Using Key Metrics

The Why, the How, the Results

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Why key metrics?

Today we hear a lot of talk about key metrics, key indicators, or key measurements. What are these things, why do we need them, and why now? Back in the 1970's NAHB recognized the need to define accounting standards and educate builders on the importance of tracking financial performance and using information generated by accounting to guide management in the decision making process. During those years builders made most business decisions based on gut feel vs. performance or facts and NAHB's objective was to enhance the decision making process with factual information in order to maximize the positive results of the decisions.

Many things have changed in the last forty years with the advent of computers. Nonetheless, we are back at the same point with builders making decisions based on gut feel; not because they do not have facts, but because they have too many facts and have no time to sort through it all. Thus, once again we find the builders relying on gut feel to make management decisions.

Computers have greatly increased the amount of information and reports that can be generated to the point where the critical facts are now buried in cluttered reports. Thus, the need to identify the key metrics or key indicators managers need to track to be able to evaluate the health of the company and the performance of departments and functional areas have become vital. This is a concern of all business segments of the economy, not just homebuilders, as well as of large and small companies. The age of the computer and the proliferation of information have created an overload situation thus the need to sort through the pile of information generated by the computer in search for what is meaningful.

How can we identify key metrics or indicators?

There is not just one key metric that would provide the information management needs to direct the business on the path of success. Even though the net profit ratio is definitely a key metric, by itself it gives a measurement of past performance with little insight about the future or how the company produced the profits. Therefore, we are talking about a group of metrics to provide a complete picture of performance which at the same time, will guide management in predicting the direction of the company and provide insight as to the decisions they need to make.

Compare it to the control panel in an airplane, ship, or space shuttle tracking a number of critical measurements for operating the vessel; or to medical charts tracking the vital signs of patients. In all cases we have a number of metrics or indicators which when taken together will tell the operator or doctor whether the mission is on track or what the state of the patient is. Thus, we are looking for the metrics or indicators to guide the operators in the housing industry in evaluating the health of the business and in making informed decisions to improve performance; it being new homes or remodeling.

Why do we need a control panel?

Presently we are deluged with information and cluttered reports which make it difficult to identify critical information. Computers have turned into data dumps producing a great proliferation of reports. Too much information is much the same as no information. As a result the managers loose focus and resort back to the gut feel methodology of decision making. Because everything seems to be important in the maze of information, the important areas are overlooked and it is hard to measure staff performance and hold them accountable for results. Once key metrics to measure performance are identified, staff can easily and simply track their results and at the same time be held accountable by their supervisors.

A requirement for meaningful key metrics is a plan, target, goal or objective. A key metric means little if it is not compared with a target, goal or objective to be able to evaluate performance. Another critical requirement is time. The objective, if at all possible, is to be able to access key metrics in real time.

The outcome for having and using key metrics needs to be a **CALL TO ACTION**. It serves no purpose to identify, measure, and report key metrics if no action is initiated to correct or improve the metrics. It is not enough to identify issues and problems, actions are necessary to change the outcome.

The basic requirements to set up or identify critical metrics include the following;

1. Keep it simple, as simple as possible. Everyone should understand how the measurement is calculated. The metrics need to be standard, consistent and reliable. Otherwise, they will be discounted.
2. Make sure there is clear accountability in the following three areas; who is responsible for tracking the metric, who is responsible for the performance of the metric, and who is responsible for implementing the call to action if one is necessary to achieve the target metric.
3. Always compare key metrics with a plan, target, objective and/or prior performance to establish the direction or trend of the metric. This is very helpful in trying to predict the future and to establish successful strategies. Comparisons with industry standards are also helpful.
4. Focus on the critical areas needing management attention and highlight where problems are to direct management to make proper decisions.
5. Make sure the information is timely to allow management more options to respond and to be able to avert major problems.
6. All metrics must be accurate in order to support good decision making.

Particularly in large companies metrics can be done at multiple operational levels starting with company wide, divisions, communities, product types, departments and functional areas. Depending on the size of the company, the levels and areas to identify metrics for will vary. We recommend you segment the company so you are able to maintain clear lines of accountability to those responsible for the performance of each metric.

Which Metrics?

Metrics can be grouped into external and internal metrics. Companies have little to no control over external metrics but do have control over how to react to those metrics. Home building companies should be particularly interested in the external metrics at two levels; national and local. NAHB is a source for the national metrics as well as the Commerce Department and a number of economic publications available through the internet or through subscriptions.

