

THE STATE OF CLOUD COMPUTING IN CANADA

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Introduction

“Last resort.”

That was one of the comments, filled out in the field “other,” which came in response to a question we asked in the following research study about why Canadian IT professionals were adopting cloud computing. It’s hard to tell if it was meant sarcastically, or came out of a genuine weariness from all the pressures enterprise IT departments face. Either way, it struck me as a good summation of many technology executives’ attitudes towards a model that has stirred more controversy in this industry than any other.

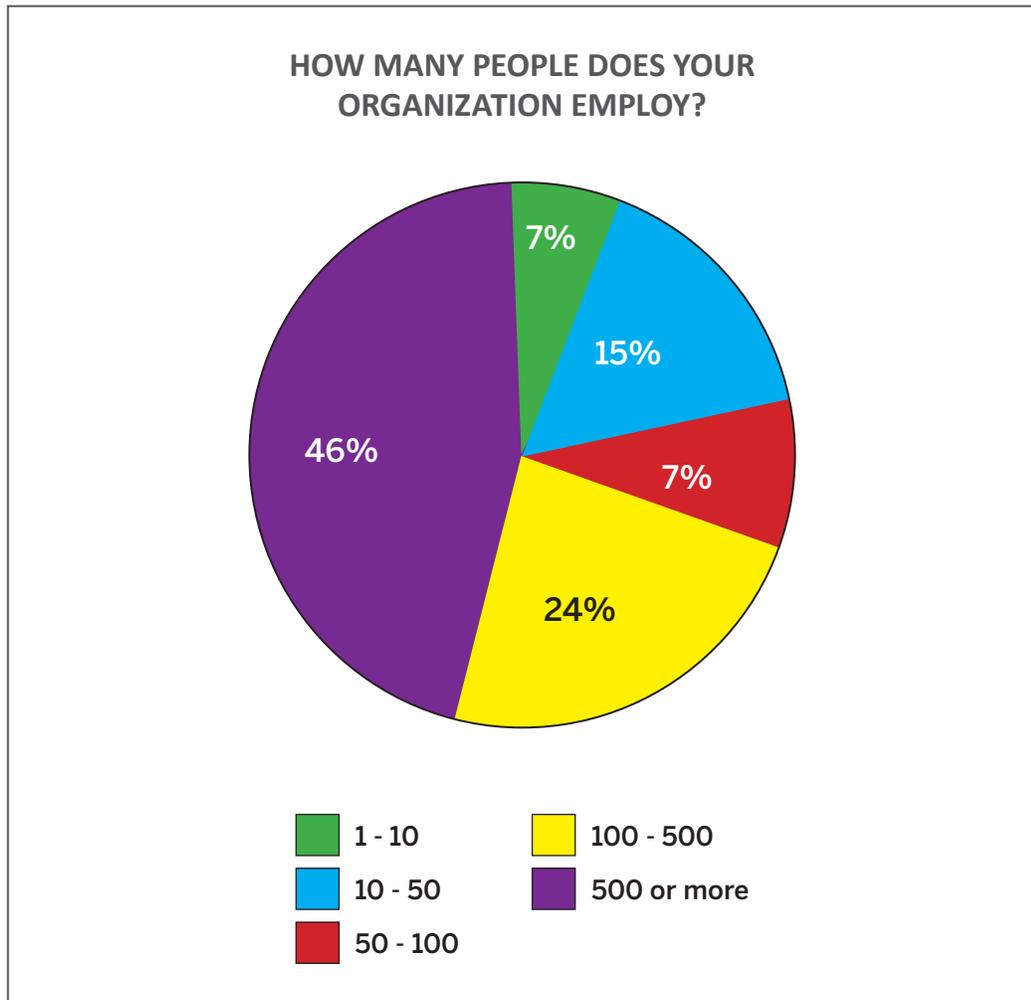
Cloud computing may feel like a last resort to many CIOs and IT managers because they are running out of options to deal with the ever-growing deluge of data, the complexity of making enterprise applications work together and what must sometimes feel like the grunt work of managing multiple data centres. They have been doing all this in the aftermath of the Y2K crisis of 1999 and, not long after, the dot-com bust of 2000, followed by recession after recession. Even during the height of the Internet bubble, it was the startups who were getting the go-ahead to open their wallets. Many everyday IT shops, particularly in the more cautious Canadian market, continued to be frugal with their technology investments. For many in the industry there has probably never been a time in their entire career when it felt like they could get even close to the resources they need.

Once it finally became better understood, cloud computing promised a way out of sorts. Not quite outsourcing, not quite product purchasing, it represents a means for finally getting the compute power of a big company when you need to act like a big company, and for scaling down when business demands aren’t at their peak. It means, in some cases, spending less time hammering out kinks in IT infrastructure and potentially more time to learn and respond to the things senior management really cares about – customers, shareholders and their fellow employees.

And yet . . . and yet. Cloud computing is a model fundamentally based not on pricing or convenience or flexibility but the trust relationship between an IT leader and their chosen supplier. Occasionally lost in all the discussion around security concerns is the notion that CIOs aren’t necessarily worried about hackers getting into the cloud, but for cloud providers to somehow drop the ball: that they will lose data, corrupt data, that their employees might do to their networks what everyday enterprise employees sometimes do to their networks. It’s not necessarily about security in terms of viruses but security in terms of negligence.

This issue has been compounded by a chorus of shrill voices warning that the days of IT departments running technology are essentially over, and that if they aren't prepared to divest themselves of the systems they manage soon they will be lost in the cloud's unstoppable momentum. This has been a curious marketing strategy by the industry at large. It's like trying to sell someone a car while telling them they are no longer fit to drive it. No wonder some see cloud computing as a last resort.

