in margins, supporting contractors to make payments faster and removing the need for retentions to be held further down the supply chain.

The opportunity to improve the environment for small and medium sized firms is therefore great. Additional momentum comes from the Construction Sector Deal, which also aims to deliver fairer payment practices through the Construction Leadership Council's workstream to eradicate business use of retentions by 2023.

Contractors, clients and trade associations across the construction industry have begun steps in this direction, with members of Build UK drawing up a roadmap to abolish retention use from the industry no later than 2025. This includes specific guidance on changing language in suites of standard contracts.

CBI members believe this timeline and a change in payment culture could be accelerated. With CBI research demonstrating that contractors' cash positions are frequently negative in relation to retention monies owed and owing, however, achieving the positive change will require action by public and private sector clients alongside the action that contractors are taking.

Recommendation

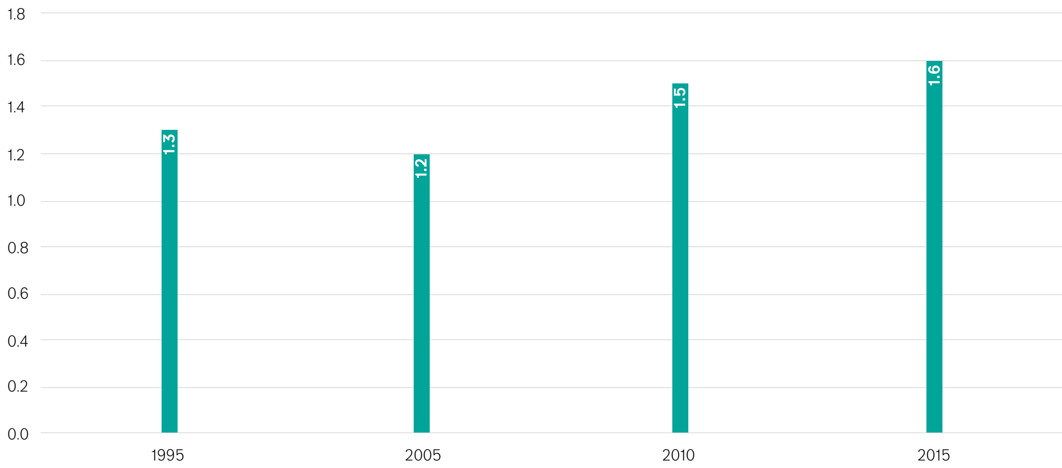
- Public sector procurement guidance should prohibit the practice of holding retentions on public contracts by clients or by suppliers. The NEC, JCT and PPC suites of contract should be updated to specifically prohibit their use.

Improved cashflow will increase trust between firms, decreasing the industry's common recourse to litigation

By nature, more collaborative procurement incentivises and rewards firms working together: sharing solutions to problems, having open conversations about appropriate risk sharing, and addressing problems together rather than getting into lengthy litigation. Expensive legal action pervades the UK construction industry: according to analysis by Arcadis, the average value of a construction industry dispute in the UK in 2018 was $17.9m (£13.8m).[48] The analysis shows the main causes of disputes are "a failure to properly administer the contract" and "[a party] failing to understand and / or comply with its contractual obligations."

This chimes with feedback during conversations with CBI members about the complexity in construction contracts. It has been highlighted above how relationships between client and contractors frequently result in complex and adversarial contracts being drawn up that feature numerous amendments to clauses or additional pages of terms to avoid, transfer or attempt to control risk. But with research suggesting the common link between contract problems and expensive litigation, business wants to see clients introduce full and transparent discussions about risk with the parties who will manage it.

Exhibit 3.1 % share of construction industry procurement spent on legal services



Source: ONS, Oxford Economics

This is coming at a major cost. Oxford Economics research commissioned for this report by the CBI established that the construction industry spends 1.6% of its total expenditure on services and goods from UK suppliers on legal services, around £1.27bn. That proportion of spend is close to two-thirds of the average margin made by the 100 largest contractors in 2018: 2.6%. While some of that is necessary expenditure, it compares unfavourably to other industries, where the UK economy's median spend is half the size (0.8%).[49] In the US, construction firms spend around 0.6% of total expenditure on legal services.[50] If UK construction firms had the same proportion of legal spend, in 2015 they would have saved £798m.

