

James Komen — Managerial Accounting for Tree Businesses

[00:00:12] **Fred Harroway:** Hello and welcome to the ISA Conference Rewind video series. My name is Fred Harroway, and I am Director of Finance for the International Society of Arboriculture. Today, ISA is proud to bring you a presentation by James Komen, on “Managerial Accounting for Tree Businesses.” This presentation was originally given at the 2023 ISA Virtual Conference, so the opinions here are those of the presenters. So, if you are interested in learning about the financial aspects of managing an arboricultural business, I expect you will like this presentation. Now, sit back and enjoy.

James Komen: You own a tree business. Maybe you've got one crew. Maybe you've got a couple of crews working for you, but it's a small business and it's yours. You're the captain of the ship, and it's a good business. You've got all your business licenses. [00:01:00] You've got all your permits, and pertinent to this talk, you keep very good accounting records. Every time you get your bank statement, every time it comes in, you meticulously checked to make sure that all of the transactions that are coming in and going out are very carefully recorded in your books.

Well, this year you've been having a very good year. Your crews have been working very well. Your clients have been happy, and the money has been rolling in. In fact, your bank account has never seen a bigger balance. We've been very happy with their work, and so you decide to give your employees a Christmas bonus. Well, how much of a Christmas bonus are you going to give them? You take a look at your books, and you see that in November and December, there was a lot of money coming in and not a lot of money going out. You can see that there's a great big balance in your bank account. You decide to give your employees a hefty Christmas bonus. Well, you write the checks. You fill out your end of your paperwork, and at the end of the year, [00:02:00] you find yourself watching the fireworks on New Year's Eve thinking about how great 2024 will be.

Well, January comes and things start to go a little south. First, a couple of pieces of key equipment break, and you gotta buy new ones, and there's some major purchases to be made. After that, you got to pay your first premium installment on your general liability insurance, and that's a big old check. By the end of the day at the end of January, you look at your profit and loss statement and it doesn't look too good. You see nothing but red.

How did this happen? Your crews were just working as hard as they ever were in November and December. Why is January so different? Why is it so bad? Are you going to have to make some hard decisions and lay off some hardworking employees? Well, I open with this story to illustrate some of the problems that might arise from what's called cash-based accounting.

[00:03:00] Today I'm going to be talking about managerial accounting for tree businesses. I'm going to be talking about running your books for purposes of making good management decisions. Now right off the bat, I want to contrast this with tax-based accounting. I'm not going to be talking taxes at all. This is not preparing your books for purposes of determining how much tax you owe. Rather this is preparing your books for one question and one question only, and it is to say how is our business doing. That is the big question that you are trying to answer with managerial accounting. So, everything else that I talked about today is only going to be related to this question, and it is purely going to be related to internal bookkeeping. It has nothing to do with the books that you report out or that you put into your tax

forms. This is only for managing your own book so you can understand how your own business is performing and how you can make good management decisions with that information.

[00:04:00] Today, I'm going to be talking about some basic terminology about accounting just so you can understand the foundational elements of what I'm going to be presenting later. I'm going to talk about the fundamental transactions that move value from place to place on accounting sheets. That's debits and credits. Then, I'm going to talk about the difference between cash and accrual accounting. I'm going to talk about depreciation. And then finally, I'm going to finish up with cost classification.

All right, some very fundamental terms that we got to talk about. You got to eat your vegetables before you can have your dessert. Now, hopefully these terms are not unfamiliar to you. We've got five basic account types. We have assets, liability, equity, income, and expense. These are the five basic umbrellas into which value can be moved in a business. So, an asset is a thing that you have. [00:05:00] It could be tangible like a chain saw or it could be intangible like the right to do something. Liability is money that is owed to somebody else. It could be a short-term liability like a credit card debt or a long-term liability like an equipment loan or a mortgage. Equity is the difference between the two: assets minus the liability. It's also known as your net worth, the value of the business after all its debts have been paid. And income and expense are the inflows and outflows of value in and out of the company. Income is value coming in. Expense is value going out.

Now assets, liabilities, and equity all refer to what is presently happening at the business, what is presently, at this moment in time, the status of the business. That forms the balance sheet. The balance sheet is one of the two primary methods of reporting the health of a business. The income and expense refer to flows, [00:06:00] change over time, and they are properly accounted for on the profit and loss sheet, which reflects how the business is changing. Hopefully, your income exceeds your expenses and you are a profitable business, but these two sheets together, the balance sheet and the profit loss sheet are the basic forms of reporting how a business is doing or the health of the business. Now, we move value back and forth between these accounts using transactions called debits and credits. I'll talk more about that in a little bit, but debits and credits are the granular transactions that move value from place to place on these sheets.

