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Contractors often overlook organizational structure in their business analysis; yet it is the backbone of any operating company and should be evaluated like any other metric.
BY MIKE CHASE AND KEVIN HAYNES
Dear Reader:

About a millennium ago, (actually only 38 years ago, but who’s counting?), sociologist and futurist Alvin Toffler penned *Future Shock*. Ten years later, he followed with *The Third Wave*. Both volumes concerned the impact on society of the (accelerating) rate of change. Sometimes crystal ballers get it right, and Toffler was on the money with his notions of the implications of change. We’ve all experienced extraordinary changes in our lifetimes, in our businesses and in our marketplaces. Since everyone confronts change, then why consider it anything special? Because those people who can internalize, adapt and implement changes faster than their competitors will be the future winners.

This issue of *FMI Quarterly* concerns itself with change management. We have a variety of writings to help you tune up your change management skills. From an interview with Gary Kaplan, newly named president of Zurich Construction, wherein he discusses change management tools that he has used, to John Wescott’s departmental piece on standardizing processes, our articles come in all sizes.

One of the more intriguing pieces in this edition is the work of Mike Chase and Kevin Haynes, both with FMI’s Research Services Group. This original research may give you some clues as to how your organizational structure can aid or impede your response to change. Jeff Schulz brings us another interview, this time on the notion of restrategizing when the first-laid plans don’t work. Building on last issue’s theme, Briston Blair shows us how mastering change makes being green easier. Several authors combine change
management with another critical skill. Kelley Chisholm teams up with FMI Quarterly newbie Lauren Mitchell to highlight Gilbane’s innovative approach to talent management. Dr. Joseph Rei and Leigh Branham from Advanced Management Institute (FMI acquired the A/E-focused consulting and training organization in February 2008) point up the changing leadership in design firms. Ken Roper, Kevin Haynes and Jim Schug tackle another key skill, strategic planning. Plus much more.

Just in case you’re ready for a change in article topic, we’ve got several good reads in this issue on topics such as creating synergies in mergers and acquisitions, time management and cost management for residential builders.

When contemplating the future, whether we find it shocking or not, most of us can get to the answer of “What needs to be accomplished?” quickly. We tend to be less adept in our skills of bringing about the changes necessary within the behaviors, operating processes, information technology, roles and responsibilities that will enable change to be made with the lowest cost and least pain. We hope that this issue of FMI Quarterly will illuminate some of the fixes for your own approach to change.

If you need help with either the what, the how, the who or the when, consider FMI for your partner in making the right moves. We’ll be glad to explore possible solutions with you.

Sincerely,

Jerry Jackson
FMI Quarterly Publisher and Senior Editor
Imagine this scenario: You are a seasoned superintendent who has recently started working for a commercial general contractor. Most of the contractor’s projects run smoothly, with an average number of issues requiring your attention. This morning you learn that you will be taking over a project for a superintendent who suddenly quit. The project is about 60% complete, and the tight schedule must be kept. The project manager has given you a set of plans, specs and documents and briefly outlined the status of the project. You expect to have many questions and few answers by this time tomorrow.

A COMMON OCCURRENCE

Sound familiar? It should. Anyone who has spent time working in construction has probably had to deal with a similar situation. During my time, I had one superintendent pass away suddenly and another quit two weeks after being diagnosed with cancer. Terminations and job offers may also take project personnel away, but no matter the reason, the abrupt end to a project’s supervision is met with immediate, and often enduring, confusion. Given that changes in field leadership are common, why haven’t companies developed a plan for field management transitions?

In most cases, companies shift this responsibility to incoming field supervision, betting on their experience and sheer willpower to keep the project on time and in the black. As long as there are white notebooks and thick rolls of plans (all stamped “approved” with different dates) in the job trailer, management feels like it has fulfilled its obligations to the incoming superintendent. The prevailing attitude goes: “If the information is available, a good superintendent can figure it out and make it happen.” Good superintendents are “steely eyed gunslingers” — comfortable with ambiguity and determined to solve any problem.

This familiar practice and its associated mentality put contractors at risk. The potential damage to reputations, relationships and profitability is substantial, if even a small portion of the critical job information is missing or misunderstood. A comprehensive plan for field leadership transitions, consistently
applied, mitigates this risk.

Companies can deal with a change in field leadership in one of two ways. Let’s look at both approaches.

THE REACTIVE APPROACH

For the superintendent who focuses solely on today’s problems, certain events become predictable: margin erosion, schedule delays, angry customers, frustrated subs and contractors, and low morale.

Here’s an example. The superintendent has been working hard to keep the mechanical, electrical and plumbing contractors busy on a project that’s been ongoing for a couple of weeks now. Some minor glitches resulting in change orders have added cost and made the schedule slip by four days. The additional costs have lowered the job’s potential margin, and the schedule delays have caused problems for the MEP subs, delayed the insulators and pushed out needed inspections. The super thinks he can make this up during the next few weeks; however, the owner has already noticed the schedule delay. The project owner saw the previous superintendent start and stay on schedule and is frustrated that the new superintendent is behind schedule. The owner is already thinking his next project will go to someone else.

Problems tend to cause other problems, often exponentially. So changes in a company’s field management are dangerous events.

Comprehensive planning, in addition to the individual actions of the superintendent, is part of a proactive approach to project management.

THE PROACTIVE APPROACH

A proactive approach involves goal setting and forward thinking. Envision a job that is going well. What activities take place? What trends appear in the numbers? What do you hear from employees, subcontractors and owners? Finally, ask yourself, What will make this job a successful one? The answers will provide insight and direction for your specific approach.

Any approach should be based upon the main goals of all construction projects: 1) to maximize effectiveness and 2) to minimize casualties.

To maximize effectiveness is to maximize your ability to complete work. A company must be able to consistently perform at or above expectations in order to keep existing customers happy while simultaneously building a reputation that will attract new ones. Profitability is another implication of being effective. Without profit a company won’t survive long enough to service future clients; profitability is not optional. Not only does a company need to be able to attract people, but it also has to attract and retain the right people, subcontractors and employees alike. It’s the people that get work,
do work and keep score. Long-term relationships and a reputation for fairness go a long way in accomplishing this.

A company should also work to minimize its “casualties,” or anything that is unintentionally injured or lost. Potential casualties include reputations, employees (physically or mentally), profit, customers, subcontractors, morale and many other things (tangible or not). Minimizing unintentional losses is just as important as maximizing gains. Analyzing potential impacts or casualties of future decisions is a prerequisite to good planning. Often bad situations can result from even the best of intentions. Carefully consider potential casualties during the due diligence process.

DEVELOPING A PROACTIVE APPROACH

When planning for a change in field leadership midway through a project, a three-pronged approach will help ensure a smooth transition.

Step 1: Know Where the Job Has Been

Any plan for the future requires a look back. Reflect on past performance, action items, communications, project changes and plus/delta feedback. Through these conversations, a new superintendent will gain a sense of what is expected.

Step 2: Know Where the Job Stands Today

After establishing the job history, review the job’s current status. An updated budget (including actual and projected earned-value information) and a current schedule will help the superintendent know where to focus his/her efforts. Insist that the new super meet with key subcontractors and the project owner. These meetings will highlight key issues quickly and enable the super to build a personal rapport with key stakeholders.

Step 3: Plan for Where the Job Needs to Go

The final step in the transition is a plan for the future. Keep a checklist of items and issues to be addressed during the upcoming discussions and meetings. Next, assign a person responsibility for each item on the list (not necessarily the superintendent), as well as a date for when a status report is due back. Establishing the who, what and when for each item allows for effective follow-up and accountability and sets up the super to manage the project as a team.
CONSISTENCY AND SUPPORT

A changeover process like the one outlined here isn’t necessarily expensive or time-consuming, and gives a new superintendent a predictable start on the project. The process builds “proactive” momentum and helps your company systematically maximize effectiveness while minimizing casualties.

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PROJECT DELIVERY/EXECUTION
Standardization Is Not a Bad Word

The construction trade has existed for centuries. During that time, the way structures are built and the management systems used to oversee their construction has changed many times. New knowledge and expertise have led to multiple construction processes. The underlying question facing companies is: “Which management system is best?” The question has caused more headaches and controversy than most companies would like to admit.

A DEFINED NEED

With employee turnover numbers ranking in top percentages compared to other industries, construction companies have seen faces come and go through their organization. Steady industry growth has made it possible for employees to seek employment opportunities with relative ease. Senior construction professionals often claim “job loyalty” is a thing of the past. A byproduct of the turnover is that individuals are being exposed to alternative project management practices. New employees bring their experiences and processes from past companies. One perspective is that the influx of new ideas protects a company from stagnancy. However, new styles and “management hybrids” create an even greater challenge for senior management in defining a corporate style and consistency. Finding the right organizational resources is challenging enough. Combining multiple processes to achieve a single task only adds to this complexity.

The need to standardize your company’s process is critical. Operating from an autonomous perspective creates unnecessary confusion. The economic growth of the past decade has highlighted this fact. Between tight schedules and increasing customer demands, time management is critical. Senior management can no longer afford to waste time learning or fumbling multiple project management practices.
RESISTANCE TO STANDARDS

The concept behind standardizing project management processes has been promoted for years. Seminars created around this topic are often delivered to business owners all over the country. The intent is to educate them on the benefits of implementing consistency around project management systems. With a high level of enthusiasm, business owners return to their companies after attending one of these seminars with every intention of standardizing their current processes. Eventually, the excitement level subsides and everyone goes back to his old ways. Institutional memory is hard to shake; process change is difficult.

Even though the benefits of standardization are well known, many companies still wrestle with this challenge. Why does this concept prove to be so difficult? It’s simple. Regardless of the best intentions, habits are hard to break. The construction industry is still heavily reliant on the “human element.” Like most humans, habits are developed and soon become our way of life. For example, smokers know that smoking is not good for them; yet the challenge of quitting is often too much for them to overcome. Changing our eating habits or going on a diet might last for a short period of time, but many of us will eventually go back to eating what and how much we have in the past. The same is true regarding our project management practices. It’s hard to change something with which we are familiar and comfortable, and that’s typically why our employees resist learning new project management systems.

Besides human nature, industry demographics make change a challenge. These habits, or ways of doing things, have been passed down from generation to generation. A majority of the workforce today is led by individuals who are heading into retirement. From a recent FMI survey, 78% of field managers surveyed were over the age of 35; half of those were over the age of 45. The term “old school” is still prevalent in the industry. Experienced construction professionals learned project management systems during their early years, and they’ve been practicing those systems ever since. With old systems in practice, companies are faced with the challenge of educating the next generation, not always with the willing help of the “old school.”

STANDARDIZED TRAINING

With an aging workforce headed for retirement, planning for the future has proved to be a daunting task for many companies. The number of professionals with years of credible experience is declining. Companies can no longer rely on their employees to gain experience through on-the-job mentoring. This nationwide dilemma has forced companies to take on the unfamiliar role
of developing and training their project personnel. Yet, the industry is known for building structures, not people. This people-building skill set is largely missing, and the need has never been more pressing. Companies will have to train their employees, but what should they be trained on?

Developing the training curriculum is perhaps the biggest challenge. Without consistent project management practices, how will you know which processes to build from? Selecting project management practices from the existing ones being used can leave some employees feeling rejected. Pride is prevalent in this industry. The construction profession is challenging and requires a strong work ethic to be effective. It takes time to build the knowledge needed to be successful. With proven success, it’s hard to argue about the “right way” to manage a project if it differs from current project management systems. Developing standard procedures is supposed to improve the work environment for your employees.

Careful handling of the selection process will avoid a blow to company morale. Provide employees with the opportunity to participate and voice their opinions. Their buy-in is needed when developing best practices. Creating these standard guidelines as a company will create a strong foundation for training development.

MORE RESISTANCE

Often, the argument is made, “Who cares about how the job was managed as long as it meets the schedule?” Construction speed is so critical that we are driven to begin building as soon as we can. Time is not available to worry about how the project is going to be planned or managed. The desire to begin production takes over, and we fail to strategically address items such as budget constraints and labor coordination. Before long, the momentum of the project begins spiraling out of control leaving management with the blank expression of “What just happened?”

All too often, management’s initial response is to add resources to satisfy the customer. The money drain continues as long as needs aren’t being met. If the customer relationship survives, the underlying reason for the additional money spent shouldn’t be forgotten. Unfortunately, the poor management practices are overlooked because of the exemplary customer service. This scenario exemplifies a reactive environment in desperate need of standard project management practices.

STANDARD PERFORMANCE AND PROJECT MEASURES

Performance measures are another component to developing employees. Job tracking metrics and a thorough understanding of roles...
and responsibilities help management identify employee skill gaps and areas for improvement. Standard project management practices provide the benchmark needed to monitor employee performance. For example, measure project management’s use of planning tools. Short-interval planning schedules have been advocated for a long time and assumed to be used in most companies. Tracking the actual use of these schedules provides a compliance measurement, which can be tied to the overall project performance. If the project produces poor results and short-interval planning schedules weren’t used, you have a missing skill set that can be addressed. Defining a consistent scheduling process provides a tool for use in training employees and a tangible performance measurement. Training and education help employees understand what they are accountable for and give management a tool for developing their employees. Without it, tracking performance creates skepticism among your employees. Management is forced to make subjective decisions, and gut decisions are seldom a good option for measuring your employee performance.

Construction projects can produce unpredicted results, and often nobody takes ownership for poor project performance. Picture the following scenario: One of your projects is finished, and the results are less than favorable. The investigation process begins and immediately the finger-pointing starts. Project management claims the estimate was inadequate and that the project never really had a chance for success. Estimating claims the original estimate was accurate and that the labor was mismanaged. The process stirs animosity between the two groups, and senior management is left more befuddled then before the project began. The true causes behind the poor performance are rarely discovered, and the same mistakes are often repeated.

Investigation into completed projects should be done solely for identifying problems and not punishing individuals or a department. The emphasis needs to be on “what went wrong,” not “whodunit?” With standard systems in place, post-job investigations will be easier to perform and key project losses and victories more easily identified. These process or systems issues can then be used as curriculum in future employee training. Key victories should be communicated so that they can be leveraged on other projects. Communicating the losses will help others plan for possible “land mines.” Post-job review meetings should be hosted after the completion of every project to ensure the collection of all lessons learned.

**DEVELOPING STANDARDS BUILDS VALUE**

Image means everything in a service business. Just one poor project can ruin a company’s successful, hard-earned reputation. Hard work and consistent
performance are requirements for developing a favorable reputation, and it can take years for a company to be recognized as a best-of-class contractor. Quality workmanship and fulfilled promises are the two defining qualities of top performers. These two factors don’t leave much room for error, which is why sustaining a favorable reputation is so challenging. To become and remain a top performer, project management needs to understand the status of its projects at all times. In good times and in bad, accurate results from standard processes mean everything to customers and financial institutions. They want to be assured of project and corporate stability. The world of construction is far from perfect, and most customers understand problems will surface. What they won’t tolerate are consistent and continual miscues.

“The Integrity Chain” by Ralph James, Ph.D., an esteemed FMI colleague, iterates the value of high integrity in construction. With multiple challenges facing the industry, maintaining the integrity balance is essential for long-term existence. James states that the integrity of a company’s systems is just as important as the integrity of its people. Giving customers exactly what is expected provides them with a feeling of trust. They understand what they are going to get every time. Standard systems provide them with this trust. When they sign a contract with “ABC Contracting” they know they’re going to get an “ABC” managed project with “ABC” systems. This is the brand image construction owners seek and contractors continuously strive for—a business mantra that is easy to remember and easy to refer.

The economic growth of the past decade has provided many expansion and growth opportunities. This creates boundless opportunity for young, inspired professionals. The need to implement and use standard management systems is vital to the growth and development of both your company and your personnel.

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LEADERSHIP

Synch Up!

“There is just not enough time available!”

Heard it? Thought it? As complexity complicates our preferred operating mode, it is an increasingly frequent complaint.

With attention focused on managing resources and leading people, often we overlook managing the most critical resource to a construction firm—time. Managed properly, time boosts morale (time off anyone?), money (results from an efficient use of time) and synchronization (aligning the right people and materials together to accomplish a goal). Our goal is improved productivity and that requires effective use of time before, during and after project completion. Project milestones and critical meetings overlay an already busy company schedule. At the project level, superintendents and project managers attend customer-required meetings, subcontractor meetings, safety meetings,
inspections, and the list goes on. In multi-echelon or geographically separated companies, potential time conflicts become even more complex. Conflicting time demands can wreak havoc on company profits and build frustration with employees. Lack of control, lack of information and lack of senior leader involvement at the right place and time (“I’m too busy”) is a surefire recipe for disaster. An effective company operations schedule helps organize the chaos and crises common to the construction industry by setting priorities.

Lack of control, lack of information and lack of senior leader involvement at the right place and time (“I’m too busy”) is a surefire recipe for disaster.

DO WE NEED A COMPANY OPERATIONS SCHEDULE?

Do you have a synchronization problem? Do you suffer from any of the following symptoms?

Do leaders frequently miss critical functions? Senior leaders should attend pre-job planning meetings, job post-mortems, customer meetings, kick-off meetings and other critical job events. Attending leaders can ensure and verify that meetings are happening and that project leaders get the support and resources they need to be successful. For larger companies, leaders enjoy the opportunity to meet with critical on-the-ground project leaders. The symbolism of participation should not be overlooked. (“This is important. You are important.”)

Is there a dearth of proactive employees and junior managers? Junior managers find it difficult to be proactive without a schedule of internal company events. Frequent, last-minute events (but known by headquarters events, i.e., not communicated) frustrate and bind superintendents and project managers. Great companies use a two-week (better yet, a three-week) look-ahead short-interval plan. Knowing that, company leaders should plan at least two weeks ahead for meetings and events. Field leaders can use company operations schedules to communicate up about critical events. These critical project events should be on the company schedule, thereby alerting the project manager, company operations leadership and others.

Do silos exist across company functions? The “get work, do work and keep score” functions of your company must communicate. A shared schedule communicates to the others the work each function is performing. With this information, for example, office staff knows when a job closeout meeting will occur, ensuring their attendance and support and that the right priorities are given to change order documentation and other project documents.

Do field managers spend 75% of their time in meetings? This is a common aspect of many companies in construction. Yet, company leaders do not see the numbers of scheduled meetings involving field managers. Mandatory training events should allow field time that morning or afternoon. Great
companies practice effective meeting management, announcing meeting times and agendas in advance so that subordinates can plan and prepare. In our work with one company, we developed a matrix of ongoing or reoccurring events. Leaders were shocked to see how many of their requirements pulled superintendents out of the field. In Exhibit 1, the highlighted position was responsible for facilitating the meeting.

Consolidating company operations into one calendar has many potential benefits. To realize these in your firm, follow these guidelines:

**Assign central control and responsibility for the schedule.** All requests for input flow through a single coordinating point for approvals. Use of resources such as meals, meeting rooms, facilitators and audiovisuals is optimized. The office manager or, in some companies, the administrative assistant to the vice president for operations is the best person to manage the calendar.

**Share the schedule, and give company-wide access.** The schedule cannot be a secret. Even in companies of significant size, company operations schedules are still hand-written in the COO’s notebook. This is unsatisfactory for the fully functioning organization. While the COO can carry the latest printed copy daily (along with other users), revisions should be provided daily for adjustments by day’s end. Electronic distribution, coupled with posting hard copies in common areas (in the office and field) and reviews at the beginning

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### Exhibit 1

**Sample Recurring Meetings/Report Matrix**

<table>
<thead>
<tr>
<th>Meeting Name</th>
<th>Purpose</th>
<th>Attendees</th>
<th>Length</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division Planning</td>
<td>Synchronize division operations</td>
<td>CTY builders and above—program director</td>
<td>2 hrs</td>
<td>First Monday of month, 11 a.m. (lunch)</td>
</tr>
<tr>
<td>Construction Operations</td>
<td>Safety, construction operations</td>
<td>All construction staff—DOC</td>
<td>45 minutes</td>
<td>Fridays, 3:30 p.m. on-site</td>
</tr>
<tr>
<td>Subcontractor Pay</td>
<td>Verify payments</td>
<td>DOC/cty builders/contract admin</td>
<td>1 hour</td>
<td>Third Thursday of each month</td>
</tr>
<tr>
<td>Scheduling</td>
<td>Confirm construction schedule/ID variance</td>
<td>DOC/cty builders/precon mgr/scheduler</td>
<td>30 minutes</td>
<td>Wednesday, 8 a.m.</td>
</tr>
<tr>
<td>Daily</td>
<td>Synchronize efforts, safety</td>
<td>Supers, on-site</td>
<td>15 minutes</td>
<td>7 a.m., daily</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Report Name</th>
<th>Purpose</th>
<th>From Whom</th>
<th>To Whom</th>
<th>Frequency</th>
<th>Sent by/Saved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity Report</td>
<td>Update, Identify issues</td>
<td>SVPs</td>
<td>COO</td>
<td>Weekly – Monday COB</td>
<td>E-mail</td>
</tr>
<tr>
<td>Daily Status Report</td>
<td>Update, Record-keeping</td>
<td>Supers</td>
<td>Cty builder</td>
<td>Daily, COB</td>
<td>Fax/Scanned and saved to H drive by admin</td>
</tr>
<tr>
<td>Change Order Summary</td>
<td>Notify/Approval/Accounting</td>
<td>Cty builders</td>
<td>DOC then accounting</td>
<td>Weekly, Friday, COB</td>
<td>E-mail</td>
</tr>
<tr>
<td>Subcontractor Payment Release</td>
<td>Release payment/ID work not complete</td>
<td>Supers</td>
<td>Cty builder—DOC</td>
<td>Monthly, third Monday of each month</td>
<td>Hard copy</td>
</tr>
<tr>
<td>WIP</td>
<td>Balance project/cost progress</td>
<td>PDs</td>
<td>COO</td>
<td>Monthly, 28th of month</td>
<td>E-mail</td>
</tr>
</tbody>
</table>

*Note: Standard meeting agendas can be found under the company hard drive at H:/XYZMeetings/Agendas/*
of operations meetings, enable all parties to stay informed. Updates to posted schedules should happen weekly at a minimum. Daily is better.

Include leader-critical locations or activities. Where possible, place all “C-level” vacation dates on the calendar or any out-of-town business trips for critical staff. This helps the second in command coordinate decision making and other critical functions around their departure. To stop progress in the field because someone is on a scheduled vacation and unavailable is a significant loss of momentum and often profitability. The same process can enable synchronization of vacation time for all critical leaders and allow senior leaders a mechanism to manage “crew rest” for their key leaders and project staff, preventing burnout.

**Summarize details on the schedule.** Do not overcrowd the calendar with too many details. Time, meeting location and mandatory attendees are a minimum for each event. For recurring meetings and locations, use common abbreviations with a legend to help new employees, and prevent confusion created by alphabet soup. For example, 0900 PJP Kohl’s Project: SVP Ops, PM, VP Sales, Supers (Conf Rm).