It also compares unfavourably to other expenditure. Despite construction's importance to the economy overall, contributing 6% of Gross Value Added,[51] the industry does not match this level in its contributions to research and development. In 2017, construction firms were responsible for just £319m of expenditure on R&D – equivalent to 1.3% of the UK total investment[52] (although this will not capture all innovation spending). Data from HMRC, meanwhile, shows that construction firms are responsible for only 4% of claims for research and development tax relief.[53]

CBI members have said in no uncertain terms that the level of legal expenditure directly impacts the amount of money that can be invested in training, technology and innovation. But they are confident that better allocation of risk would dramatically bring down the volume and value of legal expenditure. Effectively, 'better allocation' would entail the clearer understanding of risks by construction clients, resulting in: more of the risk profile being held by clients themselves; greater sharing of risk between clients and contractors in a gain/pain share arrangement; or that contractor tenders that build in appropriate costs for taking responsibility for key risks are considered fairly.

This would unlock money that could be put to better and more productive use elsewhere. If this precipitated an industry-wide shift in culture that brought construction firms' spend on legal services in line with the median spend across all UK industries, **UK construction businesses would free up funds equivalent to more than double the amount of money spent on research and development activities.**

But most importantly, unlocked cash would pave the way for businesses to invest more money in new technologies, innovative solutions to construction challenges, and improving productivity

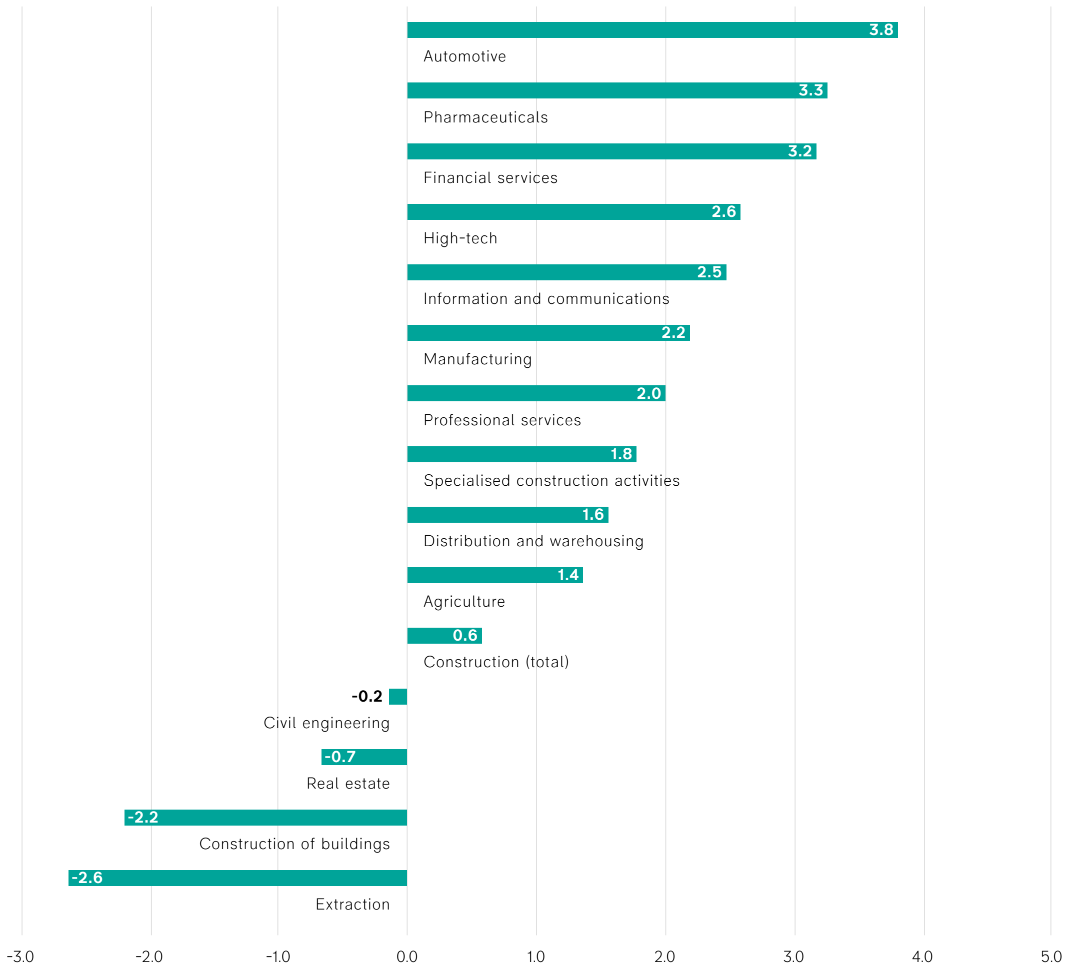
Where risk is not appropriately allocated and mitigated, the impact on operating profit disincentivises firms to invest in any expenditure that does not contribute to the day-to-day operation of the business or generate an immediate return. The wider impact this has is to limit what can be achieved to the benefit of end-users, and surpassing the expectations of client outcomes.

