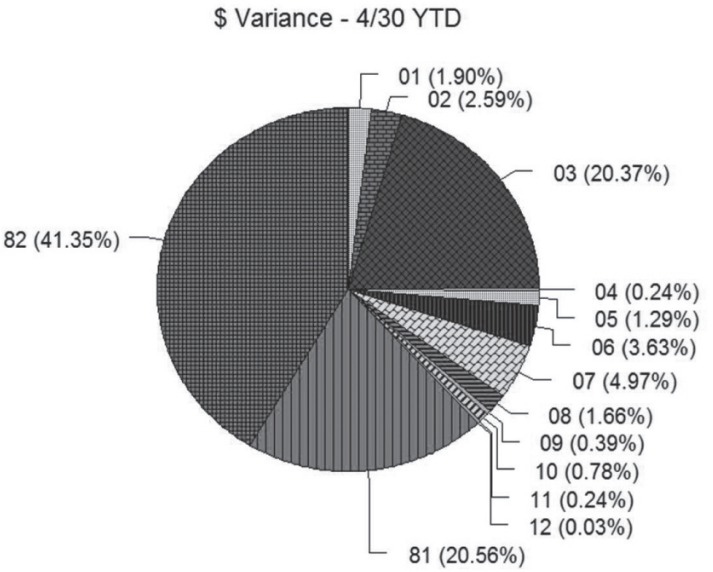
Figure 10.7 Variances by reason



Source: Shinn Consulting

WARRANTY METRICS

The critical issue for warranty is not the existence of warranty items, but the expediency with which items are handled. Therefore, the key metric in warranty is the average aging of outstanding items indicating how long it is taking to take care of warranty requests. 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 item. The total amount of time divided by the total number of requests during a time period will provide the metric.

Another important metric in the warranty area is the distribution of warranty request by type of work required. Figure 10.8 illustrates how easy it is to identify which type of work requires the most attention. Warranty metrics need to be communicated to construction because in many instances, warranty issues are created by failures occurring during the construction process.

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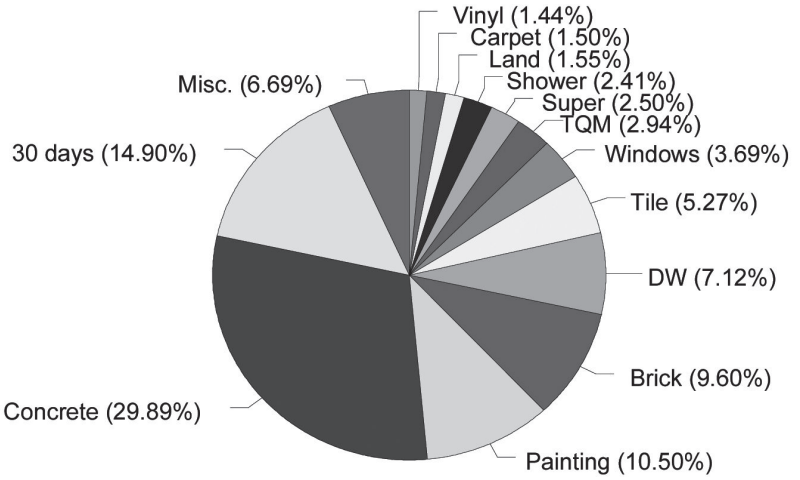
Figure 10.8 Warranty expenses



Source: Shinn Consulting

CUSTOMER SATISFACTION METRICS

A key metric for customer satisfaction is buyers' willingness 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 by a third-party. One of the questions should ask if the buyer is willing to refer their builder or remodeler, and if not, why.

Small companies usually have more touch points with their buyers than larger companies, which facilitates communication and a better understanding as to the customers' satisfaction. However, issues and problems might not surface during the normal building process and meetings. This curtails the opportunity to resolve issues or change procedures and processes, which does not provide consistent results.

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

HUMAN RESOURCES

Measuring the staff efficiency can help identify challenges with the quality of the staff, the effectiveness of systems and processes and the balance with volume. There are a couple of ways to calculate this metric: as sales dollar amount per employee or by the number of closed units per employee. In a company with diverse products, the sales dollar per employee is more consistent. The determination of which employees to include in the count can vary depending on the company's makeup. The important factor is to be consistent in the types of employees you include in the calculation to be able to compare from period to period and see the trend.

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When trying to compare with other companies, it is important to neutralize operational differences and possibly eliminate groups of employees. For example, sales are handled in a variety of ways by different companies, from having an internal sales force to using outside realtors. Therefore, it is 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. In this case, it is best to count 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. Use a report card to analyze how well the company is performing. A report card that lists and compares the selected metrics to pre-determined targets provides management with direction on how to achieve the desirable goals and objectives.

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CHAPTER 11

OVERVIEW OF JOB COST ACCOUNTING

The job cost accounting system is a subsystem or subsidiary of the general accounting system. It maintains the construction cost detail of each unit under construction. Costs accumulate on a unit-by-unit, job-by-job, or project-by-project basis in the job cost subsidiary. Therefore, the total of all jobs in the job cost subsidiary must equal the total in the general ledger for the direct construction cost account.

