Ontario Construction Secretariat

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2018 Contractor Survey: Industry Outlook & Special Report on New Technology

March 2018

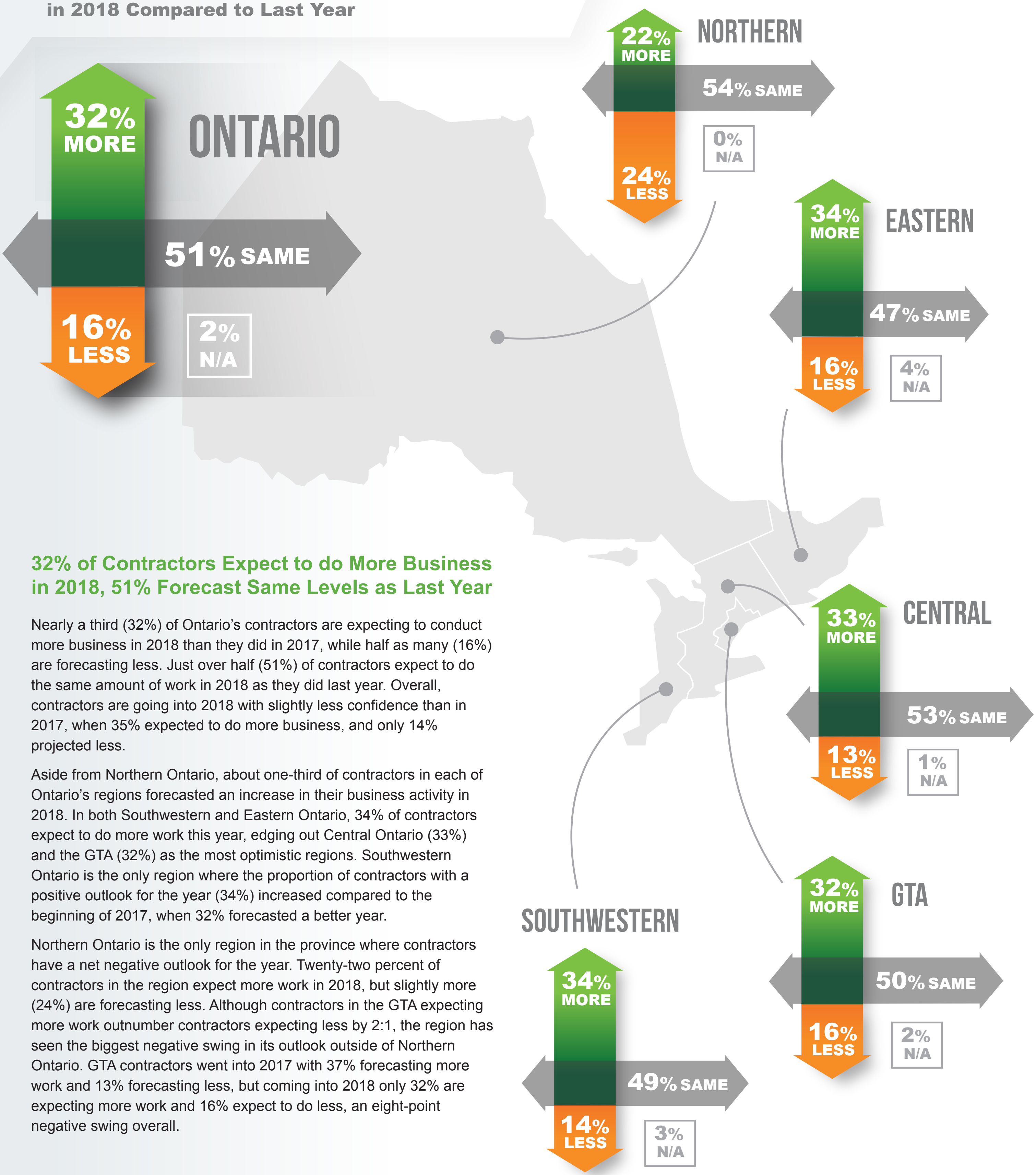
YEARS

1993 - 2018

ONTARIO CONSTRUCTION SECRETARIAT

CONTRACTORS' BUSINESS OUTLOOK FOR 2018

How Much Business Contractors Expect to Conduct in 2018 Compared to Last Year



32% of Contractors Expect to do More Business in 2018, 51% Forecast Same Levels as Last Year

Nearly a third (32%) of Ontario's contractors are expecting to conduct more business in 2018 than they did in 2017, while half as many (16%) are forecasting less. Just over half (51%) of contractors expect to do the same amount of work in 2018 as they did last year. Overall, contractors are going into 2018 with slightly less confidence than in 2017, when 35% expected to do more business, and only 14% projected less.

