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Better issue resolution for conventional construction projects

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Introduction

Project owners lament the conventional approach to problems that arise on construction projects – where the first response of the other participants is to blame someone else and seek to protect their commercial position, rather than proactively look to solve the problem in the way that will achieve the best outcome for the project.

Some forms of Collaborative Contracting, such as Integrated Project Delivery (IPD) and alliance contracting, overcome this issue by structuring the remuneration arrangements in a way that financially motivates non-owner participants to act in the best interests of the project.

But what if the owner wants the simplicity and certainty of a fixed lump sum price? How can a project owner motivate non-owner participants to proactively look for ways to solve the problem, on a best for project basis, in a conventional contracting environment? This article explains how.

The problem

Consider the following common scenario:

- The project owner engages a design consultant on an hourly rates basis to prepare the detailed design for a building.

- When the design is finalised, the owner calls for tenders from construction contractors (builders) to construct the building in accordance with the design for a fixed price. The owner enters into a conventional fixed price, fixed time construction contract with the successful tenderer. For ease of illustration, let's say the contract is for a fixed price of $100, which includes an expected profit of $10. LDs for late completion are $1 per day.

- When the builder is putting in the last of the foundations, it hits hard rock. No one expected there to be hard rock, so the rock is an unforeseen or latent site condition. It will take 2 days to dig through the rock, which will delay completion by 2 days. The builder's costs will also increase by $3.

- How this impacts the commercial position of the owner and the builder depends on how the construction contract allocated the risk of latent conditions:

  - **Builder's risk:** If the construction contract allocates the risk of latent conditions to the builder, the builder will incur additional costs of $3 and LDs of $2, which will reduce the builder's profit from $10 to $5. Let's assume that the additional costs and/or loss of revenue that the owner suffers as a result of the 2 day delay to completion come to $5, so it suffers a loss of $3 after the LDs are taken into account. So, this scenario results in a total loss of $8, $5 of which is borne by the builder and $3 by the owner. (Scenario 1)

  - **Owner's risk:** If the construction contract entitles the builder to extra time and money for latent conditions, the owner is looking at a $3 cost overrun and a 2 day delay to completion. Again, the additional costs and/or loss of revenue that the owner suffers as a result of the 2 day delay come to $5, so the total loss for the owner will be $8. Again, a total loss of $8, but all of it is borne by the owner. (Scenario 2)

But what if a change to the design of the building for which the owner pays $1 to the designer (to cover the additional costs the designer incurs in adjusting the design) and $1 to the builder (for the additional construction costs associated with the change to the design) would avoid the need for this foundation, and not result in any delay to completion?

At first blush, this looks like a potential win-win-win outcome:

- The designer and the builder are compensated for the additional costs that they incur in helping the owner mitigate the impact of the latent condition; and

- The total loss is reduced from $8 to $2, all of which is borne by the owner, if the owner bears latent condition risk.

- Even if the owner has transferred the risk of latent conditions to the builder, this scenario results in a better outcome for the owner, as the owner's loss is now $2 rather than $3.

But scenario 3 is not really a win for the designer or the builder:

- Although the builder is compensated for the additional construction costs, and still makes a profit of $10, this profit is now on work worth $91 dollars, rather than $90, so the builder suffers a slight reduction to its profit margin in percentage terms;

- Likewise, the designer has done more work for the same profit, so its profit margin in percentage terms has been reduced.

But the owner has the capacity to turn it into a win-win-win outcome for all (scenario 4) by sharing some of the gain it makes (by way of a reduction to the owner's loss) with each of the designer and the builder to restore or even increase their profit margins in percentage terms. A payment of $1.12 to the builder for the additional work would actually increase its profit margin.

	Scenario 1: ***Latent condition risk allocated to builder***	***Scenario 2:*** ***Latent condition risk allocated to owner***	***Scenario 3:*** ***Pro-active risk mitigation via design change***	***Scenario 4:*** ***Scenario 3 but owner shares gain with others***
Designer	No change	No change	**Loss** Decrease in profit margin %	**Win** restore or increase profit margin %
Builder	Extra costs: ($3) LDs: **($2)** Loss: ($5)	Extra costs: ($3) Extra payment **$3** Net loss/gain: Nil	**Loss** Decrease in profit margin %	**Win** restore or increase profit margin %
Owner	Extra costs: ($5) LDs: **$2** Loss: ($3)	Extra payment ($3) Delay: **($5)** Loss: ($8)	**Win** loss is reduced to $2	**Win** Reduction in loss

The problem is that conventional contracts don't encourage scenarios 3 or 4.

In scenario 1, because the risk has been allocated to the builder, the builder will probably just get on with the work. The builder will be obliged to notify the owner of the expected delay to completion, but the opportunity for the owner to reduce its loss by exploring a change to the design will probably be lost. Unless the owner immediately offers the designer and the builder the opportunity to increase their profit margin, there is nothing motivating the designer or builder to explore a design change solution. And it is most unlikely that the owner would promise to increase its profit margin, as the owner doesn't yet have the information to work out that a win-win-win outcome is even possible.

If the designer and builder were parties to a gainshare/painshare regime, under which they share in the pain suffered by the owner in scenarios 1 and 2, then they would be motivated to explore scenario 4, but conventional contracts don't include any such regime.

In scenario 1, the builder will have an obligation to mitigate the delay and additional costs, but it doesn't need to explore scenario 4 to discharge this obligation.

Accordingly, if the owner wants the risk profile and legal certainty that conventional contracts provide, it needs to find another way to motivate the designer and the builder to explore a scenario 4 outcome. One way the owner can do this is to make the builder's entitlement to claim extra time and extra money conditional upon the builder proactively exploring ways of mitigating the owner's risk. But this will only work where the builder has such an entitlement (i.e. scenario 2, but not scenario 1).

This is the approach that the Australian Department of Defence is taking with some of its contracts. It calls the model PRISM – or the Proactive Risk and Issue Settlement Model. At its heart, it seeks to drive the search for win-win or scenario 4 outcomes by making the entitlement of a non-owner participant to claim extra time or money conditional upon the non-owner participant:

- immediately notifying the owner of the potential issue; and
- participating in discussions with a view to reaching agreement on an alternative approach to the dealing with the issue that is beneficial to all.

Put another way, it makes pro-active risk mitigation compulsory for a non-owner participant that wants to preserve its entitlement to extra time and/or money

The approach applies equally to other risks that entitle a non-owner participant to claim extra time or money from the owner, such as delays caused by the owner, owner initiated variations, changes in law and the like.

This approach is one that sophisticated project owners might wish to consider adding to their conventional form contracts.

To learn more about how Collaborative Contracting can be used to achieve scenario 4 outcomes, view our recent report, 'Collaborative Contracting'.

Let's talk

For a deeper discussion of how these issues might affect your business, please contact:

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