FMI

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2019

How to Recession-Proof Your Business

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Message From the CEO

Chris Daum

Welcome to the first 2019 edition of the "FMI Quarterly." Coming off several years of healthy economic conditions and strong construction backlogs, we're beginning to see signs of a slowdown ahead.

With this in mind, we decided to make "how to recession-proof your business" the theme for this issue, knowing that even if the next downturn doesn't begin in 2019, it will at some point. And even if it's still a few years off, the recession-proofing advice you'll find within these pages applies in all markets and business conditions.

Now, to be clear, here at FMI we're not calling for a recession in 2019. However, construction spending growth is slowing, and there's a lot of turbulence going on in the general economy. We think the engineering and construction (E&C) industry is at or near the top of the cycle. Knowing this, it's time for E&C firms to start thinking about how to operate their businesses profitably when (not if) the recession hits.

Along with the theme of "how to recession-proof your business" come two particular articles in this edition of the "Quarterly" that all management teams and leaders will find interesting and useful. The first is about leveraging your board of directors in turbulent times. It points out that in the E&C industry, the overwhelming majority of boards are not leveraged for their maximum effectiveness.

In fact, most E&C boards spend the majority of their time dealing with historical events and financial performance, when at least 80% of their time should be focused on the future strategic direction of the business. This means focusing on tightening up operations, fine-tuning strategy, strengthening governance and partnering with leadership to successfully navigate difficult market conditions.

The second article, by Tyler Paré and Ryan Howsam, is about how to improve your performance in any market condition. It includes questions that all management teams should ask themselves: Is our current performance indicative of true operational excellence or just status-quo performance in a great market? Have our margins been expanding as a result of improved innovation and better operational execution? Or have they expanded because we're at the top of a market cycle and there's a lot of work to be had?

For many years we've noticed that contractors and clients across the industry ignore the need for internal improvements and operational execution during healthy and robust markets. Given everything that we see going on in the market today—and what's sure to come—we think now is a great time to do so. Don't wait until it's too late to make those strategic moves that will help your organization weather the storm.

Chris Daum is the president and chief executive officer of FMI Corporation. Chris oversees the management of all FMI businesses and services and leads the firm's strategic growth efforts. He can be reached via email at ***cdaum@fminet.com***.

How to Focus on Performance in Any Market Conditions

By Tyler Paré and Ryan Howsam

Position your business for long-term success by fine-tuning your company's operations, risk management, people and rewards practices.

"Only when the tide goes out do you discover who has been swimming naked," remarked Warren Buffett, reflecting on the financial institutions that had the largest exposures to the housing market through the financial crisis of 2007-08. Buffett was pointing out that although many Wall Street firms appeared to be financially strong on the surface, they lacked internal discipline and operational control.

Contractors today are happily swimming in a sea of opportunity. On the surface, success looks quite uniform—new hires, new offices, bigger jobs, higher revenues and higher margins. But what's really happening *below the surface*? If and when the tide goes out, as Buffett states, will some contractors be standing more proudly than others?

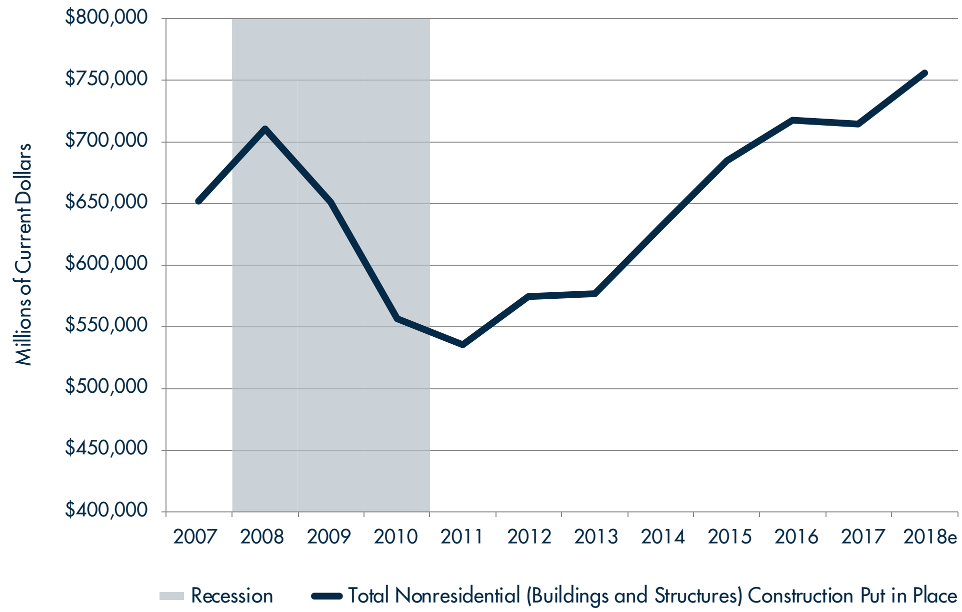
This is not a foreboding prediction of the next recession, rather a challenge to our readership to take a shrewd, introspective account of the efficacy of their business practices <u>today</u>. Ask yourself:

- Are your current results symptomatic of operational excellence or just a good market?
- As your business has grown, have you added the right infrastructure and people required to run a larger operation?
- Have your margins grown as a result of operational innovation, or are they simply rising with the flood tide?

Rising to the Top

Since "the bottom" of 2011, nonresidential construction put in place for U.S. markets has grown at 5% CAGR (see Exhibit 1). Growing construction spend across industry sectors has provided contractors a path to robust revenue and profit margin growth.

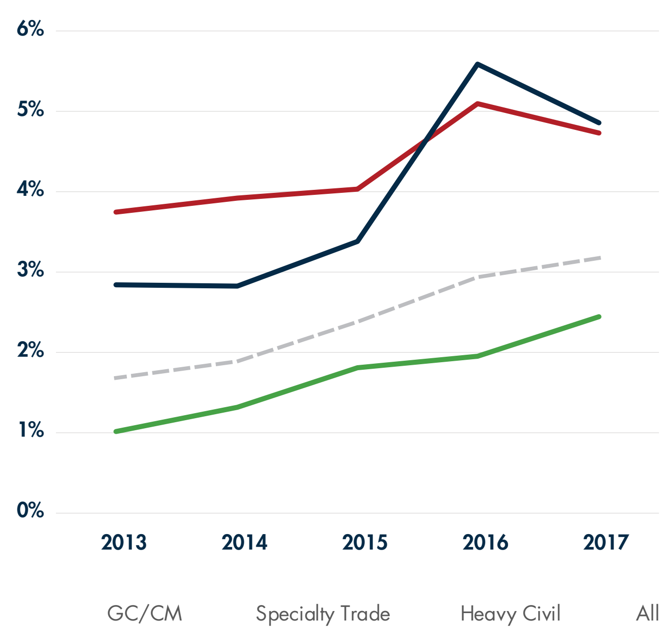
Exhibit 1. Nonresidential Construction Put in Place



Source: FMI Overview

During this broad expansionary cycle for U.S. engineering and construction (E&C) markets, operating profit margins of nonresidential construction firms analyzed by FMI grew at 17.3% CAGR (24.7% for general contractors, 5.9% for specialty trade contractors and 15.3% for heavy/civil contractors) between 2013 and 2017.[1] In aggregate, operating profit margins have nearly doubled over the last four years. And as contractors close the books on 2018, many anticipate last year's numbers to be even stronger than in 2017 (Exhibit 2).

Exhibit 2. Operating Profit Margin (EBIT/Revenue)



Source: FMI Corporation

[1] The average sample size used was 200.

Profitable growth certainly provides a lot of advantages to contractors, including:

- Increased profits can be plowed back into the company to invest in people, technologies, equipment and more. Done right, these investments can yield improved competitive positioning long-term.
- Growth also provides opportunity. An expanding work program helps contractors promote, challenge and empower their employees to manage broader purviews of project and organizational risk.
- Perhaps most noticeably, growth is good for morale. People like working at a company that continuously wins work, and they take comfort in the notion of a growing backlog, which means they will have projects to manage for the foreseeable future (i.e., job security).

Growth Risks

Growth can also present significant challenges and risks for construction companies, and progressive firms in today's market are not resting on their laurels. Below, we highlight four areas (operations, risk management, people and rewards) that should be at the forefront of every E&C leader's agenda, even (and especially) when times are good:

1. Operations

Project Performance. Broad-based margin expansion can mask many operational flaws. Margin fade from 5% to 4% is much more palatable than margin fade from 1% to 0%, but any reduction should be cause for concern. Even if a project has an acceptable profit, did the project perform as estimated? Were there opportunities to potentially improve gross margin?

Project Controls. To understand true project performance, contractors need extreme clarity and transparency on project controls, including schedule, budget, labor productivity, equipment utilization, etc. Project controls must also be repeatable and scalable, particularly as contractors grow and onboard new talent. The controls themselves are easy enough to develop, but creating management buy-in and establishing a culture of accountability can elude contractors. Are your people consistently executing for steady results?

Labor. The national craft labor shortage has made it difficult for contractors to maintain historical production expectations. To execute work profitably in this "new normal," construction firms must intentionally optimize communication and collaboration in their planning efforts, ensuring that even the newest crew member understands budget expectations and quantifiable production goals. Labor management is the top driver of project success or failure for self-performing contractors. As your work program and craft labor workforce grows, is your labor productivity management getting stronger or weaker?

Equipment. This can be a multi-seven-figure cost center in an equipment-intensive construction business. Unfortunately, many equipment departments do not receive the same level of cost scrutiny and management attention as multimillion-dollar projects do. Tracking equipment hours and understanding utilization are critical for optimizing fleet performance and yielding a return on capital-intensive assets. For the millions of dollars you've invested in equipment, are you realizing an acceptable return?

If your performance in today's market is good, but not great, challenge your operational executives to fine-tune their team's approach to project controls, labor and equipment management.

