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Act on the Root Cause of Cost

Analyze the symptoms, then fix the problems behind missed cost targets

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I had a lot of arguments when I earned my living as a hard-riding, fast-shooting construction engineer. The one I remember most was about cost and the need to reduce cost. Of course it is important to reduce and manage cost. No argument there. But you do not improve cost by agonizing over the past; you must look to the future. You improve cost by finding the root cause of the problem and by acting. General Patton told us, "A good plan, violently executed now, is better than a perfect plan next week."

It is exactly the same when it comes to managing a fleet. We do budgets, calculate unit rates, and know our costs because that is how we measure performance, balance our books, and identify areas that require our attention. Deciding what to do is, in most cases, more art than science. There is frequently no right answer, and we should not try to find "a perfect plan next week"—there are just too many variables.

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But there are some principles. Let's see how it works by following the logic in the diagram, from top to bottom and from left to right.

The first thing to do is to review the cost situation for a given rate class (machines that are essentially the same and that share the same internal charge-out rate) or unit. If the rate class or units in the class are under budget with regard to both the owning cost and the operating cost codes, then you follow the top line to end up at Row 1. Things are running well. You need to see if there is a sufficient pattern to consider lowering the rate and setting new cost targets for the rate class.

If the class or units in the class are over budget, then find out if the overrun is in the owning cost codes, the operating cost codes, or both. This is a critical first step, as the action required to rectify the situation is entirely dependent on whether the root cause lies in the owning cost codes or in the operating cost codes.

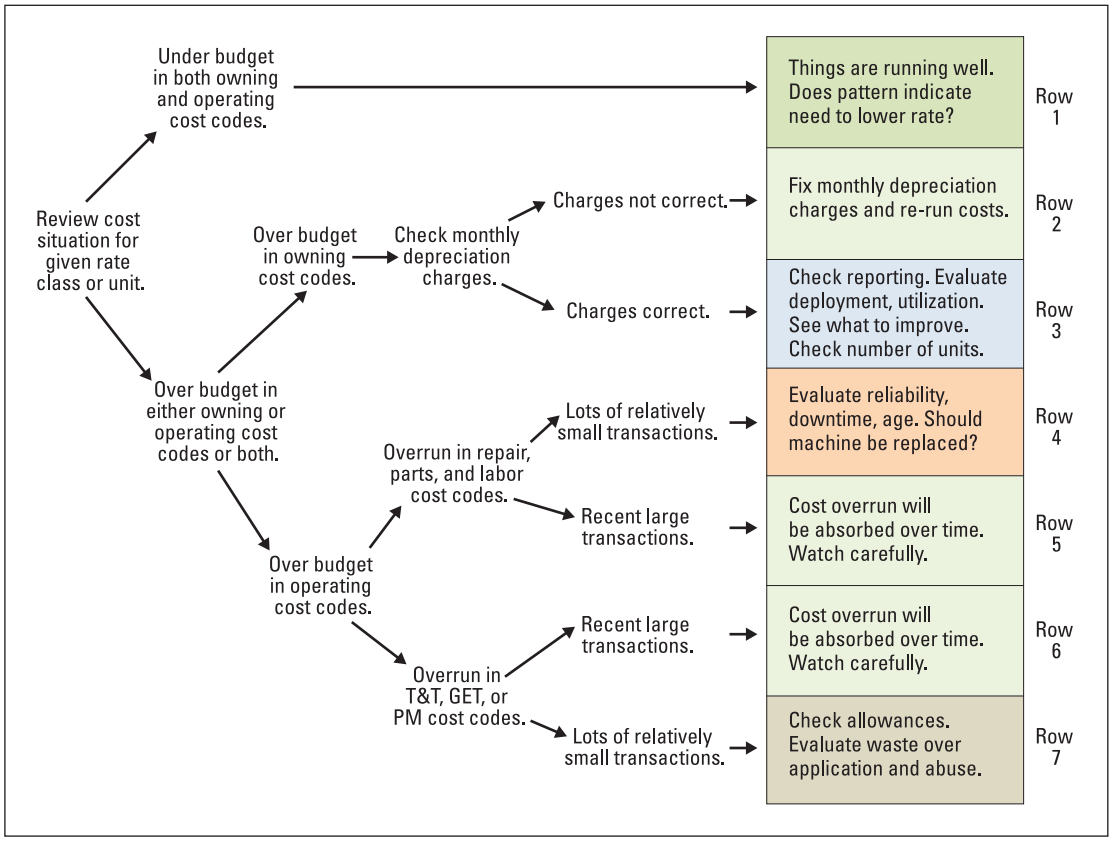
If the class or a unit in the class is over budget in the owning cost codes, then focus on fixed-cost recovery. First check if the monthly depreciation charges have been correctly calculated in accordance with company policy and correctly charged to the unit or group. If not, then the incorrect charges need to be fixed and the costs re-run (Row 2).

