Procurement Strategy
in Construction Projects

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ABSTRACT

Construction projects contribute a significant percentage to the gross domestic product of most nations. Yet it is an industry mired in uncertainty of outcome. Insufficient consideration at project inception of the procurement strategy has led to the adoption of inappropriate contract structures and provisions. The case is made out for a greater investment of time and effort at the outset into evaluating project objectives, surrounding circumstances and each factor’s impact on the procurement of the project in order to derive a procurement strategy that is suited to the desired outcome. The consequences of these failures are considered, as are examples of matters which deserve consideration, together with the interplay of such considerations. Every project, big or small, needs a procurement strategy; such strategies are even more crucial for large, complex developments often encompassing multiple projects. Euphoria at project inception does not see projects through to completion; a sound procurement strategy does.

I. INTRODUCTION

It is said that humans are an optimistic species, and this characteristic is never more evident than in the construction industry. Time and time again, projects commence with the euphoria of ‘don’t worry it will be alright’. And with that approach comes the attitude that lawyers are surplus to requirements at the start of a project. Developers, contractors and consultants alike almost always consider that everything will be alright and the presence of lawyers will only cause undesired complications.

However, even where lawyers are introduced at what appears to be an early stage of a project, this is still usually not sufficiently early. All too often they are called in to draft conditions of a contract or amendments to standard form contracts, which everyone assumes to be a straightforward, simple and standard exercise after all the decisions have been made. When asked what the procurement strategy is, a blank look is often the reply. ‘What is that?’ ask some, ‘we don’t need it’, say others.

Real life experience, however, dictates that projects which launch into the implementation stage without a thought-out procurement strategy encounter problems which are not catered for. It is the ‘square peg in a round hole’ syndrome, where the

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intentions and desires of the project developer are not reflected in the contract, and the contract is not equipped to deal with what actually happens. Often, this is because the contract used is an off-the-shelf standard form with scant consideration of how it fits the specific requirements of the project. Other times it is due to the ‘we always do it this way’ mentality.

So what should be done? Thought and consideration are poured into the architectural design and how stunning the development should be; great emphasis is placed on the budget and achieving low bids. However, most of the time little thought is given to how the budget can be met with the correct procurement strategy – a procurement strategy that enables the project to be procured and administered in a manner that is commensurate with the project requirements and project restrictions. For example, in construction projects it is common for changes to the works to be instructed, such changes commonly referred to as variation or change orders. These changes are usually due to amendments to design, adaptation to prevailing site conditions or perhaps compliance with statutory requirements. Therefore, the strategy should recognise that variations will be instructed and put in place mechanisms to deal effectively with the variations.

A classic example is the rush to use lump-sum contracts with little breakdown of the lump sum price, even though the design is still undeveloped or where it is envisaged that there will be numerous variations to be instructed. The certainty associated with a lump sum price simply does not sit well with the uncertainty of developing an undeveloped design or the instruction of numerous variations. Even if the thought process of developing a procurement strategy results in the choice of a standard form contract, it does not matter; what matters is that it has been thought through and what is suitable or not suitable, duly considered.

II. PROCUREMENT STRATEGY

What are the factors that should be thought through? It is helpful to begin with the objectives of the project and the Time, Cost, Quality triangle.

![Figure 1](image-url)
If X marks the spot, where is the desired X for the project? What is the priority for the project? Everyone will say they want all three objectives to be the top priority – but the reality is that all three objectives are mutually exclusive of each other. The closer X is to cost, the further it will be from time and quality. Thus, until charted out, such competing priorities for the project are usually not thought through, with talk being about achieving top quality in a short time at a low cost.

What about risk allocation? Everyone will sing in unison, ‘pass all the risk to the contractor of course’. However, if one were to think it through, would that achieve the project objectives? If the contractor does price for taking on all the risk as he should, then the bids should come in higher. Chances are, however, that some contractors will not price for taking on all the risk, and bid lower than their competitors. At this stage one may feel vindicated that passing on all the risk to the contractor did not result in higher prices. That may be true to start with, but again, thinking this through, nobody gives something away for nothing; a contractor who has priced for no risk will surely seek to recover his costs, if not profit, when the risk is realized. Attempts at recovery will likely come in all ways, sneaked in under disguise if needed. Common situations of such stealth attempts are claims for variations with new and higher prices in circumstances where there is no fundamental right to variations; others may be claims for acceleration of work and / or loss of productivity in circumstances where such claims would normally not be made nor allowed. All this skulduggery distorts contracts and their intent, and by doing so, creates an environment of uncertainty. So how did the certainty of a lump sum price end up with this uncertainty?

