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The Art of Avoiding Budget Headaches

Executive Summary

Managing yearly budgets is a huge challenge. Workers in all sectors, public and private, have to do more with less. Accurately predicting budgetary needs is part of the challenge. Unexpected events can stress tight budgets and cause huge headaches. In all sectors, preventive maintenance spending has great value in ensuring budgetary certainty. For professionals in both private-sector and public municipal roles who work with fuels, vehicles and equipment, there are potential “budget-busters” that could threaten to derail yearly budgets. Targeted preventive spending can go a long way to eliminating these threats.

Introduction

Think about these job roles. You may be one of them or know someone who is. What do all of these people have in common?

- City and municipal managers
- Fleet administrators
- Small business owners

The answer we’re looking for is that they all get their fair share of headaches from budget managing. Budgeting is a challenging process that requires an accurate assessment of past trends combined with the ability to predict the future. To do that well takes talent.

Budgets are typically divided into fixed costs vs. variable ones. In household budgets, fixed costs would be line items like the mortgage, car payment, maybe the cell phone bill. The variable costs would stem most often from costs derived from human behaviors – food, electricity, gas for the car. You can try to predict these based on what’s happened in those areas in the past, but by their very nature, their ultimate costs are variable from month to month. They don’t stay the same.

Whether you’re talking about a home budget or the budget for your business or department, it always seems to be the variable expenses that throw the budget into disarray. In operating your department, if you’re in charge of managing funds that are spent on the operation and upkeep of equipment, fuel and/or vehicles, the unexpected expenses of repairs, breakdowns, equipment-related crises and fuel problems are what give you the biggest headaches.

Everyone’s under more budget pressure than ever before.

The call to do more with less seems to be universal across both the public and private sectors. Private sector business entities have to do more with less because of increased market competition. The economic crash of 2009 weeded out a lot of weaker businesses, leaving behind fewer but stronger groups. And they’re all competing against each other in every single field. Competition is both good for consumers and makes businesses stronger. It makes them do more with less because they know that if they don’t, the company down the street will.

State and local governments know these budget stresses all too well. Their situations are different in that they’re not competing for private sector dollars. The pressure on them comes from having to get everything done that is required of them during the year, but within defined budget parameters. And



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those budgets aren't getting any larger. Many state and local entities are facing huge budget pressures because of past financial liabilities (like worker healthcare costs) that threaten the solvency of entire cities and towns. Big cities like San Jose and Detroit are either teetering on the brink of bankruptcy or are already over the edge. And when government workers at any level see other agencies about to go under because of finances, it makes them feel the pressure, too.

Unexpected budget items, like equipment breakdowns, are impossible to predict and will cause budget stress

Life is full of surprises. In fact, on both a personal and a business level, surprises should never really be surprises because they will always happen. You just don't know exactly when or what they are going to be. Personal finance advisors like Dave Ramsey talk about the importance of having a family emergency fund because the typical family has at least one "major financial event" every ten year period. If everyone took that to heart, nobody would be surprised at the unexpected because they would know to expect something bad to happen, at least once every decade.

Whether you work for a small-to-medium business or a local government entity, your yearly budget is fixed upon the best projections you and your department(s) can make for the things you're going to need money for in the upcoming year. That's fine if you can predict the future with all certainty. But the reality is that not all expenses that come up during the year can be predicted or even quantified with exact certainty.

If you consider your budget, it's probably not too difficult to come up with a list of the kinds of unexpected things that may happen in your sphere of influence – the things which threaten to become "budget busters". We'll say "sphere of influence" because some of you – the people reading this – will be fleet managers. Some work in city or county government. Maybe you're a local government manager running a department. This applies to all of us.

So for those of you who are tasked with dealing with some combination of vehicles, equipment, and fuel, what are the kinds of things that are difficult to plan for ahead of time, but which invariably end up putting the strain on your budget? Some answers could be:

- **Fluctuations in fuel prices that make it difficult to predict how much it will cost to fuel your fleet and business.** Is there anything worse than signing a diesel fuel contract at \$3.50 a gallon, only to see fuel prices drop the next day to \$3.40?
- **Equipment breakdown.** Nobody plans to have something not work when it's supposed to.
- **Vehicle or workplace accidents.** Definitely not completely avoidable, but the object of safety training by most businesses to reduce their likelihood. A great example of the kind of preventive spending we'll talk about later.

