

Consortium Business Models: Resources for Small Architectural Practices in Ontario

FINAL REPORT

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Executive Summary

The changing macro-environmental factors such as economic cycles, government policies, and technological changes make it necessary for small and medium sized architectural practices to adapt and constantly update their resources to survive in this competitive market. In Ontario, there are 1661 architectural practices – most of which are small or sole practices. A large number of architectural firms has resulted in increased competition for the available projects, impacting the top and bottom lines of the architectural practices- especially the smaller firms. This research study aimed at finding the key impediments to the growth of small architectural firms and suggest resources/business models that can help small firms achieve their growth objectives. An online survey and an explorative feedback session were conducted to collect information from small practice owners in Ontario. Competition from non-architects (BCIN holders, designers etc.), public procurement processes, lack of business management knowledge and failure to justify the value of their services were the key impediments to the growth of the small architectural firms in Ontario. Further, small firms see growth as an increase in their revenues but do not want to increase the number of employees. Interestingly, some small firms do not want to grow to maintain autonomy and avoid taking risks.

The Architectural, Engineering, and Construction (AEC) industry is shifting towards an integrated project delivery with increasing risks being transferred to the supply side (contractors/architects etc.) from the demand side (clients). Further, even though the operating revenues in the architectural services industry in Ontario have increased marginally in recent years, the profit margins have declined sharply due to increasing labor costs which account for ~47% of the operating costs and increasing competition from other actors in the AEC industry. In this competitive market, the small practices will continue to face competition from different stakeholders. Small firms must leverage their ability to provide flexible and personalized services to their customers in order to establish a strong reputation in their region. Further, small firms are best positioned to overcome this situation by partnering with other stakeholders to redefine their value proposition, providing a one-stop solution to the risk-averse customers. Another interesting proposition is the possibility of setting up a mentorship program in which emerging practitioners are paired with practitioners nearing retirement.

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1. Introduction

According to a study done by Ontario Association of Architects in 2015, there are 1661 architectural practices in Ontario and 60% of these architectural practices are either small or sole practice (having less than 10 employees). Further, the study discovered that over 70% of these sole and small practices have annual revenues less than \$50,000 (OAA, 2015). The small architectural firms are more effective in their local regions by leveraging the local knowledge and offering more flexible and personalized services to the customers in their local community. However, when it comes to competing for medium to larger projects, limited resources and business knowledge prevent them from successfully scaling their firms. According to a study done by Conference Board of Canada (2013), the major barriers to the growth of engineering and architectural firms are the limitations of the public-sector procurement model, contract clauses that increasingly place an excessive amount of liability on firms, labor market constraints and limited capacity to work abroad. These barriers need to be further studied in the context of small architectural firms in Ontario.

To develop resources that can enable small architectural firms to overcome these gaps, Ontario Association of Architects (OAA), in 2012, recognized the formation of Small Practice Information Forum (SPIF) by a group of member architectural firms. The objective of SPIF is to provide a platform for small architectural firms to share their concerns, exchange information and experiences that can facilitate the growth of the small architectural firms in Ontario. SPIF holds gatherings in informal settings to have discussions about the issues related to small practices. Emerging Practitioners are invited to attend the gatherings to learn about the challenges of setting up and running an independent practice. A common issue that has been raised in SPIF gatherings is that lack of business resources – guidelines and reference material that outlines business models for small firms to work in a consortium. In order to overcome the competition by pooling resources, architectural firms form partnerships/Joint ventures with other firms. However, working in partnership requires knowledge of contractual terms and conditions – an area where the small practices have a serious disadvantage when compared to medium and large practices who have in-house resources to draw legal contracts/ partnership agreements.

Therefore, small firms lack access to legal and customized resources that can help them in forming partnerships with other firms and effectively compete for relatively larger projects.

