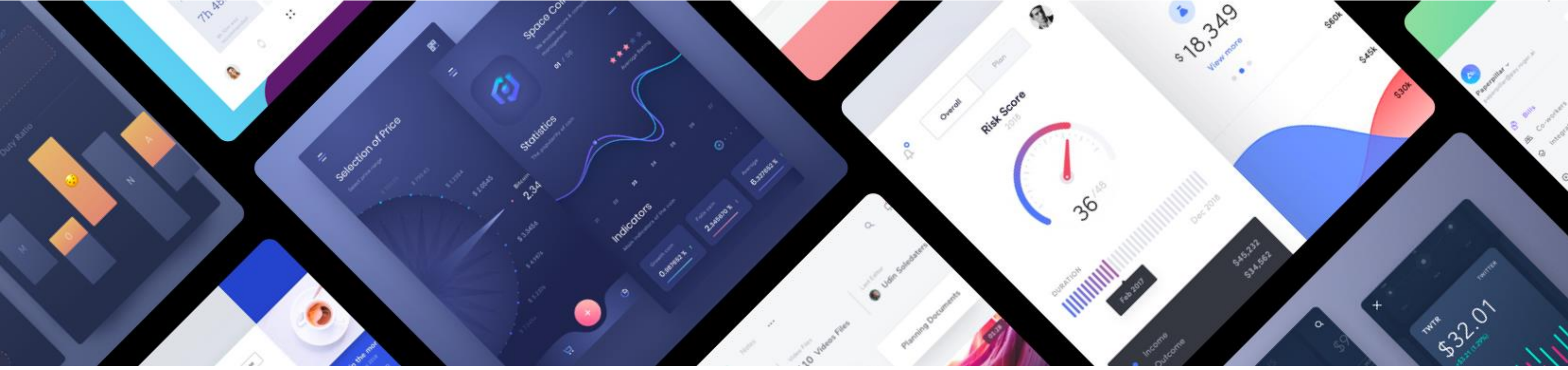

Actionable Strategies

White Paper

Next Generation Dashboards - Navigation vs. Rear View Mirrors

Leaders seeking to drive business performance need a clear picture of their organization to help guide effective decision making. Dashboards can provide guidance when properly aligned and constructed. Unfortunately, dashboards often fail to provide appropriate insight for a number of reasons.

The following are some of the more prominent examples.

- Backward looking information
- Non-actionable data
- Misalignment to strategic objectives
- Improper levels of data, including insufficient operating detail at the front line leadership level

The dashboard problem is compounded in some organizations when multiple dashboards are developed using different, sometimes conflicting data. One complaint that has been registered is that dashboards in large organizations are like opinions: everyone has one and not everyone will agree with each other. Navigating and rationalizing conflicting information creates lag that can turn a dashboard into a rearward looking tool.

Gartner

> Gartner Group projects that through 2022, only 20% of analytic insights will deliver business outcomes.[1]

This paper will examine approaches to enabling managers to get their organizations under control by making measures economical, meaningful, appropriate, congruent, timely, simple and operational[2].

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Meaningful Measures

It is essential that measures are aligned to key business drivers that impact business performance. There are many reasons that a measure will be meaningful based upon alignment to business strategy and the decision making needs of leaders. The following are examples of measures with longer term strategic value.

Actionable vs. Available

The initial foray into measurement often entails the packaging of available information. While reporting on available information may yield some useful measurements, it does guarantee such an outcome. It is best to measure what is required as opposed to what you can, as the measures may not be important to decision making and will more than likely provide a past view of the situation. Enabling action should be the primary goal of dashboard initiatives rather than merely reporting.

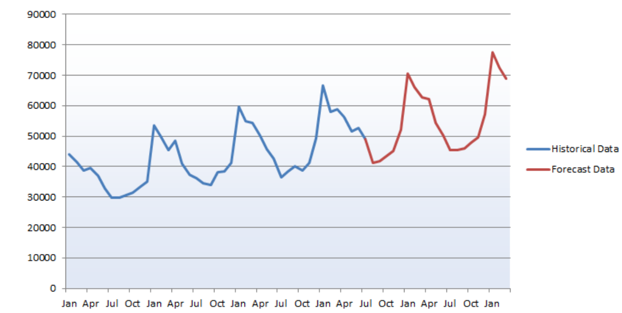
One classic example from financial services has been repeated in numerous industries. Operations and IT were tracking system uptime for a business unit. IT was able to track outage time via trouble tickets which identified the user, business unit and resolution time. The aggregate number was close to 100% but key trading systems, which were not identified in trouble tickets, contributed to virtually all of the downtime. What was required was measurement of uptime for critical systems during trading hours and settlement windows.

Periodicity

Another issue facing those who construct measurement frameworks is periodicity. Periodicity should be familiar to those involved with service or operating level agreements because error rates, throughput and availability are often closely tracked. If the measurement period is too long, signals will be dampened or fail to be provided. Long measurement periods also make the information historic rather than contemporaneous or even predictive.