2. Risk Management

More contractors go bankrupt in a boom cycle than in a downturn, primarily due to overaggressive growth and poor cash flow management (see "Why Large Contractors Fail: A Fresh Perspective"). Rapid growth can also result in contractors' management and manpower resources being stretched thin. As your business has grown over the last few years, have you maintained a healthy balance sheet, properly managed cash flow and adequately staffed projects? If so, could you say the same about your subcontractor partners or your general contractor customers? Now, more than ever, you need tight prequalification controls and go/no-go processes around project, customer and subcontractor selections. It's also prudent for general contractors to monitor and manage their risk exposure associated with one particular subcontractor or general contractor. According to our latest industry study,[2] conducted in collaboration with AGC's surety and construction risk management forum, the top-three most popular practices used to manage risk today include:

- Formal project risk assessment (56%)
- Subcontractor performance evaluations (38%)
- Captive insurance (32%)

A risk is just a problem that hasn't happened yet. If you sense that your grip on risk controls is slipping as your organization grows, circle the wagons internally on your risk management strategy and protocols. It's much easier to manage a problem before it happens.

3. People

To manage growth, many contractors have imported early-career employees with relatively little experience and skill. They've also hired midcareer professionals who may have developed less than ideal habits and practices from previous employers. Undoubtedly, as your business has grown, you've had to bring in new people as well. Has your culture (and ingrained behaviors and values) remained consistent, or has it been "diluted" since the beginning of the up cycle?

Not all hires end up being good hires. Invariably, underperformers slip through the cracks of even the best recruiting filters. Unfortunately, many contractors struggle to cull the herd. The theory is that an underperforming employee is better than no employee at all, and particularly when

[2] The 2019 AGC/FMI Industry Risk Study will be released in February 2019.

available talent in the market is scant. However, it's much easier to build an objective performance management culture and infrastructure in a good economy. Having fact-based insights into your employees' performance will give you confidence and reduce legal risks if and when you have to face organizational belt-tightening.

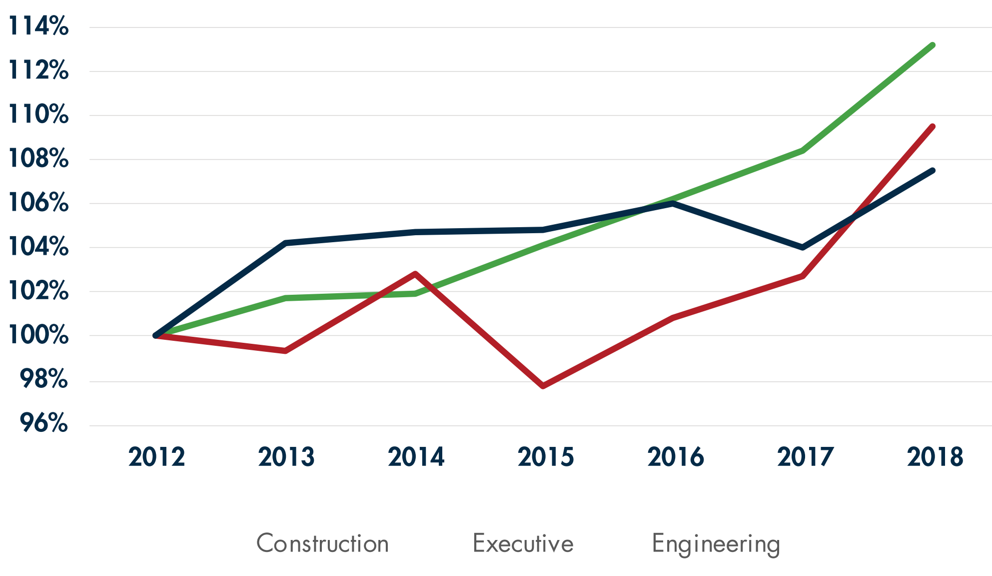
This leads us to the millennials. Believe it or not, millennials now represent the majority demographic group in the workforce. They catch plenty of flack in our industry (as being entitled, lazy, etc.), but these burgeoning professionals are the future of the industry. When asked what worries them most about the millennial generation, executives commonly cite a lack of interpersonal skills, leadership skills and business acumen. Contractors that address these areas head-on and intentionally accelerate the leadership readiness of their young professionals will gain sustained competitive advantage in the years ahead—regardless of economic conditions.

If you have a mixed bag of talent, lack of clarity on individual performance, and a growing demographic of millennials in your workforce generations, it may be time to take a step back and assess and improve your talent development strategies.

4. Rewards

Compensation levels for U.S. construction professionals (across all positions and regions) have risen 14% (or 2.65% CAGR) since 2012 (Exhibit 3). You may have experienced even higher wage growth in your own market. Very active markets such as Seattle, north and central Texas, and the Bay Area, among others, have required notably higher increases in order to attract and retain

Exhibit 3. National Average Compensation Increases (2012 - 2018)



Source: FMI Compensation

high-quality employees.

As you've staffed up, you've probably had to pay more than you would like, or possibly "top of market" pay, to recruit certain individuals. On the other end of the spectrum, you may have experienced regrettable losses of employees who left your business for higher pay. We sometimes dismiss those departing individuals as "lacking loyalty" or being "just in it for the money." While there are usually other reasons that contribute to an employee choosing to leave, compensation is a highly visible factor. Without real-time market data, contractors can't confidently confirm whether their employees are compensated commensurate with market expectations.

The balance of fixed versus variable compensation should also be considered in the context of cash management and corporate risk. High fixed (base wages) and low variable (bonus) compensation are appealing to some contractors today because they instill a sense of financial predictability in employees and can mitigate handwringing at bonus time. However, a compensation philosophy that dictates high base wages also increases fixed overhead and the overall risk posture of a construction company. Under any approach, an important question to ask is, "will our compensation philosophy mitigate or exacerbate profitability challenges in a year of poor performance."

Beyond the breakdown of base wages and bonuses, industry executives are also concerned about how to derive incentive rewards. FMI research indicates that contractors that clearly align incentive plans with their corporate strategic objectives can better measure their ROI on bonuses than those firms that use purely discretionary plans. More importantly, those with structured, goals-based incentive plans are significantly more likely to report positive results in the form of more cohesive teams, greater employee accountability and improved financial performance. Additionally, structured incentive plans help employees understand how much they can earn in a given year and how it can be earned as a result of company, business unit/team or individual performance.

Finally, once key leaders and successors are brought into the company, it is essential that they are retained for future success. Many contractors are exploring various ways to ensure top performers remain motivated and engaged in achieving corporate goals. Two increasingly common approaches are total rewards assessments and long-term incentive plans. The purpose of evaluating total rewards is to gauge the competitiveness of all aspects of the work experience offered by the contractor—from base wages to bonus to vehicle allowances to insurance to workplace amenities. This way the contractor knows (and can inform employees about) the total value of their employment. Long-term incentive plans are aimed at encouraging executive behaviors and performance that advance shareholder objectives; in many instances, improvement in corporate wealth or profitability results in an equitable reward to plan participants. Because the plan's design is long-term in nature, employees receiving long-term incentive awards must think about the impact of their decisions over time and focus on optimizing performance in all market circumstances.

It's Time to Act

Contractors are often reluctant to focus their attention on internal improvements to their businesses in a robust market. However, now may be precisely the opportune time to take inventory of your company's strengths and opportunities for improvement.

For starters, challenge your executive committee to provide a candid assessment of the current state of your business relative to the four areas highlighted in this article: operations, risk management, people and rewards. Fine-tune these areas today to position your business for success long-term. In other words, don't be caught naked when the tide goes out.

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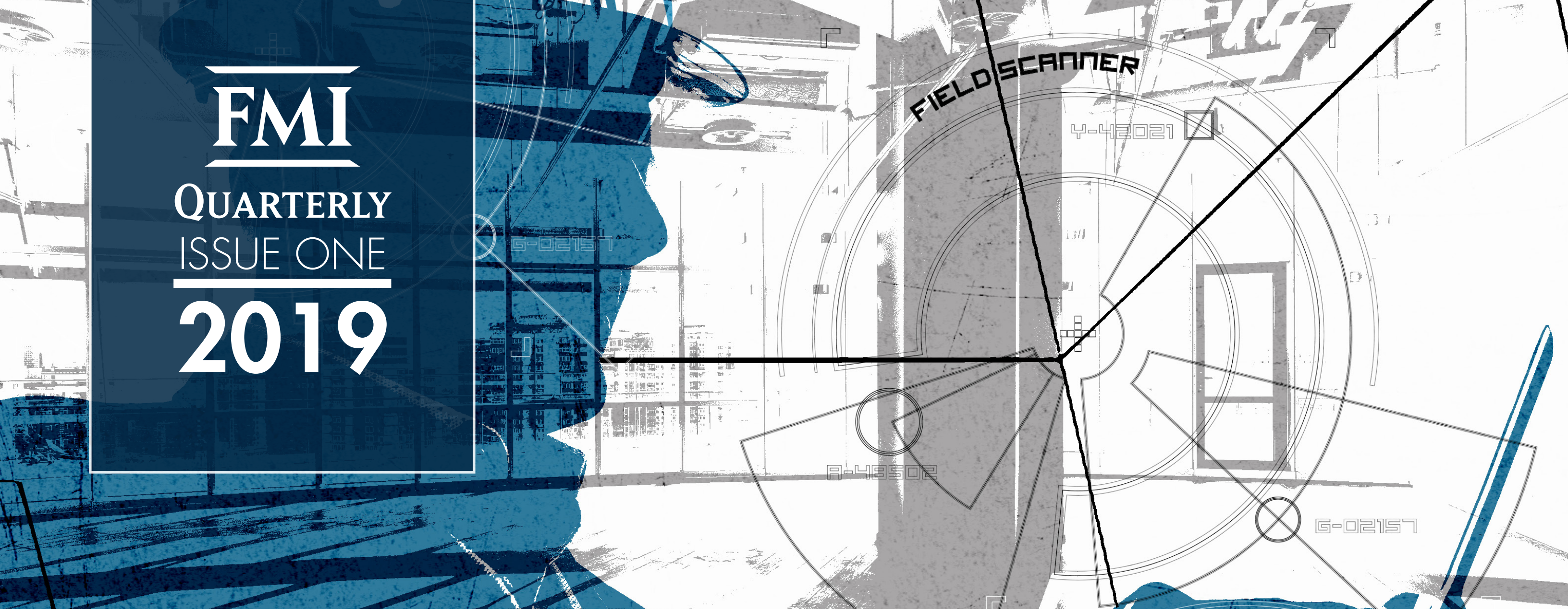


The Rise of In-House Design

By Ryan Howsam

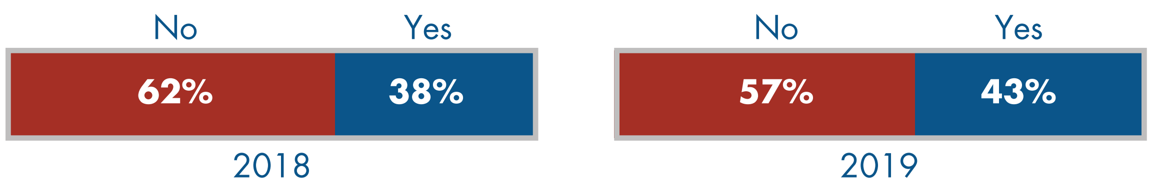
The pros and cons of bringing the project design function in-house.

