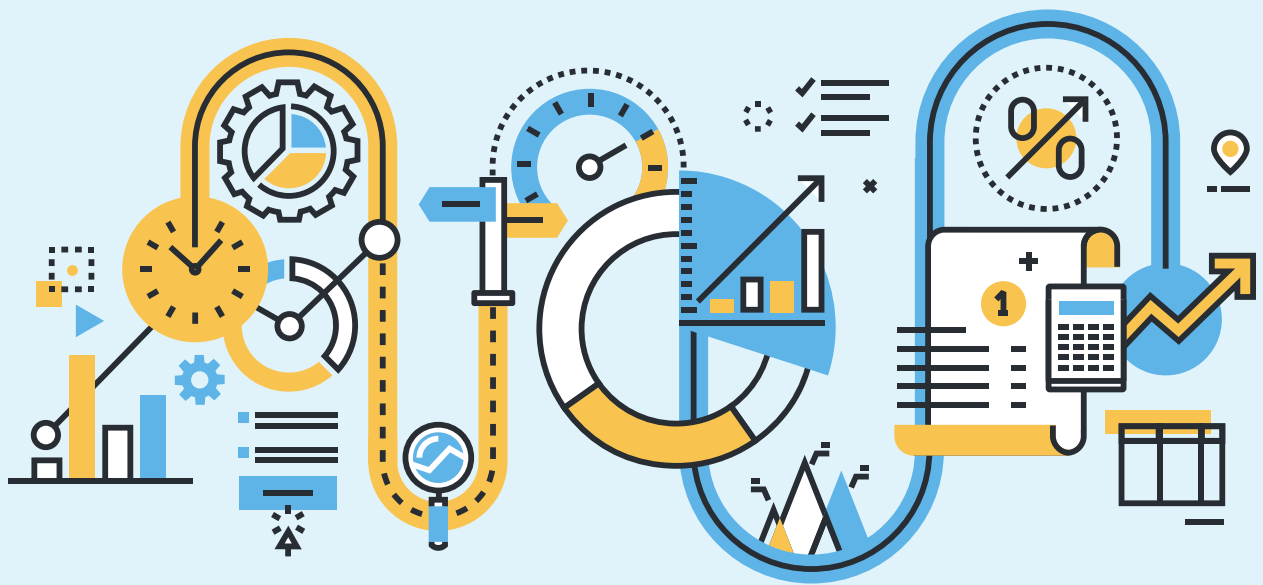# Data Analytics in Canada

## ACKNOWLEDGEMENTS

We gratefully acknowledge the efforts of our survey respondents and our forum participants who took valuable time away from their day jobs to participate in this research. We are particularly grateful to our research partner, SAP Canada, without whom this study would not have been possible.

Laura Pacheco
Vice President, Research
FEI Canada

# CONTENTS

# EXECUTIVE SUMMARY

Financial executives have long used spreadsheets as a tool for business analytics, and it seems many still remain reliant on their rows and columns. Many use spreadsheets successfully to grow their business and find spreadsheets an appropriate tool to reach good business decisions. However, using separate sheets for budgeting, forecasting, reporting and analysis can result in disparate data sets from areas such as finance, operations, sales and human resources. The work is manual and can drain time and resources.

The Canadian Financial Executives Research Foundation undertook research that suggests that despite the wide variety of data analytics platforms in existence, many organizations, including public companies and large companies, rely heavily on spreadsheets even if they are also using other tools such as business intelligence software or even accounting software. This is in part because spreadsheets offer the capability for custom work specific to their organizations that may not be offered by other platforms.

- 92% of all respondents report they still use spreadsheets, while 78% use accounting software, 40% use business intelligence software and 11% report using other tools
- 50% of organizations with revenues of more than $1 billion reported that spreadsheets remained their company's primary source of business analytics
- 70% of organizations with more than 500 employees still rely on spreadsheets as their number one data analysis tool, and this increases for medium-sized companies with 101-500 staff (75%) and small-sized companies with 100 or fewer employees (91%)

In general, respondents were confident about their organization's capabilities in the area of financial reporting, but small public companies are most likely to be struggling in this domain:

- 4% of respondents consider themselves to be industry leaders in financial reporting
- 87% of all respondents considered their organization's ability to produce financial reports as "average" or "above average"
- 9%, however, said their capabilities in this area were "below average" and, of particular concern, is that 9% of public companies reported this
  - The public companies that reported this were either small or medium-sized e.g. less than $100 million in revenue (16%) or $100 million to less than $1 billion (5%)
  - No companies with revenues of more than $1 billion rated their financial reporting capabilities as "below average" in financial reporting and, in fact, 70% rated themselves as above average, 25% average, and 5% viewed themselves as industry leaders

## METHODOLOGY

*Data analytics in Canada* was prepared by the Canadian Financial Executives Research Foundation (CFERF), the research arm of FEI Canada, and was sponsored by SAP Canada.

This study comprises the results of an online survey of Canadian financial executives which took place between October 16th – November 20th, 2015. The report encompasses the insights and opinions of 118 respondents to the online survey as well as November 12th, 2015 executive research roundtable, which was attended through a video conference linkage that connected 19 senior finance executives in Toronto, Calgary and Montreal.  For a full list of roundtable participants, please see *Appendix B*.

An interesting discussion developed through the roundtable event, with representatives from a wide spectrum of industry sectors sharing insights into the challenges facing senior financial executives as they attempt to expand their understanding of the opportunities available to their organizations to improve their ability to derive insights from data.

# DEMOGRAPHICS

This study encapsulates the responses from a broad cross-section of experienced financial executives from both public and private companies, and senior leaders from local to large multinational organizations.

The main respondents to the online survey of this research study held the title of: CFO (36%), Director of Finance (13%), Vice President of Finance (12%), and Controller (11%).  Half of the respondents were from privately held companies (52% of total) and 27% were from publicly traded companies, including subsidiaries of public companies. The balance of the respondents were from the not for profit sector (11%), Crown corporations (5%), government (3%) and other (2%).

The main industries represented were:
- Finance and insurance (18%)
- Manufacturing (18%)
- Professional, scientific and technical services (14%)
- Construction (5%)
- Education Services (5%)

For the purposes of this report, companies were grouped into three broad revenue groups:
- 49% were small companies (revenues under $100M)
- 34% were mid-sized companies ($100M - under $1B)
- 17% were large companies (Revenues of $1B or higher)

Results were also reviewed by number of employees and where there were differences between groups, the differences were noted:
- 41% were small companies (1-250 employees)
- 24% were mid-sized companies (251-1,000 employees)
- 35% were large companies (over 1,000 employees)

For more demographic information, please see **Appendix A.**

## TOOLS IN USE

The spreadsheet remains a near universal financial reporting and analytics tool, according to senior financial executives surveyed. Most organizations, according to survey respondents, are using a combination of tools, such as both spreadsheets and accounting software, or spreadsheets and BI software, in tandem, to meet a range of different needs, and to act as a check or confirmation of data from other parts of an enterprise.

CHART 1: What financial reporting and analytics tools are currently used in your organization? (Select all that apply)

| Tool | Percentage |
|------|-----------|
| Spreadsheets | 92% |
| Accounting software | 78% |
| Business Intelligence (BI) software | 40% |
| Other | 11% |
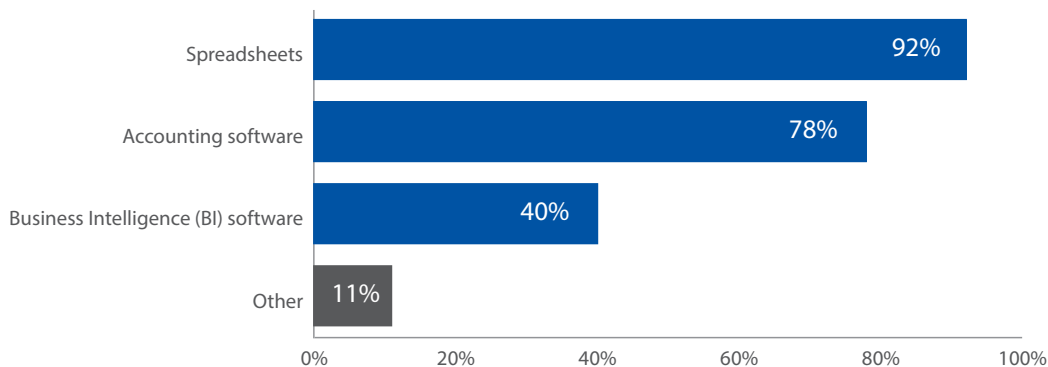
"Part of the reason for the redundancy at SAIT, is that reports are designed for the entire organization and may not accurately reflect your area," said Timothy Spielman, Academic Chair of SAIT Polytechnic in Calgary. "There is a lot of double checking that occurs, so it ties into trust or validation of the numbers."

