FMI Quarterly
2005 ISSUE 1

LEADING EXAMPLES

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FEATURES

This Quarter: Effective Leadership

Dear Reader:

Our theme this issue is Leadership. Making optimum use of our assets, large or small, is a matter of management and leadership. As long as much of our business success is dependent upon appropriate human behavior and action, effective leadership will be a fundamental organizational need. We hope that the material in this issue will be particularly helpful to you in furthering your own leadership skills as well as those of your team members. FMI's work in leader development is a rich source of information and experience.

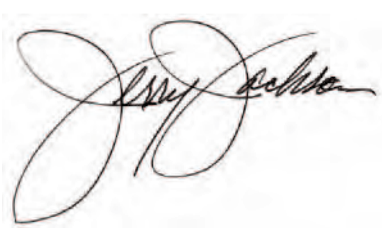
In this issue, you will find our interview with Scott Peterson and Erik Hoekstra, employees of Interstates Companies, as well as faculty members of our own Leadership Institute. FMI's Tom Alafat asks Scott and Eric how they develop leaders within their companies. In addition, Kevin Kilgore provides a how-to for *Building Business Acumen* in your leadership ranks. Providing career development to your next generation of leaders is a little like building a construction project; "You need a well-designed plan, a good foundation, sound materials, goals, and incentives to reach the top," Kilgore says. Then, Stuart Phoenix offers practical guidance for owning a construction business. Ownership strategy, valuation, management systems, merger and acquisition opportunities, and business succession are discussed. In addition, Tom Kort and Jason Baumgarten in our Tampa office, include a feature about *10 Reasons Why Incentive Compensation Plans Fail*, a hot industry issue.

This issue also contains a lively piece by David Sinodis and Training Specialist Kelley Chisholm on developing creativity for business gain. Ashley Robertson details how to use training as a tool for employee development and retention in *Develop Your Employees and Watch Them Go*. Our survey this issue, produced by Stevan Simich, reveals CFOs' views on the industry and the economy. Finally, Kelley Chisholm and Mike Putzer author the first in a series on best practices for the construction project manager. Mapping the content to the *Project Management Institute, Project Management Body of Knowledge (PMI® PMBOK)*, this article focuses on the importance of communication.

You will also find an op-ed piece contributed by *Associated Builders and Contractors* regarding merit shop issues. From time to time, FMI publishes opinion pieces by non-FMI persons with the primary purpose of providing a forum for strong opinions. If you have opinions that you would like to voice, we welcome your submittals. We reserve the right to determine the value to our readership of all submittals.

As always, if you have particular areas of interest on which you would like our focus, please let us know. Similarly, we always welcome your suggestions for improvements in the *FMI Quarterly*.

Sincerely,



Jerry Jackson
FMI Chairman
FMI Quarterly Publisher and Senior Editor

Opposing Viewpoints:
The Merit-Shop Philosophy

In this issue, Associated Builders and Contractors provides our op-ed piece regarding the merit-shop philosophy. From time to time, FMI publishes opinion pieces by non-FMI persons with the primary purpose of providing a forum for strong opinions; the publication of this piece does not necessarily represent the view held by FMI or its employees. If you have an opposing point-of-view, we welcome your submittal.

Merit-Shop Construction — Building America Today

By M. Kirk Pickerel

When considering the fast-paced, technologically driven construction industry of today, it is somewhat hard to fathom just how much this industry has changed during the past 50 years.

Today, the merit-shop philosophy is the dominant philosophy in the U.S. construction industry. This philosophy reflects the free-enterprise foundation of the U.S. economy by supporting the right of all contractors to bid for and win work on any job regardless of whether their employees have chosen to join a labor union.

The transformation of the construction industry has been quite remarkable. In 1947, labor unions dominated the U.S. construction industry, with more than 85% of all construction workers belonging to a labor union (*Union Sourcebook*, 1985, Leo Troy and Neil Sheffin.) According to the U.S. Bureau of Labor Statistics (BLS), 2003, among the 7.1 million wage and salary workers in the construction industry, only 16% belonged to a labor union. So in a true reversal, 84% of all construction workers today choose not to join a union and instead, choose to work in a merit-shop setting.

> **When considering the fast-paced, technologically driven construction industry of today, it is somewhat hard to fathom just how much this industry has changed during the past 50 years.**

BLS union membership figures do not count the approximately two million U.S construction workers who are self-employed. If self-employed construction workers were included in BLS figures, the actual percentage of those in labor unions would likely be even lower than 16%.

As such, non-unionized firms build the majority of construction being put in place in the United States. According to Dr. Herb Northrup, professor emeritus of management at the University of Pennsylvania's Wharton School of Business, the open-shop share of the U.S. construction market has likely stabilized at 75% to 80% (*Government Union Review*, 2000, Northrup and Linda Alario.) This trend has been noted for years. In 1975, it was estimated that 50% to 60% of then current U.S. construction work was being built open shop (*Open Shop Construction*, 1975, Dr. Herb Northrup.)

THE RISE AND IMPACT OF ABC

Since its founding more than 50 years ago, the leader of the merit-shop construction movement has been *Associated Builders and Contractors* (ABC), a national association that today represents 23,000 merit-shop contractors, subcontractors, material suppliers, and related firms in 79 chapters across the United States. ABC's membership represents all specialties within the U.S. construction industry and is comprised primarily of firms that perform work in the industrial and commercial sectors.

The dramatic rise of ABC began in 1950 when seven contractors gathered in Baltimore, Md., to create an association based on the shared belief that construction projects should be awarded based on merit, to the most qualified and responsible low bidders. The courage and dedication of these pioneers caused the merit-shop philosophy to spread rapidly.

Today, ABC is recognized as one of the leading organizations representing America's business community and the U.S. construction industry. Listed among *Fortune* magazine's top 50 most influential national organizations, ABC is devoted to the advancement of the merit-shop construction philosophy.

> **Salaries and benefits are competitive, and the opportunities for success and advancement in the merit shop outshine the dated, time-based approach to the limited career ladder still employed in unions.**

THE GROWTH OF MERIT-SHOP CONSTRUCTION

But why has the merit-shop sector grown to dominate the U.S. construction industry since the 1950s?

There are several interrelated reasons.

Craft professionals are choosing to build careers in the merit shop instead of joining labor unions.

Today's construction workers have heard the union's pitch, but they simply aren't buying it. Salaries and benefits are competitive, and the opportunities for success and advancement in the merit shop outshine the dated, time-based approach to the limited career ladder still employed in unions. In the merit shop, it is easier to move up and own your own business. As BLS statistics show, more than four out of five U.S. construction workers today choose to work merit shop, and more workers leave unions to join the merit shop each year. Nothing speaks more loudly to the success of the merit shop than the fact that the outstanding craft professionals in the industry recognize the superior value of working in a merit-shop setting.

The merit-shop team approach to construction is better for owners, contractors, and craft professionals.

The merit shop takes a team approach to construction. Owners, contractors, and the construction workforce join together as a team to meet the construction needs of owners. This ensures safe, on-time, and on-budget construction. It creates a productive environment on the job site that rewards individuals based upon their contributions to the team.

In the merit shop, employees take pride in the company for which they work. They are not tied to an outside organization that may have interests different from the company. Their goal is the same as the firm's — to build the best project possible and meet the owners' needs.

The labor unions' loss of market share in the construction industry can, in part, be attributed to the fact that unions have alienated not only many owners, but also the general public with their history of schoolyard bully tactics and an aggressive, adversarial relationship on the job site. Strikes, pickets, walkouts, and boycotts are trademarks of only unionized construction job sites and unionized construction workers. Owners understand that they can avoid such negative and costly tactics by building their projects merit shop.

Unfortunately, many unions today still have the antiquated mindset that unless a project is built by a 100% union workforce, they will engage in strikes and boycotts on the project. This "my way or the highway" mentality does not work in the 21st century economy.

Merit-shop construction saves money for owners and taxpayers through open competition in construction contracting.

One of the key ways that the merit shop saves money is by fighting for free-market principles and open competition. Again, the merit-shop approach is quite simple; it is like Economics 101 — by increasing competition, you keep costs down.

Unions tend to drive up costs on construction projects, most notably when advocating and using union-only project labor agreements (PLA). A PLA is a pre-hire agreement that governs projects. If a non-unionized firm were to win a bid on a PLA-governed project, it would have to act as if it was a union firm for the remainder of the project — hiring workers through the union hiring hall, paying into union pension funds, adopting outdated union work rules, and requiring their employees to pay fees to the union.

Merit-shop firms seek to provide owners, whether they are private firms or taxpayers, with the best product at the best price. But labor unions today seek to use political connections to limit competition and to secure federal and state construction work at taxpayers' expense. PLAs drive up costs by limiting the number of bidders willing to participate and by incorporating outdated union work rules on the project.

In March 2003, The Beacon Hill Institute conducted a study of 126 school construction projects built in the Greater Boston area since 1995. The study concluded that union-only PLAs increased construction costs by more than 14%, or $18.83 per square foot. Potential savings from not including a union-only PLA on a school construction project, according to the Beacon Hill study, range from $1.88 million for a 100,000-square-foot structure to $5.6 million for a 300,000-square-foot structure. This study echoes similar findings from other government and independent studies.

The simple question is: Why would any government agency accede to one of these costly union-only PLAs? Unions secure PLAs by proffering the olive branch of "labor peace" if a state government, county commission, city council, or school board ensures that unions do not have to compete in the marketplace for work. This olive branch hardly conceals the iron hammer of threats to derail projects if the unions are not awarded a PLA. This borders on extortion, and it is an irresponsible way to award construction projects.

By contrast, open competition allows the market to control costs. Open competition also helps to protect local jobs. With fewer than one out of every five construction craftworkers in unions today, it is usually impossible for unions to staff massive PLA projects with local labor. Union "travelers" are then brought in from outside the local area to meet the labor needs.

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One of the Bush administration's first actions was to implement Executive Order 13202, which stipulates that neither the federal government, nor any agency acting with federal assistance shall require or prohibit construction contractors to sign union agreements as a condition of performing work on government construction projects. The executive order ends mandated union-only PLAs on federal construction projects as well as federally funded or assisted construction projects.

This order, which was challenged by the Building and Construction Trades Department of the AFL-CIO, was upheld by the U.S. Court of Appeals for the DC Circuit, a decision that was maintained when the U.S. Supreme Court denied certiorari in the case. This was a major victory for American taxpayers and construction workers.

Merit-shop construction saves money for owners and taxpayers through increased job-site efficiencies.

The merit-shop construction sector is innovative, technologically savvy, and flexible. Its well-trained, multi-skilled workforce is able to provide efficiencies not possible in today's union workforce with its tightly drawn jurisdictional boundaries.

One of the unique differences between the merit shop and union workforces is that merit-shop construction craft professionals are trained and skilled in a number of different construction trades, creating greater efficiencies on the job site.

In a March 1999 report, the University of Texas at Austin's Center for Construction Industry Studies noted that: "Cross-training and multi-skilling can reduce unit labor costs. Contracts that create flexible work rules on the job site promise productivity benefits as well. Barriers between trades have historically been a source of problems in construction. Reduction in the percent of the workforce comprised of organized labor and PLAs with remaining construction labor organizations have reduced this problem." (Burleson, 1997)

By contrast, today's construction unions use outdated and inefficient work rules. Unions still operate in a world where carpenters must wait on the electrical union to come by and plug in the electrical cords before they can start their power tools. In today's fast-paced construction environment such antiquated work rules would be comical were they not so costly. Unionized construction job sites are often marked by jurisdictional disputes, bickering, delays, and rising costs.

Even within labor unions, there is a growing realization that they must change. In a June 22, 2004, *Washington Post* article entitled, "Union Leader Urges AFL-CIO Reform," the article began: "The AFL-CIO has failed to keep up with the changing workplace and must be radically reinvigorated — or replaced — if the labor movement is to survive, the president of the nation's largest union said yesterday."

The *Washington Post* article went on to say that Andrew L. Stern, the president of the Service Employees International Union referred to in that quote, told AFL-CIO members at a national convention in San Francisco that "(o)ur employers have changed, our industries have changed, and the world has certainly changed, but the labor movement's structure and culture have sadly stayed the same." Union activists must "either transform the AFL-CIO or build something stronger that can really change workers' lives."

Such talk brings some hope that the labor movement has taken note of its decline in membership, loss of market share, and lack of competitiveness and may pursue internal changes. The merit shop has rejected the inefficiency, inflexibility, and job-site conflict that marks today's unionized job site, and it will serve the unions well if they re-examine their time-worn approach that has caused their market share to dwindle.

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The merit shop is dedicated to construction job-site safety.

Safety is a top priority for ABC and its member firms. ABC has established a national partnership with the Occupational Safety and Health Administration (OSHA), and ABC has also established 40 local OSHA partnerships through its chapters. ABC is also one of four national construction associations invited by OSHA to participate in the pilot OSHA Voluntary Protection Program (VPP) Challenge. This program recognizes construction firms that have safety management systems that exceed OSHA standards. In addition, ABC's Ohio Valley Chapter has been designated as an OSHA Training Institute.

ABC's safety programs are designed to save, protect, and enhance the lives of workers and the community. ABC members participate on national industry panels, including the OSHA Advisory Committee on Construction Safety and Health (ACCSH), Negotiating and Rulemaking committees (NegReg), American National Standards Institute (ANSI), and local safety councils.

ABC's own Safety Training and Evaluation Process (STEP) is a benchmarking program that recognizes the best companies in terms of safety practices. Each year, ABC hosts a national Safety Excellence Awards program to recognize the safest construction companies.

In addition, ABC has created bilingual safety products to assist the industry in working with the growing number of Hispanics entering the workforce, including a construction safety orientation video in Spanish, Safety Toolbox Talks for the job site in Spanish, an English-Spanish construction phrases dictionary, and an English-Spanish audio CD.

The National Safety Committee of ABC provides leadership and direction to ABC chapters and members on safety, environmental, and health issues.

Merit-shop training better meets the needs of today's construction industry.

Recruiting and educating the construction workforce of the future is crucial to the future of this growing industry. In fact, according to BLS, construction is the only goods-producing industry expected to create net new jobs through 2012.

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This raises important questions. How do we recruit and train the workforce of tomorrow? How do we convince that workforce to build a career in our industry?

Unions rely nearly exclusively on apprenticeship for training, and many ABC chapters and firms are also involved in apprenticeship training. While apprenticeship is one method to meet the future training needs of the construction industry, it is not the solution. In fact, of the nearly nine million workers in our industry today, only about 4% are apprentices. In its current form, apprenticeship is an outdated way to train construction workers.

ABC remains committed to both apprenticeship and other forms of craft training programs, but ABC believes it is time to examine the time-based approach of apprenticeship utilized by labor unions.

It is time to reinvent apprenticeship programs overall to offer shorter terms for achievement, multiple levels of skilled craftspersons certification, and flexible curriculum. The curriculum should include performance-based and task-oriented craft training, continuing classroom education, industry-sector specific training, and license-driven training.

Innovation is not new to ABC. In 1995, ABC and its members and partners created the National Center for Construction Education and Research (NCCER), now affiliated with the University of Florida's Rinker School of Building Construction. Today, the NCCER offers standardized curricula for more than 40 construction and construction-related crafts.

ABC provides craft, apprenticeship, safety, and management training through its network of 79 chapters nationwide. ABC also partners with colleges and universities and its student chapters at 44 U.S. colleges and universities to develop a new generation of leaders for the industry. And ABC's www.trytools.org is teaching a new generation of elementary, middle, and high school students about the benefits of a career in construction.

The future of our industry depends upon the continued adoption of the free enterprise, open competition, merit-shop philosophy. This industry needs to welcome competition and innovation rather than clinging to the past.

The future of our industry depends upon the continued adoption of the free enterprise, open competition, merit-shop philosophy. This industry needs to welcome competition and innovation rather than clinging to the past. That is what the merit-shop sector of construction is about. We at ABC believe that the best days are ahead for this great industry, and we enthusiastically advocate a team approach to building America. ■

M. Kirk Pickerel *is the ABC president and CEO. For more information, visit www.abc.org.*

Departments

CONSTRUCTION MATERIALS

Equipment Purchase Decisions

Construction materials firms are extremely reliant on their equipment fleet for their overall financial success. Because of this fact, decisions regarding lease/purchase, big/small, or new/used can be among the most difficult for company executives to make. However, it is rare that we find a formal decision making process in place. Rather, it is more common to find what is termed a "corporate philosophy" regarding equipment decisions. Example of a corporate philosophy include statements such as, "We only buy used," or "We always purchase and never lease." Analysis to support these types of philosophies are generally rare, dated, or non-existent. Is this sound business decision making in an ever-changing world? If your answer is "No," or if this has given you reason to rethink your philosophy, here is our advice in development of a decision-making process.

The first element to consider in equipment purchase is the overall financial health of your company. As much as you would like to purchase new equipment, it may be that you do not have the financial strength to consider it. Furthermore, if your company's financial health is poor, the cost of borrowing or leasing may also be impacted. This is often the case in new organizations that are just starting out. If this is your particular situation, then, you should focus on increasing your balance sheet before formalizing your equipment purchase procedures.

Let's assume that your firm has the financial health to purchase either new or used equipment and can afford to purchase or lease. Given this, the development of a decision process should first start with a few basic operational parameters regarding the piece of equipment in question:

- Is the machine that's being used in direct production, or is it a support piece? The key distinction is if work would stop if the piece of equipment failed, e.g. a primary crusher that fails in an aggregates quarry. Direct production equipment generally favors a new purchase, and support equipment generally favors used or rent as needed purchases.
- How many hours will the machine run during the year? Higher machine hours favors new; fewer hours favors used.
- Does your firm perform its own maintenance and repairs, or is it

outsourced to a third party? If you self-perform maintenance, this tends to favor used equipment. If you outsource maintenance and overhaul to a dealer, then that would typically favor new or a near new "manufacturer-certified" machine.
- Is this a widely available machine, or a highly specialized, custom-manufactured unit? Widely available tends to favor used and leasing, and conversely, highly specialized tends towards new and purchase.
- Is this a one-off item in your fleet or one of several? One-off tends to favor direct purchase, and one of several may favor leasing.

Let's look at two different examples to further illustrate these decisions. The first example is the purchase of an ordinary duty backhoe in a sand and gravel operation. The backhoe is used as support equipment for small projects such as digging drainage ditches, stockpile clean-up, etc. Hours used per year are estimated at 1,500. Our quarry has its own maintenance facility and is capable of general maintenance, but not significant overhauls. The type of backhoe required is available through several suppliers and is widely available in the used equipment markets. The last consideration point is the fact that it is the only backhoe at the quarry. Based upon these operational factors, it would indicate that either a used backhoe in reasonable condition or a leased backhoe would be appropriate for this situation.

Construction materials firms are extremely reliant on their equipment fleet for their overall financial success.

In the second example, we look at a yard loader. This loader is used to fill customers' trucks in the yard. This is a direct production unit, which will be utilized approximately 2,500 to 3,000 hours per year. The size and type of unit we need is available from three worldwide manufacturers; however, there is generally a one- to three-month lead-time required. It is our only yard loader. Clearly, in this instance, the operational parameters tend to favor the direct purchase or lease of a new unit.

The next series of analysis involves the available financing options for the equipment. The questions that need to be answered include the following:

- Is leasing available on the unit? If so, is it a capital lease or an operational lease?
- What are the leasing terms?
- What direct financing terms are available to our company?
- Do we presently have the funds to purchase the equipment directly?

Leasing comes in two forms. Capital leases require the lessee to capitalize all payments and depreciate the leased equipment. Alternative to a capital lease is an operating or traditional lease where the lessee deducts the lease payments as expense. The other key distinction is that in a capital lease, the lessee will acquire the title to the equipment at the end of the lease rather than turning the equipment back at the end of an operating lease.

The other financial option to analyze is a direct purchase. In a direct purchase situation, the items can be financed directly with asset-based lending or purchased with available corporate funds.

All available financial alternatives should be analyzed to determine the one with the least cost. To perform this analysis you must compare the projected financial cost of each available alternative. For a comparison of new vs. used, the following items need to be included in the analysis:

- Direct purchase cost, including all applicable taxes and fees
- Projected equipment life and estimated salvage values
- Annual operating and maintenance costs — include estimated maintenance shop labor hours
- Applicable depreciation schedule and effective tax rates
- Estimated cost-of-capital for your company
- Projected mechanical availability (for direct production equipment).

For analysis of lease vs. purchase, you should also include the following parameters in addition to the above factors:

- Lease type (capital or operating)
- Lease term
- Usage allowance and estimated overage charges, if applicable.

The following example uses this data to determine a projected cost stream and to create a discounted cash flow cost analysis. (See Exhibit 1.)

EXAMPLE

A company is considering purchasing a new piece of equipment for $100,000 or a similar used item for $70,000. It is anticipated that the annual maintenance cost on the new piece of equipment will be $6,000; the used machine maintenance cost will be $7,200 annually. The asset will be depreciated using a five-year MACRS tax depreciation schedule, and the corporate tax rate is 35%.