Now within these five basic account types, there's a number of different sub accounts. I'm not going to go into all of them. In fact, there's many of them. These are just some common ones. Within assets, we have current assets and we have fixed assets. [00:07:00] Current assets are assets that turn over quickly or can easily be exchanged: things like cash or accounts receivable. That's the money that your clients owe you for work that's been performed. Or fixed assets. Fixed assets are assets that are not easily exchanged or removed. Think like a piece of real estate or a truck. Now, you might be able to take cash and purchase something, but it's very hard to take a truck and use that to purchase a thing or to take a piece of real property and purchase a thing. Usually, you would have to sell it and go through a long process in order to transact with it often at a loss if you have to do it quickly. So, fixed assets refer to assets that don't move around very much, but current assets can easily be moved around.

Similarly, with liabilities we have current liabilities and long-term liabilities. Current liabilities are debts that are owed to others that typically turn over fairly quickly. A perfect example of that are credit card debt and accounts payable. You typically have to pay your credit card debt at the end of the month, or accounts payable, [00:08:00] you got to pay those within 30 to 90 days, because they are they are short period of time, we say that those are going to be owed sooner, and you're going to need to have that cash readily available in order to pay them off. Contrast this with long-term liabilities, long-term

liabilities like mortgages or equipment loans for multiple years. Those are the kinds of liabilities you hold onto for a long time. What's great about those is you don't have to pay them all off in a short period of time. You can spread the payments out over a long period of time, but on the other hand, they also tend to be fairly large balances too. When you buy a piece of real estate, you don't expect to pay for the whole chunk of real estate all at once. Often instead, you'd secure that by some sort of a long-term liability and pay it off over many years.

On the income side, you could just simply have one account that says sales revenue, or you could subdivide that based on a number of different criteria. [00:09:00] Perhaps you might have a different account for different types of jobs. You might have an income account for pest management or pruning or removals or consulting. All of those could be tracked differently so that way you could more accurately determine how your business is performing in each of those respective subcategories. Expenses can be divided into cost of good and operating expenses. I'm going to talk a little bit more about this when we get to cost classification. Cost of goods sold. We call those above the line expenses. Those are the ones that are directly attributable to generating a particular piece of income. Contrast this with operating expenses. Those are the expenses that you're going to have no matter what regardless of the number of jobs that you have just to keep the business running.

The last major umbrella is the equity accounts. We have opening balance. That's the amount of money that the business started with. We have retained earnings. That's the money that the business generates but has not yet paid out to ownership. And then finally the corollary to that which is owner distributions. [00:10:00] Those are the payments that are made to owners, not by virtue of the money that they earn for working at the business, but just for their ownership of the business. Owning a piece of the business, they get distributions that way.

Alright. So those are the common sub accounts. Let's talk about how money can move from place to place within them. And we do that with debits and credits. Debits and credits are granular transactions that either increase or decrease each of these respective accounts. Now, there's a whole table of which one's effect which accounts and how they do that. You don't need to memorize this. I'm going to have this information on later slides, but if you do implement this accounting in your own books, then you'd know this like the back of your hand. Assets and expenses are increased when you debit them, and liability income and equity are decreased when you debit them. [00:11:00] And the exact opposite with credits. Credits will decrease assets and expenses and will increase liability, income, and equity. Don't worry. You don't have to memorize this. I'll have this information on later slides.

All right, so let's run a couple of examples just to see how this works. Debits and credits always must be balanced. So, whenever you do a transaction, you will always have at least one debit and at least one credit, and the total of the debits and the total of the credits must exactly equal each other. Let's do a very simple example. Suppose you have a \$1,000 sale of services with no other expenses or any other complications associated with it. It's just pure money coming in. Well, this is actually going to affect two of these accounts. You're going to affect both the asset and the income account. With the asset account, because money is coming in, you now have more cash on hand, and so you're going to increase the asset account. [00:12:00] As you can see, that means that you are debiting the asset account. Conversely, the income account, you're going to be crediting the income account which also so happens to be an increase.

So, you're increasing both the asset and the income account. You have one debit for the asset, one credit for the income. The debit and the credit are exactly equal. They balance out. And now you've

reflected this transaction on your books. Well, what's the end result? Well, it means that you have in your assets, it says that you now have an increased cash balance, and in your income, it shows that you've had a thousand dollars flow into your business. So, that's the debit and the credit that would reflect the \$1,000 sale of services.