Businesses require a more sustainable operating environment so that they can be confident in investing turnover into strategic plans that will support similarly long-term objectives. For many firms, the expenditure required for innovation and research that will accelerate the development of faster, smarter and more environmentally friendly buildings, as well as the adoption of smarter techniques and processes, is too prohibitive while low margins do not give businesses the confidence to invest.

Collaborative and fair planning of risk by clients can deliver confidence in the returns expected from construction projects, both in public and private sectors. Such confidence is essential to unlock the investment in technology and skills required to achieve a step change in the UK construction industry's productivity, which has barely grown over the last 25 years.

"The construction industry spends around 1.6% of its total expenditure in the UK on legal services, which compares unfavourably to the UK economy's median spend of 0.8%."

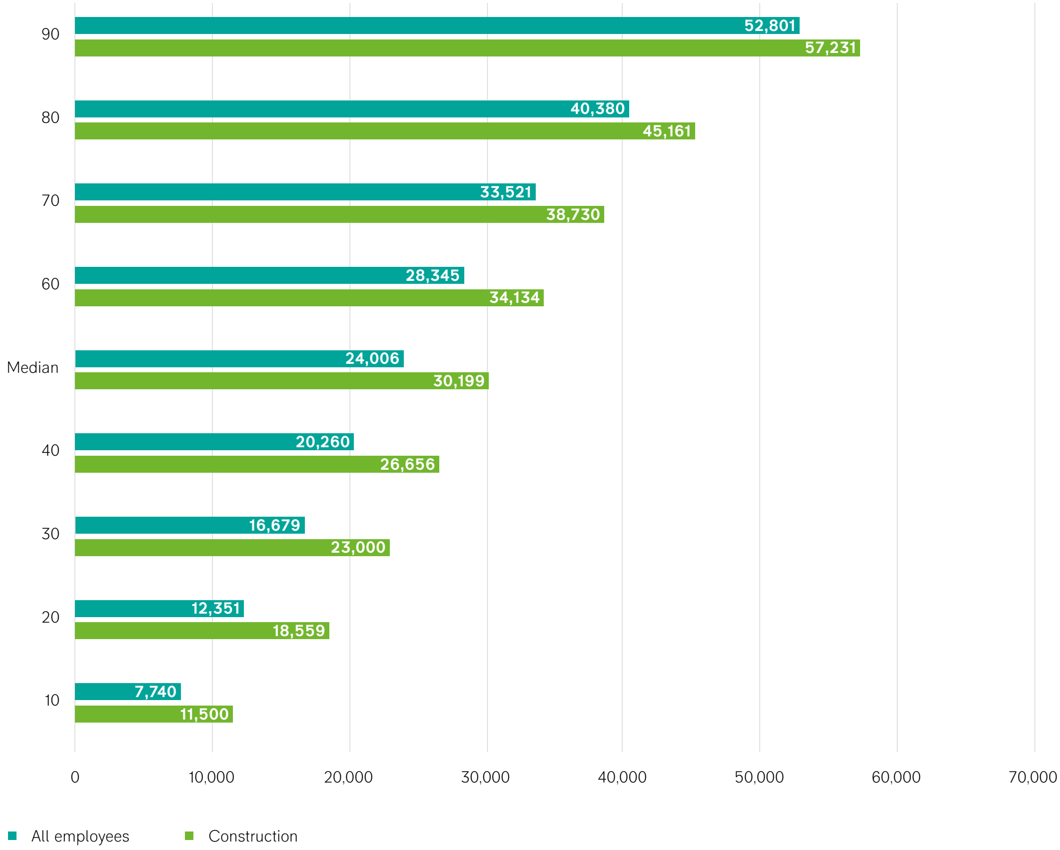
Exhibit 3.2 UK sector productivity 1995-2017 (compound annual growth rate, %)



Source: ONS

The benefits would have wide-ranging social and financial impacts across the economy. The sector already pays well, with average wages in construction outstripping the wider economy in every earning decile.