Preventive maintenance spending combats unexpected expenses and always saves more in the long run

Some unexpected expenses are truly unavoidable. A hurricane causing flood damage at a facility or a municipal vehicle being severely damaged in a car accident – those are both unexpected and not exactly the kind of events that lend themselves to having their odds of happening decreased by some kind of



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advanced spending. At the same time, some unexpected expenses can have their impacts softened by a budget allocation for preventive spending in that area. A municipality might elect to set aside budget money to retain a tree service for scheduled trimming of trees in the county. It doesn't look like it's worth doing but the financial benefits are obvious when winter storms roll around and tree branches aren't falling on power lines.

Getting people to spend resources on preventive maintenance can sometimes be a tricky case to make. Take two widely-divergent sectors like health care vs. fleet maintenance. Reams of studies in the health care field show that spending money on preventive care services and public health education – helping someone avoid getting diabetes – gives a huge return on investment as compared to reactive spending, like treating the health problems of the person who has developed diabetes after years of unhealthy living. It's obvious, right? Which effort is going to cost less? Paying a health educator or dietician to help at-risk people learn better ways to implement a healthy diet before they get diabetes? Or pay a doctor, hospital, nurses, surgeon and team of physical therapists for the care and rehabilitation of someone who's had to have their foot amputated because of diabetes neuropathy because they never learned how to eat right?

The same is true in virtually every other area of business and commerce. Fleets have preventive maintenance budgets to enable them to do recommended service on their vehicles at prescribed intervals. Oil changes and filter changes and tire rotations are all services that cost money for materials and for labor. They're not reactive services; a city bus fleet in Orlando or Newark doesn't wait until an engine seizes up before they decide to spend the budgeted money to change the engine oil. Obviously, they do that important step at prescribed intervals ahead of time, because their experience shows that they will spend less total money in the long run by allocating a small percentage of the budget ahead of time for preventive services intended to be executed before a problem develops. They get a larger return on investment by doing it that way.

Return on investment is the key to justifying preventing spending

For those that don't feel they have the budget space to spend on preventive maintenance, the return on investment issue may be the key to convincing them. And it shouldn't really be any other way. It's not going to be worth it for a city budget manager to allocate x dollars in an area that doesn't have an overt problem if it can't be shown that the expense will result in 2x or 3x or some kind of sizeable return amount of savings. Sometimes, you do have to spend money to make money.

Preventive maintenance spending is beneficial because it's a fixed cost with predictable results

In certain situations, the value of doing something stretches beyond the raw value of dollars saved vs. dollars spent. Accountants can come up with all sorts of parameters and measurements like opportunity cost and depreciation of capital investments and such. What we're thinking of here is the non-monetary value of a budget item. Sometimes, budget allocations end up having values that are greater than just the dollars saved and the ROI ratio.

Using the personal finance issue as an example, financial planners recommend that households save an emergency fund of at least three months of expenses. We mentioned this before. In addition to helping a household weather those big unexpected events (one every ten years, remember?), there's an ADDITIONAL unstated value of peace of mind that's almost, well, tangible in a sense. Think about yourself personally. Think about the times when you've had enough money in the bank (however you define that personally) and compare those to any times in your life when you were short on cash and the



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bills were coming in. When you have plentiful savings, you think differently, you have more peace. It tangibly affects your outlook and your life in a way that goes beyond just the amount of money you have. In this case, there's an actual additional value to having money saved which is greater than the value of the money itself.

Now apply that truth to the area of the budget costs and expenses in your particular sphere of influence. Here, the additional value of preventive maintenance spending is that it is a fixed cost which reduces future variable expenses that would threaten the solvency of your budget. In other words, allocating x dollars in your budget for a preventive maintenance service like changing oil will reduce the chances that the budget will be blown up later by unfixed costs of equipment breakdown that likely may end up being multiple times larger than the cost of the advance service.

Spending budget money on preventive maintenance in your sphere of influence gives you more budget certainty and reduces future surprises. As to how much additional value that has, to get the answer, you have to answer the question for yourself – how much is peace of mind worth to me in my position?