At some organizations, the use of spreadsheets remains pervasive, even among very large enterprises. Gerard McInnis, Partner, Valuations, at EY, observed that one client has one million active spreadsheets tracking different sources of information within the organization. "We're seeing this is an issue with all of our clients, where they have to backstop their accounting and formal ERP systems with spreadsheets," he said. "There's a disproportionate amount of manual effort."

Of interest was that while a small minority of survey respondents – one in 10 – report that their companies no longer use spreadsheets as a financial reporting and analytics tool, of this subgroup, only one respondent said their current analytics completely met their needs.

# DATA ANALYTICS IN CANADA

4 tools

3%

1 tool
20%

3 tools
33%

2 tools
44%

Financial reporting and analytics tools used:

1 TOOL SELECTED
(20% OF TOTAL)

57%

26%

17%

■ Spreadsheets

■ Accounting software

■ Business Intelligence (BI) software
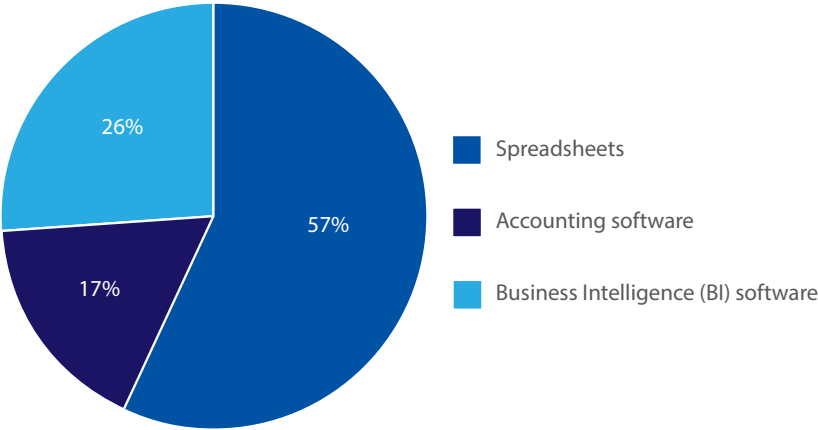
2 TOOLS SELECTED
(44%  OF TOTAL)

1%

12%

87%

■ Spreadsheets &
Accounting software

■ Spreadsheets & Business
Intelligence (BI) software

■ Spreadsheets & Other
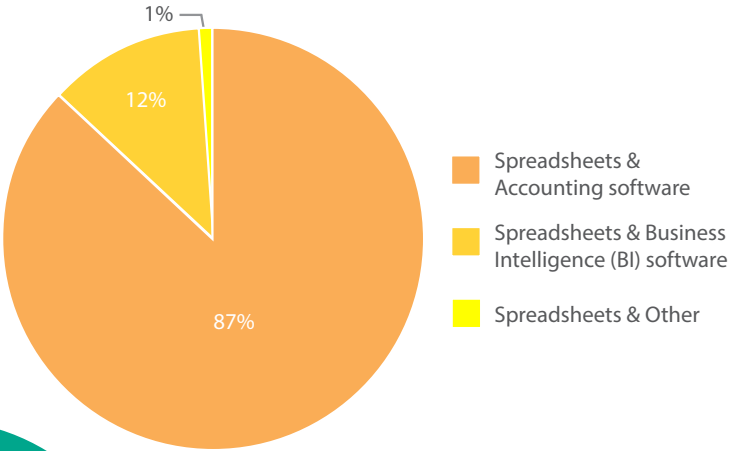
3 TOOLS SELECTED
(33% OF TOTAL)

79%

21%

■ Spreadsheets, Accounting software
& Business Intelligence (BI) software

■ Spreadsheets, Accounting
Software & Other
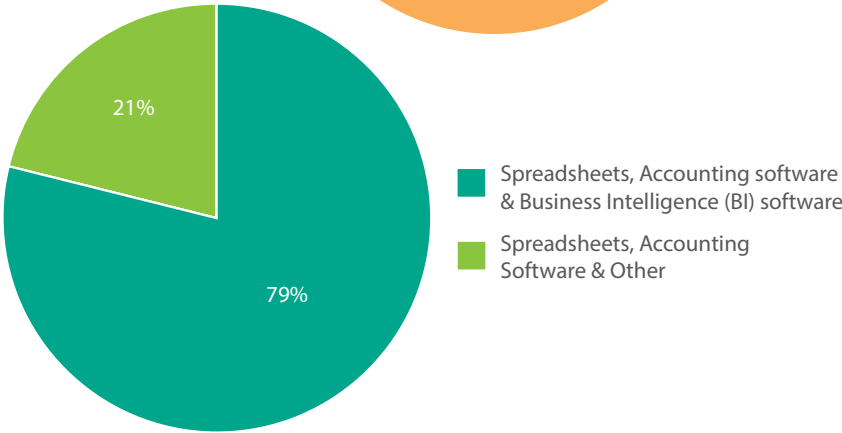
Of those companies using spreadsheets as one of their financial reporting and analytics tools:

- 78% of companies say spreadsheets like Excel are their organization's primary source of business analytics, with private companies most likely to say so (85%) compared to public companies (66%)
    - Size of company matters – 75% of large companies (with revenues of more than $1B) use business intelligence software, compared to 49% of medium sized companies and only 21% of small companies
    - Not surprising then, 87% of small companies said spreadsheets were their company's primary source of analytics, but the dependence on spreadsheets alone decreased as the size of companies increased (76% of medium-sized companies were mainly reliant on spreadsheets and 50% of organizations with revenues of more than $1B reported that spreadsheets remained their company's primary source of business analytics)
    - Similar results exist when reviewing the data by number of employees:  91% of respondents with less than 100 employees stated spreadsheets were their primary source of business analysis

> "As the global controller of a major bank that made a significant investment in a global general ledger, I had the enviable, or un-enviable task, of producing what the bank called 'one version of the truth', because there were, of course, a million versions of the truth to suit every business unit's purpose.
>
> I had to go to every business of the organization and unplug their existing spreadsheet reporting systems and then provide them with something else. By putting in place a shared service reporting system there was now only one version. No business was allowed to bring to the executive committee any financial report or presentation that was not generated out of the shared service reporting system. Nothing was used for any internal, external, or certification purpose that didn't come out of that system, which had everything defined, calculated, and presented in a consistent manner down to the lowest levels within the organizarion. This resulted in a level of consistency and transparency across the bank that had not previously existed."
>
> **Doug Chornoboy – Financial executive**

CHART 3: Are spreadsheets like Excel your organization's primary source of Business Analytics?

Prefer not to say
3%

No
19%

Yes
78%
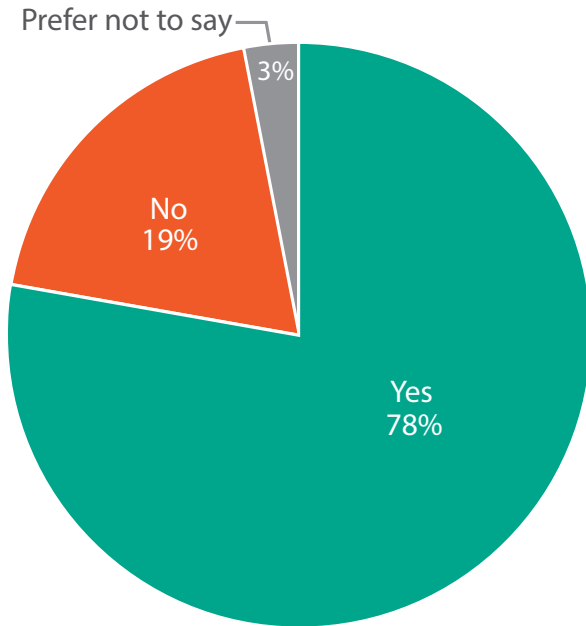
Although spreadsheets are useful, there are risks associated with using them, said Craig Smith, CFO, McAsphalt Industries: "You face the challenge of people extracting incorrect or inconsistent information and arriving at the wrong conclusions," he said. "We see that periodically, which is why standard reports extracted from the ERP database are preferred. These reports are tested and vetted and placed in a repository to be drawn on as required."

Another tool used by financial executives, beyond spreadsheets, is Structured Query Language (SQL), a language used to run queries in databases. "SQL reporting is virtually real time for us," said Smith, adding user requests and have created SQL queries to get more customized and useful information outside of their regular sources.