Aside from Northern Ontario, about one-third of contractors in each of Ontario's regions forecasted an increase in their business activity in 2018. In both Southwestern and Eastern Ontario, 34% of contractors expect to do more work this year, edging out Central Ontario (33%) and the GTA (32%) as the most optimistic regions. Southwestern Ontario is the only region where the proportion of contractors with a positive outlook for the year (34%) increased compared to the beginning of 2017, when 32% forecasted a better year.

Northern Ontario is the only region in the province where contractors have a net negative outlook for the year. Twenty-two percent of contractors in the region expect more work in 2018, but slightly more (24%) are forecasting less. Although contractors in the GTA expecting more work outnumber contractors expecting less by 2:1, the region has seen the biggest negative swing in its outlook outside of Northern Ontario. GTA contractors went into 2017 with 37% forecasting more work and 13% forecasting less, but coming into 2018 only 32% are expecting more work and 16% expect to do less, an eight-point negative swing overall.

CONSTRUCTION INDUSTRY OUTLOOK FOR 2018

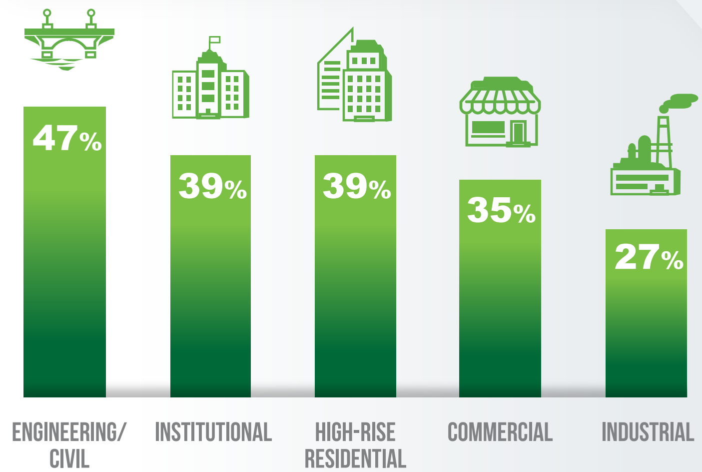
Engineering Sector Outlook the Most Optimistic in Ontario, Commercial Below Average

When it comes to Ontario's construction industry overall, 39% of contractors expect activity in the province to increase, while 44% expect it to stay the same, and 15% believe construction activity in the province will decrease compared to 2017. The increase in construction is forecasted to be moderate, with 34% of contractors indicating that activity will increase somewhat, and only 5% forecasting that Ontario's construction activity will increase significantly.

The engineering sector has the most optimistic outlook, with almost half (47%) of contractors in the sector forecasting engineering work to increase in 2018, and a further 36% forecasting activity to stay at the same level as last year. Ontario's institutional and high-rise residential sectors have similar outlooks for 2018 with 39% of contractors in each sector forecasting activity to increase. In the institutional sector, 45% of contractors expect activity to remain at 2017 levels, compared to 42% of contractors in the high-rise residential sector.

The outlook for Ontario's commercial sector is below the provincial average, with 35% of contractors expecting activity to increase in 2018, and 49% expecting commercial construction activity to stay at the same level as last year. Despite the variation in forecasted activity increases across the sectors, the expected decreases are relatively similar in the engineering, institutional, high-rise residential, and commercial sectors, ranging between 13-15%. Ontario's industrial sector has the least optimistic outlook, with just over a quarter (27%) of contractors forecasting an increase in construction activity, while five percent less (22%) are expecting a decrease in activity. Just under half (48%) of contractors expect industrial activity to stay at the same level as 2017.