Exhibit 1

Analysis of Purchase vs. Lease

Dollars

NEW MACHINE	Year 1	2	3	4	5	6	7
Purchase Cost/Salvage	-100,000						25,000
Operating Expense	-6,000	-6,000	-6,000	-6,000	-6,000	-6,000	—
Depreciation Expense	-20,000	-32,000	-19,200	-11,520	-11,520	-5,760	—
Total Expenses	-26,000	-38,000	-25,200	-17,520	-17,520	-11,760	—
Tax @ 35%	9,100	13,300	8,820	6,132	6,132	4,116	-8,750
Net Expense After Tax	-16,900	-24,700	-16,380	-11,388	-11,388	-7,644	-8,750
Addback Depreciation	20,000	32,000	19,200	11,520	11,520	5,760	—
Net Cash Flow	-96,900	7,300	2,820	132	132	-1,884	16,250
Net Present Cost @ 10%:	**-72,492**						

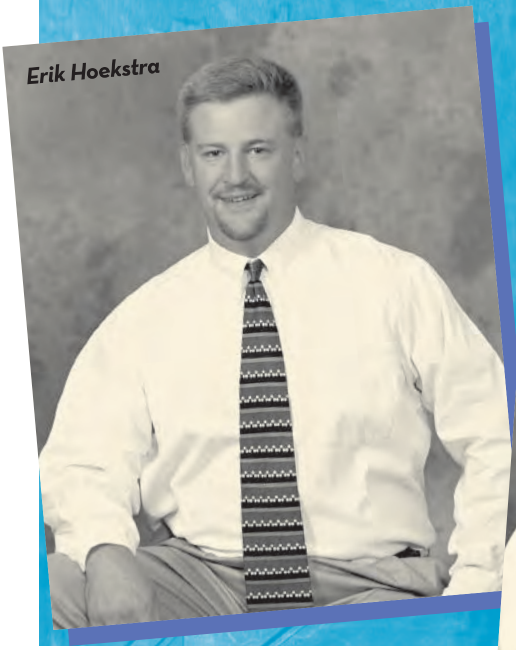
USED MACHINE	Year 1	2	3	4	5	6	7
Purchase Cost/Salvage	-70,000						5,000
Operating Expense	-7,200	-7,200	-7,200	-7,200	-7,200	-7,200	—
Depreciation Expense	-14,000	-22,400	-13,440	-8,064	-8,064	-4,032	—
Total Expenses	-21,200	-29,600	-20,640	-15,264	-15,264	-11,232	—
Tax @ 35%	7,420	10,360	7,224	5,342	5,342	3,931	-1,750
Net Expense After Tax	-13,780	-19,240	-13,416	-9,922	-9,922	-7,301	-1,750
Addback Depreciation	14,000	22,400	13,440	8,064	8,064	4,032	—
Net Cash Flow	-69,780	3,160	24	-1,858	-1,858	-3,269	3,250
Net Present Cost @ 10%:	**-63,406**						

The company plans on replacing the machine in six years, and at that time, the salvage of the new machine is projected to be $25,000 and the used machine $5,000. The cost-of-capital for the firm is 10%. Finally, no mechanical availability difference between the new and used machine is anticipated.

In this example, the used machine has the lowest net cost.

In summary, there is no "one size fits all" equipment decision matrix. However, with a focused effort, you can create a decision model specific to your firm that will yield better equipment purchase decisions and improved profitability in the long term. ■

Will Hill *is a senior associate with FMI's Investment Banking group. He may be reached at 303.398.7237 or by e-mail at whill@fminet.com*



Quarterly Interview

Developing Leaders: Interstates Companies

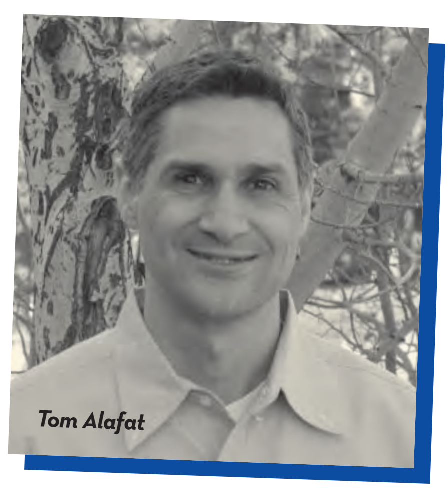
*FMI's **Tom Alafat** interviews **Erik Hoekstra** and **Scott Peterson** from **Interstates Companies** to glean how they develop leaders within their companies. Their story includes overcoming the challenge of suddenly losing their CEO to unforeseen medical issues. Fortunately, they began the process of leader development several years prior to their tragic loss, and they were able to fill the vacuum created by the loss of their leader. Since that time, **Scott and Erik have emerged as leaders in their companies as well as become faculty members at FMI's Leadership Institute.***

FMI: Erik and Scott, tell us a little bit about your companies and your roles within them.

Erik: Interstates Companies is a group of four companies in the industrial construction field. We do electrical construction, electrical engineering, control systems automation, and instrumentation. We are a 52-year-old privately held company with 350 or so employees. We operate nationally as a merit-shop contractor. Scott's role is the president of the holding company as well as the CFO, and my role is chief development officer, which entails human resources work as well as leadership development.

FMI: Explain to our readers your exposure to FMI in terms of consulting work, how you became familiar with FMI, and specifically, your experience with the Leadership Institute.

Scott: When Jim Franken became the CEO, we were a small company, and we wanted to grow and set a new direction for the company. We engaged FMI to help us with core ideology, mission identification, vision and values development, and the development of our first-ever strategic plan. That was in 1995 and 1996.



Tom Alafat

By mid-1996, we had finished the process, and we started to implement our strategic plan. At that time, we were working with Ken Roper, Kevin Kilgore, and Ron Magnus. We started to hear more about the Leadership Institute that FMI was developing in 1997 as we were growing in our relationship with FMI. We started to send senior leaders to the Leadership Institute in 1997, and we've sent a couple of people every year since then. Now, all of our senior leaders have gone to FMI's Leadership Institute as part of the organization's development and leadership effort. Through the years, we started building a very strong, well-rounded relationship with FMI in consulting and leadership development. Erik then came on board in 2000.

FMI: Scott, why did you want to become a faculty member with FMI's Leadership Institute?

Scott: I wanted to be a faculty member because it reinforces leadership principles for me personally and helps me bring these back to our companies so that I can become a better leader. Becoming a leader is a journey, not just a one-day, two-day, or a week event; you need certain events to stimulate you in order for you to really identify what kind of a leader you are, to increase self-awareness of your skill sets, and to find your niche as a leader. The Leadership Institute also helps me give back to the construction industry, and it aligns with my personal mission statement of having a positive impact on persons and organizations that are important to me. FMI has really helped us identify our direction as well as elevate our current leadership development.

FMI: Is that the most fulfilling aspect for you?

Scott: Giving back is one of the biggest aspects. Another aspect is the relationship building that happens. You meet so many different leaders with different qualities, and it really helps you to gain a broad perspective of how various people run and build their companies. It lets you appreciate different leaders and leadership styles, and it is amazing the bonding that goes on at the Leadership Institute with each cohort that goes through it. In a short week, you become very good friends, and many individuals stay in touch afterwards.

FMI: So each time you're at the Institute, it becomes a learning opportunity for you as well?

Scott: Right.

Interstates Companies

FMI: What about you Erik?

Erik: In terms of the Leadership Institute, I'd echo much of what Scott has said. It's very fulfilling to watch and participate with people as they really become transformed throughout the week. In construction, we as an industry need to "raise all boats" in terms of leadership. It's a great industry, and at the same time, we have many opportunities to enhance our leadership within the work of building the country's infrastructure and building facilities for people. It's very fulfilling to participate and watch. It helps me reinforce the lessons of my own leadership, which, as Scott said, is a continuing journey.

I got involved in the Institute as a participant, and one of the faculty there was the CEO of a construction company. I really felt one of the reasons that the Institute was so credible was because of the experience that this CEO brought to the table. I thought to myself, "Wow, wouldn't that be great if our CEO could participate in that. I think he would enjoy it as well as add a lot of value." Well, unfortunately our CEO passed away shortly thereafter and was never able to do it. However, I always thought that it would be a great opportunity for some of our senior leaders. With my background in teaching prior to coming into the human resources role of this company, I asked if it might be possible, and indeed, FMI was looking for industry people who were running companies to be a part of the Institute. Again, I think that's what gives it so much credibility. I've heard this from other participants — they really feel this is a strong aspect of the Institute. While all FMI consultants have some background in the industry, to see somebody who is actually running a company at the Institute is a very valuable piece of the experience. Scott and I are blessed to be able to participate.

It's a great industry, and at the same time, we have many opportunities to enhance our leadership within the work of building the country's infrastructure and building facilities for people. — ERIK

FMI: How did the two of you handle the death of Jim, your CEO, and did your leadership training play any role in that transition period and what you had to do?

Erik: I'll let Scott speak to the history with Jim as he spent many more years with him than I did, but if I look back and around the industry, our company in the 1980s and 1990s was very similar to many present companies. We had a successful company of about 80 employees; we were a very strong and well-known company in the industry. But all the decisions were going through one person or a very tight group of people. When Jim took over the company in 1994, he started building leaders in a variety of places in the company, and by the time he passed away in 2001, we probably had 25 people that I would identify as leaders from the standpoint of making things happen in various places in our company — individuals that made decisions and understood what leadership is about. When Jim passed on November 13, two months after the national tragedy of 9/11/01, we were probably in our most vulnerable position — both externally from the economy and internally, having lost our CEO. However, I think that his passing couldn't have come at a better time because he had put leaders in place in our company. Had the same thing happened 10 years earlier when there really weren't enough other company leaders, we would have been much more vulnerable. We were able to get through it, and knowing that he had asked us to be leaders in our areas helped me personally. He had looked each one of us in the eye and said, "Hey, I expect you to lead."

Developing leaders is a long process, and if we hadn't started when we did, it would have been a difficult process to replace a young CEO. — SCOTT

Scott: Developing leaders is a long process, and if we hadn't started when we did, it would have been a difficult process to replace a young CEO. Jim was 48 when he passed away. The good thing is that Jim and the leadership team had started the journey, and we had set a good foundation for an organization through our values and our core purpose. Also, having strong leaders with good self-awareness and an understanding of their strengths and weaknesses, made a big difference during that leadership transition. If we did not have that, it would have been a very trying time with which we might still be struggling. However, by developing leaders we were prepared for the worst, which with 9/11 was a good deal worse than we initially expected.

All of our customers were amazed at how well we communicated and how well we were leading at that

Leadership Institute *attendees perform a team-building exercise.*

time. Our employees were supportive; they understood our overall philosophy, and we confirmed that our direction hadn't changed even though our leadership had changed. We were heading towards having a stronger and more diverse leadership team, and those events just expedited the process. We were prepared as well as anyone could be for that, and a lot of that was due to the Leadership Institute. A large help came from making sure people knew their gifts and their strengths, making sure that we were giving people both positive feedback and change feedback to help them grow and reach their potential and, in turn, the company's potential.

FMI: Tell us how the leadership training you have received has affected how you run your business and how you've developed your own leaders. I know you have developed your own training curriculum internally. Tell us a little bit about those processes.

Erik: From the standpoint of a common vocabulary and a common understanding of what leadership is, sending many senior-level people to the Leadership Institute is a very helpful consolidation process. Everyone is speaking from the same idea of what leadership is and how it can be implemented. That's the first way the Institute can help. I think the Institute tries very hard to follow up with a variety of applications or action-planning steps for attendees to take at home. In fact, they remind you of those steps at several points after getting home from the Institute, and that's helped us. We could always do a better job, but we have tried to act on our plans.

From the standpoint of a common vocabulary and a common understanding of what leadership is, sending many senior-level people to the Leadership Institute is a very helpful consolidation process. — ERIK

FMI: So the Institute tries to make it more than just a training experience by transferring that training back to the workplace.

Erik: Exactly. Frankly, participants are going to get out of it what they put into it. In terms of, making sure they know why they're going to the Institute as well as when they get home, taking an extra step to work with a coach or mentor. That's not for everybody, but it can bring value. We've tried to bring people back and have them interact with people who have already been at the Institute, their senior leaders. Just today, we got an e-mail telling us that one of our young leaders with three years of project management experience will be taking over a regional office leadership position. By having this person available, we can take advantage of an opportunity and expand into this regional office. So leadership development just builds upon itself and gains momentum.

Scott: A lot of the benefit is increased business opportunities because you have those people on the bench. In our past, there are many opportunities that we ended up passing on because we had no one to run and lead them. It's frustrating when you see opportunities, but you don't know how you're going to implement them because nobody is there to take the ball and run. It's a continual process; I don't know that you can have too many leaders because the more leaders you have, the more they'll find opportunities in order to serve their customers better.

FMI: Has your experience with the Institute and being part of the faculty at the Institute affected or altered your interactions with other people?

Scott: It's had a tremendous impact on how I interact with other people. When I went through the Institute, I was the youngest person in our company on the leadership team by a good 15 years so everybody had a lot more experience than I did. With younger, high-potential leaders, a lot of times they end up deferring to people based on seniority, and the Leadership Institute helped solidify the idea that, as a leader, people are looking for you to give them the real information to make sure that they know when they've done something great and to give them positive feedback. But they are also looking for you to help them get better by giving them the change feedback and the opportunity for improvement so that they can improve and serve their customers and team members better. In that way, the Institute gave me more confidence to interact and be more assertive. I think many leaders sometimes fall for the temptation to go for harmony as opposed to positive confrontation and being real with people. Often, everyone can see someone making mistakes, but nobody wants to be assertive enough to help that person stop making the mistakes.

> **I think many leaders sometimes fall for the temptation to go for harmony as opposed to positive confrontation and being real with people. Often, everyone can see someone making mistakes, but nobody wants to be assertive enough to help that person stop making the mistakes.** — SCOTT

FMI: Can you think of any examples of when that happened in the last several years?

Erik: One of the people that leads one of our human resource functions recently came to me, closed the door, and said, "I really need to give you some feedback." The person went on to tell me that I had acted in such a way that wasn't living out our core values. I was running somebody over. I listened. It was hard. I said, "Thank you." Later that person e-mailed me to tell me that, "I was so nervous to come and tell you that, but I felt that I had to for the good of the company, and the way you handled it allowed me to give you that feedback." I would never have had that feedback, and I would have continued on in the behavior that was destructive to me, other people, and our companies, if we hadn't instituted the process of feedback. I can't say I'm perfectly open to that; I'm sure there are people who won't approach me. Nevertheless, that's one time where I knew I was being given a gift to be able to change my behavior. It may have taken me years to see the behavior in myself, but that person could see it almost immediately.

Assessment tools taken by attendees at the LI are reviewed by the LI staff and used to coach attendees.

FMI: That's a great example, and it's a testimony to the culture that you're building and the trust that had to be there for them to come and take that risk. What are you currently doing to create a culture of leaders and to have leaders develop other leaders?

Erik: We're a merit-shop contractor, and one of the things that the unions have done very well for years is to conduct training programs for craft people in the construction industry. There are avenues where merit-shop contractors can do that as well, but we're unique in that we travel all over the country. We've developed a craft technical training program at all of our job sites, but we've also put leadership aspects into that so that even the youngest craft professional just out of technical school is starting to hear about leadership very early on in his or her career. We see that doing that early in their careers avoids the problem of people becoming technically competent to a point that they're a journeyman or a great site construction person, but when the company asks them to become leaders of people, they don't understand what that means. By then, they have many habits that have become engrained, and it's really hard. We start very early in our craft training program so that later we don't have to "untrain" people when they start leading people. We've also taken that next tier of people that probably aren't ready to go to the Leadership Institute in terms of where they are in their careers and put them through a one-year program called "Excellence in Leadership." We put them through some of the aspects of what leadership is and ask them to go out and try some of those new things. In fact, one of those leaders is the person I mentioned earlier who is ready to take on our new regional office. Probably a year or two from now, he'll be at a point where the Leadership Institute will be very appropriate in terms of his career, and we may bring him to that as well. Our expectation is that those people will eventually be leaders and Leadership Institute participants as well.

Scott: We have senior leaders who are reporting to us. We talk to them about their own development, and we also talk to them about how they are developing and coaching the people that report directly to them, making sure that those people are developing not only from a technical side but also from a leadership perspective. We're trying to have our up-and-coming staff work on both technical skill development and leadership skill development and not wait until they are mid-career to begin to talk about the non-technical. It's also, like Erik said, to get those people to start thinking about leadership as integral to their jobs as opposed to separate. It's a journey that the sooner they start, the more likely they will reach their potential or become a great leader.

We're trying to have our up-and-coming staff work on both technical skill development and leader-ship skill development and not wait until they are mid-career to begin to talk about the non-technical. — SCOTT

FMI: Has the company done anything to formally train those senior leaders and develop future leaders? Does it happen naturally, or is there some modeling or training that takes place?

Scott: We have sent a couple of different leaders to FMI for coaching in developing leaders — both the Developing Exceptional Leaders program and some other sessions. This one-to-one interaction of coaching and developing is more purposeful. Those people then come back and help us formulate how to be good mentors and coaches for one another. We not only do this for the senior leadership team, but we've filtered that through the entire organization, and that's one of the things we've been focusing on in the last several years — coaching people because that's where a lot of the growth happens on the field of play of business. If you're not being coached, you do not understand where you can get better and what things you need to continue to do.

FMI: Scott, what's the biggest challenge you're facing in trying to lead well?

Scott: Balancing the vision of where we want the company to go in light of the things that we are doing well with the things that we are not doing well and understanding that the gap can be overcome through time and purposefulness. Also, it involves understanding that you really need to invest in your people and processes in order to ensure that the learning and growth is happening in your company. This focus ensures that we can reach our vision. It's balancing, looking at today vs. looking at tomorrow, not only from a marketplace perspective but also from a people perspective.

FMI: Erik, what's the biggest challenge you're facing in trying to lead well?

Erik: I've been given a new task recently of working on a new business unit. So for me, it's an emotional change from something I was very comfortable with — heading up the human resource services within our company — and going out into new, unchartered waters. It's very exciting and energizing, but I have to realize that I'm being stretched personally in this. I need to set direction for other people in new areas and contexts. I continue to be amazed when I look back to my years of 17 to 21 and how I thought I had developed. Then, when I look back to years 21 to 25 when I secured my first job out of college, I am surprised at how I thought I developed, and even with the last five years, I am amazed at how I've changed and developed. I can identify three different paradigm shifts or new plateaus. Getting through those transitions is almost like a snake that is growing and shedding an old skin to fit into a new one. I know I'm growing because I have to shed old skin, but sometimes there are growing pains associated with that process. Getting through those periods is probably one of my biggest challenges. I know that new challenges are out there, and I have to continue to grow and develop all the time. Getting through that period of uncertainty is the most difficult, and I'm in one of those periods right now.

I know I'm growing because I have to shed old skin, but sometimes there are growing pains associated with that process. Getting through those periods is probably one of my biggest challenges. — ERIK

Scott: Another challenge that occurred to me is that as people take on more responsibilities and ascend to higher positions in the company, it becomes really difficult to find people to tell you the truth about what's really going on, what you personally are doing well, and what you could be improving on. If you don't instill openness so people feel you are approachable, it is a scary thing because you are really flying blind. You don't know exactly what's going on in your company. That's a continual fear; if you don't instill openness in your leaders and people, you may never find the truth or see your current reality. That can really come back to haunt you.

A group attending* The Leadership Institute *shares common experiences and leadership challenges.

FMI: Sometimes when you are at the top of an organization, you have to go outside your organization to get feedback. Where do you seek out that kind of feedback?

Scott: Peer groups, mentoring relationships, coaching relationships, whether it's with a professional or just someone you trust. It's hard to give people that you are really close with that real feedback, and sometimes outside coaches or peer groups can do a better job than someone internally in your organization.

FMI: What is your leadership philosophy, and how does this translate into your decisions?

Erik: Together, Scott and I mapped out a purpose statement for our holding company a couple of years ago. I think that statement, serving people and organizations to reach their potential, combines both of our personal philosophies on leadership. This statement, while quite close to my personal mission statement, is also my leadership philosophy. I'm struggling with it personally since I realize I'll never fully arrive from a servant/leadership perspective. However, because of my faith, I see the servant/leadership metaphor as a very powerful one. The more I study about servant leadership, the more apparent it becomes that Robert Greenleaf was correct in writing that a leader really is one who serves. I guess that would sum up my leadership philosophy.

A year ago, I was trying to be a servant leader, but I really wasn't. Now, I'm getting closer along that journey. — ERIK

FMI: It's interesting that what you're talking about is not a technique; it's something more from the heart. It probably touches into the whole idea that Jim Collins talks about regarding identifying humility as a characteristic of a great leader. Is that right?

Erik: I think there's a lot to that, and while he didn't call it "servant leadership," I think if we really understand what Collins is talking about in terms of personal humility and professional will, we understand a lot about what Greenleaf and others were talking about. They're getting at the same things for sure, and I guess that somebody who wants to use servant leadership as a technique, but doesn't have the heart and worldview of being a servant, isn't going to be successful. By no means does that mean that I have arrived, but that's what I'm working on. A year ago, I was trying to be a servant-leader, but I really wasn't. Now, I'm getting closer along that journey.

Scott: My leadership philosophy is really the same. Possessing the heart of a servant-leader and focusing on others really frees you up to help others do great things. When you are interacting with people and other leaders, you can tell which ones are focused on themselves and the ones that are truly focused on other people. That's when you can really gauge their commitment. Leadership is really about people putting their heads, their hearts, their hands, and their whole being towards a common goal that will help your customers be successful, your companies be successful, and individuals be successful. Everyone wins by focusing on others.

Participants in FMI's Leadership Institute undergo a series of assessments designed to help with the development of their personal action plan.

Another thing is being vulnerable and interdependent with each other as leaders. For example, our leadership team, especially Erik and me, employ another philosophy that is co-leadership. We all have our specific skill set and core competencies with which we can complement each other. And there's no leader out there that's going to have core competency in everything. If you can co-lead with people and help each other, that's going to be a more powerful leadership message as a team. Our whole leadership team employs that, and I think that's important as a leader; you shouldn't lead all the time. You have to create opportunities for your less experienced leaders so that they can develop and practice leading. Identifying the best possible person to lead at that time and then leaning on those individuals is essential.

FMI: Scott and Erik, it is encouraging to see how you have integrated leader development at every level of your organization. The story of losing your CEO, Jim, at such an early age testifies to the need to develop leaders constantly within an organization. Fortunately, he and your leadership team had the wisdom to see the value of growing leaders long before his tragic death. You have both done an outstanding job leading your companies forward since that time. It is a privilege to have you on the Leadership Institute's faculty. ■

For more information about FMI's Leadership Institute, please contact Tom Alafat at 303.398.7209 or by e-mail at talafat@fminet.com.

How to Own a Construction Business

This article addresses how to own a construction business that will provide you with the best return, longevity, and an exit option when the time comes.

By Stuart Phoenix

Being an owner provides the opportunity for wealth creation and the ability to control your destiny. This article targets the business owner exploring how to own a business from creation to exit, how to build wealth, and how to exit the business. Ownership strategy, valuation, management systems, merger and acquisition opportunities, and business succession are discussed.