Include project milestones. Program out project milestones and place them on the calendar. As that month approaches, refresh the date and republish the calendar. Although some meetings will fluctuate, use placeholders set two months out, instead of no listing or forgetting events. Most companies find it difficult to look ahead more than three weeks. Yet, if company leaders cannot plan three weeks ahead for themselves, field supervisors likely have insufficient guidance for planning the week ahead adequately. This failure to plan sends a bad message as most companies are challenged in getting superintendents to plan two weeks ahead.

When creating company calendars, remember the following tips to prevent common problems:

**Prevent clutter.** The company operations officer must decide what level of information will go on the common calendar. Critical project functions are important. In deciding what to include, one company uses the rule, Who else needs to know? If a decision or meeting involves more than one function or department, it is usually “calendar required.”

**Minimize last-minute changes.** The “Calendar Czar” must keep last-minute changes to a minimum. When last-minute changes must occur, be sure they are handled properly. A critical last-minute posting with just one or two days notice will not be communicated to everyone. A more immediate communication, such as phone calls or e-mails, will be required to make sure everyone learns of the upcoming event. In other words, the calendar itself communicates well-planned events, but special handling is needed for short-notice events.

**Don’t confuse it with a project manager.** A company calendar or operational schedule is not a tool for managing labor, equipment or crews. It fails as a
project schedule. However, project schedules and management are more effective and efficient in companies that use an operations schedule. The schedule sets a template for the field to overlay project schedule information.

Beware of technology. Some companies assume everyone has access to e-mail. Many companies can afford to equip the field with laptops. Just because a superintendent has a laptop doesn’t mean he’s sitting in front of it or will before the end of the day. As the most critical link in your company’s management chain, superintendents have a high need-to-know, but are working on the job site. Don’t count on technology to communicate via calendar urgent information that should be handled by phone or other direct means.

Update the calendar. As with any other documentation, an “as of” date at the bottom helps ensure everyone is looking at the right version. In addition, if visually displayed, someone must be responsible for posting updates.

EMPOWERMENT

Company operations schedules work for large and small companies and take few resources to be well-done. Given the latest automation available, companies are able to effectively organize and communicate their time commitments with little extra effort. When leaders plan and communicate the plan, their actions empower their subordinates with similar ability.

How much would you spend to counter the running-crazy chaos in your company? Good time management encourages and allows subordinate planning by prioritizing company activities. Leaders lend importance to priorities by their actions, engaged attention and presence. Some companies do not realize the volume of meetings held (and consequently, the time superintendents are not supervising projects) until meetings are placed on a calendar. Once this happens, leaders can streamline and prioritize company activities, while giving subordinate leaders the opportunity to plan and prepare for events. Some companies standardize meeting parameters specifying, “subcontractor review meetings on the second Friday of the month.” This helps program calendars and reinforces good habits, but even recurring events should be included on the calendar.

Some companies and many individuals resent using a consolidated calendar for operational reasons. Many feel it is too time-consuming; others feel it is not necessary or simply that “You can’t do that here.” Some are simply reluctant to let others know what they are doing. Coordinated calendars have many great benefits. Follow these guidelines to build a coordinated company calendar and synchronize your company today.

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“You have to ask, ‘What is changing, and what is going to change? How do I think about that as I attempt to quantify the risk?’ That is a huge issue. It always has been and always will be.”

Quarterly Interview

Changing the Game

An Interview With Gary Kaplan

Zurich’s new president of Construction
FMI Quarterly: Gary, you are in a new role with Zurich. Will you tell our readers about your background leading up to this new position?

Gary Kaplan: I grew up in Chicago and after attending Northern Illinois University in DeKalb as a chemistry and math major, I went to work for a company called Industrial Risk Insurers as a loss control chemical engineer. I managed the loss control engineering for many of the big oil, chemical and utility companies throughout the 1980s. From 1988 to 1995, I was with The Home Insurance Company and moved into the underwriting ranks. I had just completed 10 years as a risk engineer and recognized a need to move to the underwriting side. That’s the first time I saw a need for change, as there wasn’t much risk engineering discipline in the underwriting process. Following Zurich’s acquisition of The Home, in 1999 I was given the opportunity to move from the downtown Chicago office to Zurich’s home office in Schaumburg and serve as the chief underwriting officer for the large property group. This is when I became exposed to several available change management process options. I adopted much of what I learned back then, the fundamental tools that I still use today, and began to study change management and use these concepts during several new career opportunities.

The current construction climate is synonymous with change, and those firms able to develop a competency in change management, paralleling or exceeding any other required core competency will win. Insurers are perhaps best situated to become future winners; their work revolves around quantifying risk. Here Gary Kaplan, Zurich’s new president of Construction, details learnings from his 20-plus-year career history in insurance and risk that gives him a unique perspective on change management. Clark Ellis, FMI principal and founder of FMI’s Residential Building Practice, talks with Kaplan about his tools and approaches to change management, his company’s philosophy on the subject and its application to the current construction market.
In 2001, I took my first so-called “less-defined job.” It was my first “position of influence,” where I joined our Technical Center as the property line-of-business director for North America. It was a brand new unit, and I had to understand change management to get things done. We were responsible for bringing underwriting expertise and discipline into a soft market environment.

After two years of helping to lead change, I moved into an even more challenging job as the underwriting program lead for what we called the Strategic Initiatives Group. This was another start-up operation. It consisted of a small group of executives who worked together to help drive change across the entire company. We were applying a very different change management process while trying to build more disciplined underwriting practices. After another two years, I took the job as the chief underwriting officer in North America and dealt with a wide range of challenges related to change management. Underwriting terrorism risk was new. The regulatory environment was changing. The industry had risk accumulation issues following the 2004 and 2005 hurricane seasons. We also began implementing something called The Zurich Way, which is changing our underwriting and other processes on a global scale.

My job prior to this was head of operational transformation, another change management position.

We focused on creating efficiencies and effectiveness in all that we do as a company. In February of this year, I got the opportunity to go back into a business unit and run it as the president of our Construction team.

**FMI Quarterly:** You have covered quite a few aspects of the business over your career, and you’ve been consistent in driving change from the mid-1980s to today. As you look at your current role in construction, where do you rank the ability to manage change in importance relative to other competencies for executives?

**Gary Kaplan:** Interesting question. Change management isn’t all that complicated. It’s not as complicated as building a bridge. It comes down to one question: *Can you consistently execute the key elements of change management as a part of whatever change effort you are trying to put in place?*

Change management is a competency you need to execute successfully in conjunction with other executive leadership skills such as strategy development, planning and talent management. Most leaders develop strategy, but many don’t know how to get it out there quickly, so they lose the
potential benefits. Change management is, in my mind, a way of developing talent. I always try to get people focused on the results instead of the activity — whether we are writing sponsorship statements, performance goals or doing progress updates. If you get people thinking about the result, they become more energized, motivated and more easily embrace your change efforts, whether they are leading it or are a part of it.

**FMI Quarterly:** Going back to your previous comment — that there is a finite set of things you have to execute to make the change happen. What are some examples of those elements?

**Gary Kaplan:** This is where all the authors writing about change make their money. They package the same basic elements in different ways, and it ends up being viewed as the next new thing. But it really comes back to the same thing, and the one who said it best was John Kotter. You need to get people to understand what it is that you are trying to change. You have to give them an awareness of what it is; you have to put some facts out there so that people can understand what you are trying to do. We spend countless hours with our people when we enact change efforts in developing sponsorship statements, which are really well-articulated reasons for why we are changing something. Most leaders find it difficult to sit down and draft these statements. It is one of the greatest skills you can get your team to develop, because it forces them to communicate clearly what are they trying to do and why. Using that information in ongoing communication is critical to successful change.

Another thing Kotter discusses is building a sense of urgency — a burning platform. Getting people together and helping them develop a desire for the change. How do you build a core group — Kotter called it the guiding coalition — the group that is going to go out there and evangelize for the change you are trying to put in place? You clearly have to transfer the knowledge. They have to understand what you are doing, what is important and what tools they are going to use in order to implement the change. I think the better you can document that, the better you can provide whatever is needed — whether it’s training, systems or tools — to transfer that knowledge. You need to generate short-term wins in 90 days or less that help to build confidence in their ability to do it. Finally, you have to reinforce the change.

If you get people thinking about the result, they become more energized, motivated and more easily embrace your change efforts, whether they are leading it or are a part of it.
What I have just described are the five building blocks from the Prosci ADKAR model (Awareness, Desire, Knowledge, Ability and Reinforcement), which is what we are using now. We have progressed over the years from teaching Kotter’s eight steps in leading change and have become more sophisticated with change management as it morphed into other types of training programs and focus areas.

In 2003, when I joined Zurich’s Strategic Initiatives Group, it was such a huge change effort for us that I gained support from the executive team to build a project/change management boot camp. We pulled together five experts that we had in our company who knew the most about change management, and we created a Change Council. The council built a boot camp in less than 90 days, which we ran over the next two years with approximately 350 participants. We included the fundamentals: How do you communicate effectively? How do you build awareness? How do you craft sponsorship statements? How do you drive a results focus through team goals?

We did that for two years until we moved it to the next level. We are now using Prosci’s five-element ADKAR model to teach our people how to think about change management.

FMI Quarterly: So you moved from an eight-step model to a five-element model?

Gary Kaplan: Yes. The ADKAR model goes into more detail than Kotter’s eight steps, but they all have the same basic components. What’s the most important aspect? It’s the communications side. So much of what you are doing when you are building awareness, desire, knowledge, ability and reinforcing behaviors has to do with being able to communicate with people so they can understand.

Perhaps the second most important thing is figuring out how to involve the people that will be changing behaviors in the change effort itself. The tools that we use pull them into teams so they can digest some of the identified solutions. We work with the leaders on developing sponsorship statements that leave room for the teams to come together, debate and own what we
and they are trying to put into place. The teams set their own 90-day goals. So once you start to implement that change, they feel like they are a part of it. The result is involvement through empowerment in the various levels of leadership that you need to implement a major change.

The next step is driving the participation of the members. We have become adept at piloting. It is our first opportunity to really test the change in the environment with the end users. They always find things that no one has figured out yet. By using their feedback, they grow more positive about the change. Someone is actually listening to them and asking their opinions. Ultimately, you get a better solution; participation and feedback are huge.

In my last job as head of operational transformation, LEAN was a new tool to me because it is not used much in the insurance industry. As part of our global effort to transform our operating model, we decided to start imbedding LEAN skills and processes in our current operating environments. At the beginning of this year, we kicked off an effort in our Orlando office. We hired a firm that specializes in teaching the LEAN process to come in and work with some of our underwriting back office people and frontline underwriters to identify and change anything in our processes that doesn’t add value to the customer. This will be part of the next wave of change for us as we seek opportunities to improve efficiencies and become even more customer centric.

**FMI Quarterly:** We see that happening in construction as well, down to field execution. FMI has been working on field productivity for a long time without using the LEAN terminology. Eliminate non-value-added activity; get rid of waste in any form. If it just adds cost and no value, then it is waste. Part of our methodology is called *Quick Starts.*

**Gary Kaplan:** When we started to implement change back in 1999, we called it Rapid Results Initiatives. A really great change management tool embodies all of these basic components. You give them a challenge with the sponsorship statement, appoint a team leader and empower the team to achieve a results-focused goal. They set their own 90-day objectives.

The team works together to generate the results. They pilot or give you feedback, and they create better processes. We have done close to 100 of these initiatives over the last 10 years. They have been extremely effective and work best with teams of less than 10 people.

When we are focused on bigger changes that require more people and more feedback, we tend to use
the WorkOut method made famous by Jack Welch at GE. We probably have done 25 WorkOuts since I have been with Zurich. They are always successful because the technique embeds all those same components that are so critical to change management. In a WorkOut you empower people by saying, “I’m going to allow you to cut through all the layers of management, talk to senior leadership and make your recommendations right here.” It provides great development opportunities for those people. We have done many very powerful WorkOuts over the last few years.

We also did something at Zurich that I think was unique at the time. Our group level CEO Jim Schiro challenged us to develop seven core global processes. We referred to them as The Zurich Way processes. I was fortunate enough to chair the underwriting workstream and had a great team of experts on the team from Zurich’s businesses around the world. In 90 days we were able to build what we first thought would be impossible. We created a single process for underwriting across the world. The Zurich Way efforts gave us a way to embed change on a much bigger scale. Each workstream had a toolbox and in that toolbox we put a lot of the project and change management tools we had developed, as well as some new tools.

One of the new tools was what we called underwriting files reviews. We plucked about five to eight people out of each business and took them offline for 90 days. See what I mean? Everything is 90 days — there are so many similarities in all these tools. These people were dedicated to reviewing individual underwriting files. We used something called leakage to quantify what the opportunity was for the needed change. Again, it comes right back to the Kotter steps, as well as the ADKAR model. The need to reduce the amount of leakage was our burning platform; it helped to build a desire and the awareness because there is a dollar amount associated with it. The people that are in the business units are the ones making recommendations on the changes that are needed, not somebody from the home office. It’s a great change management tool and one we have worked with globally over the last five years at Zurich.

Change management is a simple phrase used to encompass many different and diverse approaches to introducing and implementing change within companies. Enterprises like ours use many approaches and techniques to bring positive change concepts to our operations.
FMI Quarterly: Let me shift gears and ask you to talk about the construction market. Looking at all sectors, what do you think are the most critical challenges that you and other executives will face in the next two to three years?

Gary Kaplan: I am seeing some clear themes. Initially, we underestimated the potential of the emerging markets. I got this new assignment because we eventually did recognize that there was going to be a big opportunity in the emerging markets around construction. We have this big customer-focused construction practice in the United States, and we don’t have it everywhere else. There is great opportunity for us to export these capabilities. Construction is booming in the rest of the world. No matter what you see in the United States, where it looks like we are going into a slowing period, it certainly isn’t happening in many parts of the world. The previous president of Construction, Terry Gray, has taken on the assignment to make this happen for us as Zurich’s global head of Construction.

I think the construction industry has already lost a lot of equipment and talent to the Middle East, South America and the Far East. The thinning of resources here in the United States, for not only our contractors, but also in our capabilities as you start to build in those other parts of the world, is something we need to address.

FMI Quarterly: In the last say six months, we have noticed an increased tempo in requests to offer services in the Middle East. For example, there is no production building infrastructure or talent in the Middle East, or really anywhere other than here. It is a tough time because our market is cut in half here, and we might permanently lose talent in the next 18 months to demand from the Middle East.

Gary Kaplan: No doubt about it. It is not only on the contractor side, but it’s occurring with the people who support them, both of our companies included. One of our large brokers has put 200 to 300 people over there already. With all that exporting of talent comes demand for the people who support them.

Another challenge is green buildings and LEED. We’ve already heard quite a bit about how that changes the property and professional liability exposure. It is real, and we are quantifying the associated risks. It’s also a huge opportunity for us. We clearly need to deal with the change management aspects that come with that.
The rising price of gasoline and climate change are fascinating to me because I spent 18 years on the energy side of the house. All of this change is creating huge opportunities that I only dreamed about when I was in that business in the 1990s. A lot of that technology, like coal gasification, wind, geothermal and nuclear, is becoming economically viable now. The big challenge comes from all the changes in technology — the processes and types of capabilities out there. Some of them haven’t even been tested in the United States. As we start to build up capabilities, here or in the emerging markets, it is going to be a huge challenge to make sure we get it right, both on the construction site as well as in the completed operations.

What that translates to for us, as an insurer, is uncertainty. Trying to figure out those pieces in this environment with these kinds of big shifts going on is what keeps me up late at night.

**FMI Quarterly:** You describe a key issue in change management. How does the pressure from uncertainty and change impact your ability or your organization’s ability to deliver change?

**Gary Kaplan:** It is the essence of what we have to do as underwriters, which is figure out how to quantify that change in risk. Actuaries have trouble knowing what hasn’t happened yet. That is always the hardest part as an underwriter. So much of what you do is based upon history. Then, you have to ask, “What is changing, and what is going to change? How do I think about that as I attempt to quantify the risk?” That is a huge issue. It always has been and always will be.

The uncertainty in the financial markets around the world is what’s going to challenge us the most.

For an insurance company, that uncertainty cuts across all the functions that we have, whether it is the back office people who are trying to figure out the rates or the service providers. Are we getting enough expense to cover those services? Are we getting the benefit from those services on the loss ratio side that we think
we are getting? I’m working hard now to make sure we have all that right going forward. It is what ultimately is going to drive our profitability in the next few years.

**FMI Quarterly:** You have to be able to take in information, synthesize it quickly and make sense out of it.

**Gary Kaplan:** On the residential side, I think we have been doing a pretty good job dealing with change. It is an amazing model that we built to deal with completed operations exposure and stripping that out of the general liability coverage. We created a first-party coverage instead of a third-party coverage through our builder’s warranty for the home buyer. The product uses arbitration instead of jumping to the courts. We invest heavily on our risk engineering services that drive the quality assurance and quality control of our home builders.

We are building a very robust business. But the marketplace ... what a shift. To see the exposure base change as much as it did in one year is amazing to me. I don’t think anyone forecast that correctly, so it has created a big challenge for our industry.

**FMI Quarterly:** Do you see any changes or continuing trends, maybe even changing the type of person you are targeting to add to the organization going forward?

**Gary Kaplan:** Absolutely. We need to move quickly on the frequency of crane collapses. Enough of them have happened; clearly, something is going on. We have a really strong risk engineering consulting and claims group, and I’ve challenged them to develop a crane seminar in 30 days. I met with the leaders of the risk engineering consultant team and asked them to work with our contractors to figure it out. We didn’t have the answer for them, but we do have the sense of urgency — the burning platform — and we empowered them to develop the answer.

**FMI Quarterly:** The crane seminar is a perfect example of a clear need and response to something unpredictable and a great summation on change management. Gary, many thanks for sharing your change-management tools, experiences and lessons with our FMI Quarterly readers.
Building a sustainable competitive advantage that your competitors cannot easily replicate is achievable through strategic planning — the essence of which is organizing your efforts to produce a better product or service than your competitors. Strategy involves an external market focus as well as delivery capabilities. Promises delivered, not empty promises, in the marketplace win repeat work. Intelligent competitors are diligent about competitor offerings, emulating them readily upon market acceptance.

So what does all of this mean for your planning efforts? You need to build intelligence around your business, clients and offerings in order to then make smart decisions about your company’s strategy. We will deal here with the preparation process for strategic planning.

**Beyond Intuition**

Everyone wants to win, but only those with the drive to prepare to win excel. A colleague claims expertise in leading BOGSAT (bunch of guys sitting around a
table) discussions; many contractors view this exercise as strategy development. Often, intuition leads these discussions since it is a core strength of most construction managers. They know what works and why, and they know their successes and failures. This is a competitive business that, at times, requires more than intuition and instincts. It requires the discipline of market, customer and performance analysis. Fact-based information trumps intuition. The expression “my mind is made up, don’t confuse me with facts” applies here.

The following steps and fact-based information will help you prepare to build your strategic plan: Market Perceptions Study, Market Research, Completed Contract Analysis, Situational Analysis and the internal QuadRed Organizational Assessment Survey. All of these processes equip the planning team with fact-based information about their customers, markets and services, and work to identify and build a sustainable competitive advantage. Financial benchmarking analysis will be discussed in a future *FMI Quarterly* article. Exhibit 1 depicts the two phases of strategic-planning preparation. The first phase in preparation is gathering fact-based information for analysis by the planning team rather than relying on intuition and instincts. In the second phase, the planning team formulates strategy developed in the analysis of the data. The point is to develop data and facts that support your intended

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**Exhibit 1**

*Great Contracting Inc. Two Phases of Strategic Planning Preparation*

**Phase I**

- Completed Contracts Analysis and Financial Analysis
- Market Perception Study and Market Research
- QuadRed Online Employee Survey

**Phase II**

- Employee Strengths — Weaknesses — Opportunities — Threats Interviews

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<th>Phase I</th>
<th>Phase II</th>
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<td>Develop “snapshot” of current internal/external situation</td>
<td>Identify themes/issues to be addressed by strategic plan</td>
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**Strategy I**

- Completed Contracts Analysis
- Market Perception Study
- QuadRed Online Employee Survey

**Strategy II**

- Financial Analysis
- Market Research
- Employee Strengths — Weaknesses — Opportunities — Threats Interviews

**Strategy III**

- Completed Contracts Analysis
- Market Perception Study
- QuadRed Online Employee Survey

**Strategy IV**

- Financial Analysis
- Market Research
- Employee Strengths — Weaknesses — Opportunities — Threats Interviews
strategy rather than relying on guesswork or defaulting to the planning team member with the most persuasive argument for a strategy.

**MARKET PERCEPTIONS STUDY**

Successful contractors constantly monitor their company’s performance relative to their strategy through market perception surveys or client surveys. These tools and measurements are variable in design and application, but the connection to the customer satisfaction strategy is clear. FMI highly recommends that contractors take the time and effort to address their standing in the market through their customers’ eyes. Many consider customer satisfaction to be a gray area and difficult to quantify and control. In practice, from surveys of thousands of owners and contractors, we have found that customer satisfaction is quantifiable, with a strong correlation between customer recommendations and a company’s growth and profitability. A successful competitive strategy includes a plan to increase the number of satisfied and loyal customers in the company’s portfolio. Satisfied customers are repeat customers and enthusiastic promoters.

Our research experience with contractors supports the findings of Frederick F. Reichheld, a leading authority on customer loyalty. According to Reichheld, the most important question in any customer satisfaction survey is, “How likely are you to recommend [company X] to a friend or colleague?” (Reichheld, Frederick F. 2003. “The One Number You Need to Grow.” Harvard Business Review December.) Reichheld’s research found that this one question is a stronger predictor of profitable growth than all other questions on the typical customer satisfaction survey.

Our experience supports the notion that contractors with steady growth rates typically score higher on the “likely to recommend” scale. If 10 is “very likely to recommend,” a high score falls between nine and 10. While we consider all scores above seven “satisfactory,” companies should target scores of nine or above as a model for continuous improvement. In this range, loyal customers serve as good promoters of your business (see Exhibit 2). FMI created the Market

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**Successful contractors constantly monitor their company’s performance relative to their strategy through market perception surveys or client surveys.**
Perceptions Study (MPS) to help clients understand why someone recommends their services and what actions will raise the probability of a recommendation.

A MPS includes two main components: interviews and a survey questionnaire. First, an interview guide is developed in collaboration with the client. Interviews typically consist of questions in four main areas: client relationship, contractor selection, the company’s market position and specific areas for improvement. The company then provides a list of its customers to survey, a small sample of which are interviewed.

Altogether, the survey includes 30 performance-factor questions that measure the consistency of a company’s performance and execution of construction projects. These additional questions build upon the recommendation score. All questions are aimed at determining the actions a company can take to achieve a higher “likely to recommend” score (see Exhibit 3). For instance, customer feedback indicating slow response times to project questions helps explain the low recommendation scores. With that information, a company can develop an action plan to improve its response time.