Percentage of Contractors Expecting Increase in Sector's Construction Activity Compared to Last Year



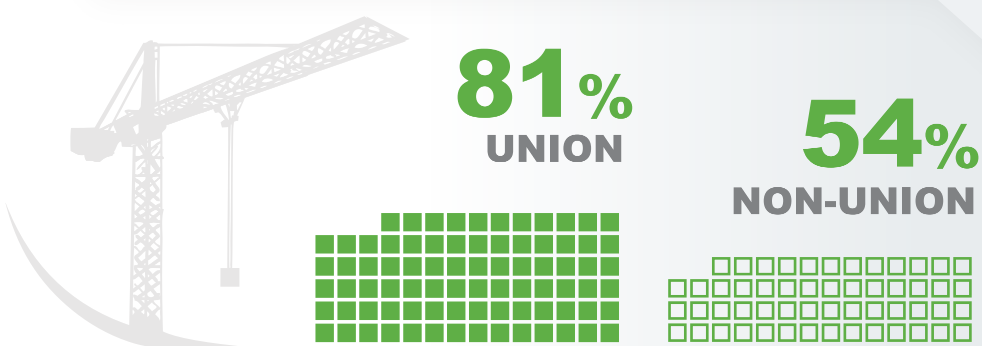
39% OF CONTRACTORS EXPECT INCREASE IN ONTARIO'S CONSTRUCTION ACTIVITY IN 2018

APPRENTICES

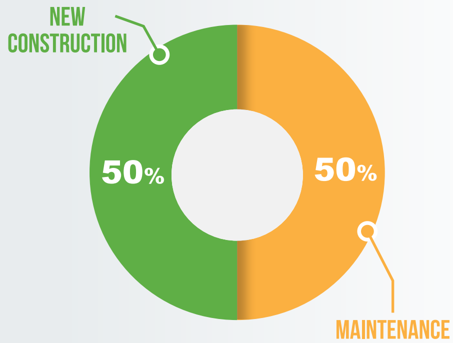
More than 8 in 10 Unionized Contractors Employ Apprentices

The unionized ICI construction industry has always been a leader in apprenticeship and training investment. Among the unionized contractors who responded to the survey, 81% indicated that they employ apprentices while only 54% of non-union contractors employ apprentices.

Percentage of Union and Non-Union Firms Employing Apprentices

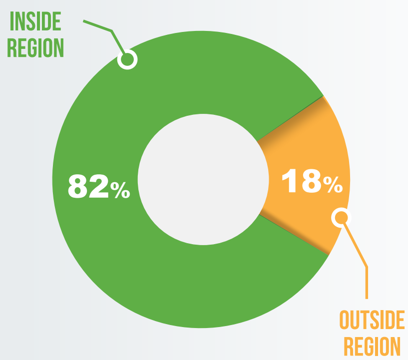


WORK PICTURE FOR 2018



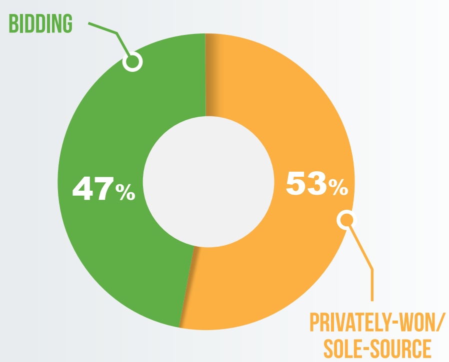
50:50 Split Between New Construction and Maintenance Work

Overall, contractors are expecting a 50:50 split between new construction and maintenance work in 2018. Contractors in the Central, Eastern, and GTA regions are also expecting equal proportions of new construction and maintenance work this year. Northern Ontario is the only region in the province where the majority of construction work is expected to come from maintenance projects. Maintenance work is expected to make up 57% of construction activity in Northern Ontario, compared to 43% for new construction projects. In Southwestern Ontario, new construction work is forecasted to make up a clear majority of 2018 construction activity. Contractors in the region are expecting 55% of their work to come from new construction this year, compared to 45% from maintenance projects.



