



Guidance on the operation of target cost contracts and pain share/gain share mechanisms

Purpose

1. This construction policy note (CPN) publishes guidance on the operation of target cost contracts and pain share/gain share mechanisms.

Key message

2. Good practice which incentivises both parties of a construction contract to work constructively towards the same ends has the potential to be a particularly strong driver of innovation.

Target audience

3. This note is intended for all those contracting authority staff involved in the planning and delivery of public works projects.

Outline of guidance

4. The [Review of Scottish Public Sector Procurement in Construction](#) observed that the construction industry has a background of confrontational attitudes between client and contractor. It did however, also identify evidence of good practice which incentivises both parties to work constructively towards the same ends. One way in which this was achieved was by the use of so-called “pain share/gain share” arrangements, whereby the “pain” of cost overruns is shared, as is the “gain” of savings.

5. The guidance, which is attached at Annex A, provides contracting authorities with advice on when and how to use target cost contracts and pain share / gain share mechanisms.

Dissemination

6. Please bring this construction procurement note to the attention of all those staff involved in the procurement or delivery of construction activities.

Contact

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Introduction

1.1 The review of Scottish Public Sector Procurement in Construction recommended that Specific guidance should be developed to help contracting authorities to decide when and how to use painshare/gainshare arrangements. This guidance seeks to provide contracting authorities with an overview of the operation of target cost contracts. It identifies a range of issues to be considered if such a strategy is to be adopted. It does not, though, seek to promote target cost procurement nor to recommend any specific forms of contract.

What is a target cost contract?

2.1 The basic principle is that a target cost is agreed and then the contractor is paid for the work undertaken on a cost reimbursable basis. The payments to the contractor are made on the basis of the contractor's accounts and records, provided to the employer for inspection on an "open book" basis.

2.2 At the end of the project, the final target cost – which is the original target cost plus the effect of any employer changes and employer risk events – is compared to the actual cost expended by the contractor. If the actual cost is lower than the target cost, a saving has been made, and this is shared between the parties on a pre-agreed percentage basis – referred to as "gain-share". Conversely, if the actual cost is higher than the target cost there is an over-spend, again shared between the parties on a pre-agreed percentage split – referred to as "pain-share".

2.3 The principal benefit of target cost arrangements is their ability to align the objectives of the parties, which helps to create a partnering environment. The contractor and employer are both encouraged to work together to control costs, sharing the risk of over or under spend through the gain-share/pain-share mechanism. The open book approach helps to build trust between the parties, through the sharing of sensitive information by the contractor and the visibility to the employer of the true cost of the project to the contractor.

Setting the target cost

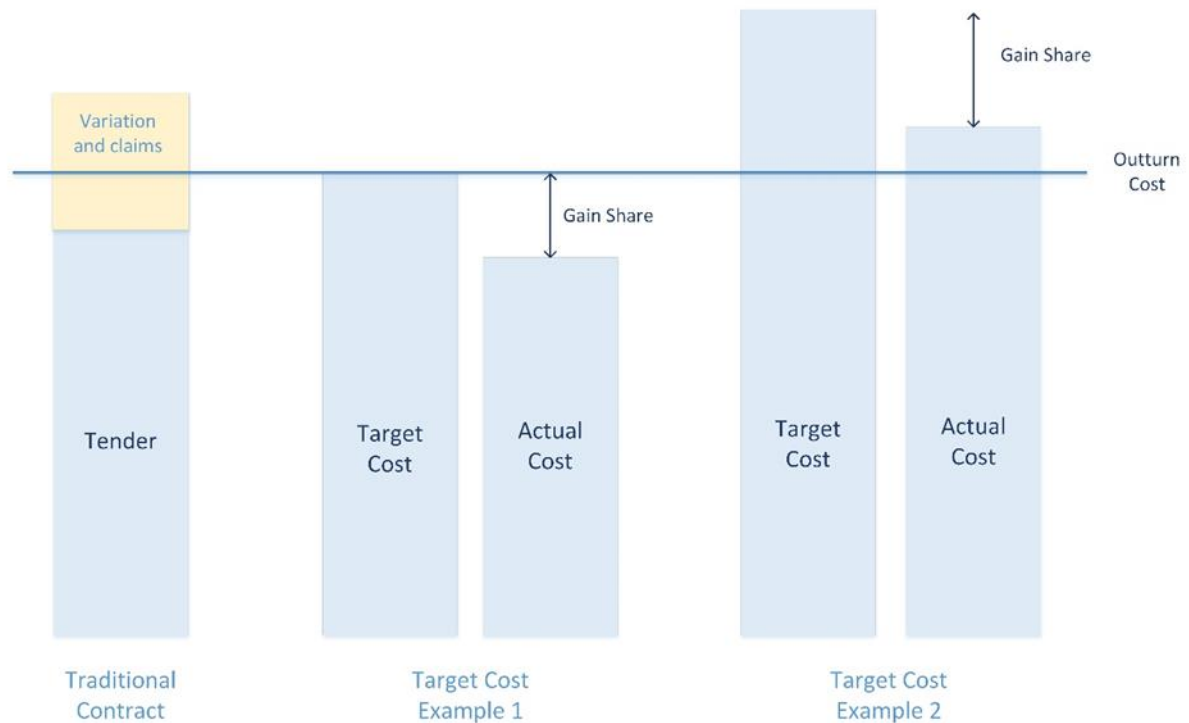
3.1 A target cost should represent a genuine pre-estimate of the most likely outturn cost. Good faith and reasonableness need to be applied to achieve a reasonable degree of accuracy. Good outturn cost historical project data is particularly helpful.