Let's take a look at another. Hundred-dollar gas purchase using cash. Suppose you go to the gas station, and for simplicity, you pay cash to purchase gas for your truck. All right. Well, the two accounts that this is going to affect are asset and expense. [00:13:00] The asset account is cash, and you're going to be reducing the cash account, because cash is going out the door. So, we will in this time credit the asset account because we are deducting from our cash balance, and we will debit the offsetting side of the transaction. We will debit the expense account. Ultimately what that means is that we take cash from our bank, and it goes out the door and increases our expenses. That's the net result of this purchase.

Well, let's say instead of using cash. We use a credit card. Same purchase. It's a \$100 gas purchase, but we're instead using a credit card. Well, in that case we wouldn't be using an asset. We wouldn't be using cash at all. Instead, we would be increasing our liability. A credit card is a liability. It's a short-term debt, you're promising to pay the credit card company back for the balance that you run throughout the month. [00:14:00] So, in this case, we would increase our credit card debt. We would increase the balance owed to the credit card company, so we would credit the liability account, and the expense remains the same. We would debit the expense account, and this is the net result of our transaction. Again, a debit and a credit, they are exactly equal to each other and they offset. In this case, we are increasing the liability and also increasing our expense. At some point in the future, we have to pay that liability off, but that's a different transaction.

All right, let's do another one. Let's say we're doing a \$50,000 equipment loan. Let's say we're using this to buy a chipper. We want to take out a loan for \$50,000, and then use that money to buy a new piece of equipment, like a chipper. Well, in that case we're going to be affecting the asset and the liability account. On one hand, we're going to be getting a new chipper. So, that's a new asset. We would debit the asset account, because we're increasing our assets. [00:15:00] But we're also increasing the amount of money that we owe, because we take out a loan. So, we would be the offsetting side of this transaction would be a credit to our liability account. Last, we would have something that looks like this. We would debit the asset account, and credit the liability account, both of which would increase. Note that by taking out a loan, we have not changed our income or expense. The mere fact that we have taken out a loan and used it to purchase equipment does not change the income or expense of our business with this transaction.

Now, it's possible that that asset will be used in later transactions to generate income. That's totally fine, but that's a different transaction. Similarly, it's possible that you're going to need to pay off this liability as we'll deal with in the next transaction, but we haven't gotten to that. That would be a different transaction. Purely taking out a loan and using those proceeds to purchase an asset is just simply affecting the balance sheet and not your profit and loss sheet. [00:16:00] So, you're just affecting the asset and the liability accounts.

All right, last one. This one's a little more complex. We took out the loan. Now we need to pay it off. So, for simplicity of numbers, let's say it's a \$1,500 loan payment where \$1,000 of that is principal paying down our balance owed, and \$500 is interest, the amount that we have to pay for the privilege of using this money. Well, we're going to be affecting three accounts this time. We're going to be affecting asset, liability, and expense. The asset is the cash coming out of our bank account to make the payment. So,

we need to credit the asset account. The liability, well, we're reducing the balance owed, because we're paying down our principal. So, we're debiting the liability. Then the remaining amount of money, that's the interest. That is as well going to be a debit, because we are increasing our expense. The expense of paying the interest for the privilege of using that money during that particular period of time. [00:17:00] Note: we have a credit and two debits this time, but when you add the debits together, the credit and the total debits will exactly equal each other—\$1,500 on each side. One is the \$1,500 comes out of the bank account and then it gets split between two accounts. One is the thousand gets used to pay down the liability. And on the other hand, we have the remaining \$500 that is expensed. It's sent out the door to account for the interest payment for the privilege of using the money.

Alright, so now that I've run a couple of examples, you can see how debits and credits can be used to increase and decrease the respective balances of these accounts depending on the type of transaction that you're making. These are the granular transactions that are used to move money around. You'll also note that money never just springs into existence. [00:18:00] Value just doesn't come springing into existence or out of existence. Rather, it just simply moves from place to place. It must come from somewhere. If it's coming into the business, it has to come from income. If it's going out of the business, it has to go to something. It has to go to an expense. Money never just simply disappears. There always has to be a place that it comes from and a place that it goes to.

All right. So, with these fundamentals in mind now that you have an idea of the basic account types and how we move money around, let's talk about the difference between cash and accrual accounting. This is the meat and potatoes of this presentation. To know cash accounting accounts for expenses and income when they are received and when they're paid. So, the day that you write that check, that's an expense. The day that you cash a check from your client, that is receiving the money. That's your income. [00:19:00] The easy thing about cash accounting is you just look at your bank statements, and if there's money going in, that's income, if there's money going out, then that's an expense. Nice and easy. Less complex.

