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Introduction

Fixed Base Operators or FBOs have become increasingly difficult to manage over the last decade. A number of factors have affected the profitability of FBOs. Chief among these is the price per gallon an FBO can charge for fuel. For the most part FBOs have lost control over their pricing. Many factors including the proliferation of online services which publish price, contract fuel providers, systems which help a dispatcher or pilot determine whether to tanker fuel, and large operators buying their fuel directly from your fuel provider. Markets change and we must change with them or perish. Embrace change, remember many old-line companies over the years became "fat, dumb, and happy" right before they died.

I doubt anyone seriously thinks things are going to change back to the way it was before. So how do we survive the changing landscape. When we fly from city to city, we no longer look down at the water tower to make sure we are landing in the correct town, and we should not run our businesses like it's 1940 either. In marketing parlance, we have lost pricing power with respect to our customers. Our choices if we want to stay in business are to control (or cut) the costs to provide our current list of services and/or augment the services we provide.

Background

This is obviously a paper that has an accounting slant to it, so we will focus on costs. As we discuss in other writings; building or fixing a business is a strategic effort which inevitably involves changes in product or service offerings. If your FBO relied heavily on fuel sales, maybe you have found ways to augment your profits by providing other services.

Most FBOs sell Jet-A and Avgas, provide services to pilots, passengers, and aircraft, and some even have a small store. Others provide maintenance and/or charter services. Finally, many also offer hangar and office space to tenants and transient customers.

Over fifty percent of the business failures we confronted when working in the "turnaround" field, where due in large part to a lack of understanding of the gross margin of the various products in the company's product line. "It's too hard" was a common theme when we questioned the CEO, CFO or Controller of the business. Any controller worth his or her "salt" can support and defend the net profit or loss on their income statement. But that next question, "ok, so how much of that profit or loss was the result of each product or product line," invariably ended up with well I don't really know or I'm not sure. Some pulled up a spreadsheet containing complex calculations full of cells containing assumptions made by the creator of the spreadsheet. A quick piece of advice...don't do this with anyone that has any forensic accounting experience. Look we don't want to know what you think it might be, we want to know what it actually is or was.

If a company measured gross profit at all, most took the approach of looking only at the "easy costs." The easy costs are those that you can "easily" calculate when looking at the cost of manufacturing or delivering a product. For example, some businesses calculated their gross profit by simply subtracting material cost from revenue. They completely ignored shared costs such as labor, facilities, equipment, and other similar costs. The few that did try to allocate those costs made it even worse by allocating them solely based upon the revenue of each

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product. So, if a product generated 50% of the revenue, then it was assigned 50% of the shared costs. I am sure you can see how many bad business decisions were made by those following that method.

Accounting

Well now to the defense of my fellow accountants. It is hard. Properly allocating shared costs is much easier to say than to do. Why...well most companies are still using accounting systems designed in the 1970's and 1980's that relied on technology of that era. Yes, in the year 2018 many accounting systems are still using designs based upon 1980's technology. It doesn't need to be this way.

First, let's define what we mean by an accounting system. We do not include those "quick" and dirty systems (and the many knockoffs) that are not much more than glorified checkbook systems. They work great for the corner store or the plumber that fixes your toilet. Those systems can tell you how much money you brought in and how much went out. Great for preparing a small businesses tax return but horrible for measuring the revenue and expenses for a business that has more than one product or service.

This is not a technical paper, so we are not going to discuss the advancements in database technology that occurred in the 1990's and early 2000's that provided the tools required to develop more advanced systems. Instead, we will focus on the features of a "real accounting system."

We define an accounting system as a tool that can be used to easily manage both what kind of revenue and expenses are received or incurred and where those revenues and expenses are realized or used. Physically, they are multitiered systems which consist of many linked subsidiary ledgers and one general ledger. In these systems, subsidiary ledgers are usually "linked" to the general ledger through control accounts.

This concept was the basis for creating AVMAN (and its predecessor Comptroller). What makes AVMAN unique is that it has an additional tier and more subsidiary ledgers than most modern accounting systems, and these ledgers are all automatically linked together using AVMAN's proprietary knowledgebase of management accounting techniques.

