

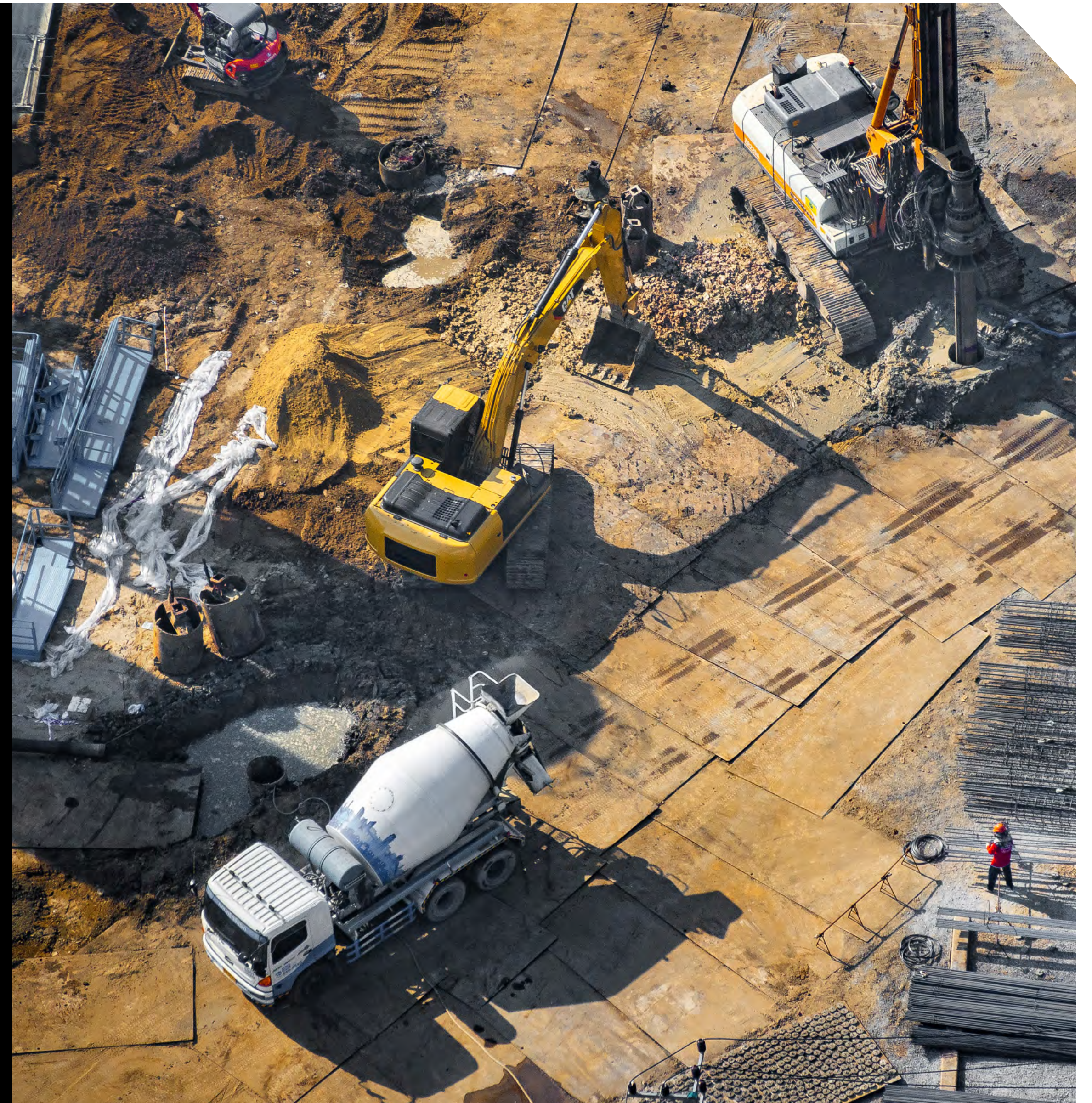
— RESEARCH REPORT

What Gets Measured Gets Managed

The Role of Real-Time Insights in
Construction Project Success

PROCORE[®]

SAPIO
RESEARCH



— INTRODUCTION

Executive summary

Research conducted for Procore suggests that almost half of Canadian construction businesses which have visibility of performance have improved product quality and overall efficiency and productivity in the way their projects are run.

