

The Construction Company

A medium sized construction company (of a few hundred workers) has decided that they wish to install computer systems in order to help streamline their business process. However, they are keen that these systems should support what they do, and that the potential contractor really understands their business. Hence, they wish to be involved in validating the domain models produced.

Two aspects of their process are to be examined first. These are the tendering process, and the activities surrounding the discovery of a non-conformance or defect.

Tendering

The following describes some of the activities involved in tendering for business within the construction company.

A request from a customer can reach the organisation via two routes, directly to an estimator, or via post to the front desk.

If the front desk receive the request for tender, then they register the request and send it to the marketing manager. The marketing manager describes the marketing view and sends this (along with the request) to the chief estimator. The chief estimator allocates a tender number, and an estimator, and sends the tender to a co-ordinator.

The co-ordinator is responsible for preparing for the estimator. The co-ordinator has three main roles.

- They must do some preparatory work on the tender itself, producing a prepared tender.
- They must also produce lists of materials and sub-contracts that would be required in the tender. They must then use these lists to obtain estimates (from suppliers) for materials and sub-contracts.
- They must separate out those sections of the tender, which will need augmentation by the estimator.

The co-ordinator will send estimates and the prepared tender to the estimator. The estimator produces a plan-based estimate and a 'bill-of quantities' based estimate. These views of the tender are produced separately, giving two different documented perspectives (with a cost based on the plan and a cost based on the quantities). The estimator then uses these to produce a final (combined) estimate.

Alternatively, the estimator receives the request directly. In this situation, they are allowed to allocate the work (usually to themselves) and pass the numbered tender to the co-ordinator, or refer the work to the chief estimator.

Discovery of a non-conformance

The following describes some of the activities of a Site Manager at a construction site. Of particular importance is the action that must be taken when a defect (or non-conformance) is identified.

The Site Manager assigns work packages to Supervisors. Supervisors will inform the Site Manager of progress on these work packages at regular intervals. Supervisors assign the work to Workers. A Supervisor may check the progress of the Worker at any time, in order to assess their distribution of the workload.

If anybody at the site detects a defect (or non-conformance), the Site Manager is informed straight away. The Site Manager must decide whether urgent action is required. If urgent action is required then the Site Manager carries out the action immediately.

For any defect or non-conformance, the Site Manager must inform a number of other parties (depending on the implications or possible consequences of the defect).

- If there are insurance consequences then the Contract Manager and Commercial Manager must be informed.
- If there are litigation consequences then the Contract Manager and Company Secretary must be informed.
- If there are implications for both then all of these must be informed.
- If there are no implications for litigation or insurance then the Site Manager logs the defect personally