It is not hard to get into the construction business — a pick-up truck, laptop, and a low bid and you are started. Staying in the business, however, is harder, as proven by the experiences of some larger firms such as J. A. Jones, Encompass, Washington, and Atkinson. Getting out of a construction business is also not easy with most companies being sold to family or employees in some manner, often struggling into the next generation.

This article addresses how to own a construction business that will provide you with the best return, longevity, and an exit option when the time comes. It is based on FMI's experience working with construction firms in sales to third parties, employees, and families. While, there is no one single, right concept, there are structures and techniques that have stood the test of time.

What you are trying to accomplish while owning a construction firm — besides the satisfaction of ownership and desire to be part of the industry — is wealth creation. Following this notion, your ownership arc can be divided into three phases.

1. Wealth Creation — getting the business started, creating self employment, and sustaining profitability.
2. Wealth Management — Preserving and growing your business and personal wealth. Important considerations are:
   - Business management systems
   - Diversification — having investments outside the business
   - Risk management — personal and business.
3. Exit Strategy
   - Retirement planning — financial and lifestyle
   - Realization of the value of the business you have created
   - Estate planning — what ultimately happens to the wealth you have created and managed?

Decisions made in Phases 1 and 2 when starting and growing the business affect your eventual exit strategy. FMI is often approached to address exit strategy when an owner needs out. Successful owners are often more occupied with becoming successful than planning what to do after they become successful. A little planning during Phases 1 and 2, however, can go a long way. It therefore makes sense to think through your strategy as early as you can.

Successful owners are often more occupied with becoming successful than planning what to do after they become successful.

Before we delve further into business-succession planning, let's review some fundamentals of our industry.

FUNDAMENTALS OF CONTRACTING

Contracting is a tough business, as are many businesses. Here are a few observations from our work with contractors:

Contracting is fragmented for a reason.

The ENR 400 performs less than 50% of construction in the United States. Besides the top 400, there are hundreds of thousands of contractors. Some of the reasons the industry is so fragmented include:

- Geography — The ability to travel is limited for most contractors.
- Lack of economies of scale — Contractors don't necessarily gain efficiencies or buying power with size.
- Propensity of the business of larger firms to unravel — As contractors grow, they often lose focus and discipline at the project level.

A construction company is principally a group of people who know how to procure, perform, and get paid for construction services. Take a few top people out of most construction companies, and the company loses focus quickly. Key people can lose motivation, go to competitors, or even start new competitors. So the phrase, "Our people are our greatest asset," is particularly true for construction companies.

Market opportunities come in waves.

Five years is an eternity for business planning in the contracting business. It is not so much that the technology changes, but what is built does. Construction may grow overall with gross domestic product, but within the market for construction, sectors are going up and down, sometimes radically. Therefore, a contractor must be able to change with the marketplace.

Contractors do not do very well in downturns.

Construction suffered severe downturns in the early 1980s as interest rates soared, in the early 1990s in the wake of the savings and loan crisis, and again in the early 2000s following the burst of the dot-com bubble, terrorist attacks, and general downturn in the economy. These downturns bankrupted many developers and contractors. The economy appears to be back in a growth mode but expectations are that in a few years another downturn will occur. One sign of a savvy contractor is the ability to get small when economic conditions call for it. Other considerations for contractors in downturns include:

- Falling backlogs cause contractors to reduce margins.
- Contractors may lay off people needed in the subsequent upturn.
- Banks and bonding companies cyclically embrace, then later turn away from the industry.

These fundamentals dictate the importance of conservatism in management and ownership strategy to deal with changing economies and opportunities.

OWNERSHIP STRATEGY FOR A CONTRACTOR

Combining the business owner's desire for wealth creation with the fundamentals of the industry, our prejudice is that a contracting business should be owned by those who drive the business vs. nonworking or passive "investors."

The two most successful models of ownership, in our experience, are a single shareholder and multi-private shareholders. Most companies start with a single shareholder. There is no structure quite as efficient as a single owner who makes all the decisions. It works very well as long as the owner "can touch everything," including all projects and people, and the owner makes "good" decisions. The downside of single ownership is the owner is the limiting factor. Growth is limited by the owner's ability to effectively work through other people and generate capital.

Also with all major decisions being made by an individual, it makes selling or transferring the business difficult because the value of the company is in the individual. So if the strategy is limit growth, make as much money as you can, and shut it down when done, this strategy can work very well. In fact, this is precisely what many small contractors do.

The multi-private ownership structure usually comes from either two or more people coming together to start a business or a business owner bringing in partners or family as part of a succession strategy. Our experience is that some entrepreneurs like having partners and some avoid it at all costs.

We have seen both work and the success of either are dependent on the individuals. A partnership in business is like a marriage, often easy to get into and hard to get out of. If they work, they are great; if they do not, they can be messy. There are advantages to having multiple owners to provide greater "ownership brain power" and additional capital. Our advice is to follow your own instincts about yourself as to whether single ownership or partnerships make sense for you. Business succession plans often dictate selling to multiple employees and/or family members to make the transition financially feasible.

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Second and third generation companies often sustain themselves as private companies by adopting an expansive employee-ownership model. Engineering firms often evolve this way emulating other professional services firms such as lawyers and accountants. Kiewit is probably the most successful example of this with more than 1,600 shareholders. Kiewit has an ownership structure and culture that obviously works and with many attributes worth emulating if you choose the broad ownership structure model. The keys to successful broad employee ownership are:

- A strong employee and leader development culture
- A conservative and consistent stock valuation methodology
- A buy/sell agreement that protects the company while rewarding employees
- A set of criteria for employees participating in stock ownership that incents the right employees with the right behavior
- Good business management.

PLANNING YOUR EXIT OPTIONS

Exit options for a retiring owner are sale to a third party, sale to employees or family, giving your interest away, or shutting the business down. Shutting the business down is appropriate strategy to pursue in the scenario where one owner controls all decisions and activities. In other cases, it may be the worst avenue to pursue as it is time-consuming and expensive to wind down backlog to zero.

Sale to a third party is viable for some firms and in many cases the quickest way to get out quickly with cash. Since not all firms are salable, having an employee sale option provides an alternative. We, therefore, recommend to clients to prepare for both alternatives, and indeed, many recommendations apply to both alternatives. For example, key to both alternatives is profitability, depth and quality of management, and experience in delegating responsibility.

Winning at succession requires developing your options. Ultimately, you will cash in your stock in a sale to a third party, to employees, or family. Alternatively, you may transfer your stock via gift or estate. Today, one or more of these options may not be viable for you. For example, if most of your net worth is tied up in your company, giving your company away may not be financially feasible for you. You may not be able to risk a sale to employees, as it typically will require selling over a period of years. A sale to a third party may not be viable as you make all the decisions and your organization is shallow. Succession planning develops your options to win.

Ideally, as you approach the time to exit, you have already developed a significant net worth outside the business, you have a strong organization within which there are candidates to whom to sell the company, and your organization and financial performance are strong enough that you can attract a third-party buyer. Therefore, your plan needs steps to develop those alternatives.

COMPONENTS OF YOUR BUSINESS SUCCESSION PLAN

To win, your succession plan should have the following components.

- Development plan for your management team
- Structure for ownership transition if an internal sale is used
- Valuation methodology if an internal sale is pursued
- Management systems
- A third party sale plan.

Let us explore each of these in more depth.

Development plan for your management team.

You need talent — entrepreneurs who help you drive the business. This, in our experience, is the biggest challenge for two reasons. First, it is a big step from being a good project manager or estimator to being an entrepreneur, manager of others, and owner. In most companies, the biggest gap in the organizational ladder is this last step to the top.

Second, to develop successors with entrepreneurial ownership skills requires a deliberate effort on your part to provide the training and the responsibility they need. That may require you to go against your instincts in order to share responsibility and decision making with them.

Skilled successors are critical to both the success of the internal sale or sale to a third party.

Structure for ownership transition.

For an internal transaction, a structure is needed to define how employees build the wealth to purchase your stock, how and when you get your money out, and how you manage your risk during the transition.

The most common assumption at the beginning of transitions is that employees have minimal funds to invest initially. This is because you probably did not hire rich employees and did not pay the employees enough such that after they paid for their lifestyle they were able to accumulate much wealth. We had one experience where the successor's father had won the lottery, but more often, limited funds are to be expected. That leads us to the reality that the funding vehicle for a transition is the company itself. That is the source of employees' compensation. That is where contributions to an ESOP could be made. That is the source of cash flow to pay off any debt that may be incurred in order to fund a buyout.

The challenge for an owner in a transaction is to decide how to allocate the cash flow to incent employees so that the buyout is funded in a reasonable time yet the net worth of the firm can continue to increase.

The challenge for an owner in a transaction is to decide how to allocate the cash flow to incent employees so that the buyout is funded in a reasonable time yet the net worth of the firm can continue to increase.

Valuation methodology if an internal sale is pursued.

Beauty is in the eye of the beholder, and there is nothing quite as beautiful to a business owner as his own creation. Add to that the owner's typical desire for maximum value and it is easy to understand how a business owner's value expectation in a sale of their business is usually aggressive. In a third-party sale, the reality of the marketplace provides the reality with a buyer bringing his or her own notion of value to the table. In a sale to management or employees, this reality is often not brought to the table, and the owner selling his business can fall into what we call the "Valuation Trap."

The valuation trap occurs when the value placed on the company exceeds the acquiring employees' ability to pay while sustaining a financially strong business. The eventual result is the failure of the company or a necessary sale to a third party.

Most business owners only sell or buy a business once in their lifetime.

That is not to say there is anything wrong with a third party sale. However, if a business owner wants his legacy company to continue as a strong independent business, the Valuation Trap has to be avoided.

Peter Kiewit Sons' Inc. is a great example of a company that has avoided the Valuation Trap and has sustained itself as a private company through multiple generations of employee owners. Having more than 1,600 shareholders, Kiewit files an S-1 report with the SEC in which some of its inner workings are revealed. One of the interesting facets of its ownership structure is that the company's valuation methodology for the sale and purchase of stock to and from employees results in a value below book value. Nevertheless, the value of Kiewit's stock has grown over the years as increasing earnings have added to book value in their valuation formula. Employees who are eligible to buy stock like the idea of buying shares at less than book value. As the company and its stock value grow, many of its long-term employee/stockholders leave or retire as wealthy people despite the lower valuation formula. We would argue that this is one very important reason why Kiewit has been able to more than sustain itself as a private company. Kiewit's ownership arrangement and culture have helped make it one of the most successful companies in the construction industry.

Most business owners only sell or buy a business once in their lifetime. Therefore, unlike designing or constructing a building that they have done hundreds of times, owners come into a sale without a great deal of experience. It is therefore not difficult to get off track.

The typical valuation traps we see owners fall into, often with the help of professionals, are as follows:

Valuation based on methods not relevant for contractors: For financial professionals, discounted cash flow (DCF) is a predominant method for valuation. The difficulty in applying this method to construction firms is that it relies on projections for a minimum of five years and up to 10 years or more. Anyone in the industry will attest that just forecasting what revenues and earnings will be in the next 12 months can be difficult. In addition, a terminal or sale value at the end of the projection period is estimated. This estimate is often more difficult to make than the projection. Therefore, while the DCF valuation method is used widely for many manufacturing and distribution firms, it is not really applicable to contracting businesses. There are other exotic methods such as excess earning or dividend capitalization, and many of these have a basis in financial theory, but in our experience, not in reality for the construction industry. In FMI's experience from numerous acquisition transactions with buyers and sellers, we find that the most relevant methods involve a capitalization of historical earnings, possibly using a one- to two-year forecast, and valuations simply based upon balance sheet assets and liabilities. Capitalization methods typically will use a conservative multiple of earnings, which can be derived from a required pretax return on investment of 20% to 35%. Balance sheet methods rely on the historical accounting net worth (book value) and the book value adjusted for the market value of assets. Asset values are important indicators or benchmarks of value in this industry, as most construction firms have few assets that are unique for their operations. Except for human assets, most can be easily replaced and there is little goodwill beyond tangible asset values. In virtually every negotiation that we have been involved in, the buyer instinctively values an opportunity based on expected return on investment and the underlying value of the assets. Again, the valuation trap for construction industry firms comes from using methods that do not relate to a rational return on investment and underlying asset value.

Asset values are important indicators or benchmarks of value in this industry, as most construction firms have few assets that are unique for their operations.

Comparisons to public companies: A common method is to take valuation multiples for public companies, typically price-to-earnings ratios and price-to-book value multiples, and apply the multiple to a private company's earnings or book value. It makes sense in that the multiples represent market values. Three issues, however, make this problematic. First, there are not many publicly traded engineering and construction firms, and it is difficult to find public companies comparable to the subject private company. The public companies typically are larger, are more geographically diverse, have deeper management teams, and have a very different mix of work. Second, public companies have different factors driving their valuation besides financial analysis. Recently, FMI met with a veteran construction industry securities analyst. We asked him about valuation, and the classic metrics. He said that while they were relevant, far more relevant were anticipated trends to drive the industry. Investors, the majority of them institutions, looked for trends such as needs for construction related to the electric grid, highways, water, or other waves of construction. They would then play the market by trying to buy into the trend early and sell before the wave subsided. Many of the investors were short term, not staying invested long enough to see if earnings materialized. For institutional investment strategy, there is nothing wrong with this, but using multiples based on these investments as a guide to a long-term investor holding in a privately held company is likely misleading.

Lastly, there is no ready market for the stock of a privately held firm. Buy/sell agreements may be in place, but financing any internal stock transaction is always subject to the financial condition of the company at sale time. Internal sales usually have to be done on a long-term note or share of earnings basis. In contrast, owners of stock in public companies can sell their shares quickly and for all cash. Unless the private firm is sold to a third party in an acquisition transaction, valuations for internal stock sales have to be financially feasible and not strip the firm of its means for continuing in business. An example of such a problem situation would be a company with two shareholders deciding to use a valuation of two times the book value of the company for one shareholder to buy out the other. In order to do this transaction, the buying owner would have to use all of the book value of the company for the value of the other shareholder's 50%. Using the company to effect the transaction, this would only work if the stock can be bought over time and financed, with the company continuing to have strong and increasing earnings. This might be a gross assumption for a construction firm given the cyclicality of earnings in this industry. The valuation trap in this case is that paying for high initial value may not work over time, eventually forcing a third-party sale.

Internal sales usually have to be done on a long-term note or share of earnings basis. In contrast, owners of stock in public companies can sell their shares quickly and for all cash.

Use of formulas that are unrealistic to sustain a private company: To value stock in a privately held company for sale to employees or other internal transactions, a formal valuation done by a professional may be impractical or too expensive. Therefore, a formula may be written into a company's buy/sell agreement. The simplest formula is to use book value, and many companies do exactly that. Book value has the advantage of being easily measured and usually conservative. However, it does ignore the market value of assets and the earnings value of the firm. So companies often seek other formulas to better represent market value. Formulas can be developed on multiples of historical earnings, book value, revenues (as discussed previously), or combinations of all of these. A formula, however, can create problems

Statistically, not many companies survive to the third generation of ownership. Many do not make it because the market changes and the company does not adapt. Sometimes, a third party makes an offer that cannot be refused.

over time. First, the business may change such that the formula no longer applies. The financial metrics can unusually increase or decrease such that the results of the formula may not be representative. Arguably, the most serious problem is when the formula results in a value such that the company or employees will strain to buy out exiting shareholders. If the employees cannot pay for a seemingly justifiable valuation over a reasonable period, the buyout will not work. The parties face another valuation trap.

One simple method to help an owner understand the maximum value that he or she can practically realize from an internal/employee sale is to take the firm's current book value, add what the employees can initially invest and the estimated after-tax earnings over the years of the buyout, and subtract the book value needed to run the company at the end of the buyout period. Stated another way, the maximum value is what the company has now plus what it makes during the buyout less what you have to leave the employees to be independent of you. This maximum value is regardless of what other creative valuation techniques may tell you. Under this method, for example, if the buyout term is a 10-year period and ending net asset requirements are the same as in the beginning, the maximum price that can be paid will be the earnings over the 10-year period. The point is that employees of construction businesses and the companies themselves typically can obtain very little, if any, outside financing for an internal buyout. If they do obtain financing, it will need to be paid off directly from company cash flow or indirectly through payments in compensation or distribution to the employees. Therefore, the principal way such a transaction can occur is out of the earnings of the business over time.

Statistically, not many companies survive to the third generation of ownership. Many do not make it because the market changes and the company does not adapt. Sometimes, a third party makes an offer that cannot be refused. More likely, for most private firms, is the inability to develop or attract successor management. However, many do not survive because of poor transition planning and unrealistic value expectations. Avoiding the various valuation traps already discussed gives the private company the opportunity to survive and prosper. An investment banker specializing in our industry recently said that most businesses in this industry should be private because the flexibility and incentives are more appropriate. Our experience also is that exit options are limited in the construction industry. For a business owner in this industry, therefore, we strongly recommend that he or she be realistic about the company's worth and its long-term survival and avoid falling into a valuation trap.

Management systems.

We are not going to delve into what strategies and tactics to use in running your business, but we are going to discuss how you run the company. How you run the company affects your succession plan and your ability to win. There are three ways of running your company:

- Seat of the pants
- Opportunism
- Systematic.

Companies with all these styles can be very profitable and successful. However, to win at succession, systematic is the best. Let's discuss each.

Seat-of-the-pants management is very efficient and low cost. Typically, one person makes the decisions with minimal consultation with others. Investment is minimal in management, meetings, and preparation. The difficulty for succession is that this skill is not easy to transfer, particularly when you are making all the decisions yourself.

Opportunism is a level above seat-of-the-pants in that when we identify something to pursue, the owner or designated persons or group go after the opportunity in some organized fashion. The opportunity could be a project, an acquisition, a client, or a market, for example. The company is run seat-of-the-pants until we find an opportunity that we want to be more deliberate about.

Opportunism is a level above seat-of-the-pants in that when we identify something to pursue, the owner or designated persons or group go after the opportunity in some organized fashion.

Systematic has, as its name implies, management systems that enable better business decisions. There will be an annual business plan and budget as well as a market plan and cash flow budget. The owner and CFO are involved as key management members. While the owner may make the final decision, key management is part of the process, providing the benefit of their input, and just as important, exposing them to a decision-making process that is a learning process. This involvement also allows the owner to assess and develop management's capabilities. It has the added benefit that managers get to know one another and develop a working relationship. It does take greater time and costs more, but it provides a process for continuance as the owner reduces his or her responsibilities.

The systems don't have to be complex. As we said earlier, construction comes in waves and change is to be expected. Reaction time of opportunities and construction in the face of risk are key. Therefore, modest management systems often work the best.

Third-party sale plan.

Much of the prior discussion has focused on the internal sale, but as we discussed, you should develop both options. This is because when the time comes, your employees may not want to buy. A third-party sale may be very attractive when you are ready to sell. Therefore, it makes sense to position the company for sale in case the need or opportunity arises.

Positioning your company for sale can be compatible with preparing for an internal sale. Again, you want both options. The obvious things to do to prepare for a third-party sale are as follows:

- Make money
- Grow the business
- Develop your management team
- Develop a successor for yourself
- Have solid, simple management systems
- Maintain clean financial statements.

The last one bears additional discussion. Clean financial statements make valuations easier for a buyer and transactions simpler to structure. Avoid complex corporate structures that create awkward tax problems in a sale. Non-operating investments should be outside the operating entity. It is often easier for both internal and external sales if real estate investments are in a separate entity, and real estate assets are leased to the operating entity.

A third-party sale may be very attractive when you are ready to sell. Therefore, it makes sense to position the company for sale in case the need or opportunity arises.

THINKING THROUGH YOUR STRATEGY

Let us now return to the three phases of ownership and consider them in light of succession planning.

1. Wealth creation
2. Wealth management
3. Exit strategy.

Phase 1, *wealth creation*, is obviously key because if you are not successful here, subsequent phases will not be necessary. Phase 1 is about starting a viable company. Succession planning considerations are minimal, but it is helpful to get good advice as to corporate structure to minimize future tax problems.

Phase 2, *wealth management*, is where planning usually starts in earnest, having established a viable business. Plans for the company's financial growth and your personal financial growth are needed. Management plans are key to building value for a third party as well as developing successors within your organization. Risk management plans address life insurance and business risk issues to protect your family and business.

Phase 3, *exit strategy*, follows Phase 2. Planning in Phase 2 creates your alternatives for exit. Is your company salable? Do you have a nucleus of employees to run the company? Can those employees own the company? What will ultimately happen to your assets?

Step back further and succession planning really addresses two issues:

- What do you want for yourself, financially and personally?
- What legacy do you want to leave?

The first question is about money and how you want to spend your time when you have the choice.

The second question is really a values question. What employment opportunities do you want to provide to your family? What wealth do you want to give to your family? What wealth building opportunities do you want to provide to your management and employees? What do you want to happen to the company and the wealth you have created?

There are no wrong answers to these questions. Owners answer by saying they want their children to get nothing, thinking they should make it on their own as did the owner. Other owners want all of the proceeds to go to family.

Some owners insist on a sale to employees even when there are more lucrative third-party sale options. Some have no interest in a sale to employees or family.

In setting your course, these are important questions that you must answer. We do, however, advocate that at a minimum owners provide financially for themselves to sustain their lifestyle under their own control.

Finally, if you want to accomplish something, first you have to dream it. Succession planning is like this. First you have to imagine your desired outcome; what do you want when you turn over the keys? Your succession plan gets you to that reality. ■

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Building Business Acumen

Building business acumen is like building a construction project. You need a well-designed plan, a good foundation, sound materials, goals, and incentives to reach the top.

By Kevin Kilgore

In many construction firms, especially privately held firms, you will find one or two people at the top who know something about every job in the company. It may be the CEO and company founder who had to do a little bit of everything before the company grew large enough to hire specialists like accountants, estimators, project managers, human resource managers, and business development staff.

Whether founder or not, the CEO who has a good understanding of the workings of each of these specialty areas and departments is in a great position to understand the company's capabilities and strengths, and use those strengths to accomplish the company's strategic goals. Ideally, the company's middle management would reflect the type of general knowledge, or business acumen, displayed by the founder/CEO. However, we often hear construction executives lament the lack of business acumen in their middle-management ranks.