Look around the engineering and construction (E&C) industry right now, and you're likely to notice an increase in the number of companies that are enhancing their in-house project design capabilities. So rather than outsourcing this function fully to a third party, these firms are taking on more of the responsibility of designing and building the projects that they get involved with.

The proof is in the numbers. This year more than 43% of contractors say they're going to do more in-house design compared to just 38% in 2018, according to the most recent AGC/FMI Risk Study (Exhibit 1).[1] This is a 5% increase in the number of organizations that grew their in-house design capabilities over the prior 12 months, with an additional 25% of organizations thinking about increasing their design capabilities in the near future (but not yet actually doing it).

Exhibit 1. In-House Design Is on the Rise

Is your organization considering an increase in its in-house design capabilities?



Source: 2019 AGC/FMI Risk Management Survey

[1] The 2019 AGC/FMI Risk Study published in March 2019.

As we ponder this interesting trend, we must ask ourselves questions like:

- What is driving this trend of increasing in-house design capabilities?
- What implications does this trend present for contracting firms, designers and owners? How does this change project stakeholders' risk profiles?
- What are the various approaches for bringing design in-house?
- What are the associated benefits and risks?
- Will the trend last long-term?

To accurately answer these questions, we should first define in-house design and work to understand the broad spectrum of capabilities that are associated with design-build contractors. Here are some key definitions to keep in mind:

- In-house design capabilities come in many forms that range from the typical design elements done by contractors (e.g., formwork, falsework, means and methods) to those normally handled by a designer (e.g., pen to paper design of permanent structures).
- At one end of the design spectrum are the contractors that have in-house architects and engineers on staff. These professionals assist with design coordination with the third-party/external designers who are hired by the owner.
- At the other end of the spectrum is the contractor that retains a full-time, dedicated team of designers and expertise to fully design the permanent structure.

With this in mind, many of today's contractors are trying to figure out whether they want to move past the lower end of the design spectrum and handle actual design coordination and design permanent structures (or not). This consideration is based on the perceived risk of incomplete design today: According to the 2018 AGC/FMI Risk Study, 92% of participants reported receiving less complete design documents than in the past (Exhibit 2).

Exhibit 2. Have the design documents provided to your firm been less complete than in the past?

Source: 2018 AGC/FMI Risk Management Survey

The issue of incomplete design is not just a large contractor problem. It also affects all other project stakeholders–small and midsize firms as well as bigger public-private stakeholder groups. It's a universal issue with the design-build model, where loss and claims can be equal to $10 million on a $50 million project (yet owners are still trying to pass on these risks to the general contractor). No contractors or designers want to take on unlimited liability for their current fees, so they're trying to get more control over project design in order to reduce risk for all project stakeholders.

The Pros of Bringing Design In-House

There are numerous reasons for bringing design in-house. Here are seven of them:

1. Today's contractors witness a considerable increase in less complete designs within the design-build model where bids are routinely made against designs often at only 30% complete versus in the past under the design-bid-build delivery model where designs were at 100% complete when put out to bid.

2. Overall, builders and designers are taking on more design risk for the same fees (yet many contractors are leery of design).

3. Many contractors think the design-build model is broken because it doesn't adequately address the risk that design-build contractors are forced to take on.

4. When the design is less than 50% complete, contractors can't provide cost certainty and must make assumptions on pricing and developing the appropriate contingencies for the project.

5. Contractors want to improve design coordination to ensure a design will ultimately be constructible since the owner will ultimately hold the builder responsible for completing the project on time and on budget.

6. To prevent potential delays, contractors want better control over the design schedule.

7. The design-build process often will only support the costs of a partially complete design pre-bid. Thus the designers complete the design only to the point of what they are compensated for versus to 100% complete as was typical of the design-bid-build model. Faced with this budget reality, designers will look to limit their liability in some reasonable way to the limitations of an incomplete design, leaving the contractor to manage and mitigate the risks associated with the design gap.

While these are the more prominent upsides of bringing design in-house, it's important to note that many contractors are leery of design liability and would rather count on the expertise of architects and engineering firms to address design needs—instead of enhancing their in-house design capabilities. After all, in an industry where outsourcing design has been the norm for decades, making the major shift to a more vertically integrated business model comes with new risks and challenges.

Five Key Challenges

Like any business shift, bringing design in-house also comes with its fair share of challenges that E&C firms must work through to successfully merge their various capabilities. Here are some of the key issues that companies may face:

1. **Culture and behaviors.** Being aware of the organizational friction points of having a designer in-house and adequately supporting him/her with financial resources, technology tools and continuing to build his/her expertise are paramount. With cultural differences comes the potential for poor communication and coordination. When design is brought in-house, the need for good communication and coordination among contractors and their key partners becomes that much more critical.

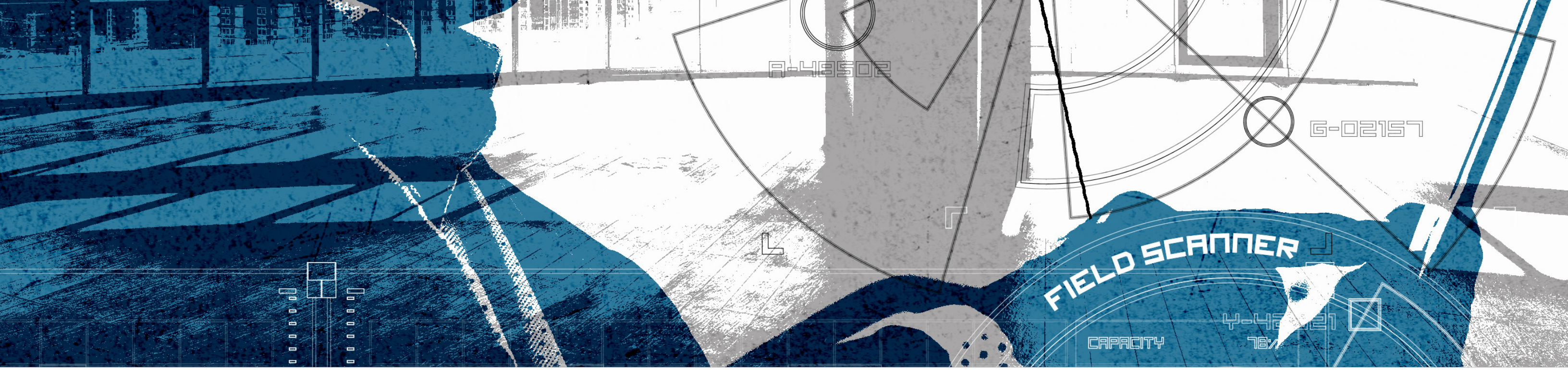
2. **Lack of a partnership mentality.** Contractors need to treat designers as partners in the process rather than viewing them in the typical general to subcontracted relationship. Both parties should work to create strong alliances with their internal and external business partners if they want to play larger roles on their projects.

3. **Not understanding how design teams work.** In-house design can range from the typical design elements completed by contractors (e.g., formwork, falsework, means and methods) to those normally done by a designer (e.g., pen to paper design of permanent structures)—with construction engineering and engineering services for design and construction falling somewhere between those two extremes. Construction firms will need to decide where they want to fall on this spectrum, based on their comfort level with design liability.

4. **Insufficient clarity about how deep into design you want to go.** Do you simply want to have some level of in-house design understanding and capability to coordinate design better in the design-build model, or do you want to go further into the design of permanent structures? Knowing the answers to these questions is important as they relate to your long-term strategy and your understanding of the insurable risks and corresponding risk tolerance level to engage in design activities.

5. **Being unaware of the increased liability.** If your firm is involved in a design-build project, then you'll have design liability whether or not you've subcontracted the design. A few key considerations will include:

   - Owning cost/quantity growth.
   - Acting as the engineer of record.
   - Understanding whether insurance programs are adequate (i.e., Contractor's Protective Professional Indemnity and Liability Insurance–will it respond as primary for the contractors' own design liabilities rather than excess of all other collectible insurances).
   - Having design liability that's adequate coverage for a contractor.
   - Licensing requirement for contractors: At what point do you go over the line in design to the point where licensure is required?
   - Understanding operational risk and design risk: What insurance programs can you rely on?



- Finding new solutions: Owner specifications prevent flexibility and the ability to buy insurance in the most efficient way, given market realities of Insured vs. Insured and Equity Interest Exclusions in commercially available professional liability policies. This could result in the need to procure additional layers of insurance with redundant costs to adequately address the design liability exposures for various parties in the design-build team.

There are also inherent conflicts between owner specifications and available insurances to consider. In fact, this is a primary challenge that all E&C firms must work through when taking on the design responsibility. In the old design-bid-build world, for example, the designer bought its professional liability insurance and was first-named insured. If a claim occurred, whether during or after construction, there was no issue with coverage regardless of whether the claim came from the owner for the contractor since neither was a Named Insured or Additional Named Insured under the designer's policy.

In the design-build model, on the other hand, the most likely lawsuit is not coming from the owner, but from the contractor during construction. The challenge is that when an owner's specifications state that the design-build contractor, designer and all subcontractors must be Named/Additional Named Insured covered under the same policy, the designer winds up at a disadvantage. This is due to the fact the entity has the design liability exposure but not any coverage from the policy that is being bought (due to the insured versus insured exclusion). This can result in the need for the design team to buy additional insurances that would actually respond to claims during construction.

The good news is that integrated joint ventures can circumvent this challenge by using a project-specific professional liability approach, provided all parties' corporate programs will respond in excess of the project-specific professional owners' liability requirements.

Getting Into the Design Business

As more E&C companies integrate at least some form of design capability into their business models, more of them will be creating joint ventures with existing designers. In such relationships, it pays to create expectations and formal processes for communicating design expectations to the owner and the architect right at the outset of the project. Early and effective coordination of design, constructibility reviews and costs are critical to maximizing the benefit of this approach.

