

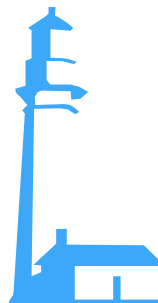
The Basics of Activity Based Costing & Management

This white paper is intended to help a newcomer to CostPerform become acquainted with some of the theory of Activity Based Costing and how it differs from traditional cost accounting.



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The basics of Activity Based Costing & Management

The battle to sustain and increase corporate profitability grows ever more arduous in most sectors of the economy. Margins are caught in a pincer movement by, on the one hand, the steady improvement in competition, and on the other, the increasing awareness of customers. We need to grasp every opportunity not only to be ever more effective at what we do, but also to be truly competitive, winning more market share of the customers both nationally and globally. For success, a full understanding of costs and cost structures is necessary. Conventional accounting and management reporting throw little light on the real cost dynamics in a business. As a result we are not in control of profitability at a level of detail that supports substantive decision-making.

Activity Based Management (ABM) is an approach that has now come of age. ABM is not a technique; it is about management. ABM needs to be understood and implemented by all functions so its power can be unleashed and the benefits obtained. Over time, ABM has evolved considerably and is now being applied in manufacturing, service companies, utilities, logistics, telecommunications, government bodies and many more sectors. With ABM; businesses can make dramatic improvements in measuring product and process costs, and more importantly customer profitability.

On its own, ABM help will change management decision-making. By understanding how ABM also supports other profit improvement initiatives such as Business Process Re-engineering, Shareholder Value Added and Customer Relationship Management, managers will learn how they can have the best possible toolkit to help put the business firmly on the road to leaps in profitability.

Activity Based Management

Activity Based Management (ABM) enables managers to understand product and customer profitability, the cost of business processes, and how to improve them.

Since conventional management accounts and standard costing systems do not provide this information, it is perhaps surprising that ABM is not more widely used. Unlike many management techniques, research shows that 80 per cent of companies that have employed activity-based techniques found them to be successful.

Why?

Activities consume resources – people, materials and equipment – and this consumption can be measured. Activities are triggered by events, which can be counted, or decisions, which can be reviewed. Activities produce outputs – products and services, which can be counted and measured. Activities can be undertaken by different methods, which will vary the unit cost. Activities are linked together to form business processes. Understanding what activities are, what they cost, what drives them, what they produce, how they are done and how they are linked together is useful.

We have understood manufacturing activities in this way for years. We measure the consumption of direct labour and materials in making products. On average, however, direct labour, materials and components account for around two thirds of total costs in manufacturing businesses. The other, unmeasured, third is overhead activities and costs. In service industries, the ratio is the other way round – the unmeasured ‘overhead’ accounts for two-thirds or more of costs.

Overhead costs are the black hole in conventional management information systems. ABM shines light into the hole. Knowledge of a business at the level of activities is the basic building block upon which new understanding can be built of where profits are being made and where they are being eroded.

By making visible what was previously invisible, ABM throws a spotlight on those aspects of a business where action can directly improve business performance. Because it deals with 'financial numbers', ABM is often seen as the preserve of the Finance function. In fact, its real strength lies in providing genuinely useful information for all functions in an organisation. Managers throughout the business need the right information to understand and address two key issues:

- How the company can position itself better in the market – for which accurate product and customer profitability information is vital.
- How it can improve its internal capability and lower unit costs – for this, it needs to understand and change the procedures, systems and processes that create products and deliver services to customers.

Most organisations are complex. Building an ABM model of a business requires a structured approach and the dedication of a team to achieve a result in a reasonable timescale. But building a model is only the start. Embedding ABM into the business means giving managers not only a new understanding of what drives costs, but the means to measure and act on the drivers to reverse adverse trends.

Initially Activity Based Costing (ABC) was presented as a means of establishing product costs more accurately. The emergence of Activity Based Management (ABM) provided a means of enhancing profitability. ABM is underpinned by a theory of resource consumption with activities viewed as giving rise to costs, as in ABC, but taking the analysis further in a way that provides management with insights into managing the business overall. Essentially, these insights are focused on a process view of the business and a deeper understanding of product, channel and customer profitability.

Costing and profitability

The ledger, budgeting and monthly management accounts are based on reporting resources; those planned to be used, the consumption month on month and the variances from plan

Resources are those things that provide the means so work can be done in the organisation. Salary costs for the people doing the work, accommodation costs so people can work in buildings, utilities so people can see what they are doing and keep warm, vehicles so goods can be delivered and customers visited. In some cases, the list of types of resources on the ledger may seem endless.

But no matter how long the list of resources, nothing in the ledger or the management accounts tells us how the resources are being consumed on doing things, to what purpose or in what way. Resources are consumed by activities and it is at this level of analysis that we see what is actually being done. At this level we can also take a view on whether the activities that are being performed are necessary. We can also find out whether the activities are being done well and use the best methods and so take the business forward, or are they really only sorting out problems that are dragging the business back.

