"The Paradox of Choice"

Opportunity Costs of Companies Not Adopting Technologies

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Overview

75% of businesses are willing to invest in new IT technologies to stay competitive.[i]

More than ever, we see a rapid growth in technology products and services available to businesses. From multinational corporations with high cyber security needs to small business owners who require a streamlined set of software, it is a shared challenge to decide what is most appropriate technology from the vast options available. Companies that are unable to adapt to new technologies are at risk of being outpaced by competitors and facing an inability to serve their customers.

Using Barry Schwartz's argument of "The Paradox of Choice," this white paper seeks to uncover the opportunity costs faced by companies from not adopting technologies as a result of too many choices. To the best of our knowledge, this is the first research of its kind in the IT industry.

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Challenge

Our challenge was to identify what the business cost of the paradox of choice is to organizations and how they can overcome not adopting technology when faced with too many choices.

Our team decided to focus on non-financial business costs of not adopting technologies, and then determine how organizations choose technologies when faced with far too many choices.

Paradox of Choice

At the core of our research is the 2004 publication "The Paradox of Choice: Why More Is Less" by Barry Schwartz. More than a decade has passed since the release of the much debated idea that an abundance of choice creates anxiety, as opposed to increasing our well-being. However, this concept remains relevant to this date, and the implications spread further now, than ever before. Whether it is choosing what jeans to buy, which posts to like on Facebook or choosing what technology will be best for a company the paradox of choice is there.

In a famous example, a law professor orders wine, although he worries that if he orders a premium wine he will be seen as a show-off; if he were to order a cheap wine it will make him appear as cheapskate. So, the professor makes his decision and orders in the middle to appease his anxiety and guilt. Through this simple example, it can be observed that choices create anxiety because the implications of what we choose affect other people around us and we are never sure of what the absolute best choice is.

Within the IT department of many companies, the decision making process Professor Schwartz outlines is followed. First, goals are determined and they are ranked to understand which are the most important. From there, all the potential options are assessed and filtered out by understanding how likely the new investment helps meet the set goals. It is difficult to make the absolute best decision within an industry that is constantly changing such as technology, but our research found this does not restrict companies from investing in new technology. Instead, this has led to robust decision making processes when making IT investment decisions. This represents an opportunity for firms to provide continuous updates and findings on the latest that is happening in technology.

Methodology

After conducting extensive secondary market research, our team decided that primary research would provide key insights into the decision making process undergone by IT experts. Over the span of three weeks in October 2016 we conduced informational interviews with 16 IT heads and experts (e.g. Chief Information Officers, Chief Technology Officers and Directors of IT) across varying industries in Canada. Participating organizations spanned a variety of industries including Not-For-Profit, pension funds, insurance, start-ups and legal services. The informational interviews focused on personal experiences in revolution within technology in their own work space, to understand what takes priority in their decision making process.

Each of our interviewees offered a different and unique perspective, which made the experience valuable for our research. Our team was surprised by the interest and openness from our interviews, giving us direct insight into the progress and challenges within the IT industry. This was reflective in the interview scheduling process as a majority of interviews were easy to schedule during most mornings on weekdays. The average length of interviews was 33 minutes as a majority of interviews had an interest in the research and were willing to discuss and educate on important aspects in the technology sphere.

A challenge faced during the process was not asking questions that interfered with the confidentiality of our interviewees. One of our key objectives was understanding the cost of not adopting technology. Some of our respondents had to maintain confidentiality and could not disclose financials which made it difficult to determine the exact dollar value of this cost. As a result, our research team shifted gears and focused on technology recommendations implemented within companies that created value for the company and how much of an impact it established. Furthermore, across our team of researchers each of us had widely different perspectives, in order to ensure that all types of ideas and opinions were expressed we kept a standardized interview transcript within the team.