Other companies are placing project team members at the designer's location for a period of time (i.e., to assist in meeting details and increasing communication of all aspects of the project design) or employing in-house designers to help coordinate design. This creates an additional "set of internal eyes" that can help manage the external design risk.

Having building information technology (BIM)/virtual design and construction (VDC) capabilities is a key element to successfully managing the design risks of a project. This expertise allows increased coordination of the BIM model with subcontractors around the design and can be an important communication tool with owners.

As prefabrication becomes an important part of the design-build model, the BIM model can help the contractor manage the prefabrication process far more effectively. In fact, many contractors believe having BIM/VDC capabilities (with BIM being the "sole source of truth" in design) far outweighs the benefits of having an in-house design team. And when considering the future technological and innovation advances in our industries, having BIM/VDS capabilities to leverage these advances is one approach to warding off potential disruption from other entrants into the E&C industry.

Another way E&C firms can get into the design business is by acquiring firms that already have their own in-house design capabilities. In these scenarios, the contractor must ask itself: Do we have the expertise to manage effectively and help grow that new discipline in our business by providing the right focus and capital to do so? If the answers to those questions are yes, then this may be a viable model for bringing design in-house.

What's Ahead for Design?

In today's world, many qualified contractors have engineering capabilities that rival most mechanical firms. For example, designers live in the design-risk world, so their internal processes, procedures, contract management practices, quality assurance and quality controls are <u>all</u> centered around managing design risk. They are also comfortable taking on the design risk. Contractors are generally not focused on design and may not have internal processes and procedures nor the expertise to support design activities.

As design-build continues to grow, integration of design with construction will also gain momentum. What form that takes is yet to be determined. It may happen within one single firm or by integrating DBJVs of E&C firms with different skill sets—but more likely a mix of the two. We think an integrated approach offers quite a few advantages in a world where engineers are striving to better understand the construction process as a whole and where design integration is well underway on many different projects.

I would like to thank the FMI/AGC Surety Insurance and Construction Risk Management 2019 panel participants for their expertise and contributions to this article. The panel participants included Joe Poliafico, Flatiron Construction; Jim Kerns, Parsons; Doug Maibach, Barton Malow; and Ronald Robey, Smith, Currie & Hancock. However, the article's perspective and points of view are solely that of the author Ryan Howsam and not necessarily shared by the panelists.

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Creating a Dynamic Strategy Through Business Analytics

By Jay Snyder

Using business analytics to create a data-driven culture that helps E&C companies fine-tune their business strategies and continually improve their operations.

As the volume of data that the world is generating continues to proliferate, companies across all industries are finding new and unique ways to put that intelligence to work. The engineering and construction (E&C) sectors are no exception. By incorporating business analytics, key performance indicators (KPIs) and operational dashboards into their day-to-day activities, companies can track current performance, review historical activity and empower better decision-making.

The problem is that most of today's E&C organizations are drowning in data, much of which just isn't captured, organized and managed effectively. Understanding which data can be useful and how it translates into business intelligence, for example, requires strategic planning and a clear understanding of your organization's overall goals and vision.

Companies that successfully apply business analytics can leverage those insights to improve daily operations and increase overall organizational performance. For best results, company leaders and their constituents must define their metrics carefully, use visual tools such as digital dashboards, and give the appropriate users access to relevant operational and financial data. In this article, we explore the concept of business analytics and discuss how dashboards can help E&C firms fine-tune their strategy ahead of the inevitable economic downturn.

What Is Business Analytics?

In today's information age, managing data has become big business. The business analytics industry is expected to reach $71.1 billion by 2022, growing at a compound annual growth rate (CAGR) of 6.9% from 2015 to 2022.[1] Encompassing raw materials, emails, financials, survey responses, mobile data usage, timecards and more, data is only "useful" if you have defined your business problem and understand ***what data will help you*** answer the business problem or question that you're trying to figure out.

That's where business analytics comes into the picture. The art and science of discovering insights by using sophisticated mathematical, statistical, machine learning and network science methods along with a variety of data and expert knowledge, business analytics helps to support better, faster and timelier decision-making. At its core, analytics is an enabler for decision-making and problem-solving.[2]

Using dashboards or other reporting tools to drill down into certain areas of their businesses, E&C firms can shine a light on aspects of the business that need more focus and attention. Then, once those areas have been uncovered and addressed, companies can effectively leverage data and analysis to get to the truly "useful" information that correlates with their key pain points (e.g., margin gains/fades, labor productivity, employee turnover, rising costs of doing business, etc.). To be most effective, data analytics must be married with a visual analytics dashboard that a broad range of users can access, review and make decisions on in real time. However, while a data analytics platform can greatly improve business performance, those results won't come overnight. By having a clear understanding of the time frame and rollout process, you can more easily manage expectations during this transition (see FMI's article "Big Data = Big Questions for the Engineering and Construction Industry" for more details).

Wanted: A Tech-Savvy and Data-Driven Culture

Using business analytics to track business outcomes and/or examine operational or strategic blind spots can help identify early warning signs and allow companies to take corrective action before these issues turn into major problems. However, the majority of firms struggle to make this work–the proof is in the numbers:

- In an HBR survey of approximately 700 business professionals, only 3% of respondents said they are able to act on all of the customer data they collect; 21% say they can act on very little of it.
- Just 48% of organizations currently have analytics systems, and only 36% possess big data analytic solutions. Forty-two percent say that their analytic systems don't meet current needs.

These numbers reveal a business world where very few organizations are capable of fully leveraging the power of their data. While getting the right tools may be as simple as buying a software program, finding the right people is a more difficult task. To successfully gain insights from your data, assemble a team that not only has a background working within the built environment and understands the life cycle of project work, but also has strong research and analytical skills to best leverage your data to improve business performance. Companies that don't invest in the right people often experience disappointing failures and are slow to realize a return on their investment (ROI).

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[1] Stratistics MRC

[2] Dursun Delen and Sudha Ram. "Research challenges and opportunities in business analytics." Journal of Business Analytics. Volume 1, 2018 - Issue 1.

Over the coming years, as the E&C industry continues to undergo a rapid digital transformation, leaders must continually assess their organization people needs and adapt their talent strategies. Not only is the industry competing over its own talent pool, but it is also going head-to-head with technology companies such as Google, Apple or Uber that attract data scientists and a broad range of IT specialists. In this context, and knowing how important talent management is for younger generations, it must also become a top priority for E&C firms.

Focusing on What Really Matters

Here at FMI, we believe that any strong strategy must be based on facts. The main benefit of using an advanced business analytics dashboard can be boiled down to one word: focus. That's really what it's all about. With this data in hand and available in a user-friendly dashboard format, companies can focus on ***what really matters***.

In today's market, we're inundated with information daily from multiple sources pertaining to various different items. Using a data dashboard, companies can look at all that data in a single, consolidated place and extract the salient points from that data. That's easier said than done though. Most of today's E&C firms face multiple disconnected data sources, which contribute to a number of issues including:

- Data silos can affect many parts of your organization, such as finances/budgeting, information technology, human resources, etc.
- Data silos can slow your company down—silos create an incomplete picture, making it more challenging for leaders to make informed decisions.
- Data silos limit communication and collaboration within and outside of your organization.
- Data silos decrease quality and credibility of your data—isolated data can quickly become obsolete or inaccurate.
- Data silos reduce efficiency and storage.

If these inefficiencies persist, E&C firms' bottom lines and productivity rates will be negatively impacted. This is particularly critical in light of increasing project complexity and growing demand for new E&C projects.

"Like it or not, every construction company—and solutions provider—is now also in the data business. How well we help our customers transform that data into intelligence that drives better decisions to deliver projects more efficiently and more sustainably, with higher quality, lower costs and fewer risks, is what defines the next frontier of construction management. Data is the key to improving the bottom line as well as protecting it. Our ability to break down data silos and transform raw data into action and intelligence is the crux to solving most challenges that rear their head in our industry. Solve the data problem and everything else falls into place."

– Jon Figland, General Manager, Collaboration Solutions, Trimble

These realities are driving the need to break down silos across the industry and find ways to increase collaboration, consistency and efficiency on E&C projects. As most executives already know, siloed information can slow down processes, impede the flow of information and decrease productivity. When those silos are "flattened" out, those challenges begin to fade. Using dashboards to create automated workflows among stakeholders on a project, for example, can keep all parties informed with real-time information to create a more effective process. This, in turn, helps reduce delays and ensures that all parties have access to up-to-date information on a 24/7/365 basis.

More Continuous Intelligence Ahead

By 2022, more than half of all major new business systems will incorporate continuous intelligence (a design pattern in which real-time analytics are integrated within a business operation, processing current and historical data to prescribe actions in response to events) that uses real-time context data to improve decisions, according to Gartner. Those E&C firms that get onboard now will be best positioned to take advantage of these advanced technologies and the continuous improvement benefits that they provide.

"The size, complexity, distributed nature of data, speed of action and the continuous intelligence required by digital business means that rigid and centralized architectures and tools break down," Gartner's Donald Feinberg said in a press release. "The continued survival of any business will depend upon an agile, data-centric architecture that responds to the constant rate of change."

Progressive, data-driven E&C companies are already capturing and analyzing many different data points, pinpointing correlations between operational and strategic variables, and determining which levers actually ***increase*** the value of an organization and improve its operational performance. Using business analytics, the same companies can rerun the analyses, measure the effects and tweak their strategies even further. This type of ***dynamic*** strategy approach allows companies to reap the rewards of continuous improvement in any business environment.

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How to Leverage Your Board Ahead of Turbulent Times

By Michael Mangum

The best boards are helping companies devise good plans of action for the future. Is yours on target?

A group of individuals elected to represent shareholder interests, a board of directors helps to establish corporate management and oversight policies. Going a step further, a board can also serve as a valuable tool in helping to lower business risk, prepare for turbulent times and weather economic recessions. That's because boards help leaders take a step back from the day-to-day operations of their companies, effectively opening their eyes to the company's strategic needs and best path forward.

Should the anticipated economic downturn—no matter how minimal or inconsequential it may be—rear its ugly head in the coming months, engineering and construction (E&C) firms will need all the firepower that they have to offset its effects, lower enterprise risk and survive the storm. Working simultaneously across the past, present and future, boards will play an important role in assuring this happens. By examining historical performance of the organization during other downturns and how those issues impacted the company, for example, a board can help devise a prudent plan of action for the future.