The State of Cloud Computing In Canada is an attempt to provide a more accurate picture of where adoption stands today, as well as the common approaches and outlook of enterprise CIOs and IT managers towards this model. The research is based on the responses of more than 200 members of our audience, 58 per cent of which were either CIOs or IT managers, who worked across a broad range of industries including financial services, the public sector, retail, health care and professional services.



What we found was a gradual but purposeful shift to the cloud by Canadian IT professionals, who feel they are starting to grasp the opportunities it presents but have clear goals around what they hope to achieve and the timeline associated with it. Any risks they are taking are calculated, and not with mission-critical pieces of their IT infrastructure. They haven't fully figured out the metrics with the cloud yet, and by no means do they see it as a panacea for everything that challenges them. Their posture towards the cloud, in other words, could not be more Canadian: optimistic but pragmatic, slow but deliberate, purposeful but not aggressive.

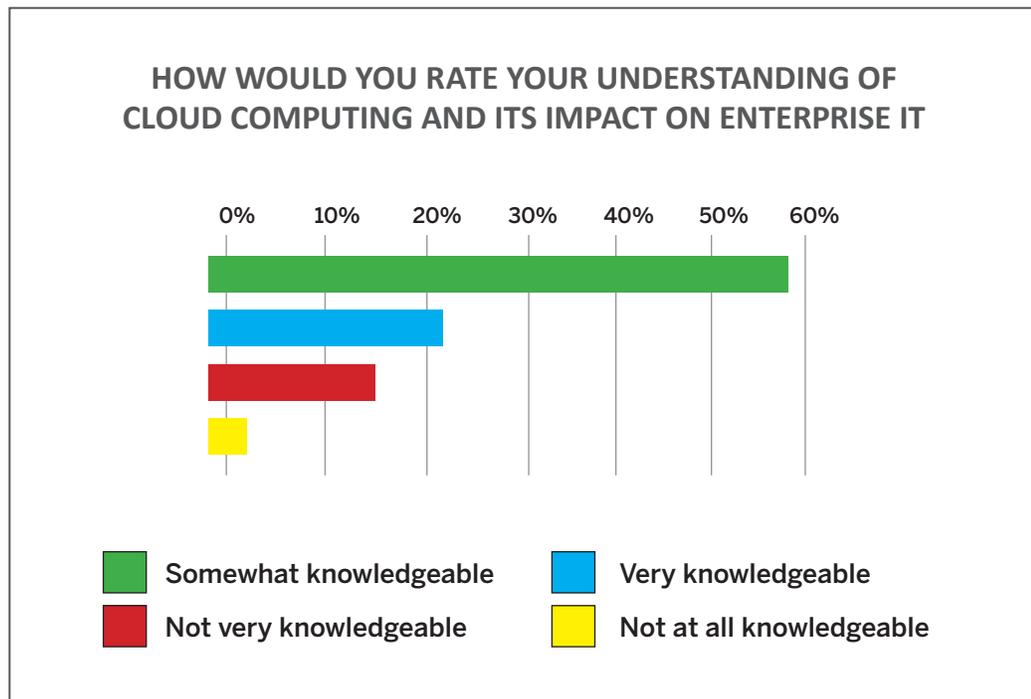
A year from now or more, the results of this research could look much different. As they get more experience with the cloud under their belt, it's possible that enterprise IT departments will be made up of people who are primarily concerned with negotiating the best service-level agreement, or setting up a strategic contract rather than spinning up a new server. They may become better at identifying the cloud service providers that make sense not only from a pricing and feature standpoint but have something akin to a cultural fit with their organization. They could become more adept at putting some resources into the cloud when it makes sense, and taking them out when it doesn't. The cloud may or may not become a Canadian CIO's first choice to deal with a problem. But we can hope it will become something better than their last resort.

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Toronto

The Education of the Canadian Cloud Computing Market

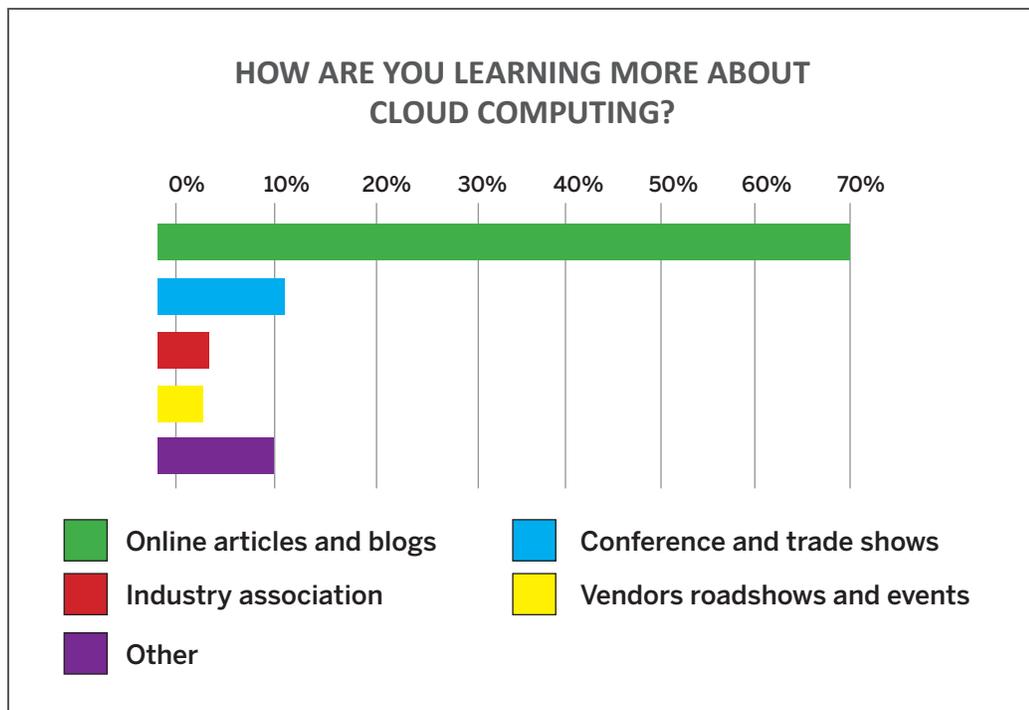
Where a few years ago CIOs and IT managers were struggling to find a proper definition of what cloud computing is, they are going into projects and strategizing with at least a working knowledge of the concept and key benefits. No one sees themselves as an expert, however, and the wide proportion of those who chose “somewhat knowledgeable” in our survey suggests that many are planning on continuing to study and learn on the job.