People hired for specialist positions such as estimators, project managers, field managers, safety technicians, financial administrators, and so on, generally stay in the department they start in because that is the position they were trained for, enjoy doing, and are comfortable with the position requirements. Upper management is usually pleased with this situation because it means that the company builds needed depth of expertise in its departments. It can also mean that there are limited possibilities for promotion, and the company sometimes loses ambitious and talented employees who are looking for new challenges.

Predictably, department leaders tend to be technical specialists who, even though they may excel in their area of expertise, are quite lost if they need to step into another area. Some, however, might be high achievers no matter what department they work in, and, in fact, their performance may drop off if they are not given new challenges. There is a resounding need today to discover and develop the next generation of business leaders who have the ability to understand the entire business and meaningfully contribute across business units. These leaders will have the ability to nurture strategic thinking throughout the company as well as lead the technical managers, because they understand the needs and strengths of each department and how they contribute toward achieving the company's goals.

DEFINING BUSINESS ACUMEN

Business acumen, sometimes called construction intellect in our industry, is a broad knowledge of the entire business as well as knowledge of how all aspects of the business interrelate. Business acumen is characterized by an ability to grasp the situation or problem and come up with sound, practical, and workable solutions. Such abilities are usually creative and always seem to draw on both a breadth and depth of knowledge that is rarely found when working with specialists. Business acumen implies a bundle of knowledge based on experience that is both broad and deep, but often broader than deep, in contrast to the specialist whose skills might be very deep, but narrow in focus.

There is a resounding need today to discover and develop the next generation of business leaders who have the ability to understand the entire business and meaningfully contribute across business units.

ASSESSING BUSINESS ACUMEN

The above description of the individual with business acumen makes it sound like this individual must be well rounded. Everyone in the industry is aware of the difficulty in hiring such accomplished renaissance business people. Often, they are entrepreneurs capable of running a competing firm. This is why we recommend looking first within your own ranks for individuals showing potential. Then, you can develop their skills across disciplines including their leadership qualities and management skills — before they become your competition.

In some cases, it will be easy to identify individuals who stand out. In most cases, however, you will need to identify these future leaders using a few carefully selected criteria. Look for generalists that have people and leadership qualities. Watch for people who seek personal growth and a managerial (not technical) career path. You want people who are "students of the industry" — career contractors in search of greater knowledge and opportunity. Select a cadre of talent that will develop as a group or class. Choose wisely, as the group will require a significant investment to fully develop into future leaders; this is often a three- to 10-year development project.

You want people who are "students of the industry" — career contractors in search of greater knowledge and opportunity.

Once you have your core group of candidates in place, assess their current skill sets. A baseline of current knowledge, skills, and abilities will help guide the development plan for individuals and the group. There are a variety of assessment tools to choose from in order to create an objective gauge for current skills and personal characteristics. Some examples of proven testing instruments that are regularly used include:

- DiSC — personality profiling
- MBTI — Meyers-Briggs type index
- Highlands Program — innate skills measurement
- Human Patterns — combination set of behavioral, themes, interests, and preferences
- Profile XT — matching current abilities to a success pattern
- IQ or intelligence test
- EQ or emotional intelligence (maturity) evaluations
- 360° review (by peers and managers).

Though the concept of business acumen is a general business concept, it can be applied more specifically to the needs of a contracting firm by developing a list of specific skills related to construction. (See Exhibit 1.) The business acumen assessment can be used by individuals and managers to gauge an individual's strengths and weaknesses in specific areas. The self-assessment can be used as a review and goal-setting document for discussions between the employee and manager. Although it is a comprehensive list, it can easily be modified for particular businesses. The business acumen assessment relies on subjective interpretation by the employee and management. You may want to use a combination of tests to get the best results. Once you have used the self-test several times, you will begin to develop a weighting system, and you can tailor the assessment tool to your company's needs.

Clearly, when you review the enormous list of knowledge shown on the business acumen assessment, it is readily apparent that there is a wide and deep body of knowledge and skills necessary to successfully lead and manage a contracting firm. What is needed is a personal development plan. The sooner you start people on a purposeful, intentional, and personal plan to gain these competencies, the better. While three to 10 years seems like a long time for this personal development plan, examining the list of development areas and comparing it to the experience of individuals that exemplify business acumen will show that this is about right.

To develop a core group of managers with business acumen, you will need to set the course for each individual by creating a personal career development plan.

DEVELOPING BUSINESS ACUMEN

Like any journey, once you have a good idea of where you are, it will be easier to plot a course to your destination. To develop a core group of managers with business acumen, you will need to set the course for each individual by creating a personal career development plan. The plan should include a chart showing needed improvement areas. When developing the chart and subsequent training modules for the group, focus on key improvement areas for the individuals in the group. Continually research the topics to be covered in your plan, and keep an active inventory of available training and development courses, books, classes, and personal development opportunities. Use a software program to keep track of their development; specific human relations or training tracking software can help. In general, we have found that achieving business acumen goals requires knowledge in four areas:

- Technical skills — Coursework about construction techniques and CSI divisions, including the mechanics of actual building construction methods.
- Business skills — A "how to" for construction project management, especially focused on the business, contractual, and risk management aspects of construction.
- People skills — Generally thought to be innate, but experience has taught us that they can be developed. The objective is to sharpen leadership skills.
- Business acumen — A focus on the combination of the above skills to accomplish project and company goals.

Research shows that people learn best by doing. To build executive and managerial skills, the individuals will need to take on challenging roles. To build

Exhibit 1

Business Acumen Assessment

Scale 1 to 10 (1 = Poor, 10 = Excellent)

Skills, Abilities	Self Score	Manager's Score	Target Next Year
LEADERSHIP QUALITIES			
General leadership aptitude			
People sense and skills			
Verbal communication skills			
Written communication skills			
Listening skills			
Respect from others			
Ability to network, build relationships (internal and external)			
Personal character			
Motivation of others			
Empathy			
Critical thinking			
Attitude			
Emotional IQ			
Personal growth and development initiative			
STRATEGY AND BUSINESS PLANNING			
Strategic thinking			
Setting vision, mission, and values			
Evaluating strategic options (research)			
Strategic advantage			
Market and competitive analysis			
Customer profile and understanding			
Identification and growth of core competence			
Resource alignment			
Linked reinforcement tools			
Plan execution and implementation			
BUSINESS DEVELOPMENT			
Prospecting, networking			
Selling			
Presentations			
Negotiating contract terms and conditions			
Packaging pre-construction services			
Knowledge of the customer's business			
Competitive analysis			
Market research			
ESTIMATING AND PRE-CONSTRUCTION			
Plan reading and interpretation			
Project pricing options and strategies			
Subcontractor prequalification, solicitation, and selection			
Creative project packaging solutions			
FIELD OPERATIONS			
Project management			
Subcontractor management			
Project buyout			
Knowledge of construction			
Constructability reviews			
Management of self-perform work			
Scheduling			
Safety			
Daily project notes			

Note: Exhibit 1 continues on page 51.

business acumen, look for ways to expand your group's direct involvement in company expansion efforts and innovative roles. These are your "high potentials" — your future leaders that you are grooming to run a division, a department, a branch office, or to head up a task force, committee, or research project. It may even be instructive if they teach courses in the company's training programs. The goal is to continually challenge these individuals to be resourceful and enjoy solving new problems and developing new skills. That way, they will not only stretch their minds, but also gain a new interest in the construction business.

There are many ways to build the business and your next generation leaders:

- Have them teach their specific skills and abilities to others in a formalized training program.
- Involve them in the company's strategic planning process.
- Move them around the company into multiple roles.
- Involve them in senior management team planning and problem-solving sessions.
- Have them mentor people in another department (out of their normal discipline silo).
- Enroll them in formal education opportunities.
- Provide them with industry exposure to thought leaders.
- Create a "lunch-and-learn" program for them around short topics.
- Pair them up to learn from subcontractors and suppliers, engineers, or architects.
- Have them teach your standard operating procedures.
- Gather "lessons learned," or war stories (both the best and the worst), for them.
- Assign them client responsibilities, for instance, as a project executive.

The opportunities to provide career development to your next generation of leaders are boundless. In fact, the breadth can become a daunting obstacle in itself. Building business acumen or developing construction intellect is a little like building a construction project. You need a well-designed plan, a good foundation, sound materials, goals, and incentives to reach the top. Like any other project, once you recognize the need and strengthen your conviction to achieve, anything is possible. When you think of it, the stakes are as high as the future of the company. How big that payoff is will be up to you and the next generation of leaders that you develop. ■

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Exhibit 1

Business Acumen Assessment — *Continued*

Scale 1 to 10 (1 = Poor, 10 = Excellent)

Skills, Abilities	Self Score	Manager's Score	Target Next Year
PROJECT MANAGEMENT			
Subcontractor (or general contractor) negotiation and management			
Drawings review and management			
RFI and submittal process			
Discipline to project control methods			
Monthly margin confirmation accuracy			
Project close-out			
Lessons learned feedback loop			
FINANCE AND ADMINISTRATION			
Financial statements (% complete)			
Understanding financial ratios			
Job-cost system by project			
Job-cost productivity analysis			
Insurance — general liability			
Insurance — health care			
Insurance — workers' compensation			
Insurance — builders' risk			
Insurance — OCIP, CCIP etc.			
Bonding rights and responsibilities			
Alternatives to bonding (i.e., subguard)			
Investment and financial tools			
Business and personal taxes			
HUMAN RESOURCES			
Employment law			
Compensation and incentive programs			
Training and personal development options			
How to recruit and hire strong talent			
How to retain and motivate your people			
IT AND MIS ISSUES			
Hardware and network configurations			
Software applications by business function			
Telephony and communications options			
Field and office productivity options			
RISK MANAGEMENT			
Safety and jobsite obligations			
Legal and contractual issues			
Liens and payment rights			
Subcontractor rights and responsibilities			
Prompt payment laws			
Employment and labor law			
Claims and contract options			
Contract language and provisions - owner and subcontracts			
EQUIPMENT AND CAPITAL ASSESTS			
Utilization rates			
Lease/own/buy decisions			
Tracking and costing options			
Sourcing and acquisition tactics			
OWNERSHIP ISSUES			
Corporate structure			
Stock ownership types			
Ownership transfer options			
Buy-sell agreements			
Options for funding continuity			
Management succession issues			

Eureka! Unleashing Your Creative Spirit

Success demands continuous innovation, and creativity is the root of innovation. It is a skill that can be developed, nurtured, and managed throughout the entire organization.

By David Sinodis and Kelley Chisholm

When you think of someone who is creative, what immediately comes to mind? Do you see someone in the arts such as a musician who has just composed a symphony, an artist who has just painted a masterpiece, or a writer who has just penned the great American novel? Do you think of inventors who have created innovations such as the telephone, television, airplanes, microwaves, or computers?

Perhaps you think of those in the medical field who discovered penicillin, the x-ray, and open-heart surgery. Or mathematicians who have developed formulas and theories and have given us calculus and laws on gravity. Or architects who have designed world famous buildings and structures such as the Empire State Building or the Golden Gate Bridge. When most people conjure up images of creative people, they often think in terms of big, finished products, and that is certainly part of creativity.

But what about those individuals whose ideas provide innovative solutions to everyday problems? These people use their imagination to come up with new products, services, or ways of doing things, saving themselves and their businesses money and time. While these individuals may not immediately come to mind when thinking about creative individuals, they are certainly part of the definition. Unfortunately, many people put the Shakespeares, Picassos, and Frank Lloyd Wrights of this world on pedestals and feel they can never measure up to them. Fortunately, everyone has the potential to be creative — it is simply a matter of allowing yourself to begin thinking this way.

> The best way to have a good idea is to have lots of ideas. — *Linus Pauling*

CREATIVITY DEFINED

How exactly is creativity defined? *Merriam-Webster's Collegiate Dictionary* defines creativity as "the ability to bring something into existence" and "the ability to produce something through imaginative skill."

CREATIVITY MYTHS

There are many myths surrounding creativity. The following represents some common ones as well as their truths.

Myth: People either are or are not creative.
Truth: Creativity can be taught and everyone can increase his or her creativity.

Myth: Creating means making something from nothing.
Truth: Most things new come as a result of combining existing concepts or ideas.

Myth: Creativity is something that just happens; we can't control it.
Truth: There are specific ways to encourage creative thinking. We can all learn how to increase creativity among our work teams and ourselves.

Myth: Only certain people in the workplace need to be creative.
Truth: Creative thinking should not be limited just to product designers or strategic thinkers. There is a need for creativity in all activities, especially those involving problem solving or improving procedures.

DISCOVERING YOUR CREATIVE JUICES

Have you ever had an "a-ha" moment and come up with a brilliant solution for a problem? One of the first steps in thinking creatively involves looking at the same information from many different angles. It involves doing things differently and being prepared to take risks. Creative individuals challenge everyday assumptions and are open to new information and new perspectives. A good way to discover new information is to look for ideas in different places and continue to build these sources. These sources may include newspapers, libraries, traveling to other places, and talking to people with completely different backgrounds. There really are no bad ideas because one idea generates another. It is a good idea to capture your

> **Try the following brainteaser, and test your creative thought process:**
>
> A man went to a builder with plans for an extension to his house. They had never met before, but the builder agreed to build the extension at no charge to the man. Why?
>
> Let go of your everyday assumptions, and come up with as many ideas as possible to try to arrive at the solution. Clues to solving this problem and the answer will appear later in this article.

ideas by writing them down. You can then refer to them later as they may trigger new ideas.

OBSTACLES TO CREATIVITY

It is often easier to impede creativity than it is to enhance it. There are many obstacles to creativity, and some of these are described below.

State of mind: The main obstacle to creativity is believing you are not creative. If you tell yourself you are just ordinary, you will begin to accept that image of yourself, and eventually feel that you cannot be creative. On the other hand, you can think of yourself as a creative person and really believe that being creative is part of your identity. Affirmations can help create a positive self-image in this respect. To paraphrase Henry Ford — whether you believe you can or you believe you can't, you're right.

Routines/habits: Most people are in the habit of doing the same thing in the same way at any given time. We develop habits and routines, and it is very difficult to change these. Habits are reactions or responses to situations that are automatic. Long-time habits limit the range of responses someone may have to any given situation.

Time (or lack of): In today's competitive environment, many people feel the demand for greater productivity and are concerned with just getting the work done. This can certainly hinder the creative process. Everyone is allotted the same amount of time each day. Yet many people use this as an excuse for not being creative. The creative process does take time, but the extra time spent upfront could ultimately pay great dividends in the long run.

Stress: People who feel overwhelmed by their problems tend to feel that there is no time to solve any of them creatively. Sometimes they simply shut down and ignore them altogether. In addition to being very distracting, feeling overwhelmed and stressed can lead to serious health problems. Identifying and prioritizing problems enables you to focus on creatively solving those that have the highest importance.

Fear of failure: Most adults are not willing to risk failure, unless the rewards are great. The judgment of others and even oneself can severely limit creativity. We all learn from failure, but we have to take risks in order to succeed or fail. It is often implied that failure is always bad. Yet, we could all probably learn something from children who readily accept that they will make mistakes and still keep trying. This is learning by trial and error.

HOW DOES A CREATIVE EVENT HAPPEN?

Serendipity: Serendipity is unexpectedly discovering something valuable or agreeable when looking for something else entirely different. Serendipity and accidents have played a major role in many creative inventions and discoveries. Expanding the information you expose yourself to is one method of serendipity. This can happen in a variety of ways, such as reading different types of books, visiting unusual websites, joining discussion groups, and talking to new people. Having an open mind and being ready for the unexpected is the key.

Incubation: Often, when we cannot solve a problem by force of will or deep concentration, we cannot consciously work on the problem, but instead, we allow consideration of it in our subconscious mind. In the meantime, it helps to do something else that is not related to the problem, or if time permits, sleep on it. For example, in the third century B.C., King Hiero of Sicily suspected that his goldsmith had used some silver instead of pure gold to make his crown. The king asked the mathematician Archimedes to find out. Archimedes puzzled over the problem for a long time. Then one day while taking a bath, he noticed that as he entered the tub, some water spilled out. In a flash of insight, he realized the solution to the king's problem. He would compare the crown to an equal weight of pure gold and see if the two displaced the same amount of water. He leapt from the tub, shouting the now famous "Eureka!" and ran home naked.

Active Pursuit: Although serendipity and incubation have resulted in many discoveries through the years, often we do not have the luxury of waiting for creativity to happen. There are active methods that we can use to spur creativity.

Visualization: Visualization is a process in which you contemplate what something would be like if you had already successfully completed it. It is about seeing the preferred, ideal future. Many athletes use visualization in practice and before a big event. They will create mental images, such as pictures or movies, and recreate their best performances and desired outcomes. For example, the best golfers learn to visualize by creating a mental movie of "the perfect shot," allowing their minds to empower performance. They will experience all the movements slowly and precisely, from placing the ball on the tee, to the perfect swing, to the ball falling into the cup. Imagery is very helpful in developing focus and concentration.

Serendipity at Work

Post-It Notes: 3M was trying to make a stronger glue. This particular glue was a failure. One of the scientists used it as a bookmark for his hymnal in church choir, and then shared it with office staff when management refused to develop it.

Discovery of America: Columbus was looking for a new route to India.

Champagne: A monk named Dom Perignon discovered champagne when his wine underwent a secondary fermentation.

Ivory Soap: A worker left a machine running during lunch at Proctor and Gamble. The exceptionally smooth, frothy Ivory soap was the result.

Penicillin: In 1928, Alexander Fleming noticed that a culture plate containing bacteria had been contaminated by a mold, and that the mold had killed the bacteria near it. The mold was penicillin.

Viagra: Scientists at Pfizer were originally looking for a blood pressure medicine.

Levi Jeans: Levi Strauss planned to sell tents to the gold miners in California. The weather was too nice, so he used the material he had brought to make pants.

Silly Putty: Silly Putty was accidentally invented at GE during WWII when boric acid was dropped into silicone oil. They were looking for a substitute for artificial rubber before the war ended.

Explorations: Explorations allow us to challenge our assumptions and think outside the box by using analogies, metaphors, and symbols to make comparisons and see what similarities and differences exist. For example, George de Mestral, a Swiss mountaineer, observed the stickiness of cockleburs that stuck to his clothing during a hike and had the insight to reproduce the clinging effect as Velcro. Increasing our options by exploring problems from a variety of different perspectives increases our chances for success.

Increasing our options by exploring problems from a variety of different perspectives increases our chances for success.

Experimenting: It is important to collect as much data as possible connected to the problem. Even if the information does not seem useful at first glance, it should not be discarded too early — you want to have as many ideas as possible. Once you have explored your problem and gathered facts and opinions, you may want to experiment.

- Gather facts and opinions.
- Try it out using established procedures.

Thomas Edison discovered the light bulb by trying out over 9,000 filaments.

Combinations: The combination technique brings different elements together in unique ways. A good example of this is when Bill Bowerman combined rubber and a waffle iron to come up with a sole for his Nike shoes. The goal of this technique is to use previous thoughts and ideas to trigger new ones, even if these thoughts appear to be unrelated at first.

Modifications: Modification involves adapting, improvising, or adjusting what you already have to make it better. You may revisit past projects to see how the approach could be modified for the present project.

There is no one perfect approach to begin to think creatively, and any of these techniques may be used — do what works best for you. The trick is: instead of looking at how things should be, look at how they could be.

Let's return to our earlier brain teaser about the building extension. Here are some clues that may help in determining the solution.

Q: Did the builder gain some benefit from this whole process? **A:** Definitely

Q: Were the two men related, or was there an existing business relationship between them? **A:** No

Q: Did the man subsequently provide some service, reward, or payment to the builder? **A:** No

Q: Was the man famous? **A:** Yes

APPROACHES TO CREATIVITY ON THE JOB

Reversal Method: With the reversal method, we move away from the standard way of looking at a problem and turn it inside out. It does not have to make sense, which removes the worry of being wrong. This allows the information to come together in a new way. Steps in using the reversal method include:

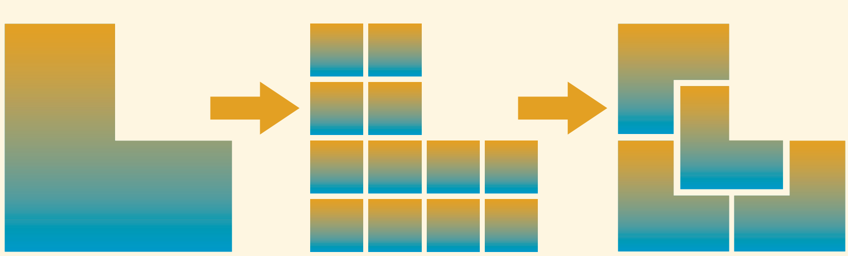
1. *State your problem in reverse.* Change a positive statement into a negative one. For example, if you want to improve scheduling, think of all the ways you could make scheduling worse. Then, if you are doing some of those things, you can work on stopping those practices.
2. *Figure out what others are not doing.* An example of this is when Japan started making small, fuel-efficient cars.
3. *Change the direction of your perspective.* If you are a manager and never come out of your office, start managing by walking around.
4. *Turn defeat into victory or visa-versa.* If something turns out bad, try to find some good in the situation. Let's say you didn't get a job you applied for — what good would come of it? Maybe you could spend more time with your family, or upgrade your skills for an even better position down the road.

Fractionation: Fractionation is a useful method for looking at a situation in different ways and generating alternatives. It involves breaking the problem down into smaller parts, which, in turn, breaks down patterns that have been built-up in the mind. In the example below, the task is to divide the first object into four equal parts. It may be easier to first divide it into 12 equal parts in order to obtain the final result. (See Exhibit 1.)

Random Techniques: To encourage the emergence of a successful idea, we need to be willing to look at a large number of ideas. Random techniques encourage breakthrough thinking. With this technique, you choose a random word to generate new ideas. Once you have chosen the word, make as many associations with the word as possible. Then look at each item on your list and see how it applies to the problem at hand. The random image technique is similar, but uses images instead of words.

Six Thinking Hats: This technique was developed by Dr. Edward de Bono to help individuals gain a variety of perspectives on a topic that are different than they

Exhibit 1
Fractionation



would have normally. People wear different colored hats that are indicative of different states of minds and emotions:

- White — calls for objective facts and figures
- Red — symbolizes emotions, feelings, and intuition
- Black — is judgmental and refers to the negative aspects
- Yellow — signifies positive thinking and optimism
- Green — focuses on new ideas and creative thinking
- Blue — controls the thinking process.