Activities are undertaken for many purposes. Some directly manufacture products, while others indirectly support manufacture, such as the Quality Department or Materials Handling. Some activities support the business as a whole, such as Recruitment & Training or the parts of the IT Department that keep the network running.

Other activities are directly associated with customers, such as the Salesforce or more indirectly within Credit Control. Other parts of the business are working on activities to create a better future, such as New Product Development, and others are working on influencing potential customers, such as Marketing and Advertising.

Some parts of the business have little to do with products, services or customers but are necessary to keep the business legal, such as Statutory Reporting or organising the shareholders annual general meeting or preparing for the annual audit

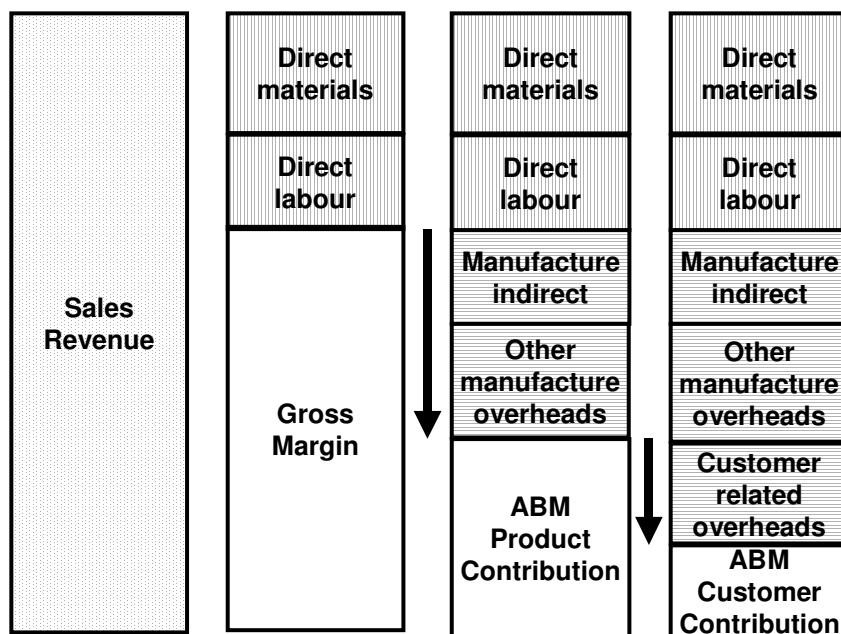
Activities are the very engine at the heart of the organisation. By understanding what is done, how it's done, what causes it to be done and why we are doing it gives us a better chance of understanding if we are getting the best value from the resources we put in place.

As a simple analogy, budgeting and reporting on the different amount of food we eat may be partially interesting but what people then do with their time having consumed the resources is what influences the world around them, for better or worse.

In conventional accounting, and particularly in manufacturing companies, costs are categorised into two main types; direct costs and overheads. Direct costs include the employees manufacturing the products and the raw material they use. Overheads are the rest. The problem then arises when the costs of the products need to be calculated. Although we will look at this in greater detail in a later chapter, we can say at this point that an ABM analysis accurately assigns the costs of those overheads that are actually influenced by the products being made or the services being provided.

Having derived accurate product costs, ABM goes further and analyses the costs of servicing each customer or specific segments of the customer base. Customers create a wide range of differing costs for a host of reasons.

The key insight that ABM exposes arises when revenue is brought into the equation. When the actual costs of the products or services going to a particular customer are calculated and the actual costs of servicing that customer derived, we can compare these figures to the revenue from the customer, as shown in the figure below.



Revenue less the product costs gives the 'ABM product contribution'. Revenue less the product costs less the costs of servicing the customer gives the 'ABM customer contribution'. The sum of all the customer contributions has to pay for all those remaining costs that are not associated with the current products or customers, such as New Product Development and Statutory Accounting. Anything left after that is the Profit.

It is at the level of 'ABM product or customer contribution' that we use the term 'Product and Customer Profitability' as it is at this level that meaningful comparisons can be made between products and between customers. It is this type of analysis that exposes small or negative values prompting a serious review of which products or customers to keep, or at least take action to try and turn the relationship into one that provides positive contributions. We will look at this later in greater detail, as this insight into a company's costs is the central power of using ABM analysis.

ABM views the treatment of costs in a way that differentiates it from traditional accounting approaches. Below we explain the way ABM handles costs and the characteristics of activities compared to conventional approaches, as well as introducing the language of ABM.

Traditional resource accounting

Most established accounting systems normally capture and distribute resource costs based on one or more of the following methods:

1. Organisation structure or Cost-centre accounting
2. Budgetary control
3. Cost allocation accounting

From their longevity of practice we must assume that in the past they have met the needs of organisations to some degree. Yet every one of them fails to meet the full requirement for management information that will adequately support decision making in today's competitive environment.