❝The information on a spreadsheet is often not timely enough. As a CFO, I want to be able to produce numbers that impact decisions and in a lot of cases, I don't think spreadsheets provide information when it is most valuable.❞

**Niall Cotter – CFO, Kingsdale Shareholder Services**

❝ The accounting or ERP system is designed specifically for controlling data throughout the organization, which is what they're designed to do. They're not very good at reporting out, providing analytical capabilities, which is why spreadsheets have become the norm. Every person in our organization has their own version of a spreadsheet. I don't know if the spreadsheet is updated, who has looked at it last and whether the data is current.❞

**John Forester – CFO, DBG Canada**

❝The biggest issue is managing all those analytics requests. IT has to manage all these requests from all across the organization. That's how you end up with spreadsheets, because it's easier for people to do it on a spreadsheet than to wait for IT to do it for you.❞

**Pierre Van Gheluwe – Treasurer, Yellow Pages**

## ADEQUACY OF TOOLS AND SATISFACTION

- 79% of all companies said their current financial reporting and analytics tools only somewhat met their needs, with only 18% indicating that their tools met their needs completely. A very small proportion (3%) stated it didn't meet their needs at all.
- 25% of large companies said their current tools completely met their needs, while medium-sized companies were less likely to report this (20%), and small companies were least likely to be completely satisfied with their current financial reporting and analytics tools (14%)

> " We get by with our reporting systems, with our business intelligence software, BI tools. It's enough for us to be comfortable. It's enough to run a business, but the challenge I have with it is the value of the decisions we make are not necessarily coming from all the databases we have. ... There's so much data out there and it changes every day, and it's extremely hard to compete and it's only going to get harder. "
>
> **Ryad Ali – Director of Finance and IT, Belmont Meats**

One CFO recalled a position at a previous organization that was still using QuickBooks, an accounting software program intended for small to medium-sized businesses, to manage a fast-growing, multi-million dollar public company comprised of dozens of legal entities. "It was an absolute nightmare to manage – let alone do analytics – to just manage the numbers to report and certify. It was just a horrific exercise on a quarterly basis to get numbers out."

CHART 4: To what extent does your current financial reporting and analytics tools meet your organization's needs?



| | Completely | Somewhat | Not at all |
|---|---|---|---|
| TOTAL | 18% | 79% | 3% |
| $1B and over | 25% | 75% | |
| $100M - $1B | 20% | 78% | 2% |
| Under $100M | 14% | 81% | 5% |
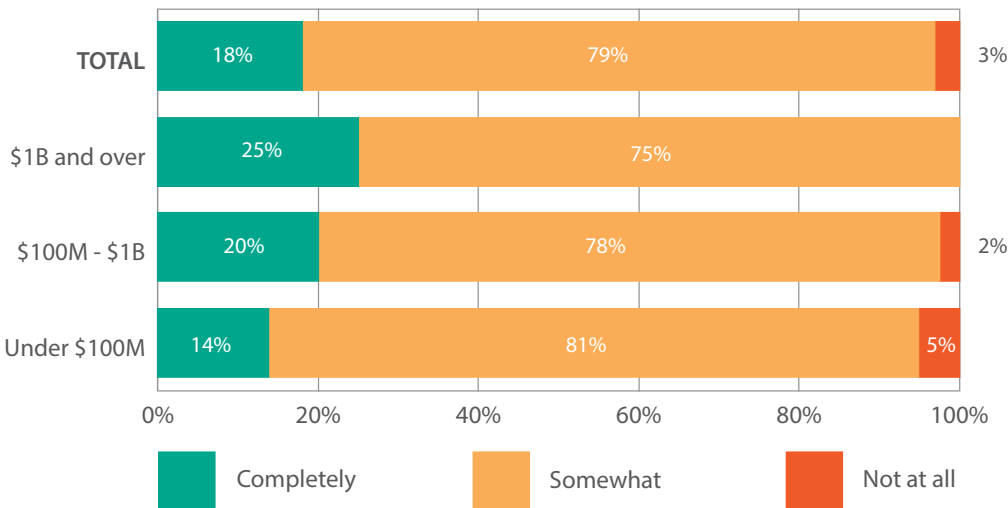
# DATA ANALYTICS CAPABILITIES

CHART 5: How would you describe your organization's ability to:
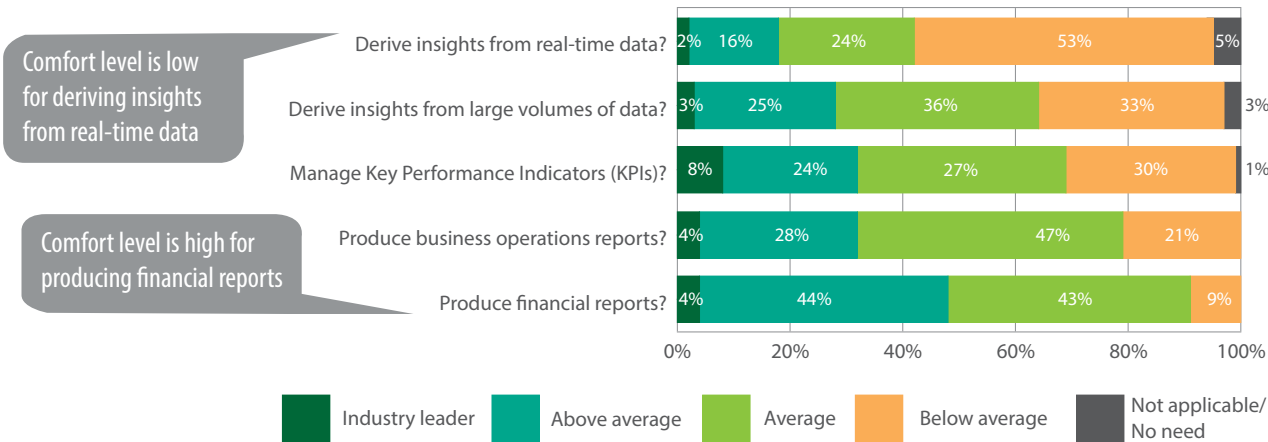
Comfort level is low for deriving insights from real-time data

Comfort level is high for producing financial reports

| | Industry leader | Above average | Average | Below average | Not applicable/No need |
|---|---|---|---|---|---|
| Derive insights from real-time data? | 2% | 16% | 24% | 53% | 5% |
| Derive insights from large volumes of data? | 3% | 25% | 36% | 33% | 3% |
| Manage Key Performance Indicators (KPIs)? | 8% | 24% | 27% | 30% | 1% |
| Produce business operations reports? | 4% | 28% | 47% | 21% | |
| Produce financial reports? | 4% | 44% | 43% | 9% | |

In general, respondents were confident about their organization's capabilities in the area of financial reporting:

- 44% of all respondents considered their organization's ability to produce financial reports as above average and a further 4% felt they were industry leaders
- 43% of all respondents described their organization's ability to produce financial reports as average
- 9% however said their capabilities in this area were below average
  - No companies with revenues of more than $1 billion said their financial reporting capabilities rated themselves as below average in financial reporting and, in fact, 70% rated themselves as above average, 25% as average, and 5% viewed themselves as industry leaders
  - Companies with revenues under $100 million were most likely to rate themselves as below average (16% of this group)

In contrast to financial reporting, a greater proportion of respondents rated themselves as below average when it came to their organization's ability to produce business operations reports (21% below average on business operations reports versus 9% on financial reporting). Overall, large companies with revenues above $1 billion had a rosier view of their ability to produce business operations reports, compared to medium-sized and small companies (large companies were most likely to rate themselves as an industry leader (10%) or above average (40%)):

- 47% of all companies described their organization's ability to produce business operations reports as average and 28% above average.
- 21% reported they were "below average" – and this segment of self-perceived underperformers was about the same proportion of respondents, one in five, whether they were public or private, or small/medium or large.

"You don't want to jump to the solution before figuring out the business problem. You really have to know what your Key Performance Indicators are, what your operational processes are, and what's really the questions that you want your analytics to answer. There is a certain distrust for IT involvement in making these connectivity processes happen as well. So in my mind, it absolutely has to be driven by the business. It really comes down to making sure you can measure what it is that you say you're going to measure."

**Gil Darnley – Project Manager, Corporate Governance, Ontario College of Trades**

"We were finding multiple spreadsheets, different locations, and trying to get information synthesized turned out to be more of a process problem because we had people duplicating efforts and information flow. There were gaps, so before anything was added we basically looked at how people worked and smoothed out the processes, then we threw technology in. We often found that, when dealing with IT directly, we were having issues of excessive level of detail before we ever got the business questions answered."

**Rolf Wenzel – CFO, Aligned Outcomes Corp.**

"I think a lot of different analytics tools/ innovations are starting to be more widely deployed into big business and, of course, the web (eg. google analytics). However, I think that we have just begun to deliver analytics opportunity into small and medium business. Companies are and will be building dynamic and integrated, customer focused sales, loyalty and other business process opportunities that are affordable for small and mid-sized business. Evolving mobile phones, tablets, eCommerce and secure networks are some of the critical elements in delivering rock solid dynamic solutions."

**Gordon Travis – CFO, Pin Payment Solutions Inc.**

"The reality of our database is that there are two factors that impact our ability to actually manage our KPIs as effectively as possible. One is cultural and the other is the granularity of the data that we need to make a good decision.

Although we capture a tremendous amount of data, the granularity of that data sometimes impedes our ability to make great choices or make good business decisions. On a summary basis, all of the data is collected and we're able to produce what we need. When it comes down to some of the more specific operational stuff and decisions, that's where the challenges are because it's all about granularity.