Exhibit 3.3 Average earning deciles in UK construction compared to whole economy (£s/year)

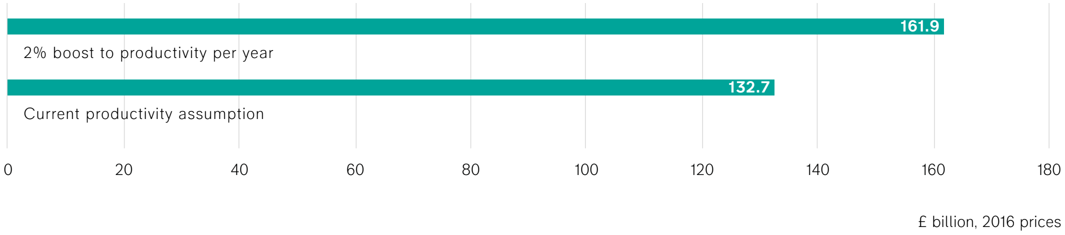


Source: ONS (2018)

But the impact could benefit the whole economy. There is huge pent up demand for construction activity, with government aiming to build 300,000 homes per year and the National Infrastructure and Construction Pipeline requiring investment of £600bn into projects before 2030.

Research by Oxford Economics for the CBI estimates that if the UK construction industry could increase productivity growth by two percentage points above baseline forecasts over the coming decade, **gross value added to the UK economy would be almost £30bn greater by 2029.**

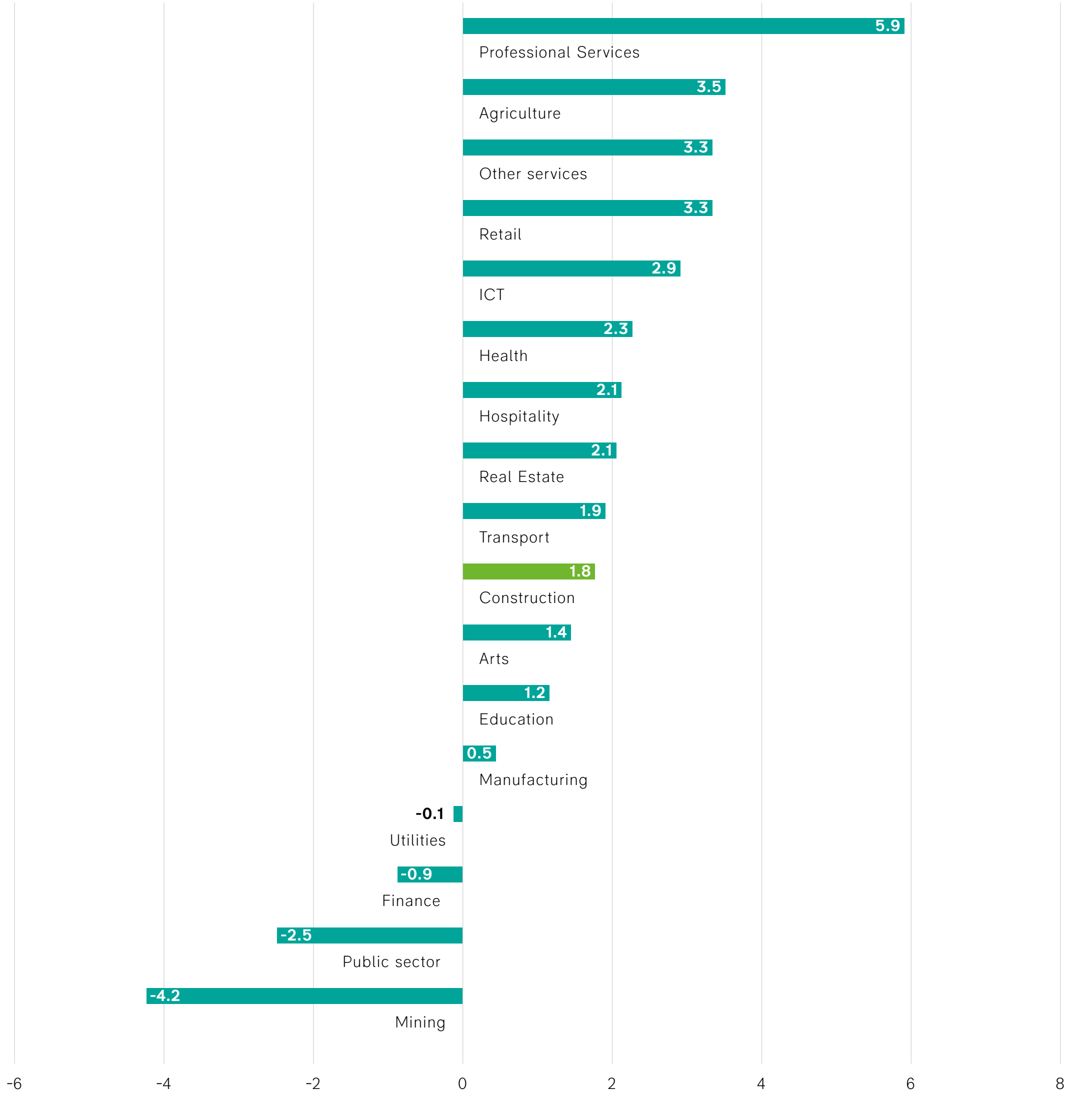
Exhibit 3.4 Construction output per year up to 2029 under current assumption and 2% annual growth in productivity (£bn)



