



Tackling Indirect Manufacturing Costs

So You Recognise That This is The Major Cost Issue!

Over 40% of manufacturing expense is “indirect”, i.e. not material and not labour used to process the material. It is quite likely that half of this expense is to pay people; necessary, but not visibly adding value. Therein lies the conundrum: you can't do without them at all, but you can still deliver your product or service if they weren't there for the day.

So why are they there? Some part of what they all do does have VALUE, but how do you assess it?

We are going to shed light on the matter by looking at it in three different ways:

- Functional basis
- Activity based analysis
- Time horizon basis

By looking at the “mountain” from 3 sides, we expect to understand better what this value is and where there may be room for improvement.

Functional Basis

This is how cost accounting looks at it. Groups such as Finance, Human Resources, Technical Support, IT Services, Quality Assurance and General Management are allocated cost centres. You know how many people are in each group, at budget time they each make a bid for their share of resources, and you know if they meet those budgets or not. Can you predict what would be the effect of reducing their numbers on the business as a whole? Difficult, but nonetheless you know that when the company has layoffs in those areas, something is lost. Maybe not this month, maybe not for a while or until a particular threat becomes real. Then you realise that your systems might not satisfy the regulators, or your customer relations deteriorate, or your staff get generally demotivated. A connection, but difficult to articulate.

Activity Based Analysis

Activity based costing looks for “drivers” in order to predict changes in cost when circumstances change. It is thus a forward-looking approach. To make sense of indirect costs, you need to identify categories that will describe the activities of indirect cost centres. This will depend on your industry.

You can start with the categories normally used for ABC of routine operations, namely Volume related, Batch related, Product related and Facility related. By definition, indirect costs are almost entirely Product and Facility related, but what is needed is a better breakdown to give a clearer picture. Here are some suggestions:

- Market
If you enter a new market (either geographical or customer group), you will quite possibly need new market-oriented technical support people, regulatory affairs staff and more complicated finances
- Product group
Adding new product lines, or breaking down those you already have into ones with common characteristics (e.g. manufacturing process, design), could well drive extra technical support, process engineers, purchasing or production planning activity.
- Employee turnover



Rapid turnover creates a lot of effort in recruitment, HR, management time discussing resources, interviewing, training of new people, not to mention ineffectiveness of those left behind.

- Management Reporting

Think about the drivers for reports and who has to spend time creating them. A new corporate structure may demand many new reports. The effect will be felt in IT services and finance, possibly HR.

- Employee daily support

How much support do your steady employees need? IT services, pensions advice, health checks, training in general themes such as safety, Good manufacturing practice, where these activities are done for old employees as well as new.

When adding these categories into the overall Activity Based costing, there will still be areas not covered by any of the above and the balance may still be classified as Facility based: in other words “what you pay for even when nothing is done!”

Time Horizon Basis

This approach categorises activity based on the time when that action taken is felt on the bottom line of the business. Day to day operations (volume and batch related in activity based costing jargon) have an immediate time horizon. HR activities related to recruitment, for example, have a time horizon of a month or so. Budget activities have a time horizon of a year. Regulatory and engineering of new factories, for example, may have a time horizon of 5 years.

When you have classified the activities of each indirect group this way, options might be:

- Outsource activities with time horizons greater than 1 month
- Move longer time horizon activities to other sites, perhaps amalgamating them
- Locate related short horizon activities from other sites with yours

The aim of any changes that this analysis highlights is to reduce communication issues by ensuring that activities with similar time horizons are done as close to each other as possible.

Example

Let's take a look at how these methods would look with some example data.

Suppose the cost centres had budgets as follows:

Finance	250
Human Resources	120
Technical Support	640
Management Information Services	180
Project Engineering	200
Maintenance Engineering	450
Process Engineering	180
Quality Assurance	600
General Management	170
Total	2,790



You can break this down by assigning proportions to activity groups as follows:

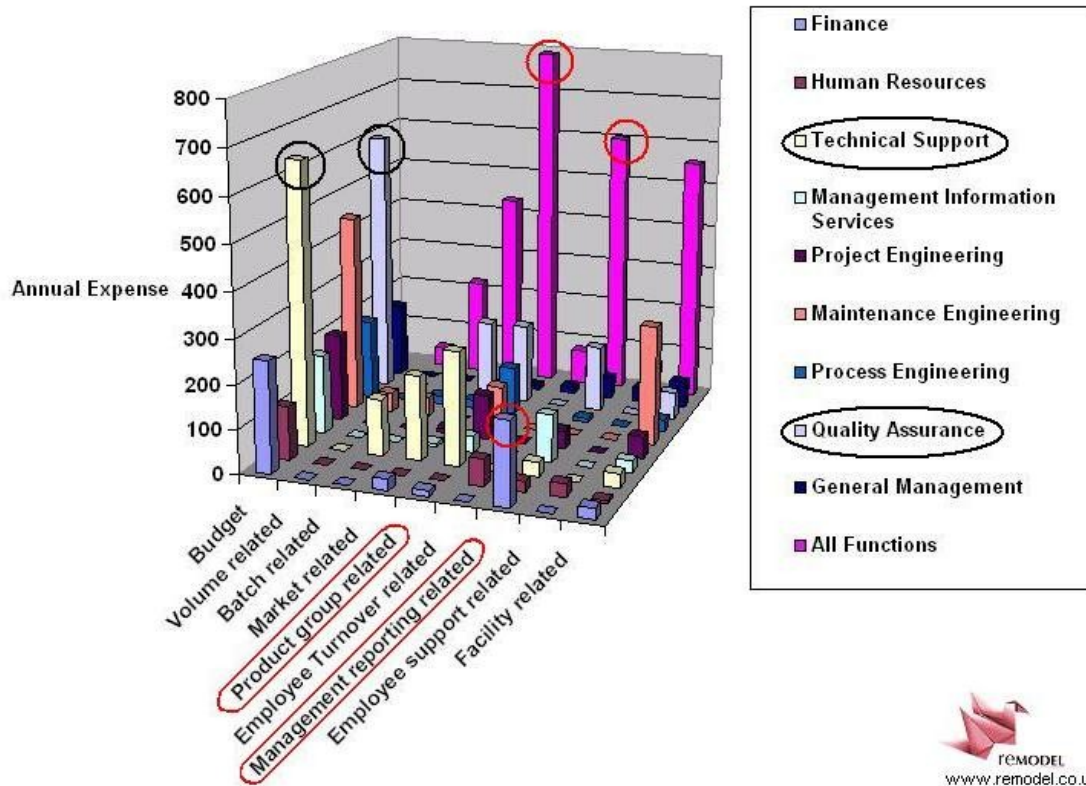
<i>Function</i>	Budget	Volume related	Batch related	Market related	Product group related	Employee Turnover related	Management reporting related	Employee support related	Facility related
Finance	250			10%	5%		75%		10%
Human Resources	120					50%	20%	25%	5%
Technical Support	640		20%	30%	40%		5%		5%
Management Information	180			5%	20%		60%		15%
Project Engineering	200			5%	50%		20%		25%
Maintenance Engineering	450	10%	10%		20%				60%
Process Engineering	180		10%	10%	60%		5%		15%
Quality Assurance	600		5%	30%	30%		25%		10%
General Management	170				5%	10%	30%	20%	35%