It's very common for small businesses to do their accounting using a cash-based system. However, the trouble with that is sometimes money is received and paid in different periods of time than when it's actually earned or used. We actually can get a better picture of what's going on with our business if we use accrual-based system. That accounts for income and expense when it's earned and used. It's more complex. There's more transactions. You have to reconcile between the actual cash in and out and where the actual usage or earning of the money takes place, in which period that takes place. The idea is it's based on this principle called the principle of matching. [00:20:00] You're trying to match up the expenses and the income in the same period that they are earned and used in order to better reflect how your business is doing.

I'm going to give you a couple of examples of why this is important. Now your books can get distorted and give you a false view of how your business is doing if you rely strictly upon cash. All right, so suppose, just for this example, suppose. You have a general liability insurance policy where you have to make a \$6,000 premium payment for the year. And the insurance company lets you do it on a payment plan, but they don't allow exactly even payments throughout the year. They want you to pay a big bulk of this premium right up front as like a, you know, a downpayment basically, a big bulk of the payment up front and then you can make installments throughout the year. Further suppose that—here's your year—further suppose that these payments begin in January with \$1,500 initial payment. From February through October, it's \$500 a month, [00:21:00] and then after October you've paid it off. So, November and December you pay nothing. Let's just say that this is the payment plan that your insurance company

is asking for. Different insurance companies will give you different payment plans. Some go by the quarter. Some have like semiannual. Some will have a big upfront payment, and a couple of subsequent installment payments. But let's just say that this is what we have to work with for this particular policy.

All right, if we used a purely cash-based accounting system, and we put these entries on to our profit and loss sheet, well, what we'd be reading is we'd be reading a very sad January, because our insurance expense would be \$1,500 in January. We'd be thinking well we're spending a ton of money on insurance. We need to cut our all our insurance coverage because it's too much money. We're just bleeding money for insurance. In February through October, we'd be neutral, because that's the cost of doing business. That's how much insurance costs. [00:22:00] And then in November and December, we'd be lulled into a false sense of security that we don't actually need to make payments on our insurance. And when everything gets aggregated together, when all of these transactions, not just insurance, but all of the operating expenses in our business get aggregated together on our profit and loss sheet, we might be lulled into a false sense of security that our business is actually doing better than it really is. We might show a profit of four hundred dollars and think, oh great. We're doing great, but really you actually lost \$100 and you just didn't account for the general liability insurance usage in that period.

So, how do we deal with this? How do we deal with these highs and lows in expenses that aren't actually properly accounted for in the same period in which the insurance policy is actually used? This coverage is used throughout the year, but we're paying for the bulk of it towards the beginning of the year. Well, let's take a look at it from the perspective of accrual accounting. [00:23:00] With the same premium, that's \$6,000 insurance premium. We would see even payments throughout the year, \$500 a month, and of course, we would be neutral to that. We would neither be happy nor sad because it would just be the cost of doing business, and that would accurately reflect how our business is doing.

Well, how do we get from A to B? How do we get from those actual payments that we make to the insurance company to a profit and loss sheet that shows even balance payments throughout the year reflecting the even gradual usage of our policy throughout the year. Well, what I'm going to show you is how to get from A to B. It's going to look complex and scary because it's a big old table of numbers, but I'm going to walk you through it step by step. So, hopefully you'll be able to understand it. Now when we make this transition from purely cash-based to accrual-based in order to better reflect what's going on with our business on our profit and loss sheet, [00:24:00] what we're going to do is we're going to create this imaginary account called a prepaid insurance account. It's just an account that we use as a placeholder. We just imagine it. And it's totally fine to do this so long as everything reconciles at the end of the day. We're not hiding any money. We're just moving things around, and we're changing the timing.

All right. With our cash account and our prepaid insurance account, let's reflect our initial payments to the insurance company. I'll deal with expensing everything later. We're only going to be working with these first two accounts. We're just moving assets to another asset account. Essentially, we're just taking money from one pocket and moving it to another pocket. We'll deal with sending it out the door in a little bit. We make our first payment to the insurance company that means money comes out of our cash account which means we are crediting our cash account and the offsetting side of that is a debit. [00:25:00] We are decreasing our cash account, but we are increasing this imaginary account called the prepaid insurance account. Both are assets. So, we've decreased one asset and increased another asset. This money, this \$1,500, has not disappeared. It's just simply changed form.

What this reflects is that we now have the right to use \$1,500 worth of insurance premiums over a period of time. I know that's a little confusing, but you'll see how it works out in the end. So, February we make another payment. That's \$500 from our bank account that goes into our prepaid insurance account. March, April, May, June all the way through October, same thing. Five hundred dollars comes out and goes into our prepaid insurance. Finally, November, December. Nothing happens. We don't need to make any more payments. We've already paid off the policy in full. That's our \$6,000. We're going to work with the other side. We're going to look at our prepaid insurance asset account and expensing it. [00:26:00] We're going to expense it gradually throughout the year, and we're going to be working with the insurance expense account so we can reflect it on our profit and loss sheet.