2. Literature Review

2.1 Business Models

There has been substantial research on business models but no consensus has been reached on the definition and use of a business model (Bos-de Vos, Lietfink, Volker, & Wamelink, 2014). A business model explains the rationale by which an organization creates, delivers and captures value (Osterwalder, & Pigneur, 2013). A business firm identifies an opportunity which can generate profit by creating value for all stakeholders (Zott & Amit, 2010). The value for the stakeholders is represented by the value proposition of the business model. According to Teece (2010), a firm must not only adapt to changing market condition but also create value through new products and services, creating a competitive advantage for itself. The value proposition of the business model is attractive to the stakeholders involved and has revenue streams that allow the firm to capture the value created to generate profits (Teece, 2010). Zott & Amit (2010) gave an activity system perspective to the business model design which expresses a business model as a system of interdependent activities that go beyond the focal firm and stretch its boundaries. Thus, although no consensus on the definition of a business model exists, common themes have emerged in the different conceptualisations of a business model.

The figure below presents Osterwalder's nine building blocks of a business model –

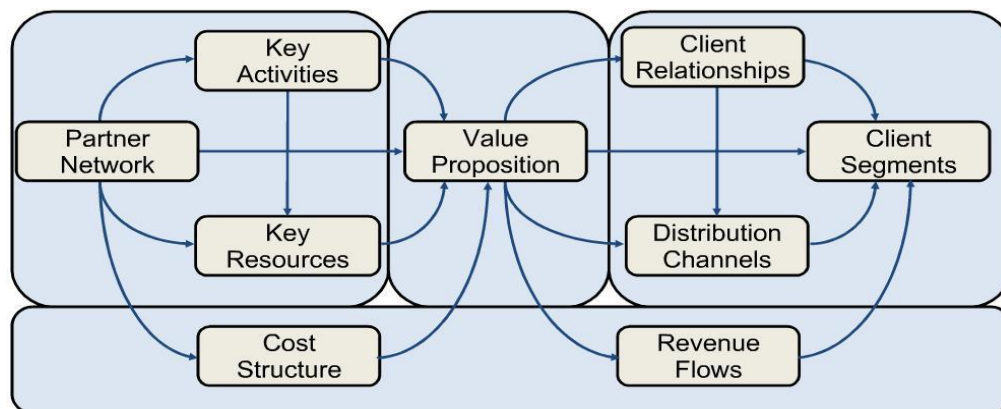


Figure 1 - Nine Building Blocks of a business model

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The nine building blocks of a business model, as proposed by Osterwalder, & Pigneur (2013) are described below:

1. **Customer Segments** – are the different groups of people or organizations that a firm plans to serve and are based on the needs and demands of the customers, different profitability and the valuation of services offered by the firm. It is difficult to meet the requirement of different customer segments with similar product or service and thus, the product/service offered by the firm must be customized to serve different customer segments. Customer segments can be mass markets, niche markets or multi-sided platforms. In the case of the architectural firms, the customers can be segments based on the areas of practice, the medium of project delivery or the sector in which the customers operate (private, public etc.).
2. **Value proposition** – is what creates the value for the customer and is the reason why the customers would prefer the product/service of one company over other companies. The value proposition can be quantitative (cost, time for delivery) or qualitative (i.e. flexibility, customization, performance, sustainability, new technology etc.). It is very important that the value proposition is attractive to the target customers. For the architectural practices value proposition can be flexible and customized service to the customers, low price for price sensitive private customers and design expertise.
3. **Channels** – are the mediums by which the value proposition is communicated to the target customers. It is important to choose the right medium to communicate with the customers and create awareness about the products/services of the company. The channels can be direct or indirect channels.
4. **Customer Relationships** – are the relationship a business develops with its customers over time and can be personal or automated. The relationship with the customer influences the experience a customer has with the company. For small firms that operate a regional business, flexible and personalized services help create a favorable customer experience and enhance reputation within the local community.
5. **Revenue Streams** – are the source of cash coming into the company through the sale of its product and services to its customers. The pricing of its services is critical to have

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revenue streams that are profitable for the company. For creative professional services, it is important for the firms to justify its price to its customers. The quality of services, competition in the market and brand recognition are some of the factors that impact the pricing of a professional service.

