

Building in Quality Initiative

Summary Report and Next Steps



Introduction

As one of the cornerstones of value along with cost and time, long-term good quality is a critical factor in the property development cost-benefit analysis.

Beyond that, it is an important public good: a high-quality built environment, especially if publicly funded, is an important benefit for the social, cultural and economic wellbeing of ordinary citizens.

In the light of evidence that the construction industry does not always achieve its quality targets, the RIBA set up and led a successful two-and-a-half-year project with the RICS and CIOB called the **Building in Quality (BiQ) initiative**.

Now completed, it leaves a legacy of original thinking about quality in design and construction, a functional system for tracking risks to quality, and fresh impetus for the industry to develop better ways of improving the likelihood of achieving quality targets.

With so much momentum behind it and with digital technology at a tipping point, there is a historic opportunity to make a lasting change for the better.

With its partners RICS and CIOB, the RIBA therefore issues a challenge to industry: to unify all quality initiatives under one collaborative governing framework to coordinate research, evidence and ideas for a common, integrated practical approach to improve quality in construction.

History of the BiQ initiative

Back in 2017, the RIBA's Client Liaison Group started the collaborative BiQ project in response to its own research into the mistrust between architects and contractors, and the growing pressure for the construction industry to improve the long-term quality of the assets it builds. They convened a BiQ Working Group in partnership with the CIOB to investigate ways to tackle the issue.

The BiQ Working Group quickly realised that the project had urgent implications for the whole industry and needed to be opened up and escalated. The RICS joined up and in March 2017, the presidents of the RIBA, RICS and CIOB signed a formal Joint Memorandum of Understanding signalling the BiQ initiative's importance and cementing their intention to collaborate on it.

Already a reaction to systemic problems highlighted in the Edinburgh Schools report and historic concerns about poor quality in volume housebuilding, the initiative grew in significance in the wake of the tragic Grenfell Tower fire in June 2017.

The Working Group eventually proposed a system that monitors risks to desired quality as an aid to fully informed decision-making.

At the heart of this system are a new definition of quality and a digital Quality Tracker, a collaborative tool for tracking risks to desired quality from project inception to completion. It produces a red-amber-green scorecard documenting the history of risks to quality faced during the project.

Both the draft Quality Tracker and the new definition were put out to consultation in May 2018. The resulting feedback encouraged the Working Group to carry on developing the system.

The final version, a significant evolution from the consultation version, was finally published in October 2018, launching a six-month piloting phase that ended in April 2019.

The Quality Tracker has five distinct benefits for the construction industry:

- It is a constant reminder of quality targets.
- It sets up a formal 'chain of custody for quality' aligned to the RIBA Plan of Work, enabling all prospective and current members of the project team to better understand their risks.
- Post-completion, when signed-off, it gives purchasers, tenants, investors and asset managers a straightforward account about the quality targets for the building they are buying into and its development history.
- It allows clients to demonstrate their overall commitment to quality and differentiate themselves in the market.
- The wider adoption of it will incentivise better quality in buildings which, in turn, will lead to improved human health, safety and wellbeing, and boost the construction industry's reputation.

The complete package of supporting documents includes a three other documents:

- a Guide that sets out the Working Group's statement of the problem, original thinking, proposed solution (and its limitations), and description of how the BiQ system should work.
- a Memorandum of Understanding form that is used as a declaration agreed between the head client and its professional advisers that describes the collaborative behaviours for achieving the desired quality of outcomes.
- a Quality Checklist, which lists outputs that directly influence the project team's ability to achieve the quality target. Keeping it up to date helps the team to rate risks to quality on the Tracker.

Summary conclusions from pilot

The industry consultation and subsequent piloting phases of the BiQ initiative were enthusiastically supportive and indicated that the system holds value-adding promise. In particular, they found that:

- The current version of the BiQ system is reasonably clear, flexible, and shows signs of having the desired effect, and so the documents should be kept freely available for use.
- The partnership between the RIBA, RICS and CIOB is universally applauded, and should be extended to represent the whole industry.
- The principle of tracking risks to achieving target quality, unique to the BiQ system, is generally approved.
- The principle of requiring the head client to lead the BiQ process by making professional appointments conditional on signing up to specified collaborative behaviours in an agreed Memorandum of Understanding is thought to be as important as actually tracking risks, and so approved.
- The principle of transparent disclosure of barriers to quality from initial client to end-user is generally approved.
- The principle that adopting the BiQ system should specifically exclude adding any additional contractual liability to any of the quality custodians is approved.
- The BiQ's three-part definition of quality is generally approved.