By wearing a color of hat that is different from the one an individual usually wears, a variety of new ideas may be generated, and the group may concentrate on constructive input. It is useful to look at a situation in all six ways.

> "Behold the turtle. He makes progress only when he sticks his neck out." — *James Conan Bryant*

INCREASING OUR CREATIVITY

Risk Taking: People naturally do what feels safe. As much as we would like to stay in our safety zones and not take chances or explore new opportunities, we cannot accept the status quo if we want to survive. Simply put, we must evolve or become extinct. It applies to all of us. Nothing is gained without the risk of loss. Creative thinking happens most easily when people feel free to fail. Each of us has the potential to be creative, but it often takes a nurturing environment to tap into our innovative thinking.

Numbers Count: The more ideas we generate, the more likely we will have a good one. Thomas Edison constructed more than 3,000 ideas for a light bulb before he achieved success. We should think of ourselves as pearl divers. We collect a number of oysters, and then we return to the shore to open them and look for pearls. We do not attempt to look for the pearl in each oyster as it is collected.

The classic method for generating a large number of ideas is brainstorming. Ideas are collected without judgment. These ideas generate new and additional ideas. Brainstorming is explained more fully later in this article.

TECHNIQUES TO ENCOURAGE INDIVIDUAL CREATIVITY

Dreaming: Studies have shown that dreaming is likely to have a role in the creative process, and that dreams seem to be a place where the updating of our memories occur. In the 1800s Friedrich Kekule, a German chemist, had tried for years to discover the structure of benzene. One night he dozed off in front of his fireplace and dreamed of structures shaped like snakes when all of a sudden, one snake grabbed its own tail. He awoke and spent the rest of the night working out the hypothesis that

> Both Tris Speaker and Babe Ruth were excellent baseball players. Ruth's lifetime batting average was .342 and Speaker's was .345. Tris Speaker only struck out 220 times during his whole professional career, which was about 2% of the time. Babe Ruth struck out 16% of the time. Based on these statistics, who would you want on your team if you could only have one? Ruth hit a home run eight times out of 100 at bats. This means he averaged hitting a home run approximately every three games. Speaker hit a home run just over one time out of 100. To hit home runs, you have to swing the bat.

Many people find visual images to be more powerful and a greater stimulus to creativity than words.

the structure of benzene was a closed, hexagonal, six-membered ring, which was later proved by his research team. Keep a journal beside your bed to record your dreams immediately upon waking.

Keeping a Journal: Journaling is a very effective technique for enhancing creativity, and it is used to record observations, dreams, ideas, and just about anything that pops into your head. By writing down your thoughts as they come to you, it is less likely that you will forget them. Your writing does not have to be perfect — you can doodle, draw, jot down phrases, or free flow write. Keep you journal with you for easy access, and refer to it regularly.

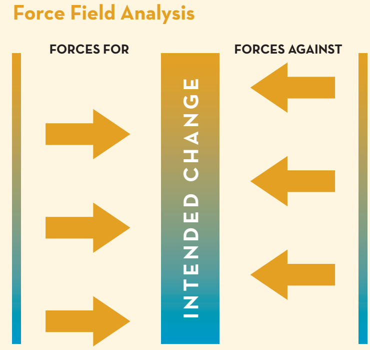
Drawing: Many people find visual images to be more powerful and a greater stimulus to creativity than words. Instead of trying to describe something either verbally or through written words, some find it easier to express themselves by drawing or sketching the solution to a problem. Drawing is an indispensable tool for those who are visual thinkers.

Meditating: Meditating is delving into your subconscious mind to tap into things of which you are not consciously aware. The subconscious mind is very powerful and handles thousands of things every minute, such as memories, feelings, associations, and other sensory input. We are continually inundated with information from other people, the radio, television, print media, and the Internet. As a result, we spend little to no time quietly by ourselves. Many of us find it hard to start meditating — our minds often race, and it is hard to reach our subconscious selves. The key is to relax, start small, and keep practicing.

GROUP CREATIVITY TECHNIQUES

Force Field Analysis: Developed by Social Psychologist Kurt Lewin, force field analysis is a useful technique for looking at all of the forces that support or hinder a specific solution to a problem. (See Exhibit 2.) In essence, it is a specialized approach to weighing pros and cons. By carrying out the analysis, you can strengthen support and reduce opposition to decisions.

Exhibit 2
Force Field Analysis



Why Use Force Field Analysis?

- To improve any situation that requires change.
- To identify and quantify forces working for and against change.
- To identify forces that cannot be changed.

How to Use Force Field Analysis

- Construct a force field diagram.
- Title it with the intended change.
- List the positive and negative forces on opposite sides of a centerline.
- Attempt to quantify the forces on each side by assigning a score to each force, from one (weak) to five (strong).
- Implement actions that strengthen the positive forces and minimize the negative.

Process Flow-Charting: A process flow chart is a diagram of the various steps, in a sequential order, that form an overall process.

Why Use a Process Flow Chart?

- To understand the steps of a process.
- To identify and isolate the problem-causing steps in a process.
- To focus on the root cause of a problem.

How to Use a Process Flow Chart

- Define the process to be charted.
- List the steps involved.
- Draw the diagram and place the process steps in boxes linked by arrows to each other.
- Analyze the steps to understand the process.

Brainstorming: Brainstorming is the most widely known creativity tool, and is a technique to encourage and develop a large number of ideas, and to look at a large number of alternatives. While brainstorming can be used individually, it is best suited for group use.

Why Use Brainstorming?

- To generate a large number of ideas.
- To create a piggybacking effect.
- To make all ideas the team's ideas.
- To make the team more comfortable sharing ideas.

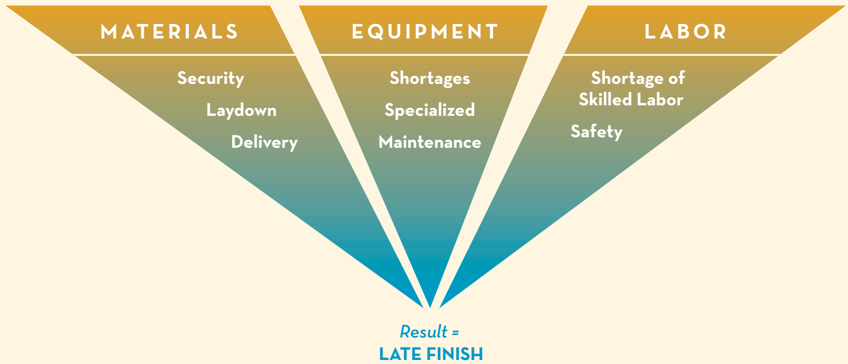
How to Conduct a Brainstorming Session:

- Choose the right team.
- Ensure that everyone knows the rules.
- Define the task clearly.
- Allow time for thought.
- Ensure everyone participates.
- Generate as many ideas as possible.
- Ban discussion and evaluation.
- Record every idea.
- Allow incubation time.
- Keep a relaxed atmosphere.

It is very important that each team member understands the brainstorming process, and that the purpose is to generate as many thoughts as possible, no matter how far-fetched some of them may seem. The facilitator must ensure that there is no discussion, criticism, or judgments while generating ideas.

Cause and Effect Diagrams: The Cause and Effect Diagram, which is commonly

Exhibit 3
Cause and Effect Diagram



known as a Fishbone Diagram, is used to identify possible causes affecting a problem or project. (See Exhibit 3.)

Why Use a Cause and Effect Diagram:

- To better define a problem.
- To identify possible data requirements.
- To identify possible causes.
- To narrow down the causes.
- To break down a large problem into smaller elements.
- To help identify the root cause of a problem.
- To provide a method to record ideas.
- To examine relationships among causes.

How to Use Cause and Effect Diagrams:

- Define the problem in terms of its effects.
- Identify the major categories of causes (people, machinery, material, methods).
- Identify all possible causes using brainstorming for each category.
- Analyze possible causes and identify links.
- Evaluate the most likely cause.

Good ideas and even great ideas are only that … ideas. For an idea to have any value, you must do something with it. This means we have to come up with the who, what, when, where, why, and how of implementing it. In other words, the idea should lead to an action.

Many see creativity as a very personal thing and feel that individuals are creative, but corporations are not. However, a corporation may be seen as a creative entity if it fosters creativity in its people. A company can actively encourage creativity in their employees in a variety of ways. Keys for companies to get and keep creative people include:

- Building and encouraging a creative work environment.
- Recruiting and hiring creative people.

- Providing challenging work.
- Focusing incentives on creativity. In addition, creating a recognition system that rewards creativity and is not necessarily linked to money.
- Providing a failure-tolerant environment and encouraging risk-taking.
- Predicting the future to allow organizations to tap into new markets.
- Balancing jobs and people.
- Employing some of the techniques mentioned earlier (such as brainstorming) as much as possible, especially when new ideas are needed.

In addition to promoting creativity, companies must be very careful not to close it off. Management and peers alike must avoid the following statements that are idea killers:

- That's a dumb idea.
- That will never work.
- We tried that before.
- That's a good idea, but …
- Top management would never buy that.
- We don't have the resources.
- We don't have the time.
- Any negative statement with the words "don't," "can't," or "won't."

CONCLUSION

If we are to thrive in today's constantly changing business world, we must be creative. Business is a creative activity. Success demands continuous innovation, and creativity is the root of innovation. It is a skill that can be developed, nurtured, and managed throughout the entire organization. While construction depends on following structured procedures, there is also a great need to think outside the box. We often are faced with construction issues that are not addressed by the "book answers." Additionally, we deal with many different people on a project, with so many different ideas and goals that our ability to be creative in our interactions and thinking will contribute to our success. ■

Answer to the brain teaser:

This is a true story. The man who wanted the extension to his house was Picasso. The wise builder realized that by building the extension he would be able to keep Picasso's rough sketch of the plans, and they would be worth far more than the cost of the actual construction work. He was right.

This brain teaser has been adapted from the following source: Sloan, Paul, & McHale, Des (1994). *Great Lateral Thinking Puzzles*. New York: Sterling Publishing Co.

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Communication: The Primary Tool of Great Project Managers

Every project is unique, and the way that project participants effectively communicate with each other is vital to a successful project.

By Mike Putzer and Kelley Chisholm

The construction industry often brings together a variety of individuals with many different roles and positions to work on a specific project; these individuals usually end up not working together again. Every project is unique, and the way that project participants effectively communicate with each other is vital to a successful project. It should come as no surprise that good communication is the key to the success of the project manager.

According to the PMI® PMBOK®, project managers should be spending up to 80% of their time communicating. This article is designed to provide project managers with the techniques used to communicate information and also to help project managers recognize how to prioritize their interactions with others.

Even with rapid advances in technology, construction is a people-based industry, and the human factor cannot be ignored. Communications planning is an important step for any project involving more than three people. It does not merely establish meeting agendas and reporting cycles — a good communications plan is developed in consideration of the needs of all of the people involved in the project. It is virtually impossible to define all of the personality types, needs, roles, responsibilities, capabilities, accountabilities, presentation skills, and active listening habits in a single cohesive procedure. Instead, we present a series of tools and techniques that will help

This is the first in a series of articles about best practices for the construction project manager. These best practices will help project managers further develop their knowledge and skills. These articles aim to provide insight to project managers desiring to strengthen their skill sets. The article content will be mapped, where appropriate, to the Project Management Institute, Project Management Body of Knowledge (PMI® PMBOK), which is the most widely accepted standard on the topic of project management.

the project manager be a more effective communicator and consequently, a better project manager.

COMMUNICATION CONCEPTS

All project communications fit into one or more of the four categories shown in Exhibit 1.

Communication is much more than spoken or written words; how you word or say something may be more important than what you say. In general, "tone" is defined as the attitude of the speaker or writer as revealed in their choice of vocabulary or intonation of speech. Tone is used to convey an attitude, either consciously or unconsciously. Research shows that the majority of all communication does occur below a conscious level and is non-verbal. Often referred to as body language, nonverbal communication is almost impossible to define exactly. Its meaning fluctuates not only by culture and context, but also by degree of intention. In other words, you may not be intending to communicate something, but your actions indicate otherwise. On the other hand, a random gesture or the perceived tone of an individual's speech may be assumed to have meaning when none was intended. Common types of nonverbal communication include the following:

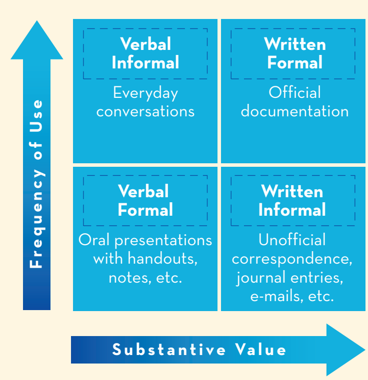
- Facial expressions
- Eye contact (or lack of)
- Posture
- Gestures
- Touch
- Smell
- Degree of personal space
- Artifacts, e.g. clothing
- Vocal features of speech, such as rate, tone, stress, accent, loudness, etc.

COMMUNICATION CHANNELS (PMBOK® SECTION 10.2: INFORMATION DISTRIBUTION)

A communication channel is the method or mechanism you choose to facilitate communication. Common channels, just to name a few, include:

- Meetings (informational or decision making)
- E-mail
- Articles in industry publications
- Phone conversations/voicemail
- Company web sites/intranets
- Informal conversations
- Memos
- Newsletters
- Faxes
- Project documentation.

Exhibit 1
Communication Concepts



The choice of a communication channel should depend on the audience you are trying to reach, the length and complexity of the communication, and whether you want an interactive discussion or simply to provide information. Most of the procedures, tools, and techniques that are described in this article will focus primarily on written communications, including those that are associated with formal meetings. Specifically, this focus will be on those documents employed to transfer information to and from project participants and documents that will become part of the job record.

MEETINGS, PARTICIPANTS, AND AGENDAS

Before a meeting is scheduled, you should determine if a meeting is necessary. Can information be communicated more effectively in a different way, such as via e-mail or a series of phone calls. Time is a premium for everyone in today's fast-paced world, and there is little point of holding a meeting just for the sake of holding it. That being said, meetings are fundamental to the construction process, and they are a very useful tool for communicating information.

Meetings (Formal verbal followed up with formal written)

All projects should have a published schedule of standing meetings and a standard agenda for each. There should be a standing project progress meeting every week, preferably at the same time and location. With practice, most project progress meetings can convene, take care of business, and close in less than an hour. Meetings should start and end on time, and each member should be given an opportunity to express his or her opinions. Active participation by all participants should be encouraged, and care should be taken to prevent one or two people dominate the discussion. Any items requiring action should be reiterated at the end of the meeting, with the appropriate people agreeing to their responsibilities, and within agreed-upon periods. Someone should be appointed to write and distribute the meeting minutes, preferably within a day or two of the meeting. Minutes serve as a written guide to what actually happened in the meeting. Minutes should include the date of the meeting, the names of those who attended, important discussion points, all action items identifying responsibility and due dates, and the date of the next meeting. Participants should be given a short period of time to make any corrections to the minutes. It is a good idea to periodically evaluate these weekly meetings, especially in terms of process, to see if there are any suggestions on how meetings could be improved and made more effective.

Meetings should start and end on time, and each member should be given an opportunity to express his or her opinions.

Participants

In order to keep meetings manageable, only those who are necessary to accomplish the objectives of the meeting should be invited to attend. This can be achieved by identifying the resources and knowledge each person will bring to the meeting. A meeting can lose its effectiveness if too many people are involved, especially those who serve no useful function, and whose time is wasted attending a meeting in which they cannot contribute. Small numbers usually add up to increased interest and participation.

Agendas (Formal written)

There should be a written agenda for every meeting of three or more people, and it should be distributed to all participants, ahead of time, in order to allow for contributions. Agendas do not have to be elaborate, but they should include what everyone needs to know in order to participate in the meeting. The agenda should include the location of the meeting, as well as the start and end times. It should also list the items to be discussed in order. If specific individuals are reporting on an item on the agenda, they should be explicitly identified. The meeting leader should estimate the time needed for each item, which may be included on the agenda as well. The leader may also want to have a more detailed copy of the agenda and include any notes and information that should not be overlooked. The agenda should be followed in order to stay on track and not waste valuable time. (See Exhibit 2.)

FORMAL DOCUMENTATION

Formal written documentation includes submittals, transmittals, letters, memos, e-mails to and from customers, drawings, specifications, redline drawings, shop drawings, as-builts, and copies of supervisor journal pages. Without an excellent system of document management, imagine how hard it will be to track down all of this information a couple of years from now, should you need them for legal purposes.

Exhibit 2

Sample Agenda: Weekly Project Progress Meeting

Formal Written

ABC Construction

Weekly Project Progress Meeting Agenda

Monday, January 10, 2005
Green Room
7:00am–8:00am

Minute taker: Tom Smith

1. *Approval of last meeting's minutes.*
2. *Additions to the agenda.*
3. *Review of what has been accomplished since the last progress meeting. (All)*
4. *Review of what has been accomplished to date. (Leader)*
5. *Exception reports – review of project measurements focusing on cost and schedule. (All)*
6. *Review project issues status; add any new issues. NOTE: only those responsible (or by their proxy) can close an open issue. (All)*
7. *Discuss what needs to be accomplished by the next meeting. (Leader)*
8. *Recap all open action items and timelines. (Leader)*
9. *Suggest agenda items for next meeting. (All)*

These documents may be your best defense to an unforeseen lawsuit and should be maintained for the statute of limitations at a minimum.

Submittals

Submittals include correspondence (formal written) that is required by contractors or subcontractors, and should be filed safely and accessible, for final archiving. Transmittals (formal written) deserve the same treatment as submittals though they are not required by contract. The project manager may exercise some judgment as to the permanency needs of a given transmittal, but it is always safe to err on the side of inclusion. Letters and memos to and from clients and/or subcontractors should be given the same treatment as submittals, and pristine copies should be secure and accessible, also to be later archived. The treatment of e-mails (example of informal written that may need to become formal) is ambiguous. The conservative project manager will treat e-mails the same as submittals and letters to and from the customer and/or subcontractor. Latitude may be given for those e-mails that are internal to the company. If stored on a computer, backup copies should be made. At least one pristine copy of each revision of the specifications, each drawing, and each shop drawing needs to be accessible and stored carefully and permanently. Redline drawings should be maintained on file until an as-built drawing has been validated and issued.

Logs (Submittals, Transmittals, RFIs, etc.)

Logs are lists of what documents went out, what documents came in, and what the status is at any given time for a given item. A consistent written daily field log is a must. A separate log or logs for issues, RFIs (Request for Information), change orders, and disputed change orders (claims) also need to be kept concise and up-to-date. Accident reports are vital as well and should be logged as required. Submittals, transmittals, specifications, drawings, and other formal, contractually required artifacts need to be logged in or out; sequentially numbered; and include whom it is to, from, and the date. A summary of the status (i.e., ship date, under in-house review, approved, not approved, open, closed) should be kept in a paper or electronic ledger. It is recommended that issues, RFIs, change orders, and claims all be logged in the same ledger because of what can happen with an issue. An issue generally becomes an RFI or series of RFIs, which may or may not result in a change order. In the event of a change order, disputes to the change order may become a claim. Having an accurate and complete paper trail is essential to prepare and prove, or disprove, a construction claim.

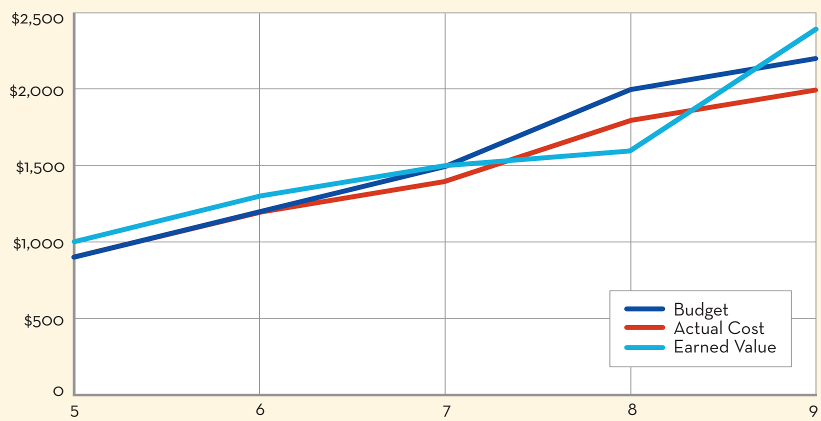
Exhibit 3

Earned Value Indexes

Example of a Month-On-Month Budget vs. Actual vs. Earned Value

	Months										
	0	1	2	3	4	5	6	7	8	9	10
Budget	0	100	200	400	600	900	1200	1500	2000	2200	2300
Actual Cost	200	400	500	600	700	900	1200	1400	1800	2000	2100
Earned Value	0	100	300	500	700	1000	1300	1500	1600	2400	2600

Sample charted below



PROJECT REPORTING (PMBOK® SECTION 10.3)

It is important to maintain accurate as well as current cost and forecast information that permits project managers and senior management to determine project status; enables management to identify and respond to problem areas as early in the process as possible; and provides accurate historical performance data for similar future work. Project managers are responsible for establishing and maintaining these formal written reports that are an accurate and timely reflection of the project's budget, cost, performance, and forecasts. There are various types of reports, such as daily activity, weekly costs/labor hours, and monthly project status reports. While not every report is necessary all the time for every job, care must be taken to ensure the information included in them is conveyed accurately and consistently.

It is always advantageous to display measurements graphically. For example, comparing budget, actual cost, and estimates to complete week-on-week or month-on month reports will communicate trends that might otherwise go unnoticed. (See Exhibit 3.)

Daily Activity Reports: A daily activity report is completed and submitted by the superintendent or foreman at the end of every shift to the project management office. This report includes workforce, safety and labor issues, equipment rental, major work accomplished, subcontractor information, material/equipment deliveries, potential delays, and descriptions of owner meetings. This report may be supplemented with pages copied from the supervisor's journal.

Weekly Cost/Labor-Hour Reports: These reports are prepared by the project manager and calculate quantities, labor-hours, and labor-hours/unit in running totals, indicating trends and variances. It is submitted weekly to the region/division manager or the COO.