Real-time insights are estimated to save individual managers half a day every week, while avoiding delays, rework and other issues saves each business is estimated to save, **on average, \$446,000 per annum**. While nine out of ten businesses say they are using performance monitoring systems, this includes use of generic manual systems such as spreadsheets. More than half (58%) of the Canadian businesses surveyed had adopted construction-specific platforms and point solutions, and just over half (52%) said they were using artificial intelligence (AI) or machine learning technologies to assist their performance monitoring processes.

Procore believes that companies with high levels of performance visibility are best placed to deliver successful construction projects, by capitalizing upon insights to inform decision-making. However, this research suggests there remains considerable room for improvement across many Canadian businesses before they can join the shift away from manual data collection and reporting tools towards integrated platforms that deliver real-time performance metrics.



On average Canadian businesses are saving \$446,000 per annum thanks to real-time insights



Contents

01	What gets measured gets managed	4	→
02	Visibility of performance	5	→
03	Measurable benefits of performance visibility	6	→
04	Advanced capabilities and collaboration	7	→
05	A Procore commentary	8	→
	Footnotes	10	→

What gets measured gets managed

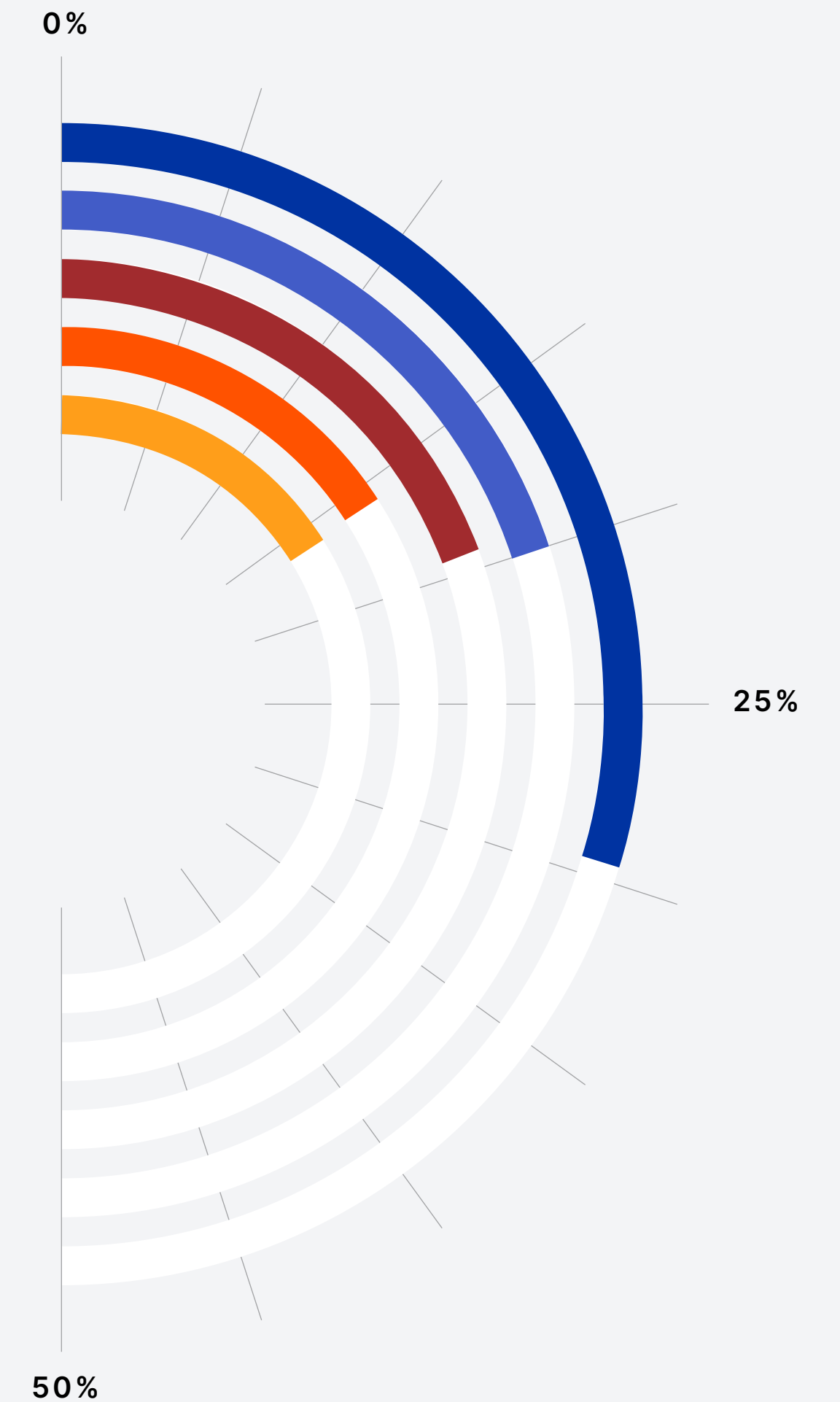
The management saying “What gets measured gets managed” has been taken on board by many construction managers in Canada, suggests new research conducted for Procore. In an industry that has long struggled to improve efficiency and productivity, the survey suggests information technology is making project performance more visible, helping businesses improve quality and safety, save time and money, and deliver better profitability.