Some of this may be explained by geography. Given our proximity to the United States, Canadian IT professionals have had a front-row seat to many of the early hype around cloud computing and even some of the early case studies with providers who have been able to host data and compute resource locally. The ongoing deluge of marketing around cloud-related products and services has also made it difficult to ignore.



However the issue is not simply whether someone knows what the cloud is, but how it might change enterprise IT departments. Although there may not be one consistent answer to this question, there are few in Canada who can be certain about whether it really means cost savings, increased performance or merely layoffs and greater vendor relationship management challenges.

This may be why so many IT professionals are relying on the media, including independent bloggers, to help them grasp the most likely trends and implications of cloud computing. Despite many vendor road shows and conferences devoted specifically to the subject, this is not where many Canadian CIOs and IT managers walk away with actionable information. Neither are they finding it with their peer groups: industry associations seem to be doing a particularly poor job of providing the necessary education and analysis of this important trend.

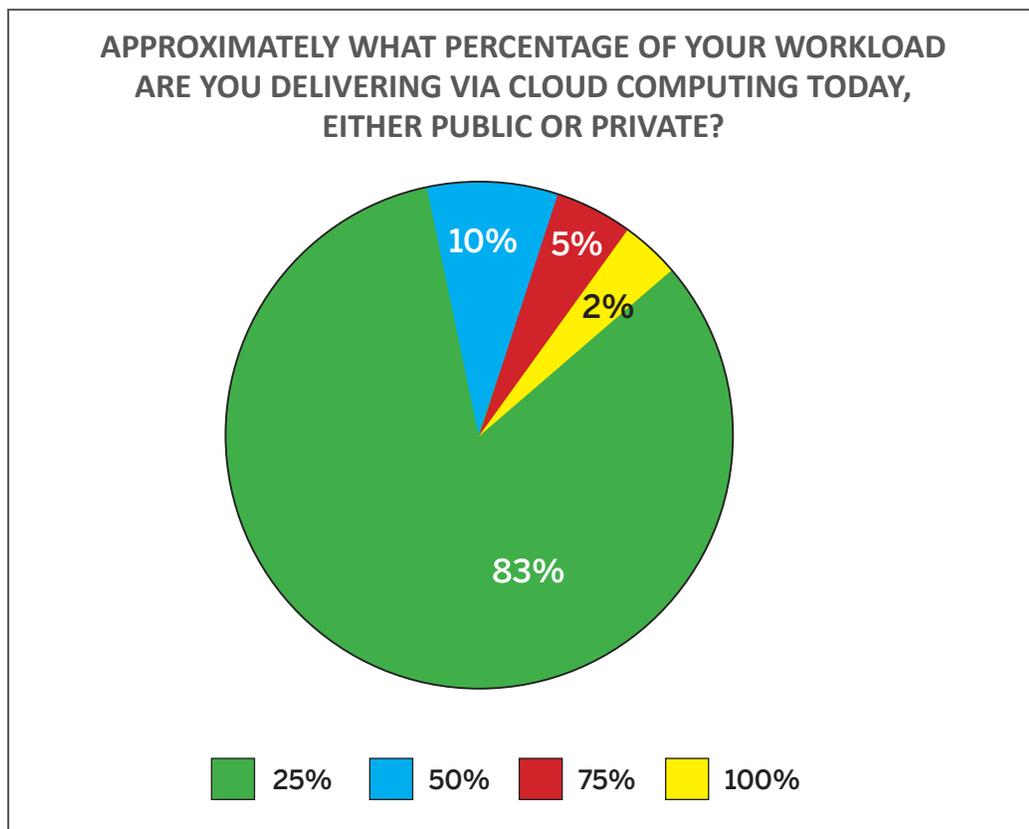


To be fair, however, a number of respondents filled in the “Other” field with “all of the above,” suggesting that any avenue for further insights on cloud computing is welcome. There were also respondents who said they were getting more information through “detailed sessions with key market leaders” and working on internal projects. In this, the cloud is like many of the IT trends that came before it: Canadian IT professionals will base their judgements primarily on first-hand experience

