

How Much DOES it Cost to Patch a Pot-Hole?



What are your services costing you?

Typically your budget will show the overall cost of running an entire department or council but it will not identify specific activities like fixing a pothole, repaving a road, or changing a streetlight bulb.

This makes it very difficult to

- Know what each activity is costing so that you can evaluate whether it is providing value for money
- To compare the cost of those activities with others (e.g. for benchmarking or for contracting out)
- To identify areas which need improvement

In this issue we look at Activity Based Costing for Asset Managers—What it is, and what it can do for you

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Penny,

Recently I was looking at the Virtual Asset Management Community site to see what there was on 'activity based costing' especially in relation to the management of government assets. I didn't find anything. So I thought I would send you some links that I have found very useful – and why. I am also including an account of a simple ABC exercise that I carried out a number of years ago. Regards,

Ron Riegel-Huth,
(Member,
VAMC)



Everyone,

This recent note was the inspiration for this short introduction to ABC and its benefits for public and private sector asset managers. It is also responsible for Ron being among the first Community Members to attain "Red One" community status, see below

Penny Burns
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Virtual Asset Management Community

- Members rise in the ranks of the community in accord with their activity.
- The more you do, the more senior you become.
- To increase your rank
 - Take part in the discussion forums
 - Contribute articles or links to articles for the Resource Library
 - (a great way to make good use of one time research materials, as Ron has done above)
 - Found a good website in asset management—send it in with a short description
 - Send ideas and articles for "Strategic Asset Management"
 - Make suggestions for improvement of the Community site
 - Write such a good 'statement' in your members profile that you are selected as a "Member of the Week"

How do you rate? See the current list of Community Leaders, visit the Virtual Asset Management Community at www.amqi.com

Activity Based Costing (ABC)



ABC is about identifying the costs associated with each activity. The following five step process explains:

1. **Define Activities** Department personnel are used to define the city's or organisation's activities, identifying exactly how many and what services were being provided.
2. **Identify Cost Drivers** The next step is to identify the cost drivers—allocating activity costs to results—and determine the most effective means of measuring them.
3. **Establish the Costs to be allocated** To compensate for the deficiencies of the conventional information systems, ABC requires firms to collect costs in specially constructed “activity pools” rather than service departments or overhead cost centers. Each of the pools corresponds to a group of similar business processes or activities that are homogeneous in that all costs assigned to the pool are influenced or driven by a common factor. The activity pools can cut across departmental boundaries and can include overhead costs incurred by production as well as service departments. After collecting the costs in the activity-based cost pools, the firm distributes them directly to its various products or services by means of a “cost driver.” A cost driver is similar to an overhead charging rate, but it should represent the factor that has the greatest influence on the behavior of the overhead costs within a particular activity pool. The ABC model goes beyond typical cash costs such as personnel, materials, vehicles, and equipment to include fixed assets, facility costs, depreciation, and administrative overhead.
4. **Allocate costs based on cost drivers.** The ABC model that results is based on the information gathered during the first three phases and is specific to the organisation being examined. It enables calculation of the activity cost per unit of driver.
5. **Train Personnel** Information is only as good as the use that is made of it. From Activity Based Costing comes Activity Based Management.

Activity Based Management

Once you have the cost information, you can target activities that can be contracted out to the lowest qualified bidder—private or public. Not only are you able to compare total unit costs, but ABC enables you to examine the cost composition of bids to ensure that elements considered essential are not missed out or unduly minimised.

Experience has shown that, armed with ABC, in-house teams frequently win any subsequent bidding with external contractors – but that they are able to do so with a lower cost than they were previously incurring. ABC means that not only are the costs known – they can be understood!

What Activities Add Value?

Now that activities have been identified and costed, Activity Based Management seeks to sort activities into those that are considered value adding and those that are not – and to minimise those that are not. For example, an administrative non-value adding activity may be “correcting invoices” and some of the potential causes could be: untrained staff, poor input screen layout, inadequate updating of prices, etc. Each of these then becomes a cost reduction target.

Converting to an ABC system is not cheap.

Depending on the size of your organisation, you may be looking at a conversion cost of between \$150,000 to \$400,000 and an expenditure of time of between 3 months to a year.



But it can be extremely beneficial

“What departments or programs know about cost these days is blunt stuff: how much money is coming in; what their personnel costs are; and what they spend on rent, utilities, equipment and materials. But when it comes to explaining what portion of each of those goes into producing a single unit of work-processing a social security check or protecting an endangered species, for example-they are pretty much at a loss. It is virtually impossible, argue ABC proponents, for managers to divine where or how processes might be made more efficient without knowing in detail what's really driving the cost of doing specific things.

To succeed at activity-based costing, government has to do more than simply follow the dancing tax dollar, which it does well now. Government has to identify discrete outputs and then take labor costs (including fringe benefits), rent, equipment, materials, administrative overhead (including supervisors' salaries) and so forth, and apportion them to those outputs. It is no surprise that the task is widely viewed as arbitrary, capricious and daunting. Yet as hard-or arbitrary-as it might seem, a science of activity-based costing is emerging. “Most of the information you need to do this exists in government records right now,” contends Ellen Doree Rosen, who came up with an equation for doing ABC while a professor of public administration at the John Jay College of Criminal Justice in New York. **(for more information see Jonathan Walters “Count Your Costs” accessible through the VAMC Resource Library)**

ABC improves the effectiveness of internal charges

Consider the case where two research laboratories are faced with a facilities charge. The charge is based on square metres of laboratory and both are the same size and so receive the same charge.