General Findings:

1. CIOs, CTOs and IT Directors want to voice their experiences as 10% responded from cold e-mails as opposed to the 3% cold e-mail response norm[ii]. IT experts want to talk because they understand IT disruption has large implications and is happening quicker than ever before. There is a need for knowledge sharing within the industry.

2. Large companies (150+ employees) have IT budgets that are not fully allocated. This represents an opportunity to allocate IT budgets towards more technology recommendations in an effective and efficient manner.

3. For small-sized firms, IT subscription services are the preferred way for IT recommendations since subscription has smaller initial costs and can easily be down-sized. While for large sized firms, upfront payments are preferred because of their higher long-term returns.

4. Having IT services available 24/7 is a key pain point expressed by almost all large sized companies (150+ employees). Often this requires later hours or staff coming in on the weekends in order to serve their global customer base. Rapidly growing mid-sized firms also begin to face the same challenge.

5. A majority of IT heads (79%) see high millennial turnover as a potential threat in the future. In order to mitigate this risk currently human resource functions are being revamped to include more flexibility and opportunity for employees.

6. Competitive pressures are high when technology is constantly changing. Different industries are facing technological revolution faster than others and during technological disruption, adapting is a key element to success.

Analysis: Customer Personas

Upon the conclusion of our interviews and analysis of research, it was evident that the types of responses we received fit into three unique categories. For the purposes of this paper, we will create three personas that symbolize these categories and reflect the three main types of organizations which face the Paradox of Choice when making IT decisions.

1. Not-For-Profit - Interview Insights

This persona is characterized as a Not-For-Profit organization with low competitive pressures and a primary focus on internal operations. This results in the organization having minimal IT needs and thus, relatively smaller annual IT budgets of under $100,000.

This persona highlights a **need to minimize cost above all else**. Moreover, professionals within this category are happy with simply maintaining their older IT infrastructure, **as long as it "does the job**", and would only consider upgrading once the need becomes significant. Interviewees expressed that they learned about and chose IT solutions from speaking to other Not-For-Profit organizations. From our interviews one insight we learned was that many Non-For-Profit's specifically wanted to have the latest Microsoft services such as Microsoft Outlook 2016. In addition, Not-For-Profits are beginning to recognize the value of the cloud and there is a growing interest in cloud based services that are affordable for this persona. Not-For-Profit organizations also receive a fair number of sales calls on a weekly basis. Individuals were not worried about staying ahead of the competition since as a Not-For-Profit, the focus is primarily on meeting their charitable objectives and ensuring that their overhead costs are kept to a minimum.

Beyond the monetary aspect, these organizations preferred to keep all their IT services with as few vendors as possible, **centralizing most of their needs.** There is a preference to have essential services purchased from a vendor and transitioned in-house afterwards. This strategy minimizes ongoing expenditures and is efficient as long as the organization's IT staff can handle those operations in-house. The biggest pain point for this group is how to keep their existing IT infrastructure working well enough for the organization. If any new services are considered, they must be simple to implement and low cost.

Takeaways for IT vendors:

There are two key reasons that can make this persona an attractive target for vendors. First, is if you can provide a **one-time, large overhaul** for technology that is going out-of-date in their IT infrastructure. Second, is if you believe that you can **provide a lower-cost and easy-to-implement solution** that can make a Not-For-Profit's operations significantly more efficient. Not-For-Profits can be

convinced if you can clearly outline how the technology will effectively work to lower their overhead costs, help attract more donors and make their operations more streamlined.

2. Low IT Needs - Interview Insights

This persona is characterized as corporations that **need to stay cost efficient and competitive**. Their key driver is that they do not want to lag behind, but rather stay relevant. These companies have operations that do not rely heavily on their IT infrastructure and thus, also have relatively small annual IT budgets of upwards to $100,000. However, this budget is spent completely every year in order to keep the corporation on par or beyond the standards within its industry.