Interview notes and survey results help identify key issues and develop conclusions, implications and recommendations. A written summary analysis, detailed findings and interview notes are provided to the client during an on-site debrief session, which precedes the strategic planning retreat. Senior representatives from all major departments and divisions should attend the presentation of research results. Every department and division of the company should understand the impact that customer perception has on his or her particular department and how each can work to improve that perception.

By using a standard process, the MPS allows benchmarking with previous responses for an individual client as well as comparison to aggregate scores of all contractors in key categories (see Exhibit 4). With this supporting data, even companies that score high on the recommendation scale will find areas for improvement. Low-scoring companies may find several areas on which to work before the next research cycle.

**MARKET RESEARCH**

In addition to the Market Perceptions Study, it is important to collect geographic market research to address current and future market conditions. Two areas of investigation include business vitality and construction demand. To study
an area's business vitality, it is essential to research key demographic and economic indicators driving construction demand in the markets served or markets being targeted in the strategy development process. These indicators may include population, personal income, employment and housing. Including both historic
Prepare to compete
and forecast market research data makes the information easier to understand and more useful. Without a strong understanding of these variables, it is more difficult to predict future market conditions. Identify construction trends and demands drivers, and examine the market outlook for a successful strategy.

Market sizing and metrics are quantitative secondary research. Providing historic and forecast construction put-in-place data at both the MSA and state levels gauges the demand for construction services by market sector. Understanding the underlying trends and drivers of construction activity and construction demand (see Exhibit 5) makes strategy formulation possible. These market research results are incorporated into the on-site debrief session, along with the MPS findings prior to the planning retreat.

Most contractors find that the results of Market Perceptions Studies and Market Research enable new insights into their markets that are elusive in the heat of the day-to-day business and valuable for strategic planning sessions. The immediate study goals are to provide hard numbers and client perceptions for contractors concerning client satisfaction and future construction demand. Based on the research results, contractors can formulate conclusions into their plans that address issues raised in the study. This is the pragmatic value of the research.

Remember that customers risk their reputations to recommend a contractor to people they know and respect. In client perception surveys, the feedback is invaluable. Knowing and measuring your level of client loyalty is a future indicator of profitable client relationships.

**COMPLETED CONTRACTS ANALYSIS**

The Completed Contracts Analysis (CCA) digs into the details of the individual project estimates and project execution that collectively present a clear picture of company performance. With accurate project information, a company gains valuable insights. The CCA helps company leadership to identify competitive advantages while weaning a company away from wasteful or inefficient efforts.
As implied by its title, the analysis applies to completed projects or “closed out projects.” The study includes the past three to five years of completed contracts as this span usually yields enough data to identify trends. The failure to use a robust amount such as only one year of data would be similar to building a personal budget from one month’s financial activity. By conducting trends analysis, we can study many aspects about a company’s operations. These details include revenue and gross profit from top customers, gross margin gain or fade on projects, profitable contract types and a host of other operating characteristics.

COLLECTING DATA

The CCA input starts with data unique and specific to each project. Project name, project number (internal project code for future reference), customer and location (county or city) are the baseline of information most companies retain (see Exhibit 6). Depending on the nature of work or contractors involved, the building type can be broad (church, school, medical, retail) or include specific building types (assisted living facility, hospital, medical office). For some companies, bid type and contract type information becomes valuable (hard-bid, negotiated, lump-sum, GMP). Analyzing the results of project performance by project personnel provides an understanding of staffing efficiency and performance (i.e., project managers, superintendents or sales managers).

Cost data is the most critical to proper analysis and often the hardest to gather. Best-of-class companies keep project performance and cost records. Begin with the overall project estimated cost, contracted cost (the amount on the contract), actual cost of the project and revised estimated cost (including change orders). From this information, profit margin, revenue and margin gain or erosion data can be developed. Where possible, great companies keep more detail, including estimated revised and actual
labor, equipment, materials and subcontracts. It is easy to see how the CCA becomes a gauge of how well companies “keep score.”

Results gained from the CCA include operational insights such as productivity, estimating accuracy, material management, labor management and organizational structure. The trends analysis provided by the CCA generates indicators for further discovery and discussion. Leaders must then process the information. What happened on that project? Who are our most profitable customers? What project types yield the highest level of profitability? What clients are growing? What clients are retracting? Given our dynamic industry, leaders are using historical performance to assess implications for future direction.

Viewing trends and fact-based reports in perspective provides valuable insights, enabling executives to “see the company” clearly. Strategic planning efforts and conclusions are supportable based on analysis and research.

A subcontractor gained a major insight from a CCA that included the best and worst general contractors by project performance. Interviews with the subcontractor’s personnel made clear that their leader believed the relationship with XYZ General Contractor to be profitable. Feedback from the field managers about XYZ General Contractor contradicted this belief. In tune with improper project management and site inefficiencies, field managers didn’t voice their concerns in order to avoid conflict with their leader. The CCA revealed that XYZ General Contractor was one of the company’s least profitable customers based on gross profit from completed contracts. Significant gross margin fade or margin erosion was occurring after the project work was completed and financial results determined. Out of this observation, company leadership sought more feedback and decided to approach XYZ General Contractor with data and project examples. A plan to improve project performance was established. If the situation did not improve over the following year, the subcontractor would terminate the relationship with XYZ General Contractor.

THE TROPHY FISH

Many construction companies lack a refined understanding of the work acquisition process, including marketing, sales and business
development needed to “get work” suitable for their operations. Some seem to be trolling for the biggest fish in the sea. After contracted and “hooked,” the large contract sometimes turns out to be a whale that can lead to significant financial difficulties. It is not the contract opportunity missed that leads companies to bankruptcy, but the wrong contract opportunity “won” that leads companies down the wrong road. Through analysis (see Exhibit 7), companies can better identify their project size “sweet spot” and catch the right-size fish. With well-developed strategy, companies can adjust their “sweet spot” over time and avoid trying to catch the whale-sized trophy fish. Through further analysis of its completed contracts (see Exhibit 8), this regional company discovered its North Carolina division was “fishing” in deeper water than it was prepared for, resulting in significant margin erosion. The company adjusted its strategy and operations in the division as a result.

Another company, a subcontractor with several divisions, identified its 60-year-old building division as the poorest performing division. Company leaders had believed the opposite. Once again, facts trumped feelings and assumptions. By coupling the CCA with a Market (client) Perception Study, the company enhanced its brand image and grew market share of another, more profitable division.

A general contractor conducted a market research study of a specific metro area. While the contractor’s long-term strength had been its retail facilities...
construction, the study identified demographics that suggested a future market shift to schools and medical facilities. The contractor’s CCA results revealed schools and assisted-living facilities were the contractor’s two least profitable work segments (see Exhibit 9). As a result of using these tools, the company leaders chose to develop a strategy to modify their target markets and delivery process for these markets over the next five years.

These analyses were possible only because the companies performing them had done a sufficient job “keeping score” and were willing to conduct an in-depth study of their past project performance.

As with most tools, insufficient analysis or incorrect data entry can lead to incorrect conclusions. The CCA results should support other analysis or data. Actionable steps come from knowing the right areas to address.

The CCA provides construction company leaders with a valuable, fact-based tool to study their company’s performance. The tool highlights the value of a strong “keep-score” function. The detail and integrity of collected project information helps leaders understand cause and effect relationships and develop insights to improve project performance. When coupled with financial analysis, industry knowledge and employee insights, the CCA provides evidence to enable the company’s leadership team to assess performance and develop strategies to become more profitable.
SITUATIONAL ANALYSIS

Contractors who have developed strategic plans are familiar with the SWOT concept of Strengths, Weaknesses, Opportunities and Threats. This situational analysis presents a current view of the organization and its market position along with future possibilities and threats. The strengths and weaknesses are internal organizational attributes of competitive advantages and deficiencies. As used in many situational size-ups, opportunities and threats are external market factors that represent organizational choices for growth, expansion or remedy.

Several methods may be used to compile a list of SWOT. Participant interviews are the easiest way. Solicit input from a variety of levels and positions within the company. Twenty to thirty respondents are sufficient to source SWOT issues. Comprehensive interview questionnaires extract key strategic issues and facilitate comparison of key leaders’ input. Asking employees and clients (the people working daily to deliver your strategy) what they think is a powerful technique and important information source.

While a good information source, performing only these interviews may produce a biased situational analysis. The interviewees’ perceptions are important, but perhaps limited based on the interviewees’ limited access to information about the organization.

QUADRED ORGANIZATION DYNAMIC MODEL ONLINE SURVEY

Online surveys are another effective way to identify a company’s current situation. The QuadRed Organization Dynamic Model (ODM) is one such survey. Jeffrey A. Rigsby and Guy Greco developed the QuadRed (ODM) online survey from an extensive six-year research study with support from UCLA and Pepperdine. Rigsby and Greco identified best practice statements impacting business performance the most. The best practice statements are organized within three core drivers: organizational strategy, design and culture. Exhibit 10 shows the interdependencies of the three core drivers.

The QuadRed ODM is further organized into twelve key components and thirty-five principal elements (see Exhibit 11). Research-based methodologies are used to provide benchmarking along the strategic concepts of organization strategy, design and culture. These concepts are sound strategic and organizational practices.
regardless of industry. The overall survey results are then based on best-practice statements derived from these methodologies. Company executives respond to the best-practice statements for their company, markets and organizational performance. The executive team's responses are summarized in the QuadRed reports and provide a comparison of the CEO, executive and employee responses for congruency or lack of congruency. The report also compares the responses for the company to those of other companies in other industries. The construction industry consistently underperforms other industries in the database.

Surveys for management and employees are distinct in the QuadRed online input. Management has more information and more insight into organizational strategy, design and structure. Accordingly, management has to respond to 117 best-practice statements while employees respond to just 55. The survey uses a Likert scale with these possible responses for each statement: Don't Know, Not Applicable, Strongly Disagree, Disagree, Somewhat Disagree, Somewhat Agree, Agree and Agree. Participation is open to the CEO, management team and invited employees. The assessment summarizes responses and produces reports. In addition to responding to the statements, participants rank the 12 key components in order of importance. The ranking measures how the respondent views the key component’s current importance to the company. The results produce a
Your Strategic Performance Index™

69

Your Prior Year SPI™

N/A

QuadRed Benchmark SPI Comparisons

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Capabilities and Constraints Definitions:

Capabilities are defined as those service categories that are viewed as “High-Impact” (important to the customer) and “High-Performing” (generally perceived as satisfactory performance).

Constraints are defined as those service categories that are viewed as “High-Impact” (important to the customer) and “Low-Performing” (generally perceived as less satisfactory performance).

Exhibit 12
QuadRed Report Card

Exhibit 13
Management Report: Degree of Impact Matrix

The Management Report clearly illustrates the performance evaluation and prioritization of the 35 disciplines by the senior managers.

These performance areas are prioritized automatically based on the collective rankings of the senior managers. These are the “Red Zone” items: Perceived by senior managers as being both High-Impact and Low-Performance.
performance score for each statement and a ranking of the elements by order of importance for each participant. This combination of performance and importance (impact) is illustrated graphically as shown in Exhibit 12. The Strategic Performance Index (SPI) indicates a summary-level score for the participating organization as compared to its peers in the database. Capabilities are strength areas that received a high-impact ranking and that earned high scores. Constraints are high-impact areas with low scores.

The management report (Exhibit 13) provides the organization with strategy focus areas. High-impact, high-scores areas are included in the upper-right quadrant. The QuadRed items are high impact, low scores from the management team. Scores on the left side of the quadrant are for areas of low impact (priority) from the management team. High scores on areas of low impact might indicate a needed change of focus and resource allocation to the high-impact business area.

The QuadRed process provides benchmarking information as shown in Exhibit 14. The range of scores from the top 10% to the bottom 10% offer valuable comparisons when assessing organizational capability. Input standardization is essential for benchmarking and establishing baselines for future performance measurement. Addressing a broad spectrum of strategic concepts with senior executives provides insight on key strengths and opportunities for improvement. The CEO and executives are presented with QuadRed Reports that show scores by organization strategy, organization design and organization culture. In one of the reports, the CEO can review each best-practice statement to determine how his score aligns with his management team’s scores. Measures of harmony and
dissonance can be made between the CEO and the leadership team.

This more disciplined and structured approach to the situational analysis and baseline of organizational strategy, design and culture is preferred; it offers a comprehensive approach and identification of area best practices. Future progress measurements can be compared for improvements.

Fact-based reports are fundamental in developing future strategy. Relying on intuition and instinct is valuable but better when supported by data. Involving clients, employees and stakeholders in the fact-gathering process acknowledges their importance in your organization’s success and helps to secure their participation in future implementation.

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You would have to be living on a deserted island to be ignorant of the need to attract and recruit more qualified people, especially the younger generation, to the construction industry. According to the Bureau of Labor Statistics, employment will grow at an average of 13% from 2004 to 2014, with almost a million new jobs created within that period. Despite the forecast need for more workers, the primary working age group population (those between the ages of 25 and 54 years old) is projected to decline, resulting in approximately three million fewer workers in this age range alone.

We need people to fill these jobs, and internships offer an ideal way to expose high-school students to the industry and its diverse work opportunities. A win-win process, internships allow students to gain practical, real-life work experience while employers evaluate their current skills and future potential. Benefits of hiring former interns for the organization include increased retention rates of new employees,
reduced training periods and improved personnel selection by using actual on-the-job performance as a practical predictor of future performance. Even more than these benefits, internships act as magnets, attracting some of the millions of high-school graduates heading to college each year with no concrete career path.

**GILBANE’S APPROACH**

Gilbane Inc. partnered with the Met School in Rhode Island to create the LAB (Learn. Apply. Build.) program based on the idea that if students realize that professional careers in construction are varied and they have the opportunity to make use of their creative, technical and business skills, then the industry becomes much more attractive. The program reaches out to students while they are still in high school in order to spark their interest in the construction industry and increase the chance of them going on to college and obtaining a degree in engineering or construction management. Students in the program “LEARN to identify and pursue their passions, which fuels their education … APPLY their knowledge and gain skills from on-the-job opportunities … and Gilbane helps them BUILD their careers” for a successful future in the construction industry.

Once LAB students graduate from high school, they begin a full-time (averaging around 32 hours per week) job with Gilbane as an engineering clerk. As engineering clerks, students learn about Gilbane and its operations, and are assigned to a project site. On the job site, students are paired with a mentor who provides guidance and acts as a resource while students assist the team in the construction delivery process.

While working full-time at Gilbane, the LAB students attend the Community College of Rhode Island (CCRI) part-time and take classes in the Roger Williams University’s (RWU) construction management program. Students typically complete their associate degree in business management or a related field in four years or less.

At this point, students may transfer to RWU and continue working at Gilbane 24 hours per week. If students maintain a 3.0 grade-point average, RWU will provide unconditional acceptance into its Construction Management program and Gilbane will provide financial assistance. Graduates are typically promoted to office engineers or another function where they can then begin to build their careers.

*FMI Quarterly* spoke with Drew Pollick, Gilbane’s corporate compensation manager, who helped launch the partnership between The Met and Roger Williams University.
**FMI Quarterly:** How did this initiative come about?

**Pollick:** Paul Choquette, the chairman of Gilbane Inc., our holding company, is on the board of directors for The Big Picture Company. He’s a strong advocate and passionate about continuous learning and education. He arranged a meeting among Pierre LaPerriere, vice president of Corporate Human Resources at Gilbane Building Company; Dennis Littky; some of the students and leaders at the MET Center in Providence, R.I.; and me. Our meeting explored the ways Gilbane could become involved with MET Center. Dennis provided us with some of his thoughts and ideas, and students gave us tours, shared stories and told us about the program at MET. From that meeting, it was up to Gilbane and MET to develop a program that would work for both partners.

**FMI Quarterly:** How long has this program been in effect?

**Pollick:** The program will enter its second year this fall, although we’re hiring our second set of associate office engineers this month.

**FMI Quarterly:** How many students are currently in the program?

**Pollick:** We hired two graduates of the MET Center in fall 2007. Two more started in May 2008. We had four interns in the first two quarters of 2008, two seniors and two juniors. This provides us with a 10-week interview window to get to know the candidates, their drive and capacity to learn and perform. We look to hire two graduates who show their professionalism and dedication early on from each intern class.

**FMI Quarterly:** How does the Learn. Apply. Build. (LAB) program function? Who and what is involved?

**Pollick:** The New England region of Gilbane Building Company is the sponsor of the program. It provides MET Learning Through Interest (LTI) internships.

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**THE BIG PICTURE COMPANY** was founded by educators Dennis Littky and Elliot Washor, both formerly of the renowned Thayer High School in New Hampshire and the Annenberg Institute for School Reform at Brown University. In 1995, they began collaborating with Rhode Island policymakers to design a student-centered high school and created The Big Picture Company as the launching pad for what has now become a national education reform movement.

The Big Picture Company’s mission is to catalyze vital changes in American education by generating and sustaining innovative, personalized schools that work in tandem with the real world of their greater community. They design break-through public schools, research and replicate new designs for education, train educators to serve as leaders in their schools and communities, and actively engage the public as participants and decision makers in the education of our youth.

Its philosophy is grounded in educating one student at a time. It promotes and creates personalized education programs that are unique for each student. True learning takes place when each student is an active participant in his or her education, when his or her course of study is personalized by teachers, parents and mentors who know him or her well and when school-based learning is blended with outside experiences that heighten the student’s interest. In a country obsessed by test-score accountability, it promotes one student at a time accountability.
to junior and senior MET school students interested in learning more about Gilbane and working as construction managers. Many of them learn about us and construction management through our current employees and the ACE Mentor program.

We target juniors for LTI internships. We want to have an opportunity to get to know them, their competencies, dedication and interest in learning the business. These experiences also allow MET staff to identify and enroll LTI seniors in Community College of Rhode Island (CCRI) mathematics courses to improve their candidacy for the LAB program.

The LAB program hires MET graduates as employees of Gilbane. They work up to 32 hours per week as engineers under the supervision of our more experienced engineers and superintendents. Concurrently, they enroll at CCRI in an associate’s degree program in Business Administration. They learn construction management through a hands-on approach with requests for increase, change order management, learning to read drawings, etc. We also assign them mentors as additional contacts in the company who can help advise them, show them the ropes, etc.

We pay them similar to our college interns and see their added value daily. In addition to their base pay, the LAB program partners have also arranged to subsidize 50% of their education tuition expenses.

When they enter the program, they are required to enroll at CCRI in an associate degree program in business administration. Provided they maintain a 3.0 GPA and receive solid performance reviews at Gilbane, in three to four years of part-time study, they earn their associate and are admitted to Roger Williams University (RWU) as juniors in the construction management program as full-time students. We envision that many of our LAB program participants will reduce their work hours at this time to tackle the additional academic challenges of their final two years of study.

The end result is an engaged employee with five to six years of hands-on industry experience and two college degrees. With this amount of tenure at Gilbane, they are eligible for positions not typically offered to new college grads.

This is exciting! It is exciting that we have developed partnerships in the local Rhode Island education and business community that can change the way secondary schools, higher education institutions and businesses interact relative to building the future workforce.

**FMI Quarterly:** What types of opportunities do you offer the students?

**Pollick:** We offer the same opportunities to these students that are available to our other similarly situated employees. They can participate in Gilbane University courses, our young professionals groups, peer groups, etc.
**FMI Quarterly:** What are some of the program’s benefits?

**Pollick:** For Gilbane, there are several benefits, which include the following:

- We support our local community by providing upward mobility for disadvantaged youth attending a top public school program.
- We have developed a solution that solves a future problem — the retirement of the baby boom generation and a shortage of engineering talent. Our hands on alternative pathway to a college degree allows us to build upon some lessons learned and best practices of the ACE program. Where ACE builds awareness, we’re building careers by going downstream. We’re creating our own customized talent pool.

Also take into consideration what we’re doing for the poor and many lower middle class families in our local communities. The high cost of education can be a tremendous barrier to upward mobility. When presented with four year degree expenses exceeding more than $80,000 to $100,000, there is a disincentive to pursue this as a realistic option for the future. For this population, what are the alternatives, and are they producing results on the scale that we need in a 21st century knowledge economy?

**FMI Quarterly:** What percentage of students goes on to work in this industry after they obtain their degree?

**Pollick:** We expect 100% to work in the industry. And we take time with MET school to select the students with the passion for learning this business and succeeding. Six years is a tough commitment to keep without it being a personal passion.

**FMI Quarterly:** Anything you would do differently?

**Pollick:** Yes, but the how is the hard part. I would be excited to see this program rolled out across our organization to have a national impact with local results. The challenge is having the time to build the local relationships and partnerships necessary to make this work. It’s also still early in the program, and although we’re seeing positive results, we want to see our first associate-degree graduates (the results) before making a larger commitment. Once we do a companywide implementation, I’d like to see the broader industry take a similar approach, similar to the successes of the ACE program.

After that, I think about what kind of impact this program could have on our approach as a country to education and work-force development. Imagine the effect a company like General Electric could have on the global educational environment by implementing a program like this on its scale! We could be at the tip of an iceberg. And that would be great.
I see in this program what is at the core of the Big Picture Company’s philosophy of educating one student at a time. Just as businesses have gone from mass production to mass customization so, too, may the educational environment.

FMI Quarterly: Is there anything else you’d like to share with our readers?  
Pollick: Our program is a partnership of five different organizations: The Big Picture Company and MET Career Regional and Technical Center (“MET”), the Community College of Rhode Island, Roger Williams University, The Rhode Island Economic Development Corporation and Gilbane Building Company.

Our partners recognize that there is a need to provide alternative pathways to college degree attainment for the poor or disadvantaged youth in our communities. We also recognize the tremendous talent potential in our local communities that is often overlooked and yet is eager to grow and develop if it can find fertile soil in which to do it. Combine that with the declining number of manufacturing jobs in this country and the fact that the commercial construction industry is forecasting a talent crisis in an economic downturn. As an industry, we are well positioned to engage “head on” our future talent crisis.

The baby boomers will be retiring in droves soon and leaving large gaps in leadership. We will need a workforce that can continue to meet the building demands of the future. This program directly grows that workforce. We have known for some time that our colleges and universities are not producing enough engineers to meet our future needs. So the question is, “What are we going to do about it?” The ACE program is a tremendous resource for our industry. It provides high school students exposure to architecture, construction and engineering careers and helps them decide if it’s their core interest and what they would like to pursue. The next step is, How do we bridge the gap in our engagement between high school and the beginning of a career? We believe we have built a program that is a bridge from high school to the career highway, which will help us mitigate the effects of the impending talent crisis.

THE STUDENTS

FMI Quarterly also interviewed two students in the program, Elsch Maisoh and Mark Rivera, to gain their insights and perspectives about the LAB program and Gilbane. Maisoh said he has been given great opportunity to do many things when he is at the job site. “I assist the engineer with his daily activities and observe the superintendents as they do their job,” he said. “I also participate in safety inspections and take daily progression photos.” Rivera has worked on three
different job sites and gained different experiences from each. “At the job site I’m on now, I’ve been able to see concrete slabs and walls poured and steal beams erected,” he said. “I’ve also experienced the business or ‘paper’ side of Gilbane. I learned how the job site office works, where things need to be filed, the process through the construction phase, Prolog and much more.”