The job cost subsidiary provides information for builders, remodelers, and developers to manage, control costs, monitor operations, and make sound business decisions. The list of job cost codes and the integration of the job cost system with estimating, purchasing, and scheduling facilitates processing and controlling cost.

DESIGN THE SYSTEM

The job cost subsidiary has a separate account for each unit of production—a house, a remodeling job, or a parcel of land—in which the construction costs related to that unit is recorded. In addition, each type of cost has its own code for easy tracking.

The cost codes set the structure of the job cost system and create the control points for monitoring construction activity. To maximize efficiencies of the back office systems, each purchasing unit and work unit must have its own cost code representing one pay point. Most importantly, the job cost subsidiary must be coordinated with the cost codes used by estimating and purchasing and follow the sequence of construction activities as set up in the schedule.

When designing the job cost system, consider the following guidelines as the job cost codes must reflect the way each company builds, remodels, or develops land and the nature of its products and services:

- Different geographical areas have different building requirements, such as type of foundation, framing versus block, and the like.

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- The use of labor may vary. Some companies use their own crews and others trade contractors.
- Large metropolitan areas might offer a wider range of products and distribution options, and suppliers and trade contractors might be more or less specialized, depending on their markets.
- The type of product or service varies from company to company, such as detached versus attached housing, room additions versus bathroom remodeling, and planned unit developments versus small parcels.

The integration of estimating, purchasing, scheduling, accounting, and pay points in establishing the cost codes, facilitates the processing and analysis of reports, streamlines the field approval process through the schedules, and helps maintain adequate control. It allows for easy comparison between estimated and actual cost, and monitors, tracks, and verifies request for payments either through invoices or purchase orders.

The comparison of actual costs to estimated costs validates whether each job performed as planned. The sooner managers know the differences or variances between actual costs and the estimate, the more options they have to correct mistakes and change the course on both present and future jobs.

In addition, because of the synchronization of the job cost codes with the schedules, the cost reports show the active cost codes in sequence. This format focuses on the current activity and reduces the number of items a builder, remodeler, or developer must analyze at any particular time.

To streamline analysis, builders could classify cost codes even further into construction phases. For example, the *preliminary phase* would include all costs incurred prior to the start of construction, such as architectural and engineering fees and permits. The *preparation phase* would include cost codes associated with site clearing, excavation, and foundation. Depending upon construction methods and each company's requirements, builders could have from three to 10 construction phases with five to 25 cost codes per phase.

For remodelers, the type of remodeling work determines the need for segregating cost codes into phases. For example, phases might not be necessary for a remodeler who mainly does kitchens and baths. However, when remodeling work involves room additions and whole-house remodeling, grouping cost codes by phases might prove helpful. Each phase concentrates attention on a smaller number of cost codes as work progresses.

Developers generally do not require as many cost codes to accumulate development costs as builders need for construction. Therefore, developers may not need to segregate the cost codes into phases, other than to separate the planning phase from the construction phase.

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Appendix E presents a chart of accounts for job cost codes. When applying the suggested list of cost codes to your business, use only the cost codes representing a purchasing unit or work order. Unnecessary detail hampers the system and produces worthless information that detracts from critical issues. The estimating system is the proper place to maintain the detail behind each job cost code.

For example, when a trade contractor supplies both labor and materials, do not have a cost code for labor and a cost code for material. Having two cost codes creates unnecessary work because you will have to add the dollar amounts in the two cost codes to compare the payment request to the negotiated contract price, which is the control point. However, if you purchase materials from a supplier and the trade agreement includes only labor, you need two cost codes to control the cost of both labor and materials purchased.

If the company is issuing purchase orders, there should be a cost code for each purchase order. For example, if gravel, sand, and concrete block are ordered at the same time from the same supplier, there should be only one cost code to accumulate the cost of all three items. However, if you order gravel and sand from a different supplier, there should be two cost codes: one for sand and gravel, and one for concrete blocks. Never break down an invoice into two or more cost codes. Doing so becomes time consuming and increases the chance of entering the cost in the wrong account.

The total dollars spent on one material is irrelevant at this time. The object is to compare the purchasing units estimated prior to the start of construction, to what was actually purchased. If the invoice does not match the estimate, any variances are caught immediately.

Use the job cost chart of account in Appendix E as a guideline or checklist to set up job cost codes that will meet your needs. A reasonable number of codes for a home builder is between 75 and 100 cost codes. Any more than 100 will begin to clutter the system and hinder the efficient processing of the accounting data.

In summary, in selecting cost codes to use in the job cost accounting system, remember the following guidelines:

- Make it simple. Avoid using more cost codes than you absolutely need.
- Coordinate the job cost codes with estimating and purchasing. One estimating unit must equal one purchasing unit, which in turn should represent one pay point or accounts payable unit.
- Follow the construction sequence to facilitate processing and make electronic field approval of invoices or payment requests possible.
- Make sure the cost codes reflect the way *you* build.
- Have a cost code for the special things you sometimes include in your homes, even if you do not add them to all of your homes, such as special flooring or finishes. That way, the cost code will be available when you need it.