So, in January, we're not using \$1,500 worth of our insurance policy. We're only using \$500. We're going to credit the asset account \$500, and the corresponding other side of the transaction is a debit. We are debiting the expense account and sending it out the door. So, \$500 from our imaginary account of prepaid insurance gets packaged up and sent out the door and reflected as an expense on our profit and loss sheet. This more accurately reflects that we used \$500 of our \$6,000 premium. In February, we do the same. In March, April, May, June, July, August, September, October, November, December. All of it is \$500 a month. We credited the asset account \$500. We debited the insurance expense account \$500, and at the end of the day, [00:27:00] we have used up our prepaid insurance asset.

Now let's check our work. We're going to run the balance for each of these accounts. Cash counts pretty easy. We just add it up. Fifteen hundred dollars in January, \$2,000 in February, \$2,500 in March, on so forth until October when we have sent \$6,000 out the door and paid for the policy and full. November, December, it doesn't change, so we're still at -\$6,000. For the prepaid insurance account, at the beginning of January, we debit the prepaid insurance by \$1,500. We increase the balance \$1,500, but we also send \$500 of that outdoor to reflect the use of our policy in January. Well \$1,500 minus \$500 leaves us with a balance of a thousand dollars. In February, we put \$500 in because we pay the insurance company \$500, but we also use \$500 throughout the month [00:28:00] as we use up February's time worth of our insurance coverage. So, \$500 in, \$500 out leaves us with the balance of \$1,000. March, April, May, June, July, August, September, October, same thing. In November, we don't put any money in, but we take \$500 out and we send that out the door leaving us with a balance of \$500. And in December, we use the remaining \$500 to leave us with a \$0 balance. Lastly, let's look at the insurance expense side. In January, our balance is \$500. February \$1,000. March, April, May, June. You just incrementally increase it by five hundred dollars until December when we have finally used up the \$6,000 of our insurance premiums.

All right. Let's take a look at this. We've at the end of the day spent \$6,000 cash. Cash has been reduced by \$6,000, and our insurance expense reflects an increase in the expense of \$6,000. [00:29:00] So, really we could have just dealt with this in a single transaction—pay \$6,000 for insurance policy. Why in the world did we go to all this trouble of filling out all these transactions and filling in all these cells of this complex spreadsheet? Well, what we've done is we've translated our cash-based accounting to accrual-based accounting to more accurately reflect the timing in which the premiums were actually used. We were using them evenly gradually throughout the year, and now our profit and loss sheet reflects that. If we only used cash based, then we'd have those wild swings with the highs and the lows which would give us a distorted picture of how our business is doing. Last thing—and this is important—whenever you have an imaginary account, you have to make sure it's zeros out at the end of the day and it does here. So, we can say that this reconciles. Six thousand dollars came out of cash, went to the expense, [00:30:00] and there is no remaining balance in our imaginary prepaid insurance asset account.

Alright, so I've talked about the difference between cash and accrual accounting. I'm now going to talk about a related topic which is depreciation. It too is based on the principle of matching. You're trying to match up the use of the expenses with the period in which the income they are used to generate is earned. Now depreciation reflects the loss in value of fixed assets over time, and it's based on the principle of matching just like I said. Instead of accounting for a major purchase the day that you purchase it and then nothing thereafter, you would instead spread out the expense of using that big fixed asset over a long period of time in order to better reflect the use of that fixed asset. The way you calculate the depreciation in a given period is you divide the cost basis of that piece of equipment [00:31:00] or piece of that asset that you purchased by its useful life. Cost basis is how much you paid for it at the time of purchase, and the useful life is merely an estimate. You're just estimating how long this thing is going to last. Computer, you might use a useful life of 3 years or 36 months. For a chipper, truck, something like that, you might depreciate it over seven years. For a piece of real estate, you might depreciate it over 27.5 years or something like that. The idea is you're trying to reflect how long you're actually going to be using it and then divide your expense of purchasing it over that entire period of time. This reflects what is known as straight line depreciation.

There's other forms of depreciation. They go beyond the scope of this talk, but suffice it to say, this is just how you spread out over a period of time the expense of purchasing a major thing. Just as an example, if you bought a \$70,000 chipper, [00:32:00] and if you estimated its useful life to be 7 years, then you would reflect \$10,000 per year of depreciation.