Future development

Although the system is functional, feedback from the pilot revealed that there are too many different procurement routes, project sizes, client types, building typologies, construction methods, and sectors involved for one size to fit all. Also, 'process fatigue' inhibits its adoption. To fulfil its promise, the system needs to be developed further.

1. Integrating processes with digital technology

As a bolt-on process, the connection between the BiQ system and all the other processes involved in development is an obvious weakness. In particular, the current system's success depends entirely on the quality targets having been formally and comprehensively expressed and remaining up-to-date.

Supply-side construction professionals (including surveyors, architects, engineers, contractors) have very little capacity to apply new bureaucratic processes on top of their already heavy administrative burdens. This is especially true if the new process substantially duplicates protocols that they already have in place for other purposes.

The BiQ system will only gain traction if it is useful, easy to implement, does not add to workload, and minimizes duplication. The BiQ Working Group anticipates that smart digital technology can overcome this issue, perhaps by integrating overlapping in-house QA systems to automate the quality-tracking process. Indeed, there is also scope for digital technology to integrate the BiQ system with standard project management software, the DQI and Soft Landings systems, and possibly other procedures such as those involved in meeting BREEAM, WELL and other standards. Finally, putting all this data in the cloud so that it is accessible online will unlock the full usefulness of the system, allowing easy sharing, fluid updating, and full information analysis.

2. Developing the evidence base for predictive metrics

Although the BiQ three-part definition of quality is generally approved, feedback included some reservations. Not all parts of the definition can be adequately measured, let alone predicted, and so the evidence linking risk indicators to risks is unverified and difficult to track. Currently derived from the consensus opinion of experienced professionals, the indicators are not regarded as properly validated or capable of being weighted, and there is not always evidence to guide how risks should be rated.

If the construction industry has the will to overcome this significant limitation, they must establish practical new predictive metrics, perhaps by conducting or funding research. To do so, professional designers will have to carry out post-occupancy evaluations and user satisfaction surveys to collect consistently formatted data. Similarly, the PI insurers and warranty providers must disclose consistently formatted data about disputes and claims. Only then might the data be analysed, likely causes of quality be detected, predictive metrics established, and benchmarks set.

3. Educating and wooing clients

The current BiQ system depends critically on leadership from the head client. Feedback from the pilot indicated that supply-side construction professionals do not feel that they have enough influence on the head client to persuade them easily to adopt the BiQ. Any future development of the system must make a concerted effort to promote its benefits directly to the client body.

Challenge of our generation

The quest to improve the quality of outcomes in the construction industry has convincing economic, social and moral force. However, we know from decades of abortive diagnosis (from the Latham Report onwards) that the problem is resistant to easy answers and too complex to be tackled by any one section of the fragmented supply-side by itself. Instead, it behoves the construction industry to collaborate as one to solve it collectively.

There are currently several isolated attempts to fix the problem of quality and value in the construction industry, including the CLC's Procuring for Value work stream, the Design Quality Indicators, i3P's collaborative innovation activity, the CIOB's Construction Quality Commission, the Get It Right Initiative, and the FMB's licensing proposal.

More generally, the strides being made in alliancing contracts, integrated project insurance, BIM, and modern methods of construction all offer notable hope for improvement in the quality of outcomes.

Finally, under the UK Construction Sector Deal, there is currently a publicly funded effort to transform construction through innovation, with the recent opening of the Construction Innovation Hub, supported by the Centre for Digital Built Britain and the Manufacturing Technology Centre.

The time is ripe to coordinate all this effort, resource and good will to answer the challenge of our generation: how can we fix the gaps in our knowledge about quality for the long-term benefit of the construction industry, its clients, and society as a whole?

This report will set the agenda for a proposed quality summit to be held at UK Construction Week in October 2019.

In parallel with the BiQ work, the CIC have been preparing for an update of the Design Quality Indicator (DQI) and its sector specific applications. They have identified different strengths in a range of tools including the Quality Tracker, Soft Landings, and the CLC's "Procuring for Value" initiative. There are some shared ambitions and gaps too - for example digitalisation, incorporating the findings of the Hackett Review and efficiency of use. As the representative body for organisations working in construction sector, the CIC are about to invite the owners / curators of these tools and other representatives to join a steering group to explore how the strengths could be combined, and whether joint working could help to meet ambitions in an efficient and cost-effective way.