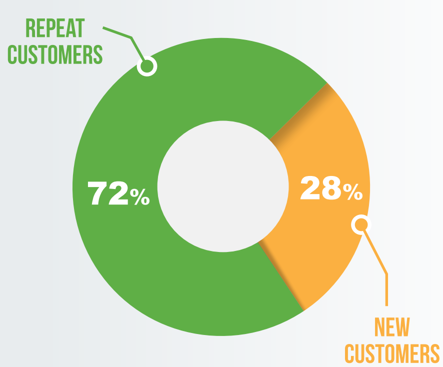
Contractors Expect More than 80% of Their Work to be Done Inside Their Region

Ontario's contractors have forecasted that 82% of the work they do in 2018 will be on projects inside their own region, while they will go out of their region for 18% of their work. GTA contractors are expecting the same proportions of inside and outside-of-region work, while contractors in Southwestern Ontario foresee doing 87% of their work inside their region. In Eastern Ontario that number goes up to 90%, the highest among Ontario's regions, while Eastern Ontario contractors only expect to go outside of their region for 10% of their work. Contractors in both Central and Northern Ontario expect to go outside of their region for nearly a quarter (23%) of their work, compared to 77% inside their region.



More Privately-Won/Sole-Source Work Than Work Won Through Bidding in 2018

Contractors expect 53% of their 2018 work to be won privately or sole-source compared to 47% won through bidding. Similar proportions are forecasted by contractors in Central, Eastern, and Northern Ontario. Southwestern Ontario's contractors are expecting the highest proportion of work won privately or sole-source, at 60%, compared to 40% from bidding. The GTA is the only region where contractors are forecasting more work from bidding than privately-won or sole-sourced. GTA contractors expect just over half (51%) of their work to come through bidding, compared to 49% won privately or sole-source.



Nearly Three-Quarters of 2018 Work Will be for Repeat Customers

Ontario's contractors are forecasting that 72% of their work in 2018 will be for repeat customers, while 28% will be for new customers. Contractors in Central, Northern, and Southwestern Ontario are expecting similar breakdowns, with GTA contractors forecasting 74% repeat customer-work, and 26% new customer-work. The greatest proportion of new customer-work is expected in Eastern Ontario, where contractors are forecasting that a third (33%) of their work will be for new customers, and two-thirds (67%) will be for repeat customers.

Contractors Expect to Face Increased Competition from Firms Inside Their Region, Less Competition from Large Firms and Outsiders

Over the next three years, contractors are forecasting more competition from local firms, and less from firms outside of their region and large provincial, national, or international firms. Well over half (58%) of contractors are expecting more competition from firms inside their regions in the next three years, while 24% are expecting less. Only 7% of contractors are expecting more competition from US or international contractors over the next three years, and 81% are expecting competition from these firms to decline. When it comes to large national or provincial firms, 59% of contractors are expecting less competition, compared to 24% who are expecting more. Sixty-three percent of contractors have forecasted less competition from small firms based outside of their region, while 24% expect more. When asked the same question at the beginning of 2017, 31% of contractors were forecasting more competition from small out-of-region firms.

