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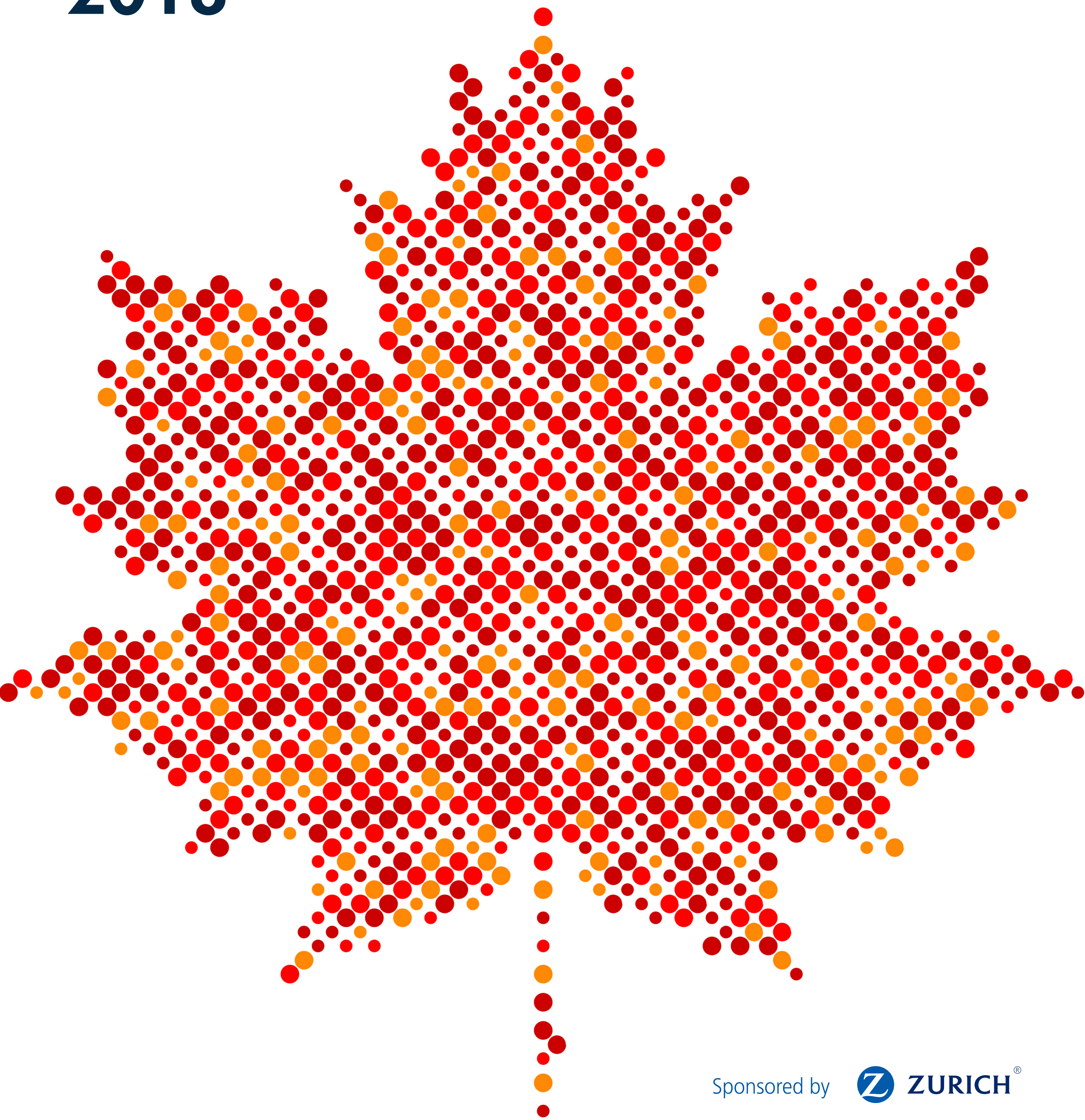
Canada: A Northern Perspective



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Canada: A Northern Perspective

By Chris Daum, CEO, FMI Corporation

Welcome to the second-quarter issue of the "2018 FMI Quarterly." With a focus on Canada, this issue explores the various facets of the E&C industry in a country that, while a close neighbor to and ally of the U.S., has its own unique, independent qualities.

As we explored our cousins to the north in greater detail for this issue, we learned about some very interesting economic and industry trends that are shaping today's Canadian E&C landscape.

In one article, Michael Swistun highlights several cross-border M&A transactions between U.S. and Canadian firms. He also discusses the fundamental issues (i.e., economic and those driven by tax strategies and general competitiveness) that are pushing Canadian firms to consider crossing the border to pursue additional growth opportunities through acquisition.

This edition also features an article on one of Canada's most successful contractors, JV Driver. It's a company that was founded less than 30 years ago and that has since transformed itself into a multi-division group that operates across Canada, the U.S. and beyond.

In another segment, Cynthia Paul discusses how technology is changing E&C customer expectations. Fulfilling those needs isn't always easy, and in this issue, you'll find thoughtful strategies that you can start using today to differentiate yourself, add value for owners and be more successful in winning new projects.

As more millennial workers enter the E&C industry, the spotlight on this generation continues to get brighter and brighter. Knowing this, we included a compelling article by Michael Kulchisky, who reframes the issue of millennials in today's workforce. In his article, Kulchisky points out that companies that align themselves with the key issues that stand out for this generation can create a competitive edge in unlocking Canada's E&C workforce of the future.

By reading this edition of the "2018 FMI Quarterly," we're hoping to broaden the industry's understanding of what's driving the Canadian markets and where a few challenges and opportunities lie. Closely interlinked, the markets are both different and the same. Here at FMI, we've been working continuously in Canada across the provinces for the last 40 years, and we expect the opportunities in the coming years—both in Canada and in the U.S.—to be stronger than ever.

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 may be reached via email at ***cdaum@fminet.com***.

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Why Millennials Are Great for Engineering and Construction

By Michael Kulchisky

It’s time to start incorporating a millennial-focused talent development strategy in the E&C workplace.

Earlier this year, the jobless rate in Canada did something it hasn’t done since July 1976, when it fell to 5.7%, according to Statistics Canada. The number of jobs rose by 78,600, beating expectations and bringing the full-year employment gain to 422,500, representing the best annual increase since 2002. “The economy showed unexpected resiliency as the year came to an end,” Bloomberg reports, noting that since September, Canada added 193,400 jobs—the biggest three-month gain since at least 1976.[1]

“The extent of the boom in Canadian jobs this year has largely caught policymakers and economists by surprise, given most have been anticipating an aging workforce to eventually become a drag on employment,” the publication reports. “Yet it seems the nation’s labor market had plenty of pent-up supply, and much of it is rising to the surface as the economy continues to do well.”

These realities are coming together to make hiring, recruiting and retention difficult for Canadian firms that are gearing up to meet the new demands of the nation’s engineering and construction (E&C) market. Many are finding success in millennial-focused recruitment and development strategies that strategically target—and cater to—the younger generation of workers.

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[1] “Canada’s Unemployment Rate Drops to Lowest in Four Decades.” Theophilos Argitis. Bloomberg. January 5, 2018.

This is important because having different generations working together under the same roof fosters creativity, enables idea sharing and expands a company's problem-solving capabilities. Plus, a workforce that spans different ages allows organizations to fully leverage their own talent pools. "But diversity also comes with challenges. Today's workforce is made up of three very distinct generations of employees," writes HR Works' Candace Walters. "Understanding the differences in approach and expectations of each age group can help your organization leverage the strengths of each and create a more satisfied and productive workforce."[2]

The Shift to a Millennial Workforce

For the first time, millennials (individuals born between 1980 and 2000) are the majority in the workforce. This is a significant shift for companies that now have to figure out how to most effectively attract, recruit and retain these younger workers—not all of whom are following in their parents' footsteps when it comes to job selection, company loyalty and opportunity.

Much has been written about the millennials and how they differ from previous generations in their approach to work—and careers in general. Indeed, millennials are often unfairly saddled with the dubious reputation for being entitled, disloyal, self-centered or optimistic go-getters, but it turns out that they're actually not that different from their older work colleagues.

In fact, Chuck Underwood, a pioneering and longtime authority on generations, pointed out that "Millennials are idealistic; they are demanding. They will insist that their employers are good corporate citizens, environmentally green and ethical. In many ways, they are exactly like the baby boomers and that's not an accident. Most have boomers for parents, and they absorbed their parents' values."

Underwood's notion was confirmed in a recent study conducted by the IBM Institute for Business Value, where the authors stated that the differences among millennials, Gen X and baby-boomer employees have been grossly exaggerated. According to the survey findings, baby boomers, Gen Xers and millennials share similar values, aspirations, attitudes and goals when it comes to work. The survey also found that some of the more common assumptions regarding millennials could actually be incorrect.

To measure its level of engagement and to explore what this generation of workers is looking for in an employer, FMI recently surveyed a total of 227 construction employees in Canada (127 of whom were millennials). Many of the survey results dispel widespread millennial stigmas, including:

- 58% of millennial survey respondents expect to remain more than five years with their current employers.
- 60% of millennial survey respondents strongly agree that they are willing to work beyond what is required of them to help the business succeed (versus 53% of non-millennial workers).
- 57% of millennial survey respondents strongly agree that it was important for them to understand their career path and opportunities within their company.

[2] "Take advantage of age diversity, leverage its strengths." Candace Walters. HR Works. October 16, 2009.

Furthermore, the following criteria ranked highest for Canadian millennials in construction:

1. Advancement opportunities
2. Commitment from the top
3. Challenging work

Millennials are also attracted to employers that provide a clear company vision and competitive pay.

Millennials Make Great Team Members

Millennials are truly great for the E&C industry for many reasons, including:

Loyalty and dedication. The majority of FMI's survey participants want to stay more than five years with their company, as opposed to jumping ship in the near term. Given good opportunities for career advancement, support for education, a collaborative culture, and competitive pay and benefits, this group of workers will go above and beyond to drive organizational success.

Innovative thinking. In an industry that is changing dramatically through emerging technologies and new delivery systems, millennials welcome the opportunity to provide input and new ideas that promote corporate innovation. As one survey participant stated, "I'm free to be creative and try new things." Progressive companies like DPR Construction, for example, encourage employees to use a special website to submit ideas for improvements, which can be related to software, tools or company protocols, among other things.

Tech savvy with a personal touch. It is true that many millennials adopt new technologies and gravitate toward digital media more easily than their older colleagues would. However, when it comes to learning new skills at work and receiving feedback, research shows that millennials prioritize face-to-face contact over digital options. This mix of tech savvy, combined with a need for personal interaction, can help companies drive change across multiple generations while infusing the industry with a fresh new perspective. Overall, 40% of workers prefer getting feedback on an as-needed basis, 34% like to receive it monthly, and 16% enjoy weekly feedback on their performance and progress.

They strive for a healthy work-life balance. When it comes to choosing where to work, millennials look at competitive pay. Given the challenging work conditions and often very long work hours, work-life balance is also very important but can be difficult to attain in the construction industry. However, if employers want to recruit and retain star talent, they will need to reconsider some of their traditional corporate policies and practices and find new ways to create a healthy work-life blend for their employees. For example, offering a paid sabbatical can help give employees a break and a fresh outlook without losing them for good. This will not only help workers across multiple generations but will also improve the negative image that the industry has suffered for decades.

Collaboration and communication. According to Underwood, many millennials grew up with parents, teachers and counselors who were their best friends and role models. "They need not only a mentor, but also a buddy. They are excellent team players. They will care about the entire organization, not just their own jobs," stated Underwood. Indeed, the timing is perfect. New virtual design and construction tools and integrated project delivery methods will all require higher levels of collaboration within and among project teams. Having these young people focused on a common purpose, effective processes, excellent communication and solid relationships will help transform the industry over time.

Exhibit 1. There is a strong correlation between inspirational vision and millennials' loyalty to their company.