In this article, we explore the value of good boards of directors, hear real-life examples of these boards in action, and learn what steps E&C firms should be taking now to prepare for success in the future.

Finding Solutions to Real Problems

It shouldn't take a recession for companies to realize the value of having a peak-performing board in place. Companies across the E&C industry are constantly seeking innovative solutions to the myriad challenges they face in today's competitive business environment. Leaders are confronted with talent pressures, changing technologies, increased competition, demographic shifts, economic uncertainty and various other seemingly random obstacles.

To find solutions, leaders often re-examine the way they recruit, onboard, train and develop their people; hire talent with unique competencies precisely suited to their new job role; reassess business models; form new partnerships and strategic alliances; join peer groups; and look for ways to cut costs and increase productivity. In short, leaders in the E&C industry deploy a multipronged strategy to confront and conquer marketplace challenges.

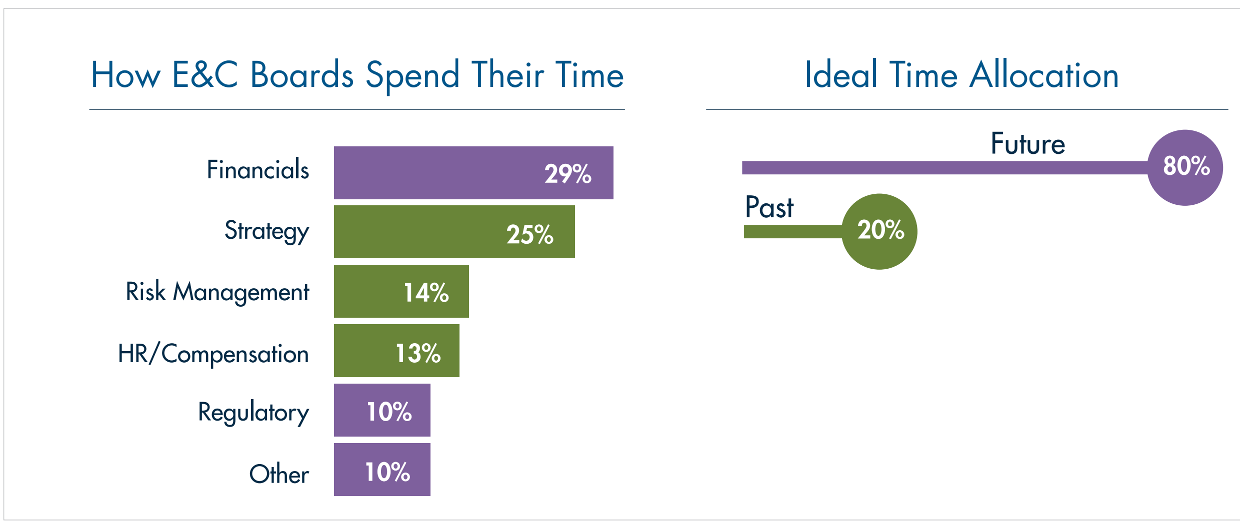
Yet through it all, one powerful asset is often overlooked: the board of directors. FMI's research confirms the fact that E&C firms are not fully leveraging the potential of their boards. In fact, as pointed out in a recent ENR story ("Engineering, Construction Corporate Boards Are Missing the Mark"), industry stakeholders confirm the struggle to make boards truly effective. However, these issues don't necessarily imply that E&C firms are poorly managed. In fact, E&C leaders don't know what they don't know. Put simply, they may not even realize what a truly effective board can accomplish or what they could be doing better.

There's Not Enough "Looking Forward" and "Looking Beyond"

During our research, we uncovered that many boards don't spend enough time "looking forward" and discussing strategy (Exhibit 1). This is an oversight in a VUCA world, where anything can happen at any time, and where the next downturn or recession could be lurking around the next corner. The most effective boards keep an eye on the horizon and encourage the organization to think about its vision and long-term business objectives. This includes:

- Encouraging innovative thinking across the organization
- Driving strategy
- Assessing and mitigating risk
- Fostering financial health
- Preparing for the future today

Exhibit 1.



Source: 2018 FMI/CIRT Corporate Governance Study

Unfortunately, study respondents say they spend more time reflecting on past performance than on planning for future success. In fact, nearly 50% of a board's time is spent on financial results and matters of a historical nature, while just 25% is spent on organizational strategy. In reality, and to be most effective, boards should be spending at least 80% of their time on strategic topics. Imagine driving a vehicle at high speed on a congested interstate highway while spending half the journey gazing into the rearview mirror. Were we passengers along for the ride, we'd all agree that the far safer course of action is to focus (primarily) on the road ahead!

FMI research also confirmed that too many E&C boards look inside the industry for outside perspectives. True diversity on boards is limited to a thin minority, with only 3% of E&C firms having some racial or ethnic diversity; 15% of firms having some gender diversity; and just over one-third of E&C boards having significant industry background diversity. In short, boards across our industry bear a strong resemblance to the executive teams they serve alongside.

So how can boards better understand where they are spending their time and change their perspective from being "historians" to "futurists" while opening themselves to fresh ideas and solutions? And how can boards be best leveraged by companies that want to lower their risk and prepare for turbulent times? Hugh Rice, a senior chairman at FMI, says those questions plague companies across all industries, and not just E&C specifically. However, because the construction field is primarily privately owned, the real value in having and leveraging a board is less visible than in industries where a large percentage of firms are publicly owned (and therefore naturally have an active board of directors with outsiders included).

For E&C companies of all types, Rice says boards offer new perspectives, objective third-party viewpoints and challenges to the norm. "Board members don't really care if someone likes what they say or not," he says. "It's a way of getting unvarnished input, and that's really critical." Add outsiders (i.e., non-family members) to the mix, and the board becomes that much more valuable. "It's hard to put on your VP of operations hat and then objectively serve on a board with a CEO whom you work for," says Rice. "That dynamic just doesn't work very well in terms of candid input. Having outsiders on the board changes the whole conversation."

Making Waves

For a board to be most effective, it needs to have a clear view of the organization's strategic vision. This, in turn, helps to propel strategy, as Ron Magnus, managing director of FMI's Leadership and Organizational Development practice, found out when serving on the board of directors of an expanding resort. He explains:

> "I showed them how to create strategic vision and the board members immediately said, 'That's exactly what we need.' They went to work on their purpose, their values, what they envision the future to be, and what their big hairy audacious goal was. That has propelled their strategy, because they came up with something huge in terms of a global strategy. And they're now well on their way and have done a great job of building out their construct and developing the associated strategies. And the boards really come alongside these guys to help them work through the details of what it means to go raise money (to buy another island and build a resort empire)."

As the board member for another large, global nonprofit organization, Magnus was recently reviewing its new five-year strategic plan. He says the process has taken "a lot more time than I ever thought on the front end," but has been well worth the effort. "Now they're getting to the final wordsmithing of the three primary objectives, what the strategy's going to be, and what culture they're trying to build," Magnus explains. "And as painful as it's been, it does take time to do it right."

As part of that process, the nonprofit engaged its board (including Magnus) as an "outside consultant" to ensure that it had covered the bases and to ferret out any gaps in the five-year plan. "This group is thinking about how to use the board and how the board interacts with strategy," says Magnus. "That's been encouraging to see."

Four Ways to Leverage Your Board

Few E&C firms are maximizing their corporate boards, and even fewer of them are using their boards of directors to ward off risk and prepare for the future, but that doesn't mean there isn't time to right the ship. Companies that want to do a better job of leveraging their boards' strategic capabilities can:

1. **Strive to develop an active fiduciary board.** Every corporation has a board, but not every company has an active fiduciary board that can help it drive strategy and prepare for the future. For example, a board may be appointed or elected by the company's ownership only to spend its time signing documents prepared by corporate counsel that say, "A meeting took place and here's what occurred." This clearly doesn't help to drive strategy, nor does it prepare the company for an uncertain future. If you're going to go to the trouble to build a board, engage it, and put the time in from a managerial and ownership standpoint, then it might as well be a highly engaged fiduciary board. This will bring a different level of commitment from directors and will help board members create a viable plan of action for the future.

   Fear of losing control is one reason often cited by business owners/leaders for failing to tap the potential of a board of directors. Arguably one of the greatest benefits of building one's own business is to not have to be accountable to anyone else—consequently, a board can be viewed as an obstacle to this unilateral authority. However, directors are always elected by shareholders in accordance with the governing documents of the corporation. Whoever holds the controlling ownership interest controls the board. All directors serve at their sole discretion and can be dismissed at a moment's notice.

2. **Create committees to address specific topics.** To be most effective, board meetings must focus on detailed discussions around many different topics, including the audit function (i.e., protecting the interest of shareholders and ensuring the management is accurately reporting the business's financial condition). It also must ensure there are no gaps from the standpoint of risk exposure, with an emphasis on returns that are creating unnecessary levels of risk that could adversely impact the business down the road. These issues require focused conversations and don't neces-

sarily warrant a group of 15 people sitting around a table. Instead, utilize committees that are specifically focused on certain topics. For example, if you set up an audit committee, populate it with people who understand that world and who possess a deep knowledge of financial statements and questions to ask an external auditor. Examples of other commonly utilized committees include compensation (or human resources), governance, technology and executive.

3. **Find members who want to make a difference.** Have these conversations early and often and focus on members who want to make a real contribution (versus just filling an empty seat). This can be done by a governance committee, a board chair or lead director, or an outside counsel—but regardless of who is involved, it definitely needs to be done. The best directors are ones who have a mindset of "I want to make a difference. I want to make a contribution. I want to leave this place better than when I found it." Truly great directors know that when their giftedness and talents cease to be of strategic value to the organization, it's time to make room for a more suitable replacement. The good news is that the vast majority of directors that I see serving on boards have this mindset. You want these people on your board because the thought of not being able to contribute scares them to death. These are the folks who will be the first ones to say, "I just need to get out of the way." Unlike a Supreme Court justice, a director's seat should never be considered a lifetime appointment.