At the local level there are several sources available through the internet including the local Chamber of Commerce, the local HBA's, the Realtors, etc. At the local level one critical source for metrics is the multi-list. We have found activity in the existing home market foretells activity in the new home market by about three to six months. Key measurements from the multi-list should at least include a trend line on outstanding listings, the average days on the market and the percentage sold price to listing price.

A couple of other external local measurements to pay attention to are job growth and net migration. Sales of high priced items, such as vehicles, are also a good predictor for future housing activity.

Internal metrics are under management control. We can react to the external metrics; we can alter the internal metrics by daily decisions. Therefore, it is critical to identify those metrics, measure and track the metrics, compare them to targets, and act on the call to action.

I have identified seven distinct groups of metrics:

Accounting / Financial

Sales and marketing

Inventories

Production

Warranty

Customer satisfaction

Other

Every one of the areas represented by a group needs to perform at an acceptable level for the company to be successful. It does not matter if you are a large volume builder, a mid-size builder, a small builder or a remodeler. If there are failures in any one of the first six areas, it will end causing failure on the other five; there are so interrelated. If we go back to the analogy of the pilot control panel; it is no good that the altitude of the plane is set at the target and the wings are set perfectly if the fuel indicator is getting very close to empty. The same occurs in business; we need to have excellent performance in all areas to be able to have excellent performance as a company and be able to sustain operations at a superior level.

ACCOUNTING / FINANCIAL METRICS

The financial metrics / indicators often referred to as financial ratios are calculated from the information produced by the accounting system. However, the way the accounting information is collected and processed has a bearing on how easily such metrics can be calculated.

The accounting system should provide reports in a format that facilitates the calculation of the key financial metrics. NAHB has two publications; Accounting and Financial Management for Residential Construction and the Cost of Doing Business Study, 2010 Edition. The first publication provides guidelines on how to set up the framework needed in the accounting system to facilitate the computation of the financial ratios. The Cost of Doing Business Study provides industry performance on the financial ratios segmented by type and size of builder providing a standard to compare to. You can obtain copies of these publications at www.builderbooks.com.

The table below illustrates the basic financial metrics, how to calculate them and the expected results. The first group of metrics or ratios is calculated from information presented in the Income Statement; the second group from information presented in the Balance Sheet.

METRIC	CALCULATION	EXPECTED RESULTS*:		
INCOME STATEMENT		Builders w/land	Builders no/land	Remodelers
Cost of Sales	Cost of Sales / Sales	< 78%	< 85%	< 80%
Gross Profit	Gross Profit /Sales	> 22%	> 15%	> 20%
Indirect Construction Cost	Indirect cost / Sales	< 4%	< 4%	< 6%
Financing expenses	Financing / Sales	< 4%	< 2%	< 2%
Sales & Marketing expenses	Sales & Mark / Sales	< 8%	< 5%	< 5%
General & Administrative exp	G & A / Sales	< 6%	< 6%	< 6%
Total Operating expenses	Operating Expenses / Sales	< 20%	< 20%	< 15%
Owner's compensation	Owner's Comp / Sales	~1% to 2%	~2% to 6%	~2% to 6%
Net Profit	Net Profit / Sales	> 5%	> 5%	> 5%
BALANCE SHEET				
Current ratio	Current Assets / Current Liab	> 1.2	> 1.2	> 1.2
Debt to equity	Total Liabilities / Owner's Equity	< 4	< 2	< 2
Receivable days	365/(Sales/Avg Accts Rec)	< 45 days	< 45 days	< 45 days
Payable days	365/(Purchases/Avg Accts Pay)	< 45 days	< 45 days	< 45 days

Key: > Greater than < Less than ~ About

**The numbers presented in this table represent typical performance from builders of all sizes across the country. They are not intended to be targets or goals but instead indicate the point above or below which a reasonable return cannot be obtained. For example, the greater than 5% for net profit indicates that performance below 5% is considered poor and that every attempt should be made to exceed 5%. Each company needs to establish their own targets keeping in mind that the numbers presented on this table are being reached by many builders throughout the country even though they are not representative of superior performance but instead average performance.*

The Income Statement metrics measure the operating performance of the company. It answers questions about how much it cost to build the homes or to do the remodeling; how efficiently the construction process was run including supervision of the job (indirect construction cost); how much it cost to finance the operations of the business including the cost of financing the construction, closing costs, and interest on other types of loans the company might have (financing expenses); how effective the sales and marketing efforts of the company were in relationship to the volume of sales achieved (sales and marketing expenses); how efficiently the main office operations were conducted (G & A expenses); and finally what is the reward in terms of compensation and profit. And remember working owners need to get both; compensation for the time spend working in the company and profits as the return on the resources (cash, land, equipment) owners have invested in the company.