Both Maisoh and Rivera are excited and optimistic about their future with Gilbane. Maisoh began his career at Gilbane when he was just 17. “I will complete the LAB program with an associate degree from CCRI in business administration and a bachelor’s degree from RWO in construction management,” he said. Rivera looks forward to the “many different opportunities that may be available to me such as full-time employment and the ability to succeed and achieve higher positions such as superintendent, project manager, project engineer, project executive and more. I may be able to travel to different cities around the country. The company has a great retirement plan, employee benefits and discounts, such as a percentage off your cell phone, purchase of a GM vehicle, insurance policies and more.”

Maisoh and Rivera were unanimous in describing their favorite aspect of the LAB program, namely to gain real-world experience even before graduating from college. “Every day I am at the construction site learning from the best in the business,” Maisoh said. “I have been able to learn some of the terminology and procedures that are used on the construction site daily.”

The enthusiasm of these two students is evident, as it should be. Gilbane has offered them the opportunity to begin their careers while still in high school. This is an enormous benefit to the students, since while they are gaining a formal education, they will also be building their careers and learning from real-life situations. And Gilbane is building its pipeline of future talent, a few students at a time.

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Sighing with exhaustion from another lengthy managers meeting, Robert slumped into his office chair. When Robert founded RBG Constructors 20 years ago, there was no time for meetings; in fact, he spent the early years just trying to make payroll. Now he looked back at those start-up days as the most exciting and demanding of his life. Everything was new, and opportunity and danger lurked ahead. No one talked about project management software, performance appraisals or consultants. “Training” was something you got driving to the job site ... if you were lucky.

After the rocky early years, the business gained momentum and began turning a consistent, if small, profit. RBG built a strong reputation for delivering high-end hotels faster than anyone else in the business. With its standing in the market, the business flourished and RBG diversified its services into different markets. After several years of 30% to 40% annual revenue growth and rapidly increasing employee headcount, the business barely resembled the one Robert founded all those years ago.
Robert started to question his ability to lead the business. He loved the company, but he was losing his passion. His early team of employees had worked long hours to grow the business. They worked, played and grew up together. The team met challenges without complaint, and everyone bought into the organizational goals.

Robert recognized his business was changing. Problems and issues began to creep in, and communication became more difficult. Robert spent increasing amounts of time trying to convey the organization’s vision and purpose to his employees. Lately, it seemed as if everyone was unhappy. Some employees complained vocally about the organization’s lack of structure, saying that they did not have clear reporting lines, could not understand the decision-making process and were having interpersonal disputes with other employees. Other employees complained of too much structure and too many systems, saying that they were feeling suffocated by bureaucracy, not having fun anymore and that they wished for the old days. Robert did not understand exactly what was happening, but he knew that the organization had shifted and that he needed to do something soon.

The situation with Robert and RBG has occurred for thousands of businesses. What Robert did not realize is that, like people, organizations go through their own life cycles. As his general contracting firm aged, it fundamentally changed from its earlier days, and so the problems facing Robert were new ones to solve. In the middle of it, Robert didn’t understand why he was facing these new issues. He also didn’t realize that the business life cycle is predictable. By understanding where the business sits on the life cycle, organizations can predict the types of problems that will arise. By changing their leadership style as they also work to change the organization’s culture, leaders can guide their business through the turbulent times and ensure their company’s continued success.

Good leadership is required for a business to survive and flourish on a day-to-day basis, but it is even more vital during times of turbulent change. As an organization moves through the corporate life cycle, strategic leadership takes on the utmost importance. Leaders of organizations caught in a transition from one stage to another need to increase their understanding of the current organizational issues and devise a strategy for moving their organization to the next stage, in order to continue their organization’s growth. Proper leadership prevents an organization from getting stuck.

THE CORPORATE LIFE CYCLE

Business life cycles first came to prominence when noted speaker and author Dr. Ichak Adizes published his seminal work, Corporate Lifecycles. Adizes believed that organizations followed a life cycle from birth to death, and that by understanding
the current business stage, leaders of that organization could combat the inherent problems of each stage and move their organization to the next stage.

Adizes outlined 10 different stages on the corporate life cycle (see Exhibit 1). The first three make up the growing stages. The first stage, Courtship, begins before the organization is created, when the business exists only as an idea in the founder’s head. The idea often comes from an entrepreneurial leader who sees an opportunity in the marketplace. The second stage, Infancy, begins with the creation of the organization. During this stage, substantial risk is incurred as the founders raise capital and risk their own personal wealth as the business starts and struggles to survive. After achieving some level of success, the business moves into the third stage, Go-Go. In this stage, the organization builds on its original idea, which has proved to be a good one, sales are up and business is booming.

After the company completes the growing stages, the company enters what Adizes called “the second birth and coming of age” stages. Following the Go-Go stage, an organization is “reborn” in the Adolescence stage. In Adolescence, the company experiences a number of growing pains — increased confusion, disorganization, conflict and inconsistency. Robert’s company was in this stage.

After successfully managing the problems and internal strife present in the Adolescence stage, a company moves onto the fifth stage, Prime. Adizes believes that Prime is “the optimum point, where the organization achieves a balance of self control and flexibility.” Truly successful organizations will reach the Prime stage and stay in this stage perpetually. Organizations that reach the Prime stage but are unable to adapt and reinvent the organization will begin to age.

Adizes outlined the last five stages of the corporate life cycle as the “aging organization.” As flexibility and entrepreneurship become replaced with bureaucracy, systems and structure, the organization begins to age. The company remains fairly strong in the Stable stage, but quickly loses its capacity to achieve results as it moves into the Aristocracy, Early Bureaucracy and Bureaucracy stages. Without change, the aging process leads an organization to the final stage, Death.

Understanding where your organization exists on the corporate life cycle is a
valuable tool for leaders. With it, leaders can predict future organizational issues, understand the leadership needed to move into the Prime stage and provide strategies for preventing organizational aging and death. Accurately placing an organization in its exact location on the life cycle requires a great deal of study and effort. Still, organizations will benefit greatly from leadership’s general understanding of whether the organization is in the growing or aging stages.

For an organization to be truly successful, its leadership team needs to adapt its style to fit the particular business life cycle stage. Sometimes this occurs accidentally. However, organizations will find more long-term benefit if the leadership team is intentional and purposeful about its leadership styles. By understanding their place on the corporate life cycle, leaders can adapt their own styles to be most effective. They can also develop other leaders throughout the organization who are more suited to take the business to the next stage. This is not an easy task for leaders, especially in an action- and future-oriented industry like construction. This requires a great deal of vision and discipline by the organization’s leaders — to slow down enough to really examine the life cycle of their business. Construction leaders who take the time for this strategic thinking will see big rewards.

GROWING AND AGING ORGANIZATIONS

What characteristics make an organization young, and what makes an organization old? Adizes believed this was embodied by a struggle between flexibility and controllability. Adizes said, “When organizations are young, they are very flexible; they are not very controllable. As organizations age, the relationship changes. Controllability increases and flexibility decreases.” Younger organizations are characterized by their entrepreneurial spirit. Change is viewed favorably; the unknown is sought out and explored. Risks are taken, and a certain level of ambiguity is not only expected, but accepted. This strong sense of entrepreneurship allows employees to quickly buy into the organization’s vision, increases motivation among the workforce and allows the business to achieve a high level of flexibility.

Aging organizations are the opposite. They are characterized by systems and processes, and a defined hierarchy where authority is increasingly centralized. These organizations have a sense of order and control. Employees know what to expect, and certain decisions and actions within the organization become predictable. This creates a sense of stability throughout the organization.

Benefits and problems are associated with both young, entrepreneurial organizations and old or aging ones. Young organizations are incredibly flexible, but they are also unpredictable. Their leaders take great risks, with potentially disastrous results. Old organizations are stable and controllable, but they become inflexible and bureaucratic. Successful organizations combine elements of both.
These organizations are both flexible and controllable and entrepreneurial, but structured. This occurs in the Prime stage. Here, organizations maintain their aggressive entrepreneurial spirit, but their actions are also controllable and predictable. The organization is in balance.

**UNDERSTANDING YOUR ORGANIZATION’S PLACE ON THE CORPORATE LIFE CYCLE**

Where do you believe your organization sits on the corporate life cycle? Is your business still growing, characterized by a sense of entrepreneurialism and creativity? Or, is your organization aging, characterized by a strict sense of bureaucracy and a defined hierarchy? Perhaps your organization is similar to Robert’s business — caught in Adolescence as it struggles between being flexible and controllable.

No real timeline exists for when a business will move through the life cycle. Some companies will move through quickly, and with others, it could take decades to move through only a few stages. Leaders need to understand where they are on the corporate life cycle so they can accurately prepare for that stage’s conflicts. By overcoming these issues, the organization can move along the corporate life cycle toward its Prime.

Through an internal focus, leaders can use the corporate life cycle as a tool to help them shift their leadership to concentrate on their biggest, current challenges. Youthful, entrepreneurial organizations will require a different leadership style than one that has already passed its prime. The first task of an organization’s leaders is to place their organization somewhere along the corporate life cycle. The next step is to address the major concerns of that stage.

**YOUTHFUL ORGANIZATIONS**

Organizations that are still in the growing stages are relatively youthful — the entrepreneurial spirit is high. Businesses in these stages will benefit from their company’s flexibility and influx of creativity. Meetings typically take place in informal settings, on the way to the airport or over a meal. Leaders should do what they can to continue to embrace that spirit. However, too much entrepreneurialism can have negative consequences. Unchecked entrepreneurialism can result in inattention to crucial details, increasingly dangerous risk taking, unrealistic expectations of co-workers and poor decision making.

Leaders of youthful organizations need to think strategically to develop a balance between entrepreneurialism and stability. For example, the most entrepreneurial employee should be paired with someone who is organized, efficient, thorough, conservative and detail-oriented. This will help ensure that key details are not missed and that dangerous risk taking will not become the norm. Through this pairing, the entrepreneurial employees will be grounded by the conservative

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Leaders need to understand where they are on the corporate life cycle so they can accurately prepare for that stage’s conflicts.
ones, and the entrepreneurs’ creativity and innovation will work to inspire the organized employees. This symbiotic relationship will serve as a microcosm for what the entire organization will need in order to reach its Prime. Leaders can also train their employees to increase their self-awareness. This will help provide some semblance of stability in an otherwise independent, entrepreneurial culture. Leaders should also encourage decisions to be made multilaterally and appropriate checkpoints to be put in place. Many companies fail because the founders never institutionalize their influence or spread responsibility. Concentrating all the strategic decisions on one person will only work if that person is unbelievably talented (the mythical Renaissance man or woman) and can sustain the pressures of the role long-term. More often than not, this is only a short-term solution since the organization will fail after that individual leaves or retires. These tactics will help rein in the most entrepreneurial employees, while still giving them the opportunity to act with a certain level of autonomy.

Leaders of youthful organizations face a very challenging task. They must continue to support and nurture their entrepreneurial culture, while also balancing it with a certain level of systems and structure. Leaders who are successful in doing this will move their organization along the corporate life cycle and begin to approach the Adolescence Stage.

**COMING-OF-AGE ORGANIZATIONS**

In the earlier example, Robert found himself in the struggle between entrepreneurialism and controllability. This is the key characteristic of organizations that are coming-of-age. These organizations will face the pain of trying to put in appropriate systems and structure such as an organizational chart and communication channels. Meetings will typically become more formal, with set agendas. Some employees will embrace these changes as long overdue, while others will lament the loss of freedom and flexibility. Organizations in this stage are often challenged with leadership succession, redefinition of the organization itself and controlling their growth. These organizations often experience internal conflict.

To strategically weather these storms, leaders must understand that the systems and structure are necessary to continued success. Companies in this stage have long since grown out of the nimble, flexible organization they were in the past. To maintain order and prevent gross confusion, establish clear lines of communication and somewhat central authority. Create hiring and compensation systems and processes that are specifically tailored to your organization and highlight the
traits you wish to see throughout the company. Control the desire for more and more growth, and learn to work smarter, not harder.

Leaders who find themselves in these stages typically begin to feel some tension between the highly entrepreneurial, founding leader, and the rest of the leadership team. In many cases, the entrepreneurial founder is still directly involved in the business, typically in an operational role. The entrepreneurial leader will be much more valuable if he or she steps away from an operational role and turns the reins over to skilled managers who can build systems and structure throughout the organization. This may be one of the most difficult challenges a leader faces. However, entrepreneurial leaders unwilling to delegate or take on a different role can easily exacerbate an already difficult situation. In these stages of the life cycle, organizations need established and predictable systems if they wish to grow and move towards their Prime. If the current entrepreneurial leader is unable or unwilling to provide such structure, the organization will begin to flounder.

Leaders of coming-of-age organizations face a difficult balancing act. Certain systems and processes must be put in place, but leaders must be careful not to completely lose the organization’s entrepreneurial spirit. The systems must be designed to complement and shift the entrepreneurial spirit, not to completely suffocate it. Creativity and innovation need to be encouraged to exist within the confines of the organization’s hierarchy. Leaders who can successfully achieve this balancing act will lead their organizations into their Prime.

**PRIME ORGANIZATIONS**

Organizations operating at their prime are characterized by achieving a healthy balance between entrepreneurialism and controllability. Predictability exists throughout the organization, but employees still work toward achieving the company’s vision. Here, sales and profitability increase greatly, internal conflict subsides and the organization operates at a high level of productivity and effectiveness.

Leaders of organizations in their prime should be proud of their achievement — of guiding their organization through the early, turbulent times. However, the greatest challenge of the Prime stage is complacency. Organizations begin to take their success for granted. It is in this stage — when entrepreneurialism is most balanced with systems and structure — that the ability to be flexible and adaptable is easiest to lose. Leaders need to maintain this balance. Flexibility and adaptability must be preserved, although the tendency will be to become more rigid. Here, leaders should do what they can do encourage entrepreneurialism; develop their people; and encourage learning, skill growth and personal development. To do this, leaders can hire more entrepreneurial employees by bringing in people outside of the industry or hiring those with a creative or innovative background,
focus their efforts on leader development and reward employees who show creative or innovative solutions to problems.

Leaders of organizations in their prime will do well to remember what they did to arrive at this point. The freedom to be flexible, adaptable and innovative must continue to be stressed, while also maintaining a certain level of systems and structures to guide the organization. If this balance is upset — in most cases this results in too much structure and bureaucracy — then the organization will begin to age.

AGING ORGANIZATIONS

Many leaders find themselves in aging organizations. The company’s hierarchy has been well established and clear lines of communication have been created. With this structure, the organization’s entrepreneurial spirit has faded. Yet, not all aging organizations must travel the downward spiral towards eventual Death. With an infusion of innovation and entrepreneurialism, an organization can recapture its Prime state and reverse the trend of the corporate life cycle. The most successful firms will perpetually return to their Prime and refrain from aging.

Leaders of aging organizations will need to develop a culture of entrepreneurialism throughout their organization. The first step is to hire people with nontraditional backgrounds. Most new construction hires have degrees in either construction management or engineering, which limits the pool of applicants. Candidates with nontraditional backgrounds will bring new ideas. A quick way to infuse the entrepreneurial spirit back into your organization is to hire people who are not indoctrinated in the same thought processes as the majority of your workforce. Leaders also need to break down a perfection-focused culture. Making mistakes is often an opportunity for great learning. Employees will be more likely to display entrepreneurialism if they know a mistake will result in constructive feedback, not dismissal or even harsh criticism. Obviously, in some areas, mistakes are not acceptable (i.e., safety), but an environment in which mistakes are never tolerated will never foster creativity and entrepreneurship.

To further foster a culture of entrepreneurialism, leaders may reward entrepreneurialism in their employees since people will do what they perceive that they are rewarded for doing. Leaders may also put one or two of their most entrepreneurial employees in key leadership positions.

A key task for leaders of aging organizations will be to move away from their well-established bureaucracy. Employees need to be given a certain level of freedom to experiment and grow. This can be accomplished by employees’ continual growth in their leadership roles and in their personal development. Coaching and mentoring programs will help aging organizations provide guidance and learning opportunities for younger employees, as well as to tap into new ways of thinking for the more experienced employees serving as coaches to the younger ones.
LEADING THROUGH THE CORPORATE LIFE CYCLE

Like Robert and RBG Constructors in the earlier example, many leaders find themselves bewildered by sudden changes in the business. They cannot precisely explain when or how the transformation took place; they only recognize that the face of their company has changed. In such situations, it is hard to know what type of leadership is required. Leaders typically stay true to the style that helped them get to that point. Unfortunately, that is often the wrong course of action.

As businesses age and move along the corporate life cycle, different leadership styles are required. Leadership that starts entrepreneurial and flexible may need to shift to being more administrative, with processes and procedures. At other times, an influx of creative, entrepreneurial blood may be required to ensure the business' long-term success. To leaders of organizations in such situations, these times can seem unexplainable and unpredictable. Robert was similarly bewildered. With an understanding of corporate life cycles, however, he was able to explain the changes he witnessed and create a roadmap to bring his organization into its Prime. While he could never return the business to its earlier days, by confronting the issues of the current stage of his business’ life cycle, he could create an organization that is stable while remaining entrepreneurial.

Understanding what to expect as his organization aged allowed Robert to regain some of his lost passion for the business and to become inspired again at the prospect of creating an enduring organization.

Leaders who practice foresight and discipline in working to understand their corporate life cycle will discover their situation is more explainable and predictable than they imagined. These leaders will be able to adapt their leadership style to ensure their continued effectiveness and pinpoint the exact remedy for their problems. These leaders will align their leadership teams and work with them to improve employee selection, training, coaching and mentoring so that they can lead the organization through the life cycle, from one stage to the next until they reach their Prime, or to recapture their Prime. Understanding the corporate life cycle will provide leaders with the tool they need to ensure the continued long-term success of their business.

As businesses age and move along the corporate life cycle, different leadership styles are required.

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Strategic plans are extremely useful tools for organizational leadership. Many would argue that they are imperative. They are used to set direction, define objectives, unite people towards common goals and foster communication. The value of such plans most certainly lies not in the defined destination but in the journey toward that destination.

You subscribe to that and invest time, effort and money into becoming something that exists for current reasons, yet is growing into something sustainable in the future. You and every one of your executives may agree that this is exactly the vision to suit your company. And, you build and execute plans toward that future. However, to paraphrase Robert Burns, “The best laid schemes of construction firms often go awry.”

Astoundingly, sometimes the reason that strategic plans fail is that the vision is too narrowly drawn. Anyone can be blindsided by a too-focused strategic plan. Even the most successful, thoughtful and industrious visionary in the construction industry can find his corporate ship listing, or even capsized. The future may be one of many possible scenarios, not just the single scenario that leads to a tightly focused plan. John Schulz is such an individual. From humble beginnings, he earned the position of vice president of world wide construction engineering for By Jeffery J. Schulz

Restrategizing

Our interview with a construction industry veteran points up the fact that just having a strategic plan isn’t enough. Instead, companies must learn to restrategize when the unforeseen happens.
what, at the time, was Case International and is now CNH Case New Holland. Schulz parlayed this success into owning Flint Cliffs Manufacturing (FCM), which is a successful operation that specializes in industrial painting and metal fabrication for several industries, including construction. Current and past clients of Schulz's include CNH, Caterpillar, John Deere, Terex, Montgomery Kone and the United States Department of Defense. However, between his departure from Case and developing FCM into a profitable enterprise, there was quite a valley, born in part of following a strategic plan too far, in an environment not contemplated when the plan was built.

Born the first of five children in rural Iowa on the banks of the Mississippi, John Schulz labored long and hard to earn his way through community college and then gain his bachelor's degree from Iowa State University. Upon graduation, Schulz accepted a job with General Motors in Dayton where he worked on the design team. After a few years in Ohio, he returned home to Burlington to work for the construction equipment manufacturer J.I. Case (now CNH Case New Holland).

He was gracious enough to give FMI Quarterly time to help us learn more about not only creating a strategic plan, but also more importantly, how to revamp it when the current plan becomes untenable due to outside forces.

**FMI Quarterly:** John, give us a brief rundown of your background starting with your time at Case.

**Schulz:** I started out in quality control and was quite content there. My wife and I thought we could make a good living and raise our family close to our parents. That is all we really wanted, to be honest. It just seemed like I kept getting promoted every couple of years and pretty soon I ran all of the construction engineering. Then I had the opportunity to go to Racine and become vice president of engineering. I was there for eight years. I ended up having 520 engineers reporting to me, 270 in the United States in six different locations and 250 in Europe in four different countries. I had the design responsibility for all the construction equipment Case made. My budget was about $42 million a year in 1985, and about 75% was for the design and testing of new products.

The chief engineer, and then vice president, before me was Elton Long, the inventor of the backhoe. He and I worked well together; he was one of the best visionaries I had ever seen. He could foresee problems and find solutions to them faster than anyone I had ever met. He could see needs for new products. He invented the over-center backhoe, the swing-cylinder and the self-leveling loader. Then when I left Case, we had 51% of the world backhoe market. It was the real moneymaker for The Case Company's construction equipment.
**FMI Quarterly**: How’d you end up at Flint Cliffs Manufacturing?

Schulz: I was chief engineer at Burlington before subcontracting was common practice. All the plants felt they needed to make everything that went into the products if they possibly could. But, as the prices went higher and higher and the productivity, because of the work rules, declined, it became apparent that the cost of the product was not going to be competitive with those manufactured overseas. As the world market became more and more open, we had to be competitive with the foreign manufacturers. I can remember numerous phone calls trying to get something that we needed done in a hurry. One phone call was to the president of the company I now own (which was adjacent to Case) to ask if he would make me a side panel for a loader backhoe. We had just run over one (a side panel) in the experimental department. It would take me three weeks to get one made, and I had a half-million dollar loader backhoe just sitting there. “I will pay you 10 times what it costs you to make it.” And he said, “No, we’re just in the business of making outdoor feed and water equipment.” And I remember saying, “I don’t want you to make a backhoe; I just want you to make a side panel, and I will pay you 10 times the cost.” And, he said, “Nope, we just make agricultural equipment.” I thought at that time that if someone was aggressive and open-minded, he could make a bunch of products for Case. So that became a dream of mine.

**FMI Quarterly**: After several years of trying to raise enough money, you were finally able to buy the firm. Describe the company’s operations.

Schulz: We made a full line of outdoor feed and watering equipment for the agricultural market and everything else imaginable. It was one of the premium lines in the industry. But, because of rising costs, it was actually only breaking even or losing money the five years prior to our purchase.