Let's run an example. Suppose you were just doing this cash-based accounting again, and for simplicity, let's say you're paying cash for this purchase. At the beginning of 2024, you purchase a chipper for \$70,000. That chipper is still in operation in 2025, 2026, 2027, 2028, 2029, 2030. So, you don't need to buy a new chipper every year. You just buy it once in 2024 and then you use it over a period of time. Because you only use it once, you just account for it once in 2024. But if you kept your books like this, if you just expensed it in 2024, your books would look pretty terrible in 2024. You'd say, "What the heck is going on? I just lost seventy thousand dollars in 2024." Then comes 2025, 2026, 2027, 2028, 2029, 2030. You're living easy, right? [00:33:00] You're thinking that oh, we hardly have any expenses at all to run this business, and you're lulled into a false sense of security about how your business is doing. You're led to believe based on your distorted profit-loss sheets that your business is actually doing better than it really is. You might show \$10,000 of profit more than you've actually earned in those periods. As a result, you may make decisions that may steer the business wrongfully. Then, of course, in 2031, you got to buy a new chipper and you're sad all over again. That's no way to run a business. Rather we want to reflect the use of this chipper over time, and the way we do that would be spreading that over each of the respective periods of time.

So, now suppose we're doing this using depreciation instead of expensing everything in 2024. We would expense it gradually. That's \$10,000 every year, and we would just feel neutral about that. [00:34:00] Ten thousand dollars is the cost of having a chipper. That's the cost of running a business and having the benefit of this chipper overtime. And over time the chipper loses value until eventually at the end of this period it is worth \$0 on paper on our books. Now, it's true that the chipper may have some residual value, and you can deal with that in another transaction. But reflecting the use of the expense that you put forth, saying I'm purchasing this chipper, anticipating its use over the next 7 years, you would just simply expense it \$10,000 a year, which would add up to the total cost of purchasing the chipper.

How do we get from A to B? How do we go from the cash-based transaction, which shows a really big nasty transaction one period and then nothing and all the others, to something that's more evenly

reflecting what's actually happening? Well, let's do something similar to what we did before. Here we have three accounts. We have the cash account. We have a chipper account, [00:35:00] and we have the depreciation expense account. Note that we have two asset accounts: the cash account and the chipper account. When we purchase the chipper, we are going to take some money out of our bank account and use it to purchase the chipper. We are going to credit the cash account and debit the chipper account. We're decreasing the balance of our bank account and increasing the balance of our chipper account. We're saying that we have basically taken a pile of cash and waved our magic credit card, and it's now turned into a chipper. It's now changed forms into an asset that we can now use in the field. Well, that asset still has value. So, we haven't just made our cash disappear and go out the door. Rather that cash has just simply changed form into a chipper that we can now use to run some branches through it. So, because it still has value, we would account for it on our balance sheet as an asset, though a different kind of asset. [00:36:00] In this case, it would be a fixed-asset instead of a current asset. All right, so since we've purchased our chipper in 2024, we don't need to do it again in 2025. We don't do anything in 2025, 2026, 2027, 2028, 2029, and 2030. We just do nothing. All we have is that single transaction in 2024.

Let's move over and take a look at how we're going to depreciate this asset. In 2024, we have used one year worth of chipper. We've used one year worth of chipper. Assuming it has a seven-year useful life, we would depreciate 1/7 of our chipper. We would credit the chipper account by \$10,000, and correspondingly, we would debit the expense account. That's reflecting sending that value out the door. The use of the chipper of \$10,000 worth. In 2025, 2026, 2027, we would do the same thing. Ten thousand dollars a year all the way to the end of the year.

Now let's see if this reconciles. We're just going to check our work. [00:37:00] In the cash account, we have a balance of -\$70,000. We've spent \$70,000 of cash in 2024, and nothing has changed in 2025, 2026, 2027, 2028, 2029, and 2030. So, it remains at -\$70,000 at the end of the 7 years. In our chipper account, we purchase a chipper in 2024, but we also use the chipper for one year. So, at the end of the year, we would show a balance of \$60,000, and in 2025, we would use another \$10,000, so show a balance of \$50,000, then \$40,000, \$30,000, \$20,000, \$10,000, and finally \$0. Over on the depreciation expense side, we would see a balance that would tick gradually upward \$10,000, \$20,000, \$30,000, \$40,000, \$50,000, \$60,000, and finally \$70,000 by the end of the year 2030.

What does that mean? Well, they reconcile. We've taken \$70,000, and we've expensed it, but we've done so not all at once in 2024. [00:38:00] Instead, we have expensed it over the period of 7 years. By doing so, you'll notice in the expense account we reflect a gradual use of the chipper over that time rather than a big bulk transaction in 2024, and then nothing in later periods, which would distort the appearance of our profit loss sheet and lead us to make poor managerial decisions. In 2024, we would think that our business was doing poorly, and we might cut expenses unnecessarily. And in 2025 through 2030, we would be led to think that our business is doing extraordinarily well, and we might spend money unnecessarily or overextend ourselves in our business. So, this will lead to a clearer picture of what's going on in our business.