4. **Use boards as succession planning tools.** When your board supports the succession process, you ultimately help your company be successful while also lowering its risk profile. In a world where baby boomers are retiring at an alarming rate and the job market is tighter than ever, a departing CEO can take its toll on the company's bottom line. I once served on a board that, during a meeting, learned for the first time that its CEO had picked his retirement date. That date was about a year out, and everyone kind of nodded along with him and said, "OK, good." There was no sense of urgency around the impending retirement. My heart started beating faster as I realized this could be a serious problem. After conferring with the other board members, a special committee was mobilized to choose a new CEO. This was a full fiduciary board, so we had a lot of input into it. We followed FMI's best practices and ultimately found a new CEO who is doing a great job. This is just one real-life example of how profound a board's impact can be when it weighs in on succession-related issues.

   Successful CEO transition extends well beyond initial selection. An engaged board of directors can be a difference-maker in supporting the new CEO. If hired externally, the board can help navigate the cultural and political "potholes" that could confound the incoming executive. If promoted internally, a board can become a useful change agent in an organization that tends to resist it—especially from an insider. I've heard many grateful CEOs thank a board for providing the necessary cover to say, "I know this is going to be difficult, but the board is pushing me really hard, and I need your help to make it work."

What Can We Do Differently?

Historically, the construction industry has been woefully behind the times when it comes to asking itself questions like "what can we do a little differently?" "how do we differentiate ourselves?" and "how do we apply technology to something that has been done the same way for hundreds of years?" But change is in the wind, and we're going to see more and more companies taking these issues into consideration as they prepare for the future.

By fully leveraging the power of their boards—ensuring that members aren't afraid to speak up, add their contributions and go beyond lip service—E&C firms can essentially "see" around the next corner, address the risks and avoid repeating past mistakes. The best directors ask questions, poke and prod to find out what the consequences are, what the exposure is, and what the downside will be. They bring fresh thinking and creative solutions to bear on old problems. That's the mindset that you want showing up to your board table for every meeting.

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Design-Build: Knowing What Your Clients Want

By Paul Trombitas

Now is the time to select strategic partners and understand what your clients really want in a design-build project.

Rumblings about a recession on the horizon are starting to make company leaders a bit nervous, but many are just too busy keeping up with current work to start thinking about contingency planning. In fact, the constrained labor situation, coupled with material price increases, compressed project schedules and ongoing margin compression, is creating more risk for E&C firms today—and right when we find ourselves at the top of the market. As we like to say, "Contractors don't starve to death; they die from gluttony. They get too much work, too fast, with inadequate resources, and then they get into financial trouble and run out of cash."

Findings from our latest AGC/FMI Risk Study[1] indicate that a potential economic slowdown is top of mind for most participants. In fact, back in 2016, only 8% of participants listed economic slowdown as a risk—today that statistic has jumped up to 58%. With growing concerns surrounding the consequences of a potential downturn, some organizations have started considering next steps to reduce risk and limit exposure. For many contractors, one of those strategies includes specializing in design-build project delivery models that can offer turnkey, one-stop solutions for owners. In this article, we highlight recent trends in the growing design-build market and provide recommendations on how contractors can set themselves up for success with this delivery model.

[1] 2019 AGC/FMI Risk Management Survey.

Gaining in Popularity

In recent years, the use of design-build has grown significantly across various market sectors and geographies, especially in the transportation sector. A method of project delivery whereby the design and construction phases are combined into a single contract—and the designer and contractor work together from the beginning—design-build helps streamline projects by eradicating the need for multiple contracting efforts and promotes a culture of collaboration from the start.

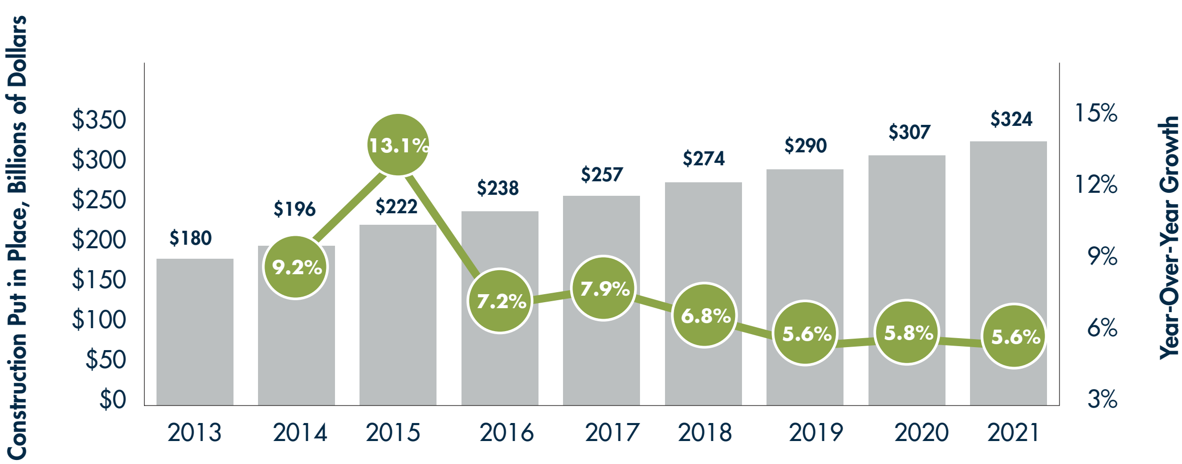
Design-build differs from the traditional design-bid-build approach, whereby project owners outsource the design work to an architectural/engineering firm on a negotiated-price basis and then contract out construction services on a low-bid basis. These and other project delivery systems may not only introduce inefficiencies during the contracting process, but also miss some of the opportunities provided by design-build when implemented correctly, including increased utilization of innovative ideas from the private sector and an overall reduction in the design and construction cycle.

For these and other reasons, a project delivery method that was considered “radical” just 25 years ago today represents nearly half of America’s construction projects (and continues to grow). In fact, according to the FMI/DBIA Design-Build Utilization Study, the project delivery method will comprise 44% of construction spending between 2018 and 2021, during which time such construction spending will grow by 18% and reach over $320 billion (Exhibit 1).

Exhibit 1. Design-build construction spending in the assessed segments is anticipated to grow 18% from 2018 to 2021.

Design-build construction put in place (Assessed segments); 2013-2021

Billions of dollars



Sources: 2018 FMI/DBIA Design-Build Utilization Study

Of the customer segments that use design-build, manufacturing, highway/street and education will represent the greatest percentage of design-build construction spending over the next three years. Geographically, the Mountain (6.3%), Pacific (6.1%) and South Atlantic (6.2%) census divisions will yield the highest growth rates between 2018 and 2021.

Owners have traditionally employed design-bid-build as the project delivery method of choice. As owner needs and project demands have changed, owners have increasingly opted to employ alternative delivery methods based on specific project factors. According to our research, owners identified "delivery schedule" as the greatest decision factor, followed by their own goals and objectives, both of which are highly influential in project delivery method selection.

As design-build's popularity has increased, the educational process associated with this delivery method has also expanded. A sustained emphasis toward educating owners and project stakeholders on the process and benefits associated with design-build, for example, has facilitated continued adoption and greater utilization industrywide. On the public side, increased design-build legislation has further helped push the adoption of such projects. On the private side, owners tend to choose it for unique and challenging projects that require a lot of collaboration.

Overall, owners received significant value from design-build when the approach was employed on larger and more complex projects. These projects allowed for greater opportunity to provide project innovations and subsequent cost savings. In addition to larger and more complex projects, design-build utilization continues to expand into projects of less than $25 million, as owners continue to learn of its benefits.

The Best Ideas Are Born

Due to its popularity, design-build is a project delivery method that's well-documented and highly publicized, both online and offline. On its website, Layton Construction highlights several of its successful design-build projects, including the Utah Valley University Library and Data Center, where it worked with the state of Utah's Division of Facilities Construction and Management and school representatives to construct a high-efficiency library, auditorium and data center for the new Utah Valley university.

"The design-build team worked closely to understand the needs, goals and objectives of the state and university and incorporated them into the final product," the company states. "The team was careful to provide as much building as possible within the given budget and time frame." The first facility to incorporate Utah's new high-performance building standard, the $42 million energy-efficient and environmentally friendly facilities features a large data center, lecture halls, private group study rooms and a café.

In another example, Layton Construction developed the RiverPark Corporate Center for The Argent Group, a first-time design-build user. "Argent relied heavily on Layton's vast experience to assist in all aspects of construction from design to completion," the company states on its website. The 1.2 million-square-foot business park is home to 15 office and retail buildings—all of which were design-build projects.

Architectural firm Korte Design, Inc. is another company that's established a foothold in the design-build marketplace over the last few years. To design and construct a patient nursing unit for Anderson Hospital recently, the firm came up with a design-build renovation and construction plan that added 10 private medical/surgical rooms to the upper floor of an existing doctor's office building, according to the company.

Working with Design Cell Architecture, Korte Design also recently remodeled the El Cortez Hotel & Casino, a downtown Las Vegas cornerstone; it was completely overhauled within a 12-week period. According to the company, the 33,800-square-foot renovation project included the remodel of 68 guest rooms and suites, corridors on three separate floors and the executive hallway—all of which involved the design-build approach.

"You might say it's a simple approach to construction; a team working together from start to finish in open communication and purposeful collaboration to deliver otherwise unachievable results," Korte Design states on its website. "It's the notion that when owners sit at the same table with architects, builders, engineers and estimators, great ideas—the best ideas—are born."

5 Steps to Success

As the nation moves closer to a possible economic recession and as companies look for ways to minimize risk in any economic conditions, here are five steps that E&C companies can use to develop and leverage design-build:

1. **Build a compelling design-build story.** You don't have to be 100% differentiated from your competition. The key is identifying what you currently do (or could expand upon) that would create more value for your customers. Come up with a story that explains to customers why you are the right choice for their project. Back up your story with proof that you really can deliver that additional value and guess what: Customers will listen. If you simply match the competition that's already in the market slice, expect heavy price competition from those entrenched contractors.

2. **Develop a viable go-to-market strategy.** This strategy will help you define which customers to target and connect with before a request for proposal (RFP) hits the street. This is when they will be the most open to meeting with and talking to you. Get in early and deep to create an advantage to win their project. Remember, it's in the customer's best interest to have multiple contractors chasing a project. You don't just want to be a number in the game. Find ways to stand out and add value for your customer and build your strategy to win around that value proposition.

3. **Think like the customer.** What is the same, and what is different from the customer's other projects? What is the project's business purpose? Who are the key end users who need to be included in the decision? What is something the customer has struggled to get other contractors to fully focus on?