Source: Oxford Economics

Between 2011 and 2015, research by Oxford Economics using EU KLEMs data[54] showed that the growth of construction's Gross Value Added to the economy fell behind many other UK sectors – half the growth in the agriculture sector and less than a third of the growth in professional services.

Exhibit 3.5 Average growth in GVA (volumes) by sector 2011-2015

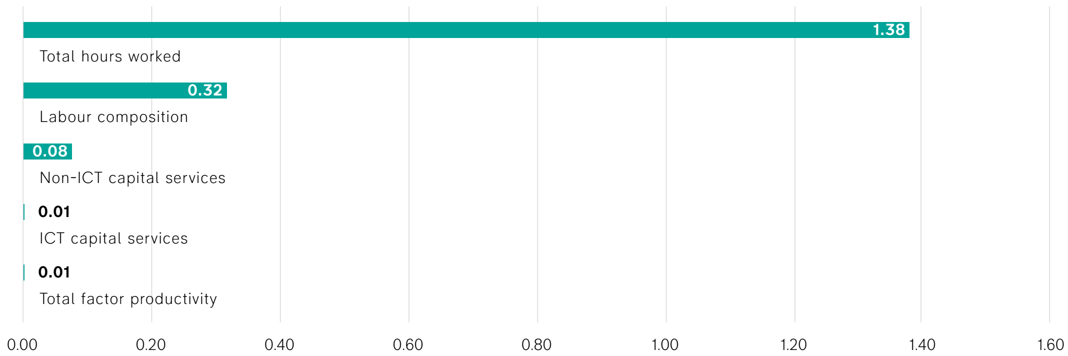


Source: Oxford Economics

In construction, the primary driver of GVA growth has been an increase in the number of hours worked, rather than increased efficiency per worker or increased use of technology. The chart below bears out how little growth in the construction industry is driven by investment in ICT capital services (information and communication technologies) and non-ICT capital services. According to KLEMs data, the UK construction industry's spend on ICT in the period 2011-2015 effectively did not increase productivity suggesting construction businesses have failed to successfully exploit new technologies. 'Labour composition', which reflects an improvement in the quality or skill of labour, makes up less than a fifth of the limited growth.