6. **Key Resources** – allow the firms to create value and deliver it to its customers. The resources include physical and IT infrastructure, human resources, financial resources and the intellectual capital of the firm.
7. **Key Activities** – must be executed by the firm to succeed in its business model. Key activities include but are not limited to providing services to the customers, problem-solving, promotion of services, developing technological competence and operations management.
8. **Key Partnerships** – describe the important business associates and partners that help create and deliver value to the customers. Key partners add value to the products and services of the firm. It can be in the form of a strategic alliance with a non-competitor, a joint venture or a consortium of firms. Further, key partnerships help reduce risk and uncertainty.
9. **Cost Structures** – are the costs a firm incurs in operating its business model. Costs can be fixed or variable in nature. A cost-driven business model aims to minimize the costs to offer the cheapest product/service whereas a value-driven business model aims to improve the quality of service and focuses on the creation of value for its customers.

In the present fast changing economy and continuously evolving society, architectural firms must keep adapting and innovating to survive. The project delivery in the architectural, engineering and construction (AEC) industry is moving towards integrated project delivery with increasing risk being allocated from the demand to the supply side which has resulted in new forms of business collaboration and reallocation of risks among the stakeholders (Volker & Klein, 2010). Thus, the architectural firms need to innovate and adapt to new business models by making changes to the building blocks of the business model described above.

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2.2 Gaps in present situation

The Conference Board of Canada on behalf of Industry Canada conducted a research study to determine the driving factors, key impediments to the growth and best practices in Canada's engineering and architectural services sector. Lack of experienced highly skilled human resources, capacity constraints to increase export of services, price based selection in the public procurement process, constant up gradation of technology and underestimation of 'value of design' are identified as the key barriers to the growth of engineering and architectural services (CBC, 2013). The sample for this survey included engineering and architectural firms in Canada (small as well as large firms). These constraints are explained below:

Public Procurement process - In the present public procurement process, many factors are considered during bidder's technical evaluation but once several bidders are shortlisted after technical evaluation, price often becomes the deciding parameter for awarding of the contract (CBC, 2013). As the architectural firms pursue commercial and professional goals, generating profits becomes more difficult for these firms (Bos-de Vos et al., 2016). The price based selection results in a situation where the architects find it difficult to balance the conflicting demands of creating and capturing the value in their business model. Delivering the highest quality work at the extremely low prices in public sector projects has become increasingly difficult for the architectural firms. Further, the price based selection has become detrimental to the adoption of innovative approaches by the architectural firms. Therefore, the architectural firms need to come up with new business models to create and capture value for their clients within the context of the dynamic market demands (Bos-de Vos et al., 2014). Additionally, there is a significant cost associated with bidding for public sector projects that restrict the participation of small firms in the bidding process.

Human Resources - One of the ways for the small firms to create more value within the available resources is to increase their productivity. However, there is not much literature available for the small firms that provide a systematic way of increasing their productivity (Chowdhury, 2013). The extent of change required in the business model to survive the fast-changing society will depend on the nature and the size of the firm. The difference in the present and the required business models result in a resistance in adopting the change as the

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capital allocation for this change is biased towards the existing business model (Chesbrough, 2010). More budget is allocated to carry the present business activities than in achieving the change in the business model.

Managers in Canadian small firms tend to associate productivity with employee performance and focus on tactical operations rather than focusing on business strategy (Chowdhury, 2013). In a fast-changing business environment, it is important for a firm to have a sound strategy to position itself according to its strengths and weaknesses, enhancing its position in the market (Zhao, Zuo, Zillante, & Zhao, 2012). According to Chowdhury (2013), business strategy has two components - degree of differentiation and degree of low-cost leadership. The small architectural firms which tend to grow by specializing in a niche market differentiate themselves from the firms that offer a broad range of services. Creating this differentiation in the market helps these firms develop a competitive advantage over other firms and command a premium in their service fees.