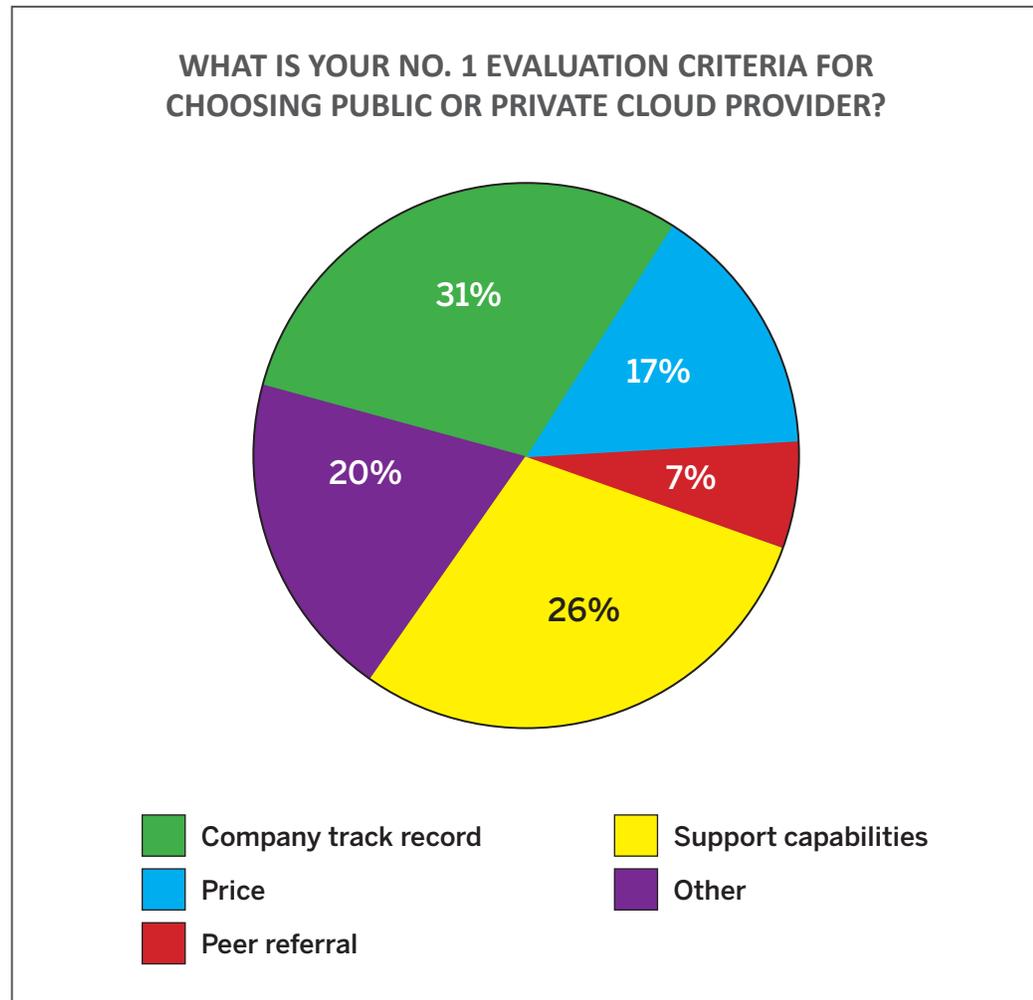
The Canadian Approach to Cloud Computing: Private and Protected

Despite the fact that Canada is home to many subsidiaries of multinational corporations, IT infrastructure and data tends to stay within the Great White North. It came as no surprise that more than 91 per cent of respondents said their data centres are located here, though the nearly nine per cent that are set up in the U.S suggests some opportunity for working with a wider variety of cloud computing suppliers.

Similarly, it would be expected at this stage that Canadian IT departments have only moved about a quarter of their workloads into the cloud. Until they feel more knowledgeable about the concept and have more experience under their belts, they would be ill-advised to do otherwise. That's not to say we don't have some more aggressive adoption in Canada. As many as 10 per cent of our respondents said they have 50 per cent of their workload in the cloud today. Most likely, given attitudes towards local data centres, many of those implementations are of the "private cloud" variety.