Cost centre accounting

This is a popular method for applying resource costs to an organisation. The accounting system identifies each of the organisational parts of the traditional functional structure and applies the identifiable costs to that part of the structure.

In many traditional organisations, the only costs that are identified to the organisation's functional departments are the salary costs. Though overhead costs are sometimes distributed to cost centres, it is more common to find that these costs are ignored at the unit level. Many overhead costs are held centrally by the providers of services and not sub-divided to the users of the services. For example, the cost of 'Vehicles' would be held in the function or department that looks after the vehicles. The cost of 'Postage' would be held in the Postroom where the mailing physically takes place.

This system was created to provide management with some information on the costs of the organisation's departments. Some argued at the time that this would make 'controllable' costs visible to those managers that have to control the costs. However, under cost pressure the owners of resources supplied to others would turn the tap down or off. The Stationery department refusing to issue paper for other departments' photocopiers is a result of this approach to cost control.

Where attempts to get a true picture of departmental costs were applied, managers of resources that were supplied to others apply cross-charges to users, based on a rate for the service. The rate would be based on a collection of costs the service department actually incurred, such as its own staff salaries, to which it added a mysterious amount to cover its own overheads and the costs that it had received as cross-charges from others. The cross-charging game can reach heights of absurdity when internal sub-divisions of the organisation are made into profit centres. The charge out rate then includes a bit extra which it calls 'profit'. In some instances this accumulating figure was then used to purchase something from outside on the basis that it was using spare income and not a departmental cost. From the organisation's perspective, this is real money going out the door.

However, trying to get accurate costs to the place in the organisation where the budget for the funds is held can also create absurd situations as one situation aptly illustrates.

A Company introduced a simple method to improve the cost effectiveness of the use of taxis. By arranging to use a single supplier, any travellers only had to print and sign their name against the meter cost recorded on the taxi's log sheet. To prevent fraud, the passenger retained a tear-off copy slip of the cost. On a monthly basis, the taxi company presented its itemised bill which a clerk in Accounts dutifully used to look up where each passenger worked. The cost centre manager's name and cost centre number were also looked up and noted. The annotated invoice then started its journey around the site for each manager to authorise and add the cost centre allocation number for taxi journeys to the invoice. Later, these costs would be accumulated and reported to each cost centre manager.

Three months later, the irate taxi company would begin to demand payment. The problem for the Accounts Department was knowing where the invoice was in its journey around the site. In a year, 40 per cent of the invoices never found their way back to the Finance Function. Regularly, the taxi company would threaten court action for payment. Accounts Payable would just ask for a faxed copy of the invoice and pay the same day on receipt of the fax.

Finally, someone did question whether the whole process added any value, or did it just add unnecessary cost.

In all this striving for accuracy, accountability and control, hardly any real attempt is ever made to trace costs to the activities or process flows in organisations or to the ultimate output, the products and services for customers.

Budgetary Accounting

The tracking of costs to a budgetary account is often combined with cost centre accounting. In this case, the major concern of the spenders of resources is to ensure that their total expenditures do not exceed the allocated budgetary amounts. Consequently, accounting systems become a safeguard mechanism to capture commitments, undelivered orders, and expenditures, normally divided into the cost centres that reflect the organisation structures, to enable tracking of actuals, budgets and variances. The measure of success and thus the major objective of each accountable manager is to fully use the resources assigned rather than enhance productivity or reduce expenses. In some types of organisation, any attempt to conserve resources or work more effectively to come under budget runs the risk of receiving a reduction in the future budget resource level.

The budgetary control mechanism can reach heights of absurdity.

In a government research organisation the scientists received funds to undertake research projects. Towards financial year-end, the researchers had unspent funds, but there were insufficient hours of research capacity to do the research before the year-end. The fund providers wanted the funds spent (for fear of their own funds for the following year being reduced), but were only concerned that the money was spent on 'project-related' costs. In this case, buying equipment was acceptable. As specialist equipment would be pointless, the researchers looked for something more generic. Two weeks later, three large vehicles arrived on site bringing top of the range desk-top computers.

As there was no immediate scientific purpose for the computers they remained in their boxes and researchers used them as additional seats. Among the Support Departments frustrations reached boiling point when they saw the vehicles being unloaded. The cap on their costs always precluded them from getting decent equipment. Worse was to come. Given the different funding regimes for the two groups, the overhead functions were not allowed to use the spare computers languishing in their boxes.

Like cost centre accounting systems, the budgetary control mechanisms make no attempt to cost the outputs of all the work or in many cases to even bother to define the output. If real customers are at the end of a supply chain of activities in such environments, then their needs can be well down the list of priorities, with 'meeting budget' firmly at the top.