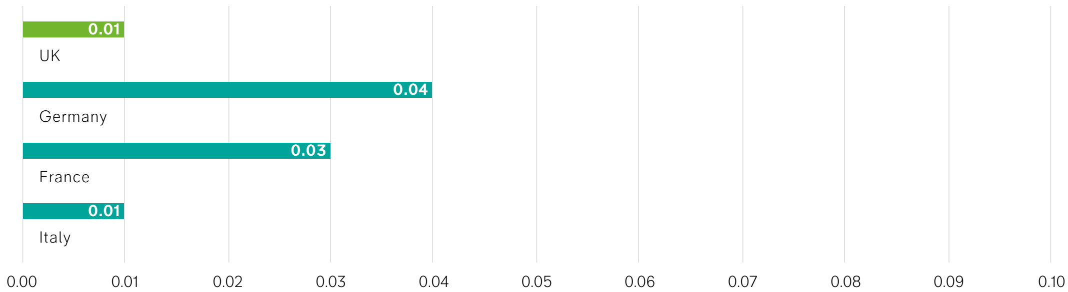
Although other major European economies have seen three-to-four times the impact on productivity growth from ICT investment, the overall impact on productivity remains negligible. This points to a challenge for the construction industry to address globally – and one where the UK could take a lead.

Exhibit 3.6 Average annual growth in GVA (volumes) by source of input 2011-2015



Source: KLEMs

Exhibit 3.7 Contribution of ICT capital services to productivity growth, 2011-2015 (percentage points)



Source: KLEMs

"The impact of technology on construction's productivity remains negligible. This points to a challenge for the industry to address globally – but it's one where the UK could take a lead."

This would strengthen UK construction companies domestically and overseas, supporting businesses to play their part in delivering the ambition of the Construction Sector Deal

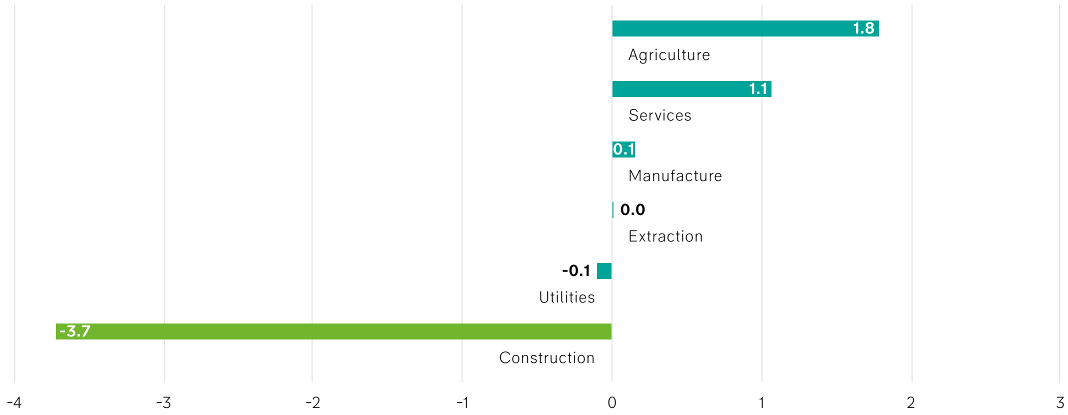
The most recent UK Innovation Survey showed that the level of innovation activity in construction between 2014-2016 was behind most other UK industries,[55] with only 44% of businesses in construction investing in "innovative activity". Without a step-change in firms' ability to invest in innovation, the industry will not be able to address the evident need to pursue the ambitions within the government's Construction Sector Deal.

The Construction Sector Deal sets out how it will support UK construction businesses in meeting the targets established in the *Construction 2025* strategy, published in 2013. These targets were to: halve the time in which assets are built; halve the built environment's carbon emissions; halve the trade deficit between export and import of construction products and materials; and reduce the overall cost of assets by a third.[56]

The industry is committed to these goals, and the Sector Deal provides welcome direction, funding commitments and expectations of the industry in order to meet them. However, following several changes in government, the frequent movement of the construction brief between ministers and a lack of visible reporting against these targets since 2013, businesses are unclear if progress is being, or will be, measured.

According to Office for National Statistics data, total greenhouse gas emissions for the construction industry have increased by over 40% since 1990.[57] Even comparing progress since 2013 when the *Construction 2025* strategy was published, greenhouse gas emissions are almost 15% higher.

