

## **Estimating Labour Costs and Charges**

Applying labour to an estimate or quote, requires the contractor to understand there is a major difference between the actual time to complete a task and the cost of employing a tradesperson to carry out the actual task.

The estimated time to carry out a task is expressed in hours, which should remain constant, however it is possible that minor changes will be experienced due to the location of the project. It is possible that a degree of difficulty may need to be applied in some circumstances. This is done by using a percentage factor which represents the degree of difficulty.

For example, pipes, fixtures and fittings installed on the ground floor of a building will have the same material component when installed on the twenty-fifth floor. What will be different is the labour time to install the pipes, fixtures and fittings. The difference can be accurately assessed by adding a percentage to the total hours calculated.

The same comparison applies when estimating an industrial shed or a shop renovation. The materials will remain consistent, only the labour component will alter depending on the estimator's opinion of the degree of difficulty.

The major difference between projects will be the cost of employing the tradesperson to carry out the work. The applicable award rate or supply and demand for labour can affect the cost and in turn the charge-out rate.

Other factors affecting the cost of labour are, union agreements, location, and allowances, such as height, travel, living away from home and enterprise bargaining agreements. They can all affect the end result. It is therefore important to calculate a new cost of labour on each individual project.

A contractor, once stated their construction projects returned a profit on the labour component, however they continually had an over-run of labour hours. Further investigations revealed that the clerical staff were applying the degree of difficulty to the cost of labour rather than the required number of hours, which of course will not provide accuracy. It is in fact the hours that should have been increased.

It is important to be able to calculate the number of tradespeople required to complete a project.

The formula for calculating the number of tradespeople is:

<b>Formula</b>	<b>Example</b>
Total Hours	2,286 hours
<hr/>	<hr/>
Duration of job	12 weeks
= <hr/>	= <hr/>
Productive hours	32.50 hours
= Tradespeople	= 5.86 average tradespeople

Knowing the cost to employ a tradesperson is an important aspect of estimating. The difference between the cost and the charge-out rate, is the percentage mark-up applied for preliminary costs, overheads and profits. Knowing the cost of labour better equips the contractor to negotiate the final tender price.

Labour is a commodity or product being bought and sold. It is expected that materials purchased for a project will be at cost, then sold with an appropriate mark-up applied. Labour is no different, an employee or subcontractor is selling their time and services for a consideration of money. The cost along with the required allowances should be calculated and a mark-up applied.

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The procedure for calculating the cost of labour, and in turn the charge-out rate is as follows.

**Note:** The labour rate is calculated per week, converted to an annual cost, and then worked back to a cost per hour that takes into consideration productivity losses.

Basic wage in dollars times forty (40) hours. Add allowances such as fares, travelling, height allowance, living away from home, and/or union agreements.

Work Cover is applied as a percentage to the total above, followed by an allowance for redundancy pay, superannuation and holiday leave loading.

The sum of the above represents the cost to a company for employing a tradesperson, which is converted to an annual amount.

The annual dollar value is divided by forty weeks, which represents the productive weeks worked by a tradesperson. Consideration for lost time include, four (4) weeks annual leave, two (2) weeks public holidays, two (2) weeks sick leave. A further, two (2) week allowance for possible wet weather, and an additional two (2) weeks loss through

lack of work between projects. Total loss is twelve (12) weeks, thus forty (40) productive weeks.

The productive hours per week are then calculated, starting with the original forty (40) hours, deduct two (2) hours for RDO's, a further five (5) hours per-week for morning and afternoon tea breaks as well as hygiene breaks. A half hour per week is also deducted for toolbox (instruction) meetings.

The end result is thirty-two and half (32.5) productive hours. After dividing the annual cost for employing a tradesperson by forty weeks, it is then divided by the productive hours per week. This provides the cost per hour for the company to employee the tradesperson.

An appropriate mark-up is applied, which then provides the estimator with the charge-out rate.

For what it is worth, I'm Paul Funnell