Get It Right Initiative

A Guide to Improving Value by Reducing Design Error

Synopsis – 13 key recommendations – July 2018

Foreword

Members of the Get It Right Initiative, from across all disciplines, have collaborated to create this design guide: a set of thirteen principle recommendations to improve value by reducing error, that can be applied to any project, particularly at its commencement and during early design stages.

The purpose of this guide is to share knowledge across the Industry as to best practice when approaching projects with an aim to reduce error and increase productivity. It does not purport to be a ground-breaking report. It is a useful review and reminder of the key techniques that can be applied. The challenge is to apply these techniques in a consistent manner and to ensure that every project seeks to carry out these recommendations as a matter of routine. It will take determination and leadership to address them all.

The guide does not suggest preferred forms of procurement or contract to implement the recommendations, as experience has shown that with the right leadership, best practice can be delivered regardless of contract.

A key theme that features throughout these recommendations is to stand back, analyse the situation and develop a consistent plan, and once that plan is in place make sure it is adhered to, or allowed to flex as situations change.

We hope that this synopsis provides you with a useful tool to support the design process and we aim to deliver the full detailed guide this Autumn. Your suggestions for improvement are welcomed, so please email us your feedback which we will take into consideration for the full guide and its subsequent updates.

We would like to thank the dedicated organisations who participated in this work.

On behalf of the Get It Right Initiative

Tom Barton
Executive Director

Recommendations

1 **Culture:** Getting the team culture right – 'Mission Command'

It is recognised that the delivery of projects is enhanced, and the number of errors reduced when there is the right 'culture'. So, what is the right culture and how is it to be achieved? Contracts determine the nature of projects and certain forms of contract are designed to "enhance" the right culture but in the majority of cases projects are procured using "non-collaborative" forms of contract. The Industry needs to develop a collaborative culture of working regardless of the form of contract.

One way of solving this issue and creating the right culture could be to adopt the military solution of 'Mission Command'.

> **Every project needs a clearly defined intent, a consistent focus on outcomes and the project team to work seamlessly together and adopt the process of back briefing at every stage. The right culture is a collaborative one.**

2 **Increased Investment:** Value from increasing investment in design fees

There is a multiplier effect resulting from the level of investment in design. Additional early investment will more than repay itself. Conversely reducing investment in design will almost certainly adversely affect out-turn costs and also have adverse technical outcomes leading to even greater costs or legal outcomes.

> **Increased investment in design reduces project error.**

3 **Robust Approach:** Progressing the design process

A clearly defined and well managed design process will mitigate the creation of errors. It requires the project team to adopt some, or ideally all, of the following:

- Clearly defined roles and responsibilities
- Design delivered to an agreed plan of works
- Strong leadership
- Well prepared brief
- Change control
- Sufficient time allowed for design evolution
- Plan for client review and approval
- Peer reviews

> **A robust design approach should be adopted at the beginning of the project and involve key members of the project team.**

Collaboration: Working with partners transparently, cooperatively and collaboratively

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A collaborative working environment provides a team approach to getting things right. Each party does their best to help others with responsibilities and to be open about areas where they themselves are struggling.

Collaboration is possible with all forms of procurement and contract terms should set out the intent as to how organisations work together.

Pre-project commencement workshops on site between senior representatives and the circulation of a 'Partnering Charter' are beneficial regardless of contract. The same can be said for the ambition to foster a spirit of partnership in completing the project for the common good. Partnering encourages cooperation and openness between Client, Design Team and Contractor.

> **Every project will benefit from collaboration, and it is up to leaders across all disciplines to enable collaboration to take place. The adoption of a Partnering Charter should be a key goal at the start of any project.**

Plan: Project specific plan of work

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A comprehensive project specific plan of work for design across all disciplines is a key component of the appointment process and should be established and agreed before any appointments are finalised. Key consultants need to be involved in defining this plan, and it should include the scope of design for supply chain members who will have design responsibility. Whilst a plan of work can be aligned to any of the available standard plans it needs to be specifically crafted for the project in hand.

> **Develop a comprehensive project specific plan of work.**

Brief: Needs and requirements of the brief

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A well prepared brief will minimise design changes and their knock-on construction errors with negative cost and programme implications. The brief should define project objectives and aspirations and be clearly communicated to the project team. The briefing process is fundamental in defining client needs and expectations and requires sufficient time to be completed in collaboration with relevant parties. The brief should meet the following guidelines:

- A comprehensive brief will minimise design changes thereby reducing construction errors and their corresponding cost and programme implications
- An effective brief defines project objectives and aspirations and should be supported with a vision statement
- Sufficient time dedicated to defining client needs and expectations in collaboration with all relevant parties
- The project team needs to ensure the brief deliverables reflect, and can adhere to, internal quality assurance procedures
- The development and delivery of the brief needs to be appropriately planned

> **The briefing process should be carried out comprehensively, within an adequate timeframe, and involve the key members of the project team.**

7 Information: Coherent and correct design

A rigorous process when planning the production of design information is needed and it should be based on the following:

- Agree the correct information (who, what, why, where, when)
- Confirm how to communicate the information clearly
- Ensure outputs are reviewed before being issued to spot potential errors and/or refine the design
- Check outputs follow the agreed processes for creating and communicating information

Correct and well communicated design information is integral to successful communication between designers, clients and contractors.