Staying within budget makes you a hero

Let's say you surveyed a thousand professionals and asked them any number of questions arranged around the theme of "what makes you most happy in your job". Most people think that money is the key driving force for workers. No doubt about it, money is a good thing and everyone likes getting paid for what they do. Everyone likes doing a good job and not getting fired for it. But money isn't the be all and end all for the average person. No, what comes out time after time is that workers are fulfilled by two really important, non-monetary things: number one, positive feedback on their performance, and number two, recognition.

Meeting your department or fleet or organization's budget helps you hit both of these. Spending a small amount of budget capital on preventive maintenance helps keep your area in budget by reducing budget fluctuations from things like equipment breakdown. And when you consistently meet your budget or even get in under the money line at the end of the fiscal year, it makes you look good to the people who matter. If you work for local government or a fleet manager, it's going to go over really well with the people above you who make important decisions. If you own a business and work for yourself, well, you need all the help you can get, so it doesn't matter who it makes you look good to – your company's bottom line is looking better because of it.

Which problems threaten to negatively impact a municipality's budget from a fuels standpoint?

Now that we've laid out these truths from a high-altitude perspective, let's narrow the focus down. It's agreed that, conceptually, preventive spending is a good thing that has lots of value, saves money, and help you stabilize your budget. Lets talk some specifics in Bell Performance's area of expertise of fuels. Both fuels and equipment (the things that use those fuels) are consistent contributors to the whole "unexpected problems that threaten my budget" issue.

If you handle fuel or manage any kind of equipment, what are the most common fuel-related and equipment issues that might threaten your budget? It's useful to consider that question, along with looking at what types of solutions to consider that may help reduce the surprise of some of these.



Budget Threats	Why It Happens & Why It's Bad	Recommended Preventive Solution(s)
<p>Loss of stored fuel quality, especially ethanol blends</p>	<p>Any time fuel – ethanol, diesel or biodiesel – is stored for longer than a few weeks, it loses fuel quality based on the actions of environmental negatives like oxygen, water, and heat. All of these fuels are susceptible to attack, with expensive consequences.</p> <p>A big reason why ethanol blends (now pretty universal in the field) can't be stored is their ability to absorb water from the air. It takes as little as half a percent of absorbed water to cause phase separation (where the ethanol separates from the gasoline in the blend) and destroy the quality of what is likely to be a rather expensive fuel investment.</p> <p>Diesel and biodiesel fuels don't separate like ethanol does, but since they tend to be stored for even longer periods, they are very prone to fuel darkening and the development of sludge/heavy end drop out. Burning stratified fuels like this gums up equipment, causes engine and injector deposits, and wrecks performance of both small and large equipment.</p> <p>Potential costs</p> <ul style="list-style-type: none"> • Potential loss of total or partial stored fuel investment • Tank cleaning expenses (typically \$1000s) • Increase operating expense from poorly functioning vehicles or equipment 	<ol style="list-style-type: none"> 1. For ethanol blends – an ethanol fuel stabilizing treatment that controls water without alcohol. 2. For diesel fuels, a diesel fuel stabilizer, along with a regular use detergent package to clean critical areas and keep important equipment running at desired performance.
<p>Water in fuel storage tanks</p>	<p>Over time, all fuel tanks develop water accumulation. At the very least, it can be from simple condensation and temperature changes. Many times, it can come from tank leaks (a hardware issue), contamination during bulk fuel transfers, even (for underground tanks) rain water accumulating in the spill catch and then flooding into the tank when it is opened.</p> <p>This water not only destroys fuel quality over time, it can have catastrophic effects on small equipment. And not just small equipment, but storage tanks as well through corrosion.</p> <p>Potential costs</p> <ul style="list-style-type: none"> • Loss of ethanol-blended gasoline investment from phase separation • Expensive corrosion damage • Gas-powered small equipment damage from water absorbed by ethanol blends interfering with essential lubrication 	<ol style="list-style-type: none"> 1. Regular housekeeping to monitor water levels. 2. Prompt repair of any mechanical tank defects 3. Use of water-absorbing fuel treatments to keep water volumes under critical levels and protect equipment.



