construction productivity taskforce

Design for Construction Productivity: Paper 2
Overcoming the Fractured Design Process

The design process is the catalyst for setting a project on the early course to improving construction productivity. It is also the time when the widest range of expertise is engaged, and if not managed properly, can become the point when the fragmentation of design objectives begins. Misaligned appointments, unclear responsibilities and inconsistent priorities create fractures and gaps long before a project reaches site, and by the time those fractures surface as cost or delay, they are left for the client and the contractor to solve.

This is not a question of capability, but one of unity and continuity. The industry has no shortage of skilled designers, specialists and contractors. What it has been lacking is a consistent mechanism for bringing together these specialists, phase by phase, bound together by the problem-solving connective tissue that holds a design process together from inception to occupation. Across the Construction ProductivityTaskforce's Design for Productivity workstream, four recurring issues emerged as the points where that connective tissue tends to fail:

- **Fragmented project set-up**
- **Discontinuous information management**
- **Late specialist involvement**
- **Poor handover and feedback loops**

Each is solvable. None is solved by accident.

The industry is perpetuating an increase in discipline specialism, resulting in roles and scope becoming ever more niche. Pressure is growing to appoint the right team composition that can hold these specialisms together and bridge the fields of expertise. The challenge is exacerbated as designers and specialists are routinely appointed at different phases, to different scopes, with responsibility boundaries that are at times assumed rather than agreed.

Two tools, used properly, can correct this. A Project Success Charter, consistent with the aims of the Private Sector Playbook, should align objectives and risk allocation, define decision pathways and reinforce continuity as new parties join, rather than resetting expectations each time. That charter only works if it sits alongside a fit-for-purpose Design Responsibility Matrix to work as the connective tissue, established from Stage 1 and aligned to programme and level of detail, defining not just who is responsible but the precise point at which that responsibility transfers. The industry needs an adoptable standard for this. A DRM that nobody updates after appointment is not a record of responsibility, it is a record of where responsibility used to sit.

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Information management tells a similar story. BIM is still too often treated as a tool for producing drawings rather than as a cradle-to-cradle data environment that should outlive any single design stage. With the ever-expanding range of expertise across the life of a project, BIM is yet another connective tissue holding together the strategies to improving construction productivity. Adopting ISO 19650 standards within a genuinely connected Common Data Environment would establish a single source of truth that survives changes in personnel and consultant teams, provided the industry invests in the upskilling required to sustain it and agrees clear information needs by discipline.

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Done well, this also opens the door to AI-assisted compliance checking, clash detection, and real-time cost and carbon assessment, none of which is possible while data fragments along the same lines as responsibility does.

Specialist input can, and must, be sought after and integrated into the early design process. Engaging trade specialists, particularly on tall or complex buildings, brings a robustness to design decisions that impact buildability, logistics and key technical challenges, which ultimately influence productivity on site. Bringing specialists in at RIBA Stage 2 or 3, with a contractually robust methodology that gives them the security to share insight openly rather than defensively, consistently improves coordination, cost certainty and programme reliability. The Building Safety Act is returning the industry to a commitment to design completion prior to works commencing on site, and specialists are ready to contribute to bridging that gap between design and construction.

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Future papers will build on this principle through practical case studies demonstrating how early contractor and specialist engagement can deliver measurable savings across products, installation and labour hours.

The final fracture sits at handover. Soft Landings remains widely treated as optional, despite being one of the most powerful tools available for improving the construction productivity of the next project, not just the current one. Whether this handover occurs between early stage designer and later stage designer; from tender phase to post-tender phase, between designer and contractor, or between contractor and owner; if done properly, it is not paperwork, it is knowledge transfer. During the design phase, it is a structured pre-handover process from one party to another to share how the building has been designed, how design decisions have been made, and what opportunities are still worth exploring, particularly when those opportunities can lead to improving construction productivity.

Paper One argued that the opportunity to positively influence construction productivity begins at design. The corollary is this: where design fractures, that fragmentation ripples through everything that follows it. None of this is inevitable. Project set-up, behaviour, information and feedback are all within the industry's control to fix, and fixing them does not require new technology so much as new discipline. The Design for Productivity workstream invites industry leaders to test these provocations against their own projects, adopt what works, and help close the fractures before they open.

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The Design for Productivity Workstream

The Design for Productivity workstream is a cross-industry collaboration of experts from design, construction, engineering, and academia, focused on how early design decisions can unlock productivity across the construction lifecycle through practical, scalable approaches.

The Construction Productivity Taskforce

The Construction Productivity Taskforce (CPT) is a cross-industry group working to improve productivity across the UK construction sector through actionable insights and collaboration.

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