Source: FMI 2015 Millenials Survey

While managers often perceive millennials as entitled, disloyal and lazy, this really isn't the case. As shown in FMI's recent construction industry survey, millennials are ambitious and eager to make a big impact in their careers early on, which sometimes can be misread as entitlement.

New Perspectives and Ideas Wanted

Not unlike other generations that enter the workplace, millennials have new perspectives to share, new ideas about getting things done and new ways of tackling problems. They were born with technology in their hands and see it as a critical part of the workplace and their interactions with others. Long thought to be "behind the curve" when it comes to technology adoption, the construction industry desperately needs this new perspective.

"The reason millennials are the most highly scrutinized generation of all time is that they put a face to the change that every industry and individual is facing in today's turbulent times. Now more than ever, the next generation provides data points into what's next...what's next for your business, leadership, communication, marketing, etc.," Ryan Jenkins writes in *Inc.* "The better you understand the emerging generations, the better positioned you'll be to thrive in 2018 and beyond."

For E&C firms, this level of understanding is critical because it can push all of us forward (whether we want to be pushed or not). So, rather than focusing on outdated stereotypes, employers in the construction industry should start building comprehensive human capital programs that will benefit workers across all generations. Now is the time to capitalize on each other's strengths instead of focusing on stigmas.

Michael Kulchisky is a managing director at FMI. He is responsible for management consulting practices and overall FMI leadership in Canada. He serves as a Skills Canada, Alberta board of directors member, using his 30 years of construction, manufacturing, technical education and executive leadership to support trades awareness and skills development. He regularly sits on advisory boards and steering committees. He believes that individuals, teams and organizations with the education, strategic thinking and action-oriented planning can reach their full potential. He can be reached at *mkulchisky@fminet.com*.

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The Surge in Cross-Border Mergers and Acquisitions

By Michael Swistun

They say the grass isn't always greener, but this year it may be in the case of U.S.-Canada cross-border M&A activity.

For decades, the relative attractiveness of Canada versus the U.S. for foreign direct investment (in the form of mergers and acquisition [M&A] activity) has ebbed and flowed like a multiyear tide. During the Obama years, for example, and particularly after the U.S. federal tax increases on capital gains and dividends that came into effect in 2012, Canada enjoyed a strong inflow of foreign direct investment.

The more competitive tax advantage that Canada enjoyed made the country a favored destination for capital. These inflows were also propelled by booming investments in the energy and natural resource sector—particularly in the western portion of the country—that fueled large investments in numerous multibillion-dollar construction projects.

Having largely avoided the 2008-2009 financial crisis that devastated the U.S. housing and banking industries, the Canadian residential construction industry continues to sustain strong growth. This is particularly true for the housing markets situated in the lower mainland of British Columbia and southern Ontario, where sustained demand has created a somewhat parabolic increase in single-family and multi-tenant home prices. This is very reminiscent of the late-2007 American housing market.

The Tide Continues to Turn

As with all tides, the one that propelled the wave of direct foreign investment into the Canadian market began to subside and reverse when energy and commodities prices collapsed in 2014. Since then the Canadian E&C industry, particularly in western Canada, has struggled with overcapacity, as large capital projects initiated before 2014 were completed. Further anticipated capital investments were deferred or canceled outright. Although the Canadian forecast for put-in-place construction is forecast to increase 1.8% in 2018, the sector is still down (in nominal dollars), from its peak in 2014.

In addition, the tax reforms passed last year have made the U.S. more competitive than Canada on taxation. Rising business and consumer confidence—buoyed by improved corporate profitability and personal disposable income as well as the yet-to-be determined impact of the repatriation of foreign domiciled capital—has created the conditions for sustained strong U.S. economic growth.

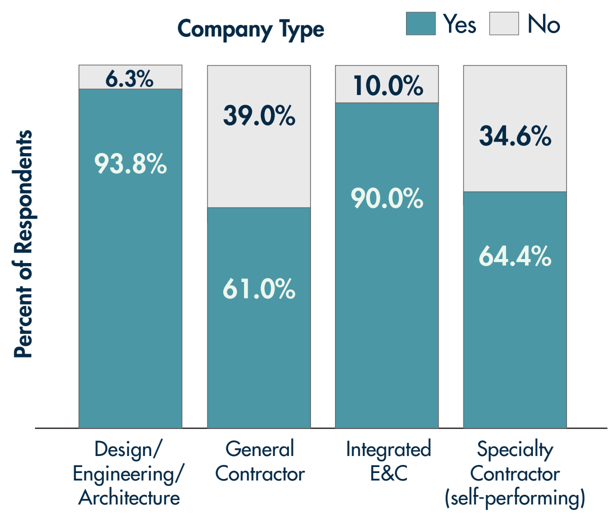
Although growth in Canada will remain positive in 2018, the relative strength of the U.S. has made the latter a more appealing destination for investors. Tellingly, in 2017, overall direct foreign investment in Canada dropped by 17% from the previous year.

Ownership Transitions Abound

Much like in the U.S., ownership transition—driven by longer-term demographic trends—will continue to grow and become increasingly urgent as the baby boomers retire. FMI's recent study on "Ownership Transfer and Management Succession" uncovered a significant shift away from an expectation of transferring ownership within family ownership groups to an expectation of transferring ownership to employees (or via a sale to a third party).

In western Canada, for example, the memory of the strong financial performance that the industry enjoyed during the peak cycle years of 2013-2015 is fading fast. As a result, owners' valuation expectations are resetting to the new market realities of a more intensely competitive, slower-growth environment. This sets the table for potential Canadian, American or international acquirers to find compelling value (relative to the current "hot" valuations in the U.S. M&A space) in the Canadian E&C market.

Exhibit 1. Are acquisitions a part of your current strategy?



Source: FMI's 2018 M&A Trends for Engineering and Construction

These trends aren't all negative for potential sellers in Canada. For larger general contractors (GCs), for instance, the increased margin pressures that the Canadian E&C industry is experiencing across the country will accelerate self-performance trends. Already well established in the U.S., this trend will drive acquisition activity, as large GCs look to efficiently internalize specialty trade competencies (see "FMI's 2018 M&A Trends for Engineering and Construction" for more details). In addition, the client-driven architecture/engineering firm consolidation trend will also pick up pace in Canada.

Exploring Cross-Border Opportunities

As more Canadian E&C companies seek relief from excess industry capacity and reduced margins in the highly competitive Canadian market, more are looking south to the U.S. for growth through acquisition. Many prominent Canadian E&C firms have recently made significant forays in the U.S. market through acquisition, with varying degrees of success. In addition to prominent examples like SNC-Lavalin's purchase of Atkins, acquisitions by Ellis-Don, Graham, PCL, Bird, The Flynn Group, Stantec and Entrec have all found compelling value in U.S. companies.

It is easy to understand the appeal of the U.S. market, where FMI predicts that total engineering and construction spend will increase by 7% in 2018, nearly double the strong 4% growth seen in 2017. The growth is expected across a broad swath of the economy and will be led by residential improvements (12%), single-family residential (7%) and office construction (9%).

It's important to note that the strong underlying market fundamentals, combined with abundant, affordable, available capital, have created significant upward pressure on valuations. Canadian buyers looking south must get comfortable with significantly higher multiples than they are accustomed to in Canada. The available universe of active buyers in the U.S. market, which includes strategic, private equity funds; family offices; and so forth, is much larger and more competitive on the buy side than the Canadian market. Buying into a "hot" market requires focus, discipline and diligence to ensure valuations are supported by value.

Common Elements of a Cross-Border Acquisition

Like any business deal, the successful cross-border acquisition requires the right dose of research, due diligence, negotiation and persistence. At a minimum, the common elements of a successful cross-border acquisition include:

1. **A clear strategy.** Before pursuing growth through acquisition, E&C companies need a well-developed growth strategy that objectively outlines how acquisitions will contribute to attaining goals for top-line and bottom-line growth. The strategy should define the target geographic and functional market segments and a clear vision of why they are key to the strategy.

2. **Good market research.** There is no homogeneous "American market." However, there are thousands of discrete local, state and national markets that exist simultaneously within the U.S. Prior to making any significant decisions on implementing an acquisition strategy, it is worth the time and investment to do market-specific research to quantify, qualify and rank, relative to the strategy, which markets are the "A" versus "B" versus "C" for the company.

3. **Use professional advisors.** This sounds somewhat self-serving, but retaining a qualified investment banking team will almost always generate a broader, more exhaustive list of qualified potential acquisition targets than an internal, company-staffed initiative. Using a professional team of investment bankers will also ensure that the process of searching for and closing acquisitions does not consume and distract senior management from running the business.

4. **Focus on the culture.** The late management guru Peter Drucker once famously said, "Culture eats strategy for breakfast." And, more to the point, my father once said, "Don't fall in love on the first date." Take the time to understand the culture of any acquisition under consideration. Also, be very clear on the degree and impact that integration of the target into the company will have on the combined entity's performance.

5. **Understand the value proposition to the company.** While no one wants to overpay for an acquisition, in many situations a premium is justified for a company that has superior management, a defensible market position or other competitive advantages. (Conversely, sometimes things are "cheap" for a reason.)

Like people, the spectrum of opportunities and nuances available through acquisition is virtually limitless, with all opportunities coming with their own advantages and disadvantages. The learning curve for companies embarking on an acquisition can be steep, but these obstacles can be mitigated by working with trusted advisors who specialize in and live in this market space.

For the foreseeable future, the momentum of the historic ebb and flow of cross-border M&A activity between Canada and the U.S. is tilted heavily southward. They say that the grass isn't always greener on the other side of the fence; but, then again, sometimes it is.

Michael Swistun is a managing director with FMI Capital Advisors, Inc., FMI Corporation's registered investment banking subsidiary. Based in Canada, Michael works closely with construction company owners on financial advisory, mergers and acquisitions, valuations and ownership transfer issues. He may be reached via email at *mswistun@fminet.com.*

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JV Driver: Building a Strong Leadership Legacy Through Tough Times

By Jake Appelman and Sara Tsahakis

Here's why organizations that invest in their future leaders are always ahead of the curve.

JV Driver started as a very small company on Vancouver Island in 1989. Over the last three decades, it has grown to become a leading "house of brands" in Canada, with multiple companies that operate nationally and internationally. JV Driver provides a wide range of contractor and fabrication services in the industrial, commercial, multiunit residential and industrial buildings, marine, environmental and public infrastructure/institutions space and has a strong culture across Canada and internationally.

Being a leading Canadian organization in the industry, operating across a large territory—with multiple companies—poses numerous leadership challenges. When you've experienced tremendous growth in the recent years, mostly through acquisition of various groups with their own cultures and histories, how do you build a strong leadership bench for the future with your next generation of leaders? How do you promote consistency and unity in leadership across your various groups and regions? How do you build strong relationships from British Columbia to Newfoundland? How do you ensure that JV Driver's core values and core purpose penetrate each group beyond its existing senior leaders? How do you ensure a legacy through the future?

These are the questions that a committee of JV Driver executives began wrestling with in 2013. They needed to solve the puzzle of developing their next generation of leaders in this complex environment, and they were not alone. This is identified as the No. 1 challenge faced by 64% of company leaders in 2018.[1]

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1 DDI Leadership Forecast Report, 2018.

A Custom Approach That Aligns With Vision

After multiple conversations, the custom-built "JV Driver Group Next Generation Leader Program" (NGLP) was born. In 2014, 30 next-generation leaders of each JV Driver group were enrolled in a cohort for a 2 1/2-year developmental journey. During the journey, workshops lasted two to three days and took place twice a year, but the program wasn't limited to the workshops. Participants were accountable for working hard on their development between sessions. Accountability groups were created and would stay in touch to track progress on their established goals. Later on, the company added a second cohort to deepen the JV Driver Group's bench of leaders, and more recently, a third cohort began training. The program followed a well-thought-out process in order to hit on some established goals:

- Build relationships across the next generation of leaders from numerous functions and companies. As leaders advanced in their careers, their ability to have strong cross-enterprise relationships would be key for personal growth and enterprisewide results.
- Socialize and embed the **JV Driver Group Core Ideology** with the next generation of leaders.
- Develop leadership competencies in the following areas: Self-Leadership, Team Leadership and Organizational Leadership (Exhibit 1).