Cost Allocation Accounting

Where an organisation has the characteristics of a business then it generally has a need to distribute its costs to an output so it can price its products or services. Revenues also come into the picture and we talk about revenues less total cost leaves us the profit. To make the costs visible 'true' cost accounting systems were established to capture and distribute costs to the outputs such as goods or services. These cost accounting systems use the classic model of cost distribution which was designed around the major sector of the economy at the time, manufacturing. In this system, the focus of gathering costs and collecting them under generic headings relied upon the simple classifications of direct labour, direct materials and overhead. Businesses and business-like organisations have relied upon the historical model of cost accounting for over 100 years.

However, the traditional cost accounting methodology does create significant inaccuracies in output costs because of the manner in which overhead costs are apportioned to output rather than assigned or traced to output. When this erroneous method of cost distribution finds its way into the ultimate price of the output it leads to poor management decisions on which products or services to promote or which to discontinue, and which customers it should sell to or drop.

As traditional accounting has such a grip on most organisations we would argue that it is in the areas of the fundamental flaws it contains that ABM really differentiates. In particular, ABM is superior to traditional accounting in a number of ways:

- ABM provides visibility in the way costs flow through the business
- ABM establishes the links between activities and those factors, internal or external, that drive the level of activity up or down
- ABM eliminates the false divide between direct costs and overheads
- ABM separates out those costs that deal with today's business from those that secure the future
- ABM ignores gross margin and uses accurate product and customer contributions as the basis for comparing product and customer profitability
- ABM exchanges functional myopia for a cross-functional process view of the organisation
- ABM exchanges the stilted definitions of value-added and non-value-added for sensitive categories that highlight the subtle impact of internal process failures and external customer behaviour

ABM versus traditional treatments of costs

At many levels, ABM brings a different perspective on how costs are treated. ABM challenges the traditional approaches to product costing, gross margins, profitability, functions and hierarchies, value and non-value added, and budgeting.

Traditional product costing

It is in the area of product costing that serious weaknesses in the traditional approach first became a cause for concern. In the days when traditional accounting practices were being formed and internationalised, the dominant industries were in the manufacturing sector. In a typical large manufacturing company, there would be large numbers of employees concerned with direct manufacturing and a much smaller number in the overhead departments

In a situation where the direct labour costs could be as high as 90 per cent and overheads ten per cent of total costs it was important to get some accuracy in terms of the hours, and therefore costs, of actually making components and assemblies. Work-study and other techniques found a ready use in determining the direct labour content of any product. The direct material costs were also simple to calculate for each product based on raw material content, scrap rates, bought-out parts and so on. How much of the overhead activity was actually associated with each product was seen as a lot of effort to work out for such a small improvement in the accuracy of the product cost. This led to the use of the Overhead Recovery Rate (ORR) as the fundamental method of product costing.

To derive a method of calculating the proportion of overheads to allocate to each product a simple ratio was derived, known as the ORR. A company would simply find the overall ratio between total Overhead Costs and total Direct Labour, say ten per cent. The direct labour for each product made, and any new ones developed, would then have ten per cent added to account for the Overhead and so give the product cost.

As manufacturing became more complex, the proportion of overhead activities to direct activities started to increase. Product costs now became far more sensitive to the indirect and overhead costs associated with each product. The traditional overhead recovery rate became highly suspect as a means to calculate product costs. Some products could be seriously under-costed, and thus probably highly competitive, but an increase in sales volume would actually erode profitability. Conversely, over-costed products would be unattractively priced and few sales made.

As the proportion of overhead costs increased in a business, the more serious the distortion in product costing became through using the ORR method.

ABM product costing

In ABM the indirect and overhead costs associated with each product are determined for each product. The characteristics of two products can be quite different in the way they need overhead activity to support manufacture.

A company that traditionally had made its name manufacturing bogies for railway trucks and carriages had branched out into making braking systems for long haul diesel road vehicles. While the technology surrounding the railway business had not developed significantly over the years, the road vehicle technologies had advanced in complexity at a rapid rate. Using direct labour as the determinant of the proportion of overhead costs had led to overpriced railway products and underpriced road vehicle products. The growth in the road vehicle business then seriously eroded overall profits and the stable rail business was drifting to competitors.

In the figure below are shown two of the company's products costed using the conventional overhead recovery rate, in this case 300 per cent. For product 'Pr1' the direct labour had 50 units of cost so the manufacturing overhead was assumed to be 300 per cent of this: 150 units of cost. Product 'Pr2' again used the 300 per cent and this was applied to the direct labour cost of 200 units giving a manufacturing overhead of 600 units of cost. Using a conventional overhead recovery rate took no account of the real differences in the amount of overheads that either product required.