III. SOME PROCUREMENT STRATEGY CONSIDERATIONS

No construction contract can be drafted for a guaranteed outcome; at best it can be drafted to provide mechanisms to enable a more certain outcome. A preferable contract therefore anticipates the types of issues one is likely to have to deal with on the project, and tailors provisions to cope with them. A common example of trying to achieve certainty with an unsuitable contract is using a building contract with no provisions for soil conditions for substructure works where soil conditions are a major, if not the most major, factor. In such a case no risk allocation for soil conditions would be made, and as such risks arise, as they do, there are few tools to deal with the claims and disputes that inevitably arise.

There are myriad other things that one should consider when developing a procurement strategy. One factor to take into account from the outset is whether it is a public or private procurement, given that the objectives of each are very different. Within public sector procurement there are various methods employed, from traditional public works department contracts (be it build only or design and build) to privatisation concessions to Public Private Partnerships (PPP) and Public Finance Initiatives (PFI). In Malaysia, the Project Delivery Partner (PDP) Model has been employed in recent major projects. For each, there are differing considerations.

The nature of the project is also an important factor, with linear infrastructure projects such as road and rail being very different from a shopping mall, which is very different again from a process plant.
Figure 2

Figure 2 is an illustration of some of the matters which one should at least consider at the outset, and each of the matters will in itself branch further down into sub and sub-sub matters, as well as lead to considerations of other related matters. The matters listed in Figure 2 are by no means exhaustive, but are representative of typical considerations for every project, starting with big picture considerations of the nature of the project, to more project specific considerations such as design and construction techniques. For example, procurement of a mass transit rail system by the public sector may not entail too much consideration of how the project is to be financed, assuming it is funded from government coffers. But the life cycle considerations are immense, as they impact the safety and comfort of the ridership, while balancing against the cost of maintenance. From an implementation point of view, one has to consider the impact of the project being a linear project running through populated areas, including considerations of interfaces with existing infrastructure and privately-owned property; as well as interfaces with the various packages of the project awarded to various contractors (e.g. trackworks, tunnels, stations). This example calls into play all the matters in the Figure 2 illustration.

Let us utilise one matter by way of example: design. Procurement strategy thinking will have to consider the strength of the design team to be able to produce a design that is suitable for the site and the surrounding environment, and yet achieve the objectives of the project while maintaining the integrity of the budget. The degree of completion of the design at the time when the contract is let has a significant impact on the choice of contract, the manner in which the works are to be priced, and ultimately the allocation of
pricing risk as between developer and contractor. The earlier quoted example of a lump sum contract rendered uncertain by the instruction of many variations which cannot be accurately priced is a case in point. A contractor cannot be expected to price with certainty a design which is incomplete, and therefore, by extension, uncertain as to the scope of works. How that design is to be developed and detailed is another factor that weighs into the procurement strategy thinking – should it be better in this case to go on a design-and-build basis, allowing the contractor to take over the design and develop it to fruition for a certain price? But by doing so will the developer lose control of the design and risk ending up with something that was not as desired? Thus to retain control, the developer opts for a build-only basis, retaining control over the design and the designers. By doing so the developer retains the risk of the designers having to deliver the amount of detail as required, on time and within budget. Time, cost and quality are objectives which stretch away from each other and yet they are all objectives a developer strives to achieve.

What, then, of value engineering? An alternative viewpoint to that of the designer, often by a streetwise contractor who has ‘seen it all’ as a veteran builder, is a valuable resource. Constructability may be underrated by designers who may focus on the end product more than the journey to that end product. If value engineering is to be engaged then it will bode well to have the concept and the parameters of what is allowed and not allowed, the approval process and the consequences of approved actions all set out to provide guidance. It is all well and good to declare that value engineering by the contractor is welcomed; but if the guiding principles are not set out then what of the design liability of a design that may now be a shared? How does the contract deal with that shared liability? And how about the cost implications arising from the value engineering, usually a saving? In fact, does the contract envisage value engineering at all, let alone how the cost savings are to be dealt with? The opposing interests will see the contractor seeking to benefit from his great ideas, but the developer will wonder why he has to pay the contractor more than the sum for the work actually executed. If only all of this had been considered and provisions made for dealing with such eventualities in the contract. Instead, uncertainty and argument often prevail.