Demonstrating its own commitment to measurement, Procore commissioned Sapio to get an independent industry perspective on the extent to which construction businesses have visibility of performance. Sapio Research conducted an international **online survey in January 2021 among 820 middle managers and above**, working for construction companies of 100 employees or more. This report is focused on Canada, drawing on insights provided by middle and senior managers across **154 businesses**.¹ Other respondents were located in the UK and Ireland, France, Germany, the Netherlands and UAE, helping provide some useful international perspectives and comparisons (particularly when low numbers in the Canadian survey were encountered).

¹ Of the 154 Canadian businesses surveyed, 28% had between 100 and 249 employees, 28% had 250-499, 18% had 500-999, 17% had between 1,000 and 4,999 employees, and 9% had over 5,000 employees. The Canadian sample predominantly comprised middle managers (40%); 40% were senior managers, with 20% business owners, directors and functional heads. The Canadian companies were fairly evenly distributed across sectors - engaged in housebuilding/residential (29%), civil engineering (20%), fit-out work (19%), industrial work (16%) and commercial work (16%).

Canadian companies included in the report

- Businesses engaged in commercial activities **16%**
- Businesses engaged in industrial activities **16%**
- Businesses engaged in fit-out activities **19%**
- Civil engineering firms **20%**
- House / residential builders **29%**



Visibility of performance

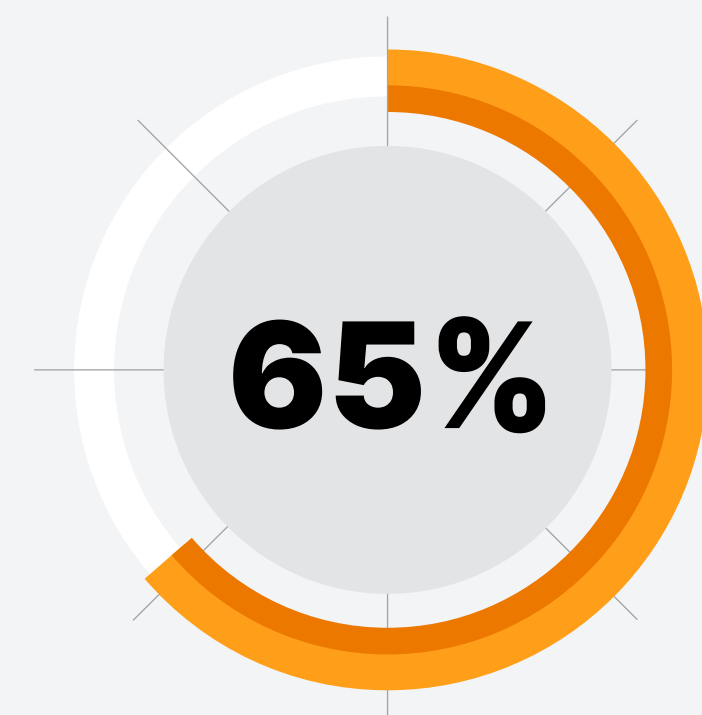
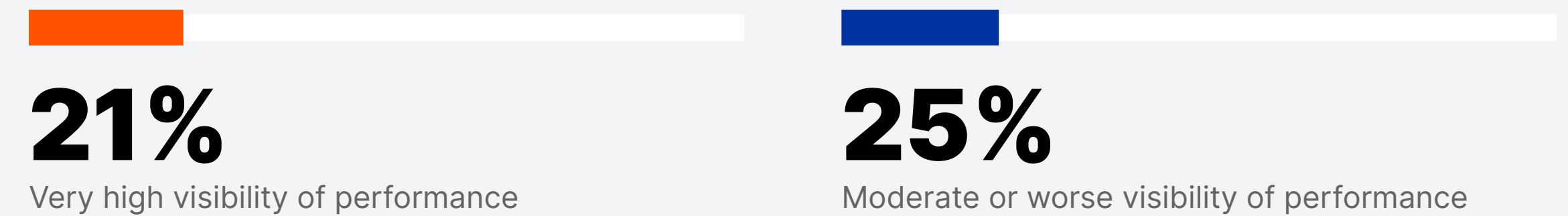
Nine out of ten managers (90%) in the surveyed Canadian construction firms believed their businesses had visibility of performance. A fifth (21%) rated visibility of their business performance as “very high” (this broadly correlated to larger firms, with annual revenues above \$173 million), while over half (54%) rated it “high”; a quarter (25%) rated it moderate or worse. Visibility of performance is related to the tools commonly deployed; among those deploying construction-specific platforms like Procore, 82% had confidence in their performance visibility.