Conventional approach		
	Products	
	Pr1	Pr2
Direct material	200	100
Direct labour	50	200
<i>Calculate O/H using ORR based on direct labour</i>	<i>50 x 300%</i>	<i>200 x 300%</i>
Calculated Production O/H	150	600
Total direct + OH	400	900
Revenue	1250	1300
Gross margin	1000	1000
Product contribution	850	400

Product 'Pr1', a road vehicle braking system, was complex, had many production changes, and used difficult manufacturing technology. There were also many discussions with specialist suppliers.

Product 'Pr2', a railway truck bogie, used simple manufacturing technology, enjoyed a steady demand with few changes to schedules, and had used the same suppliers of raw material over a long period.

Using the ABM approach the direct and actual overhead costs reflected the real situation as shown in the figure below. Note that for Pr1 the conventional approach gave a contribution nearly double what it actually was. In other words, in reality the product was less profitable than they thought. Conversely, Pr2 was much more profitable than they thought. Using the overhead recovery approach meant that Pr1 was underpriced. They had orders but made little profit. Sales of Pr2 could be higher if it wasn't overpriced.

Conventional approach			ABM approach		
	Products			Products	
	Pr1	Pr2		Pr1	Pr2
Direct material	200	100	Direct material	200	100
Direct labour	50	200	Direct labour	50	200
<i>Calculate O/H using ORR based on direct labour</i>	<i>50 x 300%</i>	<i>200 x 300%</i>	Actual O/H activity costs		
			<i>Purchasing</i>	<i>120</i>	<i>30</i>
			<i>Planning</i>	<i>50</i>	<i>80</i>
			<i>Material handling</i>	<i>100</i>	<i>50</i>
			<i>Inspection</i>	<i>180</i>	<i>40</i>
			<i>Maintenance</i>	<i>80</i>	<i>20</i>
Calculated Production O/H	150	600	ABM Production O/H	530	220
Total direct + OH	400	900	Total direct + OH	780	520
Revenue	1250	1300	Revenue	1250	1300
Gross margin	1000	1000	Gross margin	1000	1000
Product contribution	850	400	Product contribution	470	780

Traditional view of gross margin

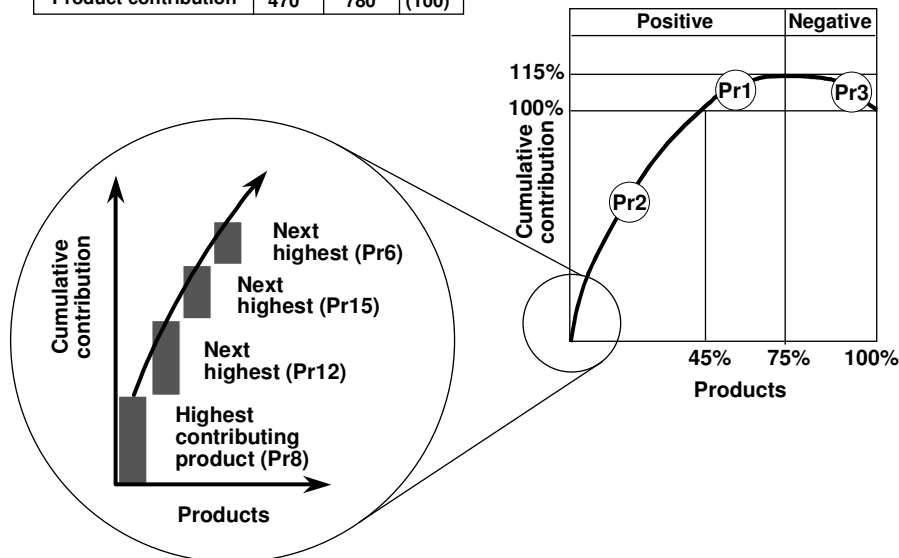
In traditional accounting we find the term gross margin, defined as the revenue less the direct costs. As long as the gross margin is a positive number then the product is deemed to making a 'contribution to overheads'. In other words, whatever the overheads actually are, at least there exists some funds to pay for them. The issue is that we do not know, other than at the overall company level, whether this contribution has any bearing whatsoever on the real overheads involved in producing each particular product.

ABM view of product contribution (product profitability)

In the product costing examples we saw above, the ABM analysis uncovered the actual indirect and overhead costs associated with producing each product. Now when we calculate the revenue less the actual product costs we have a number that is called the ABM Product Contribution. In other words, if this is a positive number then we know that product costs are covered and the sum left over now contributes to the other overhead costs in the business such as Sales, R&D, Invoicing and so on.

The ABM Product Contribution is a fairer basis by which to compare one product to another. We can show each product on a graph where we plot the cumulative product contribution, highest to lowest, for all the products. The resulting graph, the appropriately named 'hook curve' is shown in the figure below. The hook curve is one of the most powerful ways to display the outcome of the ABM analysis.