3.2 The target cost can be set via a competitive tender or by negotiation. For this to occur, the project must have an adequate level of completed design. As a minimum this is typically when the scope is fully defined, supported by performance specifications and RIBA 2013 Plan of Work Stage 2 drawings (or 2007 Stage C). The contractor has to be able to understand what it is required to do and the risk it will carry under the contract. The more detail that can be provided the better.

3.3 The phrase "most likely outturn cost" is used because the target cost needs to represent the best estimate of the cost of the project. It is not a tender figure which the contractor believes is low enough to win the work but perhaps not sufficient to

deliver all the works required and at the correct specification. The range of approaches has been well described by Ian Heaphy in his 2011 paper to the Society of Construction Law:

Diagram 1



Note: The horizontal line represents the outturn cost of the project. Each example excludes the effect of project scope changes which increases the target cost.

3.4 The left-hand side of the diagram on page 4 illustrates a traditional contract situation where the contractor has knowingly bid low in order to secure the work. The contractor might then seek to recover this shortfall by pursuing claims for client held risk events, which will also include design development variations, provisional sums and changes to quantities.

3.5 The middle part illustrates a design and build target cost approach set at the most likely outturn cost. The contractor, knowing it has sufficient money and risk allowance in its target cost to construct the works, can now put its efforts in to innovation, creating efficiencies, and delivering savings which it can benefit from through the target cost mechanism. The employer is also saved from time spent defending claims and can contribute to these efficiencies.

3.6 The importance of the target cost being set correctly can be demonstrated by the right hand side of the diagram. In this example the target cost was set too high, above the most likely outturn cost. In this situation the contractor is able to make gain share by simply delivering the project at the likely outturn cost, or perhaps even higher. The contractor has no incentive to make savings and might even be tempted to overspend the realistic outturn cost as it will get paid its actual cost and still potentially demonstrate a saving hence achieving a gain share.

3.7 For a target cost to work effectively it must be set at a level which not only reflects the most likely outturn cost, but also at a level which creates the need for the contractor to achieve efficiencies in order to create gain-share savings.

When should the target cost be fixed?

4.1 There are a number of options which might be adopted. Some considerations are given below:

- As part of a competitive tender process, contractors are invited to indicate the Target Cost. This might be regarded as being contrary to a partnering spirit and it can often lead to a lowest price selection policy.
- A variation on this method is for the contractor to be requested to submit in his tender fixed prices for overheads and profit.
- On most target price contracts it is customary for the Target Price to be fixed after tenders are received but before the contract is signed.
- On the majority of contracts a value management or value engineering exercise is undertaken. If the target cost is fixed before the first major value engineering exercise has been undertaken it is less challenging for the contractor to achieve an outturn cost for the project within the target cost. Savings from that first exercise would also then benefit the contractor through gain share.

Adjusting the target cost

5.1 It is essential that the target cost is maintained and that changes are agreed as soon as they occur, if not in advance. This enables the target cost to continue to reflect the current scope of works and allows the gain share/pain share mechanism to remain valid. Unfortunately, in practice many employers do not actively do this. The undesirable consequence is that the target cost becomes ineffectual and the project defaults to an entirely cost-reimbursable basis.