This persona is the middle ground between the other two, Not-For-Profit and High IT Needs. Their similarity with the Not-For-Profit persona stems from their shared need for cost minimization and overall little need for many IT services. Their needs were met by just a few services, for example one firm that was interviewed had IT expenditures which solely consisted of system updates. Despite whether a company is multinational or a smaller local business, they have shared low IT needs. This persona is mostly service-based in **non-technological industries such as law, consulting and accounting**. Thus, Low IT Needs organizations do not have a big need for complex IT infrastructure. However, there seemed to be a trend in increasing preference for **subscription-based IT services** such as Salesforce and Workday. These services allow this persona to get leading technology at minimal up-front costs, making it easy to fit into their yearly budgets. Moreover, they are easy to justify since it is a small cost and immediate returns are realized. In comparison, other options such as large up-front expenditures are costly and take a while before they yield returns. A CTO of a major law firm supported this claim, he explained that it will typically take a longer time horizon of 5-10 years to realize their IT investment costs. The caveat is that subscription models do cost more over the long-term. Subscription models are easy to put into a budget and justify, and are increasingly preferred by companies with this persona. Another key insight for the low-IT persona is that there is a need for software solutions to be integrated within industry regulated infrastructure. Interviewees mentioned they were not certain new systems within their industry would be

compatible with new software. Thus, it is critical that software solutions are provided in a way that is completely compatible to specific and strict industry guidelines in insurance, accounting etc.

Takeaways for IT vendors:

The Low IT Needs persona is **an ideal target for managed services** which provides a low up-front cost and subscription model payment method. In short, IT Directors know that there are a lot of services which can drastically improve their company's operations; however, they have small budgets to work with and cannot afford to choose the wrong technology solution. As a result, if vendors can provide an option that has a small recurring charge for the company and in return can drastically improve its IT infrastructure. It is important to note that industries such as accounting, law and insurance have high regulation and thus need the suitable software that can integrate easily with such standards.

An ideal example is Workday replacing an HR system from 2001. While the old system did the job well enough, Workday is a relatively smaller investment that can justify down-sizing an HR department. Employees are able to do some of HR's work themselves through Workday's user-friendly interface. The net effect could end up being a positive cash flow for the company and if you can explain this to the IT Directors successfully, it makes their decision to choose easier.

3. **High IT Needs - Interview Insights**

This persona is characterized as corporations that operate in a high-tech industry that is constantly evolving, which presents a strong need to stay ahead of the competition and lead the industry in IT-related investments. Interviewees that fall under this persona, currently have an ecosystem of trust with firms such as Forrester, Gartner and Cisco that they refer to for new product information. High IT companies also have several IT decision makers and in many cases there are 5-6 personnel in charge of allocating the IT budget as stated by several interviewees. These companies have larger annual IT budgets ranging from $100,000 to over $1 million. This persona is characterized by strong pressure on IT Directors by top level management to ensure they choose the right IT solutions as stakes are high. Thus, **they are constantly on the lookout for new and**

innovative technologies that can help improve their company's operations.

The High IT Needs persona has a robust IT decision making process and set of pain points compared to the previous two personas. To tackle the feeling of being "frozen" in the face of uncertainty when not being sure if next month better technology will be available, firms have developed robust processes designed to overcome the paradox of choice. Specifically, processes include having team meetings discuss progress and evaluate options based on key performance indicators.

Cost minimization is of small importance within this persona, rather high return on investments and other metrics are key. 75% of businesses interviewed that fit this persona said they were willing to invest in new IT technologies to stay competitive. A CTO of a large engineering corporation stated that "**when large budgets are not deployed by the IT department we risk a budget shrink from upper management in future years**." This persona prefers to in-house their IT instead of subscribing to ongoing services since in-house provides more control with cost and customer service. Moreover, security is a big factor which motivates this persona to have as much of their IT in-house as possible. These companies try to keep up-to-date on developments in the IT space through subscriptions to industry newsletters, publications and conversations with existing vendors.