Monthly Project Status Reports: The monthly project status report is prepared every month. Subjects covered include progress, performance, safety, milestones, delays, supplier issues, schedule updates, owner relations, owner metrics, and photos, if possible.

Digital cameras on-site are very popular, but digital images may not always be admissible as legal documentation in all jurisdictions.

Photographs of construction methods and materials are a good defense in the case of a challenge. Digital cameras on-site are very popular, but digital images may not always be admissible as legal documentation in all jurisdictions. In the meantime, conventional photos should be taken. Photographs may also be used to illustrate ways of improving the job. Upon completion, the report is submitted to division and region managers and the COO. Additional topics of interest that may be included in this report are:

- Completion schedule vs. bid schedule
- Performance units vs. bid units
- Actual quantities vs. bid quantities
- Change-order status with owner and subcontractors
- Non-budgeted expenses
- Owner/engineer relationship
- Disputes or claims with subcontractors and/or owners
- Stability of subcontractors
- Buy-out status
- Anticipated costs-to-complete.

CLOSURE (PMBOK® SECTION 10.4)

The project requires closure upon completion when its objectives are achieved, or when terminated for other reasons. The client must formally accept the project results. Documenting project results includes:

- Collecting project records
- Ensuring records reflect final specifications
- Analyzing project success, effectiveness, and lessons learned
- Archiving all information for future use.

Closure is an ongoing activity and should occur after each phase of the project. This will help ensure that data is not lost. Outputs from administrative closure include project archives, client confirmation that the project has met all requirements, and lessons learned.

CONTINUOUS-COMMUNICATION SKILL DEVELOPMENT

All members of an organization should update their communication skills on a regular basis. This can be achieved through attending various communication-related training courses, such as:

- Time management
- Leading/managing effective meetings
- Presentation techniques
- Public speaking
- Managing groups/teams
- Customer relations
- Conflict management skills
- Business writing
- Assertiveness training
- Active listening skills
- E-mail etiquette
- Negotiation skills
- Cultural diversity training.

In addition to acquiring new skills and knowledge, employees who participate in training courses often come back to the jobsite feeling energized and full of new ideas.

CONCLUDING THOUGHTS

Great communication skills, verbal and written, informal and formal, encompass all aspects of successful project management. A good communications plan must be developed in consideration of the needs of all people participating in the project. The following thoughts from Lee Smither, a director with FMI, highlight the importance of communication effectiveness.

FMI: The lack of communication seems to be at the root of most problems, not just in the construction industry. What can a project manager proactively do to avoid communication problems?

Lee: As simple as it sounds, they must proactively communicate to everyone associated with the job. Don't assume that anyone knows anything. Over-communicate. For example, don't wait until the last minute to let someone know there is a problem. Then, it's too late for him or her to do anything about it. Let them know that there may be a problem, and encourage them to have an

Don't assume that anyone knows anything. Over-communicate.

alternate plan in place in case things do go wrong.

FMI: What are the critical communication skills project managers must possess? Are there any specific areas of project management that consistently have communication problems, and if so, what recommendations do you have for improvement in these areas?

Lee: Project managers must possess strong communication skills (both verbal and written) in order to be successful. In fact, their ability to lead a project successfully will be based in large part on their communication skills. Consistently, most project managers don't know how to sell or negotiate well. A lot of this comes from poor presentation and persuasive skills, which are really a part of communicating well. Project managers need to receive training on developing and refining their selling and negotiating skills. Toastmasters is a great organization for improving your speaking skills.

Project managers must possess strong communication skills (both verbal and written) in order to be successful.

FMI: In your opinion, how is the construction industry embracing electronic communication (i.e. e-mail, documentation, scheduling, meeting agendas)? What are the biggest pitfalls? Greatest advantages?

Lee: Construction has always been a fast-communication environment, and e-mail has greatly enhanced the speed and ability of people to communicate and document conversations. The Internet has allowed the electronic distribution of drawings, records, memos, etc. on jobs, and therefore, created more efficient communication among designers, contractors, and owners who may be geographically dispersed. The downside is that is has also caused people to send too much information simply because it's easy to do so, and this causes information overload.

FMI: Do you have any specific examples of a company recognizing their communication problems and taking measures to solve them?

Lee: One company needed to improve their safety performance, and they began an internal communication campaign. They began to talk about safety more frequently, they communicated why it is important to be safe on the job, and they even sent safety newsletters to each employee's home. They reinforced the value of safety by proactive and sincere communication. Good communication creates awareness and can change behavior. It did with them — safety performance improved dramatically. ■

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Develop Your Employees or Watch Them Go!

It is not enough to hand employees a paycheck. Consider training as a tool for employee development and retention.

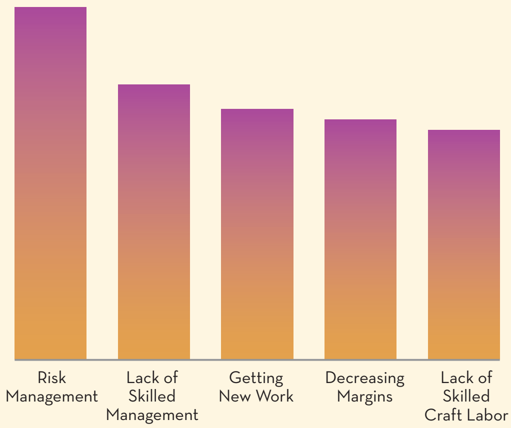
By Ashley E. Robertson

Hiring good people is only part of the challenge in today's labor market. Retaining employees is just as critical. The effort to retain talented employees should start from the moment an individual walks through the door as a candidate for hire, not when the individual threatens to leave. However, when we're faced with this situation, we're often caught scrambling or begging for the employee to stay around, offering incentives such as additional compensation, benefits, and vacation time.

But, you can't buy loyalty, and while you may buy yourself some time before the employee inevitably leaves, money is not necessarily the winning factor in keeping employees around. Money, gifts, and incentives aren't enough to keep people around when they are highly dissatisfied. If your people don't like the company, the people they work with, the boss, or the way they are treated, they will leave. The question then is not why they leave, but when they will leave, and your job is to provide your employees with a reason to hang around as your company moves ahead. When trying to attract, motivate, or keep a talented employee, it is the bigger picture that often counts. No longer can companies get away with only having a retention strategy that kicks in when departures are threatened. Construction professionals need to recognize

Exhibit 1

Top Five Industry Challenges



what employees want from their job and figure out what must be done to help employees meet their personal and professional goals. Construction companies need to develop and implement a loyalty strategy that works if they want to thrive.

In order for a construction firm to be successful, management must be able to negotiate, communicate, and lead employees to fulfill the organizational goals and mission of the company. Being able to effectively motivate and inspire employees is an indicator of true leadership. Unfortunately, motivating people is not an exact science, and there is no magic pill that always works. What may be an incentive for one employee may not work for another. For example, one employee might need flexible hours to be able to care for a sick family member, while another employee may appreciate training for skills improvement. It is critical to find out what motivates individual employees in order to retain them. Finding solutions to employee retention means more profitable companies; happier, more productive employees; and more satisfied customers.

In survey after survey, one of the key challenges identified by contractors around the country is "finding and retaining good people." In fact, two of the top five industry challenges identified in FMI's *2004–2005 U.S. Construction Industry Training Report* are "lack of skilled management," and "lack of skilled craft labor." (See Exhibit 1.) Why should the construction industry be concerned about employee retention?

- Losing top employees can result in substantial recruiting, hiring, training, administrative, and productivity-related costs. The risk of losing customers increases the potential costs of top-employee turnover.
- The economy has doubled in the past 30 years, but the birth rate has dropped 24%. This generation gap is creating headaches for succession planners and has driven unemployment rates to 30-year lows.
- Economists are forecasting the economy to grow twice as fast as the total labor force for the next decade. This growth can only be achieved by significant productivity gains, and the most productive employees will be in very short supply.
- The U.S. Department of Labor reports that the average length of stay with a company among workers aged 25 to 34 has declined to 2.7 years and still appears to be on the decline. Young workers are not staying with an organization for the length of their career. If a company is not meeting the worker's needs, the worker willingly looks elsewhere.

Most construction companies realize that losing good people is costly. The idea that turnover is bad isn't exactly rocket science. However, many people do not seem to fully appreciate the significance of employee turnover or its impact on their firm's bottom line. Most companies do little or nothing to reduce employee turnover. In fact, most companies are not even making serious efforts to understand why their employees leave. Exit interviews are a great way to start. However, many companies fail to do that much.

There is no objective method for calculating the cost of losing an employee, so managers often just accept turnover as uncontrollable. The cost associated with training a new employee can be substantial, and the training and knowledge given to a new employee is a substantial investment. To continue to train new employees as a result of even a modest employee turnover rate can be costly. Another area of concern relating to employee retention is customer service. For the construction industry, customer loyalty and satisfaction are among the most important factors to a successful business. If customers are not receiving the attention they expect, there is a good chance they will discontinue business with you.

You are not alone if you consider your people your most valuable asset. Most firms do realize that people are, indeed, assets. Almost everyone claims that their people are their greatest assets, but is the construction industry walking the talk? Unfortunately, when an asset such as an employee leaves the company, insurance doesn't cover the loss. You can't simply call the manufacturer or distributor and order a replacement. You ultimately have to begin the whole process over again. Finding, recruiting, hiring, training, and developing another employee is expensive, and these tasks occupy management attention that could be better focused on delivering world-class construction services to customers. This doesn't even take into account the cost of other employees having to fill in the gap of the missing person, detracting their attention from the work for which they are primarily responsible. And, who is to say that once you train and develop your "replacement" employees that they won't leave also, especially if there are deep-seated cultural issues creating dissatisfied employees.

The total cost of "losing" a human asset can be far greater than the cost of having an expensive piece of equipment taken away from you.

The total cost of "losing" a human asset can be far greater than the cost of having an expensive piece of equipment taken away from you. It is estimated that the cost of replacing an employee is 70% to 200% of that employee's annual salary. Yet, if you are like most managers, you budget more time and money to take care of your equipment than you do to take care of your human capital. In the construction industry, it is critical to take care of both. We are quickly approaching a generation gap in which you not only have to consider retention costs, but the even greater costs of inadequate succession planning.

Research consistently shows that people come to expect salaries and benefits —

those are table stakes. Consequently, people are no longer highly motivated by such monetary rewards. You have to do more to keep your equipment and your people in productive, working condition. Failure to do so, and to retain your valuable employees, results in expensive turnover and disruption to your business and your customers.

How then does a company attract good employees and keep them? Let's first look at the de-motivating factors and potential reasons for employees to leave a company. These reasons include hazardous/unsafe working conditions; inadequate or incorrect supplies and materials; poor communication with managers, supervisors, and laborers; downtime; disrespectful treatment; a lack of recognition or rewards; lack of challenging or stimulating work; lack of growth opportunities or a clearly defined career path; feeling under-appreciated or under-valued; lack of training; lack of leadership; unclear goals; and poor compensation. Employees look to management to provide guidance and encouragement so that they can get their jobs done efficiently, which translates to productivity gains for the company. A company can and should look to these de-motivators to formulate an effective retention strategy. Some examples of what a company can do to attract and retain employees include:

Retention, or company loyalty, and turnover are company-wide issues that are owned by all levels of management.

- Connecting company strategy to clearly communicated goals
- Creating an environment for success, quality, and teamwork
- Providing basic hygiene factors to ensure employees' success on the job
- Paying employees well, and
- Offering a competitive benefits package.

Let's be honest, though. There are many tasks to be executed immediately to avoid the possibility of talented employees leaving the company. Some require you to be more active in leading, managing, and motivating individuals across the board. By providing good professional development and succession planning, you enable the organization to promote from within. This saves training time and money that would be spent on replacement employees while promoting employee loyalty within the company.

BE ACCOUNTABLE

Retention, or company loyalty, and turnover are company-wide issues that are owned by all levels of management. Hold your field management accountable for retention issues and share ownership of the issue with them. If the company doesn't recognize the issue at the field level, field management won't see the issue as their problem. They will continue to point their fingers at senior management or the company as a whole. It is important to acknowledge and teach a new view that anyone who manages employees is ultimately responsible for hanging onto the organization's human capital for the organization's long-term success.

COMMUNICATE A COMMON PURPOSE

Organizations that encourage every member to contribute ideas and suggestions are better prepared to meet future demands. Employees are more likely to help achieve a company's mission if they understand the purpose of the organization and their role in creating or sustaining its success. Some employees leave because no one ever connects their role in the organization to the company's mission. Making this connection can be as simple as sitting down with each employee and discussing how and why their role is important to the organization's overall success. And it can begin as early as during the interview process to make sure that the employee understands his or her role in achieving company goals. Encourage employees to create an action plan and identify their strengths, developmental needs, and opportunities for success. Then, help them develop their action plan by jointly setting performance goals that directly relate to the organization's overall mission. It will be more rewarding, and you'll have more success by helping others achieve their goals than by simply focusing on your own goals. Organizations that aim for success in this economy will have to focus on their mission and align and train their people to take the organization to the next level. It is important for everyone in your organization, to be working toward common organizational goals, not just meeting project, departmental, or personal needs.

Organizations that encourage every member to contribute ideas and suggestions are better prepared to meet future demands.

CREATE LEADERSHIP OPPORTUNITIES

Encourage risk taking throughout the organization. This doesn't necessarily mean that you should encourage employees to take on a project that is doomed to failure. You should, however, give away power and trust subordinates to take on higher levels of responsibility. For example, remind your employees that they all have problem-solving abilities and should come up with solutions on their own when the opportunity exists. For example, if your employees consistently run into the same issue, it doesn't make sense for them to wait for a manager to tell them what to do, wasting valuable time on the job. They can determine how to solve the problem by thinking it through. This may sound simple, but allowing employees to make decisions on their own builds a sense of pride about their work. It also makes employees feel connected to the organization and encourages their active participation in creating successes for the organization.

You can also share the decision-making process. Again, by involving employees in the decision-making process it creates buy-in to

Today's employees want a voice — to state problems, share ideas, and make suggestions.

the process, making employees less likely to leave because they are involved. Being listened to and heard by others is a sign of being respected and valued. Today's employees want a voice — to state problems, share ideas, and make suggestions. Within this process, identify your star players and prepare them to lead the organization in the future. This will prove to be a critical success factor in your organization's succession planning. Rather than panicking because you don't have someone in place for the next leadership position, you will have been actively involved in grooming several key players to take on the leadership of the future. This shared approach makes each player feel like he or she has a part in the success of the organization.

INTENTIONALLY DEVELOP EMPLOYEES

We know that some companies are already willing to meet the challenge. The *2004–2005 U.S. Construction Industry Training Report* acknowledges that organizations are motivated to develop their employees for many reasons, and there are positive links between training initiatives and increased productivity, higher levels of on-the-job satisfaction, improved product quality, lower turnover rates, and higher profits. Increasing employee retention ranked as the No. 2 incentive in firms' motivation to develop employees, according to FMI's study.

Providing employees with increasing levels of authority and responsibility based on personal growth and proficiency results in increased trust by leaders within the organization. With employee growth, leaders will have confidence that their direct reports can do the job and will support them in their efforts to take risks, assume responsibility, and perform their jobs more effectively. In the process of developing employees, be patient with yourself and others. Get to know your people. Discover who your star players are and invest in their development. Find out their motivators, de-motivators, and ambitions or goals for the future. You can then collaborate with them to create personal development plans. These plans should be tailored to meet individual needs of employees, decreasing turnover. Send your employees to developmental opportunities including formal training. When employees see that you are investing time and money into their career, they are likely to pay attention and hang around.

VALUE TEAMWORK

Encourage and reward teamwork, reinforcing that there is no "I" in "team." In the construction industry, companies often compare projects and project teams to one another. This creates competition and resentment between teams rather than cohesiveness and teamwork. Instead, companies should set standards for adherence to project deadlines, budgets, safety, and other criteria, and hold everyone accountable to those standards. Be sure to communicate that the company is not successful unless each team is also successful. This makes it possible for every team to be a top performer as well as to identify teams that are performing below an established standard without creating internal tension within the organization. Every team should be working together to create successes for the organization, and keeping that in mind, the company should be rewarded for each successful year in addition to having high-performing teams.

BUILD RELATIONSHIPS

The cheapest and easiest methods to help retain the best employees are communication and relationship building with your employees. Communication, in particular, is so important; if employees feel like they are in the dark, they may wonder if this is a place they really want to work. You should know when your employees are unhappy. It is your job to know how employees are doing, what motivates them, and what pushes their buttons. Furthermore, you should have in-depth knowledge of your employees' personalities, their likes and dislikes, strengths and weaknesses, and dreams and aspirations. You should know what is important to them and about what they are passionate. Periodically, companies should even encourage spouses and children to attend corporate functions, and they these events should be family friendly and foster interaction. The relationships forged in the workplace will grow stronger, and participation and teamwork will increase. It is so important to get to know your people, even though it takes some additional time out of your day. People need to feel respected, valued, and involved in daily company decisions.

How can you know why people leave if you never bother to get to know them in the first place?

The best way to learn about the challenges your people face is to visit them in their natural setting, whether this is on the job site or at their desk. How can you know why people leave if you never bother to get to know them in the first place? Open the lines of communication and show respect for each person's job. By creating an atmosphere of respect on the job as well as for their personal lives, you show employees that you value them professionally and personally. One of the best ways to get to know your employees is by walking around. Don't tie yourself to your work. Get up from your desk and make the time to get to know each of your employees. If they don't feel like you care about the work they are doing, they are less inclined to stick around and add value to the company.

REWARD SUCCESSES

Recognizing and rewarding individual and group efforts enhances teamwork as well as the individuals. It is vital that people feel recognized and rewarded for performing well. Receiving awards and recognition for a "job well done" increases employee pride and encourages them to continue working hard to achieve personal and corporate goals. Be creative when giving rewards and recognition. While money is appreciated, realize that it is no longer the most motivating factor for staying on the job. Oftentimes, the creative and personal rewards will mean much more. Furthermore, celebrating accomplishments is extremely important for morale, teambuilding, and getting to know your people. Be sure to allow flexibility in your schedule to celebrate events such as project successes and even employee birthdays. Again, be personal. Write employees handwritten notes just to say “Thank you for your hard work.”

RECOGNIZE LEARNING OPPORTUNITIES

Just as it is important to recognize people for their accomplishments, it is equally important to recognize that people make mistakes. Taking the time to understand the reasons for poor performance or discipline problems and working to correct those issues as a team can yield far greater returns in performance from your employees. By simply taking the time to work one-on-one with a fellow employee you can build the relationship and show the employee that you are interested in developing their career, mishaps and all.

CREATE AN ENVIRONMENT FOR SUCCESS

Organizations that consistently achieve superior results clearly articulate performance goals and objectives; create a non-threatening work environment; allow employees to excel and grow; and publicly reward individuals for outstanding performance. When employees feel good about themselves, they are more likely to actively participate in success creation for the organization. Employees will ultimately be more creative, more effective, more cost efficient, take chances, and hopefully contribute to a culture in which everyone is valued. In this environment, employees are also better able to experience meaningful relationships at work. As a result of building meaningful relationships, the company creates a more cohesive community, inevitably creating financial rewards for the company. In addition, this environment increases employees’ satisfaction and enjoyment levels at work. Meaningful relationships, social or professional, help employees become more engaged in their work and more committed to the organization. One of the biggest reasons employees do not leave their jobs is because of a positive relationship with their boss.

PROVIDE ADEQUATE COMPENSATION & BENEFITS

While compensation and benefits are no longer the No. 1 factor for employees deciding whether to stay or leave a company, they certainly do play a role. In order for an organization to keep employees happy and motivated, the organization must first eliminate job dissatisfaction by providing employees with basic hygiene factors such as suitable working conditions and reasonable pay. These factors only prevent dissatisfaction though, and in order for work to be considered important, an organization must give employees a sense of responsibility and provide chances for recognition and advancement.

INCREASE MORALE

Morale has a significant effect on employee retention, productivity, and profitability. When employees are not satisfied with their job, they often demonstrate their dissatisfaction through lower levels of productivity, which will inevitably reduce profits. However, companies that have created an energizing work environment will benefit from the momentum generated by the individuals who are doing the work, thus increasing the bottom line. Aligning an employee's individual performance with the company's strategic goals increases the individual's perception of personal value and results in commitment and loyalty.

All good investments involve a certain amount of risk, and developing employees is no exception.

There are a number of low-cost strategies companies can consider to boost employee morale and reduce turnover, including:

- Developing employees through training and education programs
- Celebrating successes, no matter how small
- Organizing recognition programs to reward employees for their contribution to the company
- Allowing employees to expand their duties and job responsibilities.

Should you take the time to develop your employees to prevent them from going elsewhere? All good investments involve a certain amount of risk, and developing employees is no exception. Investing in employees is risky to some extent because the continuous development of professional skills ensures employability — whether with your company or with another organization. Employees view the amount of training they receive as an indication of how much the organization values them. In fact, to do anything for the betterment of the employee lets the employee know you care. You may be thinking, "But they'll leave if I give them additional skills because they are more likely to find a better opportunity." However, they will definitely leave if you don't develop them because they assume that you obviously don't care. You'd rather have people standing in line waiting to work for you than a company that can't keep someone on payroll for more than a year. Many companies fall into the trap of neglecting their employees because short-term costs are obvious and value creation takes time to emerge.

Just as it takes time from the moment you break ground on a project before the true value of effort is realized, so too, does it take time to realize value from training as an initiative aimed at retention. The business of training is an investment in and for your employees, your company, and your customers. There are a number of reasons to use training as a tool for retention. Consider developing your employees to create world-class talent in order to aid the development of succession-planning candidates, to improve retention, and to set employees up for success in their jobs. Most importantly, use training to communicate the value you are placing on the persons being trained. It is simply not enough to hand employees a paycheck. Much more is required of companies in order to keep their talent. Consider training as a tool for employee development that will strategically position your company for the future. ■

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10 Reasons Why Incentive Compensation Plans Fail

A successful incentive plan focuses on achieving company goals by driving the right behaviors in employees. Unfortunately, many contractors spend a lot of money and receive little value in return.