5.3 The simple, though hugely unsatisfactory, solution is, at the end of the project, to reset the target cost to the actual outturn cost. This is often seen as an easier, non-confrontational, solution than going back and agreeing the time and cost effect of each change or employer risk event – which is usually what the contract envisages. The parties take some comfort in persuading themselves that the employer has only paid “what it cost” and has not paid a premium. This approach, however, removes any incentive for efficiency from the contractor and eliminates cost and time certainty for the employer. It should be avoided.

Cost reimbursement

6.1 Different contracts define which of the contractor’s costs are to be reimbursed in slightly different ways, but typically these consist of the sum of:

- The actual cost of sub-contracts – normally no main contractor discounts are allowed.
- A fee to cover the main contractor’s head office overheads and profit.
- A schedule of contractor direct project costs – similar to Preliminaries in a fixed price contract. This is called a Schedule of Cost Components in NEC3 contracts.
- Less any “disallowed costs”.

6.2 This becomes more complicated if the target cost concept is also taken in to specialist sub-contracts too.

6.3 It is very important for the employer and contractor to understand what is and is not reimbursable. For instance would the cost of a visiting contracts manager, director or regional commercial manager be reimbursed? A contractor’s temporary works design department? Health and safety inspections? Would a main contractor’s transport delivering materials or plant be reimbursed? Is hired plant on the site, but not in use, cost reimbursable? What about “small tools” or fuel for compressors? Contracts will typically define what is reimbursable – and therefore subject to producing auditable records – and what might be rolled up in what the NEC call a “working area overhead percentage”.

6.4 Similarly it is important to define, and understand, what the fee covers. For instance does it include contractor group based insurance?

6.5 The verification and audit of a contractor’s records of actual cost is important. It will be for the employer to decide if this is undertaken on a sample basis, or more comprehensively. The contract will normally require records to be available on an open book basis but this does not address whether the goods or services have actually been incorporated in the works.

6.6 Whichever strategy is chosen, the employer must make appropriate resource available either through suitably experienced in-house personnel or via a consultant.

Disallowed costs

7.1 Some disallowed costs are simple to define and apply. For example, materials ordered in excess of that required to complete the works, after allowing for reasonable wastage.

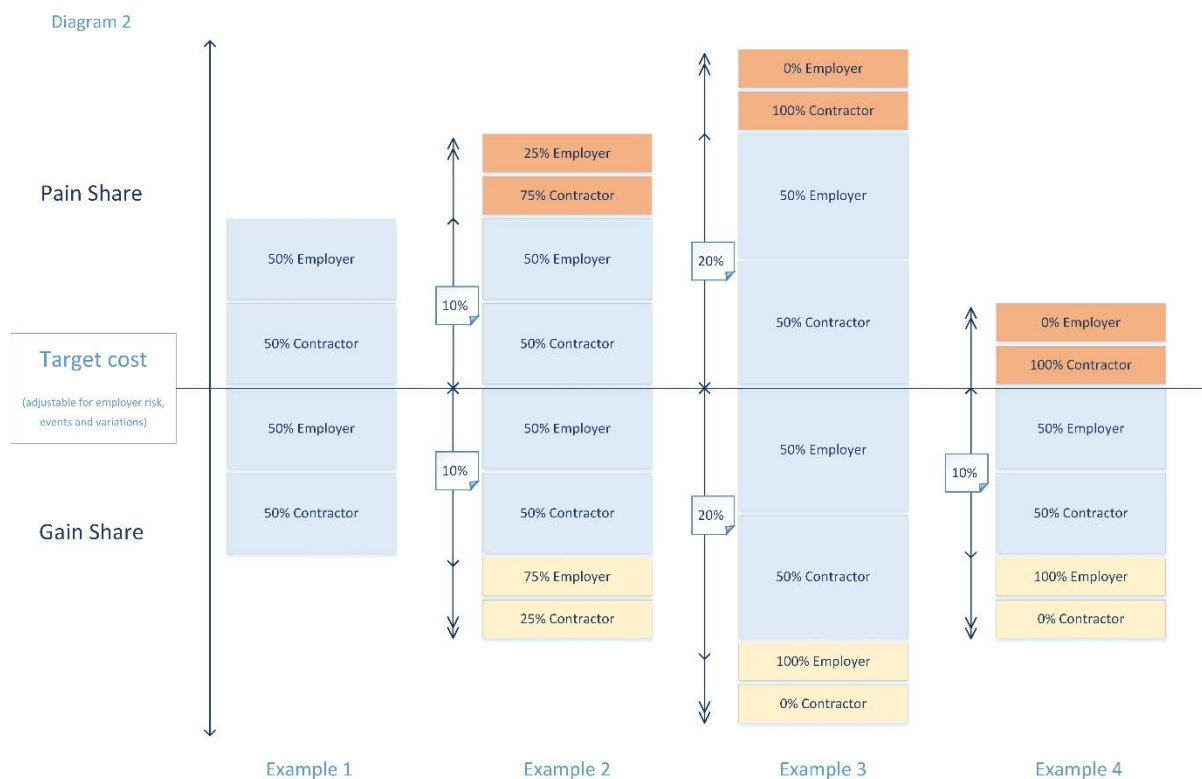
7.2 Other situations are more complicated. Most employers would not intuitively expect to pay for the inefficiency, negligence or mistakes of contractors but under some cost reimbursable contracts they may find they have to. An example is the cost of rectifying defects. Those defects rectified after completion are easily defined and most contracts make these costs disallowable. What about defect rectification prior to completion? Careful thought is required here. Disallow those costs and the contractor may be tempted to hide the defect. Allow them and perhaps there is a greater probability of a defect-free handover.

