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What's Your Keystone Metric?

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What do you do when you have opportunities for improvement everywhere but you don't know where to start? Your inventory is higher than it should be, your delivery systems are too slow or inconsistent, your customer satisfaction is just OK or worse, your profitability is lackluster or perhaps inadequate, maybe productivity is lousy or simply stagnating, maybe your safety record is not to be admired. Any one of these is a candidate for systematic improvement, but where do you start? Many organizations launch improvement teams to work on all of these at once, and if they go about it the right way, they'll get good results on most of them and excellent results on some of them.

But chartering a number of different improvement efforts, each with its own results metric, can become unwieldy to manage and sometimes results in some teams working at cross-purposes with others. Once the project is complete, the next best project must be selected and the natural impetus is to take a break, wind down. Management must provide constant encouragement to find the next improvement and address it. In some ways, this is a push approach to process improvement.

An alternative approach is to identify a keystone metric to pursue. A keystone metric aligns the entire organization around a single objective that eventually transforms the habits of an organization in a way that simultaneously improves all the other key metrics of the organizations — such as quality, safety, productivity, and customer satisfaction. In *The Power of Habit*, Charles Duhigg describes how a keystone metric and the habits it formed enabled Paul O'Neill to transform one of the largest, divisive, and unwieldy corporations in America.

When Paul O'Neill was brought in as CEO of Alcoa, profits were down, quality and worker productivity were poor, and morale was so toxic that striking workers would bring dummies dressed like managers into the parking lot and burn them in effigy. Paul O'Neill decided to choose one metric and target with which to manage and improve Alcoa: zero worker injuries. He declared that no matter what it cost, Alcoa was going to drive toward zero injuries. Part of the brilliance of this idea was that no one could argue against it — unions were always arguing for better safety and managers wanted to avoid the adverse impact of an injury on productivity and morale. But while no one was opposed to safety, many were incredulous that O'Neill established this as the keystone metric. How would it improve profitability? Poor profits had motivated the Board of Directors to replace the previous CEO. What about the other metrics that the management team was accustomed to focus on? What would happen if they focused on safety and neglected everything else? Skeptics were plentiful.

Within a year of O'Neill's declaration that safety would be the number one metric and the only way to get promoted and rewarded at Alcoa, the company's profits reached a record high. By the time O'Neill retired twelve years later, net income and market capitalization were five times what they were when he arrived. In the same period Alcoa went from an average of one accident per branch per week to becoming one of the safest companies in the world, with worker injury rate at one-twentieth of the U.S. average. How could safety improvements lead to this increase in profitability when the cost of worker injuries was such a relatively small expense? O'Neill got these results by focusing on a 'keystone metric.'

"I knew I had to transform Alcoa," O'Neill told Duhigg. "But you can't *order* people to change. That's not how the brain works. So I decided I was going to start by focusing on one thing. If I could start disrupting the habits around one thing, it would spread throughout the entire company."

O'Neill disrupted the habits the organization had in place to deal with injuries by instituting a requirement that anytime someone was injured, the unit president had to report it to O'Neill within twenty-four hours and present a plan for making sure the injury never happened again. This required unit presidents to set up a fast and clear communication process from the vice presidents who had to implement fast and clear communications with floor managers. They had to have a set of ideas available so that when a plan needed to be put into place, they had some possibilities available. To avoid this unpleasant fire-drill, and to increase their chances for promotion, managers had to reduce the frequency of worker injuries. That meant they had to find out *why* injuries happened, so they had to study the work processes. They had to bring in people to teach everyone about quality control and the most efficient work processes. They had to dramatically reduce the variation in the work processes by making it easier to do everything right in order to achieve the metric of zero injuries. To pursue this keystone metric, they had to change the way they ran their businesses, adopting root-cause-thinking and problem solving.

Safety was an excellent keystone metric for Alcoa, because it disrupted the pervasive bad habits that led to a tolerance for poor process management at Alcoa. But is it the right keystone metric for everyone?

Other Keystone Metrics

One of the companies we trained several years ago in process improvement and the Right Way To Manage manufactured generators. Sales were great but productivity was not so good, inventory was not well controlled, and profitability was mediocre. The leader decided he would focus the entire organization around a 'keystone metric' of production uptime. Like Paul O'Neill did for Alcoa, this division leader employed this keystone metric to inspire everyone in the organization to pursue well-aligned improvements through studying and improving their own work. Materials management had to improve their processes of inventory control to ensure appropriate availability and this simultaneously brought inventory down and availability up. (As Taiichi Ohno once observed, the more inventory you have in your warehouse, the lower the chances you have what you need.) Production supervisors focused on causes of absenteeism and of machine breakdown. Engineers focused on reducing setup times which increased agility to respond to mix changes as well as reducing downtime. Operators were trained to handle routine maintenance or repairs to reduce time spent waiting for a maintenance engineer to arrive. Parts and tools were organized in easy reach to reduce time spent looking for what was needed. They not only increased uptime, they increased productivity and profitability as well.