JV Driver's Vision (Core Ideology)

Core Purpose	Think Different, Build Better
Core Values	Build Great Things
	Take Care of Each Other
	Be Innovative
	Have Fun

NEXT GEN NEXT GENERATION LEADERS PROGRAM

JV DRIVER GROUP

Exhibit 1. JV Driver's Leadership Competencies

Organizational Leadership	Team Leadership	Self-Leadership
Align Teams and Encourage Collaboration	Take Care of Your People	Build Trust
Set and Communicate Direction	Communicate Effectively	Get it Done
Drive High Performance	Encourage Innovation	Understand Yourself
Think Strategically		

A program of this magnitude, influencing individuals working across North America and around the globe in multiple companies, had to be intentional to ensure significant development. This required rigorous planning. More importantly, it was key to have the program custom-built and suited to JV Driver's specific needs as a "house of brands." As a company, its core purpose is to "Think Different, Build Better." While the firm knew it could have had some success with "off-the-shelf" programs, it wanted to think differently about how it was going to develop these leaders to ensure alignment with its vision.

JV Driver followed these steps to define its approach:

1. **Establishing a program charter.** The team established objectives and definitions of success and set program rules, such as deciding whether an individual could be removed from the program or brought into it midway.

2. **Appointing a steering committee.** Early on, the team appointed a steering committee composed of several executives who weighed in and provided feedback on the design of the program and alignment with strategy. All decisions were vetted through this committee, which helped drive accountability and alignment.

3. **Defining the leadership competencies.** The team defined a set of behaviors that should be demonstrated by exceptional leaders, at any level and in any JV Driver group. These competencies aligned with JV Driver's previously established vision. Leadership competencies could apply to any leader across groups and brought everyone together with a set of common behaviors.

4. **Designing the program flow.** The team established the program flow (e.g., what concepts get covered where) and identified key delivery methods for driving greater learning.

5. **Selecting leaders for the cohort.** The team established a nominating process for selecting program participants. To be enrolled, executives had to sponsor leaders and prove their eligibility through a nine-box grid, which is a visual way to highlight one's current performance and leadership potential. Leaders in Boxes 1, 2, 3 or 5 were recommended for the program for cohorts 1 and 2 (Exhibit 2).

Exhibit 2. JV Driver's Nine-Box Grid Framework

		Potential		
		Satisfactory Placed *Remain at current level of organization, in current or similar role; has likely achieved highest career level.*	***High Professional*** *Able to do the work of bigger jobs at the same management level in the next 1 to 2 years.*	***High Potential*** *Able to do the work at the next management level in 3 to 5 years or sooner.*
Performance	***Excellent Performance***	JVD Leaders in Box 4	JVD Leaders in Box 2	JVD Leaders in Box 1
	Effective Performance	JVD Leaders in Box 7	JVD Leaders in Box 5	JVD Leaders in Box 3
	Performance Needs Improvement	JVD Leaders in Box 9	JVD Leaders in Box 8	JVD Leaders in Box 6

Source: JV Driver

6. **Assessing the participants to understand their starting point.** Using the competencies as a backdrop, each participant in the program took a custom 360-degree assessment (based on JV Driver's core ideology and leadership competencies/leadership model). To build self-awareness, each leader also took the Myers-Briggs Type Indicator (MBTI) assessment. Next-gen leaders were then debriefed individually by a consultant coach from FMI and identified developmental goals to work on through the program.

7. **Developing competencies using a highly interactive approach.** The program was built out with workshops covering each competency and a team building component in a highly interactive formula off-site. For many participants, this meant traveling across the country to attend the events. These off-site workshops included training sessions, case studies, action learning assessments (groups of leaders solving real-life organization problems) and interactive executive dinners.

8. **Driving accountability between workshops.** Accountability teams were created among participants to keep learners progressing between workshops. These cross-country, cross-company teams would touch base regularly and keep track of progress and goals between off-site workshops.

Unleashing the Program's Potential

Besides following a best-in-class approach for their next-generation leadership program, JV Driver executives put various strategies in place to enhance the program and multiply successes, including:

1. **Heavy executive sponsor involvement.** When executives sponsor an initiative or program, they can catalyze change. Leadership development is one of the most important areas where executive sponsorship can have an impact.[2] Many executives not only sponsored the JV Driver NGLP program but also were heavily involved as co-facilitators. This level of participation from executives was unheard of: Five to eight executives, including JV Driver's founder, Bill Elkington, would attend each workshop and deliver presentations or facilitate case studies.

2. **Co-facilitation by internal leaders.** Leadership development programs are even more effective when some content is delivered by internal leaders,[3] instead of being solely led by external consultants. JV Driver appointed many internal speakers for the different portions of the program. The most notable was the program's "Leadership Thoughts" sections, in which executives from across the JV Driver Group reflected and told stories about the power of specific competencies for the business or personal stories about their own learning and growth as leaders.

3. **Highly engaging and interactive workshop settings.** The workshops weren't mere one-way classroom trainings. Some innovative approaches were used:

   a. Executive dinners were part of each workshop, in various restaurants in a given city, where one executive sponsor would sit at the table of a next-generation group of participants and go to different restaurants in the city. Groups were given conversation topics so they could learn from the executive and have deeply insightful conversations as well as build strong relationships.

   b. The program included case studies, with participants solving real challenges that companies across the JV Driver Group were facing. The case studies ranged from project issues to ethical issues and leadership succession challenges. Participants built their organizational leadership skills by practicing strategic thinking with real-life, engaging situations.

   c. At the end of each workshop, action planning sessions were held to establish action items for learners to work on before the next workshop. Between sessions, accountability groups would regularly discuss their progress and offer support.

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[2] Dr. Ajit Kambil. "Four Types of Executive Sponsorship to Catalyze Change." Deloitte. November 2, 2017.

[3] "Global Leadership Forecast 2018." DDI. 2018

4. **Frequent program evaluations.** One of the main reasons leadership development programs fail is that their effectiveness is not evaluated, and no adjustments are made in consequence.[4] In this case, JV Driver gathered participant feedback, but went beyond that by taking the following steps:

    a. At the end of each workshop, participants would evaluate program effectiveness and offer feedback on content, team activities and facilitator effectiveness.

    b. Using a pre- and post-program 360-degree assessment, progress on the competencies was evaluated using objective data.

Pushing Through Tough Times

In 2014 the program kicked off just as JV Driver was working on its largest construction project in history. "It felt like the perfect time to get started," says David Whyte, JV Driver's Director of Human Resources. Soon after, in 2015, the drops in oil and gas prices, combined with the political and socioeconomic climates at the time, started affecting the industry and market conditions. In 2016 this impacted JV Driver directly and, more importantly, its specific industrial and fabrication groups directly tied to the oil and gas industry.

The company's executives had to make many difficult decisions at that point, including staff layoffs. In tough times like those, it could have seemed like a safe decision to "pull the plug" on the NGLP program to cut costs. Indeed, in an economic downturn, many leaders tend to believe that professional development is a luxury.[5] However, at JV Driver, the NGLP program was continued despite challenging times. No changes were made in the structure, the cadence or the output of the program.

This decision was well-supported at the executive level, because it aligned with the company's core ideology and strategy. In fact, it was a crucial part of a people development goal for the company. The group used transparency as a means of explaining its difficult decisions to employees. As counterintuitive as it may seem, executives at JV Driver understood that "actively seizing a downturn as an opportunity [for development] can reduce the pain of the current one and can soften the blow of the next."[6]

Keeping the program alive during the layoff phase paid off for the company. One of the program's focus areas was the competency "Take Care of Your People," which is based on its "Take Care of Each Other" core value. Participants actively learned and practiced this competency during difficult times. For JV Driver, this means developing others and being there both as a support network and for emotional support.

"Participants who understood this and lived the core value were able to take this back to the business after attending the sessions," says David Whyte. They worked actively to move their teams forward by showing understanding that while they have lost teammates, they have to remain optimistic and continue living out the core values. The participants were encouraged to take responsibility in motivating the teams and showing positivity in the midst of the downturn.

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[4] Pierre Gurdjian, Thomas Halbeisen and Kevin Lane. "Why Leadership Development Programs Fail." McKinsey Quarterly. January 2014.

[5] Robert S. Kaplan, David P. Norton, Stewart D. Friedman, BV Krishnamurthy, Tamara J. Erickson, Jeffrey M. Stibel and Peter Delgrosso. "Unconventional Wisdom in a Downturn." HBR. December 2008 Issue.

[6] Ibid.

Strategic thinking is another competency developed in the program. Leaders were coached and developed on strategic thinking—the backdrop for great organizational leadership. In the midst of difficult times, leaders must learn how to respond to and spot potential challenges to the business in the future. Participants thought deeply about emerging trends in political, economic, social and technological areas and how these trends might impact their respective teams and businesses in the future. With more strategic thinkers across the group, JV Driver maximizes the chances of responding effectively to the next challenging situation coming its way.

Reaping the Benefits

In 2017, as the program wrapped up for the first two cohorts, FMI and JV Driver evaluated program success by looking at behavior change. Before and after the program, participants received the same 360-degree evaluation. The participants from both cohorts improved their 360 evaluation scores on all competencies. For nine out of 11 competencies, the changes were important enough to be considered statistically significant. This means that individuals in the organization noticed obvious behavioral changes. Some of the most noticeable changes in competencies were around "Take Care of Your People," "Encourage Innovation" and "Understand Yourself." There was an even more noticeable increase in how the core purpose and core values were lived out across all participants.

On top of these competency improvements, JV Driver noticed many other tangible results, based on the NGLP program. While one of the goals was to strengthen relationships across the various companies, the group was amazed to see how the program elevated the connections between leaders from the various offices. Executives knew the cultures of the various companies would align fairly well, since this was a prerequisite JV Driver had for acquiring new businesses. However, the depth of the relationships this program helped create was beyond what leadership had anticipated. For instance, it's not uncommon to see a participant from Alberta leveraging an existing client relationship for a colleague in Texas, or a participant from Newfoundland pick up the phone to call someone in Edmonton to "pick his brain" about a project. This kind of relationship really helped strengthen and integrate the business.

According to Whyte, the post-program self-awareness changes were also impressive; the feedback received by some of the participants was life-changing. For example, a participant who struggled to speak in front of a group at the beginning of the program was able to articulate—in his closing presentation—how his increased self-awareness as a leader not only helped him at work but also had tremendous, positive impact on his family.

To say that this program added value to JV Driver is a euphemism. Not only did the firm make it through an economic downturn, thanks to developing leadership at various levels, but also it built a strong, engaged, competent bench for the future of the various groups and strengthened relationships across Canada.

If you are questioning the returns of investment in high potentials, or if you're debating starting a program at a time when the economy could soon enter a downturn, reconsider. Slower times can, in fact, be a great opportunity—with less work in the pipeline—for future leaders to invest in learning. Moreover, building great leaders prepares the organization for facing any challenges more effectively, whether it's temporary financial difficulties, increased competition or talent shortages. Organizations that invest in their future leaders are always ahead of the game.

Thank you to David Whyte, HR Director, JV Driver Group, for his testimonial.

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Leadership Fundamentals for Any Market Conditions

By Rusty Sherwood and Tim Tokarczyk

A look at how strategic, deliberate talent development can make a significant difference in an organization's current and future growth.

In challenging times, leaders react in wildly different ways. Some choose to ignore the trends, bury their heads in the sand, hunker down and change nothing. Others feel great urgency to make change—to try something, anything new. Some slip into overreaction mode, leaping from potential solution to potential solution, depending on the way the winds are blowing that day. Still others take a more conservative approach, keeping an eye on changing trends, but staying true to the path they originally forged.