Looking at the technologies deployed, two-thirds (65%) used manual tools like spreadsheets to achieve visibility of performance, 58% used construction-specific platforms, 44% were using business intelligence (BI) presentation tools such as PowerBI, Tableau and SPSS, with two in five firms (42%) using construction-specific point solutions. Among companies deploying manual methods or generic BI solutions, the most widely reported disadvantage was incomplete insights (34%), followed by duplicated insights (31%) and inaccurate insights (29%).

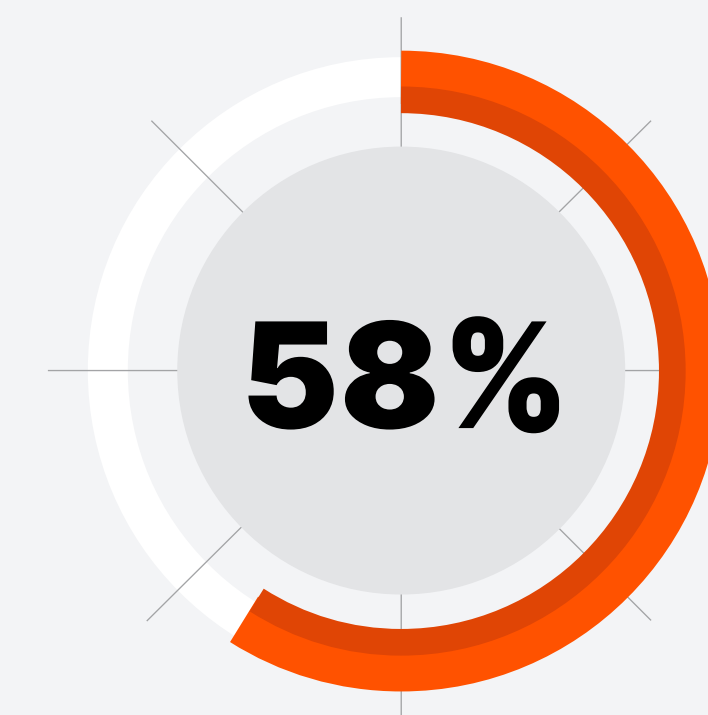
Almost three quarters (72%) of Canadian firms with visibility of performance said this particularly applied to the build stage of projects (helping determine optimal cost or phasing, or reduce defects). A similar proportion (69%) also said they gained insights during the preconstruction stage (including better estimates of their project costs).

Procore’s global survey data suggests that 84% of firms with no visibility of performance wanted tools to help them achieve it. Why? Well, almost half (47%) wanted to save money, while increasing and/or gaining visibility of profit margins (40%) was also important.