Neither safety nor uptime are likely to be transformative metrics for a service business. First pass quality or zero customer complaints could be more transformative metrics for a service organization. For example, many service organizations devote a great deal of time and resources inspecting and reworking their work product as it moves from one person to the next. A typical mortgage application moves from a loan originator to loan processing where it is inspected and reworked before moving to underwriting where it is inspected and reworked before going to a closing coordinator who inspects the package and tracks down any missing documents or signatures. After closing, someone in the servicing department may inspect to make sure the documents are received from the attorneys complete and on time, and rework any differences. First pass quality metric would track the percent of loan applications that require no rework throughout the process. Similarly a financial account opening process will typically include inspection steps and reworking, before the customer is in the optimal account and is ready to use all of the account features.

Zero customer complaints might be another keystone metric for service and production organizations that could drive a deep dive into process quality and control that will have a ripple effect through all the other important business metrics. Throughput rates (at quality, of course) might be another possible keystone metric for service and production organizations, necessitating that everyone work on surfacing and eliminating the bottlenecks, the need for inspection and rework loops, and all the root causes of downtime.

What Makes For An Effective Keystone Metric?

- **It must have some intrinsic value.** A leader must be able to explain why the organization should pursue this goal with such zeal. O'Neill made the case that people should not put their lives and limbs at risk to feed their families. The leader of the generator manufacturer explained they had more customers wanting their product than they were producing — and this was depriving them of a great deal of revenue and would attract competitors to their space. People may disagree about whether it is the best goal, but they must be able to at least recognize its merits.
- **It must have an effect beyond itself.** What distinguishes a keystone metric from any other metric is its ripple effect that creates in positive change in a number of areas. An effective keystone metric will have an indirect favorable impact on all aspects of the balanced scorecard.

- **It must be easily measured**. Any metric, keystone or otherwise, must be easily measured in order to have an effective impact.

- **It must be enduring.** To be as effective as Alcoa's keystone metric, it must substantially and permanently change the way people look at the work. At Alcoa, the focus on safety was so consistent and so important to everyone's career that eventually everyone automatically looked for safety implications wherever they were — work, home, vacation. It became a habit to seek ways to eliminate every risk they could identify, implementing poka-yokes to prevent the risk completely or to alert people that a risk condition had surfaced so it would be addressed before an injury took place. They became habituated to root-cause-thinking and problem-solving. More than a few quarters of effort is necessary to fundamentally change people's habits, so the metric cannot change every year.

- **To be enduring, it must also be a stretch.** To endure, the target must still be in front of the organization several years down the road. Goals such as reducing injuries to 'best in class' levels, reducing customer complaints by 50%, or reducing rework are not enough of a stretch to endure long enough to fundamentally change and improve the habits of the organization.

What Is Required To Set A Keystone Metric?

This is the hard part. To set a keystone metric requires three things:

1. **To choose the right keystone metric requires a pretty deep insight into the organization.** Safety was the perfect keystone metric for Alcoa, but not at all suitable to transform many, many other organizations. What would make a powerful keystone metric for your organization? You must evaluate and decide, and that is not easy.

2. **It requires an incredible amount of guts in a leader.** Essentially, it puts all the improvement eggs in the one basket. If it works, the focus and leverage is incredibly powerful; and if it misses, the organization will have missed out on opportunities to focus on improving a diverse set of other metrics more directly. What if I focus on first-pass-quality and costs get out of line? What if I focus on safety and productivity goes through the floor? It may be safer to hedge our bets by asking lots of teams to work on their own independently selected metrics. Some will fail, but many will succeed and you are assured of getting some good results, if not a transformational improvement.

3. **Finally it requires a leader with the determination and perseverance to stick with the decision to focus on the keystone metric he or she has selected.** The determination must be supported by a Board willing to provide the space for the leader to select and tenaciously pursue achievement of a keystone metric.

A keystone metric can be very powerful, but it is certainly not the only path to business improvements. More frequently, leadership sets clear and measureable expectations about improvements in general, and provides all levels of management and to key employees with the training in the principles and methods of studying and improving their work. If done well, this path inevitably produces solid business improvements, with the pace varying with the pace and energy with which the improvement projects are pursued.

However, a keystone metric can be very powerful, unifying an organization in clear and measurable progress toward a shared goal. If a leader selects the right metric — one that is intrinsically worth pursuing, has ripple effects beyond itself, is easily measured, and is a stretch goal that will endure long enough to change fundamental organizational habits — it has the potential to take an organization much further than a more distributed continuous improvement effort.