However Research Laboratory A runs 24 hours a day, seven days a week whereas Laboratory B runs 8 hrs a day, five days a week. Hours of use is one of the drivers for energy use (lighting, ventilation) Laboratory A would suffer serious data losses if there was an electricity outage and so is supported by a back-up generator which Laboratory B does not need. Laboratory A is also reinforced against external noise disturbance. Laboratory B, although operating for shorter hours, requires extensive cleaning which does not apply to Laboratory A.

The ABC study dissects the various facility costs and assigns them to the two laboratories according to their determined drivers. The facility costs include more than simply the cash out items – it also includes depreciation on the facilities.

After study, the facility costs of Laboratory A are seen to be twice the costs of Laboratory B.

Why is this information important?



Case Study 1

One company segmented their customer base into high and low maintenance customers. High maintenance being those who created more work by placing frequent small orders, continually requesting expedition of their orders, slow players, etc. Applying the ABC principles they found that 90% of their profit came from 10% of their customers. BUT they were losing money on 50% of their customers! An attempt to 're-educate' these customers had some success – the remainder were simply asked to take their business somewhere else. Sales fell of course. But profits trebled! (**for more information** see "Learning your ABC: Understanding Activity Based Costing" accessible through the **VAMC Resource Library** – search on Activity Based Costing.)

Case Study 2

By Ron Riegel-Huth



I was appointed Engineering Manager of a plant that made small power electric motors. There were two types of motors: those for consumption by other departments within the company ('internal motors') and those for sale for use outside the company ('external motors'). When I joined the company it was general knowledge that external motors were the most profitable. This seemed strange as the internal motors were produced in large numbers, around 500 a day and made on automatic winding machines, whereas the external motors were made in varying batch sizes but usually less than 50, and were generally hand-wound.

The electric motor division had a history of never meeting planned production and one internal user actually imported motors from the USA to meet his own production needs. Some external customers had orders outstanding for over a year yet they still placed orders!

Traditional cost allocation was used – overheads were allocated by way of direct man-hours. Set-up costs were \$500 whether the run produced 500 internal motors or 50 external motors. After discussion, it seemed sensible to allocate set up costs on the basis of unit cost - \$1 per internal motor; \$10 per external motor. After more discussion, it also seemed sensible to allocate the costs of the sales team to the external motors alone. This had a considerable impact on 'general knowledge' and an understanding of the relative cost of the two motor groups. At the end of 9 months a bold decision was taken to stop external motor production entirely. As a result of focussing entirely on internal motors, several things happened:

- Productivity rose by a factor of 4 and we matched our USA benchmark
- End of line failures fell by a factor of 3
- Quality improved to the extent that 'motor failures' dropped out of the 'Top 10 Fault List'

Having learnt the hard lessons we then revisited one of the larger volume external users and started making motors for him at a much better price.

This was a very limited application of ABC but it resulted in great benefits.

ABC in Government—References



1. It's Their ABC - How NTU Counted the Costs

Northern Territory University is one of just a few Australian higher education institutions to have initiated an institution-wide costing study to meet Commonwealth requirements for financial reporting. For more than 18 months, this multi-dimensional analysis involved the costing of all activities within the university from teaching (per subject, per student) to administration and support services. ([More information](#)—see [VAMC Resource Library Northern Territory University](#))

2. Moreton Institute of TAFE, Queensland

In a pilot for the whole TAFE network and the Treasury Department, Moreton Institute supplemented its new financial management framework with an Activity Based Management system incorporating an Activity Based Costing methodology. The system tracks and measures outcomes to determine how effectively and profitably revenue is being utilised. see [VAMC Resource Library TAFE Queensland](#)

3. Government Uses of Activity-Based Costing By John M. Vann, John Vann Associates Management Consulting

The government environment is tailor-made for Activity-Based Costing and its rapidly growing corollary, Activity-Based Management. Some of the many uses for ABC and ABC-related information are shown below, with examples based on Defense Department experience pioneering ABC work, primarily in the Public Works arena, since 1992 (see Figure).



(A good paper and short—see [VAMC Resource Library John Vann](#))

4. **Using Activity-Based Costing to Manage More Effectively** Michael H. Granof Professor
David E. Platt Assistant Professor Igor Vaysman Assistant Professor Department of
Accounting College of Business Administration University of Texas at Austin

Many of the activities carried out by [government] organizations are similar to those carried by businesses. Clerical functions, for instance, such as procurement and payroll processing, are common to all types of organizations. Thus, as noted in the books and articles promoting the use of ABC in the government and not-for-profit sectors, ABC is no less applicable to those sectors than to businesses. But these books and articles are directed mainly to the functions that governments and not-for-profits have in common with businesses, not to the unique, often "intellectual," activities in which they engage.

(A 38 page research endowment paper, **VAMC Resource Library Granof or Activity Based Costing**)

5. **What Activity Based Costing is Not**

(from Activity Based Costing in the Telecom Industry, a set of informative slides with a PDF attachment)

Activity Based Costing is a branch of management accounting. ABC is not the same as traditional financial accounting. ABC does not replace traditional financial accounting. If you were to mess up an ABC account, you do not go to jail. If you mess with financial accounting reports, you go to jail.

ABC draws data from the general ledger but does not replace financial accounting. Companies that implement ABC still need to submit financial accounting report for tax and legal purposes. ABC is not a heretic in the world of accounting either. In fact ABC is mentioned in all accounting text books and most accountants already understood ABC as a "Two-stage Cost Assignment Process." ABC is also a required subject in accounting qualification examinations. But ABC is not well understood by accountants. Very often, financial accountants think they know everything they need to know already

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(more information—see **VAMC Resource Library Telecom**)