The other side of this is cultural. We have a completely enabled technology program and all of our learners use it. The first thought is faculty would be less able to utilize the technology, and what we find is most of our faculty are extremely good at this.  It has nothing to do with age. "

**Tim Spielman – SAIT Polytechnic**

"I deal with a range of clients from small start-up entrepreneurs, up to some fairly large scale organizations. I'd generally in terms of KPIs, they fall into one of two categories.

On the entrepreneurial side, the general feeling is, especially amongst the folks who have been there since day one . . . 'I have it in my head. I know exactly what my KPIs are, I know what my cash flow should be, my hours, my unit costs, they're all sitting up here. I have my QuickBooks system and it works fine, it tells me what's going on and I may not know for six weeks how much my revenue is, but I can tell based on the orders what it should be, so it's a confirmation. We can get by based on this, it's not telling me a whole lot but most of what I know about where I want to go, I have up here.'

The second group — in some of the family businesses, it's the second generation coming in. And they're looking for greater growth, they're looking for a more robust organization, but they feel that the dollars can better be spent someplace else. In a lot of cases, my time is spent in more of a selling job, telling them this is what you can have, this is the kind of information you can get, these are the kind of structures you can have and these are the kinds of pieces of information that you can put together to help make your business grow. And they say: 'Yeah, but I can still put the $200,000-$300,000, into marketing and get an advertising campaign and I can see the growth rate then.'

So it depends on who you're dealing with. The KPIs in some cases can be very, very basic. "

**Harold Hay – Principal, The Osborne Group**

CHART 6**:** Does your organization have a data governance strategy regarding Key Performance Indicators (KPIs)?

Don't know
9%

Yes
33%

No
58%
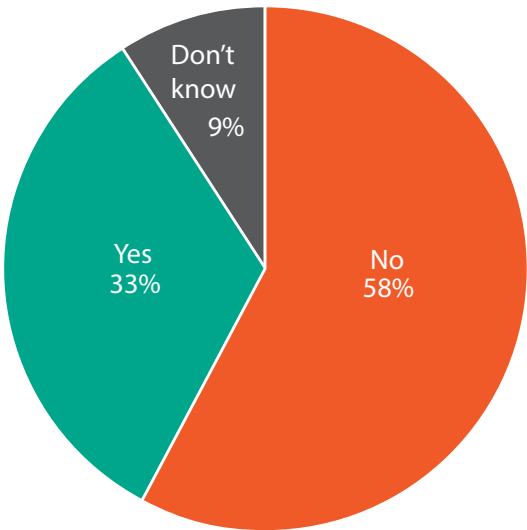
Organizations were somewhat less likely to feel they were above average in managing **key performance indicators (KPIs)**. Greater polarization occurred when asked about KPIs. Overall, 8% felt they were industry leaders (versus 4% on financial reporting), yet 30% felt below average in this area.

Only one-third of respondents have a data governance strategy regarding KPIs. Typically, the goals of data governance are to enhance the quality of data, eliminate or reduce inconsistencies, allow for accessibility across the organization and to help a company make strategic decisions to attain a competitive advantage.

"It was a recognized weakness in our organization that we have data from a variety of sources, both internal and external to the organization, especially around electrical incidents. While we are able to use all of this data, we do not have a data strategy that considers an efficient way to do that. We are lacking a defined governance structure for data, so we hired a data architect and are in the process of completing that work now. It was highlighted by our Audit Committee as a governance gap, we highlighted it to them, they highlighted it to us, so it was a mutual understanding. So, we're in hurry up mode."

**Lesley Gallinger – VP, Corporate Services & CFO, Electrical Safety Authority**

Those with a data governance strategy reported that these strategies ranged from limited to highly defined (see chart).

**Chart 7: How would you describe your organization's data governance strategy?**

| Category | Value |
|---|---|
| Limited governance and departmental enterpriseinformation management strategy and vision, and departmental KPI management | 32% |
| An enterprise-wide data governance system that is defined and implemented | 10% |
| Enterprise Information Management strategy and vision sponsored by the CEO, and Performance Management Excellence Centres in place. | 10% |
| Defined governance and departmental enterprise information management strategy and vision, definition of business intelligence competency centre and overall KPI management strategy | 34% |
| Don't know | 10% |
| Prefer not to answer | 4% |

When it came to deriving insights from large volumes of data, many organizations identified room for improvement. For instance:

- 33% described their organizations as below average in deriving insights from large volumes of data
- Large companies (revenues over $1 billion) were more likely to see themselves as industry leaders (10%) compared to overall (average of 2%)

When it came to deriving insights from real-time data, more than half of all organizations (52%) felt they were below average, with higher results in the mid-sized company grouping (60%). Interestingly, a higher proportion of smaller companies (revenue under $100 million) felt they didn't need real-time data or this wasn't applicable to them (10%) when compared to the total group of respondents (6% overall).

> "My feeling on spreadsheets is that they're very static. In a BI report I can almost flick over all the various areas that I want to see. If I want to view metrics by campaign, by person, by graph, or whatever, I can do it without having to go to separate tabs; it's all there, it's real time and I find that very powerful."
>
> **Niall Cotter – CFO, Kingsdale Shareholder Services**

## ANALYTICS IMPROVEMENT PRIORITIES

Profitability analysis and management is the number one area most selected when asked what the area to target for improvement should be.

- 44% of all survey respondents say profitability analysis and management should be a top improvement priority area, and public companies were more likely to say this (57%)
- 25% of all respondents say budgeting and planning was the number one area to target, this was especially felt by those in not for profits (38%)
- 8% of all respondents identified financial consolidation as a priority, but more so for survey respondents from medium ($100 million - $1 billion in revenue) (14%) and large-size companies (revenues of $1B or higher) (10%)
- Risk management and risk assessment, each, represented 5% and weren't identified as top priorities for most organizations but, those who did identify it as such were more likely to be large companies with revenues of more than $1 billion (10% of large companies)

One financial executive observed that the organization's statutory reporting works well, and scorekeeping at a summary level is successful, but the greatest challenge arises around analytics, due to the lack of data integrity of the disparate databases – segments don't equal each other. "If you can't do analytics that equal the financial statements, it doesn't matter how many decisions you come up with from that data, nobody's going to agree with you," the executive said.

CHART 8: If you could improve only one aspect of financial reporting and analytics in your organization, what would it be?

- Profitability analysis and management — 44%
- Budgeting and planning — 25%
- Financial consolidation — 8%
- Risk assessment — 5%
- Mobile business applications — 4%
- Risk management — 4%
- Governance and compliance — 4%
- Other — 6%

(x-axis: 0% 10% 20% 30% 40% 50%)
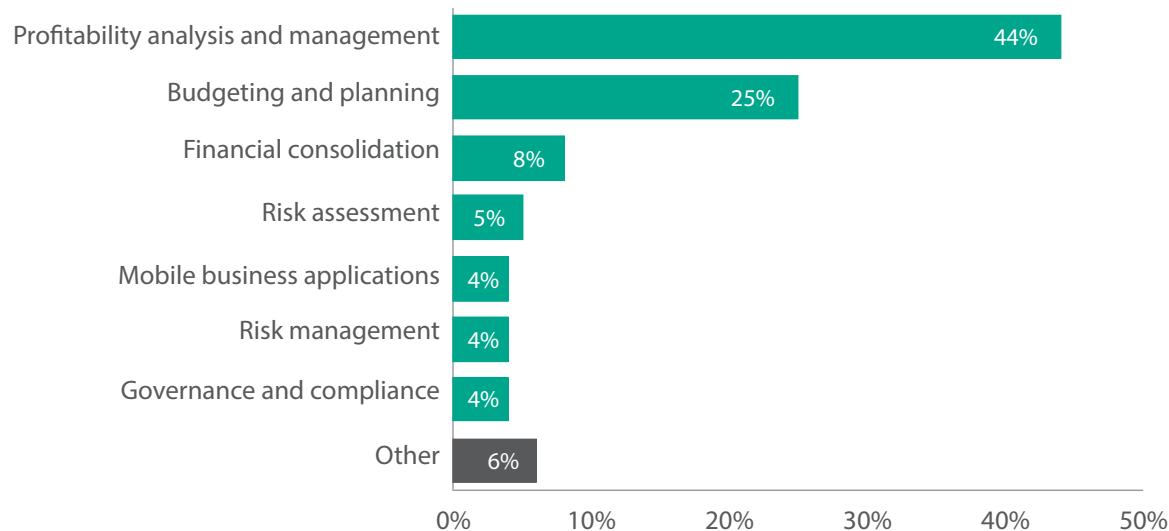
"There's always room for improvement and there always will be. We struggle with the same things -- using too much Excel because it's basically flexible and everybody knows it, so it's the comfort zone. We get by, but it's nowhere where we should be. The goal should be to use the organization's data and intellectual capital in its analytics."