4. **Find out what the customer really wants.** What value do you bring that the competition does not? Value, by definition, is something that a person is willing to spend a little bit extra to obtain. See if you can find something the customer values and then deliver it better than anyone else.

5. **Put your time into your strategy.** Build organizational capacity that's centered on a key focus, such as spending time with customers in advance. Everyone is busy today, so even when you do a good job of targeting specific customers, a lot of other things will be vying for their attention. The tactical things we all get caught up in take time away from the strategic moves that are needed to put ourselves in a winning position in any economic conditions.

Why throw millions of dollars out the window trying to win design-build bids and customers? Chasing work is a necessary but expensive proposition for contractors, but the firms that get smart about their strategies are generally the most successful and profitable. Getting smart about your go-to-market strategy, picking the right customers and pre-positioning yourself for the win will help set up your company to gain profitable market share even if the economy goes south.

Continuing to Deliver Results

On track to account for $1.19 trillion in construction spending through 2021, design-build presents opportunities for E&C firms that are exploring new ways to ward off and/or contend with the impacts of economic uncertainty. And with more agencies adopting the design-build model, the future looks bright for this project delivery method. From an industry perspective, alternative project delivery methods have become a popular option for both public and private owners. On the public side, growing support for design-build legislation has further increased the use of this delivery model.

Overall, the owners surveyed by FMI indicated receiving significant value from design-build, when the delivery method was used on large, complex projects. Opportunities to innovate and the ability to fast-track a project were identified as top benefits associated with this delivery method. Cumulatively, these projects allowed for greater opportunity to provide project innovations and subsequent cost savings.

In addition to larger and more complex projects, design-build continues to expand into project sizes of less than $25 million as owners continue to gain exposure to the benefits of the delivery method. As design-build continues to mature and gain in popularity, FMI expects to see even more successful outcomes and high success rates for this collaborative project delivery model. Now is the time to select strategic partners and understand what your clients really want in a design-build project.

Paul Trombitas is responsible for conducting primary and secondary market research focused on the built environment. He has conducted numerous research studies, including in-depth market assessments that provide unparalleled insight and understanding of industry dynamics. He can be reached at ***ptrombitas@fminet.com.***

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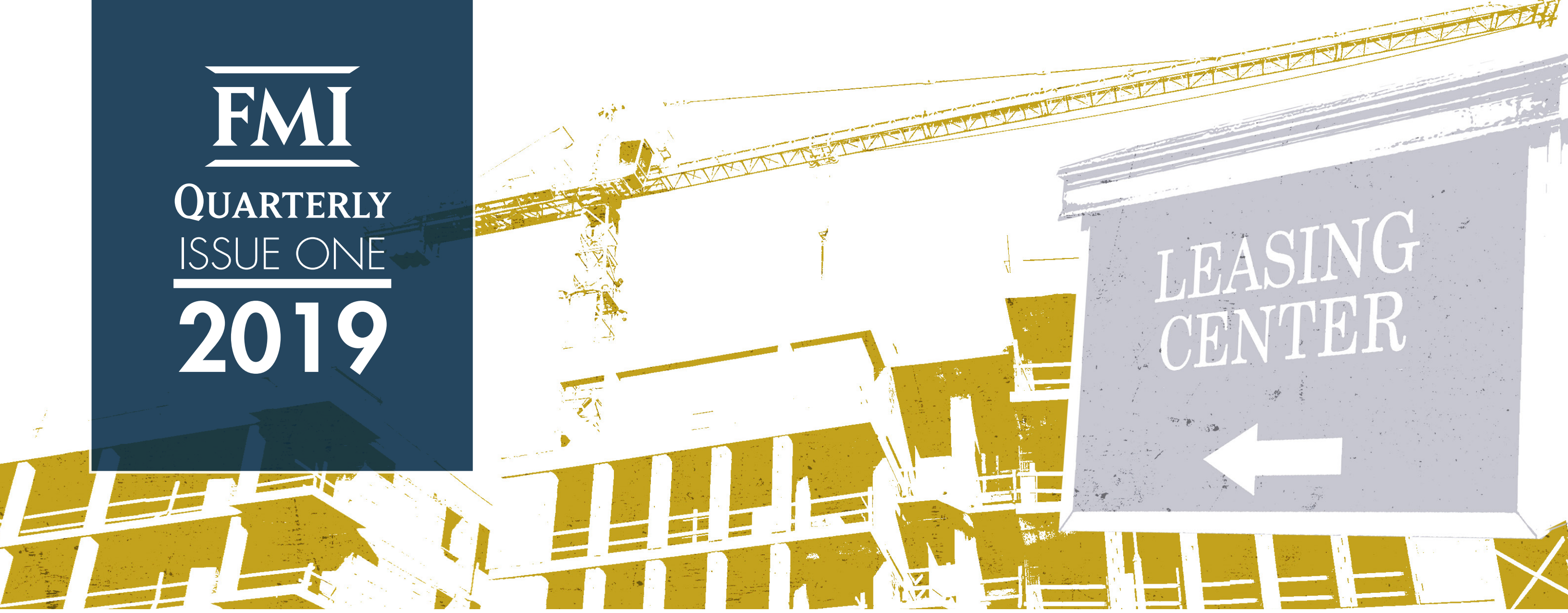

The Multifamily Boom: How Much Longer Can It Go On?

By Jay Bowman

Because the time to fix a leaking roof is when the sun is shining, multifamily contractors should be shoring up their cash reserves and diversifying now rather than later.

Ever since the Great Recession ended, the multifamily sector has been on a tear. In fact, no other segment of the construction industry can match its expansion. From a spending perspective, multifamily construction spending put in place has increased at a compound annual growth rate (CAGR) of 18% over the last 10 years. That's the highest among all construction segments and three times the rate of growth in total construction spending put in place.

The multifamily segment has clearly benefited from sociodemographic trends, most notably the fact that the largest cohort of the U.S. population—the millennials—began entering the workforce in large numbers in 2010. This younger generation tends to favor urban environments and rent-by-choice housing, both of which have helped strengthen demand for multifamily housing.

These and other trends have buoyed the financial returns on multifamily developments and properties, which continue to draw interest from a broad range of stakeholders. In this article, we explore the likelihood of an economic downturn, explain the impacts that past downturns have had on multifamily construction, and provide recommendations on how to start diversifying now rather than later.

How Much Longer Can It Continue?

It's no secret that multifamily contractors have been on quite a ride over the past several years. However, there are signs that we may be nearing the end of the road of double-digit growth for the multifamily sector. And when the road ***does*** end for multifamily construction, the ditch will be deeper than it would be for any other construction segment. Engineering and construction (E&C) firms that have all their eggs in the multifamily segment should start preparing now to either ride out the downturn or diversify their options (or a bit of both).

Right now, a lot of E&C firms are asking themselves just how much longer the multifamily boom can continue. Not everyone agrees on the answer to that question. Those who believe multifamily building construction should continue at or near the current pace point to several positive trends, including:

- Occupancy rates remain high and are expected to average near 95% this year.
- With near-full occupancy, rents are expected to grow at 2.5%, which is half a point above the target inflation rate of 2%.
- With supply and demand in perceived balance, developers plan to deliver 337,000 new apartment units this year, up from 320,000 units in 2018, marking the sixth straight year for 300,000-plus units.

The pessimists don't buy into these facts and figures, and instead point out the inconsistencies in the supply and demand equation as signs that the multifamily boom could be winding down. Yes, occupancy rates are high, they say, but the sociodemographic trends that fueled demand for multifamily buildings may now be turning against it. Consider, for example, that the oldest millennials are now approaching the average age of the first-time homebuyer (29.7 years old, according to Ellie Mae).

There are other factors at work here, including:

- According to the Urban Land Institute's "Top 20 Emerging Markets" report, 55% of new residents over the last five years have relocated to suburban homes (a trend that's pushing up vacancies in some markets).
- From 2015 to 2017, 40 of the 75 largest metropolitan markets (MSAs) in the U.S. witnessed an increase in vacancy by an average of almost 1.5 percentage points.
- Rents may be up in the aggregate but are flattening in some markets. For example, 63 of the 95 largest cities in the U.S. experienced rent appreciation below the 2% inflation target last year.
- Finally, the multifamily segment hit several "peaks" in 2015, including the number of multifamily units started for rent and the number of multifamily units started for buildings with 20 or more units.

Exactly where the multifamily market is headed in 2019 depends on various factors, with geographic location being one of the key determining variables. E&C firms working in Los Angeles, Miami, San Francisco or Washington, for example, may not notice much change in the market this year. However, firms focused on Houston, Nashville or San Antonio may start to see a slowdown.

Preparing for the Worst

When recessions hit, they tend to have major impacts on the multifamily sector. By one measure, more than 75% of economists recently surveyed by the National Association for Business Economics (NABE) expect a recession within the next three years, with about 10% of them foreshadowing a recession in 2019; 42% expecting one in 2020; and 25% predicting that one will rear its head in 2021. Whether the next recession is as severe as the Great Recession remains to be seen, but even a slight downturn can significantly impact the multifamily segment, which usually suffers more than most other construction segments during these periods. Here's the proof:

- In the two to three years following each of the past three recessions, the number of multifamily units started declined by more than 50%.
- In 2009 alone, the decline was almost 60%.
- From 2006 to 2010, construction spending put in place in the multifamily segment declined by more than two-thirds.
- FMI's construction spending for put in place pinpoints 2018 as the most recent peak year for multifamily construction spending for the U.S. and predicts an 8% decline over the next two years.

These numbers, and the hints of a possible recession coming around the next corner, should be prompting those in the multifamily industry to think ahead and ask themselves just how prepared they are for the potential of a greater than 50% decline in construction spending or project opportunities.

Diversify Now Rather Than Later

As history has taught us, most companies in the multifamily segment probably ***aren't*** prepared for a downturn and will wind up suffering much worse than companies that strengthened their cash and working capital positions in advance—or that diversified their options by expanding into adjacent segments.

The problem is that diversification doesn't happen overnight. In fact, FMI's research reveals that diversification takes an average of 18 months from the time of entry to positive financial performance. Should the next recession occur within the next two years, and if diversification is an attractive and/or possible option, it's time to start putting those wheels in motion now.