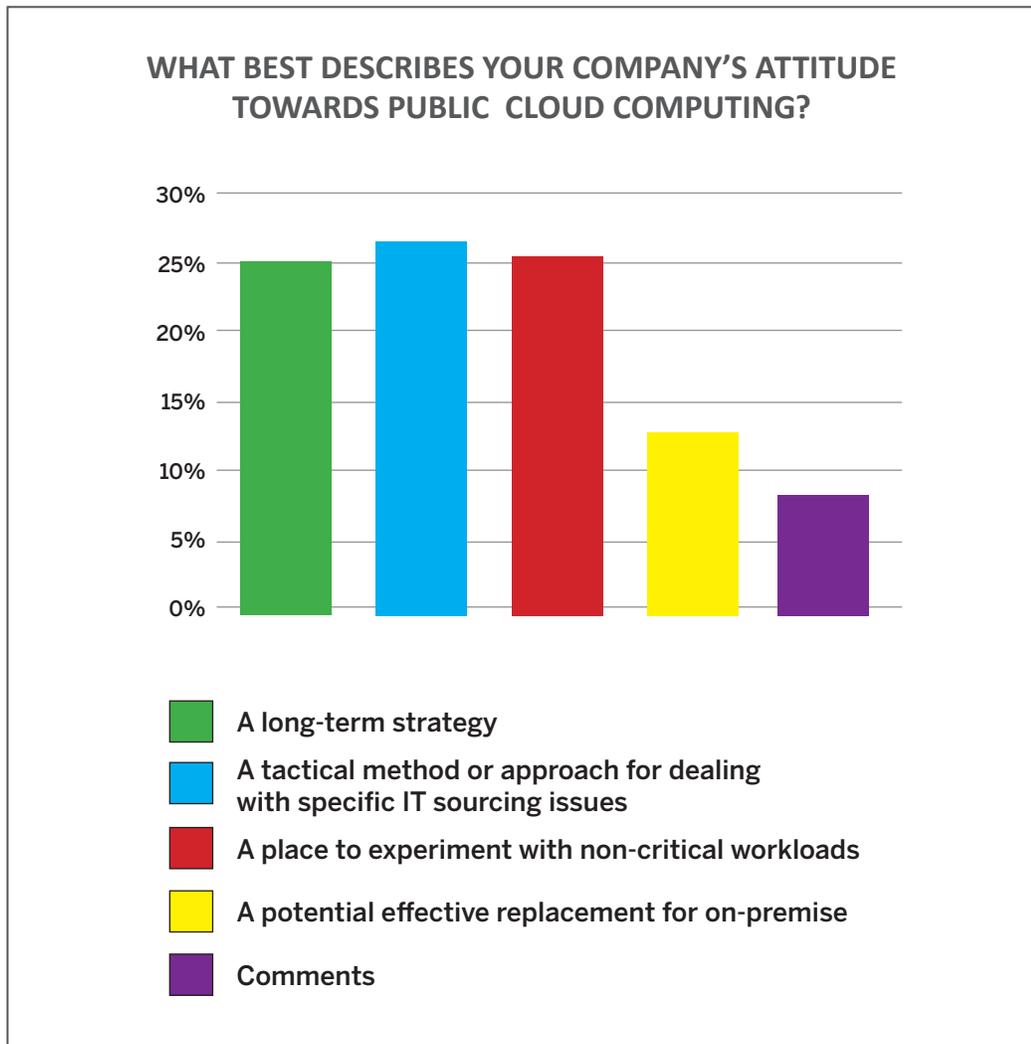
Perhaps because of their relative inexperience, Canadian enterprises are expecting their vendor partners to fill the void. Track record was the most important of the criteria used to choose a provider, with price falling second-last. For the moment, at least, there's not much value in being seen as the cheapest cloud company on the block.



Although security wasn't listed as an option here (we knew it would likely have topped the list), that was the item cited most often by the 20 per cent who made up the "other" category, along with "proximity for Internet speed" and legal requirements. Overall, Canadian IT professionals may not be completely confident in the cloud. They insist on having confidence in their providers.

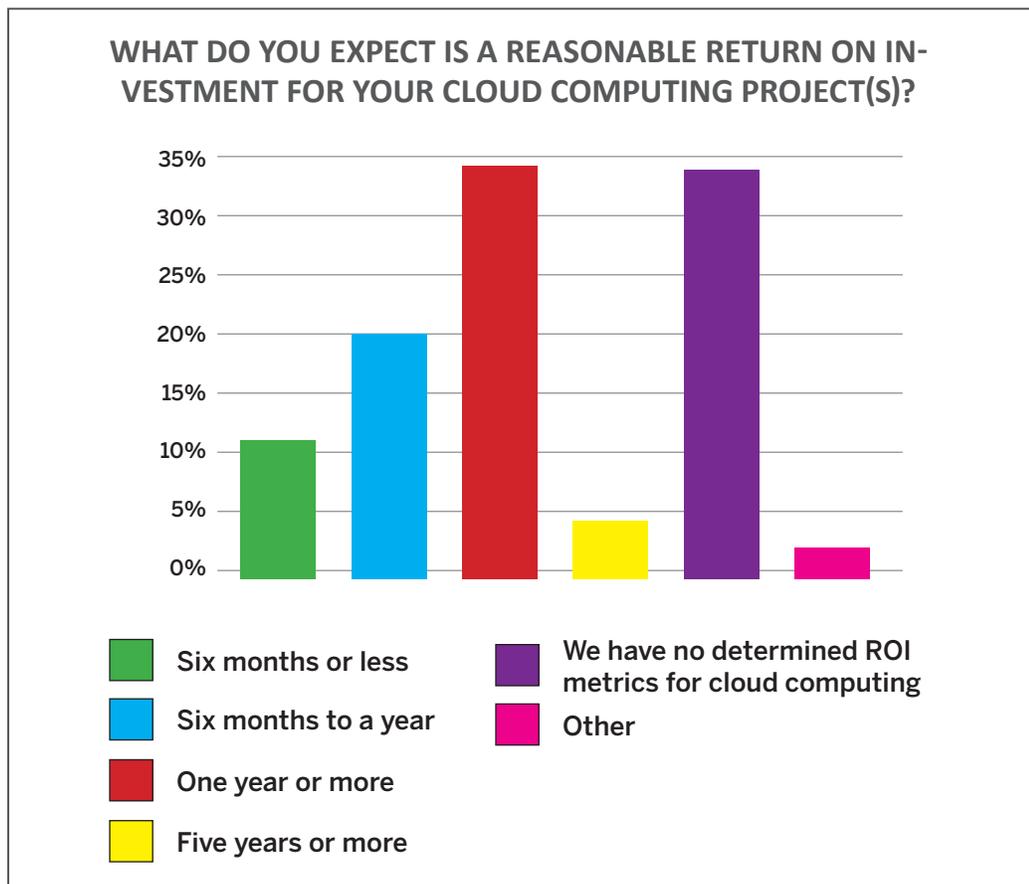
It is important to note that while this survey was completed primarily by IT professionals in senior IT manager and CIO roles, many cloud computing projects don't get very far without the authorization or support of other parts of their organization. That's why we asked for some sense of the company's outlook towards the cloud model, given its increased profile in business magazines and even consumer media.