7.3 Another difficult area is the cost incurred in delays. If there are low, or no, liquidated and ascertained damages (LAD's) the contractor may have little incentive to perform to time, and will recover his additional costs through the cost reimbursable mechanism. If LAD's are set higher, the contractor may feel he needs to accelerate the works to avoid incurring LAD's and, again, he is able to recover the costs of doing so.

The gain share/pain share mechanism

8.1 The gain share / pain share mechanism is at the heart of target cost arrangements. It is the key driver in aligning objectives and governing the behaviours of the parties. There is no right and wrong mechanism, and many different ones have been used even by the same employer.

8.2 Let us consider four examples of possible mechanisms, see diagram 2, and consider the likely behaviours they might drive.



- Example 1 is a straight 50:50 split, with no caps, which is seen as the most equitable and should drive a strong partnering ethos. It is also least likely to encourage the contractor to drive up the target cost pre-contract. However there is no cap on the pain share and therefore it is very difficult for the employer to accurately predict what its final payment might be.
- Example 2 caps the 50:50 split at the first +/- 10% of the target cost. Thereafter, for variances above 10% from the target cost, the contractor bears a greater percentage of the pain, and the employer benefits from a

greater share of any gain. Whilst this may seem attractive to the employer at first glance, it reduces the incentive for the contractor to seek savings greater than 10% as it increases the likelihood of starting with a higher target cost.

- Example 3 is a compromise between 1 and 2. By increasing the equal 50:50 split up to a cap of the first +/- 20% of the target cost, strong objective alignment should be achieved. The employer has an absolute cap on its potential pain share and therefore eases final cost predictions. If there is sufficient analysis of the target cost in the first place, the contractor should be comfortable enough not to seek its increase given a 20% overspend would be most unusual.
- Example 4 is often called a guaranteed maximum price, or GMP. The employer bears no share of any cost over the target price. In this example the employer would also keep 100% of any savings after the first 10% is split 50:50. Again this may appear initially attractive to the employer but the behaviour of the contractor might well be to drive up the target cost in the first place to limit his risk of any overspend. The contractor's incentive for sharing in savings is also limited. The term GMP is a total misnomer, however, because the target cost itself will still be subject to adjustment for employer risk events and variations. It is recommended that employers do not use the phrase guaranteed maximum price without acknowledging the price can still, and probably will, change.

8.3 Some employers have totally reversed the approach in example 4 believing that this would drive a lower target cost in the first place (true, because the contractor has nothing to lose) and maximise incentives for the contractor to find innovative efficiencies and savings. The combination leading to a lower actual cost.

8.4 Which of these approaches is most appropriate depends on the intended commercial effect of the pain/gain mechanism. There will also be different dynamics to consider if the contract is part of a long term framework partnership or a single one-off procurement.