One of the first places you will see this in operation is in how expenses are managed. First, the expense is defined in the chart of accounts. This account specifies what type of expense we are tracking. Next, we track where is the expense incurred, this can be a job (project), activity, or an overhead pool (department). Finally, we want to know which product or service that we sell realizes the benefit of that expense, so we can determine a real gross profit for each product or product line.

Why do we need this?

Let's start with an easy one, fuel cost. 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.

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However, 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 called **shared costs**.

When we did try to differentiate these costs in "the old days," we would try to divide each expense up into different accounts (or subaccounts) when we entered invoices into accounts payable, timesheets into labor, or even making a journal entry. In addition to being a "pain-in-the-***" to record (and even worse to report), those "one-by-one" distributions to one or more accounts can/will cause an error 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 your accounting system.

Ok, so we believe shared costs should be collected in a "bucket" (we call them overhead pools), so we can allocate them later to the activities that represent our products or services. In other words, we split the total costs

collected in the overhead pool between the items we sell so we can track actual gross profit.

We collect these shared costs in one or more overhead pools, which act like buckets into which we dump these costs. Most FBOs only need one overhead pool to collect shared costs. However, it doesn't take the accounting department much more time each month to allow more overhead pools if they make sense.

One common use of multiple overhead pools is when you have more than one manager responsible for their own budgets. Each manager/department can have its own overhead pool or bucket. This makes it easy to track who is spending the money. We can set up budgets for each of these overhead pools and track those budgeted costs against the actual amount spent.

Picking the right number of overhead pools is an art. Too many and you complicate the data entry process. Too few, and you lose valuable information. So, think it through before you pick your pools.

Let's look at another common cost, "Supplies". Think of this as the "what" as in what kind of cost is this. So, we take out an account in the chart of accounts say "61101 – Supplies".

Next, you need to think of the "where" as in where did we incur this cost, in other words who spent the money? Say we have a vendor invoice us for supplies purchased for use by the linemen. So, we distribute the cost of these supplies to the "Flight Support" overhead pool (department). Tomorrow, we may record an invoice for supplies purchased by the accounting department, and we would distribute those costs to the "Administrative"

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Overhead" pool. So, as we record costs throughout the month, we distribute those costs to the pool or department where they were incurred. I know you are thinking, I want to know both pieces of information how much are we spending on something like supplies each month and where are those costs incurred. Yes, there are reports that provide both views of the information.

Now at the end of the month, we are going to close the month and one of the steps is to "allocate" our shared costs. Here, we take the total shared costs in our Flight Support bucket and allocate them among the jobs and/or activities that benefited from them.

It's not that hard anymore

At first glance this seems like a lot of work. However, AVMAN automates much of this work by using its own built-in expert. We call this expert "EA," and he was created in the early 1990's and was part of AVMAN's predecessor Comptroller. EA was the first expert system for management accounting.

EA solves the problem that most small companies face trying to implement management accounting within their organization. We recognize that the real cost inherent in operating a management accounting system is the cost of the manpower they require. EA has been designed to allow the power of a management accounting system to be utilized by typical accounting clerks, avoiding the considerable cost of management or cost accountants. Now you only need one person that understands the "big picture." This is usually your controller or CFO.

Using EA, accounting clerks will be collecting management and cost accounting data when

inventory is issued, accounts payable are recorded, orders are taken, invoices are issued as well as many other typical accounting tasks. All of this without even knowing that this is happening behind the scenes. EA becomes the company's "specialized staff."

One area where EA plays a very significant role is in AVMAN's Overhead Management component. The functionality provided in this component provides enhanced overhead management and application capabilities. EA completely automates the application of overhead to both ensure complete allocation of shared costs to all cost objectives and simplifies the task by providing a "wizard" approach to the establishment of the allocation methodology. With EA, your AVMAN Aviation ERP system will be providing efficient, effective control and insight into your FBOs business operations.

Wrapping up

To understand where we are making money and where we are losing it, we need to understand the total cost of making and providing our products or services to our customers. We need to know where those costs are generated if we want to control them, and where they are spent if we want to know the true cost of products and services. That is the only way you will know if you sell more of that product, or deliver more of that service, you will make more money. I cannot remember how many products or service lines we ran into where increasing sales resulted in increasing losses. They just did not understand the real cost of making/delivering that product and therefore, made bad decisions.