Takeaways for IT vendors:

The High IT Needs persona provides **the most lucrative opportunity** for vendors with scalable and industry-leading service offerings. The challenge though, is that most of the companies with this persona have existing relationships with large vendors and do not see a need to actively search for smaller vendors. One insider explained "you don't get fired for employing Cisco systems". There is an **element of trust** that these companies have with large IT vendors which makes it difficult for a lesser known vendor to replace. Price is not a big concern for these companies compared to the previous personas. Since these companies refer to Forrester, Gartner and Cisco, smaller vendors may be unable to reach this customer persona. Smaller vendors need to provide more innovative and flexible solutions that can help IT Directors justify making the switch from a trusted name.

The "Cost" of the Paradox of Choice

The vast number of choices IT Directors face on a daily basis and the resulting cost of the Paradox of Choice cannot be quantitatively defined. However, depending on the customer persona there are a few key costs as a result of the Paradox of Choice.

For companies that fit the Not-For-Profit persona, many are paralyzed by the Paradox of Choice and are at risk of missing out on potential donors. The CIO of a global childcare organization shared that "without proper IT infrastructure that provides a seamless process of donation on a webpage, it lessens credibility and donations." They also shared that there are employee learning costs associated with adopting new technologies. We also found that there is a growing understanding within Not-For-Profits that investments into IT will lead to cost savings. Specifically, Not-For-Profits embracing IT can attribute less of the donation to overhead, and more towards making an impact in society.

For Low IT Needs personas, the main cost is neglecting to actively pursue IT solutions. The focus of this persona is not to be the leader of the pact with technology, but rather ensuring they do not lag behind. This persona seeks up-to-date new offerings that could directly impact their operations. A CIO of a mining company fitting the Low IT Needs persona shared that "because of the vast number of choices, they do not know when to best choose and upgrade their IT". This can cause companies to miss out on opportunities to improve their IT and in the process, negatively impact their growth and efficiency in the utilization of resources. Already there is a notion of being hesitant with IT investment and an array of options makes the decision even more difficult.

For the High IT Needs persona, the main cost of the Paradox of Choice is missing out on leading edge opportunities which could greatly increase their competitiveness. This is due to the fact that with such a wide variety of choices and information available to be digested, it can overwhelm even an entire IT department. One of our interviewees, CTO of one of Canada's largest insurance companies stated "the huge risk of self-driving cars could potentially wipe out auto insurance". This represents a serious hurdle from the Paradox of Choice in deciding what IT solutions would best position them for success in a rapidly changing industry. To counter this, firms fall back

on their 'trusted' existing IT vendors and take the risk of assuming that these vendors are at the leading edge. Almost all IT decisions have multiple people involved in the decision making process. Respondents reported that although they are directly in charge of IT budgets there are other key decision makers, upwards to 5-6 influencers. As a result, engaging with all key decision makers is critical to going forward with any type of IT investment. If companies with large IT budgets in fact do wish to be at the front of new IT developments, they must overcome the cost of the Paradox of Choice and pay more attention to lesser known vendors who are able to provide more innovative and flexible solutions to justify making the switch from an existing 'trusted' vendor.

Final Remarks

Companies are overwhelmed by the number of IT services and products available to them. Companies are at risk of losing their competitive advantage and falling behind competitors if they do not act.

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*Metrics could include Return On Technology, Revenues traceable to program (e.g. referral code) or employee productivity.

[i] Calculated from interviewed companies fitting the High IT Needs Persona
[ii] http://www.salesforlife.com/blog/sales-metrics/only-3-of-cold-calls-work-heres-how-to-fix-it/

About the Researchers:

Akash Sidhu, Yash Patel and Michelle Kwan are 4th year students at the Schulich School of Business. The students met with Third Octet in August 2016 to discuss the project in collaboration with the school's Entrepreneurship Field Study course with Professor Steve Pulver. Their aim for this industry white paper is to provide critical insight for both IT vendors and companies in the pursuit of educating the industry and staying competitive with the ever-changing technological landscape.

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