The Balance Sheet metrics measure important relationship of particular interest to lenders. As such, managers need to be aware of them and make sure they conform to lenders' expectations to be able to maintain the ability to borrow money. Current assets refer to the assets that will convert to cash within one year such as cash, accounts receivable, and inventories. Current liabilities refer to those obligations that need to be paid within a year's time. This ratio is important to the lenders because it measures the liquidity or capacity of the company to pay obligations to third parties.

The debt to equity ratio is another important metric to lenders as it measures the level of risk the lenders will have if they make a loan. The higher this ratio is, the higher the risk to the lender. As the ratio increases, in the event of liquidation, the capabilities of the lenders to recapture their capital diminish. The premise is assets do not sustain their value under force liquidation; therefore, the lower the ratio the greater the possibility of collecting the full amount of the loan.

Another very important financial metric to track is the cash balance together with the potential sources and amount of additional cash that can be tapped. There is no calculation involved in the cash balance other than the accurate tracking of deposits and withdrawals from the bank accounts. The expected cash balance varies with the size and type of company. A general guideline is to have on hand or available from identified sources enough cash to cover a minimum of six month of operating expenses.

There are many other metrics or ratios that can be calculated from the Income Statement and the Balance Sheet that will expand on the performance story. Even though additional financial metrics are important and can be very helpful, the metrics presented on the table above provide a meaningful overview of the financial health of the company.

SALES AND MARKETING METRICS

There are a number of sales and marketing metrics that are important to track. The metric itself will vary some depending on the type and size of company but what needs to be measured remains the same.

1. Metrics predicting future activity. For a large and mid-size builder this will mean tracking traffic through communities; for a custom builder it might mean tracking the number of request for bids; for a remodeler tracking the number of inquiries received. This metric should provide the first indication that market conditions might be changing and also the effectiveness of the marketing efforts.

2. Metrics measuring the effectiveness to capture prospects. For a large and mid-size builder this will be a conversion rate which is calculated dividing the actual number of contracts written in a given time frame by the number of traffic units during the same time frame. For custom builders it might be the number of bids per contract; for remodelers the number of proposals per contract. If we consistently track the effectiveness of our sales efforts, we can react and make adjustments if and when we begin to loose the touch.

3. Under the present environment it has been significant to track cancellations as they spiraled out of control during the downturn. It has been significant not only to

measure cancellations but also to track the reason for the cancellations. Remember the metrics provide a call to action and it is important to be able to identify the reasons to be able to determine the course of action to take to tackle the problems at hand.

4. For large and mid-size builders it is important to measure performance at the community level; how many sales per community. This metric will indicate very quickly whether or not each community is self sustainable.

An often overlooked metric is the number of sales per plan type. There is a cost associated with maintaining a set of plan in an active portfolio many builders do not pay attention to. This metric might not be one to track monthly but on an annual basis to evaluate the plan offerings and make decisions on which plans need to be retired. Have a minimum target for performance that when not made automatically will retire the plan. It will force the company to keep a fresh inventory of plans available for sales at all times and the same time maintain the efficiency and effectiveness of the back office.

There are many other metrics to track in this area including the number of contracts written, the actual sales compared to the goals set per month and cumulative for the year, closings, average dollars volume per job type, etc. However, be judicious as to the metrics you want to track consistently. They should be the ones that give you an indication that results are changing and your attention is required.

INVENTORY METRICS

Metrics regarding inventories are critical to track in both good times as well as bad times. However, this is an area seldom considered when identifying key metrics to track, even though it has been proven time and time again that failure to manage inventories can cause tremendous harm to a building company.

There are four types of inventories that need to be measured; raw land, finished lots, unsold houses under construction, and completed unsold houses. When looking at land

and finished lots it makes more sense to track them in terms of weeks or month of supply based on current absorption rates. In good times, it is a predictor on how quickly the company is running out of land / lots and a call to action to proceed with land acquisition and development. In bad times, it is a call to action for the company to look at ways to quickly dispose of excess land / lot inventories. Obviously for companies not buying land, such as custom home builders and remodelers this is not a relevant metric.

The number of unsold houses in inventory, also known as specs homes, is also a metric critical to the success of a company. A distinction should be made between unsold houses under construction and unsold finished houses. Companies need clear policies, based on their market and economic conditions, as to the maximum exposure on specs homes and also on how to dispose of the inventory as it aged. The metric should trigger, as a call to action, the path already determined by management. Under good economic environment and based on market behavior it is important to maintain certain level of spec inventory with the number of completed unsold houses providing the call to action to respond quickly with adjustments as that provides a clear indication conditions might have change.