Interface considerations are regularly considered, but often not in sufficient detail. Each project is usually considered as a whole but in isolation. Such isolation may occur whether it be several projects within a development with shared infrastructure, or a single development in a city centre environment. Even projects in remote areas will have interface considerations. Starting at the very simplest, any project will have an interface even if only to hook up to the electricity supply. But more often, there will be at the minimum, interfaces arising from sectional completions for parts of the project, ahead of final completion of the whole. Larger developments will usually consist of individual projects within the overall development – for example, the project for an airport will consist of projects for approach roads, car parks, main terminal building, apron, runways, fuel farm, air traffic control tower, air cargo centres, maintenance facilities, etc. Within the main terminal building itself one has to deal with ‘mini’ projects, from the earthworks to the substructure, main superstructure, roof, electrical wiring, air conditioning, heating, security systems airside and landside, baggage handling system etc.

It is clear that there are myriad issues in any development, big or small, all of
which weigh on how the procurement of the development and the projects within the
development are to be handled. And although each project is to be considered separately,
they need to be stitched together to form a cohesive and seamless development. One
may claim that this is only needed for large projects and ‘does not apply to my project’.
However, it is submitted that every project, big or small, should consider the procurement
strategy, with less complex projects arriving at the selected strategy easier than larger,
more complex projects.

In a recent case example in Malaysia, the master developer of a large mixed
development undertook to design and construct the supporting infrastructure for the
development. This included roads, parks, car parks and shopping podiums upon which
the towers would sit. In order to do that, almost the entire substructure had to be
completed, which entailed moving earth to fill hollows and to flatten mounds. Into that,
piles had to be driven in order to ensure the stability of multi-storey buildings to be
erected. Car parks had to be constructed underground to cater for the volume of cars
anticipated, which required retaining walls and other underground structures, supported
with electricity supply to power lights, ventilation systems and security. All were planned
properly for construction. However, the financial strategy of the project was for the
towers to be built only when anchor tenants and purchasers were secured. The dilemma
was that en bloc purchasers would then dictate the design of the tower purchased, which
then had direct impact on the substructure design. The master developer was therefore
placed in a ‘chicken and egg’ situation – having to construct the infrastructure ahead of
the towers as was promised, but not being able to do so until the tower had been sold
and the design finalised with the purchaser. The finalised design in turn impacted the
design for the infrastructure and substructure works, which therefore could not proceed
ahead as promised.

The usual response to the example above is ‘yes, but that’s not the case with my
small project’. However due consideration of a procurement strategy upfront is not
the exclusive domain of large projects and large developments. It should be employed
in every project, big or small, public or private. Understandably, the less complex the
project, usually the less complex the considerations and selected strategy. However small
projects may be complex too, such as a small development on a small piece of land in the
middle of the city, surrounded by existing developments and hampered by the crowded
environment in which it sits.

One should never underestimate a project and dismiss the need to consider all
matters upfront to develop a suitable procurement strategy. One does so at one’s own
peril, feeding uncertainty and the greater possibility of disputes.

**IV. LACK OF PROCUREMENT STRATEGY A
FERTILE GROUND FOR DISPUTES**

From the contractor’s perspective, an ill thought-out procurement strategy and unsuitable
contract is fertile ground for dispute. The usual mantra is ‘if the contractor accepted the
risk, then so be it’, and indeed contractors tend to accept the risk because they want the
work. More often than not, contractors will refrain from qualifying their bids because
the invitation to tender states that no qualifications are allowed. However, does that
mean that the contractor will meekly swallow all the losses arising from unpriced and
uncatered-for risks? Highly unlikely. All this does is push the claims for compensation into murky waters where clarity is obscured in favour of finding some way to squeeze a claim in. Now the parties in the project are no longer dealing with issues within defined rules of engagement, but in fact engaging in ambushes and undercover tactics.