This turned out to be one of the most evenly-split responses to our survey. True, not many people said cloud computing was a way to do away with IT departments (an attitude that probably wouldn't be conveyed to them directly anyway). But there will clearly be a wide diversity in Canadian adoption of cloud computing over time. Using the cloud to deal with short-term, tactical sourcing issues had a slight edge, but that makes sense; it's the way most organizations begin adopting any kind of new technology or strategy. There is also a surprisingly healthy "let's try it and see" approach to the cloud, and an impressive quarter of all respondents who see it as a foundation for the future.



There were still a number of responses in the "comments" area, however, that said cloud "isn't on the radar right now," "not high on the list of to-dos" and "not clear on the company's attitude at the moment." Worst was a comment which said, "strategic decision but no action to back up decision," which sounded like a case of cloud computing being shut down by senior management.

Even though vendors, analysts and media have all suggested cloud computing will completely transform companies into more flexible, dynamic users of enterprise IT, Canadians haven't set their expectations very high. For the most part, they either haven't determined how they will measure return on investment yet (which probably represents those who don't consider themselves very knowledgeable on cloud computing), or they don't expect ROI for more than a year. Having gone through the rigours and challenges of traditional IT outsourcing, as well as dabbling in software as-a-service, thin-client computing and other disruptive technology strategies, Canadian IT professionals realize that it will take time to adjust processes and accurately capture the data necessary to determine real ROI.

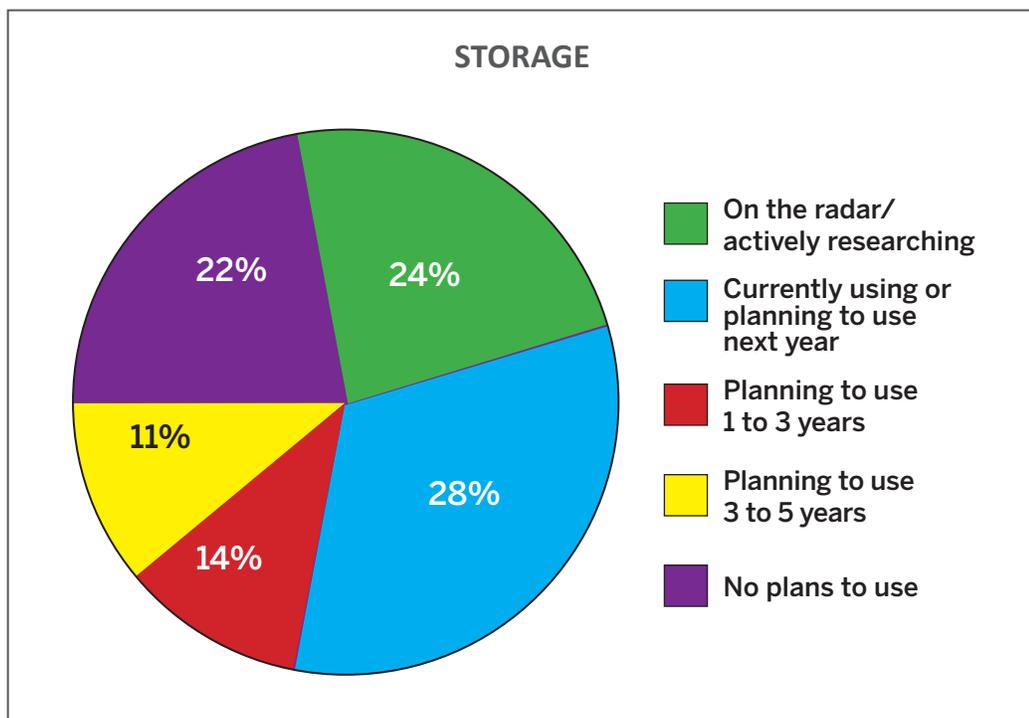


Given they're so willing to wait for results, what exactly are Canadian companies expecting to get out of the cloud? The lion's share were split between two answers: scalability/flexibility to the business at 30 per cent, and reduced hardware infrastructure costs at 28 per cent. Less than 12 per cent believed they would experience reduced IT administration costs; as we will see later, management of a cloud-based IT operation remains a critical concern for CIOs and IT managers. All other possible benefits suggested – including extra capacity for storage, for data centre, more frequent storage updates and access to new skills through providers – all registered at less than 10 per cent, and in some cases far less. Say what you will about the slow and steady pace of Canadian cloud adoption, but enterprise IT organizations know what they want.