It's impossible to say what the best course of action is as too many variables impact our decisions on whether to spur great change, stay put or choose a path down the middle. While there's no obvious solution, leaders need to think strategically about how they are leading. Of course, trying something "wildly different" can be pretty tempting during tumultuous times. After all, what could you possibly have to lose by tossing the script and testing out new ideas, approaches and innovations, right?

Not so fast. While there is a certain logic in the phrase "extraordinary times call for extraordinary measures," leaders who stray far from the fundamentals that served them well during prolonged healthy growth cycles often wind up chasing the "new, shiny solution du jour." This often causes managers and executives to lose sight of the basics of great leadership.

What we find over time, and despite construction cyclicality, is that leaders who consistently optimize their firm's approach to talent selection and development, deepen collaborative team performance, and strengthen the organization's ability to adapt and embrace change are the ones who consistently outperform the competition and industry averages. In short, taking focus off these three essential tasks leads to roller-coaster-like performance, consistent with the cyclicality of market conditions.

In this article, we explore the key challenges that Canadian leaders are facing in today's E&C environment and show how strategic talent development can make a significant difference in an organization's current and future growth.

Leading With Strength

Depending on which province you call "home ice" or the market sectors you actively serve, the degree of volatility, uncertainty and enduring success you are experiencing is all over the map in Canada right now—not dissimilar to what U.S. markets faced in recent years. But here's the crazy thing: Right now, there are construction firms in the Plains, thriving as much as those businesses situated in one or more of Canada's hot markets—Vancouver, Toronto, to name a few.

There are also firms that are situated in these strong markets but are struggling to find sustained growth. This begs the following questions: How are the leaders of thriving firms delivering growth despite market conditions? How are they leading their people, teams and organization with fluctuating uncertainty pervading the landscape? Finally, what decisions are they making, and what pitfalls are they anticipating and proactively avoiding?

The answers to those questions aren't always easy to find. When dealing with uncertainty and performance pressure, for example, it can be easy to forget that we need to find the best people and continue to invest in them. The problem is that in challenging economic times, training is often the first thing to get cut. While there might not be the same budget for formal training initiatives, great leaders recognize that they cannot stop developing future leaders.

Recent studies[1] in the business world reveal that a single person performing in the top 1% is worth 12 in the bottom 1%. As the construction industry continues to age and more experienced leaders exit the industry due to retirement, the importance of developing next-generation leaders has taken on greater and greater importance. The intense challenge of finding the right people and growing them isn't going away anytime soon.

Leading an Effective Response to Change

Right now, most construction leaders are seeing change happen at unprecedented rates, not the least of which include:

- Massive changes in workforce demographics.
- Acceleration in the scope, scale and economic impact of technology.
- Increased volatility and unpredictability of capital markets.
- Changing consumer confidence.
- And uptick in government policies.
- The list goes on…

1 Scott Keller and Mary Meaney. "Leading Organizations: Ten Timeless Truths." McKinsey 2017.

Since "survival" isn't a given for any company, staying agile and tackling changes are both critical right now (and in any market conditions, really). To create organizational agility, leaders should:

- Encourage collaboration throughout teams and across their organizations.
- Recognize that empowering individuals and allowing them to collaborate helps increase organizational speed and flexibility.
- Encourage innovation throughout the company—great ideas don't just come from the top.
- Realize that great ideas can take many different shapes and forms.
- Place equal focus on near-term performance and its levers as well as on organizational health—ensuring an organization not only achieves "here and now" results but also continuously improves over time.

At the heart of all successful responses to change is organizational clarity to the company's vision and strategic direction. While your organization may innovate in many areas, it's critical that people understand the foundational, nonnegotiable elements of your company's culture and vision. This gives your people an "anchor" and allows them to more fully embrace the inevitable changes that are around the next corner.

Building Out the Pipeline

Great leaders recognize the importance of continuing to build a pipeline of future leaders across the organization. This starts with identifying the pockets of leaders where growth, execution and motivation happen today and then asking how these role requirements will change over the next five years. The characteristics and competencies of great leaders within the Canadian construction industry will likely look much different by that time. For example, it's not a stretch to believe the skills we've mentioned—the ability to develop talent, build effective teams and appropriately respond to organizational change—will take on even greater significance.

To prepare for these shifts, leaders must build those skills in their people today, so that their next-generation leaders are equipped to deal with the world as it is. Too many organizations spend their time developing next-generation leaders to solve today's challenges. Then, when they come into leadership positions of their own several years later, they find they were prepared to fight yesterday's battles, not today's.

> "*Vision without action is a daydream.*
> *Action without vision is a nightmare.*"
> **– Japanese Proverb**

When things are complex and ambiguous, people tend to lose sight of what is important. They get tunnel vision, focus on the day to day, instead of looking ahead. Leaders need to continually remind people of the organizational vision and of the path ahead. They must remind their people not only what needs to be done, but also why doing it matters. This can serve as an incredible motivator for people, especially those in the younger generations. Too many leaders look out across the landscape and stop communication (in reaction to the confusion that they feel). A better approach is to bring your people together and get them refocused on what matters. Investing in your people is more than just providing them training or stretch assignments. In fact, it can be as simple as ensuring they don't lose sight of your organization's core values.

How to Create Effective Teams

While developing individual people is essential to future organizational success, leaders also need to be able to build all-star teams. This requires a different skill set than simply cultivating and building individuals. Teams can be challenging—you're bringing together different people with unique viewpoints and motivations and trying to get them all to focus in the same direction. You likely have to deal with task conflict, relationship dynamics and/or the impacts of losing or adding a member to the team.

Harnessed properly, teams can accomplish significantly more than any individual could ever hope to achieve. And yet, like individuals, in trying times leaders often lose focus on their role in building peak-performing teams. Here are three strategies that E&C firms can use to build out effective teams in any business environment:

1. **Get everyone on the same page.** At the heart of the issue is understanding why the team exists and ensuring everyone on the team is undeniably clear on that purpose. According to a "Global Institutional Investor Survey" conducted by Ernst & Young in 2009, **there is a 1.9-times likelihood of having above-median financial performance when top teams are aligned and working together toward a common vision.** While this may seem obvious, it's extremely common for individual team members to take different views on the inherent reason the team exists.

2. **Create strong team dynamics.** One of the most challenging aspects of building effective teams is navigating through the many different team dynamics that directly influence the team's performance. Leaders need to intentionally work on opening the lines of communication across the entire team, work to build trust among team members, deftly handle and manage conflict that arises, and ensure team members are providing effective feedback to each other.

3. **Cultivate synergies across the team.** The elements of team synergy outlined above don't just happen by accident. Leaders need to focus on building these among the teams they are leading. This takes time and it can be messy. This is why too often leaders ignore these aspects, especially when they are feeling pressure and stress.

What's Ahead?

If history has taught us anything, it's that we should expect to see Canadian construction markets eventually return to more stable conditions countrywide. At the same time, however, we shouldn't expect the construction landscape to return to "the way it used to be." We're in a new world now, one characterized by constant and rapid change and unwavering expectations of better, faster, cheaper by our clients. In this setting, it will be tempting for leaders to chase every new solution that presents itself.

While any potential solution or idea should never be ignored, it's important that leaders don't turn a blind eye to reality but that they also don't overcompensate in response to environmental changes. Innovations are critical to long-term success, but there are fundamentals that leaders neither turn a blind eye to reality nor overcompensate in response. In any environment, with any level of competition and in good and bad economic times. Leaders ultimately rise above average performance when they take the long-term view and focus on finding and developing people, building high-performing teams and responding to change in agile and effective ways.

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It's a New Day, Canada

By Cynthia Paul

Technology connects us, informs us, entertains us and changes the way we think, but how is it shaping customer expectations in the construction industry?

Coincidence or causation? You do not have to look far to find technology disrupting societal norms. From the mundane to the complex, technology changes are reinventing the way we think about the speed of service, quality of goods and services, and the price we are willing to pay.

Stand in a long checkout line today and you are apt to notice someone checking Google or Amazon to see where else he or she could buy the items more efficiently. With Amazon Prime, you have the advantage of quick ship, and you will find your purchase on your doorstep in a couple of days, or even within hours. Today you can get prepacked food complete with recipes and ingredients sent to your door to expedite the home cooking experience. Want chicken parmesan? Uber Eats will deliver it from your favorite restaurant while you chill the wine. And if you want to watch your favorite movie while you eat, say the word, literally, and your remote control will do the rest.

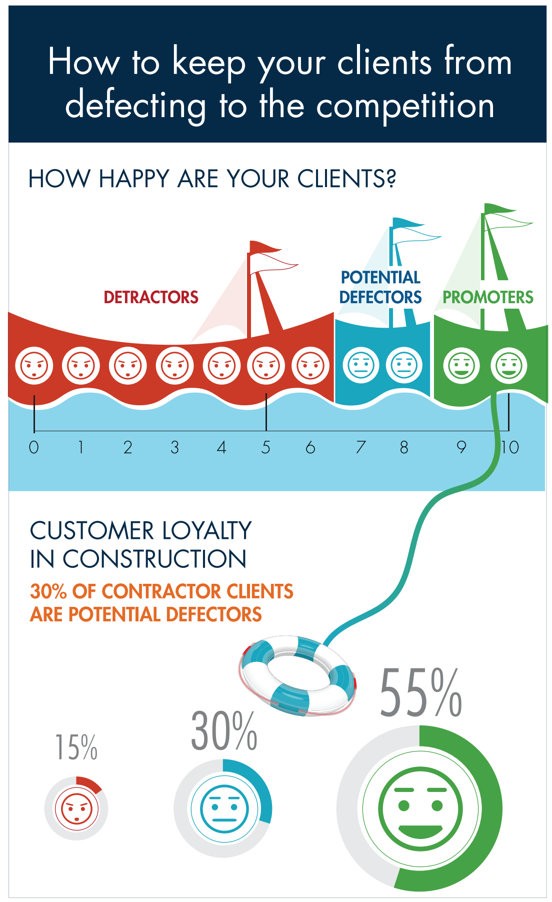
We have seen the impact that Uber and Lyft have had on cab companies, rental cars and car dealerships. Once a movement starts and gains momentum, innovation launches it into new applications and services. Anyone want to share a ride from Montreal to Toronto? Companies like Kangaride are taking the ride-sharing approach and expanding to longer-distance travel. You now have an app that allows you to join a driver and a "crew" of prescreened strangers all sharing that same ride to Toronto.

Technology connects us, informs us, entertains us and changes the way we think. From checking prices to finding product knowledge, we are armed with technology that gives us real insights and choices. Certainly, retail construction is being impacted by technology. Autonomous vehicles, for example, will challenge how the industry plans for commercial office space, institutional projects, auto dealerships, road renovations and garage space availability in residential properties. And if you are focused on serving the higher education market, e-learning and online degree programs are bound to impact education construction and your business. **But the bigger industry impact of technology is how it is shaping customer expectations across the engineering and construction (E&C) landscape.**

The Industry Is Not Immune to Tech Changes

We are in an age of immediate gratification, multiple companies vying for our dollars and apps to make our lives easier. The result is a mentality of better, faster, cheaper. It is no wonder that customer expectations are changing across Canada. Some of these changes depend on location and the specific type of work, while others are more generic. All of them can be problematic. Here are a few examples:

- **More for Less.** Nationwide, profit margins are not fully back to pre-recessionary levels. Contractors are still reluctant to make significant changes to pricing, even though the breadth of available talent is limited in many organizations. From Vancouver to Toronto, we hear that subcontractors have led changes in pricing, which makes sense as they are the first to struggle with labor shortages. Construction manufacturers and commodity producers have gained price increases, yet the industry has been in a slow and steady expansion for years. Normally, at this point in an economic recovery, construction prices would be moving up consistently.
- **Dropping Loyalty.** Customer expectations continue to rise, and justifiably so. Contractors are rethinking what it really takes to capture customer loyalty in this immediate response, app-based world. If you fail to gain customer loyalty, then how can you effectively deliver on customer expectations and scope without overcommitting resources and cost? Customers will, of course, ask you to give them a greater level of service than they are paying for in the contract; it is in their economic interest. It is in your economic interest to make a business decision that balances your concessions (that may gain loyalty) with profit.