If the charges are correct, then the overrun on budget can only be due to the fact that the machine(s) have not worked or have not been reported as working for the anticipated number of hours, days, or weeks. You end at Row 3 and need to do three things: check whether the reporting is correct, see what can be done to improve deployment and utilization, and look at the possibility of reducing the number of units in the rate class to better fit current workloads. In every case, deployment and utilization are the key metrics you require to guide decisions.

If the problem lies in the operating cost codes, it means that the class or units in the class are over budget when it comes to recovering variable costs such as repair, parts, and labor; tires and tracks (T&T); ground-engaging tools (GET); and preventive maintenance (PM). There are two possibilities. First, the overrun is in the repair, parts, and labor codes that increase with age; or second, the overrun is in the tires and tracks, ground-engaging tools, and preventive maintenance codes that remain largely constant with age.

If the problem lies in the repair, parts, and labor codes, then one of two things is happening. The machine could be experiencing a lot of relatively small transactions with costs occurring frequently. The number of work orders is high and the interval between work orders is low. You end up at Row 4 and need to look seriously at reliability and downtime. Check if the repair work is being done properly or if there is a lot of repair rework on the same machine and the same component. Is it an age problem? Is the machine a candidate for replacement? Reliability and downtime are the key metrics.

Budget overrun situations in the repair, parts, and labor codes can also occur when the machine has re-



Following the logic in the diagram, from top to bottom and from left to right, reveals principles of cost analysis that expose root causes.

cently undergone a major repair and not yet accumulated the hours needed to bring hourly costs back into line. You need to check if there have been any recent large transactions, and if this is the case, then you end in Row 5. You need to hold on and wait for the hours to accumulate. Watch the machine carefully.

If the problem lies in the tires and tracks, ground-engaging tools, and preventive maintenance codes, then you again have two possibilities. First, there have recently been large transactions due to the fact that you have replaced an undercarriage or set of tires. You end in Row 6 and simply need to wait to accumulate the hours needed to bring costs into line. Second, there are all kinds of small expensive transactions in the ground-engaging tools, preventive maintenance, and fuel codes. You end in Row 7. This is not good. Check the allowances you have made for these codes, and look carefully into waste, overapplication, and abuse.

The diagram shows how we can use our knowledge of equipment costs to analyze a symptom—over- or under-performance relative to budget—to identify seven end points that detail what we can do to improve performance. Row 1 puts us in a position to use our knowledge of cost to lower our rates and be more competitive. Row 2 is a simple administrative check. Rows 5 and 6 require patience: We need to wait it out and absorb the impacts of large, infrequent expenditures. We hope our decision to do the work was good and that we will, with time, return to normal.

Rows 3, 4, and 7 are the tricky ones. Row 7 requires a detailed, disciplined approach to day-to-day cost management. Watch for overapplication and eliminate waste. Rows 3 and 4 are where the problems can lie and where most of the money is spent. There is no shortcut and success depends on three things: a detailed knowledge of cost to analyze the situation and get to the root cause; a knowledge of deployment and utilization to take action and fix the problems in Row 3; and a knowledge of reliability and downtime to analyze problems, take action, and fix problems in Row 4.

Cost is a symptom. You fix problems and improve performance by going to the root cause and taking action.

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