Priorities and Providers

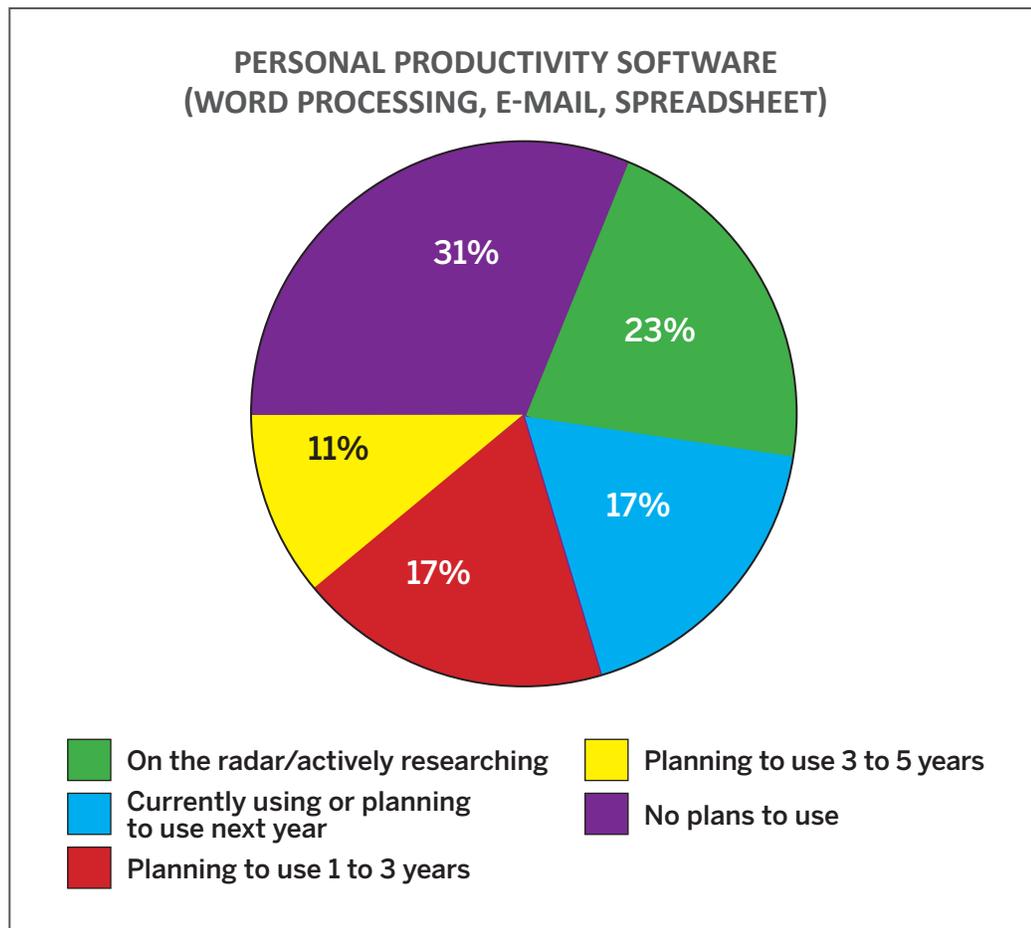
There have been more than enough so-called experts who have claimed that, given enough time, everything will be on the cloud in some form or another. Canadian enterprise IT departments aren't so sure about that.

Though they don't rule out anything as a group, CIOs and IT managers are fairly consistent in where they are putting their efforts first. The dominant areas are in relatively low-risk areas such as collaboration tools like wikis and Web conferencing platforms, which nearly 40 per cent of respondents plan to move to the cloud within the next year. Around a quarter of those surveys said the same thing about application development platforms and software, enterprise application software and servers. The biggest hesitation came in areas that are closely tied to overall IT performance, such as networks, which 45 per cent said they have no plans to move into the cloud for any period of time. Other areas, such as storage, were more mixed.



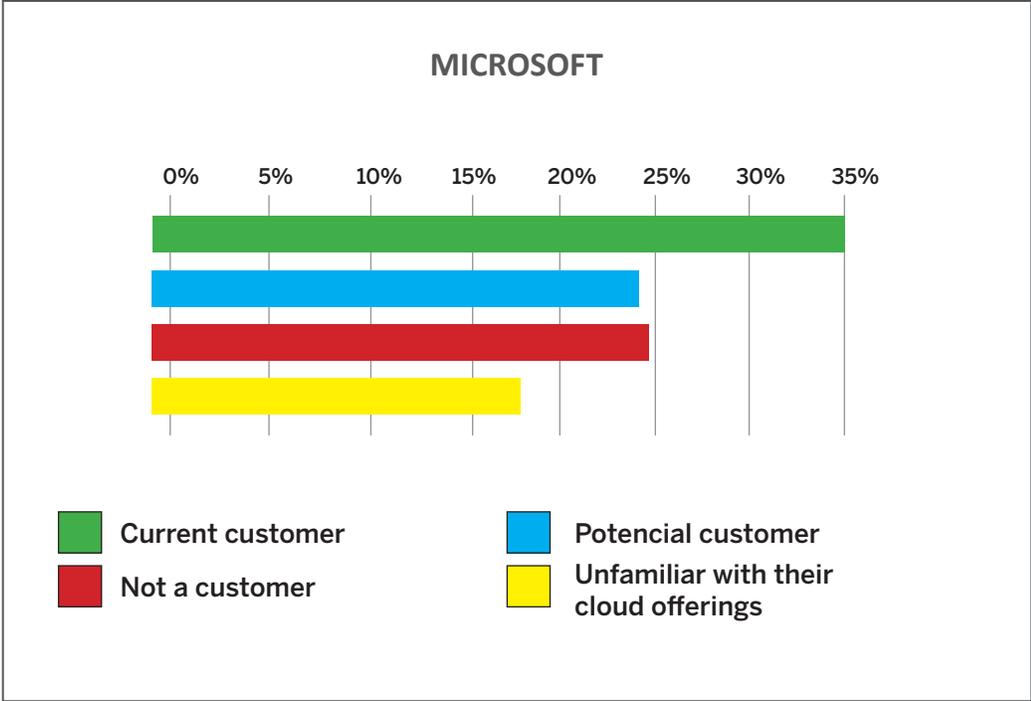
For the most part, CIOs and IT managers are thinking in fairly short-term windows. The responses around any of the above-mentioned areas were never higher than 20 per cent for timeframes in the one to three-year mark or the three- to five-year mark. Most likely this reflects the need to gain more experience with cloud-based offerings and providers before moving into other areas.