Data Source: FMI Research Services. Statistics are based on more than 5,000 contractor-client responses. For more details, see "Three Ways to Keep Your Clients From Defecting to the Competition."

One example comes from the oil sands, where owner organizations have started shifting from using Master Service Agreements (MSAs) that spanned three to five years to using one-year contracts. At that level, the MSA might only be viable for one project. How much can a contractor invest in technology and infrastructure to improve that customer's experience when its ability to leverage that investment over multiple projects is dramatically decreasing?

- **Risk Shifting.** A continuing trend in the industry, owners have used contracts to shift project risk to construction managers and general contractors—both of which are doing the same thing with subcontractors and vendors. Assigning risk to the entity that can best control that risk makes good business sense, but accepting additional risk for no additional remuneration does not.

Technology has become another element in risk shifting. BIM, 5-D modeling and other innovations add enormous value for both the project owner and the team. They allow not only for real-time shop drawings but also for early decision-making and issue identification before problems arise on the project. As contractors begin to engage in larger and larger projects and provide design-assist and design-build services, they inadvertently set up contractors for potentially more project design risk.

We've heard about instances, both in Atlantic Canada and on the West Coast, where owners expected construction teams to provide solutions that have traditionally been the purview of the design team. For example, when does suggesting punching a hole in a beam to resolve a clash move from good construction practices to accepting the risk of the engineering integrity of the project?

Other examples include owners asking contractors to include the design team deliverables on the project schedule. If contractors are not careful, they can slip over the line of doing the customer a favor by making the design delivery visual and accepting the risk of managing the engineer's schedule and deliverables.

Getting From Here to There

We have long been taught that all risks should come with an appropriate level of reward, but we aren't seeing that give-and-take in the industry today. The fragmented nature of construction makes sweeping changes in the industry difficult, if not impossible. What will it take for the industry to right the risk transfer challenges being faced by contractors? How does the industry get paid for the value it's providing when there is always another contractor willing to step in and accept the contractual terms and conditions?

If value is defined as something that a customer is willing to pay just a little more for, we need to find out what customers truly value and what they expect for free. As long as the industry is willing to do things for free, we cannot expect customers to stop asking for them (e.g., preconstruction, access to our top talent, GMAX contracts where the savings only benefit the owner, etc.).

Here are a few of the things we are doing with clients that have helped them move the needle and get a bit more money for the value provided:

1. **Get fact-based—from market strategy to the project approach.**

   a. Which customers are willing to spend just a little more for your services?

   b. Where is the market growing and expanding, and how do you get your fair share?

   c. What do you offer that they cannot get from all the other contractors? (You'd better have a good answer for this, or you are destined to compete on price.)

2. **Know what it really costs you.**

    a. If you are going to give something away for free, you should at least know what it really costs you. For example, the cost of developing a proposal for a new or existing client can be significant. Knowing what those costs are and understanding the chances of winning a given project are important data points for making informed decisions and being selective about the work you go after.

    b. Your team will also make better decisions when it has the facts at hand. Knowing that a specific type of work costs $15,000 to create an estimate and proposal for is important. Then you can ask your team in the project pursuit process, “Is this worth us spending $15,000 on?”

3. **Build the business case.**

    a. A business case sets the foundation to get a customer to change the way it does something. As an industry, we need to become more proficient at building a business case for the changes we would like to see. The business case needs to answer the question, “What does this do for the customer?” Unless we can demonstrate the benefit of hiring our services, the conversation is not likely to progress toward our desired outcome.

    b. Conducting strategy sessions with your internal project teams is a great way to teach them to think this way and to be able to craft the answer for a specific customer.

4. **Match customer and project to your approach.**

    a. Not all customers are created equal. Which customers are willing to pay for the value provided? And which are simply asking for a lot of service yet unwilling to pay for it? Knowing the answers helps you make decisions.

    b. If the customer gives you a preferred status on a potential project, that is worth something. If the intent is to buy the project at the lowest possible price, that is OK too. But if the game is “How low will you go?” then you have to decide whether to work with that customer or not. If you do, then get as much cost out of chasing and winning the project as possible. Get creative with strategy on how you can approach the project to deliver quality and expectations while reducing costs.

5. **Be willing to walk away.**

    a. In my 30-plus years with FMI, I haven’t seen many contractors that would knowingly walk into a losing project. The more we know upfront regarding the customer’s expectations on risk and reward, the better we can be at making the right business decisions.

    b. At the end of the day, are you willing to walk away from a project or fire a client where you do not make a sufficient return for your invested effort?

    c. Certainly, do not walk away quickly; rather, do so in a thoughtful way. If you are unwilling to walk away, then the only option is to make the most out of the situation.

Meeting Technology's Challenges

Customer expectations are changing at an alarming rate. Embracing these changes on a project-by-project basis might not be the most efficient or effective way to respond. We need to get above the fray and think strategically about how we can leverage the situation to our advantage. Early questions to consider include:

- How can we capture the customer's attention and share the credible differences that we bring to the project, process or customer?
- How do we get engaged early enough to pre-position ourselves to win?
- Are our project approaches dynamic enough to meet the changing expectations of customers?
- How does this impact how we think about and target the right customers (and the right projects)?

Technology brings innovation. Innovation brings choice. Your strategy and approach need to build on the choices that customers are demanding today while balancing your company's own needs and vision. Asking the right questions, getting pre-positioned to win the work you want, and demonstrating your value to prospective customers will go a long way in ensuring that your company meets today's requirements and tackles future challenges.

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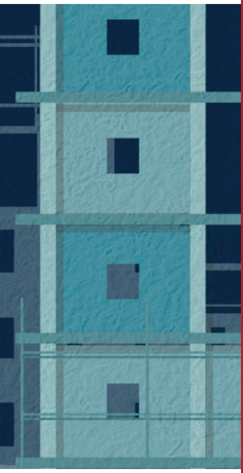

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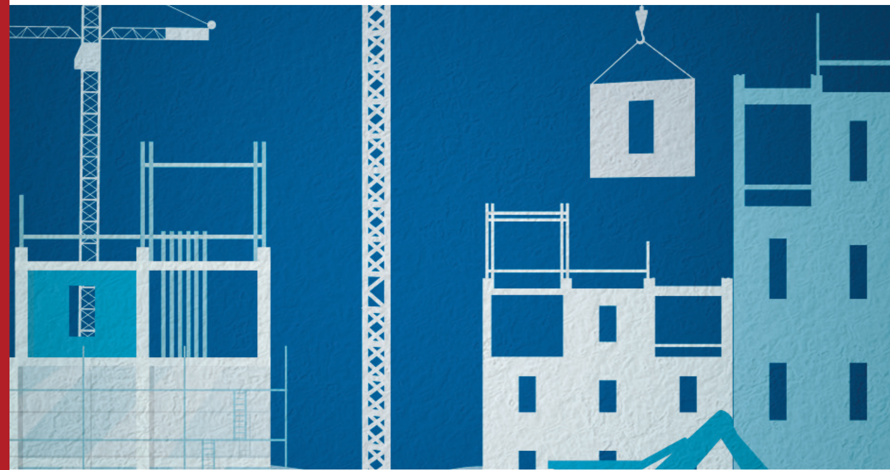


A Case for the "Last 10%" Being the Hardest 30%

By Gregg Schoppman

The phase between substantial completion and final acceptance can be one of the hardest bridges to cross, but the rewards of getting there are worth the extra effort.

An interesting phenomenon occurs on just about every project in the built world when the line blurs between substantial completion (a legal term used to define the moment a project is sufficiently complete according to the contract documents) and final acceptance (the actual moment a project is truly complete in the customer's eyes).

For many trade and general contractors, this block of time represents a source of margin erosion for myriad reasons, including:

- **Personnel Swaps.** Supervisors and managers are often removed at the end of a project to focus on new endeavors.
- **Punch List/Deficiency List Misestimating.** The punch list process garners little respect on the CPM schedule, leaving miniscule time for a herculean phase.
- **Paperwork.** The as-built documents, operations/maintenance manuals, training and so forth become a distraction, even with the specter of held retention hovering over the process.

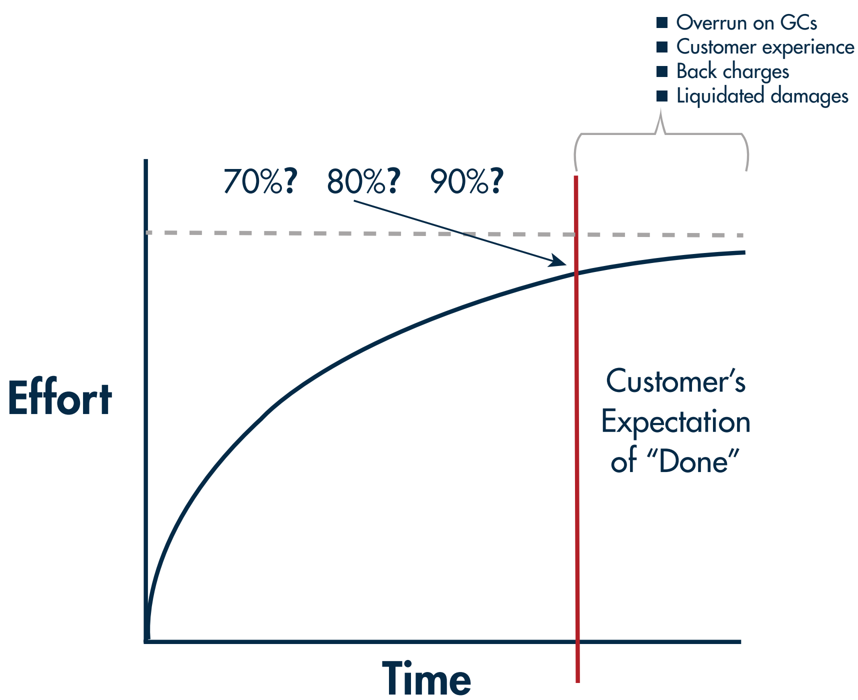
> *The prime contractor started the project with the making of a true thoroughbred but finished like a mule.*
>
> **– Quote from an undisclosed owner describing the "closeout strategy" of a general contractor**

The common thread among these items represents one singular theme—the negative impact they have on the customer's business. Contractors create an interesting paradox. In an attempt to deliver customer service to one customer, they often pull critical personnel on another customer's project too early, leaving a deluge of paperwork, unmet promises and ever-growing deficiency lists, resulting in poor customer service. More importantly, consider the timing of the message this sends to the later customer, all at the end when memories are the freshest. The closeout portion of the project is arguably the most important phase, simply because it represents so many milestones, including final financial reconciliation, release of surety obligations and the customer's acknowledgment of completion. Failure to observe the sanctity of closeout damages relationships and extends a firm's risk profile. Below is a simple illustration of how the end of projects tends to have an asymptotic appearance (Exhibit 1).

Best-in-class firms have become proactive in attacking closeout with the same fervor that they exhibited during project kickoff. Even though every stakeholder agrees that completing projects on schedule is imperative, many would also agree that most firms struggle to execute effectively in this area. The three critical elements that describe an effective firmwide closeout strategy are:

- Metrics—Defined closeout-related key performance indicators.
- Processes/Tools—Consistent and standardized approach to the final executable phase.
- Customer Involvement—Achievement of the customer's version of "complete."