Forecasting outturn cost

9.1 Unlike fixed price contracts, where an employer has a running final account based on the original contract value (plus or minus agreed changes), under a target cost contract the contractor is paid its actual cost, which can vary greatly during the construction phase. Difficulties arise around forecasting costs still to be settled, such as accruals and liabilities for materials received; or work undertaken but not yet invoiced. Even more difficult is forecasting costs not yet ordered or agreed, or the final value of disputed variations.

9.2 This is then further complicated by the need to reconcile the costs expended to date with the value of work done. It may be that, for example, a project is 50% complete in terms of physical progress, but that 75% of the target cost has been expended. Does this mean that the project will overspend? Or is it simply the more

expensive elements have been completed and the project should have expended 85% of the target cost by this stage, so in fact a gain share should be predicted?

9.3 The answer is to ensure the project is managed by experienced and suitably skilled personnel both employer and contractor – and a form of earned value analysis (comparing progress with value) is undertaken for cost forecasting.

Do target cost contracts offer value for money?

10.1 Some employers are moving towards a greater use of target cost contracts, citing value for money as a driver. Others are moving away from them or looking to restructure how they are managed due to problems encountered on previous projects which were perceived not to deliver value for money.

10.2 One issue that often occurs is that target cost arrangements are entered into without fully understanding how the process works – in particular the additional risk that the employer takes compared to a fixed price contract. It is vital that this risk is effectively managed. Too frequently there is insufficient control of the target cost value so the contract becomes little more than a cost reimbursable arrangement with limited incentive for the parties to perform efficiently.

10.3 There are many examples where the actual cost has far exceeded the target cost – creating problems for the employer – and yet it appears there are few examples of contractors suffering from pain share. In most cases the gain share/pain share calculation results in a neutral or positive gain share.

10.4 Value for money will only be secured if the contract is let with a well-defined target cost, and is thereafter very actively managed. At all times the employer needs to recognise that it is carrying a larger degree of risk than a fixed price contract and therefore requires a greater resource to manage it.

10.5 Care is also needed when reporting likely outturn costs. It is not uncommon for a contractor, due to poor cost management of his supply chain, to under estimate his final costs during the construction period only for a large amount of “actual cost” to come to light at the end of the project as sub-contractors present final account information. This often results in the employer needing to seek additional funding from its board. When questioned by that board on what has changed, what additional scope had been instructed, or what risk event had occurred to substantiate additional monies it would be good to avoid the response *“Nothing, it’s just cost more than we thought”*.

Advantages and disadvantages

11.1 Advantages

- Provides contractors and subcontractors with an incentive to improve performance
- Encourages active and equitable risk sharing, based on a clearly defined allocation of risk agreed at the outset of the project

- Can incorporate both lump sum and prime-cost reimbursable subcontracts under a single target price
- Target costs provide incentive for the timely administration of change control mechanisms
- Provides an accountable mechanism to enable public sector clients to use incentives

11.2 Disadvantages

- Employer and contractor must share gain and pain if the full benefits are to be secured. This exposes the employer to greater risk
- Potential for failure on insufficiently defined projects owing to complexities in the operation of the incentive mechanism
- Complex target price, gain/pain share and change controls may not easily be understood by all parties
- The separation of target and actual costs before completion creates the potential for loss of control in predicting the final cost to the employer
- Requires best practice in project administration and a suitably skilled project manager
- Disputes and adversarial behaviours can occur when the employer scrutinises the contractor's cost records to ensure they are valid

Summary

12.1 The target cost route has clear advantages for those instances where some form of cost plus contract is appropriate. For example, where a contract must be let before design development is sufficiently advanced to permit a lump sum price to be fixed; where the employer wishes to actively participate in design; or where contractors are simply not prepared to tender a lump sum due to the size and complexity of the project.

12.2 However, employers need to be aware that they are sharing a greater degree of risk in respect of the contractor's performance under a target cost contract than they would under a fixed price contract.

12.3 Target cost contracts will only deliver value for money when:

- The target cost is set at a level which requires the contractor and the employer to work together to create efficiencies beyond those normally expected

- The target cost is actively managed and maintained so as to remain valid and to continue to drive performance
- The gain share/pain share mechanism is carefully chosen to drive the right behaviours in the parties to seek savings and thus avoid pain
- The contractor performs in an efficient manner, mitigating risk, and not incurring excessive actual cost