Budget Threats	Why It Happens & Why It's Bad	Recommended Preventive Solution(s)
<p>Microbes in fuel storage tanks</p>	<p>Microbes and water are linked, because once a storage tank has a water layer, microbes have everything they need to grow in that tank. And once a microbial colony is established in a tank, they can spread wherever that fuel goes. Which means you can easily go from just one infected storage tank to multiple tanks, vehicles and equipment with microbial problems.</p> <p>The problems that microbial presence cause in fuel are numerous, serious and costly. They produce biomass and deposits that plug filter. They secrete acids that cause serious corrosion damage.</p> <p>Potential costs</p> <ul style="list-style-type: none"> • Increased filter change intervals • Increase operating expense from poorly functioning vehicles or equipment • Structural damage from tank corrosion 	<ol style="list-style-type: none"> 1. Use of biocide treatment to kill microbes in fuel and keep them away. 2. Recommended housekeeping measures to ensure control of excess water in storage tanks.
<p>Small equipment damage</p>	<p>Smaller, gas-powered pieces of equipment are essential to getting the job done for most non-transportation businesses and entities. But they are extremely sensitive to the effects that ethanol-blend fuels have, being affected both by gradual damage to rubber and polymer parts from ethanol solvency and also possible catastrophic damage by absorbed water's interference with lubrication in two cycle pieces of equipment.</p> <p>Potential Costs</p> <ul style="list-style-type: none"> • Equipment damage, ranging from replacement parts to complete shut down and replacement. 	<ol style="list-style-type: none"> 1. Preventive treatment of ethanol gas to protect susceptible parts and control ethanol gas water absorption.
<p>Fuel storage tank corrosion</p>	<p>Corrosion to storage tanks and internal components happens over time when there is long-term presence of water or microbial infestation in the tank. Microbial infestation is particularly devastating to tanks because of the acids they secrete in the tank, accelerating corrosion that may already be underway due to the water presence.</p> <p>Potential Costs</p> <ul style="list-style-type: none"> • Expensive tank hardware replacement from corrosion damage 	<ol style="list-style-type: none"> 1. Recommended housekeeping measures to control water build-up in storage tanks. 2. Use of biocide fuel treatment to kill microbes and prevent infestation. 3. Use of water-absorbing treatment and/or mechanical service to get rid of accumulated water.



Budget Threats	Why It Happens & Why It's Bad	Recommended Preventive Solution(s)
Fuel gelling in winter	<p>Cold temperatures in the winter will cause both diesel and biodiesel fuels to thicken and gel, plugging fuel filters and shutting engines down because of fuel flow restriction.</p> <p>Potential Costs</p> <ul style="list-style-type: none"> Loss of operation of equipment and inability to accomplish essential winter functions due to cold weather engine shutdown 	<ol style="list-style-type: none"> Addition of cold flow treatment to diesel and biodiesel fuels before the temperature drops below the fuel cloud point. Have fuel-thawing treatment on hand for emergency use if fuel unexpectedly gels at critical times.
Emergency generator shutdown	<p>Due to the nature of stored fuel for emergency backup generators (out of sight, out of mind), a significant number of generators fail to start or operate as needed at critical times. Such failures are always fuel-related. During significant storm- or power-related events, such as Superstorm Sandy and the North American Blackout, fully 20% of back-up generation systems have been shown not to start or only to run a few minutes before shutting down.</p> <p>Potential Costs</p> <ul style="list-style-type: none"> Inability to accomplish essential tasks during emergencies 	<ol style="list-style-type: none"> Have and implement a protocol in place to test emergency generators under load on a regular basis. Treat stored fuel with stabilizer and biocide to ensure its proper performance during emergency situations.

Conclusion

Prevention-related spending is a proven way to minimize unexpected budgetary stressors while saving crucial budgetary funds. But sometimes it takes the right vision and perspective to commit to doing this, because the savings and benefits of preventive spending are not always immediately apparent. Like the sports team that commits resources to a player development department or the corporation that takes some of its profits to invest in an employee wellness program, the fruits of preventive spending are different from the results of the reactive spending that so many of us are used to doing. Reactive spending is done in response to a problem or existing situation and the results are usually immediate and visible. Preventive spending is far more cost effective and always yields a higher Return On Investment than reactive spending does.

Why not make this the year that you reap the benefits of fewer unexpected problems and more peace of mind?

If you'd like more information on this or other fuel-related topics for your business or municipality, visit us at www.WeFixFuel.com. Bell Performance has been helped city and local governments, fleets, and small to medium businesses solve fuel problems since inventing the very first fuel additive in history in 1909.