Exhibit 1. Construction Timeline to Effort Curve

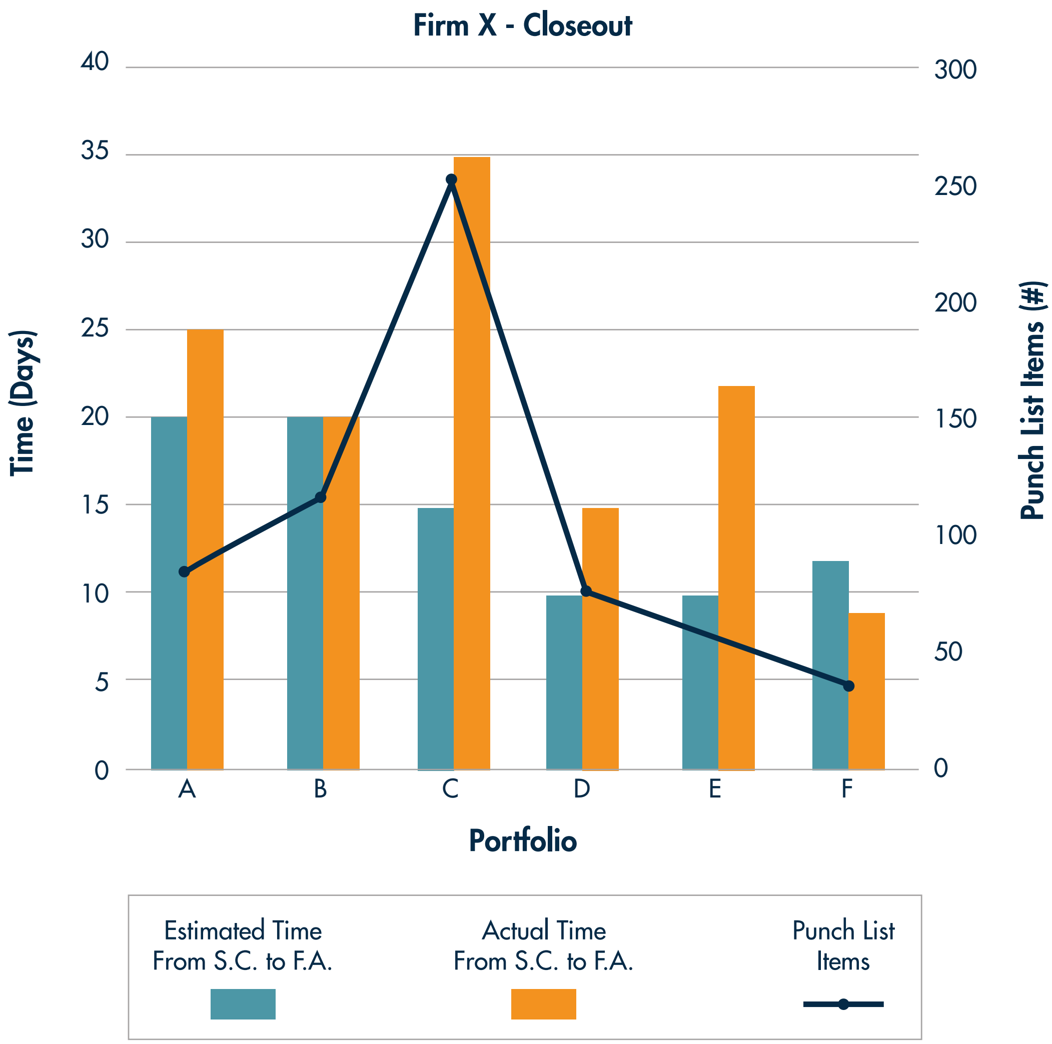


Source: FMI

Examining the Metrics

Firms continue to migrate towards data-driven strategies, but they aren't using that data to drive decisions and behaviors. For instance, the proliferation of software tools that capture closeout data, such as documentation and even punch lists, is ubiquitous. The first step in understanding the impact of closeout on the firm is to mine the data and show the correlation of time and activities. For instance, Exhibit 2 links the duration of the "closeout phase" (substantial completion to final acceptance) and the number of punch list items examined from a macro level.

Exhibit 2. Closeout Metric and Deficiency List by Project



Source: FMI

This simple illustration can be broadcast across the various departments in the firm. Furthermore, a firm can measure other critical aspects of closeout, including:

- **Punch List/Deficiency List Dollars.** All work associated with closeout is captured in one budget code, separating work packages.
- **Closeout Compliance.** Whether it is the closeout strategy meeting or simply the gathering of documents, project personnel are recognized globally to drive behaviors internally (see below).

Project	Closeout Strategy Meeting	Final Document Packages
A	DONE	INCOMPLETE
B	INCOMPLETE	IN PROCESS
C	SCHEDULED	IN PROCESS
D	DONE	DONE
E	DONE	DONE
F	INCOMPLETE	IN PROCESS

- **Change Order Activity.** The closeout phase forces—in many cases to the detriment of the project budget—change order closure. The illustration below is one "dashboard KPI" consideration:

Project	Change Order Dollars (Approved)	Change Order (Outstanding)	Change Order Average Margin
A	$450,000	$250,000	12%
B	$125,000	$125,000	10%
C	**$10,000**	$250,000	7%
D	$1,250,000	$350,000	5%
E	$17,500	$5,000	25%
F	**$35,000**	$100,000	10%

The most important aspect of any KPI is its connection back to the firm and its strategic relevance. For instance, change order measurement may only be important to a firm that experiences a high frequency of such requests and that engages in high-risk closure. The last 10% of the project should be used to place optics on closeout and influence upstream and downstream behaviors, in much the same way that diet and exercise (upstream) influence better weight and health (downstream).

Processes and Tools

Many firms have some semblance of a preconstruction phase, but they lack a defined and consistent closeout process. In other words, does the firm have a "preconstruction phase for the last 10%"? During the start of the project, the "last 10%" process is often triggered by some milestone or simply defined during said preconstruction phase. For instance, firms may have triggers tied to an inspection, man-hour percentage or internal phase such as landscaping, final grading or final cleaning. From there, the steps should include an internal meeting focused on strategizing closeout and an external meeting(s) that involves the customer and/or trade partners.

Here are the typical agenda items and the action plan:

Item No.	Item	Discussion/Strategy	Who?	Target Date	Complete?
1	Punch List Approach				
2	Owner Furniture, Furnishing and Equipment				
3	As-Built Status				
4	O&M Manual Status				
5	Utility Switchover				
6	Final Testing (HVAC)				
7	Final Testing (Bacteriological)				
8	Commissioning (Security/Life Safety)				
9	Owner Training				
10	Strategy on Extra Work Orders				
11	Equipment Demobilization				
12	Trailer/Sea Can Removal				

Item #10 is generally the most vexing component. For instance, deficiency list completion gets increasingly complicated with the addition of new contract work, leading companies to focus on profitable work (or work that represents incomplete contract work). What will the firm's response be? For example, should a new crew/foreman be included who is simply dedicated to extras that arise?

Lastly, it is important to note that during the closeout discussion, some firms use dedicated punch list teams. On the surface, this sounds like an acceptable way of attacking the punch list with newfound energy and gusto. However, these groups are often riddled with problems such as:

- **Cost Allocation.** While the closeout phase should have a budget line item, you want to avoid an internal battle over how much time is required—a common occurrence that can lead to resentment or angst. In short, will there be a cultural war and internal divide among operational teams?
- **Punch List Punting.** Since the project team knows a special crew is coming in to serve as the closer, will the project experience a higher frequency of closeout items? In other words, will contract work (and not punch list work), get punted at the end, leading to increased cost allocation issues?
- **Utilization.** In theory, closeout is a small portion of the overall schedule. Unless this team has other obligations, will the firm suffer cost overruns due to failed utilization?

Research has uncovered several successful uses of punch list teams, tiger teams and/or closeout crews. These successes are tied directly to a well-thought-out strategy and well-developed rules of engagement. More importantly, these groups were initiated to drive superior customer service rather than serve as backstops for punch list costs.

The Voice of the Customer

The customer's voice is the most important voice in this process. Many firms focus on their versions of "done" rather than the customer's opinion. What does "done" mean to them? The definition should be reinforced during the preconstruction phase as well as the closeout phase.

Here are sample questions and components that should be defined early and revisited throughout the construction process:

- **Document Collection.** Short of the contractual description, what will be expected in terms of the as-built documents, operations/maintenance manuals, training, etc., in terms of format (electronic, paper versions, etc.) as well as the number of copies? Yes, the contract documents trump many things, but in the court of the customer's perception, there is the contract answer and then there is <u>their</u> answer.
- **Punch List Process.** Who will create the punch list? What is their experience with this process? What has frustrated them in the past? Will there be multiple inspections?
- **Owner Vendors and Suppliers.** Furniture, low-voltage coordination, security and kitchen equipment contractors are all professionals who lack specific job knowledge. When selecting parties, it's incumbent on the lead contractors to execute a coordination meeting as part of the preconstruction and then close out as if those contractors were already on the team. In cases where it has not been selected, the savvy prime contractor should develop a proactive coordination timeline—working backward from the award stage to illustrate important decisions and considerations (i.e., fabrication, municipality expectations, etc.).

Too often, an owner's vendor lacks project knowledge, thus creating delays, because the local municipality's own version of "complete" was not factored in.

Closeout leaves an indelible imprint on a customer's mind. He or she may forget the botched start, for example, but failing to complete the nagging punch list may mean the difference when it comes time to award the next project. By focusing on project closeout, industry leaders can not only differentiate themselves in a field of mules, but they can also keep their customers happy and coming back for more.

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QUARTERLY
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Leveraging Canada's Active P3 Market

By Paul Giovannoni and Paul Trombitas

A viable means to repair and upgrade infrastructure, particularly in a strained economy where public resources are limited and private capital needs strong, risk-adjusted investment opportunities, P3 maintains a strong presence in Canada.

A critical factor in facilitating a country's ability to support growth and generate prosperity, available public funding can either enhance or restrict construction on a national level. To combat the latter, various countries (e.g., Australia, Colombia) across the globe have leveraged private financial capacity to help move essential infrastructure projects forward.

In particular, Canada has been a leader in utilizing public-private partnerships (P3s) to address its infrastructure needs. A project delivery model that relies on the upfront collaboration of all parties in the design, construction and financing of infrastructure assets, P3s' success in the Canadian market has been a multifaceted effort that involves a broad range of organizations and agencies.

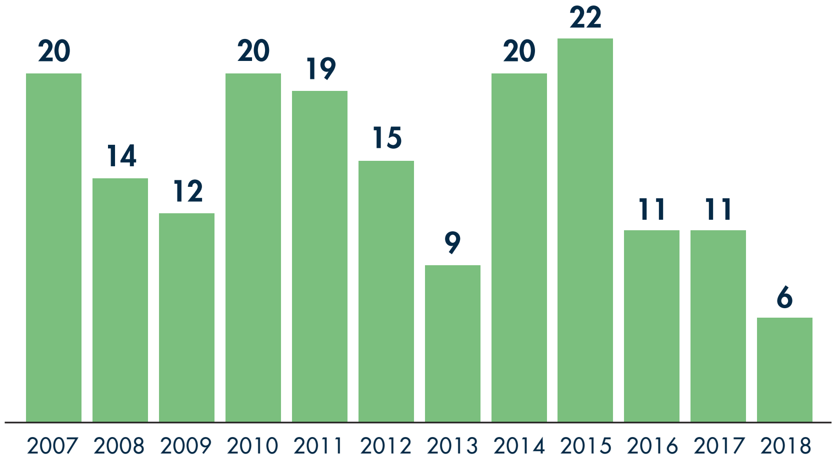
The Canadian government launched "PPP Canada" in 2009 to promote greater adoption of the P3 model nationwide. In addition, the "Canadian Council for Public-Private Partnerships" was established in 1993 to encourage and promote the P3 model across industry stakeholders. These two entities, along with other agencies and organizations, have made great strides in proliferating the Canadian P3 market.