**FMI Quarterly**: So why’d you buy it?

Schulz: Well, we figured we could bring in additional business with the contacts we had. When you are vice president in a company the size of Case, you know a lot of important people, and I knew a lot of them would trust me enough to let me look at some of the subcontract business that I just talked about. We could produce their products at a much lower price than they could do it themselves. That would ultimately result in their finished product being sold at a lower price, making it more competitive and leading to the sale of more units. Thus, the volume would go up, and the circle would continue to increase with
everyone winning. We were able to talk the bank into funding that strategic growth while we maintained the current sales level, and we fixed a few of the engineering problems, which I figured we could do. So it was kind of a three-phased operation: keep current sales, improve product in the field and then grow the subcontract sales.

**FMI Quarterly:** Most of the first year was uneventful and went according to your strategic plan. Then what happened?

**Schulz:** The two elements that affect the profitability of most every product are what it costs to produce and what you sell it for. The sales plummeted due to outside forces. Corn prices went up from an average of $2.30 to between $4 and $5, which was the highest level ever. Farmers’ costs thus went up since their livestock survived on the corn. At the same time, the hog prices went from about $45 to $20. The farmer was left with the difference of what it cost him to raise the pigs and what he sold them for, and so his profits were squeezed. That market fell by about 80% nationwide in four years. We went from selling about 16,000 feeders a year to 400. And we went from four competitors to just one.

**FMI Quarterly:** Looking back now, could you have foreseen this occurring?

**Schulz:** No. Maybe we should have made provisions for that somehow, but I don’t know how you get a lending institution to take that kind of responsibility when they have nothing to work with. It wasn’t like the steel market or corn prices that are somewhat volatile. This market had been fairly flat for decades, and within four years it changed four or five times more than it had in the previous 70 years. We found ourselves in a market that was in a death spiral. We had to do something quickly, and we were running out of money with which to do it.

**FMI Quarterly:** So you bought a company that you didn’t think was going to make you instantly rich, but you thought was low-risk as well, and it didn’t turn out that way at all?

**Schulz:** Yes.

*A strategic planning session is an educational experience not only for those outside the planning session, but also for those inside. A great strategic plan will let the entire payroll know what you believe in as a firm and what you will be when you grow up, but it will even define, for the world to see, just who you are as a company. (See Exhibit 1.) One thing any strategic plan is not, however, is perfect. We cannot predict the future. We have no idea exactly what is around the bend. Just grab an issue of Engineering News-Record and read the features and reports. In the June 16, 2008, issue, for instance, the cover story is about the astronomical rise in fuel prices. Who planned for*
such a hike? While a modest gain in the cost of diesel was to be expected, did you put in your bids the 68% diesel surcharge to cover the Energy Information Administration’s reported price increase since June 2007? If you are like most of the world, of course you didn’t. Also in that same issue of ENR, it was reported that rebar and scrap metal prices soared by more than 50% since January. Did your strategic plan foresee and include offsets for that?

OK, those are both pricing problems so I will give you something else. What did this same issue of ENR say about cranes? If you are working in a larger city, the tragic accidents and the corresponding legal reverberations have certainly affected you. Do the strategic plans of New York City firms now account for the inconvenience and costs associated with the proposed law [Ed. June 2008] that would “increase training for crane operations; require mandatory safety meetings before crane erection, jumping or dismantling; require completion of a 30-hour safety course before someone can participate in rigging operations; and force riggers to take an annual eight-hour refresher course every three years”?

ENR is not the only source of future scenarios. The Association of General Contractors reports that there will need to be highway-spending cuts of $13.5 billion in 2009. Have you accounted for this in your strategic plan?

Could Schulz have predicted the scenario of his perfect storm? Probably not. After all, his market shrinking was a combination of two of the worst events possible in his market occurring at the same time: rising costs and falling prices. To make matters worse, these price and cost movements were driven by factors outside of his direct market. Schulz didn’t raise livestock; he manipulated metal so that others could raise livestock. There was at least one degree of separation from the ramifications that devastated Schulz.

**FMI Quarterly**: How did you go about planning a strategy and implementing a change?

**Schulz**: The original strategy was created by just filling out normal business plans. We then reviewed them with the bankers and accountants and the Kleins (the people from whom we bought the company). My partner had been with the company for 28 years so he knew a lot about the history and sales, and he was very helpful with filling in the blanks. So our strategic plan hinged upon the assumption that if the (agriculture) market did fall off at all, it would be maybe 10% or 20%. We hoped that by the time it had any impact on our cash, we would have had a little time to diversify and get some of this new stuff going. We’d be able to backfill behind that and keep the sales volume going with the greater margins from the subcontract side.

**FMI Quarterly**: You had some of the best minds in the business sitting down together to create this strategic plan. You had your experience with a multinational
corporation with a huge budget, you had one of the best salesmen in the industry and you had a local bank familiar with the industry, dealing with it on a daily basis. You had this great plan set up, you invested a lot of time and money and it still did not go according to how you expected it. Not by a long shot.

**Schulz:** That’s right. When we got into trouble, our sales went from $6 million to $1.8 million in a period of about five or six years, I guess. When we got down to 1.8 million, we had more subcontract sales than we projected so we were ahead of schedule on that. However, the ag market had fallen off far more than anybody could project. The bank almost recommended we close the doors because it didn’t think there was any way we could return to profitability. But we knew we could, and we could see the relationships that needed developing. Even though it has taken somewhat longer than we thought, the future looks pretty bright.

**FMI Quarterly:** You substantially accelerated your plans — things you had planned to do, but were forced to do a lot quicker.

You sound matter-of-fact, but if I’m the bank that loaned you millions and your revenue plummets by more than $4 million, I’m going to be a little more concerned than that. Are you saying the bank was easy on you?

**Schulz:** No, it wasn’t easy at all. We had borrowed more than a million and a half and everything was personally guaranteed; I had my lifetime earnings as collateral. There was no easy way for me to walk away from this. I don’t think anyone would ever say that we had one serious meeting where we talked about getting out. The bank essentially said, “John, we made a mistake. We didn’t see this coming either to this degree, but that makes no difference. You are still accountable for this loan.” I remember asking one day in a meeting, because I wasn’t sure that I could show the bank how the revenue stream could support the loan, “Let me ask you a question so I know where you are coming from. If we borrowed a million dollars from you, and we had paid it all off minus $20,000, and we needed $50,000 to keep the company going, realizing that we paid you over a million dollars in interest since we bought the company, would you loan us the money?” And the banker said, “Probably not.” He was just doing his job so we weren’t angry, but we started looking at other avenues. However, it was another problem for us to deal with.

**FMI Quarterly:** So how did you get the money?
Schulz: When we started on this, the SBA (Small Business Association) had guaranteed 85% of our loan. This meant the bank was only responsible for 15%. So it just had to loan us enough money for us to stay alive for two or three years, and it would have its money since we were paying it back at 9% per year. We went back to the SBA and showed it all we had going and how hard we were working. The SBA said, “OK, you are a much better risk now than what you were before because now you don’t have all your eggs in a 70-year old basket that has changed.” So it loaned us the money about six years ago, and it is still with us.

FMI Quarterly: How did you select new ventures? Did you expect to get into fireplaces and paint? How do they tie into construction?

Schulz: I learned that the person with whom I worked with on the Case plant outside of Paris had left Case and started working for Terex who makes excavators. I met with him and said, “I need more business. I am trying to grow this operation of ours.” He gave us the platforms for one of its products. We started building them and it was the relief for our backfill. Our plan now was to start building other things to make up for the work we lost. The biggest problem we had was to get them painted. We were having trouble getting quality product. We said, “If we are going to survive, we are going to have to paint our own product.” We sold a product line that was diminishing and put in a brand new wet-paint booth, and that seemed to work really well. Then Terex said it wanted powder-coat paint so we installed that after doing the calculations based on the cost-of-capital, labor and electricity and determining we could pay for the painting with this product line in one year. We knew we could do a good job because we hired the smartest paint authority I ever met. And that was just by chance. I was asking around the office to see if anyone knew of him. No one did, and I said we had to find him, and the very next day, by chance, he shows up looking for a job. He’s been with me ever since.

FMI Quarterly: So you have updated your strategic plan a second time after accelerating it and everything went great from there?

Schulz: Let me back up a bit. We had one other major stumbling block. Terex became our No. 1 customer, and at that time, we were only working on one (major) customer since we could get all our sales from it and we needed sales in a hurry. About the time it looked like we had everything going right again, it bought another scissors-lift brand and started using that product so we lost about 60% of our business over a period of about five or six months. At that point, we decided strategically to run multiple avenues through multiple
industries so we would never go through it again. There were many months where I would wake up at 3 a.m. wondering how we were going to make it through our financial problems.

_FMI Quarterly:_ How did you decide to revise your strategic plan?

_Schulz:_ We asked ourselves, What products do we do the best? How do we increase sales? What customers are most likely to be able to give us increased sales the fastest, and with whom could we have a long-term relationship? In other words, what are we good at? What does the market want, and who would make great partners? We set out to tackle those guys first. Every day now, we take care of those three questions first before we put out other fires. We are now a tier-three supplier to two, larger companies that are tier-two who sell directly to Case, Caterpillar and John Deere. A lot of what we sell is the paint because we have what’s probably the best-recognized quality, process and turnaround time in southeast Iowa for powder-coat paint. About five years ago, we decided to do some military work based in the area. We tried to build that relationship and remind them that we were local, knew their needs, had the engineering to fix any problems that came up and that we would work all night if needed. Now, they are our No. 1 customer. We became certified to do a lot of government work, and they are sending us quotes for jobs that we had no idea existed.

We asked ourselves, What are we good at? What does the market want, and who would make great partners? Every day now, we take care of those three questions first before we put out other fires.

_FMI Quarterly:_ Are you at the point now that you are turning down work?

_Schulz:_ We try not to turn down anything. If somebody needs something that he is paying $2 for now, and we don’t think we can do it for less than $5, we will tell him $5. If we can provide a quality product for $5, and he was paying $2, but having to redo it four or five times and missing shipment, he’d be thrilled that we are able to give him an on-time, quality product for $5 because he can adjust his price to accommodate it and meet his schedule.

_FMI Quarterly:_ You found then that you could charge more for turning out on-time, quality product.

_Schulz:_ That’s right. We have a customer that makes electrical components. We have a good relationship with him, and it started at a time when there didn’t seem to be enough hours in the day. He’d call at 9 p.m. or 10 p.m. when I was still at work and say, “John, we hate to ask you this, but we are going to have a line go
down unless you can ship us some of our product that you might have.” If I was the only one there, I would go out and check, and if we had it, I would load his truck. Well, guess what? Next time he needed a part designed and built, he came to us because we were the only ones who would supply him with parts, at any time.

**FMI Quarterly:** What other construction-related business do you do?

**Schulz:** Before we were only in ag, but now we say we serve six different industries. We’re still in ag. We do office furniture. We’re in home decorating; we have our own fireplace line. We are in the leisure industry; one of our biggest and best long-term customers is Momentus Golf. We are in construction equipment; we do a lot of work with tier-two suppliers for the biggest names in the business. And call-ins. We don’t turn anyone down. If someone can give us six weeks lead time, we can give him a very competitive price. This allows us to fill voids because we can’t let our guys go home just because we have nothing for them to do, or they’ll get another job. We also do a lot of stainless work. We made all the handrails for the Land Pavilion at Disney’s Epcot in Orlando and have done work on several sports stadiums such as Invesco Field at Mile High.

**FMI Quarterly:** How does the future look now for Flint Cliffs Manufacturing?

**Schulz:** Very good. Our sales have increased 250% in the last five years. Plus, I just got mail over the weekend saying there is an add-on order for one of our big jobs.

**FMI Quarterly:** Do you think you are diversified enough now to handle bumps in the road that might come along?

**Schulz:** Yes. It’d be nice to have two or three years of good profitable success, but you can’t have that until you have the first one. We think this will be the first year for us.

**FMI Quarterly:** What are your strategic advantages? Why would someone go to Flint Cliffs over another organization?

**Schulz:** That’s a good question and part of our strategy. We want to know why we think we can grow at that rate. We are making few cold calls. Our business is nearly all based on relationships and reputation. We don’t have to be the cheapest anymore because our customers know we’ll do what they need us to do, and if they can compare our price to what they need to still make money on
it, we’ll get the job every time. As long as we continue to do that, we’ll be fine. We’re probably only one-third capacity right now so we have a lot of room to produce profitable product.

These business difficulties were tremendous. Compounding these were unforeseen forces working against Schulz in his personal life. (See Exhibit 2.) This last year was unexpectedly demanding and filled with remarkable personal challenges. Since late 2007, the church in which Schulz was married, watched his daughter get married, he, his children and grandchildren were baptized and he belonged for more than 50 years, was destroyed by an arsonist. His mother passed away. His farm and many of his neighbors’ farms were flooded and entire towns destroyed. Those are the kind of losses that can emotionally wreck a man, but his burden was compounded because of his sense of service to his community. Respected as he is, he was selected to be co-chair of the church’s building committee, which is tasked with unifying the congregation and determining how and where the church will rebuild. In addition, with the flooding that so recently devastated his entire community, John was a lay leader for the flood salvation effort, providing guidance along the Mississippi levee for hundreds of volunteers and National Guardsmen.

FMI Quarterly: How did these personal issues affect your business?
Schulz: First, there is the emotional strain of having three of the most important things in a person’s life taken away from you or ruined. My church, family and community all suffered devastating losses. So you have that taking away your focus, and then there is the physical time you are away from the office. With the floods, I would be at the levee some nights until 2 a.m. searching for potential weaknesses and boils, and my work at the church probably takes about 10 hours a week on average.

FMI Quarterly: These things, of course, were not considered in your strategic plan. When you go through the strategic planning process in the near future, how will you account for potential personal disturbances that will carry, unfortunately but inevitably, over to Flint Cliffs Manufacturing?
Schulz: You have obligations in life that you cannot pass on to other people. You must, however, delegate some of your business responsibilities and ensure people are in place who can fill temporary voids. Enlist people for the crisis jobs and let the rest of it slide. Focus on what is critical to the business.
FMI Quarterly: Given all these unforeseen obstacles, was the original strategic planning process worth it?

Schulz: Without a doubt. It set a direction, and while things happened that were beyond our control and out of our vision, we still had a plan. We just needed to modify it, even if those modifications were substantial.

FMI Quarterly: What would you do differently?

Schulz: I would spend more time developing it (the strategic plan). Look at it at least monthly, and keep going back to it. Make it a living document that we can tweak when we see things starting to change. I would have had someone else facilitate it and do it offsite. Being offsite would have allowed us to focus on the task at hand and not be distracted by our daily work, and the facilitator would have made sure we were organized and kept us focused as well as provided insight into the market that we probably didn’t have.

FMI Quarterly: John, thanks for your time and insight.

A well-formulated strategic plan is essential. But having the plan is not enough, as was the case with John Schulz. He appeared to do most everything correctly. He organized the leaders of the company. He sought outside experts. He invested significant time and effort. But he had no way of knowing what was around the corner. There could be a bump or a huge pothole, even a road closure. However, those things don’t need to keep you from reaching your destination of being a profitable, sustainable enterprise. Learn from John Schulz’s precarious past situations to make efforts to discover what is knowable and to have the will to persevere to overcome the unknowable as it unfolds.

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The whole will be greater than the sum of the parts. This is a common rationale when it comes to justifying strategic acquisitions (as opposed to financial acquisitions, which are those involving a sale to a private-equity firm). Acquisitions can be an excellent tool to increase the value of a firm through the addition of new capabilities, services or markets. If this rationale does not prove true, there is no reason to do a deal. Without synergies, a combination of entities is, at best, a zero-sum game. At worst, it destroys value.

By some estimates, over half of publicly disclosed M&A transactions are ultimately considered financial failures. Assuming that rational managers are at the helm, why do such a large percentage of deals fail to generate positive returns for shareholders? At some point in the transaction process, a plausible financial scenario was produced. Parties on both sides reviewed the results and agreed to a price and deal terms. But the devil, as is often the case, lies in the details of the transition from theory to reality.

The excess value — that is, the difference between the “whole” and the “sum of the parts” — created through a combination of entities can come from a variety...
of factors. Sometimes the target offers the acquirer a footprint into a new geography, unique skills or capabilities, or valued customer relationships. Other drivers of transaction value can be found in the streamlined operations of a post-merger organization. All of these components are often referred to as “synergies” and are the most challenging, but also most important, aspects of making a deal work.

Some synergies are additive, resulting in increased revenue and/or profitability. Others result in cost savings achieved through lowering the cost basis of the combined firms. (See Exhibit 1.) Regardless of the type, having a maniacal focus on capturing synergies before, during and after the deal can help a firm avoid being a statistic and destroyer of shareholder value.

**TIMELINE OF A TRANSACTION**

A typical transaction process starts with high-level strategic rationale and gradually becomes much more complex as an acquirer moves through each phase. (See Exhibit 2.) In the targeting phase (Phase 1), a buyer develops its key criteria for an acquisition. Firms that meet these criteria are added to a “short list”; firms that don’t meet the criteria are excluded. For example, a firm interested in geographic market entry would consider, say, three or four targets in its geography of choice, and then select one or two out of the group that had the right financial or strategic characteristics.

The process continues in Phase 2 as confidential discussions commence and more information is discovered. The evaluation becomes more complex as the buyer reviews all aspects of the target business and determines what it would really be buying. A buyer digs deep into a firm’s financial condition, performance trends, marketplace reputation, employee competence and management experience. At this point, a typical buyer reviews information specifically prepared by the target and typically assumes that much of the information has been “window-dressed.”

Meanwhile, the buyer is creating a financial framework that reflects the operations of the hypothetical combination. This framework is continually revised as more information is gathered. The data builds a case that either solidifies or contradicts the rationale to support a merger or acquisition. Solidified cases continue to the next stage while contradicted cases are abandoned.
The interested buyer then schedules a site visit (Phase 3) with the target company and management. At this point, the target addresses a lengthy list of questions and provides additional information as requested. All data is continually fed into the financial framework by the buyer, and another go/no-go decision is made.

In Phase 4, due diligence, both parties have agreed to major deal considerations like price and rough deal terms. The buyer and seller also enter into a period of exclusivity — like a newly engaged couple, they agree not to court other parties but haven’t yet said their wedding vows.

Due diligence is a detailed effort. At this point, the buyer is digging through all of the information a target has: customer contracts, employee agreements, legal settlements and previous financial forecasts. This is, as one might expect, a time where massive amounts of information are revealed. As before, the post-merger financials are updated with this data, and the case must continually be made to proceed with or abandon the proposed marriage.

In the closing stage (Phase 5) of the deal process, the parties discuss and come to agreement on the major issues: valuation and deal terms. Intrinsic in the price the buyer is willing to pay is the expected achievement of synergies as spelled out in the financial framework. Some acquisitions rely more heavily on synergy capture than others, but whatever the targeted level, it is captured in the framework.

Phase 6 marks the end of the deal process but is, by far, the most important step. This is the hard part: taking the myriad of assumptions from the financial framework and coaxing them to life.

**CAPTURING SYNERGY**

Planning for proper capture of synergies starts long before the ink is dry on the merger agreement. What is especially important is that the deal team communicates its planning assumptions to a group of people who ultimately will be responsible for implementing them. Deal teams are small by design, transactions being secretive business and for good reason. Desire to keep the rumor mill quiet often pushes many deal teams to hoard information — rumors often are leaked on a proposed transaction, and the best defense against careless mouths is to limit the number of mouths themselves. Consider the old game of telephone played in elementary school. Everyone remembers how a message became convoluted when passed through the ears and mouths of 20 successive eight-year-olds. But growing that team as the stages progress is inevitable, and communication with the new members is imperative.

Consider also a complex financial statement prepared by a deal team of three that have been working on it for four months. How do you know which of these financial assumptions are the most critical, which are less important and which
may not be achieved at all? And, just as important, how do you ensure that the downstream communication of that plan is efficient and stays uncorrupted as it is communicated and reinforced throughout the organization?

**INTEGRATION CHAMPION AND GOALS**

The key to managing the constant change introduced by acquisition integration is to assign and empower an integration champion to the deal team at the earliest possible time. This leader can then carry the torch for the internal action required to successfully execute the required plan to capture synergies. Using a third-party consultancy that specializes in merger integration can also help an integration run smoothly.

As the deal marches toward a closing date, the integration team grows and embraces a broader array of roles and responsibilities. An efficient integration champion will have the team ready to execute on Day zero, immediately following the closing of a transaction.

By the time a deal moves towards Phase 5, an integration champion should be intimately familiar with the financial framework driving the deal. With this information, the leader and the broader integration team can then formulate precisely how the combined firm will achieve the specified synergies through clear, defined objectives for each. These integration aims are the road map to a successful transaction.

When creating a set of objectives, look at the combined organization with a clean slate and aim to leverage the integration opportunity as a positive force for change. Doing this requires an unbiased approach and avoiding an “us vs. them” mindset. The reality is that the target firm became an attractive target by doing something right. If the acquirer implements the wrong kind of change (importing the mindset of “that’s the way we’ll do things around here now”), then value can be destroyed before the deal has a chance to succeed.

Consider the case of a firm that makes a defensive acquisition to better compete against a larger, more successful competitor. This particular market will shrink from three firms to two as a result of this acquisition. The No. 2 firm snaps up the third, smaller competitor. Making scale economies for this deal to work requires overall cost synergies of 10%.

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**The key to managing the constant change introduced by acquisition integration is to assign and empower an integration champion to the deal team at the earliest possible time.**
The most dangerous thing a firm can do when seeking these kinds of synergies is to implement blanket, across-the-board, headcount cuts in the acquired firm without adjusting for operating processes. Unfortunately, that’s exactly what many firms do. A better way to approach cost savings is to take an operational approach to both firms’ processes and determine where the potential inefficiencies lie. It may make more financial sense to make larger cuts in some areas, while actually hiring in others to increase the overall productivity of the combined firm.

TIME TO IMPLEMENT

With objective in hand, an integration team should then embrace the following elements to maximize its chances for success:

- Communicate — often and to everyone
- Empower — give responsibility to those who can impact the results
- Execute — when in doubt, act
- Fail — at the right things and adapt

Communicate

When the prison warden admonished Paul Newman’s character in the classic film “Cool Hand Luke,” “What we’ve got here is a failure to communicate,” he gave us a line for the ages. It is all too common for management and the deal team — who have likely been working on a deal for several months and are used to keeping important details to themselves — to be stingy with information. In the early stages of the deal (Phase 1–Phase 3), information hoarding is not only good, but also imperative. By the time a firm enters due diligence, however, an integration champion should be as versed in the dynamics of the transaction as the deal team. As the integration process progresses communication also broadens in terms of numbers of people and volume of information. (See Exhibit 4.)