You can usually get this information by interview. You do not need to be precise: it's the overall shape that matters more than exact figures. The objective is to try to single out areas to address.



Charting the actual values gives you this picture:

ABC Breakdown of Indirect Costs



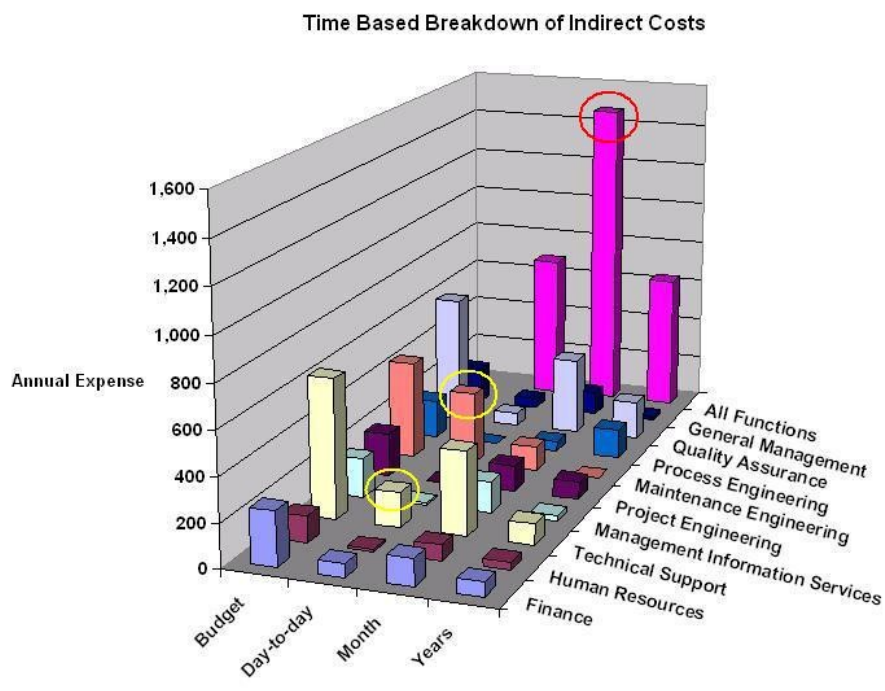
The functional view tells you that Technical Support and QA (circled in black) are where your money is being spent, but gives no clues as to why. The activity based costing shows that the highest expense is incurred in Product Group and Management Reporting related activities (circled in red), and further highlights the Finance involvement in this. Do you have a head office (on another continent, say) that wants reports about many things? To reduce your cost, you will have to address this issue. The Product Group related figures are telling you the cost of product diversity in your factory and both the potential for reduction and the likely cost of adding new product ranges to it. Note that solutions to these issues are not to be found within the departments that incur the expense, so applying budgetary constraints on the “high-spending” departments will only cause stress.

Now, let’s look at the time-based view. Here we are trying to see what time horizon people are working to, whether they have to be physically located close to the daily action and whether they could be outsourced without putting delays into production.

The proportions look as follows:

<i>Function</i>	Budget	Day-to-day	Month	Years
Finance	250	25%	50%	25%
Human Resources	120	10%	60%	30%
Technical Support	640	25%	60%	15%
Management Information Services	180	5%	80%	15%
Project Engineering	200		60%	40%
Maintenance Engineering	450	75%	25%	0%
Process Engineering	180		25%	75%
Quality Assurance	600	10%	60%	30%
General Management	170	25%	65%	10%

Charting the values gives you this picture:



Most activity has a time horizon around a month, but a not insignificant amount relates to daily tasks. In particular, Maintenance Engineering and Technical Support have to react often to daily issues. Are they located close to where they are needed? Is time wasted trying to get them to come to where they are needed?

How This Helps

The value of these different approaches is that from looking at anything from a different angle: you see things that did not see from other views. When you better understand what the true nature of these costs are, you will get new insights and ideas about what to do about them will flow.