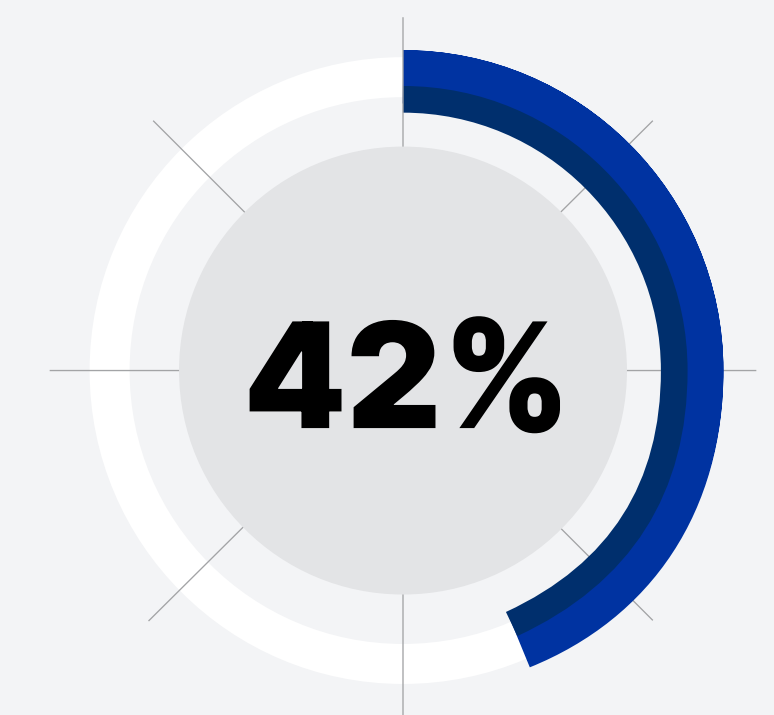
Canadian construction firms who believe their business has performance visibility



Canadian managers still using outdated manual tools



Companies using construction platforms similar to Procore



Companies using construction-specific point solutions

Measurable benefits of performance visibility

Survey respondents in Canada estimated a **time saving of around 4.5 hours per week** (or 216 hours a year) due to performance visibility. Weighted to the relative sizes of the organizations and to their manpower costs, the results suggested **average annual savings of \$446,000 per business** from addressing performance gaps.

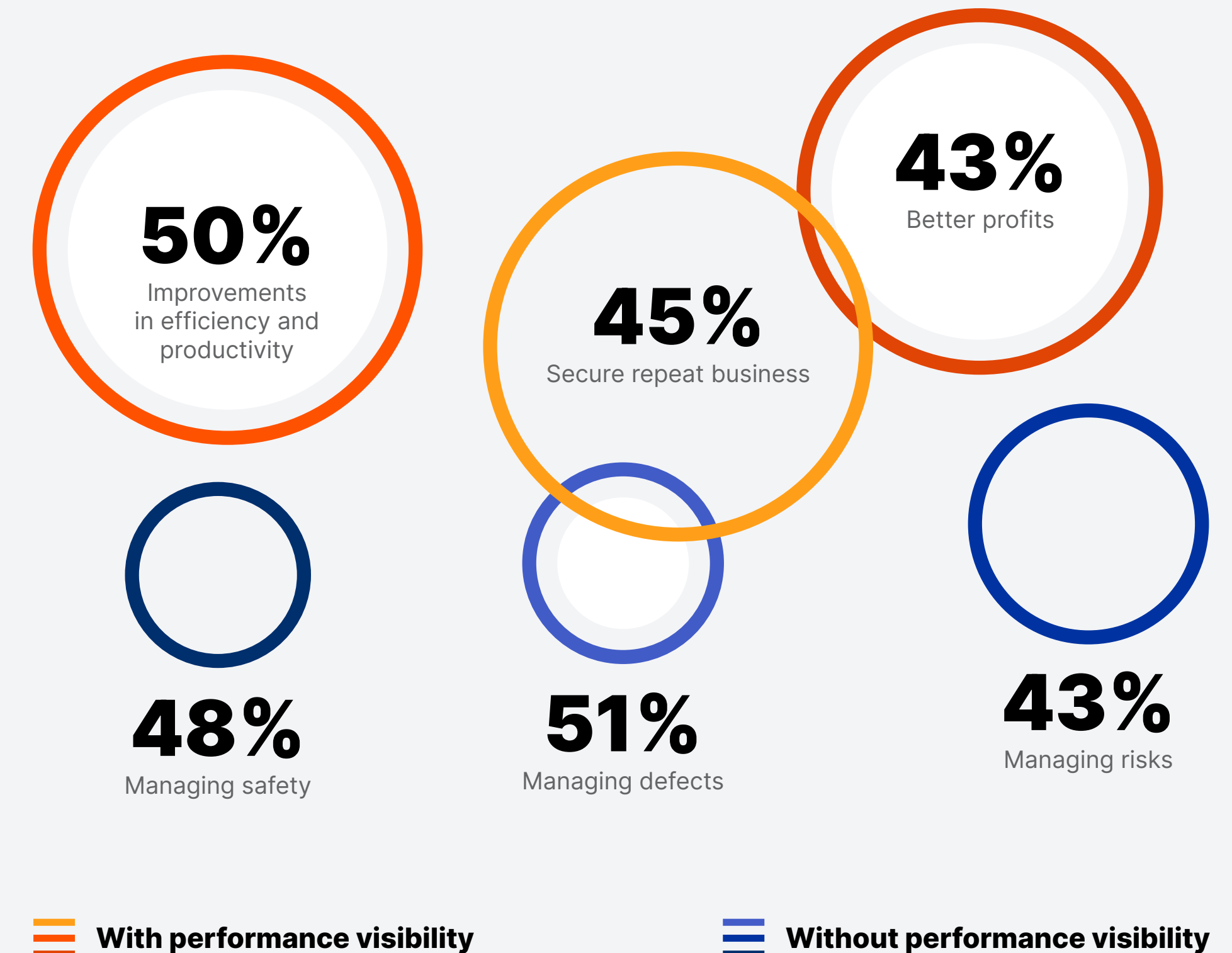
By contrast, global firms with no visibility of performance estimated they were **wasting an average of 3.5 hours per week** (or 192 hours annually). If this was replicated among Canadian firms, each could be incurring **financial costs of around \$459,533 a year due to poor performance**.