It has been observed that the small architectural firms are not keen on growing the size of their firm due to the issues related to quality control and work environment (RIBA, n.d.). Possible reasons for this contradicting theme is that the small firm owners prefer complete control over the activities of their practice. For such firms, it is difficult to come up with business models that can help them grow without increasing their human resources. Also, the small architectural firms face serious challenges in finding the right human resources for their projects. This is a major problem for architectural firms located in remote locations (CBC, 2013).

Underestimation of Value of Design - In the professional services sector, firms create value by having a better understanding and expertise of the subject matter than their clients (Bos-de Vos et al., 2014). This is the reason that the firms in creative services industry such as architectural firms require highly skilled and experienced workers that can deliver high-quality services according to the expectations of the clients. When it comes to the price sensitive customers, it is becoming increasingly difficult for small firms to justify the value of their design. More and more small firms are losing out to less skilled and cheaper alternatives (BCIN holders, designers etc) to their work that deliver similar services at much lower prices (Holmes, 2013). Educating

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the customer of the expertise and the quality that an architect brings to a project is essential to solving this problem.

According to Michel (2014), innovation in value creation and value capture are equally important. At times when the firm is not selling large volumes of its product/services, they need to maximize the value capture. Value capture can be maximized by revising the price setting mechanism (as per the worth to the customer), changing the price carrier (value proposition) or by changing the customer segment (Michel, 2014). This is perfectly applicable to the small architectural firms who have failed to justify the value of their design to the customers.

Technology - The implementation of new design technologies such as Business Information Modelling (BIM) has reduced the instances of design errors, enhancing the reputation of architectural firms (Love, Lopez, & Edwards, 2013). But the senior members of the small firms are not good at adapting to new technologies and believe that the constant up gradation of technology is not sustainable for the smaller firms (RIBA, n.d.). Adapting new technologies not only requires significant financial investment on the part of small firms but also needs time and money for training staff, making it difficult for the small firms to keep up with latest technologies. In the architectural practices, the adoption of new designing software also depends on the compatibility with other stakeholders. The design process is becoming increasingly complex which requires the use of latest technologies and the failure of the small firms to adapt to these changes is detrimental to their growth.

Risks & Liability - Another major impediment faced by architectural firms in upcoming projects is the transfer of excessive project risks to the architectural firms by the clients (CBC, 2013). This limits the number of opportunities for the small firms as their risk-taking capacity is considerably small. The present market is moving towards integrated project delivery in which the risks are being transferred to the architectural firms by the clients. In markets where the risks are being transferred from demand side to the supply side, the value chain is redefined by new forms of collaboration with new roles and new responsibilities of the stakeholders (Bos-de Vos et al., 2014). Forming business partnerships can allow architects to work on larger projects

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while sharing risks with partner firms and take advantages of the expertise and connections of the partner firms.

Other potential barriers to the growth of architectural firms include lack of business knowledge, economic cycles, excessive insurance requirements and an increased competition due to growing number of architectural practices in Ontario. All these impediments will be evaluated in the context of small architectural firm owners during the primary research.

2.3 Industry Overview

The cost of hiring skilled manpower remains a key component of the costs incurred by the firms offering architectural services in Canada. In 2015, salaries, wages, commissions, and benefits accounted for 47% of the total operating costs of the architectural firms (Statscan, 2017). Figure 2 below provides a breakdown of the total operating costs of the architectural services industry-