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- Break down cost codes into material and labor only if you supply the material and subcontract the labor only. Otherwise, use one cost code to keep track of the total contract. If your trades receive multiple payments, create a separate cost code for each one. Tie the payments to specific stages of completion rather than an estimated percentage of completion. Spell out payment requirements in your trade contractor agreements.
- Prepare accurate estimates for each house you build.
- If you do not use purchase orders, compare invoices to your estimates to ensure you pay what you agreed to.
- Review each home built comparing the estimate to the actual cost. This analysis will help identify profits leaks and direct you to the problems. It will also enhance your estimating skills because it will identify cost codes where estimates might have not been done correctly.

CODE THE INVOICES

The best approach to coding invoices is to implement a purchase order system. Proper coding of job costs is essential to ensure the accuracy of the reports generated by the system. Cost reports are useless unless the data presented is reliable and accurate. Assigning a job cost code to each invoice is generally the weak link in a job cost accounting system. By the time invoices arrive, staff may not remember why the materials were purchased nor where they were used. Answering these questions becomes a guessing game. Moreover, invoices are occasionally lost, misplaced or damaged while they are being coded.

Implement a system to facilitate the coding process and ensure reliable reports. A purchase order system provides the best solution to the coding challenge: orders are coded as the job is planned and also prior to releasing them to suppliers and trade contractors. This maintains accuracy of the cost codes and the job address. However, if a purchase order system is not in place, use the job number followed by the cost code number as the purchase order number when you order materials from suppliers or labor from trade partners. The cost code will then appear on the invoice as the purchase order number identifying both the job and the cost code. Place a separate order for each job to ensure costs are designated to the right jobs.

A purchase order system also serves to clarify the trades' lien rights. The trades need to clearly identify where they have done the work to be able to exercise their lien rights. The purchase order system identifies the location of the work and amounts owed to the trade for that work.

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IMPROVE CONTROL WITH A PURCHASE ORDER SYSTEM

A purchase order system provides many advantages, including the following:

- confirms a verbal or telephone purchase
- confirms anticipated delivery dates
- fixes the price on will-call orders
- provides a written record of purchases
- gives the superintendent a reference or control point to check quantity and quality of materials delivered
- serves as proof of delivery and authorization for payment
- facilitates job cost posting and accounting
- allows the builder, remodeler, or developer to delegate much of the purchasing function to non-managers
- provides a reference to quoted prices
- provides current information on outstanding obligations
- clarifies the trades' lien rights

PREPARE JOB COST REPORTS

Reports generated by the job cost system must be timely and standardized. The objective of the reports is to highlight deviations or variances from the planned cost and must include the following information for each unit or remodeling job under construction or project being developed:

- estimate/budget and actual costs by cost code
- variances or differences between budget and actual costs
- committed cost or outstanding purchase orders necessary to complete the job

The overall objective of a job cost control system is to produce accurate cost information that builders, remodelers, and developers can use to increase the profitability of their businesses. Therefore, make sure each cost code represents a point of control and that the reports highlight variances.

With a well-functioning estimating and purchasing system and a reliable cost accounting system, a company can focus on controlling costs. Many accounting software systems facilitate tracking variances by reason, community, superintendent, and home—further enhancing the ability to eradicate the variances and prevent reoccurrences by guiding management to the problem areas.

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CHAPTER 12

UTILIZING TECHNOLOGY

When looking at the technology opportunities available to the business environment today and in particular, the processing of the accounting information, there is a proliferation of options regarding the software and platforms available. However, for accounting, technology remains a processing tool. The software and platform environment do not change the strict requirements that need to be followed to provide sound, accurate, timely, and relevant management reports and processes outlined in this publication. Technology provides a fast and efficient way to process financial transactions and helps minimize errors in recording, classifying, and processing financial data to ledgers and subsidiaries, and provides options to access and store programs and data.

Computer technology is continually changing and providing applications that enhance the role of accounting. In the last decade, connectivity to suppliers, trades, prospects, and homeowners has become essential in the business environment—helping support the communication of financial information relevant to third parties. Web-based programs, social media platforms, and BIM technologies can also significantly change the way you do business if it hasn't already done so.

Computers, cloud, and web-based technologies have become affordable and essential tools crucial to the effective management of a building, remodeling, or land development company. It is management's responsibility to research and understand the capabilities of technologies available today and the opportunities it provides to enhance the daily operation of their company. Changes and improvements occur regularly requiring a concerted effort on management's part to sort-out and be able to incorporate the relevant new advances into the daily operations.

Technology is leading in the search for efficiencies and increases in productivity. To remain viable, efficient, and effective in every aspect of your business (prospecting, sales, estimating, purchasing, accounting, scheduling, warranty, and customer service), you need to be technology-savvy. Consumers expect it, otherwise you will quickly find your company running behind your competition with little chance of catching up. Understanding how prospects, buyers, trades,

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