In addition to time and financial savings, other performance visibility benefits were also reported by Canadian construction businesses. Half (50% – the highest of any other country surveyed) claimed overall improvements in efficiency and productivity, 45% said visibility had helped them secure repeat business, 43% claimed better profit margins, and 40% reported better supply chain management.

Asked about quality or safety improvements, 51% reported better quality with fewer defects and 50% reported better compliance with international standards such as ISO 9001 / 45001; among larger firms—those with revenues over \$173 million—this quality figure rose to 59%. Almost half (48%) claimed better safety records, and 47% said they were better able to track progress against sustainable construction key performance indicators, while 43% claimed better risk management.

Another insight from the global results shows that, **without visibility of performance, firms are unable to increase efficiency and productivity, save money, improve profit margins, or accurately monitor project programmes**. Poor risk management, poor quality management and less accurate safety record-keeping also resulted. More than four out of five (84%) of those who did not have visibility of performance said they would consider adopting a tool to help them achieve it.

Measurable benefits of performance visibility





Facilitating better collaboration

Just over half of Canadian respondents (52% – but rising to 62% among larger firms) said they were currently using artificial intelligence (AI) and/or machine learning technologies to assist with visibility of performance. For those not using AI/ML, four out of five would “definitely” (16%) or “potentially” (64%) consider using them to help achieve visibility of performance.



52%

Canadian managers who are currently using AI/Machine Learning



80%

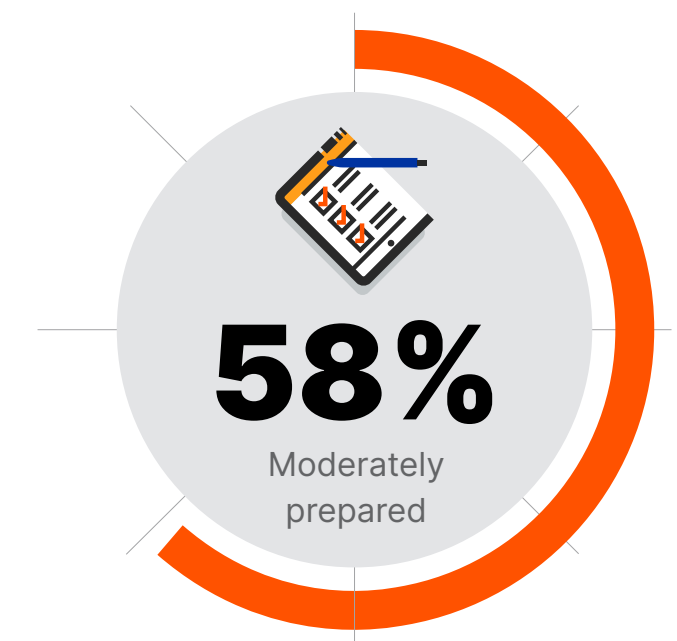
Those not using AI/Machine Learning considering adopting them

Canadian firms were also highly prepared to share their performance metrics with their supply chains. Visibility of performance was “always” (31%) or “sometimes” (59%) shared with supply chains to improve project performance, the survey showed.