The problem is that information that is not provided by management inevitably is replaced with rumors and speculation. Employees in both organizations (target and acquirer) have a need to know what is happening so they can perform their jobs efficiently and continue to provide valued services to customers. During times of dramatic changes, an employee’s focus will shift inward as everyone asks, “What will happen to me?” Nobody wants to hear that job cuts are
coming, but if management says nothing, then a lot of employees will assume the worst. Many acquisitions are focused around acquiring talent and ultimately provide more opportunities for the best performers. If those intentions aren’t communicated, employees may feel like they’re going to lose out and consequently develop personal plans to walk out.

A communication plan should answer three questions:

1. **What** are we going to do?
2. **Who** is going to do it?
3. **How** will it get done?

The integration objectives themselves are the *what*. These aims need to be communicated across the organization — to the *who*. Finally, the *how* represents the collection of each employee’s individual effort.

Stakeholders needing information reside at all levels of the acquiring organization, the newly acquired firm, customers to both companies and all affiliated subcontractors. Customers need to know if or how their services will change. Will there be a new project manager? Will pricing change? Project reporting? For subcontractors, will payment policies change? For employees, layoffs are a tricky matter, but if they are planned, it is best to communicate and implement the changes rapidly. Employees with a sense of uncertainty are a drain on productivity. Multiple terminations spread over weeks do not lessen the pain, but they certainly increase the anxiety. For all parties, communicate changes if they are planned. If there are no anticipated changes to products and service offerings, communicate accordingly. If you don’t know but are evaluating various options, tell them that.
Empower

Merging two organizations requires making order out of a process that is chaotic by nature. The good news is that because the process of combining two organizations together is inherently disruptive, it presents an opportunity to make massive improvements to both organizations’ operations. Key to this effort is to push decision making as close as possible to the level of implementation. For example, if a stated objective is to standardize the combined company on the acquirer’s project management scheduling system, leave the specific timing of individual implementation up to the project manager of a given project. Project managers may prefer the flexibility to make a change later in order to preserve scheduling along the project’s critical-path.

One-size-fits-all prescriptions can cause more harm than good. Projects in similar phases of the life cycle may not be similarly conducive to structural change, and the project manager is usually the best person to make that call.

Dispersing decision making across the organization is also an effective way to get employees — both current and “new” (from the target firm) on board with the overall strategy and direction of the new organization. Creating broad accountability forces goal articulation and empowers employees to be part of the solution — ideally mitigating feelings of “us” and “them,” while developing a sense of ownership of the new solutions. When management trusts employees to make sound decisions, employees feel management respects their knowledge and values their judgment.

Finally, empowered employees can implement best practices in the newly combined organization without crossing massive bureaucratic hurdles. Consider the thousands of work processes and know-how that happen in every job function in any organization. Exposure to a new way of doing things can uncover ideas of how to do things better. If management can foster an environment that absorbs new and better ways to do things, the organization as a whole benefits.

Execute

Many firms get hung up on making the perfect decision when it comes to integration. Management ponders options for exhaustive periods of time and little gets done while employees await word from above on which way to act. This is a pure recipe for integration stagnation and ultimate deal failure.

Decisiveness in execution is paramount during integration. The sheer volume
of change requires that integration team members (and employees at large) act swiftly to implement the plan. Not every decision is going to be correct. Many will succeed, some will fail; but don’t let the perfect become the enemy of the good. Acting swiftly and committing to a plan gives team members the opportunity to correct and/or adapt to the changing conditions that a failed decision may produce.

Some issues can be contentious: say, the companies involved have competing product or service lines, and it is common knowledge that only one will survive. For these issues, there may not be a “right” answer. Each path presents its own positive and negatives. Endless debate of which path to follow only fuels the uncertainty faced by customers, subcontractors and employees. Acting swiftly can help stakeholders adapt to the changes instead of spinning their collective wheels while decision scenarios are endlessly debated.

**Not every decision is going to be correct. Many will succeed, some will fail; but don’t let the perfect become the enemy of the good.**

Fail

Every merger in history failed at something during the integration. Every single one. No matter how carefully everything is planned, how perfectly modeled are the financials or how effective a communication strategy is enacted, the unforeseen will rear its head and take everyone by surprise. That should not be a problem: *It is okay to fail.* The key is to fail at the right things. Design plans so that failures most likely occur with objectives that have lesser impact on integration success. This maximizes the opportunity for success with objectives that have the greatest weight on successful integration.

So how do you know where the biggest impact is going to be? It starts with the integration objectives and the activities that support these objectives. Each activity should be ranked across two dimensions: 1) The financial impact to the company and 2) Success factor. The first category need not be in detailed dollar terms — orders of magnitude (e.g., small, moderate and great) are sufficient. The second category, Success, is one that should be constantly updated as the project progresses to reflect whether the project is achieving success.

Throughout the integration process, the integration team can look at this list and sort integration activities into four categories:

1. High Value, Successful — Keep on doing what you’re doing.
2. High Value, Not Successful — Focus energy on turning these around.
3. Lower Value, Successful — Don’t abandon the initiative, but focus energy elsewhere.
4. Lower Value, Not Successful — These are the “okay failures” that, in retrospect, perhaps weren’t necessary activities in the first place.
The initiatives plotted on this matrix (see Exhibit 5) will move around as the integration progresses. Some initiatives will start out successfully and run into challenges later. Others may take a while to get off the ground but end up becoming terrific success stories. The integration team can use this matrix as a compass to help navigate the complexities of implementing the plan and tying it back to the financial success of the transaction.

Don’t be surprised if some of the key value-generating initiatives in the initial plan do not drive as much financial impact as assumed in the initial model. What is important is that team members are constantly focusing their efforts where they can have the most impact.

**STAY FOCUSED ON VALUE**

Managing change is never easy, especially when it is as potentially disruptive as combining two independent, distinct entities into a single cohesive operating unit. While many firms focus on having the right deal team in place, those that emphasize and empower a strong integration team are the successful ones. In deal making, as with many other ventures, the value is only apparent when the “rubber meets the road,” and a good integration team can unlock that value from its theoretical confines in the digital spreadsheet.

Winning teams are those that value communication, trust their team members to execute an integration plan and, perhaps most importantly, aren’t afraid to fail in pursuit of the optimal outcome. A group that can do all of this can drive real impact to an organization — even outside the merger process. Within the construct of a deal, a high-impact integration team is all that stands between a failed transaction and superior returns for shareholders.

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Any change, even a change for the better, is always accompanied by drawbacks and discomforts,” said British novelist Arnold Bennett. Change is one of the few certainties in business and in construction. The fluid nature of construction requires contractors to be unusually adept at anticipating, managing and capitalizing on change. It is this inherent ability to adjust tactically to unanticipated events that truly separates the best contractors from all the rest.

Ironically, the constant drumbeat of project-related change that consumes time and resources prevents many firms from noticing and adapting to strategic transformations occurring in the broader industry. Green building is one such change on the immediate horizon, and compelling evidence now indicates that contractors should consider it as an area of strategic importance.

The rise of green building to the forefront of local, national and global consciousness is driven by myriad macro- and micro-economic factors that show no sign of abatement. Government initiatives, residential demand, rising energy prices, improving materials and construction techniques, consumer awareness, the
war for talent and a confluence of many other demand drivers are all combining to make green building a viable and lucrative opportunity for contractors across the globe.

The numbers can be compelling. FMI’s aggregate growth forecast for nonresidential green construction is 32% over the next five years. Our recent survey of 165 construction industry executives also points toward increasing demand, with project backlogs of green buildings now constituting 5% and increasing to an anticipated 35% in the next five years. While the results of past surveys of construction executives and building owners indicated increasing levels of interest and demand for green building capabilities, a great deal of confusion still exists throughout the industry. Industry stakeholders’ lack of education and awareness about its effects slows early adoption. Recognition and anticipation of this bellwether change within the industry not surprisingly brings with it hesitation and uncertainty regarding how to adapt.

We have all seen the forecasts, read the articles in every major publication and been involved in discussions around the industry about the potential for green building. The question quickly becomes: “What does this mean for my organization, and where do I begin?” The following highlights what green building means to contractors from an organizational perspective and outlines how contractors can better position themselves to take advantage of the opportunities being presented in their local market.

**7-S MODEL OF THE ORGANIZATION**

Green building is synonymous with change. To understand the nature of change, its interrelationships within the firm and how it is best managed, we will conduct a comprehensive examination of the organization using the 7-S framework (see Exhibit i). Originally developed by McKinsey & Company, the model serves as a sound guide to understanding change from a holistic perspective by considering the relationships among strategy, structure, systems, style, skills, staff and superordinate goals within the organization.
A few of the model’s core themes are:

- Many firms have historically paid attention to only two components of change: structure and strategy. The 7-S framework takes multiple aspects of the organization into consideration and provides a much more comprehensive understanding of the key implications of change.
- The model highlights the interconnectedness and complexity of the organization.
- A central theme of the model is that superordinate goals, or shared values, are critical in their ability to tie the firm together.
- The shape of the model is important in that it implies no dominant hierarchy, as a change in any one of the seven factors could be the critical driver that allows the organization to achieve success.

So what does all of this mean for contractors seeking to understand the impact green building will have on their organization? The following analysis aims to illustrate how green buildings’ inherently different requirements will impact the businesses of contractors.

**SUPERORDINATE GOALS/SHARED VALUES**

Superior-performing organizations are tied together by a strong set of shared values. These values are prevalent at all levels of the organization and infused into every decision. It is these higher-order principles that serve as the backbone of organizational strategy, structure, core skills, operational systems, staffing philosophy and management style. Without well-defined, articulated and reinforced core values, firms can experience difficulty effecting change. One of the primary responsibilities of leadership is to foster a sense of shared values, ensure that they are adequately communicated and thereby create meaning for the firm’s employees.

Most firms currently building green are guided by a strong sense of shared values. These guiding principles are understood by all employees and reinforced by management’s example. High-performing construction firms understand that a strong, vibrant corporate culture is the Petri dish for change and will not sacrifice these values for any economic incentive.

**STRATEGY**

Strategy refers to those actions that a company plans in response to, or anticipation of, changes in its external environment. Strategy means making a conscious choice intended to grow value for the firm and its clients. The decision to incorporate green building into your firm’s strategy represents a business decision, and as such, will require an appropriate amount of strategic discourse.

Without well-defined, articulated and reinforced core values, firms can experience difficulty effecting change.
However, beyond the simple question of whether to pursue green projects, astute organizations are taking a macro view and assessing potential business risks from the climate change debate. Contractors can manage this risk and capitalize on future opportunities through the steps outlined below.

**Strategic Planning**

Contractors should convene a formal planning session with key managers to discuss the firm’s long-term vision and determine what, if any, involvement the firm should seek in the burgeoning green building sector. The discussion should include what risks the firm faces from a regulatory, supply chain, technology and reputational perspective. The planning effort will likely produce an adequate level of discussion about the merits and difficulties of pursuing green building projects within the broader economic context, as well as the long-term viability of either proactively pursuing the market or taking a more reactive approach. Given the construction forecasts for green building and the macro-economic factors driving demand, a highly proactive approach will provide firms with a first-mover advantage over competitors who are slow to recognize and adapt to change.

**Corporate Sustainability**

Corporate sustainability must be led by management, and its intent is three-fold. First, a robust sustainability plan enables the firm to proactively communicate its commitment to social responsibility to a wide audience. Second, it provides the firm with credibility when presenting its capabilities to clients who are building green for the environmental benefits rather than just the economic gains. Third, it creates a common set of organizational values to guide current and future firm employees and lends internal credibility to the firm’s decision to pursue a place in the green building market.

Many larger organizations are discovering the need to have a formal, well-communicated and comprehensive corporate sustainability plan. Major firms, such as Sukut Construction of California, have instituted bold policies to reduce their carbon footprint in anticipation of future regulatory hurdles and to bolster their image in the eyes of environmentally conscious clientele. Small and large firms alike have taken such steps as increasing the required fuel economy and lowering the idle times of their vehicle fleets to reduce greenhouse gas emissions and fuel costs.

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Given the construction forecasts for green building and the macro-economic factors driving demand, a highly proactive approach will provide firms with a first-mover advantage over competitors who are slow to recognize and adapt to change.
Strategic Alliances

Any successful strategy to penetrate the market for green building should consider strategic alliances with subcontractors and other project stakeholders, who have a reputation for effectively and efficiently executing green projects. Through an alliance strategy, the firm will identify critical green materials suppliers and begin to develop relationships to improve its supply chain. Relationships with innovative design firms that have a portfolio of green projects or visible presence in the local green building market, can be nurtured into more collaborative working relationships. Fostering alliance relationships will enhance a firm's project execution capabilities, but will also improve its business development prospects and provide credibility in the marketplace.

Business Development

Green building has the potential to radically change the sales and marketing strategies of many organizations. The following are some of the biggest factors changing the business development landscape at many firms.

• Contract types and project delivery methods for green buildings are shifting from the traditional design-bid-build platform toward more negotiated work, necessitating a different approach. For contractors historically focused on hard-bid projects, the shift to negotiated and/or design-build work always proves challenging.
• FMI’s survey of industry executives indicates increased interest in RFPs for green experience, expertise and proven results. Survey panelists expect at least some degree of green building expertise to be existent, based upon RFPs for many projects. Firms that have yet to successfully complete a certified green project are at a disadvantage when competing with more experienced firms that have already passed the qualification-based selection process. However, this disadvantage can be mitigated by recruiting individuals experienced in green building.
• Contractors are expending significant marketing resources to develop and sell their green building expertise for differentiation purposes.

In conversations with contractors across the country, a common question is how to take the firm’s green building capabilities to market, or if the contractor is a green building novice, how to win and build its first green project. The answer has to do with perception and understanding that green is synonymous with quality. Green buildings are really just high-performing buildings, and owners at all levels of the construction industry are coming to this subtle realization. The most successful contractors building green across the country understand and incorporate this core theme into all of their sales and marketing efforts.
Positioning your firm as one that delivers high quality, on time and on budget negates most clients’ cost concerns.

Whether your firm has successfully completed 20 LEED certified buildings or has yet to see one mentioned in an RFP, a strong business development function and project hand-off will prove highly valuable.

STRUCTURE
Organizational structure is often the first item on most planning teams’ agenda. Yet, real change is often made by an adjustment in one of the other six organizational drivers. A common analogy compares organizational structure to a sports program. Managers must get the right people into the program and then get them into the right positions on the team. Green building’s team-based approach to project delivery will necessitate a change in structure for some construction firms.

Some general contractors and construction managers adhere to the estimator/project manager model of project delivery. Under this system, a person skilled in both estimating and project management takes the project from conception to completion with the help of support staff. The entrepreneurial approach is highly dependent on the individual skill of the estimator/project manager and can work well for firms until their size and operational complexity reach critical mass. Yet, firms with this structure experience difficulty building green since the approach is less collaborative than that used by most firms successfully delivering green projects.

Companies with this structure often operate without a dedicated estimating department or a true conceptual estimator. Most firms building green have teams of conceptual and traditional estimators in a pre-construction services department. The pre-construction staff serves as the nucleus of the project team until construction begins. The project team thrives off the data, knowledge and interaction among the pre-construction services team (conceptual and traditional estimators), the operations team (project manager and superintendent) and outside parties such as design professionals and key subcontractors.

SKILLS
What are your firm’s current core competencies? Training, business development, pre-construction services, estimating, partnering, pre-project planning, project management, quality control and assurance, risk management, communication and managing client expectations are some of the answers we hear from contractors. Each of these skills is important in traditional building approaches, but their significance is magnified when building green.
Construction firms may need to develop new skills to mitigate the effect green building has on their project delivery systems. Alternatively, firms face the difficult challenge of eliminating skills that create inefficiencies in the team-based approach to building green. Pre-construction services and project execution are two core skills that successful contractors are shoring up in order to secure more work in this burgeoning sector.

Pre-Construction Services

As owner sophistication, schedule and budget compression and building complexity have increased throughout the industry over the last decade, many firms have created a strong suite of pre-construction services (pre-con) to meet these challenges. In order to clearly understand the impact true pre-con can have and to mitigate much of the confusion around this discipline that exists within the industry, we must first define what pre-con actually entails. FMI considers pre-construction services to be a comprehensive and collaborative team-building process initiated at project conception and executed through substantial completion to meet an owner’s building objectives. The process transitions projects from the business development cycle to conceptual budgeting and estimating through an operational orientation.

As part of FMI’s 1Q 2008 Nonresidential Construction Index, industry executives consider key, developing issues across the nation. The following excerpts from their feedback highlight the importance of pre-construction services for green building.

• “We are now working, in pre-construction, on LEED-accredited projects.”
• “More and more clients are expecting us to understand and be able to lead the [project] team in green construction.”
• “Clients are very interested [Ed. in examining green building in precon], however, they want to understand the cost trade-offs.”
• “We see it as an opportunity to assist our direct customers to create cost savings by smart design … leading to higher LEED scores and energy savings.”

Green building requires an integrated, team-based approach to project delivery. The owner, contractor pre-con team, critical subcontractors, design firm and any key, third-party consultants would go through an iterative process to create estimates, budgets and schedules for each phase moving from pre-concept, conceptual design, schematic design and design development to construction documents (see Exhibit 2). In order to build quality (a.k.a. green) into the construction process, the necessary components of LEED must be identified as

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<th>Exhibit 2</th>
<th>Iterative Green Building Construction Process</th>
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<td>Pre-Concept Phase</td>
<td>Conceptual Design Phase</td>
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early as pre-concept. LEED credits and their impact on the building process are discussed at the pre-concept stage and integrated into design and construction documents throughout the different stages of pre-con. By the time construction documents are agreed upon and a final constructability review completed, the project team will have a crystal-clear understanding of how the project is going to be built, where the LEED credits are going to be captured and what impediments to success require monitoring. This early involvement and collaborative approach are essential to minimizing the project’s overall costs and realizing the owner’s building objectives.

Additional aspects of pre-con that are essential for creating green building expertise are a robust cost history database and life-cycle analysis capabilities. By understanding the true costs of building green and capturing this information in a centralized cost history database, contractors create a powerful tool for future business development efforts. Contractors can use this historical cost data to perform a life-cycle analysis of projects, highlighting the costs and benefits of building green to owners. These two tools will help contractors sell the firm’s green building expertise and devise ways to lessen additional costs from building green on future projects.

Project Execution

After pre-construction, the critical project execution phase begins. While best practices for project execution are well-documented, contractors often fail to implement them. This failure has an even greater significance on green projects.

Contractors who have been successful building green have strong project delivery processes. Operational best practices are ingrained in these contractors’ culture. Project planning, project management, quality control and assurance, risk management, communication and managing client expectations are just a few of the critical skills that define whether a contractor can deliver a project as promised. The need to understand the impacts of building green at the field level has become a hot topic. General and trade contractors alike are struggling to understand how to educate their field personnel to manage the site conditions and document flow and construction processes that are so important to achieving LEED certification. Many are finding that it is imperative to develop a game plan for field managers at the pre-concept stage to resolve issues and minimize associated risks.

Without a consistent and disciplined approach to project delivery, contractors will have a steeper learning curve for building green, with challenges to the project’s overall success.
Companies need to carefully consider the skilled personnel they will need going forward and how they will train and develop existing staff to meet the greater challenges of building green.

Consider market size, the pipeline of potential projects and the timeline for the next green project when assessing the skill sets of current employees and the knowledge gap to be overcome.

At this nascent stage of the green building market, many contractors are opting to cautiously build knowledge within their existing ranks. The most common approach for firms yet to actively pursue a green project is to locate someone already in the organization and designate him or her as an internal subject matter expert. This person will often have prior green building experience or will have familiarity with green construction techniques or a specific rating system. This internal resource provides two types of benefits. First, he is able to articulate exactly what organizational and operational changes will be required to successfully compete in the green building market because he has intimate knowledge of the firm and its key processes. Second, this person can provide credibility for the firm in a business development capacity if it is required to submit on a qualification basis or if this knowledge is required for presentations or other client interaction.

Companies already engaged in green building are further developing the requisite skills and knowledge of existing staff and/or acquiring knowledge by hiring outside personnel when the current workforce cannot be trained quickly enough. Firms are going through the process of having several of their key project staff achieve the LEED Accredited Professional designation. At least a few critical project staff should understand LEED, the leading green building rating and certification system in the nonresidential construction market. Contractors acquiring green building knowledge from outside their firms are seeking experienced conceptual estimators, design professionals, MEP coordinators, project managers and superintendents who have already built a LEED-registered project. These experienced outside personnel can bring detailed, practical knowledge of the LEED system as well as alternate construction techniques and project considerations.

An ancillary and significant benefit of being recognized as a green builder is the ability to attract, motivate and retain younger employees. As the war for talent in the construction industry rages on, firms building green are increasingly attractive to a new cadre of construction industry professionals seeking to align their core values with those of their employer. This new generation of sustainability-minded professionals is in
high demand and is selectively targeting those companies with a demonstrable commitment to building green and reducing their impact on the environment. Many successful green builders are incorporating their past project successes into their recruiting and hiring strategies and seeing significant returns on these efforts in the form of increased retention rates.

**SYSTEMS**

Systems are the procedures, formal and informal, that make the organization tick. Training, estimating, subcontractor pre-qualification, project management, technology, financial reporting and information feedback loops are a few examples. Some firms will dedicate their entire strategic planning effort to developing these critical procedures due to a weak systems orientation. For them, the system is the strategy. The impact of green building for contractors will be less severe for firms that are already highly systematized. The opposite is true for firms that are loosely or barely systematized, where anyone’s system is as good as another’s.

For many mid-size general contractors or construction managers, project management is an entrepreneurial endeavor that is largely dependent on the individual skill and business acumen of their project managers, rather than a rigorous series of systems to ensure efficient and effective project delivery. While this free spirit and savvy are certainly required when building green, firms with the right balance of standard operating procedures and project manager autonomy are finding the transition to green building the least impactive on their current operations.

In addition to all of the internal operational systems that support project execution best practices, understanding the external systems required to build green is equally important. As the U.S. Green Building Council’s LEED system has grown in acceptance, its guidelines have continued to evolve, requiring consistent monitoring and understanding. For instance, the newest iteration of LEED will award points based on regional building and environmental considerations. Also, the LEED rating system has ballooned into nine separate rating systems for different types of construction. For regional or national contractors with a diverse project mix, understanding all of the various LEED systems and their inherent differences will prove increasingly important as they begin to build green in more widespread geographies.

Technology systems, especially BIM (building information modeling), are taking a larger role in the delivery of green projects. Firms with a portfolio of green projects are adept at incorporating green features into the design process during pre-construction. BIM has become a vital pre-con tool for these firms to help determine the cost impacts and constructability issues that may surface during construction. The technology helps contractors understand and visualize how a change in one system during design or construction has downstream ripple effects on others. Contractors can then focus on the important task of managing these interactions throughout design and construction.