The last topic that I want to end with is called cost classification. Cost classification refers to grouping expenses based on how they behave. [00:39:00] Generally speaking, we can group costs or expenses into two big groups. We've got indirect costs and direct costs. Direct costs refer to expenses that are directly related to generating a particular source of income. Indirect costs relate to the operation, continuing the operation of the business regardless of the number of jobs that you have. This is a very simplified profit-loss sheet. This is what it looks like. At the very top, you have the income. That's the

revenue coming in. Then below that, you have cost of goods sold or cost of revenue in a service-based business. You subtract the cost of revenue from the income to get gross income. That's the profit from the work that happened out in the field, the money that came into the business. But you still have to run the business. You still got to pay office rent, and you still got to pay someone to do your taxes. All of those operating expenses are going to happen regardless of the number of jobs you have out in the field. [00:40:00] So, then you subtract that out, and finally at the end of the day, you have your net income. The net income is your profit at the end of the day. Indirect costs properly go under operating expenses. Direct costs properly go in cost of goods sold or cost of revenue. This is sometimes referred to as above the line or below the line expenses. And the line is this double black line between cost of goods and gross income.

We're referring to grouping these costs based on how they behave. We're saying that these direct costs are used to generate income. We just account for them early on so that we don't distort our view of what's happening with our business and think that we should be reducing those expenses. We shouldn't, because they're being used to generate more income. So, it's actually a very good thing that we're spending that money, because we're using it to generate even more money. On the other hand, the operating expenses, those are the ones that we want to focus on cutting, [00:41:00] because that would just be related to the period expenses of keeping the business running. That's like the overhead of running the business. We don't want to just eliminate this cost of revenue, because then we would likely also eliminate our income, but instead we want to focus on if we want to eliminate things. We want to make our operation lean and mean and reduce that overhead that would be focusing more on those operating expenses.

By separating the map by classifying them in this way, we can better focus our management decisions on what expenses we want to look at reducing in order to run a better operation. Our direct cost will easily include hourly labor and materials. So, paying the guy in the tree to do the cutting for Mrs. Jones, who is then paying you to do that work. That's hourly labor that is directly attributable to the work that was done out in the field, and we would properly account for that under the direct costs. [00:42:00] Similarly materials, if you're purchasing a tree to plant for Mrs. Jones. She pays you for tree planting. Well, that was the materials that you use to generate the income of the tree planting, so that of course would also properly get classified as a cost of goods sold.

Contrast this with the indirect cost. These are the things that you need to spend money on regardless of the number of jobs you have. Staff salaries and the office rent, advertising, continuing education, general liability insurance, and depreciation, all of these are things that you just have to spend money on overtime just simply because time has passed but not necessarily because you have done more or less work out in the field. By dividing these out you can then group them based on how they behave in your profit and loss sheet and in your business, so that you can make better decisions, better management decisions.

Now, I'm going to add an asterisk next to these next two because sometimes they're grouped under one heading. [00:43:00] Sometimes they're grouped under another heading. I'm putting them under direct costs. Sales commissions are often directly proportional to the amount of revenue generated. You'll give your sales consultant a percentage of the amount of the bid. If that's the case, then it's directly related to the income that came in and then it would properly be classified as a direct cost. And Workers Compensation Insurance. Those premiums are directly related to the hourly labor cost. When your labor costs go up when you're working more in the field, so too does your workers compensation premiums.

Conversely, when you work less, the premiums go down to reflect less payroll. So, I group those under direct cost, but I have seen other businesses just simply group them under indirect costs. I could see them going under either side.

Alright, so a payroll in a service-based business like a tree business is the big elephant in the room. [00:44:00] Payroll is a monster because really the vast majority of what we spend money on is people. Now payroll looking back at that income statement, most often when people do their simple books. It'll just get lumped in under operating expenses. We just say, oh this is the cost of paying everybody to stay on staff, because that's how much it costs to run our business, but I would encourage you to actually itemize out and think about the amounts of payroll that are actually directly attributable to generating income and you can group them under the cost of goods or cost of revenue heading. So, if someone is out in the field actively generating income, if those hours are billable out in the field, then some portion of their salary should be attributable to the cost of goods or cost of revenue. So, essentially what you're going to be doing is taking someone's salary and splitting them between these accounts using one of these transactions [00:45:00] on your managerial books to show that some of it is related to directly generating income. Other portion of it might just be related to continuing operation. And still more you might actually put some of that payroll into a temporary asset account and then later expense that into your operating expenses over time reflecting gradual usage of that asset that you've created.