By the Numbers

By definition, a P3 is a government service or private business venture that is funded and operated through a partnership of government and one or more private sector companies. Such partnerships play out particularly well on large infrastructure projects, where financing, ideas, risks and other input can be shared among the various parties—all of which have significant stakes at play. Although P3 infrastructure projects have had a fitful history in the U.S., other countries, including Canada, Australia and the United Kingdom, have fine-tuned such arrangements over the last few decades.

In looking at the numbers, the Canadian P3 market has successfully reached financial close on over 250 projects, accounting for more than $120 billion over the past 25 years. The majority (70%) of the country's P3 projects reached financial close after 2006 (see Exhibit 1 below), putting it at the helm of the Western Hemisphere's P3 market.

Exhibit 1. Canadian P3 projects reaching financial close

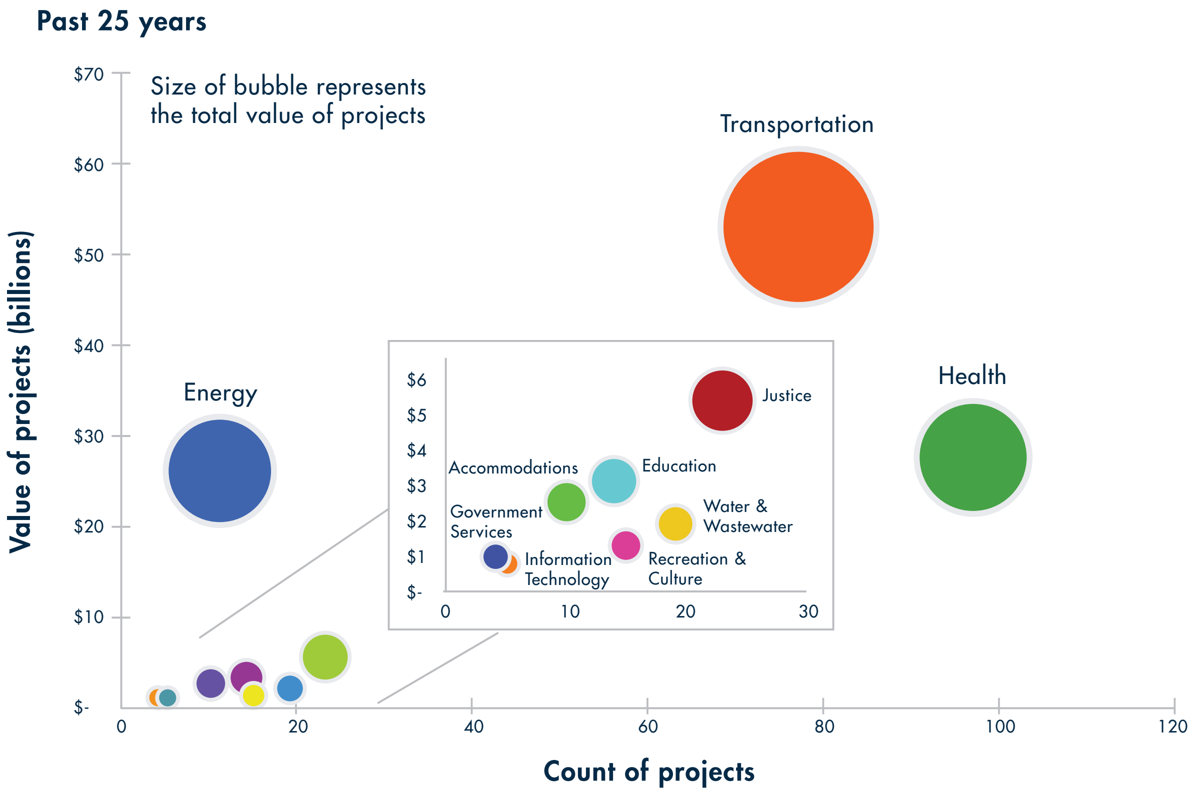


Source: P3 Spectrum and Canadian Council for Public-Private Partnerships

With the goal of leveraging private sector financial investment and market expertise to improve the country's overall infrastructure, the P3 model has been utilized successfully in transportation, health care, energy, education and various other project types. More specifically, transportation (43%), health care (23%) and energy (21%) have accounted for nearly 90% of the total value of P3 projects in Canada. Exhibit 2 depicts the count and value of the country's P3 projects carried out over the past 25 years.

In a recent interview with FMI, a utility owner indicated a growing interest in utilizing a P3 model to push its construction program forward. The utility owner wanted a contractor with "P3 know-how" to provide insight on effective strategies and best practices for structuring a successful P3 project. As owners continue adopting new methods to best deliver their E&C projects, firms that have proven experience and valuable insights on P3 best practices will have a competitive advantage.

Exhibit 2. Count and value of Canadian P3 projects by segment



Source: P3 Spectrum and Canadian Council for Public-Private Partnerships

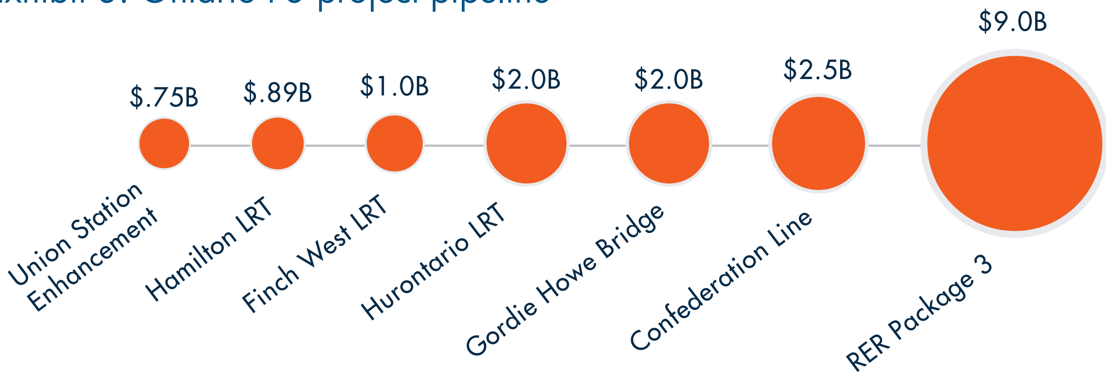
Today, P3 projects continue to proliferate nationwide, with Ontario representing nearly 50% of all Canadian P3 projects in the past 25 years. Outside of Ontario, British Columbia is next in line with 43 projects, followed by Alberta with 19 projects over the same 25-year time frame. Currently, Alberta is undertaking a significant LRT project in Edmonton with a total value over $2 billion. British Columbia is assessing a potential terminal project, Roberts Bank Terminal, valued at $2.5 billion. Needless to say, firms participating in the Canadian E&C market have experienced the continued growth of P3 projects in both number and size.

Hitting Record Highs

The number of multibillion dollar P3 projects is hitting a new record high, particularly with the growing expansion of mega-transit projects. As one transportation agency official stated, "It is slightly challenging for us when we come out with a billion-dollar project because so many companies are competing on all the other major P3 projects. This is unique from anywhere else in the world. What happens is that expertise is pulled from all around the world because the Canadian market cannot keep up with this mass of major projects."

Right now, Ontario is experiencing an unprecedented level of mega-P3 projects. Exhibit 3 represents the province's current P3 project pipeline, which totals over $21 billion. These megaprojects require significant labor resources—a requirement that has caught the eye and piqued the interest of many major multinational E&C firms that have the manpower and resources to complete such complex projects.

Exhibit 3. Ontario P3 project pipeline



Source: PW Finance and P3 Bulletin

The continuing success and ongoing growth of the Canadian P3 market has also attracted a unique consortium of E&C power players, drawing the likes of the country's homegrown giants and the "who's who" of multinational E&C firms and financiers. This band of industry giants is unified by a single purpose: the pursuit of a consistent stream of megaprojects across Canada.

Models That Work

Traditionally, there have been two distinct models for delivering P3 projects. The first is typically used by North American firms and is organized according to the firm's distinct role (i.e., financing, construction, operations and maintenance, etc.). The second model, which is typically used by European firms, includes greater vertical integration with a single construction firm participating across multiple roles—both on the front end (financial component) and back end (operations and maintenance) of the project life cycle.

The large multinational market entrants are structured to leverage the second model, which has gained traction and proven successful on large P3 projects across Canada. Vertical integration enables these firms to price more effectively and avoid duplication of risk. With those benefits, vertically integrated firms have been known to outprice their competition by double digits. Firms that have participated on multiple P3 projects have become even more aggressive on their P3 project pursuits, particularly as it relates to their pricing strategy.

"It is hard to compete against the big players on a multibillion-dollar P3 project, because they have it down to an art," stated one market participant. As the market continues to evolve, large Canadian construction firms are migrating toward the vertical integration model. These construction firms are becoming more involved in the equity component and expanding their services to operations and maintenance. The successful expansion of service offerings was indicated to be time-intensive and costly, requiring dedicated company resources at all times.

In addition to the large, vertically integrated P3 firms, smaller, midsized firms with P3 knowledge and experience are also becoming highly sought after. Local market experience and knowledge are another critical component for teams participating in the Canadian P3 market. Midsized firms with local experience are in demand and well-positioned to participate in a non-shareholder role.

As project size continues to increase, firms of all types and sizes will be needed to successfully deliver these megaprojects. Through in-depth interviews with more than a dozen P3 industry leaders as well as FMI experts, we uncovered several tactical strengths that help contractors get started with P3s, from both a business and operational standpoint.[1] Here are five key areas to consider:

1. **Build your expertise through strategic joint ventures. Pick your partners carefully.** Most interviewees described P3s as a completely "different animal." What you learned in previous construction jobs does not necessarily apply to P3s. Therefore, it is important to start cautiously, educate yourself as you move along, and work with experienced project partners—ideally, trusted partners with whom you've had successful prior experience. When selecting the right partners, the lowest bid is not always the best choice when you are hoping to form a long-term relationship in which both your futures are invested.

2. **Plan comprehensively for project complexities. Be smart about your business decisions.** P3s are typically very complex, large-scale projects. It is therefore ever-more important to know what to expect of the partnership beforehand and to outline expectations and responsibilities at the outset in an extensive, detailed contract. On top of that, a conflict-resolution contingency should be on hand to deal with inevitable disputes, whether large or small. Always keep an open mind and be ready to resolve issues at every step of the way.

3. **Understand the cost and risk barriers to entry. You need deep pockets and a thick skin.** Due to the magnitude of P3 projects, contractors are often required to provide proof of strong balance sheets and solid bonding capacity. Often, the concessionaire will require a large (i.e., financial) parent company to back the performance of the design-build and request very large Letters of Credit (LOCs) as additional performance guarantees of the design-build to meet the lender's requirements for backing the deal with debt. While the amount of equity a firm looks at fronting is one obvious consideration, the issue with greater potential impact on a firm's balance sheet is the financing risk it is taking on.

4. **Be very strategic about the projects (and owners) you go after.** Preparing bids for P3 projects can take years and millions of dollars of investment. Therefore, it is paramount to have a deep understanding of the owner's "ecosystem" (What are his/her budgeting process, timetable and constraints? What does his/her decision-making process look like? How is the public agency run?) and the viability of the project, which is often dependent on the public and political context. As part of this reconnaissance phase, it is also important to identify public agencies that understand what types of public policy goals they are trying to achieve and promote.

5. **Get in the door early.** Start building relationships with public officials and finance representatives now. P3s require commitment and support from very senior public officials, who must be actively involved in supporting the concept of P3s and taking a leadership role in the development of each given partnership if they are to succeed. Start conversations with public officials and finance representatives long before projects have been announced. Understanding both their project needs as well as the P3 process is key to building trust with a given stakeholder—crucial if they are to personally invest themselves in a P3. Long-term relationships with key influencers will help you shape and develop P3 projects from the onset.

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[1] "Public-Private Partnerships: What You Need to Know." Sabine Hoover. FMI. 2013.