**STYLE**

Management style is an often overlooked, but essential, factor for instituting organizational change. FMI has witnessed many strategic initiatives be hindered or completely derailed by cultural constraints directly linked to management style.
This qualitative factor for consideration often does not receive the necessary attention when many other definitive concerns are confronting the management team. Management’s style, as a reflection of its culture, has more influence over the firm’s ability to change the organization or its performance than is commonly realized.³

Firms must consider how adept they are at managing change. Many of the leading green builders have change-focused managers leading the organization. When adopting a new strategic initiative, these executives lead their organizations by example. Change is given precedence and is driven from the top of the firm down to the field level. The ability to embrace and adapt to changing environmental and market conditions has allowed these managers to guide their firms to the forefront of their target markets and capture new green projects. By recognizing the changing competitive landscape, they have been able to exploit an untapped market and position their firms for future growth.

Companies with more rigid, change-adverse management teams will find it more difficult to compete in the green building sector. Some firms are overcoming this hurdle by appointing internal subject matter experts or putting change-oriented managers in charge of developing the firm’s approach to green building. This strategy has worked well, but the change agent must be given the authority to effect change on some of the organizational dimensions discussed here. Change management and adaptability take on heightened significance when building green.

As green building continues to grow and represent a greater percentage of total nonresidential construction, contractors will have to think about building in new ways. The changes required in these seven organizational drivers may be subtle for some, but they may require a much greater effort for others. Knowing your firm’s strengths and weaknesses and having a strong pulse on trends driving green building in your market will serve as the basis for understanding what must be done to position your firm to take advantage of these opportunities.

Many of the leading green builders have change-focused managers leading the organization. When adopting a new strategic initiative, these executives lead their organizations by example.

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Virtually all large U.S. builders are losing an average of $2,000 to $4,000 per home due to inaccurate takeoff procedures, inflated waste factors and careless use of materials on site, according to research conducted by FMI’s Residential Building Practice. FMI has analyzed building materials packages for more than 500 different house plans in multiple divisions of the nation’s top home builders between 2006 and today.

If a builder’s division completes 250 homes per year, these losses will reduce its annual profits by about $500,000 to $1 million — a significant drain of its profitability.

THE PROBLEM

Call it the home builders’ Latte Factor, a term that describes why someone who spends $4.99 per day at Starbucks can’t afford to save a couple of hundred dollars each month. A few bucks a day may not seem like much, but it adds up to a hefty annual expense.

The same process is bleeding profits from builder divisions. Material takeoffs are rounded up to the next highest number, then padded with generous waste...
factors. Inaccurate deliveries aren’t identified as such, so the builder pays for stock it never receives. Materials are then used inefficiently, so more has to be ordered to make up the shortfall. But while a few studs here and a few sheets of plywood there seem like no big deal, they add up to thousands of dollars in unnecessary expense on each home.

A few years ago, when everyone could get a mortgage, prices were rising and buyers were standing in line, the most important objective was to build and close homes quickly. Material conservation was not nearly as critical, particularly with the amount of price inflation that was present in most major markets. However, with home prices falling nationwide, builders who want to stay in business have no choice but to run tighter operations.

WHERE THE PROFITS ARE

The top areas of physical waste are found in framing and siding (including brick veneer), roofing, concrete and drywall.

The reasons for this waste are as follows:

**Not paying enough attention to details.** Most builders do not know exactly how much of what materials go into their homes. That lack of detailed knowledge means they are cheating themselves out of a powerful negotiating tool to use with trade partners. But the builders are not alone: Even their trade partners would be hard-pressed to give an accounting of the stock they use because they tend to pass the buck for takeoffs to their suppliers. Of course the supplier is in the business of selling building materials, and while most suppliers want to be accurate, they are so busy that they only have time to do estimates rather than takeoffs. In fact, many shipments are inaccurate, with too much of one item and too little of another. The result: repetitive field orders that never make it into the budgeting process. That hampers the builder’s ability to accurately analyze the cost of building a plan.

**Generous waste factors.** Regardless of who figures the materials order, trade contractors always add a waste factor to cover damaged material, theft and installation mistakes. Most add 10% to 15%, but the actual waste is higher, since takeoffs are rounded up to the next highest number before the waste factor is added in.

** Bundling of materials and labor.** Contracts that roll materials and labor into one price give little or no incentive for suppliers or installers to use materials wisely, and they hide the potential savings. For instance, if drywall is selling for...
$10 per sheet, most builders assume that reducing the drywall takeoff by five sheets will save them $50. The truth is that the drywaller charges a price per sheet that includes materials and labor. If that price is $35 then the builder can actually save $175.

**Overextended job supervisors.** Many builders have cut costs by reducing staff. With fewer job supervisors, the ones who are left are responsible for more jobs than before. So when a package is dropped at the site, they do not have time to verify the count. They also do not have time to hold trade partners accountable. When a trade partner comes up short, most supers automatically stamp the field purchase order, and the true cause of the shortage is never identified. There is no incentive for the trade partner to conserve material, and all shortages get coded as takeoff errors, regardless of the true cause. This makes accurate estimating and budgeting impossible.

**Transferring material from lot to lot.** This is another practice that plays havoc with estimating. If a framing, siding, roofing or drywall crew is finishing a house on one lot and it’s short of materials, it will often take some from the house next door, leaving a shortage on that job. This has a domino effect as more homes are built. The effect on the construction manager and purchasing manager, who are trying to determine the correct material quantities, is much like the popular carnival game “Whack a Mole”: Each time they think that they have the problem figured out, it pops back up on another lot!

**Unclear lines of responsibility.** Many builders lack a system for ensuring that unused materials get returned and credited. The field supervisor may think it is an accounting issue, but the accountants cannot track down a missing credit if they are not notified of the return.

**Culture of “close enough.”** The residential building industry has operated for years on the premise that material quantities need only be “close enough” to produce acceptable financial results and to avoid material shortages. The industry does not have a continuous improvement culture and operates in a classic cyclical fashion. When times are good, builders and trades make lots of profit, and when times are tough, they share the pain of losing money. This culture and mentality causes significant volatility in the financial performance of all the players in the residential supply chain and destroys millions of dollars of value through every cycle.

**POWER TAKEOFFS**

Luckily, there’s a straightforward fix for the above problems, and it has an almost immediate payback for the builder.

Much of this waste can be eliminated by working with the individual trades on cutting direct costs, specifically the amount of material that goes into a home. Many purchasing managers have been told to renegotiate their contracts, but because they let trade partners figure materials, they do not have enough information
An accurate takeoff is a powerful negotiating tool, especially when it’s backed up with a system for helping trade partners work with the new takeoff amounts.

to get into a good negotiation position. Working with a third party, the purchasing manager can gather the information needed to negotiate the best contract price. An accurate takeoff is a powerful negotiating tool, especially when it’s backed up with a system for helping trade partners work with the new takeoff amounts.

In addition, reasonable unit pricing for installation labor brings further cost transparency, making it easier to realize potential cost savings and providing an objective baseline for future interaction with trades and suppliers.

This is not a value-engineering process. Builders do not have to change their plans or specs. Instead, builders should “unbundle” materials and labor and identify the exact amount of materials needed for each phase of construction. Then, compare takeoff quantities to the current materials packages, and create a new target budget. Look for areas where less costly products could be substituted without impacting the design or structural integrity of the house. Builders may then work with their architectural and engineering staff to decide whether to make these changes.

More detailed takeoffs improve potential savings. Using the drywall example again, do a separate takeoff for the first and second floor walls, the first and second floor ceiling sheets and the garage. This helps both the builder and the trade partner get a better grasp of where shortages are occurring and where they can save money.

This system has been proven to significantly reduce waste factors: Builders who have implemented it are now working with waste factors of just 4% for panels and 8% for dimensional lumber.

Builders can even save on engineered lumber. For instance, one builder used a lot of I-joists. The supplier was creating excessive waste by shipping longer spans than necessary and shipping extra pieces that never got returned. The builder saved an average of $400 to $1,000 per house on I-joists alone.

ON THE JOB SITE

After creating detailed materials lists, builders must work to ensure their entire team — from the purchasing department to project managers,
Get trade partners involved early in the process. Meet with a representative of the framer when you’re counting the house to gather his input and to show him where the potential savings are. It is critical to understand how the home is built in each specific location, and the trades are consistently the best source of this understanding. For instance, they can point out details that are not specified on the plan but are required by the local inspector. A takeoff based solely on the plans will miss this local nuance and will not be completely accurate. Accuracy is essential to gaining the trade’s buy-in and to making the process work.

The process does require some new work habits. Job supervisors have to pay closer attention to the actual material packages, and trade contractors need to be more careful with details such as how they cut up framing stock. Most will adjust. By the end of the process, the builder is getting consistently lower prices, and the trade partners have gotten used to working with the lower takeoff amounts.

The key to getting cooperation from trades and staff is to show some immediate savings. To do this, spend 30 days working with a few key trades. Framing and drywall are two places where builders can get a good bang for their buck. Honing in on material management and waste reduction, will often find $600 or $700 in savings on drywall alone in a typical 1,900 sq. ft. house.

Another way to get buy-in from trade contractors is to show them how the system can benefit their entire operation. Companies that focus on using materials more efficiently end up planning their jobs more carefully, which means their workers become more productive. Trade contractors who have gone through this process generally become better managed and more profitable on all their jobs.

**THE BOTTOM LINE**

Builders can no longer afford their Starbuck’s latte in the current residential building market. Across the country, profits are slowly draining from building divisions at an average of $2,000 to $4,000 per home from inaccurate takeoff procedures, inflated waste factor and careless use of material on-site. Builders can stop the drip by implementing a takeoff and cost-management plan.

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A CASE STUDY

A builder’s most profitable division is now its loss leader. Volume has fallen from 3,000 units to 1,000. Even worse, gross margins went from more than 20% to negative. Staff in most departments is down 70% and management is discussing a possible market exit. Rebidding efforts have led to significant reductions in direct cost, but these have not kept up with falling sales prices. The options for an overworked purchasing staff look limited.

Unfortunately, this story is known by many in the home-building industry. For one top-10 builder division, FMI’s takeoff and cost-management service offered an answer to some of the market’s seemingly impossible problems (see Exhibit 1).

At first, many of the builder’s staff were skeptical. They had rebid their projects several times and had not realized additional reductions of late. In addition, the division had almost no staff left. Those who were left were at the office until after 8 p.m. every night just to keep the business running. How would they have time to make significant changes?

TARGET LOW-HANGING FRUIT

After completing material quantity takeoffs on the division’s top-10 plans, the best unit pricing available in the market was used to determine the best possible cost for each trade. Several areas of focus appeared. The engineered I-joist packages were priced well above the total determined by summing the cost of all items on the layout. After interviews with the supplier and trade contractors, it was discovered that the supplier was sending two additional long joists with every pack in order to account for errors in the field. It also was charging two times the linear foot cost for precut blocking panels. The team, in partnership with the division’s purchasing staff, also identified numerous order errors resulting in extra,
very expensive, engineered LVL and Glu Lam beams being sent to the job site.

FMI worked with the supplier to audit and clean up the joist orders. The excess material was eliminated and a more reasonable rate was negotiated for precut items. The result was between $500 and $2,000 savings per plan. For the division, this resulted in annual savings of $1.2 million.

Lumber presented another large opportunity. Takeoffs indicated potential savings of $2,000 to $8,000 per home. As a first step, this information was presented to the framer with a request for lower pricing. This resulted in large price cuts averaging $2,500 per home.

The same process was followed with roofing, drywall and foundations. Savings per plan averaged $500 to $1,000 for each trade (see Exhibit 2).

The initial quantity analysis drove rapid results for the division. In 30 days, an average savings of $5,800 per plan generated $6 million in direct cost savings for the division. The bleeding had been stopped and the focus turned to establishing the process and systems to maintain and grow these savings over time (see Exhibit 3).

BUY DIFFERENTLY

As a result of the process, the division decided to change its method of engaging trades and suppliers. Instead of continuing the typical industry practice of bidding trades in turnkey — labor + material — lump-sum

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**Exhibit 2**

Typical Distribution of Savings per House for Five Trades

- Framing: 50%
- Roofing: 40%
- Siding: 10%
- Concrete: 1%

**Exhibit 3**

Example ROI for FMI’s 30 Days to Savings Cost Management Plan

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<th></th>
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<th>ROI</th>
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</tr>
<tr>
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fashion, each trade is now priced by applying a competitive unit price bid to the material quantities determined from the takeoff. Drywall offers the least complicated example.

After the drywall takeoffs for every active plan in the division were completed, meetings were held with the trades to gain agreement on the material quantities. The builder then asked the drywall contractor to supply one number in its bid: the installed cost per square foot for drywall. The resulting price was well below the lowest price previously seen in this market and translated into an additional savings of more than $500 per plan on drywall. Going forward, the builder has received additional savings on all its plans as drywall prices have fallen by adjusting this price per foot number. This process addressed the two most critical factors in the builder’s purchasing function: It has been able to increase savings while reducing staff time spent rebidding. A once impossible situation has turned around 180 degrees.

The divisional purchasing staff was able to deliver similar results by working to apply this process to foundations, roofing and lumber. Lumber required the largest effort and generated the biggest reward. The division worked with local lumber suppliers to achieve the best unit cost for lumber in the local market. This pricing was first applied to the framer’s lumber list and generated substantial savings. Next, an item-by-item quantity comparison was performed between the framer’s list and the takeoff to identify opportunities for material reduction. This process was completed for every base plan, elevation and option. The new lumber lists significantly reduced quantities and drove significant additional cost savings. The division now prices lumber by adjusting a master lumber price list and applying it to each takeoff. Price visibility now exists between the division and the framer. This process lowers the time spent rebidding, allows for more effective long-term relationships with suppliers and trades, and generates lower direct costs.

This process lowers the time spent rebidding, allows for more effective long-term relationships with suppliers and trades, and generates lower direct costs.

Since the project began, the builder has achieved framing reductions between $4,000 and $12,000 per home. Unlike in many areas of the country where the builder is forced to purchase the lumber directly, a process that requires significant administrative time from the builder, in
this division the framer is still responsible for buying and managing the lumber. The builder and framer have simply agreed on the quantity and unit price that the framer will use to purchase the lumber.

RESULTS

The takeoff and cost management service has generated annual savings in excess of $8 million for the division. Total direct cost has been reduced by 15%. This division is now the top-10 builder’s leader in terms of cost savings, among more than 20 divisions. Most importantly, margins are now slightly positive in a market where many builders continue to suffer huge losses. The division is well-positioned to deliver the right product to customers for the right price moving forward.

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The future of the A/E industry and the firms that design our built environment is dubious. The United States and our global society have clear needs, but doubt exists about who will lead the transitions facing the firms and the industry. Increasingly, transitions in the way projects are delivered, in the roles played by design professionals, in the manner in which new professionals are recruited and retained all demand increasingly skilled leadership at a time when the industry’s leadership talent pool is decreasing. At risk is the future of these professions.

The face of leaders in many architectural and engineering firms is changing, and identifying the next generation of leaders is a significant issue for current design firm leadership.

THE ROLE OF TEAMS

Design (A/E) firms are project-based businesses that are continuously forming and reforming project teams. The generational research suggests team-based, project-focused firms may be impacted more than other types of firms. The success
Changing of the Guard: How to Avoid a Leadership Shortfall

The changing of the guard of a project depends on moving the team to a high level of performance in a relatively short period. When teams contain members from different generations, a series of assumptions and unstated expectations often influence performance. The old adage of “form-storm-norm-perform” that describes team performance should be closely monitored to ensure the firm builds a core competency of teambuilding and team performance.

The popular press has addressed “who” will lead the way in a multitude of forums. The concepts of multiple generations in the workforce and the eventual retirement of the baby boomers are documented thoroughly. Some are enlightened by the research on generations, while others are rankled by the way the generations are stereotyped. Regardless of your take, there is no denying that leaders of design firms are facing significant challenges and workforce issues.

There is an ever-increasing set of complexities that CEOs and firm leaders face regarding how design firms deliver their services and how projects are created and completed. In the May 2008 issue of Dwell Magazine, Steve Silberman provided a summary of the AIA International Committee Report on the Offshore Outsourcing Roundtable (2006). In 2006, U.S. architectural firms outsourced 69% of all construction documents, with 9% going overseas. That number is expected to continue increasing, and the AIA Committee estimated that by 2015, 20% to 30% of U.S. architecture jobs would be offshore.

This example reveals the complexity of the business environment facing our leaders. How much should the firm invest in future leaders who are possibly not committed to the firm? How will the firm develop the international business savvy needed to drive its future sustainable competitive advantage? These and a host of other questions have no easy answers. (See Exhibit 1)

“One issue you don’t hear much about is that our industry already lost a large group of people during the recession of the early 1990s,” said Jane Walton, corporate human resources consultant at The HNTB Companies of Kansas City. “Many left the industry and didn’t return when the economy improved.” This may explain some of the current pressure felt by firms trying to find talented management-level professionals.

On top of this shortage, Generation X alone will not provide enough people to replace all the retiring leaders from the baby boom generation; millennials will, of necessity, be called on to step up into leadership roles at an earlier age than their predecessors. Their early introduction to leadership may prove challenging for firms, as the worldview of

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**History is not destiny; demography is destiny.**

— AUGUSTE COMTE

1823, Statistical Philosopher

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When teams contain members from different generations, a series of assumptions and unstated expectations often influence performance.
Baby boomers and millennials is quite different. A 60 Minutes segment that aired in November 2007 entitled, The Millennials Are Coming, described the upbringing of Americans born after 1980 as follows:

“They were raised by doting parents who told them they are special, played in little leagues with no winners or losers, or all winners. They are laden with trophies just for participating and they think your business-as-usual ethic is for the birds.”

The segment provoked a torrent of emotional e-mail comments on the network’s web site, such as:

“I don’t need sensitivity training to work with them ... they just need to grow up.”

“Companies should not have to bow to every whim their 20-something employees have and strive to constantly entertain them.”

But other comments included differing opinions:

“I’m a 25-year-old with 50-year-old parents ... and yes, I loathe the idea of an 8-to-5 job, as do the vast majority of my peers. We see our parents having the life sucked out of them, constantly taken for granted by whatever supervisor/boss/corporate figurehead they answer to, and we intend to figure out ways to avoid that....”

“The new generation has been taught to love themselves, believe in themselves, respect themselves and not let others take advantage of them.”

The Advanced Management Institute for Architecture and Engineering (AMI) recently conducted a survey with 155 managers and staff of several professional services firms and
With the looming talent shortage, talented younger workers know they have other employment options and now insist on better management, including more frequent feedback and more flexibility about where and when they work.

found 96% agreed that inter-generational teamwork was very or extremely important to their firm’s success. Yet 76% of respondents also said that generational differences have created major challenges, such as poor communication, reduced quality and productivity, loss of teamwork and lower morale.

SWEEPING CHANGES

Sweeping changes over the last 30 years such as increasing divorce rates, single parenthood and global competition have greatly shaped the development of different generations. Experts argue that the proliferation of video games and computer access have had their effect on the brain conditioning and personality development of large numbers of Gen-Xers and millennials. Such stereotypical perceptions, even if inaccurate, are part of the reality that firm leaders must deal with daily.

Meanwhile, many millennials and Gen-Xers, who have watched parents lose their jobs after lifetimes of sacrifice for the good of the company, cannot grasp why they should be loyal to a heartless corporation. They seek a “new deal” — since they feel they cannot realistically expect lifetime employment. Instead they expect “lifetime employability,” which to them means challenging assignments and lots of learning. With the looming talent shortage, talented younger workers know they have other employment options and now insist on better management, including more frequent feedback and more flexibility about where and when they work.

“We give our young people a program in the business of architecture and expose them to the nuts and bolts of the business early in their careers,” Walton said. “They learn about how a firm functions internally much sooner than they would normally. They’ve made it clear that they are entrepreneurial and are used to just jumping in and doing things — their creativity and abilities with technology are going to be great assets to those firms that help them develop and leverage their skills.”

POLARIZATION

In many workplaces we see a polarization of generations that erodes the trust necessary in developing both current and future leadership for the firm. Both older and younger workers have taken a “we’re right, you’re wrong” position. This shortsighted stance is not helpful in building an environment that will nurture the next generation of design firm leaders. This, to say the least, is not a recipe for an effective leadership development program.
The first and most critical step is to recognize several undeniable facts. The first is the changing composition of the workforce. With 78 million boomers on the retirement threshold, only 44 million Gen-Xers in line to replace them and most millennials just entering the workforce from college and lacking the experience to move up, the workplace will look very different in 10 years. How will firms deal with the coming talent and leadership shortages, especially if the economy turns around after the presidential election and reaches previous growth rates?

Leaders with foresight and longer-term perspectives are investing in succession management, creative recruiting, and employee retention and engagement initiatives now, so when the leadership talent crunch increases as 2010 approaches, their firms will be far ahead of their competition.

**IMMEDIATE CONCERNS FACING LEADERS**

The more immediate challenge for current leaders is devising how to develop future leaders who may have markedly different attitudes about life-work balance, teamwork and company loyalty. Progressive leaders must start by acknowledging that they must understand the strengths of each generation and work to develop those strengths, as well as finding ways to affect essential knowledge transfers from the firm’s senior leaders to its future leaders.

Walton said, “We have a mentor-protégé program designed to help each side understand itself better — growth is experienced by both participants. We use the film *Twelve Angry Men* to introduce them to the concepts of the Myers-Briggs types and to show them how they impact group dynamics. They see part of the movie, take the assessment and then look at the rest of the film with the types in mind. We also took them out to a traditional museum to see how the building was designed and how art was displayed by that generation, and then took them to a brand new “starchitect” museum to look at the differences. We want to expose both groups to ideas from other generations.”

Some firms now recognize that they no longer have the luxury of waiting for a good prospective leader to develop for five or 10 years before the firm expresses an interest. Gen Xers and millennials will not wait long to be tapped for future leadership roles, and they are willing to jump ship to firms that promise them immediate responsibility and advancement. Forward-thinking leaders must engage promising future leaders early, develop them aggressively and provide them with the mentoring that will bring them up to speed in a shorter timeframe than tradition dictates.

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**The more immediate challenge for current leaders is devising how to develop future leaders who may have markedly different attitudes about life-work balance, teamwork and company loyalty.**
Changing of the Guard: How to Avoid a Leadership Shortfall

Immediate Actions for Leaders

How can you accommodate differences in approach when this feels akin to compromising your firm’s long-held values?

Members of each generation have earned the right to see the world in their unique way. Not all members of each generation share the same worldview, but each generation deserves to have its worldview understood and respected. Organizations and leaders who don’t accommodate these diverse needs and expectations, and attempt to impose a uniformity of values, will fail to attract, engage and retain the talent their firms will need to succeed.

The AMI survey of employee attitudes asked the question, “What should we do about inter-generational challenges?” The following are the responses:

- 34% Train all employees to understand and accept generational differences
- 27% Increase coaching of younger generations
- 22% Train management how to manage and motivate other generations
- 7% Perform more selective hiring
- 6% Do nothing at this time
- 2% Conduct selective terminations
- 2% Other: Hold more social events, use mixed teams, etc.