Among firms with revenues over \$173 million, the proportion “always” sharing rose to 40%.

A wide range of benefits from sharing were reported by Canadian firms, with better supply chain management (40%), better safety management (40%), increased overall efficiency and productivity (38%), reduced downtime or delays (37%), better risk management and better KPIs (36% each), and saving money (35%) all frequently cited as benefits.

Managers were also asked about their companies’ readiness to adopt new construction technologies such as augmented or virtual reality (AR, VR), drones and 4D building information modelling (BIM) in the next five years. A fifth of Canadian businesses (21%) considered themselves “very” well prepared while 58% said they were “moderately” prepared.



A Procore commentary

Procore believes that construction businesses with high levels of performance visibility are better placed to deliver successful construction projects by capitalising upon real-time insights to inform decision-making.

Jas Saraw, Vice President of Procore Canada, says the survey findings suggest the Canadian construction industry is undergoing a major digital transition:



“Construction has historically been a conservative and risk-averse industry, and globally it has lagged other industries in terms of its levels of digitisation. However, this survey suggests that Canadian construction businesses are now seeing real signs of a digital and cultural transformation.

Labor-intensive manual data capture and Excel-based performance monitoring to support monthly board reporting cycles is now being replaced by real-time dashboard reporting enabled by platforms like Procore and its ecosystem of supported solutions. On-demand dashboards increasingly provide project teams and managers with detailed, up-to-the minute visibility of key performance metrics.

As a result, today’s managers can get the insights they need to make informed decisions for their own businesses, and – as this Procore survey shows – can then more easily share those insights with supply chain partners. By its inclusive approach to licensing its software, Procore is supporting information-sharing across project teams. It is also fostering better collaboration with corresponding improvements on time, cost, quality, safety, repeat business and other key performance metrics.”

Procore's research also suggests that digital transformation may be advancing more quickly than many realise. Jas Saraw highlights the survey's findings relating to adoption of new technologies:

“Outsiders don’t always see construction as being technologically advanced, but we have advanced in recent years. Cloud and mobile technologies are increasingly helping companies to switch from reliance upon on-premise legacy systems and paper-based approaches.

Our industry used to be one of ‘data chaos’ - reliant upon decentralized documents, drawings and other paperwork. Today, we are collating and analyzing our data, and capitalizing upon the real-time performance visibility insights the data delivers.

As advanced technologies are proven in other industries, construction can also quickly adapt those tools to its specific needs. The enthusiasm for artificial intelligence and/or machine learning among our surveyed businesses suggests this is already happening. Larger firms with higher revenues may be leading the way, but others are following, and there is a strong willingness to build upon these digital foundations and exploit new technologies.”

However, Procore suggests there remains room for improvement across many smaller businesses. Its survey focused on 100+ employee firms, but, as in most other economies, smaller businesses – including contractors, specialists and consultants – make up a large part of the Canadian construction sector. Jas Saraw says the benefits can also be shared by smaller firms:

“Digital construction is not just for large companies. Platform-based ecosystems such as Procore’s are perfect for smaller organizations needing real-time performance visibility to make them more competitive. More need to shift away from the data chaos of manual data collection and basic reporting.

Canadian firms’ willingness to share data and collaborate with their supply chains is evident from the survey, particularly among larger firms. They find it enables better projects, with better time, cost and safety performance. These rewards can be quickly extended across the sector. By enabling performance visibility, smaller, more agile Canadian construction businesses can compete with larger firms, and help their project collaborators, large and small, to work smarter and faster, be more competitive, and achieve better and more resilient profit margins.”





Footnotes



Research Methodology

The survey was conducted among 820 middle managers and above, from construction companies of 100 people or more, from the following countries: and Canada (154), UK & Ireland (251); France (111); Netherlands (100); Germany (104); and UAE (100). The interviews were conducted online by Sapio Research in January 2021 using an email invitation and an online survey. At an overall level results are accurate to $\pm 3.4\%$ at 95% confidence limits assuming a result of 50%.



Definition of 'Visibility of performance'

Real-time insights which you can access and use to gain visibility of an entire construction life cycle as well as overall business performance and/or that of a project. Such information can then be used to make more informed decisions. For example, you can gain an understanding of how many days a particular trade or a specific team takes to resolve snags and which element of a build had the most snags to therefore identify what the most optimal way to close out the project would be. Or, to see which contractors on a previous project were most associated with delays to help inform future choices.

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