Why should this be the case? Why is it that a designated supplier of large pre-cast segments, which require months of lead time for production of moulds and casting to curing, be contracted to supply the segments as it were on tap to be turned on and off at will? The supplier cannot stop production, as he will never be able to deliver when then tap is turned on, leaving him in default of the supply contract. So he carries on casting; but the tap is not turned on for some time, so he has to deal with the problem of storing large numbers of large segments – not something one can stuff into the broom cupboard, but storage that requires large spaces and often purpose-built facilities. One may take the stand that since the supplier signed up for an on-off tap type of supply, that problem is for the supplier to deal with. However, it is submitted that this is an unrealistic stance, as problems which are incapable of being solved will only escalate into disputes. Much as lawyers and arbitrators may love disputes that pay substantial fees, they are not in the greater interest of the project nor the project budget. Engaging in lengthy, complicated dispute resolution processes only adds to the time and cost of completing a project successfully.

Unrealistic expectations are part of the euphoria of a project start-up. Such expectations are usually fuelled by contractors who come in with bids even if the tender requirements and contract conditions are unrealistic. Contractors are perhaps even more optimistic than developers about their own capabilities to overcome problems. However one thing is certain: when the euphoria wanes and the disappointing reality of the project sets in, the cracks appear, claims are made and rejected, financial issues arise and the wheels start to come off. Stop-gap measures such as paying suppliers and sub-sub contractors directly may alleviate some of the problems of keeping the work going, but often are no solution to the core issues.

Where does the start-up euphoria lead us? Disillusionment follows as reality asserts itself, and optimism is replaced with cynicism. Sentiments of ‘don’t worry, it will be alright, I will make sure you are taken care of’ vaporise and are replaced with ‘your claim is rejected – no additional money, no additional time’ and ‘if I don’t get paid how am I supposed to do the work?’ Unrealistic expectations are not the purview of developers only; if anything, contractors are even more optimistic, expecting ‘fairness’ out of tough, one-sided contracts they have signed up to. Contractors often ignore the legal aspects and indeed fail to read the contract, thus not even realising what they are signing up to. And when required to do more, to spend more time and money to get the work done, they are indignant that they are not accorded due compensation.

Disillusionment and indignation are music to the ears of dispute lawyers. But is that the right way to run a project? Surely the aim is to avoid disputes, with dispute resolution being only a last resort.

Arbitration is the dispute resolution process of choice in construction contracts. Once touted as an alternative dispute resolution process, arbitration has evolved into something so mainstream that alternatives to the alternative are now deemed more
fashionable. With that also comes increased procedural issues, time and cost. One will notice a common topic in arbitration conferences to be how to control costs from spiralling – because they often do, keeping armies of lawyers, juniors, experts, arbitrators, legal clerks, and transcript writers busy. Finally, there is the client of course – spending significant amounts of senior management time and money in order to pursue time and money which they consider they should have been given during the course of the project but were not. Having to spend all this time and money upfront in funding the arbitration, with no guarantee of the outcome as favourable or otherwise, makes it all somewhat of a gamble.

Malaysia is fortunate to have a statutory adjudication regime for payment disputes, with the introduction of the Construction Industry Payment and Adjudication Act 2012 (CIPAA). Employment of this statutory adjudication by unpaid parties in construction contracts has gained pace and continues to gain pace. This allows for speedier resolutions with ‘rough justice’ being dispensed. But, however well this regime of statutory adjudication works to unlock cash flow, it does not address the uncertainties that arise from unsuitable contracting strategies; it merely provides another avenue to resolve the disputes arising.

So why should the outcome for work done, and time and money spent, in completing a project, be a gamble? Granted that there is no certainty in anything, let alone certainty of outcome in the operation of a contract in the dynamic environment of a construction project, however the case being made here is that the outcome ought to be governed by a set of rules that determines a sensible outcome.

V. CONCLUSION

Consideration of procurement strategy for projects is often overlooked, but it is a keystone to every project and ought to be undertaken without exception. Even if the consideration results in a simple procurement strategy that could be said is how things are usually done, and therefore a wasted effort, the thought process would have taken place and matters that required consideration or special attention would have been highlighted in the thought process. Without that thought process taken up front, it would otherwise be taken during the course of the project in reaction to issues which arise on an ad hoc basis, requiring ad hoc solutions, and promoting uncertainty of outcome.