Competition Expectations Over the Next 3 Years

58%
EXPECT MORE COMPETITION
FROM FIRMS
INSIDE THEIR REGION

CONSTRUCTION INDUSTRY CHALLENGES

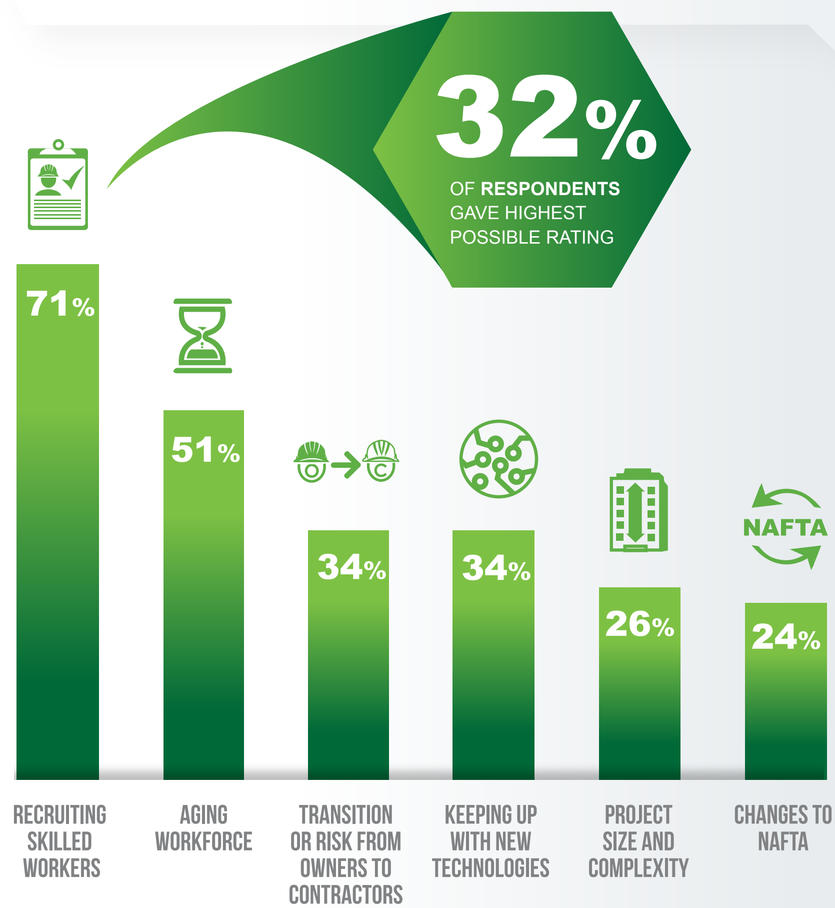
Future Labour Supply Challenges Are Contractors' Most Common Concerns

Labour market issues are among contractors' top concerns, with recruitment of skilled workers and dealing with the aging workforce both seen as significant challenges to their firm over the next three years. Recruiting skilled workers is considered a significant concern by 71% of contractors, while 51% of contractors indicated that the aging workforce is a significant concern over the next three years. In addition to being a widespread concern, skilled worker recruitment is also considered a major concern by nearly a third of contractors, with 32% of respondents giving it the highest possible rating.[1]

The transition of risk from owners to contractors is seen as a significant concern to slightly more than a third of contractors (34%), while the same percentage consider keeping up with new technologies to be a significant concern to their firm over the next three years.

Just over a quarter (26%) of contractors believe that project size and complexity will be a significant concern to their firm in the next three years. Only 24% of contractors said that they are significantly concerned about potential changes to NAFTA, while nearly a third (32%) gave the lowest possible score, indicating that they are not concerned at all about changes to NAFTA.

Concerns Over the Next 3 Years (percent indicating significant concern)[2]



[1] Percent giving a rating of 7 out of 7
[2] Percent giving a rating between 5-7 out of 7

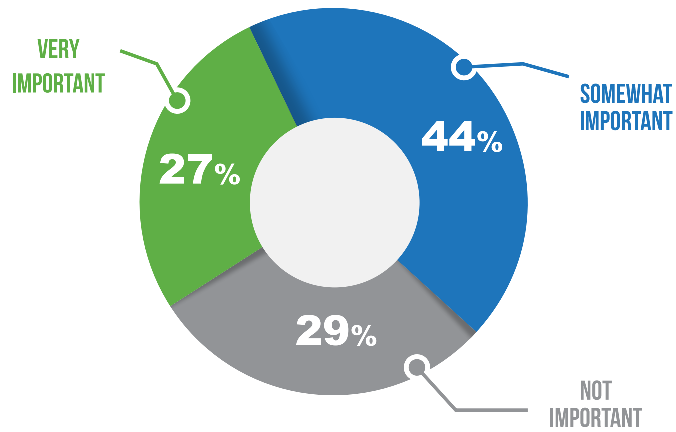
ONTARIO CONSTRUCTION INDUSTRY'S PERSPECTIVE ON NEW TECHNOLOGIES

In this year's survey, the OCS undertook a new initiative to find out what Ontario's ICI contractors think about the role of new technologies in the construction industry, identify which emerging technologies Ontario's contractors are using, and gauge the potential impact that contractors expect various new technologies will have on their business.

7 out of 10 Contractors Believe that New Technologies are Important to the Future of Their Business

Overall, 71% of contractors said that new technologies are important to the future of their business, with 27% indicating that adopting new technology is very important. Twenty-nine percent of contractors indicated that adopting new technologies is not important to their business's future.