**Ryad Ali – Director of Finance and IT, Belmont Meats**

In terms of IT improvement, the most desired tweak identified by surveyed Canadian Senior Financial Executives was in the area of advanced analytics:
- 27% of all respondents would like to see more advanced analytics
- 20% would like an easier reporting process
- 17% would want cross-functional integration, if only one area could be improved and
- 11% desire a greater ability to customize their data (respondents from small (12%) and medium organizations (11%) had the most desire for customization, while large companies had less need for this with only 5% stating they wanted customization, perhaps because they already had these customized features

> " We're not just responsible for analytics for the financial side, as it's imperative not to ignore other departments. For instance, in our marketing group, if they are provided a couple of reports to improve the interface with customers, it tends to generate new ideas to tap into additional information. Once you start down a road by providing incremental, useful information for a user group, it seems to foster new ideas from that group. I am challenging our IT department to create customized, meaningful, easy to use mobile applications. I want to see these on the phones of the marketing group this year. "
>
> **Craig Smith – CFO, McAsphalt Industries**

CHART 9: If your IT department could improve only one aspect of financial reporting and analytics, what would it be?

| Category | % |
|---|---|
| More advanced analytics | 27% |
| Easier reporting process | 20% |
| Cross-functional integration | 17% |
| Greater customization ability | 11% |
| More flexibility | 8% |
| Faster reporting | 7% |
| Greater data capacity | 4% |
| Lower cost | 3% |
| Other | 3% |
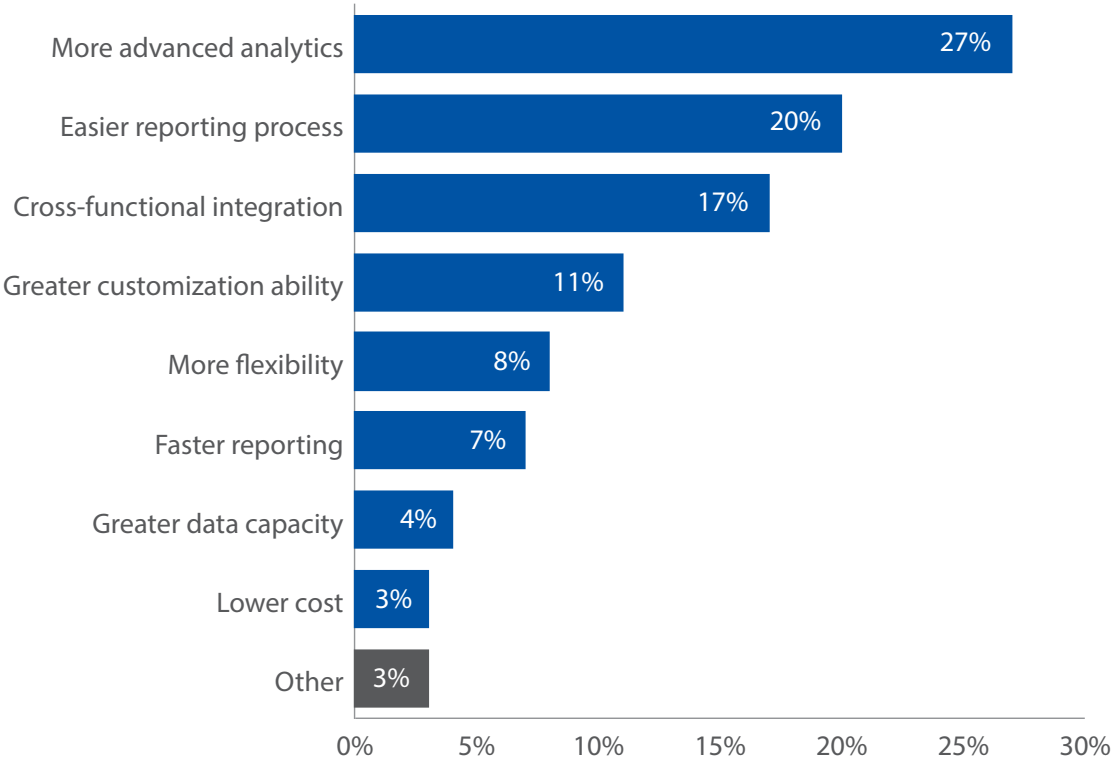
> " The question is . . . can we move away from Excel into something which is more disciplined, more defined, a tool that everybody understands and is used consistently, as opposed to having each person come in a room with their own Excel spreadsheet. There is no consistent format and everybody has their own way of looking at things. It makes it hard to explain and communicate issues to a broader audience. "
>
> **John Forester – CFO, DBG Canada**

> " Don't forget the human element. So what you really try to do is incent user demand within your organization, create a culture driven by human nature.  Fact-based decisions and analytics-based support for decision, and then put pressure inside the organization on creating the right technical environment. So look at it from the user pushing it back up through to technology. Historically, most working data analytics to date has been done through the IT department as an IT initiative. "
>
> **Gerard McInnis – EY**

## TIME TO INVEST?

Most companies anticipate investing in improving financial reporting and analytics this year or next, indicating an ongoing commitment to re-investing in IT:

- 29% of all organizations say this year
- 19% say in one year
- 14% say in two years
- 8% said in three years or more

CHART 10: When do you anticipate your organization will invest in improving its financial reporting and analytics infrastructure?

Will depend on prioritization of overall business initiatives and activities

Our company invests in IT on an ongoing basis

They have attempted a number of times to update the BW data cube feeds, however with the next business change they become mis-aligned from financials again. The absence of multiple years of data makes trend analysis difficult.

Don't know 21%

This year 29%

Prefer not to answer 3%

Will not invest 7%

In one year 19%

In three years or more 8%

In two years 14%

Planning data strategy next year for implementation the year after

"Corporations have a limited amount of financial resources. If it doesn't generate higher revenues or sales, if it doesn't show clear savings, it's always – we'll do it next year. Every corporation is managing its cash, so all have that issue in terms of where are you going to put your limited amount of cash."

**Pierre Van Gheluwe – Treasurer, Yellow Media Inc.**

## APPROACH TO BUSINESS REPORTING

Not surprisingly, the larger the company, the more likely the organization is to have the resources to devote finance teams to work directly with information technology professionals to derive insights from data:

- 15% of all respondents have a dedicated team of analysts working with IT, and at large companies this proportion rises to 35%
- 45% of all survey respondents said they have a dedicated team of analysts providing ad hoc reporting capabilities to business users (59% of medium-sized companies)
- Most respondents who had a self-service analytics platform that enables business users to undertake their own ad hoc requests reported that the platform is "somewhat well adopted". Half of mid-sized companies stated it was well adopted

One CFO suggested finance professionals may turn to spreadsheets to do data analysis because it may be faster than approaching IT to create a report. "Everyone's got a one-off report they have to use infrequently and in these circumstances, Excel is suitable," observed Craig Smith, CFO of McAsphalt Industries.

> "Once IT delivers that report, they're off the hook from the analysis in my opinion – but I would be interested in more specific business intelligence reports that come with top line insights derived from it, the same way Excel can validate numbers and actions."
>
> **Derek Petridis – CFO, Shikatani Lacroix**

"IT configures business reporting systems and user experience. Non-tech business people must then use other systems, such as Excel, in order to access the information they need to know in order to do their jobs. Why can't IT directly deliver the information that non-tech business people need, when they need it?"

**Gil Darnley – Project Manager, Corporate Governance, Ontario College of Trades**

"To create your own self-serve reports, you have to be well-trained. You have to know the software and how to use and work the software. Basically, you need to have some kind of training with the system to be able to self-serve. As a result, not many people can use the self-serve option because not everybody is trained to the same level. For example, in our company, it's just the accounting team that is trained, and for all the rest, we have to create reports for them. So there are certain limitations."

**Elena Lokchina – CFO, Architects Alliance**

"As we have a team that's dedicated to data analytics, the business knows to go to them if they want specific data to be analyzed to understand what's going on in a certain industry or certain segment or certain geography. We also have standard financial reports that go out every month with our results."