During the present downturn we have seen way too many small volume builders with too many specs homes even for a good market environment. In too many instances the excess inventory caused the demise of these companies. Therefore, this is a metric as important to small builders as it is to large builders.

Because remodelers are typically working on their clients properties this is not a metric they need to be concerned with unless they are acquiring distressed properties, remodeling them and placing them back in the market. The concept is the same; monitor the exposure and make sure the number of houses in inventory does not exceed the ability to sustain the ownership.

PRODUCTION METRICS

There are three basic metrics to measure in any production operation regardless of size or type of product; cycle time, cost, and efficiency of the front line manager whether you choose to call them supervisors, foremen, builders or superintendents. How you measure the three metrics might depend on the size of company or whether you are a builder or remodeler but the focus remains the same.

One of the objectives of the metrics is to simplify the measurement process and the amount of information required to assess performance. Therefore, we recommend you look at the exceptions rather than the norm. For example for cycle time let's look at the average number of days lost per job; for cost let's look at the percentage of actual cost over budgets or estimates. For efficiency let's measure the number of houses the front line manager is supervising at one time or for a mixed product type company, the number of square footage. Remodelers could look at the average dollar amount each front line manager is carrying at any one time. The metric is the same, the way you measure it will depend on the specific situation in your company.

A further step on the production metrics is to group variances by reason and measure them in relationship to the total to be able to identify the issues or problems. The resulting metrics will direct the call to action to the areas where problems are occurring.

WARRANTY METRICS

The critical issue for warranty is not that there are warranty items to take care off but the expediency with which the items are handled. Therefore the key metric in the warranty area is the average aging of outstanding items; how long it is taking to take care of the warranty items. This is true for all sizes of companies and all types of operations. To calculate this metric, the company needs to track how long it takes to complete each warranty item. The total amount of time divided by the total amount of requests during a time period will provide the metric.

An additional metric, as for production, will be to group the warranty type of requests and determine the relationship of each type of request to the total to be able to direct the call to action to those areas needing attention.

CUSTOMER SATISFACTION METRICS

The key metric for customer satisfaction is whether or not buyers are willing to refer the builder or remodeler to friends, acquaintances or prospective buyers. In order to adequately measure the willingness to refer it is necessary to conduct some type of survey; either internal or conducted by a third party where the buyers are asked whether or not they are willing to refer their builder or remodeler.

A small company can always get a general feeling as to where their customers stand and know which buyer they can call on to talk to a potential buyer about their services and product. This approach tends to hide issues and problems that might be dormant with some of the less friendly buyers and curtail the opportunity to resolve issues or/and change procedures and processes that might not be providing consistent results.

Therefore, it is advisable to at least conduct an in-house survey to be able to adequately measure customer satisfaction. After all, it is by providing superior customer service that the reputation and the company brand is built.

OTHER METRICS

There are a few other metrics that are helpful in evaluating the health of a company and predicting future success such as the breakeven point. The breakeven point is the sales volume required to cover all cost and expenses. It can be expressed in either dollars or units. The size of the company and the product offerings will determine which metric is more meaningful.

Another helpful metric is a measurement of staff efficiency. Again there are a couple of ways to calculate this metric. It could be calculated as sales dollar amount per employee or number of closed units per employee. In a company with diverse products, the dollar amount is more meaningful. The determination of which employees to include in the count can vary from company to company. The important factor is to always use the same approach to be able to compare from period to period and see the trend.

When trying to compare with other companies it is important to neutralize operational difference and possibly eliminate groups of employees. For example, sales are handled in a variety of ways from having an internal sales force to using outside realtors. It is, therefore, advisable to eliminate any sales agents from the count. Another area might be construction employees as some companies subcontract all the work while others have some of the workers on staff. Therefore, it is best to count down only to the assistant superintendent level to make the comparison meaningful.

For internal purposes the critical element is consistency on which types of employees are included in the count. The calculation is simple; dollar volume of sales divided by the number of employees to get the dollar amount per employee, and total units closed divided by the number of employees to determine the number of units per employee.

Summary

To enhance the value of each metric it is advisable to set up a plan of action identifying targets for each metric. When evaluating the metrics, targets provide the benchmark to grade performance and prepare the report card on how well the company is doing. The report card also provides management direction on how to achieve the desirable goals and objectives.

As it is with any system, process, and procedure the effective use of metrics in managing a company depends on the commitment management has to track, measure and evaluate the metrics and most importantly to respond to the call to action given by the results.