Importance of Adopting New Technologies to Firm's Future

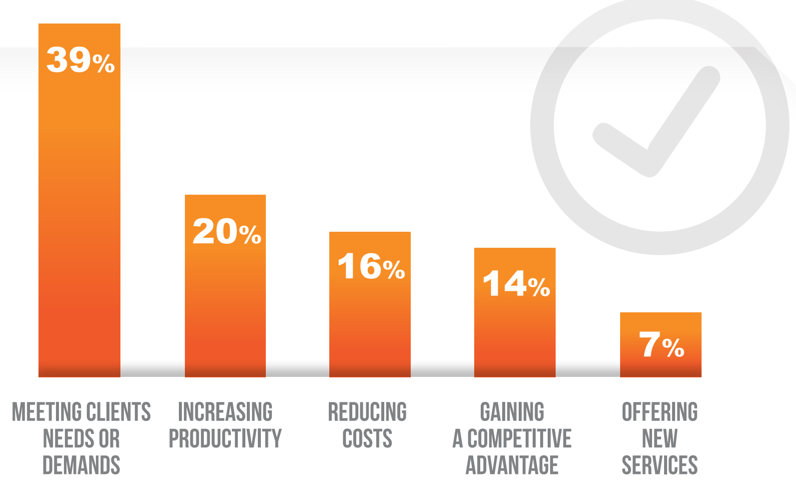


"Technology can help us improve every aspect of our company"
- Survey Respondent

Meeting Owner Expectations is the Biggest Driver of Adoption

Owners are a key driver of new technology adoption, with 39% of contractors indicating that meeting client needs or demands is their most significant motivator. Productivity and cost reduction are also important factors, with 20% of contractors indicating that increasing productivity is their most significant motivator, while 16% are primarily motivated by reducing costs. Fourteen percent of contractors said that gaining a competitive advantage motivates their firm more than other factors, and another 7% indicated that their primary motivation in adopting new technologies is to offer new services.

Most Significant Motivator to Adopting New Technologies

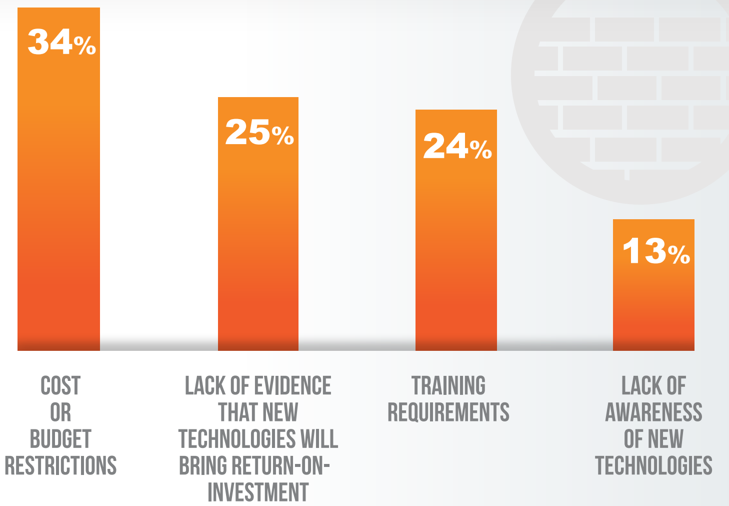


13% ONLY 13% OF CONTRACTORS HAVE A BUDGET DEDICATED TO NEW TECHNOLOGIES

Cost is the Greatest Barrier to Adoption of New Technologies

Cost is more of an impediment to the adoption of new technologies than other factors, with 34% of contractors indicating that cost or budget restrictions are the most significant barrier. A quarter (25%) of respondents said that the most significant barrier to their adoption of new technologies is a lack of evidence that the technology will bring a return-on-investment. Just under a quarter (24%) of contractors consider training requirements associated with new technologies to be the most significant barrier to adoption. Their firm's lack of awareness of new technologies is the most significant barrier to adoption for a further 13% of contractors.