The P3 Opportunity Is Vast

The potential opportunity this presents for midsized firms is tremendous, but only if those firms can position themselves to take full advantage of the market. The winning midmarket firms that will be the most successful are those that have a well-defined and focused strategy that combines the external market conditions and opportunities as well as the internal context the organization operates in and its aspirations.

Firms that are within five to 10 years of a potential ownership transfer and that have well-structured processes and loyal, experienced leadership could be prime candidates for an acquisition by a large multinational firm seeking to vertically integrate and penetrate the Canadian P3 market. Conversely, the firms that have growth aspirations, higher risk profiles and a strong balance sheet may enter the P3 market through the smaller-scale projects (i.e., those that fly under the radar of the larger firms chasing megaprojects).

The Canadian P3 market has not shown any signs of slowing down in the future, and while it may appear to have the greatest potential for billion-dollar contractors and multinational consortiums, it also presents a significant opportunity for middle-market firms, should they choose to venture out into this evolving marketplace.

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In the Path of a Natural Disaster: Lessons Learned for Construction Work Sites

By Jennifer Fortunato and Forrest Ropp

Hurricanes and wildfires in North America have brought new insights to risk management strategies. Can your risk register weather the storm?

If last year's extreme weather events taught us anything, it's the need to be prepared for the unpredictable. The devastating wildfires and hurricanes that left a trail of destruction in the U.S. and Canada resulted in staggering losses for people, communities and businesses.

The implications for contractors, whose projects may extend for several years in areas vulnerable to severe weather events, can be daunting. Crafting a robust risk register (a master document created during the early stages of a project to help track issues as they arise) that addresses extreme weather events is vital and can be built upon the tried-and-true practices your company already puts in place.

Hurricanes Harvey, Irma and Maria—all striking in two months' time—rank among the top-five costliest U.S. hurricanes on record, with an estimated price tag of $265 billion.[1] Last year's California wildfires tallied nearly $12 billion in insured losses,[2] and that figure doesn't include wildfires in

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[1] "Fast Facts: Hurricane Costs." Office for Coastal Management, National Oceanic and Atmospheric Administration (NOAA). 18 January 2018.

[2] "California Statewide Wildfire Insurance Claims Nearly $12 Billion." California Department of Insurance. 31 January 2018.

other parts of the American West. In Canada, British Columbia wildfires in 2017 destroyed nearly 3 million acres at a cost of $127 million, and the 2016 Fort McMurray wildfire in Alberta proved the costliest in Canadian history at over $3.5 billion.[3 4 5]

Last year's experiences and the accumulated wisdom gained over many years can shed light on some key considerations that all E&C firms should be thinking about in 2018.

Planning Is Everything

Avoid complacency. Businesses, like people, often struggle to accept that a severe weather event could affect them, especially when a work site isn't a direct target of the event. Consider that last year's hurricanes caused flooding beyond accepted norms and that wildfires can and do occur in every region of the U.S. and Canada. Moreover, their paths are unpredictable. Hurricanes change direction, and wind can blow embers from a wildfire miles away to ignite new fires.

Make your plan specific. Working near an ocean or by fire-prone forests presents two types of hazards that defy a one-size-fits-all plan. Re-evaluate your plan by considering the different exposures for each project. The least-prepared companies are often those that are working in unfamiliar regions. For example, a Midwestern general contractor (GC) hired for a multiyear project in Florida might neglect to consider the necessity of having a hurricane plan. Familiarize yourself with your subcontractors as well. Specificity is critical in crisis management events for any natural disaster.

Protect equipment. When you have an equipment schedule that reaches into the hundreds of millions of dollars, you need a specific plan to protect that investment.

With hurricanes, people often overestimate the wind and underestimate the water. In fact, water is much more of a concern. After Harvey, about 40% of the buildings that the Federal Emergency Management Agency (FEMA) deemed flooded in Harris County, Texas, were not located in flood plains.[6]

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[3] British Columbia 2017 Wildfire Season Summary. Government of British Columbia.

[4] "British Columbia Wildfires Cause More Than $127 Million in Insured Damage." Insurance Bureau of Canada. 27 September 2017.

[5] Northern Alberta Wildfire Costliest Insured Disaster in Canadian History – Estimate of Insured Losses: $3.58 Billion." Insurance Bureau of Canada. 7 July 2016.

[6] Fessenden, Ford et al. "Water Damage from Hurricane Harvey Extended Far Beyond Flood Zones." The New York Times. 1 September 2017.

Although you can't completely remove liability in these situations, you can act to mitigate risk. Some questions to ask:

- Where is the equipment stored?
- Where is your staging area?
- At any one time, how much equipment will be on the staging area, and what is the value of that equipment?
- Are you protecting the equipment as well as you can?

For example, a company had about $50 million worth of equipment staged on a low-lying area near a river that could crest at any time. Indeed, the risk of inland flooding has significantly increased over the past 50 years.[7] Made aware of the threat, the company raised the equipment by bringing in gravel to create an area more than three feet above the river.

For wildfires, winds can abruptly shift and/or strengthen, putting a once-safe work site in the fire's path. Remove all fuel sources from your vehicles and fuel tanks and, where possible, remove the vehicles themselves. Never keep vehicles parked next to structures or combustibles. If you regularly fill tanks and equipment, interrupt that schedule to avoid any potential disasters.

Know where your workers live. Employees with homes in vulnerable areas should not be part of your emergency action or preparedness teams. Also, should an evacuation order arise, determine ahead of time where emergency or preparedness teams will deploy.

Address site vulnerabilities. If your work sites are in an area at risk for wildfires, clear a barrier zone of trees or shrubs that could fuel a fire. Keep these sites as clean as possible; debris can unnecessarily strengthen a wildfire. Moreover, remove anything flammable, which could further accelerate the fire. In hurricane situations, remove objects that could become missiles even in lesser winds than those carried by Category 5 storms.

Know where to set up project trailers. The office of a GC working on a Gulf Coast bayou flooded three times last year due to Harvey, then Irma and then Maria. This might have been mitigated if the GC had thoroughly investigated its trailer site to ensure it wasn't in a low-lying area. Talk to risk specialists or local authorities, especially if you're unfamiliar with the region, to explore which areas are and aren't elevated. The inconvenience and/or expense of a slightly longer drive to your work site may well be worth it. Those sites might also be good places to store your equipment. If you're building near the ocean, there won't be as many higher-ground options, so you may want to consider laying down topsoil or gravel to build a place to raise your trailers. You might also be able to put your cranes on these higher areas, which may be enough to save them from substantial damage.

For wildfires, remember that some project offices can be several trailers wide. If trailers are close together, fire could quickly wipe out the entire complex. Spread trailers out and create a firebreak around each trailer (as well as the entire site).

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[7] "Inland Flooding." U.S. Climate Resilience Toolkit. National Oceanic and Atmospheric Administration (NOAA). 6 October 2017.

Evacuation: Personal Safety First

The overarching goal of effective evacuation plans is to reduce the time they take to implement. You can do this by taking these steps:

- **Map out routes.** Do workers know where to go in case of a mandatory evacuation? Consider all evacuation options from the work site. Last year, some people evacuated from Florida to Charlotte, N.C., which wound up having worse weather conditions than where they came from. During fast-moving wildfires, delayed departure times can prove fatal.
- **Identify approved evacuation staging areas in your plans.** In urban locations, contact local authorities to pinpoint all potential escape routes. In remote Canadian or Pacific Northwest locations, there may only be one road for ingress and egress. Whether the challenge is inching along clogged arteries in populous areas or traveling long distances on a single road, you may want to recommend that all workers have at least half a tank of gas in their vehicles at all times and/or access to extra fuel.
- **Plan and time things carefully.** Around 36 hours prior to a hurricane, you can mitigate some risk by removing equipment from the shoreline and getting the booms down, but you probably can't demobilize all of your cranes. At 24 hours, you probably won't have the trucking ability to do that, especially since everyone will be evacuating from the same location. With wildfires, there may be even less advance warning. In both situations, constantly monitor conditions from local news and government websites. In the event of a power outage, have portable radios or satellite phones available to monitor conditions.
- **Anticipate evacuations.** The best companies not only have evacuation procedures in place but also regularly conduct unannounced practice drills.
- **Save your records.** Consider the safety of vital business records. If everything is stored electronically, are you regularly backing up the data, and is it being saved to a main server in a less vulnerable region? On the other side of the coin, are your paper blueprints also in electronic form? Paper documents should be kept in fireproof containers. Evacuation plans should be available in both electronic and paper formats. If your network crashes, you won't be able to access these crucial documents on a computer when you need them most.

Returning to the Work Site

It's common for GCs to focus on a severe weather crisis before and during an event, but they often neglect to take steps after the event. When you return to a devastated work site, you will be facing the challenges you had prior to the disaster as well as an unprecedented set of new problems. You can avoid these problems by taking these steps:

- **Anticipate post-event hazards.** Natural disasters create unique safety challenges. Smoldering debris that can reignite a fire and post-flood waste that can create environmental hazards are just two of many examples. Understand and plan for these risks.
- **Secure labor and supplies.** Ensure you'll have what you need, supplywise and laborwise. There may not be as much material available as before because a natural disaster leads thousands of businesses to look for solutions to the same problems. Likewise, finding workers may be difficult. A post-Fort McMurray report from Economic Developers Alberta (EDA) noted that entry-level workers did not return to the region after the wildfire, creating labor challenges.[8] Because a natural disaster can create project interruptions lasting several weeks, many workers may be forced to find employment elsewhere. What's more, the workers who are available may not have the needed experience or knowledge.

  Last year, some GCs thought they had done a good job in this phase. But they had secured just one labor service or supply vendor. When the vendor proved unable to deliver following the disaster, it created major challenges. Consider contracts with several vendors.
- **Anticipate budget pressures.** Because you'll be competing for supplies and workers with everyone else, costs can rise accordingly. Will your cash flow accommodate this possibility?
- **Start small.** Once authorized to return to a work site, don't bring everyone back right away. Instead, deploy a preassigned team to conduct a hazard assessment. Each event creates its own challenges, be it from washouts or downed power lines, as well as the need to perform emergency repairs before a normal project schedule can resume. Internet service may also be limited or absent, creating additional delays.

Nobody knows if 2017's natural disasters were an aberration or the "new normal," but they taught us to expect the unexpected. Today's construction boom is happening in many vulnerable areas. In the U.S., some of the fastest-growing regions are near oceans, and the U.S. Forest Service estimates that wildfire seasons are on average 78 days longer than in 1970 and the number of acres burned each year has doubled since 1980.[9] These are today's realities.

It underscores the importance of a risk register that addresses these profound vulnerabilities and includes a robust risk-mitigation plan that is developed before mobilization. The more you can drill down to the specific location and implications of a natural disaster and get contractors and project teams thinking the same way, the better off you'll be.

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[8] "Embracing the New Economic Realities: After the Wildfires." Economic Developers Alberta. June 2017.

[9] "USDA Forest Service and Partners Gear Up for Significant 2016 Wildfire Season." U.S. Department of Agriculture. 17 May 2016.

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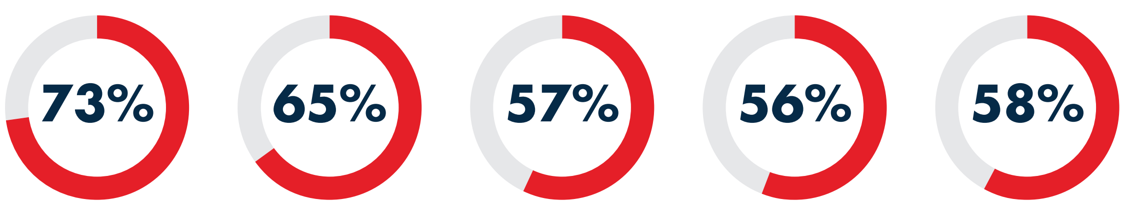

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