By Tom Kort and Jason Baumgarten

Incentive compensation is currently a hot issue in the construction industry. The theory behind incentive compensation is that money motivates employees to perform well. Unfortunately, many contractors spend a lot of money on incentives for their employees and receive little value in return.

In fact, the worst-case scenario occurs when employees become angry with the company because their own expectations for bonuses are not met. Morale is hurt when employees work hard all year, yet the profits of the company still lag because employees are working inefficiently. Contractors who are genuinely trying to reward hard-working employees are frustrated when they realize that they have just created a negative company atmosphere. Unfortunately, this is what many companies face when they incorrectly design and implement incentive compensation plans.

We are often asked, "What is the ideal incentive compensation program?" Contractors are disappointed when they hear our answer, "It depends." There is no standard incentive program and no perfect system that everyone can use. The answer to what will work in a particular organization depends on the organization's goals, desired behaviors, and culture.

KEY TO SUCCESS: GETTING EMPLOYEES TO DO THE RIGHT THINGS CONSISTENTLY

A successful incentive plan must focus on achieving company goals by driving the right behaviors in employees. For instance, if your business aims to secure repeat business and work safely, the bonus system should compensate employees for good customer service and safe work practices as well as profitability. Bonuses based solely on project and/or company profitability do not drive important behaviors (such as safety, customer service and satisfaction, following "best practices," and inter-company teamwork) that lead to long-term company success. Long-term success is the end result of doing the right things consistently.

While, it may seem counterproductive to focus on items besides profits, focusing solely on profits can be dangerous to a company's viability. The following is a real example from a client who focused on the wrong things in his business. A few years ago, a regional manager for a national construction firm drove profitability severely at the monthly work-in-process (WIP) meetings for a struggling division. In fact, these meetings became known as "whip meetings" because if employees did not produce the profit numbers each month, they were verbally berated. At every WIP meeting, the message was loud and clear: "Production, production, production." This message was communicated to them every month. Morale was low, and with the focus exclusively on profitability, items such as quality and customer service were poor. The company's largest customer did not want to work with the contractor anymore. Additionally, while trying to meet production standards one afternoon, a crew ignored safety standards, and a man was killed. When the regional manager asked the foreman why his crew was unsafe, the foreman told him that the crew was never told to be safe. Their focus was always to be on production. With profitability as the sole measurement of success, the company had:

Bonuses based solely on project and/or company profitability do not drive important behaviors (such as safety, customer service and satisfaction, following "best practices," and inter-company teamwork) that lead to long-term company success.

- Low morale among employees
- Customers that did not want them
- Work practices that put their employees at risk
- A reputation of poor quality work
- Managers that had no time to plan for successful projects.

In order for a company to ensure long-term success, employees have to do the right things; cutting corners for immediate profit is dangerous.

THE TOP 10 REASONS WHY INCENTIVE PLANS FAIL

The reasons why incentive plans fail are common among companies and include the following:

Incentive compensation is the additional compensation paid to personnel as a bonus for the successful achievement of specific individual and corporate objectives.

1. Poor Communication With Employees

Poor communication about the plan demoralizes personnel. Management must communicate the following directly to each participant in the plan:

- The dollar amount of the bonus targeted for that employee with the understanding that it will be paid only if both the employee and company meet all their objectives. (Such bonuses can run from $500 to $500,000 or more.)
- The company objectives that must be achieved before the bonus is paid. (An example is achieving some threshold of profitability as well as meeting safety-related goals).
- The objectives the individual must achieve personally in their position. (Examples of employee-performance metrics are provided in No. 5).

Some companies do not communicate to their employees that business has been slow until the week that bonuses are normally paid. It is only at this point that management breaks the bad news. Most employees base their perspective on how the company is performing by how hard they are personally working. We talk to many field managers who tell us that they know the company performed well over the past year because of how much overtime they worked. Without the knowledge of how the company is performing financially, employees will expect a bonus and not realize that, in fact, no bonus is coming. Management has a responsibility to communicate company performance throughout the year so employees' expectations for bonuses are in alignment with reality. Keeping employees informed about company performance does not mean they have to know how much the company is making. If a company is budgeted to make $100,000 pretax profit this month but only makes $75,000, simply tell employees that the company is achieving only 75% of its profit goal.

One of the biggest failures of incentive compensation programs is that they often do not take into account all the key drivers that will make the company successful.

2. The Strategy for the Company is Not Developed

One of the biggest failures of incentive compensation programs is that they often do not take into account all the key drivers that will make the company successful. The best incentive plans promote behaviors that are consistent with the company's strategic plan, marketing efforts, financial goals, productivity processes, and personnel development. For example, if the company performs negotiated, high margin, value-added work, the bonus should factor in the level of customer satisfaction. Or, if the company's strategic goal is to be involved in the local community, a portion of the bonus should be tied to an employee's individual involvement in boards, associations, and other community events. Without purposeful linkage to the company's strategy, incentive plans risk promoting behaviors that are contradictory to the stated strategy.

If best practices are well defined but employees do not follow them consistently, it is the same as having no processes at all.

3. "Best Practices" Do Not Exist

We are often asked to implement an incentive plan when it is evident the business has poor business and operational practices. If the company lacks well-defined "best practices" in the field or does not drive financial performance through strategic or business planning, implementing an incentive plan alone will change little. The bottom line is that employees may work harder, but their hard work may not have a significant impact on profitability. They will continue to install work unproductively, and the company's business strategy will remain flawed.

The following are some examples of "best practices" that can have a significant impact on the performance of a construction business:

- Zero-injury workplace
- Pre-job planning
- Short-interval planning
- Daily-crew planning
- Bid-selection process
- Estimate-review process
- Change-order process
- Post-job reviews
- People development
- Negotiated work.

4. The Plan is Ineffective at Driving the Right Behaviors in People

If best practices are well defined but employees do not follow them consistently, it is the same as having no processes at all. The ultimate goal is profitability and providing an adequate return on investment to shareholders. Unless the company has a market niche or performs negotiated work that provides extraordinary profitability, the company's best chance of success comes when its people:

- Work safely
- Work efficiently by using "best practices"
- Produce quality work
- Satisfy customers
- Motivate subordinates
- Communicate well with others.

5. The Company Has a Poor Employee Performance-Evaluation Process

The employee evaluation process is a painful exercise in many companies. First, supervisors must write a short summary of a subordinate's performance on subjective issues that often include:

- Job knowledge
- Problem solving
- Professionalism
- Motivation
- Interaction with others.

These criteria are subjective and rather meaningless in driving the right behaviors in employees. Looking at this another way, the performance metrics for a controller may include the following objective (vs. subjective) metrics judged on a scale of one to five with one being poor and five being excellent:

- Timely financial statements (statements issued by the 10th of the month)
- Accurate financial statements (financials have minimum errors)
- Timely and accurate work-in-process reports
- Age of receivables equal to less than 40 days of sales (assures cash flow)
- Timely filing and payment of payroll and other tax returns.

Performance metrics for a foreman may include the following:

- Safety (as measured by audits and number of incidents)
- Quality (as measured by rework and customer surveys)
- Customer satisfaction (as measured by customer surveys)
- Labor budget to actual labor costs (ability to meet the labor budget)
- Total cost budget to actual costs incurred (ability to meet the job's budget)
- Schedule performance (ability to meet the schedule).

Evaluations are of little value unless they are simple to create and provide periodic feedback (at least quarterly) to the employee.

The evaluation process should tie in with your incentive compensation plan. The metrics identified for each position should be meaningful. Evaluations are of little value unless they are simple to create and provide periodic feedback (at least quarterly) to the employee.

6. Performance is Measured by Profitability Alone

The common measurement of success is net income reported on a financial statement. However, it is not always the most complete measurement. Consider cash flows. Profits are meaningless if a business cannot collect receivables and runs out of cash. The worst case is the firm that has to borrow money to pay bonuses. If the company is truly profitable, then cash should be available.

In fact, many bonus plans in other industries are not driven by profits, but free cash flow. Free cash flow is the cash generated from business operations less the acquisition costs of new capital assets such as equipment, trucks, and cars (regardless if they are financed or paid for with cash). A company that consumes most of its cash flow by acquiring new equipment will have little, none, or negative free cash flow, and yet, may be very profitable because the cost of new fixed assets is allocated over several years on a financial statement.

Other issues such as safety, customer service, quality, and developing subordinates are essential to the long-term profitability of the company and are often included as measures of success and performance.

The common measurement of success is net income reported on a financial statement. However, it is not always the most complete measurement.

7. The Best People May Work on the Worst Jobs

In a project-based "beat-the-budget" incentive plan, the best people may suffer if they are placed on the toughest jobs. Sometimes the best job a field manager can do for his company is to save it from losing a considerable amount of money due to earlier estimating errors or unforeseen problems. In a project-based incentive plan, this ends up affecting the compensation of the best people because they spend the majority of time on jobs with little or no chance to beat the estimate unless some allowance is made.

8. The Plan Promotes Divisional vs. Corporate Behavior

Plans that primarily provide bonuses for division vs. company-wide performance can promote "me first" behavior. The company's success comes secondary to an individual's own financial success. Under these plans, senior managers may go to extremes to promote their division at the expense of the whole company. Then, the firm suffers. Such incentive plans are poorly conceived.

An exception is the bonus paid to foremen who save labor hours on a project. Labor hours are the main variable a foreman can control and are the best measurement of field productivity.

> **Labor hours are the main variable a foreman can control and are the best measurement of field productivity.**

9. Costs are Miscoded and Resources are Hoarded

There are many different "tricks of the trade" that field managers can use to make one project look good at the expense of another. Plans that pay bonuses based on the success of individual projects but do not set up any consequences for project losses, essentially promote a "me first" mentality at the cost of other projects. Field managers may fight over the best people and equipment, hoarding them without regard to any other projects in the company. We have even seen a field manager code hours to a losing project in order to make a larger bonus on a high-performing project.

10. The Incentive Plan Itself is a Cause of Divisiveness

There is always some tension between estimating and operations. However, with some incentive compensation programs, when an estimator leaves something out of the estimate, it affects the project team's compensation, adding to the tension. Additionally, if field managers are moved on and off jobs, issues about how to split bonuses arise because everyone will not agree on who really contributed to the project's success.

DO YOU HAVE AN EFFECTIVE INCENTIVE PLAN?

How can you determine if your incentive plan is effective? If you answer "no" to any of the following questions, chances are that you are not getting the most benefit out of your plan:

- Have we defined our corporate strategy and communicated it to the rest of our organization so that employees understand what we want to accomplish?
- Does our incentive plan drive behaviors that lead to the objectives outlined in our strategic and business plans?
- Do we have well defined and communicated "best practices?"
- Do we know what our competitors are paying for base pay and incentive compensation so we can be competitive in our offerings?
- Does our company have a threshold of financial performance that it must reach before a bonus pool is created (to ensure that our shareholders are compensated for their risk first)?
- Do our employees know that the company must reach a threshold of profitability, safety performance, and other goals before a bonus pool is created?
- In addition to the company's performance, do employees know what they must accomplish in terms of their own specific performance goals to be paid all or a portion of their targeted bonus?

- Do personnel receive periodic, objective feedback on their performance throughout the year in an easy-to-administer employee-review process?
- Do employees know how well the company is doing throughout the year because of proactive communication? Or, are they surprised the week before Christmas with a memo indicating that no bonus will be paid this year because profitability is down?
- Do you balance issues such as return on shareholders' investment and profit as a percent of revenues with the potential amounts that can be paid under a plan?

CREATING AN EFFECTIVE INCENTIVE PLAN

Step One — Develop a Strategic Plan

Developing and communicating a formal strategic plan creates a unified direction for the company that provides a platform for performance expectations, decision making, and people development. Without a formal strategy, it is impossible to design an incentive plan that promotes behaviors consistent with overall corporate goals and strategies.

Step Two — Develop Best Practices

The second step is to develop and implement standard best practices within the business. Developing best practices establishes expectations for all positions within the company and enables management to hold employees accountable for their performance. These best practices vary depending on the type of work, size of company, and structure of the organization. The key is to identify the critical processes that affect business. Then, standardize and communicate them. Finally, employees must be held accountable for complying with and using the company's best practices. For example, one company might determine that a formal pre-job planning meeting, change-order processes, customer service, and project-closeout process are their critical best practices. Establishing standard criteria for how to perform each of these processes creates a platform for accountability. Once this is established, employees can be evaluated based on objective criteria and an incentive program can be developed that compensates individuals for consistently doing the right things.

Developing best practices establishes expectations for all positions within the company and enables management to hold employees accountable for their performance.

Step Three — Determine Shareholders' Required Return on Investment

Company performance standards must be met before any individual bonuses are paid. Employees work for a company and are paid a salary to carry out their job responsibilities. The expectation is that if everyone performs up to certain standards, the company will be profitable. An owner should expect to be compensated for the risk that he or she takes beyond their salary. This means there is a certain level of financial performance the company must meet before any type of bonus pool is created. This financial performance is individual and determined by the owner's expectations. Once the owner feels he or she has been compensated for risks taken, a bonus pool is established. Employees must understand that if the company does not perform to expected standards, no individual bonuses are paid out.

Return on investment may be defined as net income before income taxes divided by shareholders' or partners' equity in the business. Given the risk of owning a construction business, a minimum return on investment to shareholders should be in the range of 20% to 25%. Some contractors earn returns on investment of as high as 60%.

The starting point for creating an incentive plan is to compare the current base compensation and employee bonuses paid to that paid in similar companies.

Step 4 — Creating, Implementing, and Communicating the Incentive Compensation Plan

Benchmark how other companies are paying base and incentive compensation to their employees. The starting point for creating an incentive plan is to compare the current base compensation and employee bonuses paid to that paid in similar companies. Salary surveys are available from a variety of sources, including Personnel Administrative Services and the Bureau of Labor Statistics. Once it is determined how the company compares to other companies, target bonuses can be set for each person in the plan according to their position and responsibilities.

Develop performance standards by position in the company. The next step is to set performance expectations for each position participating in the plan. This goes beyond creating job descriptions. A metric is a standard of performance. Employees' bonuses are determined by how well each employee achieves his or her individual objectives.

Performance metrics drive the right behaviors in people. These are the actions that keep employees safe in the field, keep customers satisfied, and make the company money.

This process may be used to set pay grades and performance expectations for A, B, and C foremen, project managers, and superintendents. For example, an A foremen submits accurate paperwork timely (including time sheets), and a C foremen does not. An A foreman has consistent profitability and beats the budget. A C foreman does not always achieve the budgeted profit. Pay scales are higher for an A foreman than a C foreman.

Create performance standards for the company. Remember, for an employee to receive a bonus both the employee and employer must perform. Once we know what each person can expect to receive as a maximum bonus, we add up all the bonuses to determine the dollar amount of exposure to the company. For example, if all the targeted bonuses add up to $500,000, we need to determine the profit level the company must achieve to begin creating the bonus pool.

A specialty contractor plan might indicate that bonuses shall accrue as a percent of profits after a threshold level of profitability is reached in terms of dollars or profits as a percent of sales or equity (the shareholders' return on investment).

Exhibit 1
Profit Level Required for Bonus Pool Creation

Total pretax profits	$3,000,000
Less threshold	-$1,000,000
Profits in excess of $1 million	$2,000,000
Bonus rate	x25%
Bonus pool created	$500,000

As an example, we might start accruing the bonus pool once the company achieves at least $1 million in net income before taxes. If we accrue a bonus pool equal to 25 cents on the dollar for profits in excess of $1 million, the goal of the bonus pool is achieved when the company earns $3 million in net income before taxes. (See Exhibit 1.)

Profitability is almost always the key objective of an incentive plan. If safety is important, tie the thresholds for the payment of incentive compensation to specific goals such as the number of recordable incidents or lost workdays. A company trying to drive customer service will use the results of formal customer surveys to determine how much of the bonus pool is paid.

Formalize and Communicate the Incentive Compensation Plan. The next step is the write-up and communication of the incentive compensation plan. It is this communication and consequent understanding that drives employees' behavior to meet company objectives outlined in the strategic or business plans. Expectations must be communicated to everyone in the plan. Generally, communicating only once is not nearly enough.

An incentive compensation plan is intended to drive the right behavior in employees.

CONCLUSION

An incentive compensation plan is intended to drive the right behavior in employees. Whatever program is established for paying bonuses, management must communicate its expectations for performance and the behaviors required. Before developing a plan, it is important to look at the entire organization and determine the readiness of the company to pay incentives based on the right behaviors and performance. Can the culture tolerate a compensation plan that rewards employees for doing the right things? ■

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Construction CFOs Optimistic

FMI's survey of CFOs in the construction industry revealed that these financial executives are optimistic about the coming year.

By Stevan Simich

According to a survey conducted by FMI in the summer of 2004, financial executives in the construction industry are optimistic about the coming year. The majority of survey respondents believe that their general contracting business and the national construction economy will expand in 2005. As might be expected, there is concern for the cost of materials, insurance, and cash flow. Driven by competition and rising costs of doing business, contractors are expanding into new markets, modifying employee benefit packages, and increasing their spending on sales and marketing.

KEY SURVEY FINDINGS

The survey explored the general economic climate and outlook, bank financing, and merger and acquisition trends.

Market and Economy. Most respondents rated the current state of the U.S. construction economy as average to slightly above average, with expectations for construction spending to expand in the coming year. Most CFOs expect their revenues to increase with greater confidence than the construction economy as a whole.

Financial Concerns. The most significant financial concerns were general economic conditions, insurance costs, and costs for materials, supplies, and equipment. Most CFOs expect little change in their credit availability, banking covenants, or bonding capacity.

Mergers and Acquisitions Activity. Thirty-one of the 119 respondents acquired an average of 2.4 companies in the last five years. Most CFOs believe that valuations have decreased in the last five years. The majority of companies that were acquired or merged had successful overall integration and cultural and managerial transitions.

RESEARCH DESIGN

FMI sent the first-annual Construction CFO Survey to 1,200 CFOs, VPs of finance, and controllers of general contractors. A total of 119 respondents (10% response rate) from across the nation returned the survey via the internet, fax, or mail. Questionnaires were mailed in June 2004, and completed questionnaires were received between June 28 and July 19, 2004. The source of contacts was generated from FMI's proprietary database of general contractors, which includes ENR's Top 400 Contractors.

RESPONDENT DEMOGRAPHICS

Most CFO's responding to the survey work for privately held companies with 2003 revenues in the $50 million to $500 million range.

Location. Respondents represented all U.S. states, with 69% having operations in more than one state. Exhibit 1 demonstrates the states served by respondents.

Type of Company. Almost all the respondents were from privately held firms. (See Exhibit 2.)

2003 Revenues. Sixty-eight percent of respondents' companies had 2003 revenues in the $50 to $500M range. (See Exhibit 3.)

Market Sectors. The sample results show respondents represented the major market sectors. The primary markets serviced in 2003 and 2004 by the majority of respondents were general building, health care, commercial development, education, and corporate facilities. (See Exhibit 4.)

ECONOMIC OUTLOOK

Most rate the U.S. construction economy as average. Eighty-nine percent of respondents rate the current state of the construction market as average to above average. (See Exhibit 5.)

Market expansion is expected. Fifty-eight percent of the CFOs surveyed believe that the market will expand in the next 12 months. This survey result is consistent with FMI's market predictions of a 4% growth rate in production PIP for the next year. (See Exhibit 6.)

Revenue growth is expected. Two-thirds of respondents expect their company's revenues to grow in the next 12 months. (See Exhibit 7.)

Contractors are expanding and increasing their spending in response to current economic conditions. Current economic conditions have driven CFOs to take the following actions: expand into new markets, increase spending on sales and marketing, and modify employee benefits. (See Exhibit 8.)

Other changes mentioned include:

- Close branch offices
- Sell noncompetitive divisions and assets
- Invest in new tools and equipment
- Bid on a diversified type of work
- Purchase capital equipment
- Plan to move to new premises.

Twenty-four percent of respondents perceive general economic conditions as being the most significant financial concern.

Economy, insurance, and cost of materials are contractors' top financial concerns. Twenty-four percent of respondents perceive general economic conditions as being the most significant financial concern. Insurance costs; cost of materials, supplies, and equipment; and labor follow in importance during the current market conditions. (See Exhibit 9.)

Impact of Financial Concerns. Cash flow is the one issue listed above that contractors can actually control. All other topics are subject to trends in the market. Unfortunately, the trends have not been in favor of the contractors. General economic conditions are moving in a positive direction. However, insurance costs, materials costs, and bonding availability and costs will not improve in the near future. The role of the CFO will become more complex as banking, insurance, and bonding agents may demand more detailed information on risk and financial performance.

The economy is the biggest financial factor affecting contractors. More than half (59%) of the CFOs surveyed rank a strengthening/weakening economy at the top of the list of factors having the greatest impact on their business. (See Exhibit 10.)

FINANCING

There are two key influencers driving conditions for credit and financing of general contractors. One is the optimism that increases with an economy on the rise. The second is the demand for loans for investing in internal expansion or capital for new equipment. During optimistic times, banks are more willing to loosen restrictions and covenants and increase lending flexibility. Currently, the demand for loans is down. Combining these two factors creates a very positive environment for seeking debt financing. Low interest rates boost these two factors further in favor of contractors. Despite these trends, anecdotal information suggests that many banks are reducing their business with contractors due to the risky nature of the industry. Nonetheless, the following results show this not to be the case with survey respondents.

Credit availability for contractors is not changing dramatically. Only 5% of the respondents have seen lenders dramatically change credit availability from the last year. (See Exhibit 11.)

Net worth and debt covenants have increased for some contractors. Ninety percent and higher of respondents have not seen lenders change debt, liability, or net-worth covenants in the last year. (See Exhibit 12.)

Most contractors expect their financing requirements to stay the same. One-third of respondents anticipate an increase in their requirements over the next 12 months. These results may reflect the possibility that many contractors are internally financing capital needs. As demonstrated earlier, 58% percent of CFOs expect the economy to expand and 67% expect their revenues to expand. Contractors are confident that they can expand through means other than bank debt. (See Exhibit 13.)

Ninety percent and higher of respondents have not seen lenders change debt, liability, or net-worth covenants in the last year.