One surprise segment was the relatively split attitude towards personal productivity software such as word processing, e-mail and spreadsheet programs. Despite the relative maturity of software-as-a-Service offerings such as Google Docs, CIOs and IT managers are concentrating on other things – perhaps where there is a greater likelihood of tangible business benefit.

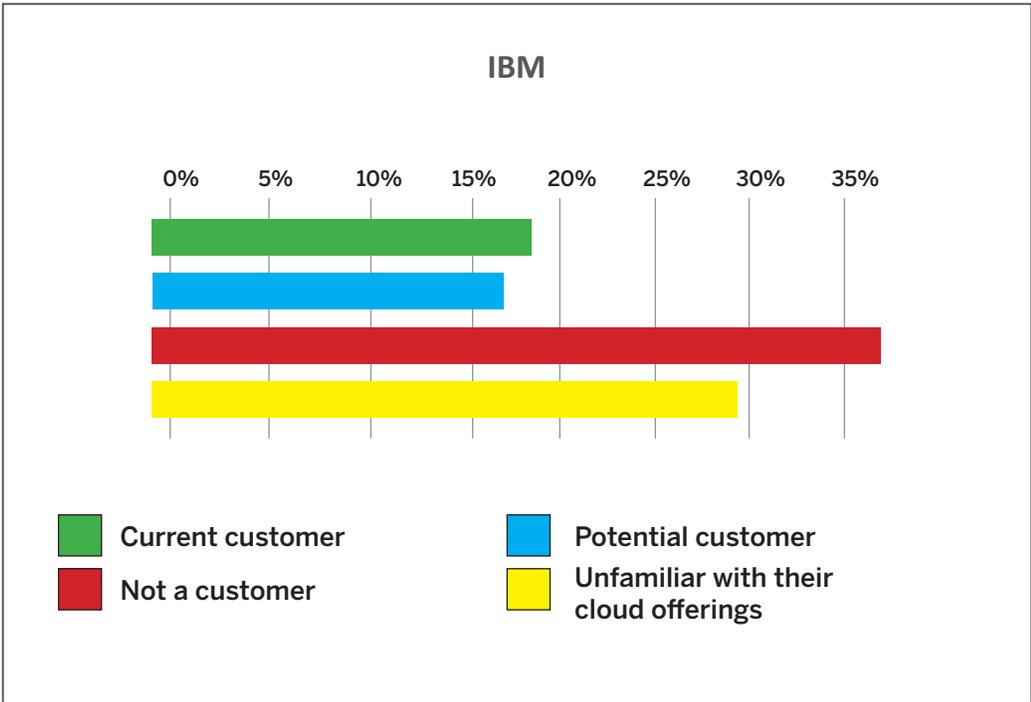


A common complaint we hear from our audience is the lack of mature cloud computing provider, particularly at the local level. With that in mind, we asked our survey participants to rate identify where they stood with four of the largest vendors in this space: VMware, Microsoft, HP and IBM.

It came as little surprise that VMware came out on top in terms of current customers at 35 per cent, but it was closely followed by Microsoft at 32 per cent. Microsoft, however, was rated as “potential customer” by nearly a quarter of respondents, compared to 14 per cent for VMware.



Contenders in this space will need to focus more on education and marketing than anything else. HP, for example, was listed as a current or potential provider by more than 35 per cent of all respondents, but 27 per cent were unfamiliar with the company’s cloud offerings. There was a similar finding for IBM, where close to 30 per cent said they didn’t know about its cloud-related products and services.



The Barriers Beyond Security

From the very beginning, the idea of allowing a third party to access data, resources or both struck fear into the hearts of enterprise IT departments, including those in Canada. Although a variety of security offerings have since been developed to help mitigate the risks, it remains the No. 1 impediment to increased adoption by CIOs and IT managers. It is not, however, the only thing standing in the way of future implementations.

We tried to think of every other factor that could lead to a “no” decision, including the immaturity of some products and services, lack of senior management support and much more.



Some of these, like regulatory requirements, may have been perceived as merely IT security by another name, which could be why it topped the list at nearly 30 per cent. It was tied, however, with “integration with existing systems,” followed by “loss of control over data.”

More significant, perhaps, were the areas that didn’t rank very high. For the most part, Canadian IT professionals do not seem overly concerned about uncertainties around skills and training needs, bringing IT back in-house if necessary or measuring ROI. These options didn’t come close to reaching 10 per cent of our respondents. Performance issues, contracts and difficulties around service-level agreements are all moderate barriers, but never cited by more than 20 per cent of all respondents.

Conclusion

Canadian CIOs and IT managers are prepared to move into the cloud – slowly, in low-risk areas and as long as they have providers they trust. They are already dealing with massive complexity in their IT systems and they don't want the cloud to introduce more. Although security is still top of mind, integration remains a critical concern.

Many potential cloud customers simply need more experience under their belt. They have been reading up on the concept and have reached a sufficient level of understanding that they feel prepared to begin, but not yet expert enough that they will move beyond certain parameters. Their use-case scenarios may differ widely but a good portion of the activity will be around tactical projects. They are willing to wait a year for a return on their investment, in part because they are still learning how to calculate it.

Cloud computing has often been marketed as a new approach, but some IT professionals have suggested elements of it have been in place for many years. Rather than treat it as something radical and innovative, IT professionals may be more likely to adopt it if they see it as something that has been evolving naturally over time.

It may be that one day, we'll look back and see 2011 as the year Canadians first decided to “hire” the cloud. At the moment, however, we are still in the probationary period.