8 Stakeholder Management: Managing and informing everyone involved

Stakeholder management is integral to the design and delivery of all projects and indeed multiple researchers have cited inadequate stakeholder management as a cause of project failures. Construction projects are no exception. Stakeholder management is the continuous, iterative process of identifying, analysing and engaging those with an interest in the project.

Successful stakeholder management will build and maintain support for a project provided that the outcomes are clearly explained to, and understood by, the stakeholders. Time invested in understanding stakeholder needs and the client's sign-off and approval process is never wasted.

9 Milestones: 'Give Get' as a tool to encourage behaviour

Milestones are an important tool for managing projects. It is vital that milestones are crafted in such a way that organisations who achieve them receive some type of gain: 'Give Get'. Professional appointments can be used to encourage beneficial behaviour across disciplines and project milestones can be utilised as a tool to achieve this ambition.

Carefully crafted and developed milestones are an important tool for encouraging performance and collaborative behaviour within the project team.

10 Guiding the Design Team: Valued input from an Independent Principal Consultant

Appoint an Independent Principal Consultant to have accountability and to be the 'controlling mind'. This may not necessarily be one person and depending on scale and complexity could be a team of people with the requisite skills and experience to manage the risk and ensure success.

An Independent Principal Consultant as the 'controller' is critical to ensure that design related communications are robust, co-ordinated, and well managed.

Opening up and Closing Down: The value of not rushing ahead between stages

11

Design change is a significant cause of error. In many instances design change becomes necessary because the important thinking and decision-making processes have not been rigorously applied at the appropriate stage in the design process. If each stage of the design process is reviewed and approved to be 'closed down' before 'opening up' the subsequent stage, opportunity for error is diminished.

'Opening-Up' and 'Closing Down' project stages allows for all creative thinking and key decision making to be carried out and completed in good time prior to preparation of subsequent production information. This reduces the necessity for change and hence the opportunity for errors.

Contractor Input: A sense check from the contractor's perspective

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Design teams often involve contractors, both formally and informally, to advise on the appropriateness of the design in terms of delivery, buildability and performance. In many cases these consultations have not been allowed to take place because of commercial rules particularly those that govern any tender process.

In reality all project design teams, regardless of the form of contract or procurement, would benefit from contractor advice. If this was encouraged, it is likely that errors would be reduced.

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Handover: Passing on the baton successfully

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The consequences of not communicating design intent adequately to specialist designers and sub-contractors can be significant and therefore the following should be considered:

- Provide clarity as to the purpose of design information when it is issued
- Carefully and clearly define design responsibilities for all parties so that there are neither gaps nor duplication which create muddled thinking and unnecessary effort
- Ensure that relevant information is passed on rather than responsibility
- Enable an effective passing of the baton by organising reviews with specialist designers and sub-contractors

The communication of design information should be relevant, convey the design intent and clearly presented to all necessary recipients.

Getting the Design Right

Improving Value by Reducing Design Error
13 Key Recommendations

1 Culture

Every project needs a clearly defined intent, a consistent focus on outcomes and the project team to work seamlessly together and adopt the process of back briefing at every stage. The right culture is a collaborative one.

2 Increased Investment

Increased Investment in design reduces project error.

3 Robust Approach

A robust design approach should be adopted at the beginning of the project and involve key members of the project team.

4 Collaboration

Every project will benefit from collaboration, and it is up to leaders across all disciplines to enable collaboration to take place. The adoption of a Partnering Charter should be a key goal at the start of any project.

5 Plan

Develop a comprehensive project specific plan of work.

6 Brief

The briefing process should be carried out comprehensively, within an adequate timeframe, and involve the key members of the project team.

7 Information

Correct and well communicated design information is integral to successful communication between designers, clients and contractors.

8 Stakeholder Management

Successful stakeholder management will build and maintain support for a project provided that the outcomes are clearly explained to, and understood by, the Stakeholders. Time invested in understanding stakeholder needs and the client's sign-off and approval process is never wasted.

9 Milestones

Carefully crafted and developed milestones are an important tool for encouraging performance and collaborative behaviour within the project team.

10 Guiding the Design Team

An Independent Principal Consultant as the 'controller' fills a critical role in ensuring that design related communications are robust, co-ordinated, and well managed.

11 Opening & Closing Down

'Opening-Up' and 'Closing Down' project stages allows for all creative thinking and key decision making to be carried out and completed in good time prior to preparation of subsequent production information. This reduces the necessity for change and hence the opportunity for errors.

12 Contractor Input

In reality all project design teams, regardless of the form of contract or procurement, would benefit from contractor advice. If this was encouraged, it is likely that errors would be reduced.

13 Handover

The communication of design information should be relevant, convey the design intent and clearly presented to all necessary recipients.

The Get It Right Initiative welcomes your feedback on this design guide. Please email your comments to info@getitright.uk.com and include you company name and job title.

In accordance with GDPR legislation your email to us indicates your consent to GIRI collecting your name, email address, company name and job title. For more information on our privacy policy and how we protect your data please visit:
https://getitright.uk.com/privacy/

The Get It Right Initiative would like to thank all the organisations listed below for their contribution to this design guide: