

BEHIND AVMAN'S OVERHEAD MANAGEMENT

When Actual Gross Profit Really Matters

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The textbook definition of an Indirect Cost is “any cost not directly identified with a single, final cost objective, but instead identified with two or more final cost objectives (jobs/activities)”. Said another way, Indirect Costs are those costs not readily identified with a specific product or service but incurred for the joint benefit of one or more products or services. Indirect costs are usually grouped into overhead pools and charged to those products or services receiving some benefit from them. This definition is fine except that it does not go far enough. More on that later.

A LITTLE MORE HELP ON INDIRECT COSTS

First, let's distinguish indirect costs from direct costs. In an FBO, the cost of the fuel sold would be a direct cost of the fuel sales activity. Also, the cost of new cylinders for an engine overhaul job would be a direct cost of that job. However, not all costs incurred by your organization are directly related to a specific job or activity and those costs are indirect costs. One of the most common differentiators in categorizing direct from indirect costs is how we are invoiced by a vendor. If we receive an invoice from our vendor that specifies that the cost of Jet A fuel delivered was \$xx,xxx.xx, then we can specifically identify that cost as a direct cost of the Jet A sales activity. The same can be held if we receive truck rental invoices for our Jet A trucks. In contrast, if we receive invoices for uniforms or training for our line personnel, we cannot say that this much was for the Jet A sales activity versus the Avgas activity

unless we estimate and allocate each and every one of these invoices. So, in AVMAN we take these indirect costs and place them in overhead pools for later allocation to the final cost objectives. One estimate performed one time and one allocation performed one time.

In many systems you don't have any other option and the only way to distribute costs is to allocate each one separately when you are entering invoices into accounts payable, recording labor, or even making a journal entry. Those “one-by-one” distributions to one or more accounts can/will cause multiple errors since you are often estimating how much goes to each account. Those errors build up or compound as they are recorded. It is practically impossible to eliminate all estimating errors, however if you bundle them all together and then allocate them all at once you are naturally going to smooth the errors out and reduce their impact on the information you use to make decisions.

SHARED VS. NON-SHARED INDIRECT COSTS

Ok, so where did the definition described above not go far enough? In the definition above and in our example, we failed to specify that some Indirect Costs are Shared Costs, and some are not. For example, overhead pools that contain administrative costs and selling costs are not shared costs. The best way to contrast shared from non-shared costs is to look at an example. Shared costs are those that are related to

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your manufacturing of a product or delivery of a service; however, they are not incurred on a product-by-product basis as is the cost of fuel in an FBO. In an FBO, they usually include the big one labor and also many smaller items such as compliance, training, uniforms, safety, Fuel Farm Rental, etc. Non-shared costs that you may allocate to your Administrative or G&A pool are costs such as professional fees, payroll fees, bank services charges, the salaries of your accounting department and administrative personnel.

So, when you set up your overhead pools you are setting up both shared and non-shared overhead cost pools. Remember that not all of these overhead pools will be allocated to jobs, activities, or other overhead pools. Notice how I snuck that "other overhead pools" in here. Let's ignore that now. I will try to confuse you later. For the most part you can think of shared costs as those indirect costs that will show up in cost of sales on your income statement. There is one rule that must be followed, with the exception of "other overhead pools" you cannot mix shared and non-shared costs in the same overhead pool. Basically, everything in a shared pool is going to be allocated to jobs/activities as opposed to non-shared pools.

Let's review and expand on our FBO example. Most FBO's sell Avgas and Jet A. When we sell a gallon of Jet A, there are costs associated with that sale. First, there is the cost of the fuel. The cost of Jet A fuel is easy to identify and is directly related to

the sale. We call this a direct cost and when we record the cost, we distribute it directly to the activity we use to track Jet A revenue and expenses. Another direct cost might be the rent or depreciation on the Jet A truck.

As we said earlier, not all costs associated with the sale of Jet A, Avgas, or any other activity can be directly associated with the sale of the underlying product or service. For example, the labor costs associated with sale of both Jet A and Avgas would be close to impossible to directly associate with either Jet A or Avgas. CSRs and linemen bounce back and forth dealing with the sale of both types of fuel as well as other items such as providing GPU or lavatory services, moving airplanes, making reservations for customers, etc. Other types of expenses that may fall into this category include compliance, training, uniforms, fuel farm rental, etc. These are our shared costs. By allocating these shared costs back to an activity we can determine the actual gross profit of each activity.

Non-shared indirect costs in an FBO are usually those related to administrative matters and sometimes separately to sales and marketing. On your income statement, these are usually "below the line" costs. Which means they come after the Gross Profit on an income statement and therefore are subtracted from Gross Profit to arrive at Operating Profit.

Now back to my promise to confuse you. There are some overhead pools in larger organizations that contain shared costs but

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are allocated to both final cost objectives **and** other overhead pools. These might be overhead related to purchasing departments, IT departments, and of course fringe benefits. Fortunately, the only one of these that we usually see in FBOs is fringe benefits. Actually, it is easy to understand. The fringe benefits overhead pool usually contains things like health care expenses, employment taxes, 401K expenses, etc. Since these costs are usually allocated to cost objectives based upon salaries, you would of course expect that they would be allocated anywhere you allocate salaries. If the overhead pool receiving the allocation contains shared costs, then the allocated fringe benefits costs would be included in the costs rolled up into cost of sales. If the overhead pool contains non-shared costs, then they of course would remain below the line.

Indirect costs present two problems. First, how do we collect those costs and second, how do we assign or allocate them to jobs or activities in a manner that truly represents how the jobs or activities benefit from those costs.

COLLECTING AND ALLOCATING COSTS

Collecting the costs is straightforward. You can have them entered directly from accounts payable, inventory, labor management, and even journal entries.

Allocation and automation are where we need to apply both knowledge and technology. We have used the word allocate a few times. If we are going to

allocate the expenses contained in an overhead pool, we need a methodology. The methodologies used in AVMAN are also straightforward. We need a numerator and a denominator. The numerator is the sum of the costs in the cost pool. The denominator is a selected direct cost base. We will cover the direct cost bases supported in AVMAN in a few moments. Automation is what AVMAN's Overhead Management tool is all about. If you had to allocate these costs manually, you just wouldn't or couldn't. Afterall, accounting is no longer a field where a room full of men sit in green eye shades recording entries in their ledgers all day. When we configure AVMAN we tell it how to allocate costs we collect in the overhead pools. When we execute our entries to record overhead, AVMAN follows our configuration to perform these tasks.

A FACT

Shared cost pools are the only cost pools that you will set up for allocation by AVMAN's Automated Overhead System.

ALLOCATION METHODOLOGIES

AVMAN's Overhead Management Component allows the automated allocation of the costs accumulated in overhead pools to final cost objectives and/or other overhead pools. This powerful tool allows you to define the overhead cost flow structure of the company and save this structure for use by AVMAN in its automated overhead processing. AVMAN supports three types of overhead allocation

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methods, the *Simple* (company-wide) method, the *Departmental* method, and a *Special* method called Flight Resources for use only in aviation. New industry specific allocation methods are in development for different markets.

SIMPLE METHOD

The *Simple* overhead allocation method allows you to allocate the costs collected in an overhead pool to other overhead pools, jobs, and/or activities based upon one or more cost elements in your chart of accounts. These costs may be direct, indirect, or a combination of both. This method is often used to allocate the cost contained in a fringe benefits overhead pool.

DEPARTMENTAL METHOD

The *Departmental* overhead allocation method is labor/timesheet driven and can only be used if you use AVMAN's Labor Management Timesheet System. Although rarely used in many FBOs, it does become very useful if you have maintenance or charter operations in your FBO. It allows you to allocate the costs collected in an overhead pool to other overhead pools, jobs, and/or activities based upon the effort of the personnel in the department to which the overhead pool is assigned. Therefore, an overhead pool can be associated with a department and the overhead costs of that department can be allocated to the jobs, activities, and/or cost pools to which the personnel in that department charged their time.

1. Allocation to final cost objectives can only be performed utilizing either a direct labor dollar or a direct labor hours base. In a small FBO you may only have two or three departments. One containing the CSRs, Line-techs, and their supervisors. One containing the sales and administrative personnel. Sometimes the sales and administrative personnel are separated into different departments. In a larger FBO the CSRs and Line-techs may be broken into separate departments and may even have other personnel in a totally different departmental structure.
2. Allocation to both final cost objectives and other overhead pools can be performed utilizing either a total labor dollar or a total labor hours base. This type of departmental allocation is usually not found in an FBO. It is used when you have a department, such as internal IT department, that only provides services to other departments in the company but not directly to customers.