The classic outsourcing example is using annual service level agreements. If an organization is operating with a service level of 99.379%, it is at a sigma quality level of 4 (meaning 6,210 defects per million opportunities or an error rate of 0.621%). Suppose that the organization can cope with 10 defects per month executing 10,000 transactions per year. On average, the will only see 5 problems per month. However, if the SLA is enforced annually and just one third of the errors are clustered in a month, the organization would be overwhelmed coping with 20 defects. There are numerous anecdotes of companies experiencing call center "meltdowns" and BPO disasters while not breaking a service level agreement.

Cyclicality



Another important element of time relates to the cyclical nature of many industries. In retailing and the feeding supply chains, seasonality usually exhibits a defined pattern. Therefore, measures focused on period-on-period (e.g., December sales vs. December sales in the previous year) tend to be more germane. More sophisticated analysis can eventually examine measures in longer cycles such as industry peaks and troughs. For example, airline order books reflect years of buying patterns and are closely tracked in the supply chain affecting both expense and capital decisions.

Units of Measure

Periodicity focuses on units of time, but units of measure are equally important. Units that are too small will

cause false alarms while units set too large will prevent visibility into issues, again making the dashboard a backward looking tool. The simple example borrowing from freshman statistics is measuring overfill and underfill of containers. One ounce too much or too little in a 55 gallon drum is not nearly as meaningful as overfilling a 12 ounce beer can by an ounce or depriving a freshman of 8% of a can.

Selecting the appropriate unit of measure may require back testing against historic data to ensure that proper signaling occurs. Even the use of constructed data sets can prove valuable. Organizations who look forward should also construct possible future state scenarios to ensure that the proper signals are emitted from dashboards under changing conditions.

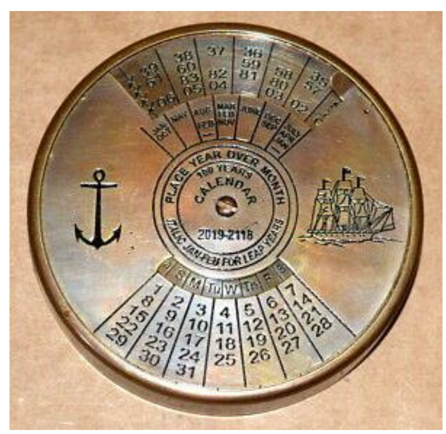
Leading Indicators

Forward looking measures are perhaps the most valuable business tool available. Actionable measures that provide sufficient time to respond and effect change prior to a significant event can be an impactful competitive advantage. An excellent example is the proprietary risk models of Goldman Sachs that predicted significant trouble in the mortgage market in December of 2006, long before any other major institution. This information enabled Goldman to not only liquidate holdings of eventually toxic assets but to also take short positions throughout 2007, earning profit as the market fell[3]. Similarly, marketing metrics that can accurately measure purchase intent rather than report on past sales are unequivocally more valuable.

Rate of Change

For leaders focused on longer term performance, the rate of change is often more important than absolute measures. Examining percent change (remembering the importance of periodicity) is one way to enable more strategic analysis. Classic examples across all industries are sales and earnings growth. These measures are particularly relevant in publicly traded companies where analysts look not only for sustained profitability but also for continued growth, whether organic or via acquisition.

Time Series vs. Snapshots



Rate of change can provide an indicator of performance in the recent past. The next level of sophistication involves creating forward looking measures with longer horizons. Using time series analysis, leaders can be alerted to trends, changes in momentum and potential future events. Providing predictive models requires effort in analysis, access to appropriate data and processes that are under control (thus emitting meaningful data). The results of predictive models can provide a level of agility that would otherwise be impossible looking backward.

Another critical dimension of predictive models is the use of correlation. By understanding the interrelationship between measures, analysts can help leaders determine cause and effect from both exogenous factors as well as those decisions that can directly impact results. It should be noted that while correlation analysis can indicate impactful measures, there are often many other correlated factors and some that are not directly observable via measurement.

Temporal offsets are a more sophisticated use of predictive models. By understanding the difference in time between interlinked processes, analysts can provide actionable insight into the future for leaders. One interesting example came from a hedge fund that profited from the fortunes and woes of a particular cardboard box company. The hedge fund predicted future sales based on the order book of the top customer of the box company which was a large computer manufacturer that dramatically influenced revenue derived from boxes for PCs, monitors and the components shipped with the PCs. The hedge fund consistently profited from upturns and downturns by knowing in advance what would be moved through distribution.

Focused Metrics

The initial temptation when building a first generation dashboard is to provide as many measures as possible to provide a complete set of information. Evaluating a plethora of sometimes conflicting data points is actually a hindrance to effective decision making in addition to being costly. One particularly pointed example is a supermarket chain that gathered 340 million different data points every week but was only able to sift through 20% of the data[4].