When it comes to diversification, there are two roads that companies can take: market diversification and segment diversification. Here's a look at each option and how it works:

Market diversification is similar to "taking the show on the road." The multifamily contractor that adopts a market diversification strategy remains committed to building apartments, condominiums and so forth, but it does that in a new city or state.

When considering a market diversification strategy, the most important questions to answer are related to addressable opportunity and owner procurement practices and preferences. An "addressable" opportunity is the share or volume of spending that represents the types of projects the contractor is best at. Often, this is defined by project value, but it may also include product type (e.g., midrise, podium, etc.).

Contractors that enter new, unfamiliar markets are almost guaranteed to fail if they don't have a deep knowledge of owner procurement practices and preferences. Contractors should ask themselves questions like:

- How satisfied are owners with the current contractor community?
- Are owners likely to consider a new contractor?
- What most influences contractor selections?

If these questions cannot be answered, avoid market diversification.

Segment diversification finds the contractor remaining in its existing market(s) but expanding its services into new building or owner types. Contractors commonly choose segments to diversify into on a superficial basis. For example, a multifamily contractor may see student housing or patient bed towers as sharing many similarities with apartments.

Now, this assumption isn't completely false, but more often than not, the owners of these buildings <u>do not</u> equate their projects to "just another type of apartment." It is reasonable for a contractor to diversify in this manner, but we suggest a slightly different tack when considering a segment diversification strategy. Rather than looking for similar product types, the contractor should ask what benefits or value it provides that goes beyond just the product. For example, is the contractor schedule-driven? Or does it have an expertise in high-end finishes?

Effectively articulating a value proposition can increase an owner's willingness to buy what the contractor is selling. When a contractor diversifies based on owners' receptivity to a given value proposition, that company's success often surpasses that of the contractor that took the "safe route" and simply expanded into other like-kind projects.

It's a Matter of "When," Not "If"

Whether it happens during 2019 or sometime in the future, an economic downturn is definitely in the cards. It's just the nature of the beast when you're operating in a cyclical economy. The choice is yours at this point: Either continue to make hay while the sun is shining or take the preventive steps now to make sure your multifamily construction business can sustain itself through the next recession (and beyond).

Because recessions have been tougher on multifamily contractors versus any other type of E&C firm, it's important to evaluate your position and preparedness for the next recession now versus later. If, for example, market or segment diversifications are options, start the process today. Remember that most diversification options take 18 months to begin to bear fruit. As the adage goes, "The time to fix a leaking roof is when the sun is shining."

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What's Your Strategy When Times Get Tough?

By Rick Tison

How to get the most out of your business strategy—even when the future is unclear.

The U.S. economy has enjoyed a 10-year run since hitting the depths of the Great Recession in 2009. And while a strong economy doesn't just roll over and die of old age, there are some signs that its healthy run will end sometime in the next few years. According to Bloomberg, although the U.S. government said the economy expanded at a faster than expected rate of 2.6% during the fourth quarter, there's little doubt that activity has slowed considerably this year.

This isn't the time to rest on your laurels and hope that project pipelines will remain full. It's time to plan and prepare your firm for the worst, whatever that may look like. The problem is that fluctuating market dynamics challenge how most firms in the built environment approach strategy, and even push some of them to wonder why they're doing it at all. In light of these realities, how can you effectively set direction for an organization that's facing an unclear picture in the future? And perhaps even more importantly, how do you know where to position yourself in the market in a dynamic and uncertain landscape?

Of course, these questions should be answered both in good times and bad, and not just when a recession begins to rear its head. The bottom line is that poor strategy—or the failed execution of a good strategy—is more evident when times are tough.

In this article, we'll look at the core elements that to go into a good strategy, show the role that context plays in the strategic process, and help you prepare your company for whatever might be coming around the next corner.

Key Strategic Challenges

Uncertainty poses two key challenges for engineering and construction (E&C) firms that have been riding the wave of good economic times over the last few years. The first is that the future is less clear. In other words, it's harder to see the path for getting to your destination through a dense fog. A universal truth of strategy in many companies, the second challenge is that many companies rely on strategies that fail to live up to the full potential of what those strategies can deliver. This happens when the strategy:

1. Focuses more on planning and budgeting than on identifying and resolving key strategic decisions.
2. Can't balance the tensions inherent in setting long-term direction while informing and inspiring action **right now**.

For many companies, strategy focuses more on planning and budgeting. While both are critical tasks for every organization, these focuses don't ensure that leaders are truly wrestling with the right strategic issues or answering the right strategic questions. You can determine the long-term viability of your company's strategies by asking yourself these eight questions:

How well does our approach to strategic planning…

1. Pose and answer the right strategic questions?
2. Frame choices and force decisions?
3. Identify the few critical strategic issues that need to be addressed?
4. Take objective stock of your current capabilities and limitations?
5. Balance tensions between creativity and analytical rigor?
6. Incorporate broad inclusion to enhance engagement versus getting the right decision-makers in the room to ensure candor with a focus on making the hard choices?
7. Lead the business by setting direction, aligning resources, and motivating and inspiring versus managing the business by planning, organizing and controlling?
8. Factor in the needs of a variety of time horizons (i.e., long term, midterm and near term)?

Use the answers to these questions to gauge exactly where your organization stands on the strategic spectrum and adjust accordingly, knowing that both industry and economic uncertainty could be lurking around the next corner.

Reimagining Strategy

When a company's strategy fails, that entity loses its ability to make quick decisions that help it stay ahead of market trends and/or its competitors. The answer is not to abandon strategy, but rather to reimagine how the company approaches strategy as a whole.

Strategy should move from an episodic, calendar-driven event to a ***perpetual*** process that identifies the most pressing strategic issues and decisions to tackle. From there, companies can execute on the decisions that they've made. This may sound simpler than it really is; doing it effectively requires separate and distinct time throughout the cadence of planning to focus on both strategic thinking and strategic planning.

> *"However beautiful the strategy, you should occasionally look at the results."*
> **– Sir Winston Churchill**

Strategic thinking activities focus on vision clarification, setting direction, identifying critical issues that need to be addressed, and figuring out which strategic decisions to make. In general, this is the time to think strategically about the business, your competition, the industry at large and where each of these may be headed over the next five or 10 years. Given the well-informed thinking of your leaders, consider which critical issues you need to address to achieve your vision and stay ahead of the competition.

With this foundation in place, leaders can then make sound choices about how to position the business. They can also develop the critical initiatives needed to be able to achieve those goals and then do what great managers do best: create implementation plans, allocate resources, set budgets and create accountability for implementation.

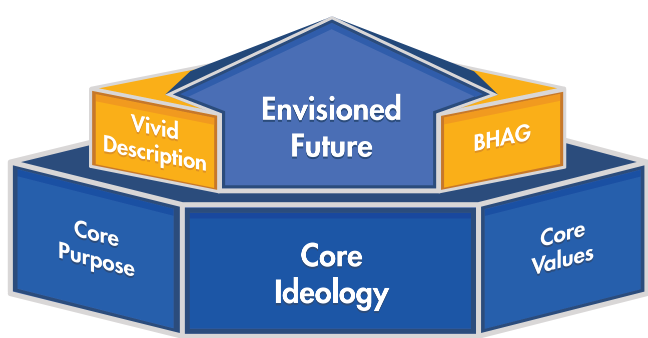
Putting It Into Context

At its core, strategy should determine a company's priorities and how to best achieve those goals. Done right, leaders start with their vision, take stock of their context, and drive change toward their desired outcomes, all while remaining committed through implementation.

As Jim Collins first defined in his book, "Built to Last," an organizational vision is comprised of these four components:

1. **Core Purpose –** Why the organization exists, beyond just making money.
2. **Core Values –** How everyone is expected to behave, what filters to use when making decisions.
3. **Big, Hairy, Audacious Goal (BHAG) –** The 20-year overarching strategic goal.
4. **Vivid Description –** What the organization looks like once it has accomplished the BHAG.

Exhibit 1. Enduring Organization



From "Built to Last"
by Jim Collins and Jerry Porras

Now, context provides a holistic framework for understanding your current situation to inform what strategic choices matter and how to make them. It includes the following components (Exhibit 2):

- **Climate –** What is the demand outlook for our services? What are the drivers of that demand? How do we anticipate these demands changing over time?
- **Customers –** Who are our current and prospective clients? How do they procure our services? Why do they buy our services? How do they perceive us relative to our competition?
- **Competitors –** Who are we competing with to fulfill customer demand? How do they compete differently from us? How do we anticipate the competitive landscape changing over time?
- **Company –** How well-positioned are we to exploit market opportunities? What are our primary capabilities and constraints? What is our state of readiness of change?

Exhibit 2. FMI's 4C Strategy Model

Context informs your leadership team's understanding of the market environment, its current positioning and your company's capabilities and constraints to operate in that market. A deep understanding of context in setting strategy improves decision-making around where to play and how to win.

The role of context changes as a company shifts from strategy development to execution. No amount of information gathering or insight generation can answer all questions about the future during a planning session. At best, a good understanding of context narrows the probability for success. Ultimately, strategic decisions are based on some degree of well-informed assumptions or hypotheses about how the world will unfold. These assumptions must be continuously monitored and tested during implementation.

When times are good, these assumptions and hypotheses may go untested by the market, so companies do not spend significant time or energy monitoring them. When uncertainty arises, however, these assumptions can make or break your strategy, making it more important to monitor your understanding of the market and your business on a regular basis.

Clouds on the Horizon

As the clouds grow on the horizon, it may be tempting to batten down the hatches and prepare to weather the storm by focusing solely on day-to-day execution. The challenge here is that, in addition to operational excellence, truly weathering the storm requires a more ***perpetual approach*** to strategy that focuses on alignment with vision and near real-time changes in context—all with a specific focus on the key assumptions that underpin past strategic decisions.

Ultimately, your company's vision will provide essential guidance throughout your strategic planning process, while your core purpose and values create guardrails to protect your cultural DNA in the face of hard choices that must be made. Finally, your envisioned future reinforces long-term priorities that will transcend any single business cycle or recession. While recessionary environments will challenge fundamental business economics and balance sheet health to invest in pursuing the envisioned future, steady focus on the long-term goal increases the odds of progress, even if at a slower pace.

Rick Tison is a strategy practice leader with FMI Corporation. Rick works with clients across the engineering and construction industry to develop strategies to improve company performance and profitability. He specializes in strategy development and organizational change. He can be reached at ***rtison@fminet.com***.

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