Exhibit 3.8 Change in GHG emissions produced per unit of production, 2013-2017 (%)



Source: ONS (2019)

However, between 2013-2017, construction outperformed other major industries in reducing the level of greenhouse gas emissions per unit of production. In other words, the industry's annual activity is now emitting 3.7 per cent less emissions on average. The timing could hardly be better, given the government recently legislated that the UK is aiming for a 'net-zero' economy by 2050.[58] The ability for firms to invest in materials and products with a lower carbon footprint, construction processes that produce less emissions, and designing built assets that deliver lower levels of operational carbon will be a game-changing contribution to the country's challenging climate change goals. Construction has shown it is moving in the right direction – closer scrutiny and monitoring is needed – but it is likely that more investment will also be required if the downward trend is to accelerate. A fully environmentally sustainable construction industry will only be achieved if it becomes a financially sustainable construction industry first.

The next steps

The opportunity a new majority government has to reshape successful and prosperous business and government partnerships, and to think strategically about the country's long-term sustainability – both financially and environmentally – should be firmly gripped. Given its importance to the strength and growth of the UK economy, its continued role as a provider of millions of jobs with the potential for these roles to be future-proofed, the construction industry would benefit from greater strategic representation within government. Appointing a Construction Secretary of State, or placing responsibility for the industry within a Cabinet Minister portfolio, for example, would be a bold but wise move. This would unite industry and government in dealing effectively with the industry's enormous challenges on skills, technology and environment, challenges that urgently face the transport, housing, infrastructure, energy and power sectors.

The transformation required across UK construction for the good of the climate, and for the long-term health of the sector, can be made. Business is ready to force the pace of change, if they are in a position to invest their expertise, ideas and capital into new technologies, new skills and new research towards solving the industry's most pressing issues.

That investment can be unlocked by fixing the business basics: eradicating unfair risk allocation between clients and contractors, and embedding far better procurement behaviours right across the industry. The impact would be more sustainable margins, increasing the flow of investment – the outcome would be securing a bright future for UK construction. *Fine Margins* is a call for contractors, clients and policymakers to make a start, by adopting the recommendations within it.

"The investment needed to transform the industry can be unlocked by fixing the business basics."

Summary of recommendations

What industry should do:

- A body such as the Construction Leadership Council – or the CBI – should monitor the relationship between margin and revenue to track the trend in the industry.
- Businesses should be prepared to challenge or walk away from contracts when bidding. Business leaders and boards should think strategically about the long-term planning and shareholder management required for such an approach.
- Where clients and contractors cannot agree on a risk sharing position during early engagement, they should utilise a gain/pain share approach to incentivise appropriate allocation of risk between parties.

What government should do:

- To take full advantage of the hard work and business engagement that has gone into it, the next iteration of the Outsourcing Playbook should be seen as mandatory for public sector Building and Civil Engineering projects above a specific value. The CBI suggests £10m as a threshold and will consult with industry on this proposal.
- This would have the effect that public sector Building and Civil Engineering works contracts do not include uncapped liability clauses. The NEC, JCT and PPC suites of contracts should similarly remove such clauses.
- Public sector procurement guidance should prohibit the practice of holding retentions on public contracts by clients or by suppliers. The NEC, JCT and PPC suites of contracts should be updated to specifically prohibit their use.
- The government should provide further financial support and resources to the Construction Leadership Council so that efforts to create an industry-wide definition of value, and performance benchmarking tools to measure it, can be accelerated.

What clients should do:

- Public and private sector clients should refrain from amending standard risk clauses in construction contracts.
- Effective early engagement with businesses is paramount. Major public and private clients should ensure they design their procurement processes with a distinct 'first' stage, so that early engagement can support risks to be identified, priced and allocated, before a second competitive process stage is undertaken.
- It is essential that public and private clients make a credible and consistent assessment of balance sheet strength during the first stage of a procurement process. The measures in this report are suggested as a framework for this assessment.
- Major public and private sector clients must produce a clear and robust evaluation of whole-life benefits of a project and share this with suppliers before tendering begins, so that contractors are able to price risk management costs transparently against the asset's whole-life value.
- Design and build procurements must engage contractors early enough to influence project design before it is signed off.
- The use of single-stage procurements should be discouraged in major construction projects above a specific value. The CBI suggests £10m as a threshold and will consult with industry on this proposal.

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