Focusing on a smaller number of indicators provokes the discussion and analysis of needed actions as opposed to deciphering what the data really means. Suggestions have been made that the optimal range of metrics is between five and nine at any given level of management[5].

To achieve focus, organizations must build initial consensus on the appropriate metrics. The following is a basic roadmap for achieving consensus.

Align to strategy: Confirm the key strategic drivers and what results constitute success

Define measures: Define how success is measured with specific metrics

Map flow: Determine how the data will roll up to the metrics; this also provides drill down data to enable exploration by the next level of leadership

Customer Measures

Customer measures are obviously important as they are the focal point of most organizations. Selecting appropriate measures to make appropriate decisions regarding customers is therefore critical. Much effort has been expended in this area for good reason. As an illustration, 68% of key leaders who are responsible for customers will not embrace new strategies such as social networking without proven metrics[6].

Beyond Customer Satisfaction

Basic approaches focus on customer satisfaction because that measure is easy to gather and also to impact in addition to making intuitive sense. Firms in highly competitive markets, such as cellular service providers, also focus on non-customers or departing customers due to high customer acquisition costs and significant efforts in creating strategies for lock-in. Both are useful measures but focus on different drivers: activities to perpetuate because they drive satisfaction and those activities to change in order to improve.

The Right Customers

Numerous measures provide a gauge for whether the right customers are being pursued and also retained. These are important and may shift with strategy. However, some data may be difficult to gather but this should be viewed as a means to attaining a competitive edge. Examples include the following:

- Customer profitability
- Customer loyalty
- "Lifetime" revenue and profitability
- Influencers (likely to attract other customers)
- Growth prospects (potential for greater future revenue)

Internal customers should be viewed with the same eye towards importance. Great customers can be tremendous internal advocates. Unhappy customers can drain away precious resources which should provide an indicator that there are issues in service delivery or alignment.

In Customer Terms

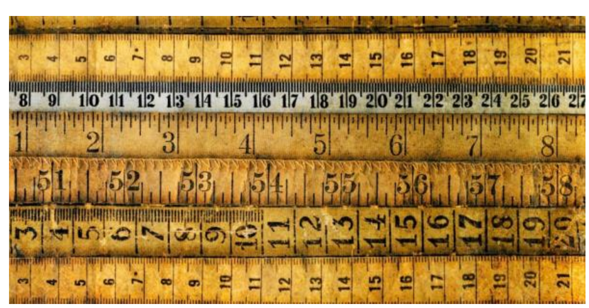
Internal measures are important but are only a portion of the entire value chain. When possible, using customer focused measures can be more enlightening. The classic example is GE's wing-to-wing concept unearthed during a Six Sigma project at GE Aircraft. Driving down repair time was identified as a critical measure to enable customers to attain more revenue through less downtime, but efforts to decrease repair time did not appear to work. With investigation, it was found that even with decreased repair time, aircraft engines still waited for transportation back to the customer resulting in no net gain *in their terms*. The measure was evolved to "wing-to-wing" – the time an engine spent between being removed from the wing and subsequently reattached. Driving the new measure then led to the expected improvement in customer satisfaction.

Published Priorities

Publishing priorities focuses organizational attention and energies on those measures that are important. Aligning compensation to measures further reinforces the desired behaviors. However, it is important to consider the impact of driving certain metrics. For example, a singular focus on driving down average handle time in a call center will inevitably lead to customer service reps rushing to end calls rather than delivering excellent service.

Optimizing the value chain can produce dramatic and measureable bottom line results. Aligning incentives to specific and achievable goals can drive individual performance increases of 22% with team performance increases as high as 44%[7].

Benchmarks



Comparative measures provide deeper insight into strategic performance. Organizations should not only benchmark against internal measures but also against competitors and the broader market. Relative performance analysis can enable leaders to make better decisions. A simple example should provide context. Strategic decisions will differ vastly for a firm with sales increases of 20% and 5% earnings growth when the industry averages sales growth of 5% and flat earnings vs. an industry where the average sales double and earning growth is 40%.

Benchmarking is a topic that has justifiably warranted significant discourse. The reader of this paper is advised to delve deeper into this important topic. When constructing both strategic and tactical dashboards, it is essential that benchmarks be used to provide broader context. As with all measures, it is essential that the appropriate benchmark be chosen; benchmarking against the wrong set of measures drives decisions in the wrong direction.

Conclusion

The first few attempts to provide dashboards tend to present available information. While useful to understanding internally available information, these measures tend to be rearward looking. To effectively enable both strategic and tactical navigation, dashboards must provide measures that are strategically aligned, forward looking and predictive. Achieving these goals make dashboards tools for business leaders to steer companies rather than merely scorecards for past performance.

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