Most Significant Barrier to Adopting New Technologies

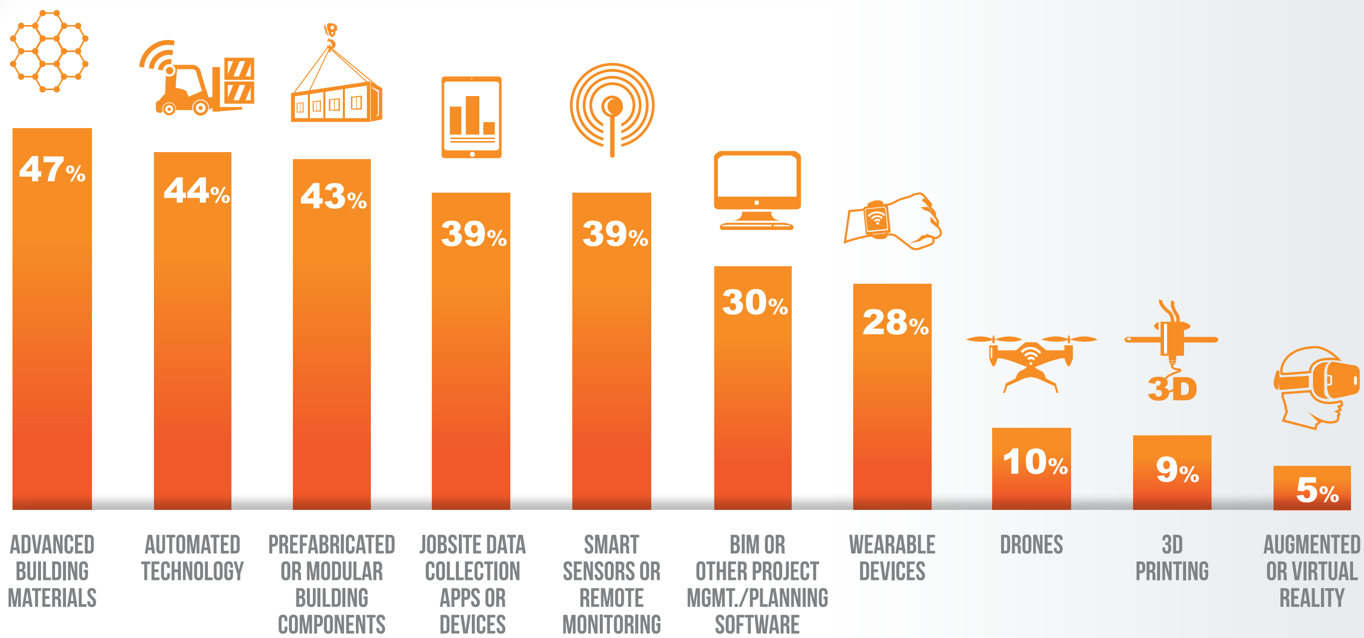


"If we don't adopt new technologies, customers won't be interested in hiring us"

- Survey Respondent

CONTRACTORS' EXPERIENCE WITH NEW TECHNOLOGIES, LIKELIHOOD OF ADOPTION, AND POTENTIAL IMPACT

Percentage of Firms That Have Used New Technologies



Building Materials and Components are Most Commonly Used New Technologies, Along with Automated Tech

In order to capture a clear picture of what contractors think about various new technologies, respondents were asked about their experience with ten categories of new technologies in the construction industry. They were then asked to rate the likelihood that they would use each technology in the next five years, and rate how much of an impact they expect each technology would have on their business.

The most commonly used new technologies are building components and materials, as well as automated technology. Nearly half (47%) of contractors have used advanced building materials, while 43% have used prefabricated or modular building components. Forty-four percent of contractors have experience with automated technology.

> **"Constraints that come with sharing information can have costly delays – You have to keep up with the technology that everyone is using"**
>
> - Survey Respondent