	Pr1	Pr2	Pr3	Pr4	Pr5
Product contribution	470	780	(100)		



As we would expect, one product is something of a cash-cow, such as 'Pr1'. The traditional gross margin calculation also gave a high figure and we now know that there are no issues concerning high levels of indirect and overhead activity. However, as we add more and more products to the graph, such as 'Pr2', we eventually find those where the revenue only just covers the real costs of manufacturing. The ABM Product Contribution gets smaller and smaller until some products balance out to zero.

At the tail end, we might be unfortunate to discover that some products, such as 'Pr3', which have a negative ABM Product Contribution. In other words, the revenue we obtain is insufficient to cover the actual manufacturing costs of the direct materials and labour and the appropriately assigned indirect and overhead costs. What is often surprising is finding products in this category where the gross margin is positive. We believe the situation is acceptable as long as they are making 'a contribution' to overheads. The reality is that any volume increase seriously erodes overall profitability rather than building up a useful contribution to cover overheads. The increased volume contributes only to losing even more money.

ABM view of contribution (customer profitability)

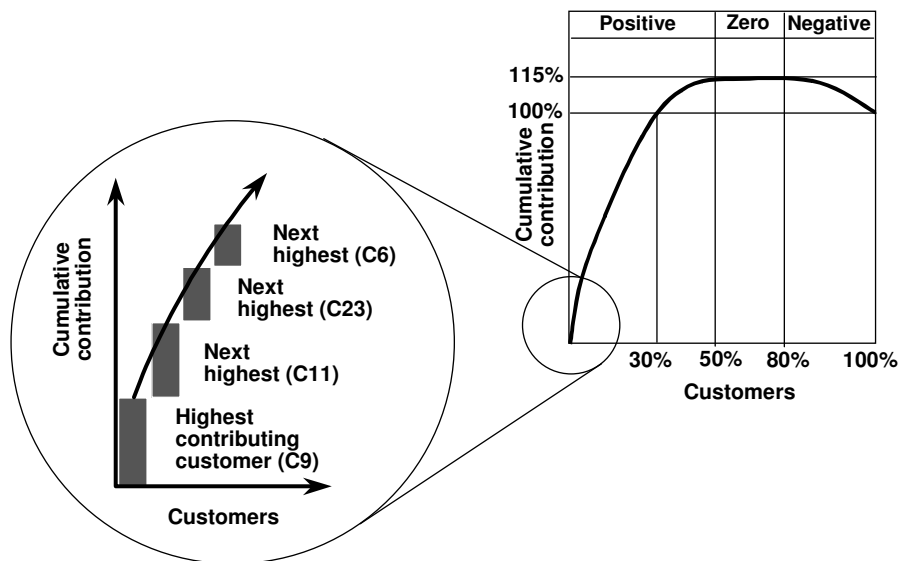
So far we have emphasised comparing revenue to actual product costs to give the ABM Product Contribution. This contribution has to pay for a number of significant costs associated with getting the sales in the first place, getting the products and services to the customers, and finally collecting payments. All these activities are customer-related costs.

An ABM analysis of these activities enables us to assign the customer-related costs to each of the customers. In some cases, individual customers will be appropriate, whereas in others, meaningful segments or groups of customers will be the basis for the analysis.

In a particular company, customer 'X' manually raised large numbers of low value orders, raised many queries, made many returns due to ordering errors, and had a poor payment history. Customer 'Y' electronically raised a small number of high value orders, paid through Bank transfers and never raised any queries or made product returns.

The gross margins made from both customers could well be equal but the costs of doing business with one are significantly higher. By calculating revenue less the real costs of the products the customer is ordering and less the real cost of servicing the customer, we are left with the ABM Customer Contribution. This figure is an appropriate basis to compare one customer to another.

We can now plot a graph of cumulative customer contribution, highest to lowest, for each customer. Again we would generally find a hook curve but usually flatter than for the products. Many customers could be giving no contribution at all as shown on the figure below with some seriously eroding profitability.



As we would expect, one customer could well be a cash-cow. The traditional gross margin calculation gave a high figure and we now know that there are no issues concerning high levels of overhead activity associated with the customer. However, as we add more and more customers to the graph, we find those where the revenue only just covers the real costs of the products and the real costs of servicing the customer. The ABM Customer Contribution gets smaller and smaller until some customers balance out to zero.

At the tail end, we might be unfortunate to discover that some customers have a negative ABM Customer Contribution. In other words, the revenue we obtain is insufficient to cover the actual manufacturing costs plus the customer servicing costs. What is often surprising is that customers in this category may have positive gross margins. Again we believe the situation is acceptable as long as they are making 'a contribution' to overheads. The reality is that any volume increase seriously erodes overall profitability rather than building up a useful contribution to cover overheads.

We know, instinctively, that some customers are more profitable than others. We also know that some are probably loss-making. We may also have some idea of which customers are probably the least profitable and which are the most profitable. So anecdotal evidence will pick up the extremes. The hook curve shows the situation with the other 99%. This is often a profound shock to management.

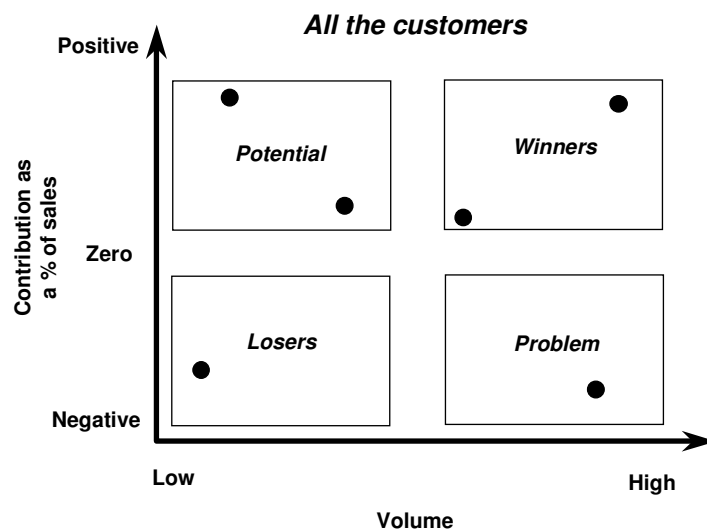
With accurate information we are now in a position to question how we can change the relationship with the customer and thus the costs incurred. In the extreme we might consider ceasing to do business with some of the customers.

The appropriately named 'hook curves' are a revelation to many companies that undertake an ABM analysis. Hidden from view by the smoke screen of gross margins, the reality of products that lose money and customers that lose money are now shown in sharp relief. The question then arises over what to do about the low or negative ABM Contributions.

The first instinct is likely to be an instant desire to get rid of the products and customers who are in the negative part of the hook curve. However, caution should be the first response. It is in this area that the hidden additional profit lurks. The approach should be to convert the negatives into additional positives. The quick answer is to raise prices for the products or to specific customers. While this may seem fair, particularly to 'awkward' customers, in general, market forces probably determine the upper limit on prices, usually the current prices!

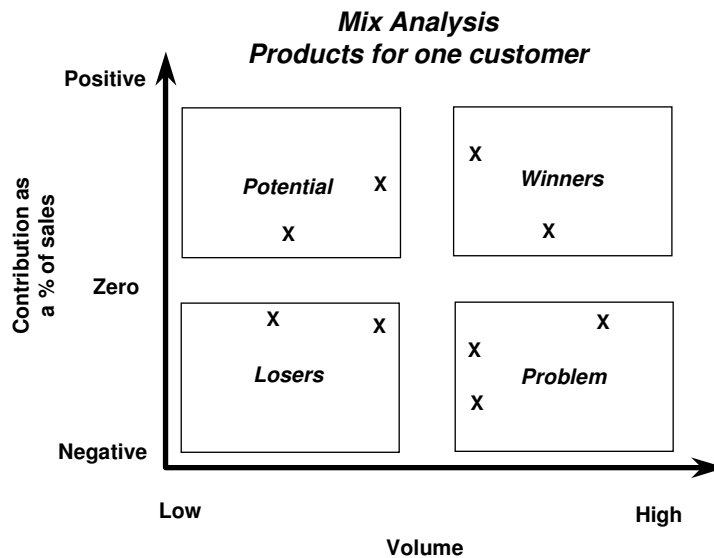
The first approach is to look at the characteristics of the products or customers in the high ABM Contribution end of the hook curve and then attempt to create these characteristics for the negative area. This would be the 'best practice' approach. In some cases the processes that interact with the customer may be creating problems for both parties. Resolving these types of issues opens up a constructive dialogue with customers where the outcome is likely to be a reduction in process costs for both. This is a win-win solution and should be the first outcome to search for.

Another consideration before eliminating customers is the amount of 'fixed' costs that may be affected. In ABM we argue that no costs are fixed, all of them can be influenced in some way. However, for a warehousing and distribution business, it is not easy to reduce the size of the warehousing facilities or vehicle fleet in the short term. In this situation, taking actions to change from a negative to a positive ABM Contribution is the first course to explore. As a last resort, letting negative customers go to competitors is one way of shifting known unprofitable business to other companies that will be glad of the volume but will not be aware of the unprofitable nature of the business.



The impact of volume and ABM Contribution can be shown graphically in a way that helps determine the next course of action to take. In the figure above are shown a number customers on a graph of the percentage 'ABM Customer Contribution divided by Sales Revenue' set against Total Sales Revenue per customer. This highlights which customers are priorities to resolve.

For any one customer, a graph can be plotted of the percentage 'ABM Product Contribution' set against Total Sales Value for each product the customer takes, as shown in the figure below. This highlights which products are priorities to resolve for that customer.



What if a particular customer is ordering a mix of products, where one or more products has a negative ABM Product Contribution? It does not automatically follow that you tell the customer they cannot have a particular product anymore. This issue is one of taking a balanced view about the future relationship. It may pay overall to leave the situation as it is if the overall relationship is sufficiently profitable.

The key to using an ABM analysis is that a business makes decisions with knowledge that it can trust.

Traditional view of costs in a business

As we have said earlier, in traditional accounting a business reports the use of resources and may split these simply into direct costs and overheads. However, in the overhead departments there exists a large diversity of costs. There may be training and personnel departments that enhance the skills and competencies of other departments. There may be new product or service design departments that are looking at ways to ensure the business has a future. There may be a legal department that looks at such things as litigation taken against the business or the formulation of commercial contracts to new markets.

In the accounts these costs are expensed under headings such as 'salaries' and lumped together as business overheads. This simple categorisation of diverse activities obscures the rich diversity of tasks being undertaken in a business to serve many purposes.

ABM view of costs in a business

Where a company allocates all its costs to products and customers (full absorption costing) it loses the real relationship between cost drivers and those costs that are influenced by the drivers. It also loses the visibility of the difference between the current business that is generating income and the real contribution that can be used to develop the future business. Full absorption costing destroys the ability to make meaningful relative judgements of product and customer profitability.

In ABM, the diverse costs and activities are categorised so we can understand what is happening inside the business.

There are certain key activities that are being performed that we define as **Frontline**. A frontline activity is one that has something to do with producing the primary product or service and any activities that interface with customers. Frontline activities have a direct cause-and-effect relationship to products and customers through cost drivers. This relationship may be a simple one based on, say, production hours to produce a product or number of invoices processed for each customer. They are current costs paid for by the revenue from current products and services for current customers. If more volume of the cost driver is forecast then more resource will be required. However, changing the methods used can change the unit cost of doing the work.

There are other costs and activities that exist because the organisation is a legal entity and must fulfil specific tasks. The annual audit and financial reporting would fall into this category. Such costs are largely independent of the product or service being provided. They are the costs of being in business. These we call **Legal entity**. These costs and activities have no direct relationship to current or future products and services. The level of costs is unlikely to change with throughput volumes or number of customers. However, the actual costs can change if the method changes or a service is obtained at a lower rate. For example, the auditors can be changed to reduce the level of fees charged.

In most organisations, doing nothing to develop future products and services will guarantee the demise of the business. Organisations need to have funds to pay for the current costs of the people doing, say, new product development, but the benefits are expected to be derived in the future. The current product throughputs or current customers do not directly influence these activities. We call these activities **Sustaining** and they are essentially an investment to achieve a return in the future. The organisation has a choice over the level of Sustaining costs it wants to have. A reduction in Sustaining costs would transfer directly to the bottom line, but it would risk the future of the business. Companies invest in Sustaining costs so they make a higher return in the future. It could be argued that Sustaining costs should be made specifically visible to shareholders as they are investments in the business made out of retained profits that could have been distributed.

The final category we call **Internal Service**. Typically, training, recruitment, current use of IT networks and the like are an internal service to all the other departments in the organisation. There are no direct relationships to current products and customers other than through the frontline activities that are supported. The key here is to understand and then assign the internal service costs and activities in an appropriate manner to all the other areas of the business that are supported.

Given the four categories of costs and activities we can now structure the costs in an ABM model in a way that is far more meaningful than using conventional accounting categories and thus aid decision-making.

Having analysed the activities in an organisation, the first task is to re-assign the Internal Service costs and activities to those of Frontline, Sustaining and Infrastructure. This uplifts the Frontline costs and links the cost drivers to the Internal Service costs. One can imagine a need for more frontline staff in say the invoicing department requiring an increase in the training department to train more invoice clerks. The link may be the number of people trained per annum, which would be the cost driver volume.

The uplifted frontline activities are assigned to the products and customers. The ABM Contributions are the revenue less the uplifted Frontline costs, either at customer or product level. It is at this point that it is meaningful to compare ABM Contributions for each product and for each customer. This is what Product and Customer Profitability means in ABM.

The total ABM Customer Contribution has to pay for the Infrastructure costs. After that, any amount that is left has to pay for any Sustaining costs and activities the company has determined it needs to secure its future. Increasing Sustaining costs reduces profit to shareholders. This is the acid test of management's decision to spend on Sustaining activities.

The four ABM categories of cost are not shown in the accounts. However, these categories better identify the nature of the decisions that management is called upon to make. It also focuses Management on two clear objectives.

1. To ensure that cost effective methods are used to produce current products to current customers at a price that generates the maximum positive ABM Product and Customer Contributions.
2. To ensure that the ABM Contributions are used effectively to generate new products and services to new markets such that the return on the investment in Sustaining costs is greater than that which would be achieved by shareholders investing elsewhere.