SQUARE FEET METHOD

The *Square Feet* overhead method applies primarily to those organizations/FBOs that have facilities for rent. This method allocates costs collected in an overhead pool by the square footage of buildings that you specify.

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FLIGHT RESOURCES – A SPECIAL AVIATION METHOD

Special overhead methods have been developed to satisfy specific allocation needs. One special overhead method, the Flight Resources method, has been created to support FBO operations. The Flight Resources method allows for the allocation of an overhead pool based upon the revenue levels and number of times Jet-A and Avgas were sold (i.e. the number of times you fueled aircraft with Jet-A or Avgas). You can specify a weighting that allows you to weight the number of Jet-A to Avgas fuelings for even finer tuning of the overhead allocation. It also allows you to add other activities that should receive a portion of the overhead.

Formula: The denominator below is used for all allocations when using this method. The numerator below is an example of the Jet-A allocation. The result of applying this formula is to end up with a ratio for each targeted activity selected by the user.

$$\frac{(\text{Jet-A count} * \text{Jet-A weight}) + \text{Jet-A Revenue}}{(\text{Jet-A count} * \text{Jet-A weight}) + (\text{Avgas count} * \text{Avgas weight}) + \text{Jet-A Revenue} + \text{Avgas Revenue} + \text{other activity revenue}}$$

BEFORE YOU START: CONFIGURING OVERHEAD

Before you begin using AVMAN's Overhead Management module, you will need to perform the configuration tasks. These include configuring the Overhead Periods, setting up the Overhead Structure, and

defining the Application Rates for the period. Since this topic is covered in AVMAN's manual, we are only going to address one topic here...Accounts.

HOW MANY ACCOUNTS DOES IT TAKE...?

THE GENERAL LEDGER OVERHEAD ACCOUNTS

The two overhead accounts below are general ledger control accounts.

1. **Actual Overhead Control Account.** One of these accounts exists for each overhead pool you have created. This account contains the total amount in the overhead pool for the period.
2. **Applied Overhead Control Account.** One of these accounts exists for each overhead pool you have included in your overhead structure. It will contain the total amount of budgeted overhead for the overhead pool after you apply the overhead for the period but have not yet closed that period.

THE COST ACCOUNTS

For overhead allocated to activities and jobs, AVMAN utilizes the following accounts to record the transactions. They are both direct expense accounts.

1. **Direct Applied Overhead Expense Account.** This account will contain the overhead applied to a job or activity. It is a subsidiary ledger account and will not show up in the general ledger.

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2. **Direct Over/Under Applied Overhead Expense Account.** This account will contain the overhead variance for a job or activity. It is a subsidiary ledger account and will not show up in the general ledger.

For overhead allocated to other overhead pools, AVMAN also needs the following accounts to record the transactions:

1. **Indirect Applied Overhead Expense Account.** This account will contain the overhead applied to an overhead pool. It is a subsidiary ledger account and will not show up in the general ledger.
2. **Indirect Over/Under Applied Overhead Expense Account.** This account will contain the overhead variance for an overhead pool. It is a subsidiary ledger account and will not show up in the general ledger.

your accounting period, you can instruct AVMAN to close your applied overhead to the actual overhead. Beginning with the first overhead in your structure AVMAN will determine the actual amount in the overhead pool and will calculate the rate for that pool. AVMAN will then search for applied overhead entries for that pool recorded in the period specified. AVMAN will calculate the difference and make the appropriate entries in the Job, Activity, and Overhead Cost Pool ledgers. AVMAN will then update the accounts in the general ledger.

WHY

The primary purpose of AVMAN's Overhead Management capability is to help you efficiently and accurately determine the *actual gross profit* realized when your company makes and sells a product or service.

THE OVERHEAD PROCESS

The typical process for companies is to first apply the overheads created in your structure and then determine actual overheads and record any variances. Using this method allows you to see what the gross profit would have been if budgets had been made by the departments and then to see what the gross profit actually is when including the variances.

Based upon your instruction, AVMAN will apply overhead based upon budgeted rates you provided for each overhead pool defined in your structure. At the end of