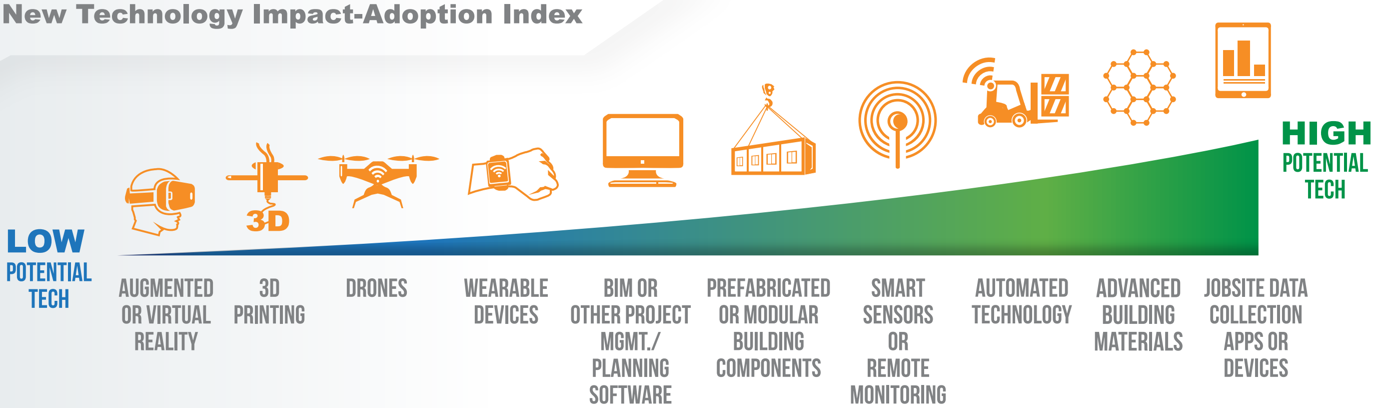
Drones, 3D Printing, Augmented/Virtual Reality are Least Commonly Used Technologies

Jobsite data collection apps or devices have been used by 39% of contractors, while the same percentage has used smart sensors or remote monitoring. Thirty percent of contractors indicated that they have experience with BIM or other project management or planning software, and 28% have used wearable devices. The least commonly used new technologies are drones (10%), 3D printing (9%), and augmented or virtual reality (5%)

Potential Impact and Likelihood of Adoption of New Technologies

The New Technology Impact-Adoption Index shows the overall potential of each new technology in Ontario's ICI construction industry by combining the likelihood of adoption with the expected impact. Contractors were asked to rate the likelihood that they would adopt each technology in the next five years, and rate how much of an impact they expect each technology would have on their business. Technologies on the high end of the index have a high likelihood of adoption and are expected to have a high impact. Technologies at the low end have a low likelihood of adoption and are expected to have a low impact.

New Technology Impact-Adoption Index



Overall, jobsite data collection apps and devices score the highest on the index, followed closely by advanced materials, and automated technologies, meaning that it's highly likely these categories of technologies will be both adopted, and have a high impact on contractors' businesses in the next five years. Other categories of technologies with high potential for adoption and impact are smart sensors and remote monitoring, prefabricated and modular building components, followed by BIM.

Wearable devices scored moderately on the index, meaning that it's moderately likely that wearable technology will be adopted by Ontario's construction industry in the next five years, and that the technology could have a moderate impact on contractors' businesses.

Augmented reality and virtual reality had the lowest score of the ten technologies that were evaluated. Despite the media notoriety of 3D printing and drones, both technologies had low scores on the index as well. Based on contractors' responses, it's unlikely that these technologies will have widespread adoption in Ontario's construction industry in the next five years, and these technologies are unlikely to have a significant impact on contractors' businesses.

ABOUT THE SURVEY

The OCS 2018 Contractor Survey is designed to gauge ICI contractors' expectations for their businesses and Ontario`s ICI construction industry in 2018. This year's survey also has a special focus on the role of new technologies in the construction industry. The survey was conducted via telephone with 500 ICI contractors from across Ontario in January-February 2018. The margin of error for a sample of 500 is +/-4.38%, 19 times out of 20. Seventy percent of the contractors surveyed were trade contractors and 26% were general contractors. The regional breakdown was as follows: Central Ontario 25%; GTA 31%; Eastern Ontario 17%; Southwestern Ontario 15%; Northern Ontario 11%.

ABOUT THE ONTARIO CONSTRUCTION SECRETARIAT

The Ontario Construction Secretariat (OCS) represents the collective interests of the unionized construction industry in Ontario's industrial, commercial and institutional construction sector. A joint labour-management organization, OCS is dedicated to enhancing Ontario's unionized ICI construction industry by developing relationships, facilitating dialogue and providing value-added research.
Our stakeholders include the twenty-five unionized construction trades and their contractor partners.

25 YEARS
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