Well, what might that mean? Well, I'll show you an example of it in just a moment. So, I'm going to show you how payroll could actually be classified as cost of revenue or cost of goods, operating expense, or an asset that then later gets expensed on your operating expenses. Let's take a look. All right suppose you've got an \$8,000 salary payment. You're making a salary payment to one of your employees. And this is just for simplicity of numbers. And 90% of their time out in the field was billable right there. They're out in the field doing billable work, [00:46:00] and it's directly attributable to generating income. 10% of that time was spent at continuing education events, maybe this conference, maybe, you know, another local event. The idea is it wasn't on the clock. It wasn't something that they were able to bill a client for. It's just something that you want to encourage them to do for continuing education purposes.

So, in that case, we've got three accounts that we're going to be affecting with this transaction. First the obvious one, we have to reduce our cash account. So that would be a credit to the cash account, and then we're going to divide that cash transaction among our cost of revenue expense, the cost of generating the income that was billable out the field, and then the continuing education expense, which is an operating expense, reflecting usage running our business over time. So, we'd say that \$7,200 of that (90%) was used to generate revenue and we're properly classifying that as an above the line expense [00:47:00] which is a good thing. It helps us see how we're generating our income. We use that \$7,200 worth of salary to generate the billable hours out in the field. With our continuing education expense, we're debiting or increasing the continuing education expense reflecting the amount of money that we've invested in our employee's education in order to make them a better employee and do good work for our clients.

Now we might just be satisfied with this transaction to be totally fine, but if you look at this in your profit and loss sheet in January, for example, you're looking at January. You're going to see a big old lump of \$800 under continual education. You're going to think gosh. We're spending an awful lot of money on continuing education. Maybe we ought not spend so much money on continuing education. And you might be led to make a rash decision to cut out [00:48:00] continuing education or limit that continuing education and instead focus more on billable time in the field. Well, I would suggest that one

way to handle this would be to add in yet another account and call it a professional development asset account and then amortize it over time. Let's see how this works.

So same salary payment. We're just going to divide it out differently. We'll still be crediting the cash account because cash goes out the door to pay the employee. And we're debiting the cost of revenue account, because 90% of that was still done in the field. So that's going to remain the same, but instead of debiting the continuing education expense, instead of immediately expensing all eight hundred dollars of that, we would put it under the professional development asset reflecting that we have this intangible asset, the brain power within our employee, this aggregated knowledge that we have gained from sending them to the conference, and that we will then use that asset over time to benefit our company.

[00:49:00] Well, then we would have to subsequently credit that professional development account in monthly installments. At the end of the year after making \$66 credits every month for the rest of the year, it would reconcile, and we would finally use up all \$800 in that professional development asset account, the imaginary account, and we would have expensed it. At the end of the day, we will have debited the expense account which would just then reflect \$66 a month of continuing education. When you look at your profit loss sheet, now \$66 spent on continuing education, that seems like a very paltry sum. It seems like a very easy to swallow pill if you think about the value of the benefits that you're getting from educating your employees. It also shows that you have a commitment to continuing education by spreading that out throughout the entire year. You're reflecting that that continuing education is actually benefiting you throughout the year. [00:50:00] You're, by the principle of matching, matching up those expenses within the period in which you're using them to generate income. So, these transactions would be used in order to present a clearer picture of how your business is actually doing, and that's the main purpose of managerial accounting.

So, let's review what I've gone over today. I went over some basic terminology. I talked about the five basic account types. That's an asset, liability, equity, income, and expense. I talked about some of the sub accounts. I talked about the transactions that we use to move money from place to place. Those are debits and credits. I gave you some examples showing cash versus accrual accounting and depreciation. The purpose of those is to, by the principle of matching, reflect the expenses and the income in the period in which they are actually used and earned [00:51:00] and not necessarily the period in which they are paid and received. Then finally, I showed you different ways that you could classify payroll in order to better reflect how your business is doing. That's the main point of managerial accounting.

So, I want to remind you that this whole talk was based about managerial accounting, not tax accounting. Not once have I told you any tax advice. Consult with a proper tax professional when it comes to preparing your taxes. You very well might have two completely separate sets of books, one for internal management decision-making and one for external reporting purposes. As long as you can reconcile the two and show how you got from place to place, that's perfectly normal and perfectly fine. But these are tips for helping you make decisions with your own business, your own small business when you're managing your books.

All right. I hope you've taken something from it. [00:52:00] I invite you to have conversations with your bookkeepers and your accountants on the advantages and disadvantages of these different methods that I've presented for you, and I hope that you are better able to reflect how your business is doing so that you can make good management decisions in running your businesses in the future. Thank you very much, and I hope you enjoy the rest of your virtual conference.