Contractors expect their bonding capacity to stay the same. Seventy percent of respondents expect bonding capacity to remain the same. Twenty-five percent expect it to increase in the next 12 months. (See Exhibit 14.)

With increased optimism, an expanding market, and growing revenues, it only makes sense that bonding capacity would follow suit. We would expect to see a greater percentage of contractors increasing their bonding capacity; however, the current surety market is operating contrary to current optimism. The surety industry is extremely tight, and is expected to be so in the near term.

MERGERS AND ACQUISITIONS

The mergers and acquisitions results of the survey show that in the past five years, 31 contractors acquired an average of 2.4 companies. Twenty of the 31 firms that participated in a transaction in the past five years plan to make an acquisition in the next five years. Of the firms making an acquisition, only 11 of the 31 firms acquired one firm. A median number of two firms was acquired per contractor with a maximum of eight firms acquired by one contractor.

There are many drivers of merger and acquisition activity. Consolidators of contractors have seen a rollercoaster ride with the acquisition markets, with many having divested of ill-concerned acquisitions. Private-equity firms are showing interest in the industry as multiples increase and the ability to leverage transactions increases. The surety markets also play an important part in mergers and acquisitions activity as companies that struggle with obtaining sufficient surety credit are forced to sell their businesses to companies with ample capital and surplus credit.

One-fourth of contractors surveyed have acquired a firm since 1998. Twenty-five percent of CFOs surveyed said their company acquired a firm since 1998. The 31 acquiring companies purchased 75 companies for an average of 2.4 companies acquired per company. (See Exhibit 15.)

A small percentage of CFOs perceive that valuations have increased or stayed the same. Fifty-two percent of respondents perceive that valuations of construction companies have decreased in the past five years. (See Exhibit 16.)

A softening of business valuations occurred during 2002 and 2003. This trend is changing, but with greater caution compared to market conditions in 1999 through 2001. Mergers and acquisitions are beginning to increase with strategic and financial buyers entering the market for consolidation opportunities and with that will come increases in valuations.

Integration of acquisitions generally seen as successful. Ninety-one percent of respondents who were involved in an acquisition viewed their transaction's overall integration as having average to very successful results. The cultural transition and management transitions had 81% and 82% percent results of average to very successful. (1 = not successful; 5 = very successful) The results from this survey are surprising when compared to statistics by numerous other studies. A KPMG study in 1999 showed that "83% of mergers were unsuccessful in producing any business benefit as regards shareholder value."[1] Another report demonstrated that "62% of 234 acquisitions rated as satisfactory or very satisfactory."[2] (See Exhibit 17.)

One-third of contractors are considering making a transaction in the next five years. Twenty-six percent of survey participants are considering buying another firm. (See Exhibit 18.)

The top reasons for making acquisitions are to enter new markets and grow geographically. Adding staff and bonding capacity were not selected or were a small percentage of the total. (See Exhibit 19.)

The current state of the economy has not affected mergers and acquisitions plans for most contractors. Two-thirds of respondents said their plans for making mergers or acquisitions are not affected by the economy. The results are balanced at 12% each between respondents stating that they are more interested in buying than before and those that have put acquisition plans on hold until the economy improves. FMI's experience had shown that most strategic buyers are consistently looking for appropriate acquisitions regardless of the economy. (See Exhibit 20.)

A softening of business valuations occurred during 2002 and 2003. This trend is changing, but with greater caution compared to market conditions in 1999 through 2001.

Favorite M&A targets are contractors active in the commercial, institutional, and corporate construction segments. Despite the strength of the health care and education markets in the last years, commercial/institutional and corporate facilities rank the highest as potential acquisition targets. Criminal justice, entertainment, petroleum, and transportation construction firms rank the lowest. (See Exhibit 21.)

Firms with revenue ranges of $5 to $10 million are most appealing to potential acquirers. Five percent of respondents are considering construction companies with revenues greater than $50 million. (See Exhibit 22.)

SURVEY CONCLUSIONS

The economic outlook for construction firms is positive in the coming years. FMI's market research confirms the optimism shared by CFOs responding to this survey. However, the general economic perception is being checked by the increasing costs for materials, insurance, and benefit costs. Generally, these costs are being passed on to the owners of construction projects.

Loosening restrictions on covenants and inexpensive debt are providing opportunities for contractors to finance capital expenditures to meet increasing demand. Even in this environment, many contractors are financing growth internally or waiting to make major capital expenditures. Even though many respondents do not foresee the need for external financing, many are considering acquisitions in the coming five years. ■

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[1] *Kelly, John and Cook, Colin (1999) Mergers and Acquisitions: Global Research Report 1999. KPMG.*

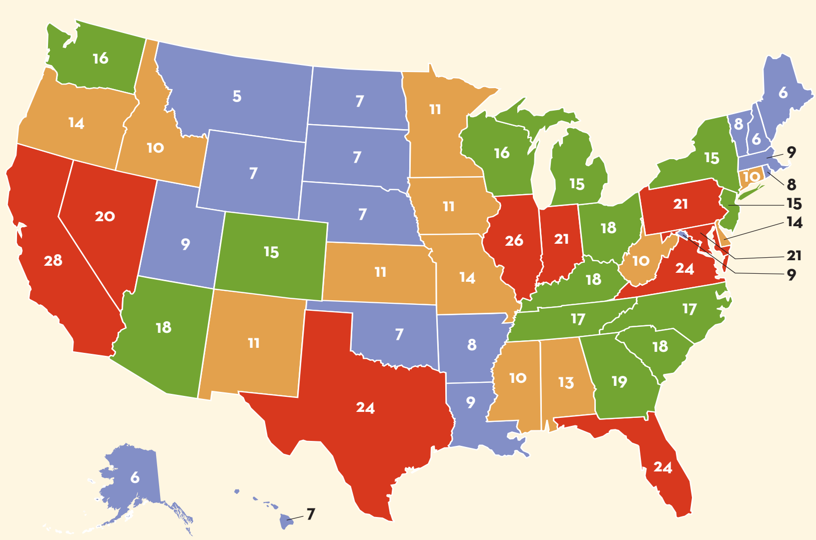
[2] *Beatty, Carol A. (1999) Living Happily Ever After... with an Acquisition. Queens University*

Exhibit 1

States Served by Survey Respondents

Number of Operations

- 5-9
- 10-14
- 15-19
- 20+



Sampling size: Each result lists the sample size (example: n=119). Several questions show a sample size greater than 119. Respondents had the option of selecting more than one result for questions with larger sample sizes. A general rule of thumb shows that a sample size of 30 or more can be considered statistically significant, meaning the sample size can represent a greater population.

Exhibit 2

Type of Company

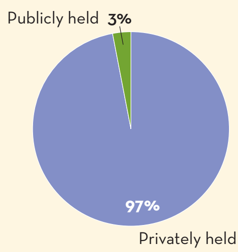


Exhibit 3

2003 Revenues

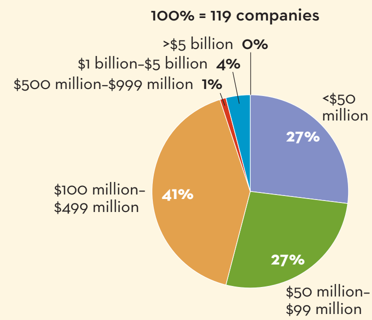
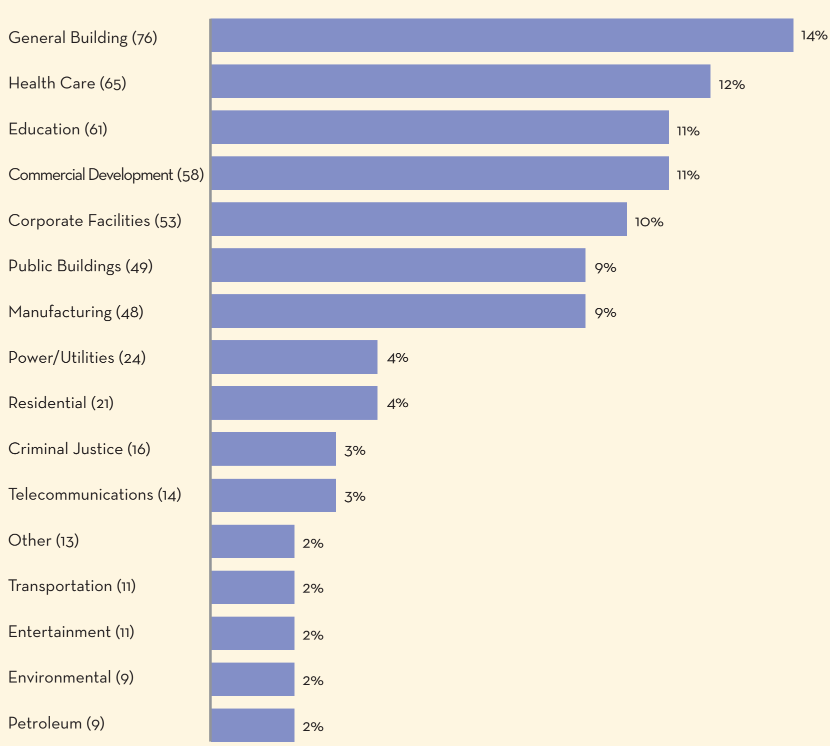


Exhibit 4

Market Sectors

Percentage of total number of responses for 119 respondents
( ) Total number of responses*



** Respondents could choose multiple market sectors.*

Exhibit 5

Economy Strength

How would you rate the current state of the U.S. construction economy?

100% = 119 companies

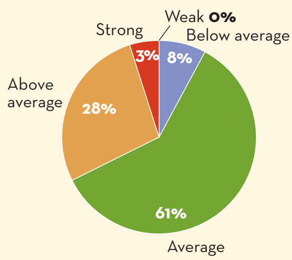


Exhibit 6

Market Expansion

Do you expect the U.S. construction economy to expand, contract, or stay the same in the next 12 months?

100% = 119 companies

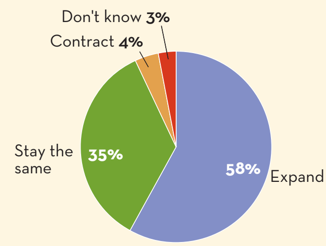


Exhibit 7

Revenue Growth

Do you expect your company's revenues to grow, contract, or stay the same in the next 12 months?

100% = 119 companies

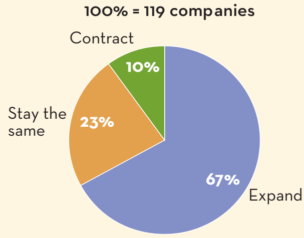


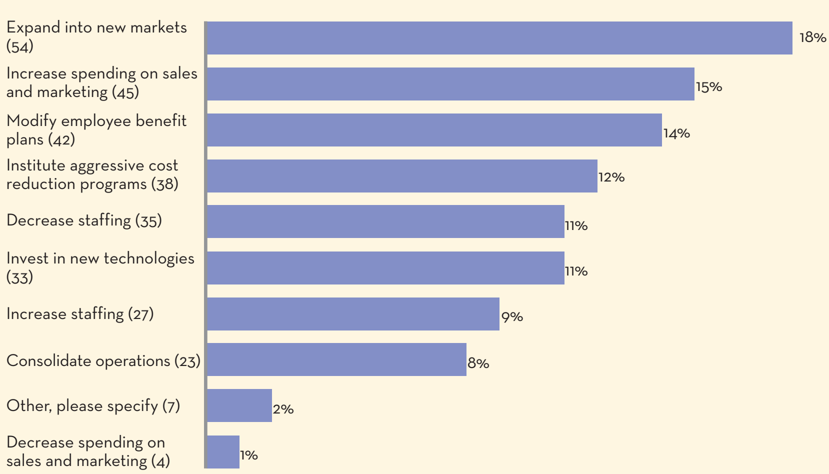
Exhibit 8

Effects of Economic Conditions

Have the current economic conditions caused you to do any of the following? Choose the top three.

Percentage of total number of responses for 119 respondents

( ) Total number of responses*



** Respondents could choose multiple responses.*

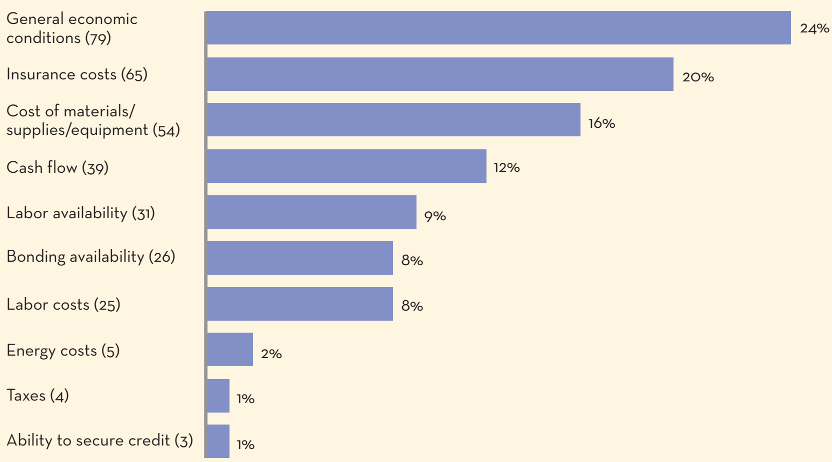
Exhibit 9

Contractors' Top Financial Concerns

What are your most significant financial concerns? Choose the top three.

Percentage of total number of responses for 119 respondents

( ) Total number of responses*



** Respondents could choose multiple responses.*

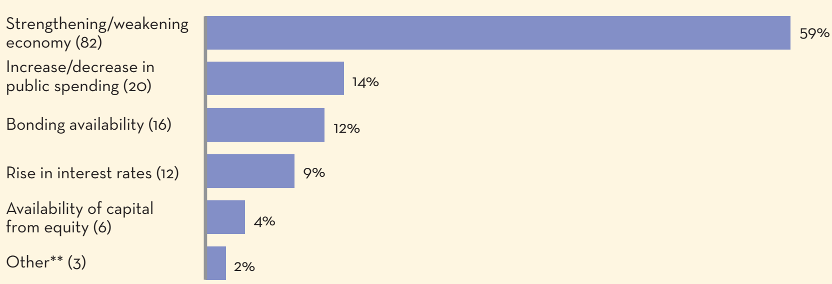
Exhibit 10

Financial Factors Affecting Contractors

Of the following, what will have the greatest impact on your business?

Percentage of total number of responses for 119 respondents

( ) Total number of responses*



** Respondents could choose multiple responses.*

*** Other included escalating costs for material and labor, workers compensation, and increased costs of materials, i.e., steel prices.*

Exhibit 11
Credit Availability
Has your lender dramatically changed your credit availability from last year (excluding normal extension of routine credit)?

100% = 119 companies

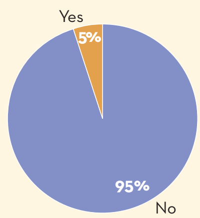


Exhibit 12
Financial Covenants
Have your lenders changed any of the following financial covenants for your business in the last year?

100% = 119 respondents

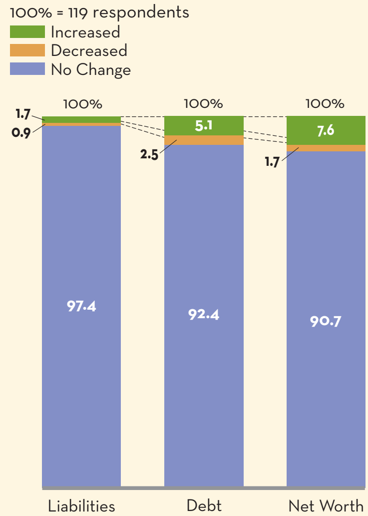


Exhibit 13
Financing Requirements
Will your company's financing requirements increase, decrease, or stay the same in the next 12 months?

100% = 117 companies

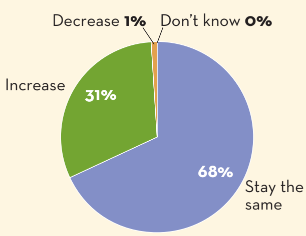


Exhibit 14
Bond Capacity
How do you expect your bonding capacity to change over the next 12 months?

100% = 119 companies

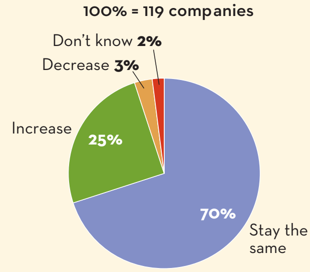
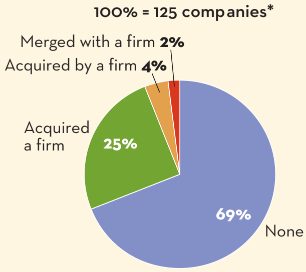


Exhibit 15
Firm Acquisition
What were your merger and acquisition activities during the last five years (since January 1998)?

100% = 125 companies*



** Respondents could choose multiple responses.*

Exhibit 16
Company's Valuation
Have valuations of construction companies increased or decreased over the past five years?

100% = 87 companies

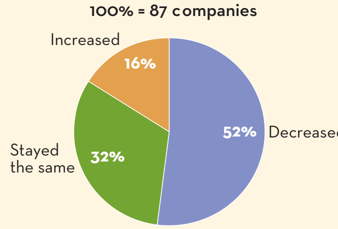
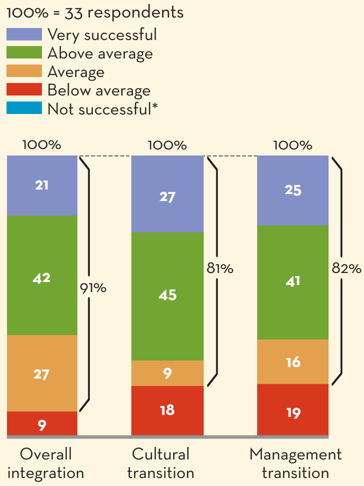


Exhibit 17

Acquisition Integration

How successful would you consider your most recent merger or acquisition in achieving its strategic goals?



* *Of the 33 respondents, none considered their most recent merger or acquisition "Not Successful" in achieving its strategic goals.*

Exhibit 18

Company Transactions

Is your firm considering any of the following transactions over the next five years?

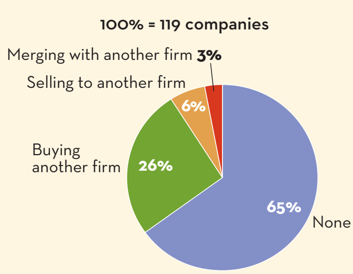
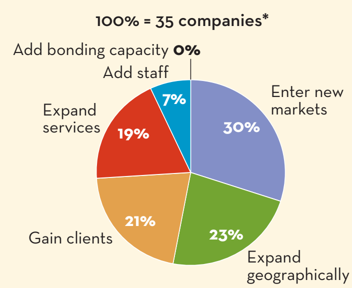


Exhibit 19

Reasons for Acquisitions

Choose the top three reasons you are considering buying or merging with another firm?



* *Respondents could choose multiple reasons.*

Exhibit 20

Effect of Economy on Mergers and Acquisitions

How has the current state of the economy affected your merger and acquistion plans?

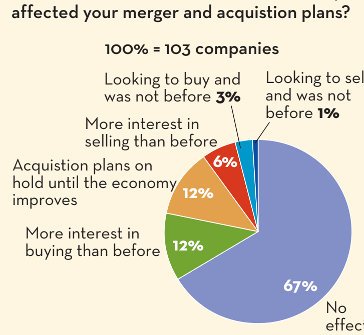


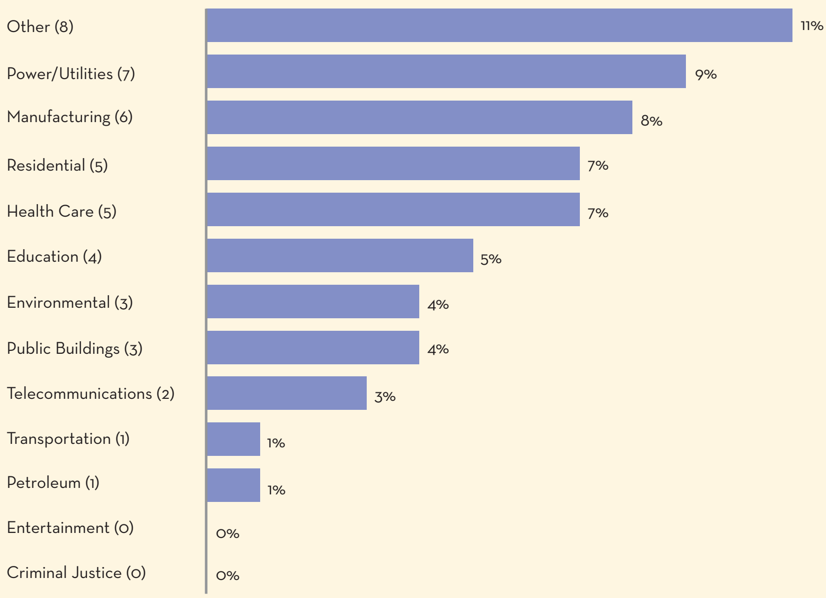
Exhibit 21

Favored Merger and Acquisition Targets

What type of construction firm would best meet your merger or acquisition objectives? Mark all that apply.

Percentage of total number of responses for 34 respondents

( ) Total number of responses*



** Respondents could choose multiple responses.*

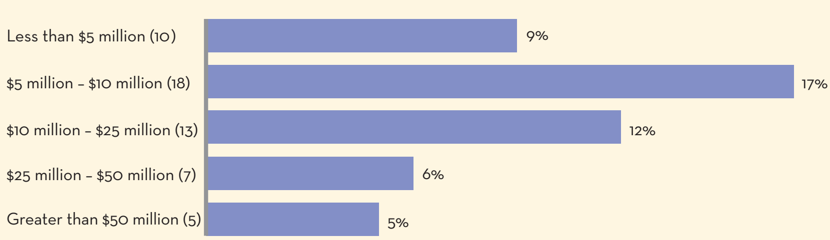
Exhibit 22

Revenue Ranges Most Appealing to Potential Acquirers

By revenue, what size firm would you consider? You may choose more than one response.

Percentage of total number of responses for 38 respondents

( ) Total number of responses*



** Respondents could choose multiple responses.*