We wonder about the 6% who advocate doing nothing. Perhaps the inter-generational teamwork and communication at some firms is so smooth and clear that no more work needs to be done. Some firms still have so few millennials on staff that the full force of changing expectations has not yet struck home. That said, doing nothing is exactly the wrong way to go.

AMI followed its research with a focus group to help establish best practices for developing the future generations of leaders. The following ideas emerged and, in most cases, are being used to great advantage.

Self-Awareness

- Leaders must be self-aware. This self-awareness is a precursor to authenticity. Help them become authentic and understand others by using assessment instruments and providing the opportunity to discuss the results.
- Use competency inventories and personality assessments to increase employee self-awareness.
- Share this information within the organizational work teams so that all generations and organizational levels have a better understanding of their team(s) and team members.
Training and Development

- Allow interns to design their own Individual Development Plans.
- Provide significant training and development opportunities. Young workers no longer expect lifetime employment, but do value lifetime employability. (Paradoxically, they are more likely to stay with employers who make them more widely employable.)
- Allow interns to propose their own training topics, and invite senior staff to attend and participate.
- Train all employees in fundamentals of quality control and improvement, diversity, communication and leadership so that all generations speak a common language.
- Teach the principles of change management and how to overcome resistance to change. Show all employees why logic does not always convince the minds of resisters.
- Teach listening skills and negotiations as a key aspect of change management.

Coaching and Mentoring

- Allow younger workers to choose or gravitate to preferred mentors.
- Train mentors in coaching and mentoring skills before pairing them with mentees.
- Ask younger employees to provide “reverse mentoring” to older staff and encourage older staff to seek such mentoring.
- Consider group mentoring, where one senior leader meets periodically with multiple participants. This can be a useful option for transferring knowledge of firm history, best practices, client and project case studies and similar knowledge carried by senior leaders.
- Identify early adopters of newer technologies among older generations — they can relate to their peers and communicate with them more effectively than younger staff. These early adopters may also help bridge communications.

TRANSCENDING NEEDS

All employees want and need certain conditions in the workplace, regardless of age, race, gender, nationality, ethnicity, education, life passage, personality, disability or whatever other dimension of diversity such as:

- A job that matches the talents they want to use
- Recognition and fair pay for a job well done
- Respect, clear expectations, coaching and feedback
- Trustworthy leaders
- Reasonable work demands
- Opportunities to learn and grow
- Upbeat relations with co-workers
- A reasonable expectation of job security and belief in the organization’s stability
Despite generational stereotypes, you must still lead and manage one employee at a time. Different employees will need some conditions more than others, and those needs may change over time. Savvy leaders know which ones they need now. Finally, always ask:

1. “Am I spending enough time listening to what each employee needs?” and
2. “Do I spend enough time making sure they know what I need from them?”

**IMPACT ON ARCHITECTURAL AND ENGINEERING FIRMS**

**Ownership and Leadership Transition**

The small size of the Generation X cohort may challenge owner transition. In the American workforce, Generation X is the smallest of all the current cohorts

**HOW THE GENERATIONS DIFFER IN ATTITUDES AND VALUES**

**Large numbers of traditionalists (now age 62+):**
- Lack technological skills
- Value loyalty, compliance and dues-paying
- Expect younger generations to value what they value
- Believe their way is the right or only way
- Are disengaging and preparing for retirement

**Large numbers of boomers (now ages 42 to 61):**
- Limited in their technology abilities
- By their mere presence are blocking the upward advancement of many Gen-Xers
- Believe “if you train ‘em, they’ll just leave”
- Believe in and practice “hands-off” management
- Have sacrificed family and work-life balance for career advancement
- Believe many Gen-Xers and millennials lack a work ethic
- Expect younger generations to value what they value

**Large numbers of Gen-Xers (now ages 27 to 41):**
- High-tech skills
- Are frustrated with limited promotional opportunities
- Feel more loyalty to their own careers than to the organization and have little reluctance to change jobs
- Think about self-employment as a desirable option
- Believe it doesn’t matter when and where they work as long as they get the job done
- Want to have rich personal and family lives outside of work
- Are impatient with “unrealistic expectations” of millennials

**Large numbers of millennials (now 26 and under):**
- Eat/Breathe/Sleep technology — they are so skilled, it is invisible to them
- Have received intense parental attention, structure, feedback and coaching
- Expect to receive the same from their managers in the workplace
- Believe they are special and deserving of praise and recognition
- Expect their jobs to be challenging and meaningful
- Want to fit a variety of activities besides work into their workweek
- Believe it doesn’t matter when and where they work as long as they get the job done
- Recognize that they have other employment options and do not hesitate to move on when things turn sour
and will not be increasing in size. For any specific design firm, this may not be an issue. However, taken as a whole, in 10 years fewer potential purchasers and leaders will be around when the boomers are ready to exit.

This has several potential impacts: Will your firm have a full complement of internal buyers with enough wealth to purchase the shares as priced? Will you have to sell shares to employees who are younger than what you would like? How are you going to prepare them to lead the firm? When making a transition, we recommend separating the ownership issues from the leadership issues. But even that ends in the same questions: Will there be enough? Will they be ready? What will be the strategy to get them ready for the transition?

**Filling the Leadership Pipeline**

The vitality of architectural and engineering firms depends on recruiting, hiring, developing and promoting a steady supply of great staff and employees. The different expectations and needs represented in the multiple generations increase the challenge to this all-important process. The human capital challenges facing senior leaders and managers in design firms should not be taken lightly. Senior managers are being challenged to adapt their managerial style to ensure that individuals and teams perform at their highest levels. Managers and leaders often feel like they are spending too much time in this arena, but there could be no more important job in the firm. The talent of these generations is evident, the differences in working styles are pronounced and the manager’s job is to tap into these sources of energy to produce the highest quality services.

The challenges of generational dynamics require senior managers and leaders to pay attention to the needs of all employees. The issues will not go away spontaneously, and each generation has earned the right to see the world through its own lens. The challenge for managers and leaders is to leverage their unique perspectives and abilities into even higher performance.

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**The challenges of generational dynamics require senior managers and leaders to pay attention to the needs of all employees.**

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In the construction industry where cash is king and one poorly performed job can send companies off the deep end, contractors are becoming more focused on their operating metrics. The old adage of, “I need to keep my guys busy, no matter what the cost,” has been replaced with business-minded individuals.

The shift in operating perceptions from “busy” contractors to “strategically performing” contractors has led to detailed analysis of company financials and balance sheets, as well as a more identified need for training and marketing investments. The list of financial and operational metrics analyzed grows longer, and while most of them are relevant to a contractor’s performance, the thoughtful chief executive cannot help but ask, “Is something being overlooked?” That something may be organizational structure.

Organizational structure is not often lumped in with the analysis of a contractor’s balance sheet. Perhaps it should be. Contractors are inevitably looking to turn a profit through their businesses, and any metric that may have an influence on their profit should be evaluated. Questions such as: “Is this the structure for my company?” and “Is there a better way to do this?” need to be asked. (See Exhibit 1.) Organizational structures are unique to the contractor organization and may be exactly what a contractor has been overlooking.
The Importance of Structure

Organizational structure, often overlooked or relegated to the back of many employees’ minds, is the backbone of any operating company. Organizational structures should not be random and must adapt with changes in the business environment. FMI Quarterly previously examined differing viewpoints of strategic organization within the construction industry (“Opposing Viewpoints: Strategic Organization,” 2003, Issue 3) and acknowledges that, in most cases, structure will follow strategy. Contractors who achieve their strategies and adapt to their changing competitive marketplace become more efficient, more productive and usually more profitable.

Organizational structure can be thought of as: (1) the grouping of people into functions or departments; (2) the reporting relationships among people and departments; and (3) the systems to ensure coordination and integration of activities both horizontally and vertically.\(^1\) Organizational structure provides a framework for the company or organization. It influences several key business areas:

- Communication between company branches or parallel operating groups is essential to develop a successful company. Organizational structure facilitates this communication.
- Definition of individual and group roles and responsibilities can make the difference between dedicated employees and a low retention/high attrition rate within an already dry labor pool. Organizational structure defines these roles.
- Management of employee, customer and company expectations may be the difference between a profitable company and a bankrupt company. Organizational structure manages these expectations.

While it’s not the most glamorous piece of a successful company’s “profitability puzzle,” organizational structure should not be tossed aside. Without all the pieces to the puzzle, the picture will never be complete.

**Survey Methodology**

FMI began the study of organizational structures in the construction industry by completing a survey of national top-performing general contractors and specialty contractors. Fifty-two general contractors responded to the survey and 71 specialty

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<table>
<thead>
<tr>
<th>Issues to Analyze</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are customers satisfied with your service level?</td>
</tr>
<tr>
<td>Can you keep up with your competitors?</td>
</tr>
<tr>
<td>Do employees have the appropriate level of information to make the right decisions?</td>
</tr>
<tr>
<td>Do information and knowledge flow effectively from top to bottom, bottom to top and division to division?</td>
</tr>
<tr>
<td>Would your direct reports continue to operate if you were not there?</td>
</tr>
<tr>
<td>Could you change your organizational structure if you wanted to?</td>
</tr>
</tbody>
</table>

Source: FMI, Contractor Performance Management
contractors responded, for a total response of 123 contractors. The survey questionnaire contained five questions aimed at identifying a firm’s process for obtaining work, performing work, profitability and organization. Exhibit 2 shows available survey choices for each question. Additional company characteristics (age, revenue, employee size) were obtained from publicly available literature and company-specific marketing material (see Exhibit 3).

Analysis of survey results is reported here. General statistics about organizational structures that are prevalent in the construction industry, as well as broad profiles for companies operating within each organizational structure, are included.

Ideally, a properly organized company could be identified by its above-industry-average profitability. Through profitability comparisons between contractors operating with different organizational structures, the survey examined the relationship between profitability ties and organization structure. Profitability for both general and specialty contractors was compared against RMA-reported averages. Reported “above average” and “below average” profit ranges were identified and applied across all survey responses. Exhibit 4 shows that more than 80% of companies operating under a matrix organizational structure (explained later) have realized above industry-average profitability, and 80% of companies with a functional organizational structure are performing below industry-average profitability.
ORGANIZATIONAL STRUCTURE DEFINED

Organizational structure varies across the construction industry, and each structure has pros and cons. Each structure falls somewhere within the spectrum of the “centralized” operations of a functional structure and the “decentralized” operations of a divisional structure. The following definitions of divisional, matrix, project and functional organizations provide a brief description of the structure as well as the profiled company characteristics for each structure.

DIVISIONAL STRUCTURE

For nearly a century, beginning with The DuPont Company and General Motors, organizations have grouped activities along business and product lines. Individual business/product divisions developed as diversification increased. It became increasingly difficult for an executive of a large, multi-business corporation to manage all product lines and business divisions. In response to this dilemma, the general manager role was created to wield authority over individual business units, and the divisional structure emerged.

Divisional organizations are separated into business units that operate as self-contained profit centers and are organized around the functional/process departments and geographic units that best suit the business's strategy, key activities and operating requirements (see Exhibit 5). Divisional organizations have a high coordination of functions within the business units. Low centralization allows business units to react quickly to environmental changes. The general or business manager is in charge of a business unit and responsible for creating and implementing a business strategy. Since managers control all basic functions, they can develop a wide array of skills.

A negative, potential consequence of this independent, stand-alone structure is a lack of communication between divisions. For example, no formal structures may
Many organizations fall somewhere between a fully functional and fully project organizational structure.

be in place to transfer or share information between business units. In addition, this lack of coordination can cause the organization to lose some economies of scale by duplicating activities between headquarters and divisions. Some divisions may have insufficient management capabilities, hindering profitability.

Division rivalries and competition for resources and power are additional potential consequences of this structure. Employees may communicate well within their group, but are hesitant to collaborate with those outside their group. Independent business managers may become too focused on their own divisions and lose sight of the company’s best interests. Business managers may resist being held accountable for activities and outcomes outside their division’s locus of control.

To combat these rivalries and barriers to communication, organizations may develop incentive programs that reward business managers for working together. Also, interdivisional teams may be formed that include individuals from the various divisions and encourage skill and knowledge transfer between units. Finally, headquarters may centralize certain functions such as the human resources department or a corporate sales force.

**MATRIX STRUCTURE**

Many organizations fall somewhere between a fully functional and fully project organizational structure. The matrix structure is considered a hybrid of functional and project structures. In a matrix organization, there are cross-functional teams with multiple channels of command and multiple sources of performance and reward (see Exhibit 6). Project teams combine skilled individuals from various parts of the organization.

The key feature of the matrix is that authority for a project and authority for a function are intertwined to form a matrix or grid. Employees report to both a functional manager and a project manager, and both managers share the decision-making responsibilities. The matrix structure has low centralization and fosters strong horizontal communication.

Matrix organizations grew as business strategies began to create a simultaneous need for both project managers and functional managers. This shared power structure balances strategic objectives with operational priorities and allocates
resources based on what is best overall for the organization. The matrix structure is best suited for companies in complex external environments with multiple demands. Companies that have used matrix structures to fit their business strategies include General Electric, Texas Instruments, Citibank, Shell Oil, Turner Construction, Bechtel, Boeing and Dow Chemical.

The main disadvantage of the matrix structure is a sense of confusion that can result from its “two-boss system.” It can be a complex structure, and employees may become frustrated by unclear reporting paths. Employee confusion and frustration, known as “matrix muddle,” can lead to communication barriers that may result in wasted time and energy. Slower decision making can occur when business requires people to communicate and coordinate activities with others in various functional areas. Extra time may be needed to network through functional bureaucracies.

**PROJECT**

Both general contractors and specialty contractors gravitate toward a project-based organizational structure over any other structure type. The idea that employees will report to one supervisor for the duration of a single project and possibly switch supervisors with the commencement of a future project forms the basis of the project structure (see Exhibit 7).

Such a structure identifies itself with a single point of contact (the project manager) that can control each individual project and foster increased horizontal communications between like-acting teams. A single-source contact can dramatically decrease redundancies in the communication chain and potentially increase efficiency. Since a newly formed group will staff each project, a higher level of accountability and responsibility can effectively be delegated to all participants upon beginning a project.

However, project-based organizations are not without their own hurdles. One such hurdle is the duplicity of many staffed positions. To effectively staff multiple concurrent projects, a company must employ multiple project managers able to lead each

<table>
<thead>
<tr>
<th>Exhibit 7</th>
<th>Project Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specialty</strong></td>
<td><strong>GC/CM</strong></td>
</tr>
<tr>
<td>Age</td>
<td>26-50 years</td>
</tr>
<tr>
<td>Revenue</td>
<td>$25-$50MM</td>
</tr>
<tr>
<td>Work Performance</td>
<td>DBB</td>
</tr>
<tr>
<td>Bid Type</td>
<td>Select Bid</td>
</tr>
<tr>
<td>Location</td>
<td>Midwest</td>
</tr>
<tr>
<td>Employee Size</td>
<td>100-250</td>
</tr>
</tbody>
</table>
team, as well as staff a larger pool of skilled laborers or field staff. While this model is not impossible to do, and is, in fact, quite popular among many in the construction industry, future labor concerns may limit growth opportunities of a project-oriented company. Additional human resources drive up a company’s cost structure as well.

**FUNCTIONAL**

A functional organizational structure is grouped by functional areas within a company, as opposed to individual product lines as in a divisional structure. Functional organizations offer a highly centralized organization, often with a core business or product (see Exhibit 8).

Organized around a strong, simple vertical chain of communication, functional structures represent efficiently run businesses that have eliminated the redundancy of functions across all groups, compared to a divisional structure. Centralized operations can benefit a company’s actions in numerous ways, including:

- Shared “best practices”
- Business planning or strategic planning
- Accounting, estimating and project communication procedures and software

For example, best practices in a functional structure, revolving around pre-construction planning and equipment utilization, could be deployed to all necessary subsidiaries or geographic locations to maximize revenue or profitability. The ability to transfer best practices or other shared resources becomes more difficult as a company’s structure becomes decentralized.

A simple vertical chain of command allows for a high specialization among tasks. Such specialization can foster a higher degree of expertise to develop and continue to maximize efficiencies throughout an organization. The high specialization and centralization inherent in a functional structure reigns in each functional group’s control, narrowing its control and responsibility.

### Exhibit 8

**Functional Profile**

<table>
<thead>
<tr>
<th>Specialty</th>
<th>GC/CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>&gt;26 years</td>
</tr>
<tr>
<td>Revenue</td>
<td>&lt;$25MM</td>
</tr>
<tr>
<td>Work Performance</td>
<td>DBB</td>
</tr>
<tr>
<td>Bid Type</td>
<td>Select Bid</td>
</tr>
<tr>
<td>Location</td>
<td>West</td>
</tr>
<tr>
<td>Employee Size</td>
<td>100-250</td>
</tr>
</tbody>
</table>

**Potential “Best Practices” utilized by functional or centralized structures**

- Zero-injury workplace
- Pre-construction planning
- Daily planning at crew level
- Production feedback to managers
- Post-job reviews
- Standard change-order practices
- Equipment utilization
- Training

Source: FMI, Opposing Viewpoints: Strategic Organization, 2003
Functional organizations may struggle with communication between each functional group and, as such, identifying responsibility for failures or successes becomes difficult. Accountability issues and interdepartmental conflicts may become problematic. Unlike other organizational structures with organic characteristics, a functional system maintains strict mechanistic operations, resulting in a lack of flexibility and a potential “blinders” effect where delivery of, or response to, new ideas is not eagerly acknowledged.

Well-run functional companies must balance their lack of flexibility with the potential synergies that arise through centralized functions at a corporate level.

**SURVEY RESULTS**

The purpose of this research study was to examine the relationship between contractor characteristics, such as company age, revenue, work performance, bid type, geographic location and number of employees, and organizational structure. Could specific company characteristics suggest an optimal organizational structure?

Another purpose of this study was to search for a relationship between organizational structure and profitability. An analysis of our survey findings reveals that there is a distinct company profile for each organizational structure. In addition, certain company characteristics increase the probability that a company will have a particular structure. Not only does a profile emerge, but within each structure category, there is a division between above-average and below-average profitability reported by contractors. Taken a step further, we suggest that a contractor performing below average may improve its profitability by changing its organizational structure.

Survey results suggest that for general contractors, company age and number of employees are the most influential factors of organizational structure and should be considered when evaluating a company’s structure. Interestingly, for specialty contractors the relationship between age and organizational structure is not as strong, but instead company location and number of employees are the most influential.

We compared company characteristics within each organizational structure type and discovered a distinct split between above- and below-average performing companies. For example, an above-average performing general contractor with a divisional structure is on average much younger and smaller than its below-average counterpart. As previously mentioned, a weakness of divisional
companies is a lack of communication between divisions. The larger the company, the more chance there is for miscommunication between divisions. There is also a higher probability of duplicating activities between divisions and headquarters, and greater potential for wasted time and resources.

Our survey results also suggest that a below-average performing general contractor with a divisional structure may improve its performance by switching to a project structure. We found that the characteristics of a below-average performing divisional structure company closely fit the characteristics of an above-average, project-structured general contractor. Both profiles show an average general contractor that is 35 to 50 years old with revenue greater than $600 million and more than 450 employees. The project structure may be a better fit for a general contractor that is larger and more established. Unlike the divisional manager, a project manager that acts as a single-source contact across divisions can decrease redundancies in the communication chain and potentially increase efficiency.

In addition, we found that a below-average performing general contractor with a project structure is older than the above-average project-based general contractor, but smaller in both company revenue and employee size (see Exhibit 9). The project structure requires the general contractor to have multiple project managers

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**Exhibit 9**

**Organizational Structure Profiles:** Above- and Below-Average Profitability Profiles for GC/CM

<table>
<thead>
<tr>
<th>General Contractor/Construction Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Divisional (25)</strong></td>
</tr>
<tr>
<td><strong>Profit</strong></td>
</tr>
<tr>
<td>Above (8)</td>
</tr>
<tr>
<td>Below (7)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>29</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
</tr>
<tr>
<td>$246MM</td>
</tr>
<tr>
<td>$608MM</td>
</tr>
<tr>
<td><strong>Work Performance</strong></td>
</tr>
<tr>
<td>DBB</td>
</tr>
<tr>
<td>DBB</td>
</tr>
<tr>
<td><strong>Bid Type</strong></td>
</tr>
<tr>
<td>Neg</td>
</tr>
<tr>
<td>Neg Bid</td>
</tr>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td>South</td>
</tr>
<tr>
<td>South</td>
</tr>
<tr>
<td><strong>Employee Size</strong></td>
</tr>
<tr>
<td>385</td>
</tr>
<tr>
<td>460</td>
</tr>
</tbody>
</table>

| **Project (25)**                        |
| **Profit**                              |
| Above (16)                              |
| Below (9)                               |
| **Age**                                 |
| 34                                      |
| **Revenue**                             |
| $628MM                                  |
| $173MM                                  |
| **Work Performance**                    |
| DBB                                     |
| DBB                                     |
| **Bid Type**                            |
| Neg                                     |
| Neg Bid                                 |
| **Location**                            |
| NE and South                            |
| South                                   |
| **Employee Size**                       |
| 470                                     |
| 225                                     |

| **Functional (6)**                      |
| **Profit**                              |
| Above (1)                               |
| Below (4)                               |
| **Age**                                 |
| 50                                      |
| **Revenue**                             |
| $35MM                                   |
| $133MM                                  |
| **Work Performance**                    |
| DBB                                     |
| DBB                                     |
| **Bid Type**                            |
| Neg Bid                                 |
| Neg Bid                                 |
| **Location**                            |
| Midwest                                 |
| South and NE                            |
| **Employee Size**                       |
| 85                                      |
| 57                                      |

| **Matrix (5)**                          |
| **Profit**                              |
| Above (4)                               |
| Below (1)                               |
| **Age**                                 |
| 42                                      |
| **Revenue**                             |
| $189MM                                  |
| $470MM                                  |
| **Work Performance**                    |
| DBB                                     |
| DBB                                     |
| **Bid Type**                            |
| Neg Bid                                 |
| Neg Bid                                 |
| **Location**                            |
| West                                    |
| Midwest                                 |
| **Employee Size**                       |
| 270                                     |
| 350                                     |
and a larger pool of skilled labor or field staff to effectively staff multiple projects. Labor scarcity may limit the growth of a project-based company. The below-average profile of a project organization more closely fits that of an above-average matrix company. An under-performing project-based company may be more profitable changing to a matrix structure.

Our research indicates that the average general contractor with a matrix structure has 200 fewer employees than the project company. This smaller size may help to reduce the complexity and confusion that results from the matrix, “two-boss system.” On average, below-average project-based general contractors have 50% fewer employees than their above-average counterparts. Switching to a matrix structure may allow an under-performing general contractor with a project structure to benefit from its smaller size.

Organizational structure should be evaluated like any other metric in a construction company. A general contractor’s organizational structure is influenced by company characteristics, especially company age and employee size. Under-performing contractors experiencing low profit margins should perform an analysis of the fit between the company’s structure and its age, revenue, work performance, bid type, geographic location and employee size.

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