**Winnie Leung – Chief Financial Officer, Moneris Solutions Corporation**

# DATA ANALYTICS IN CANADA

| Response | Percentage |
|---|---|
| All reporting is executed by a dedicated team of analysts that work closely with IT | 15% |
| Dedicated team of analysts provide ad hoc reporting capabilities to business users, while standard reports are published for general consumption. | 45% |
| We have a self-service analytics platform that enables business users to undertake their own ad hoc requests | 10% |
| None of the above | 26% |
| Don't know | 2% |
| Prefer not to answer | 2% |

- 33% Yes, the platform is well adopted.
- 20% No, the platform is not well-adopted.
- 44% The platform is somewhat well-adopted

**Don't know**
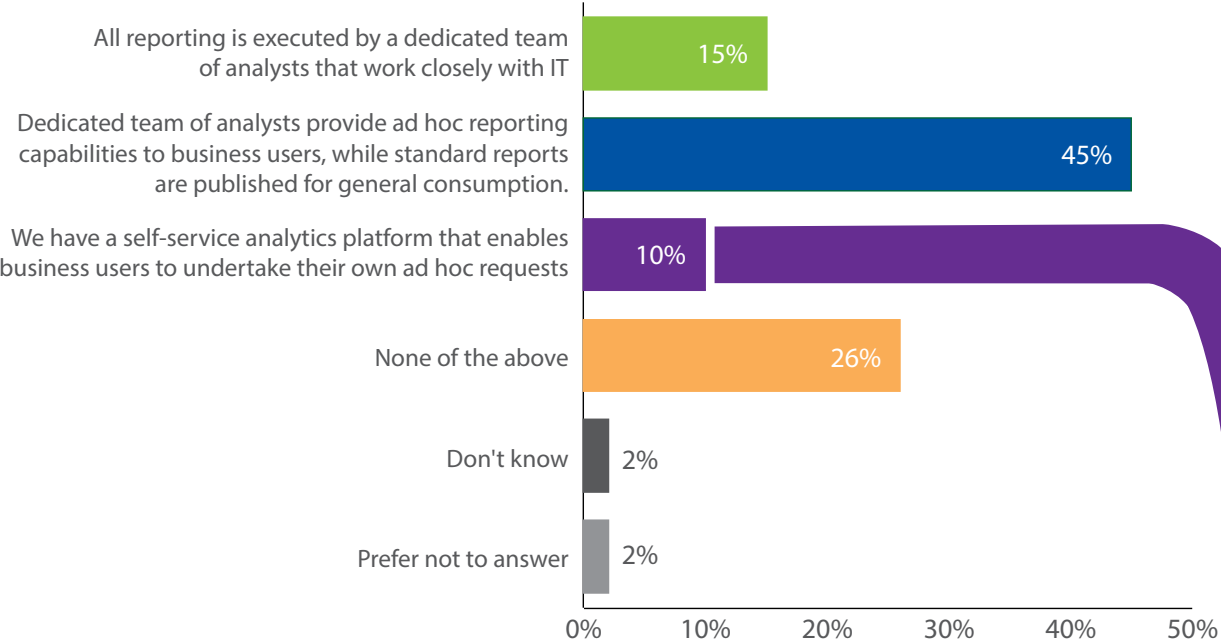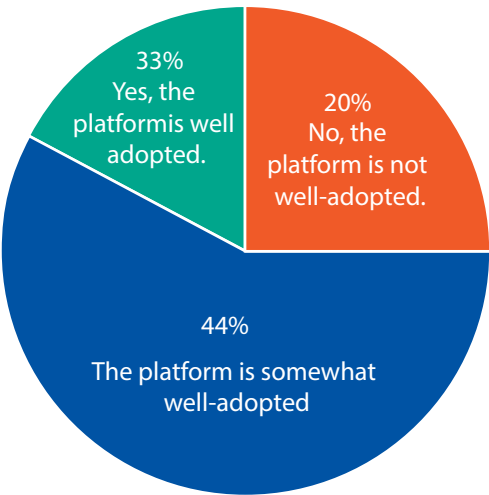
**CHART 13: Does your organization leverage real-time reporting?**

Yes
31%

No
65%

4%
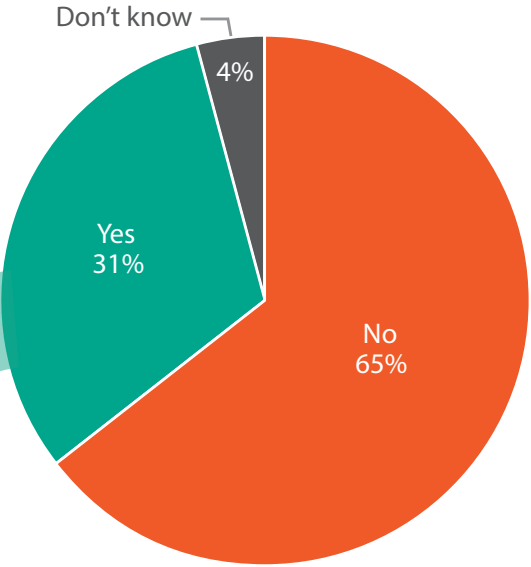
Most survey respondents (65%) said they currently do not leverage real time reporting. Of those that do (31%), only a minority said there was a clear differentiation between real time and near time reporting. [Real-time reporting is defined as near to zero latency (or lag time) with access to information whenever it is required]

**CHART 14: Which statement best describes your organization's ability to leverage real-time reporting?**

| Statement | % |
|---|---|
| Real-time predictive and structured insight into own and external data. Instant business insight is directly related to business value. | 14% |
| Limited differentiation of near-time and real-time analysis. Real-time supported only for analytical applications. | 24% |
| Isolated reporting silos in the organization on internal data, only reacting reporting with long reconciliation cycles. | 8% |
| Clear differentiation of near-time and real-time analysis. Real-time only for business critical processes on analytics. | 35% |
| Prefer not to answer | 8% |
| None of the above | 11% |

0%  5%  10%  15%  20%  25%  30%  35%

Large companies were least likely to leverage real-time reporting (80%) whereas mid-sized companies were most likely to leverage it (37% of respondents).

"One of our key competitive advantages as a company is the speed with which we obtain and use information to make good decisions."

**Niall Cotter – CFO, Kingsdale Shareholder Services**

CHART 15: Does your organization derive insight from cross-functional areas? (e.g. drawing information from functions outside finance)

Don't know — 2%

No
23%

Yes
75%
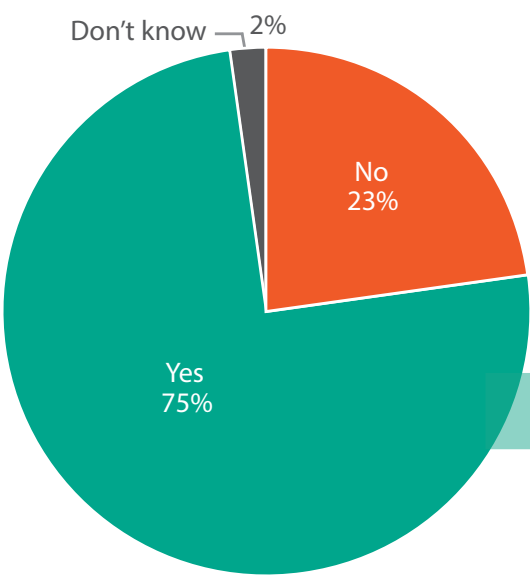
75% of survey respondents said their organization derives insight from cross-functional areas  (eg. drawing information from functions outside of finance). The major challenge associated with this practice was the need for common data definitions, so that all departments are using the same terms to refer to the same data sets.

**CHART 16:** Which statement best describes your organization's ability to derive insight from cross-functional areas?

| Response | Percentage |
|---|---|
| Insight is drawn from core operations and finance. Decreasing manual steps and people doing data transfers, limited building of data services started | 39% |
| Insight is drawn from finance primarily, core operations is periodically included. High number of manual steps are involved for transferring data, limited batch processing. Data transfer is done based on simple techniques. | 25% |
| Insight is derived from all core operations (including customer). Data services are actively managed and documentation allowed from multiple sources. Integrated data services are built. Service Level Agreements (SLAs) defined by IT, very high degree of automation. Extended Business Process Management (BPM). | 13% |
| Insights are derived based on information across all functions and external data (e.g. premium sources, social, etc.) | 7% |
| Extended Enterprise Architecure with real-time information allowing for insight to be derived from across all functions | 2% |
| Prefer not to answer | 3% |
| None of the above | 8% |
| Don't know | 3% |

Of those who said they draw insight from cross-functional areas:
- 39% say insight is drawn from core operations and finance
- 25% say insight is drawn primarily from finance, with information from core operations periodically included. However, a high number of manual steps are involved in transferring data
- 13% said insight is drawn from all core operations including the customer (this was most likely to happen at the largest companies, 29% of which reported this, compared to only 13% of medium-sized companies and 9% of small)

" The standardization of data and having everybody reporting the same number for sales, net sales, would be lovely. With this, you could have cross-functional conversations about the numbers that are pulled by each different group from the self-service model. "

**Financial executive**

" We look a lot at benchmarking. We also look at benchmarking against market. Salary compensation and benefits as a percent of revenue to make sure that we're in line. Real attrition, like turnover; basically not the one created by the company but people leaving to determine what are we doing wrong or what are we doing right. "

**Ryad Ali – Director of Finance and IT, Belmont Meats**

**"We had data with different definitions used by different groups"**
**A CASE STUDY: THE CHALLENGES OF CROSS FUNCTIONAL DATA ANALYTICS:**

"In order to tell the story from a financial point of view, you have to get data and analytics from each part of the business, whether it be from our credit department to know what's going on, in terms of any losses from merchants, fraud or anything. And also from our call centre, because that would drive certain financial results.

We had data with different definitions used by different groups; for the definition of what a merchant is, finance used one definition and the sales organization used something different.   So, when we looked at a solution to help us with data analytics, we got together a cross-functional team to define what "that" is, whether someone is in a call centre, or sales, or finance. That helped generate one big analysis tool that everyone can access to get that data. So, we're now all talking the same language.

I always tell my team we don't necessarily have to control everything, as long as we have the data, but we have to understand how the data was captured so that we can tell the story correctly. We use cross-functional data all the time. It's just understanding it and making sure that it aligns with our financial story.
We'll sit down with our businesses to understand what they are analyzing, how they analyze, and what story they are seeing. We compare that to our financial results, and ask "does that make sense"? If there are gaps, then we have to follow up further to say what exactly happened and get to the bottom of it.

From a financial point of view, we're not just focused on the debits and credits, but what's the story behind the numbers."

**Winnie Leung – Chief Financial Officer, Moneris Solutions Corporation**

"In Calgary, you often have a number of oil and gas companies which acquired other companies and so it's not unheard of for them to have 20 to 50 different databases of geological, geometric and other drilling and wellsite information. They then need to pull reports from these data sources on a consolidated basis to be able to make strategic and tactical decisions. Some of the self-service analytics tools I've seen actually knit together all those databases when integrated correctly. In conjunction with this more internal data management part, data sources external to the company can also be integrated.  The end result can be a decision making dashboard that integrates internal and external data, structured and non-structured data and historical and real-time data on a true self-service basis to be able to access all  the information that they need or want."

**Mark Deller – President and VP Finance, Davison Mattice Inc.**

> **"** The challenge we have is how do we get all of those tools and all the diverse data sources thinking together to give us those insights, because spreadsheets are not very good at that. So you're drawing from call centre software, CRM, performance management software which we use for financial forecasting .... There is great insight in all of those tools. We just can't get them to work together and Excel seems to be the pseudo toolset for that, but it's not very good at that. In terms of the control environment, we're not public but we still do certify, and so I use a spreadsheet to figure out whether I can certify all the things that we are required to certify against. **"**

**Lesley Gallinger – VP, Corporate Services & CFO, Electrical Safety Authority**

> **"** It's interesting to hear the challenges people have with different sources of data. In other words, information silos.  I assume that most, if not all, companies would be operating on a single database, simply to benefit from the inherent efficiencies.
>
> At McAsphalt, our manufacturing operations are the backbone of the data flow and it's all done in real time. For example, a raw material will be received at a plant, the transaction is recorded in the ERP system at the plant and all that information is instantly available to all interested parties. A/P simply checks the pricing and, in a matter of minutes, the obligation to the vendor is established and ready for payment. To put it all in perspective, although we are the largest global asphalt customer for a major oil company, only one person at McAsphalt is required to oversee that account.  In fact, that company is just one of dozens of major oil companies and chemical manufacturers that particular person is required to administer. The efficiency of the process reverts back to managing the information flow in real time in a single database environment.
>
> Sales activity is also managed in an equally efficient manner. A customer sale is initiated as soon as their truck passes over the plant weigh scale. Once the truck crosses the scale the second time, fully loaded on its way out, that information is updated in real time for all interested parties.  In most cases, a pricing matrix creates an invoice automatically and the customer can be invoiced the same day, if desired.  In the absence of this real time, single database environment, these efficiencies would not be realizable. I think it is obvious that real time reporting in a single database environment allows for the most efficient use of staff resources and permits the most timely decision making by management. **"**

**Craig Smith – CFO, McAsphalt Industries**

# CONCLUSION

Financial executives have long used spreadsheets as their primary tool to plan, forecast, and run scenarios, as spreadsheets offer the ability to quickly analyze a specific data set in a particular way. Many financial executives successfully use spreadsheets to make good business decisions that foster corporate growth, and this isn't likely to change soon.

That said, the research undertaken for this study indicates that many organizations, including large, public enterprises with high revenues, continue to be heavily dependent on disparate data sets in spreadsheet format, perhaps unnecessarily, given the availability of the many data analytics platforms in existence.

The demands of business are extensive and growing, and analytics can help with tasks such as forecasting performance, market research, profit margin analysis, risk assessment and management, operations and product pricing.

Given that CFOs are already masters of spreadsheets, as organizations move towards the integration of data with business intelligence and ERP systems, it makes sense that the CFO would oversee this evolution. Further, the benefit to the CFO of taking ownership of analytics is that it enhances the strategic role of financial executives in the organization's growth, whether it's with their board of directors, their CEO, fellow executives and copmany staff or with their clients.

For a data analytics program to be effective however, financial executives surveyed cautioned that there must be a "single source of truth" – in other words, data must be defined and consistent across an organization. A major challenge identified around analytics, due to the lack of data integrity between disparate databases, was that segments don't equal each other. It was also suggested that data analytics could offer more insight by integrating information from outside the organization, including industry benchmarks.

By providing reliable, real-time information drawn  from cross-functional areas, the financial executive using data analytics will become invaluable to other departments and a key driver of revenue.
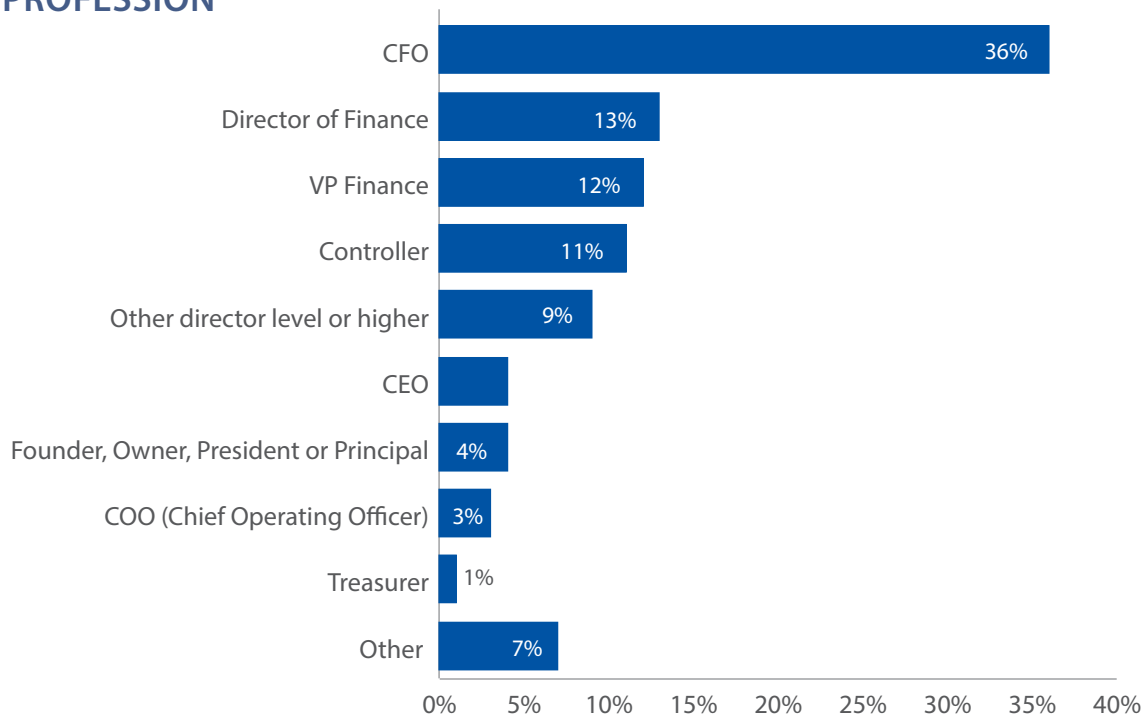
Rather than simply reporting on past results, the CFO and the finance team, with support from IT and other departments, can help answer immediate, pressing sales and operations questions on future pricing, inventory and supply chain decisions, and even continue to enhance the role of the CFO as a strategic member of the C-suite. It should be emphasized that having outstanding IT tools such as predictive analytics and real-time reporting is only half the issue. Businesses require personnel capable of interpreting the data and leaders able to clearly define the data requirements and again, this is where the senior financial executive can add value.  One way the CFO can spark innovation in a company is by providing users in various areas of the organization – from operations to sales and marketing – reliable, consistent metrics offering insights that they can build on.

> "I think it's important to keep up to date on new technologies that provide information to decision makers in new ways at previously unimaginable speeds as it can lead to better approaches to information delivery. For instance, the sales team may not have the patience to run reports or analytics that take two minutes, but if they can run them in a few seconds on multiple devices, that's a whole different matter."
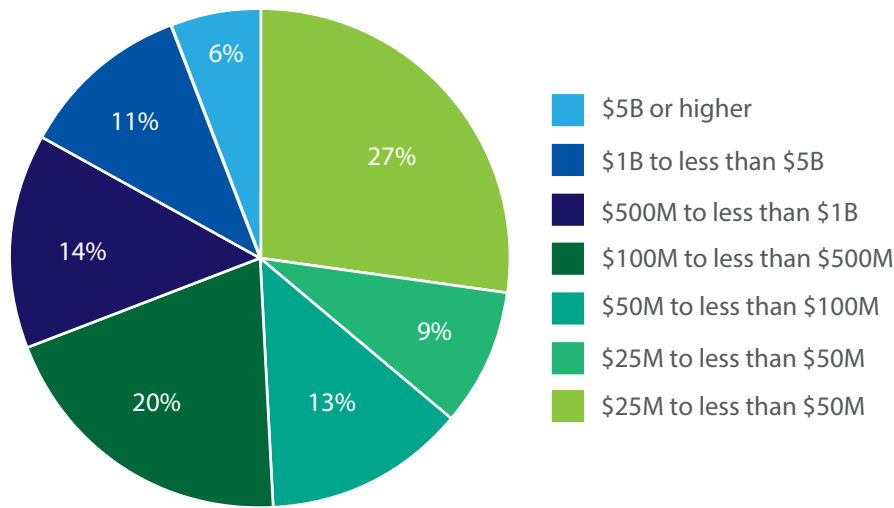>
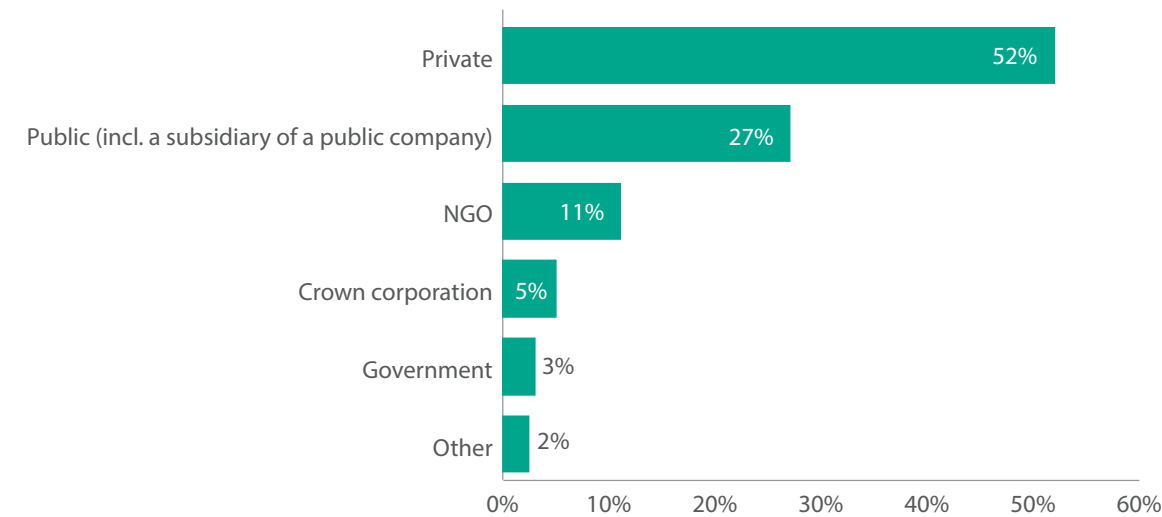> **Niall Cotter –  CFO, Kingsdale Shareholder Services**
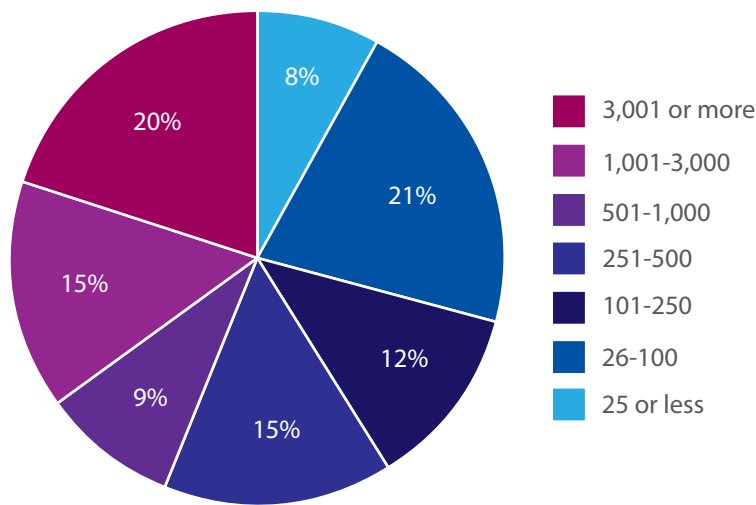
# APPENDIX A – DEMOGRAPHICS

## PROFESSION

| Profession | % |
|---|---|
| CFO | 36% |
| Director of Finance | 13% |
| VP Finance | 12% |
| Controller | 11% |
| Other director level or higher | 9% |
| CEO | 4% |
| Founder, Owner, President or Principal | 4% |
| COO (Chief Operating Officer) | 3% |
| Treasurer | 1% |
| Other | 7% |

## ANNUAL REVENUE

- $5B or higher — 6%
- $1B to less than $5B — 11%
- $500M to less than $1B — 14%
- $100M to less than $500M — 20%
- $50M to less than $100M — 13%
- $25M to less than $50M — 9%
- $25M to less than $50M — 27%

## CORPORATE STRUCTURE

| Category | Percentage |
|---|---|
| Private | 52% |
| Public (incl. a subsidiary of a public company) | 27% |
| NGO | 11% |
| Crown corporation | 5% |
| Government | 3% |
| Other | 2% |

## NUMBER OF EMPLOYEES

| Category | Percentage |
|---|---|
| 3,001 or more | 20% |
| 1,001-3,000 | 15% |
| 501-1,000 | 9% |
| 251-500 | 15% |
| 101-250 | 12% |
| 26-100 | 21% |
| 25 or less | 8% |

## PRIMARY INDUSTRY

| Industry | Percentage |
|---|---|
| Finance and insurance | 18% |
| Manufacturing | 18% |
| Professional, scientific and technical services | 14% |
| Educational services | 5% |
| Construction | 5% |
| Health care and social assistance | 4% |
| Retail trade | 3% |
| Wholesale trade | 3% |
| Management of companies and enterprises | 3% |
| Accommodation and food services | 3% |
| Real estate and rental and leasing | 3% |
| Public Administration | 3% |
| Transportation and warehousing | 3% |
| Utilities | 3% |
| Mining, quarrying and oil and gas extraction | 3% |
| Information and cultural activities | 2% |
| Other Services (except Public Administration) | 1% |
| Agriculture, forestry, fishing and hunting | 1% |
| Arts, entertainment and recreation | 1% |
| Administrative and Support and Waste Management and Remediation Services | 1% |
| Other | 3% |

0%     5%     10%     15%     20%

## APPENDIX B: FORUM PARTICIPANTS

Forum Chair:     Michael Conway – President & CEO, FEI Canada


Moderators:      Arthur Gitajn – CFO, SAP Canada
                 Laura Pacheco – Vice President, Research, FEI Canada


Calgary:         Mark Deller – President & VP Finance, Davidson Mattice Inc.
                 Gerard McInnis – Partner,Valuations , Ernst & Young LLP
                 Timothy Spielman – Academic Chair, SAIT Polytechnic
                 Gordon Travis – Chief Financial Officer, Liberty Financial Advisory
                 Rolf Wenzel – CFO, Aligned Outcomes Corporation

Montreal:        Pierre Van Gheluwe – Former Treasurer, Yellow Pages Limited

Toronto:         Ryad Ali – Director of Finance & IT, Belmont Meats
                 Douglas Chornoboy – Chief Financial Officer
                 Niall Cotter – Chief Financial Officer, Kingsdale Shareholder Services
                 Gil Darnley – Senior Project Manager, Ontario College of Trades
                 John Forester – CFO, DBG Canada Ltd
                 Lesley Gallinger – Vice President, Corporate Services & CFO, Electrical Safety Authority
                 Michael Greene – Chairman & CFO, InsightAction Inc
                 Harold Hay – Principal, The Osborne Group
                 Winnie Leung – Chief Financial Officer, Moneris Solutions Corporation
                 Elena Lokchina – Chief Financial Officer, Architects Alliance
                 Susan Manos – Former Director of Finance, Indigo
                 Derek Petridis – CFO, Principal, Shikatani Lacroix Design Inc
                 Craig Smith – Chief Financial Officer, McAsphalt Industries Limited

Observers:       Laura Bobak – Research and Communications Manager, FEI Canada
                 Diane Pickett – Marketing Director, SAP Canada
                 Adam Winfield – Copywriter, SAP Canada

# ACKNOWLEDGMENTS

## CORPORATE DONORS:

**GOLD ($10,000 +):**
Husky Energy Inc.

**SILVER ($5,000-10,000):**
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Imperial Oil Limited

**BRONZE ($1,000-5,000):**
Ameresco Canada Inc.
Canadian Western Bank Group
Intact Financial Corporation
Investors Group

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