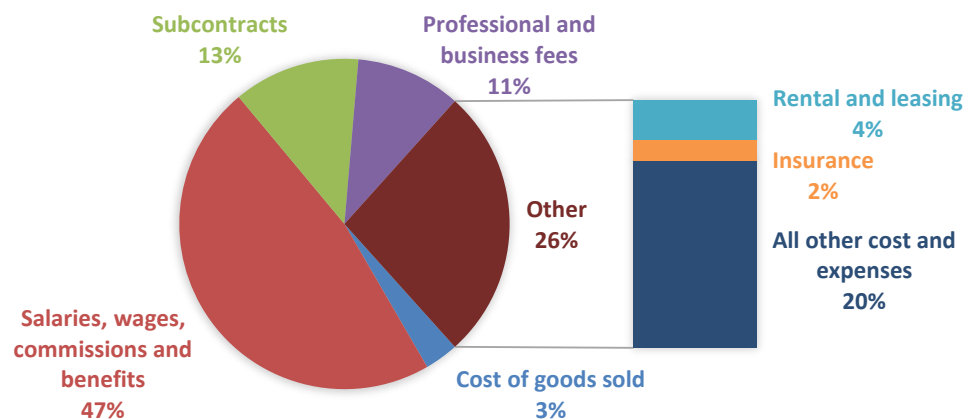


Figure 2 - Breakdown of total operating costs in architectural services industry in Canada (Source: Statcan, 2017)

There has been a significant increase in the operating costs in the architectural services industry in recent years. Figure 3 below represents year to year percent change in the operating revenues, operating expenses and operating profit margins in the architectural services industry in Ontario. Year to year percent change in the salaries, wages, commissions, and benefits is also included as it is the major component of the operating costs.

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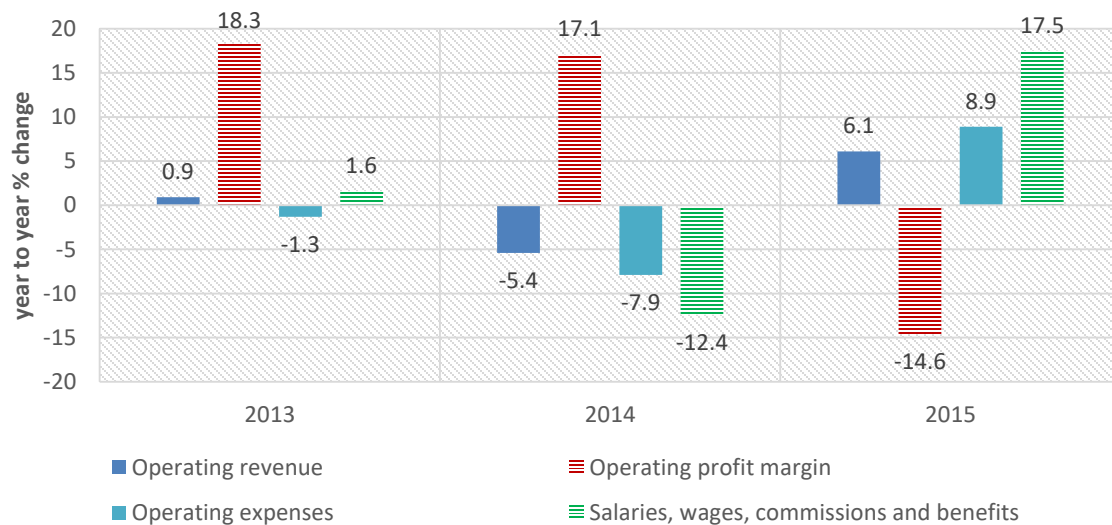


Figure 3 - year to year % change in summary statistics of architectural services industry in Ontario

(Source: Statcan, 2017)

Although the operating revenues have increased marginally over the three-year period (2013-2015), there has been a significant increase in the operating costs which has resulted in a sharp decline in the profit margins of architectural service firms (Statcan, 2017). Salaries, wages, commissions, and benefits, which account for 47% of the operating costs, have increased sharply and contributed significantly to the decline in operating profit margins in the industry. Other factors such as increased competition, the performance of the construction industry, and provincial regulations may impact the revenues and profit margins of architectural firms. Specifically, for small architectural practices, increasing competition from BCIN holder and designers could explain the shrinking profit margins.

3. Primary Research

3.1 Methodology

This research followed a mix of qualitative and quantitative strategies to come up with tools/resources that can help small architectural firms overcome their key impediments to growth. At first, an online survey was designed by conducting a review of the available literature and circulated to small firms across Ontario. The information collected in the survey was analyzed to identify the barriers to the growth of small firms in the present market, growth

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strategies being presently adopted by small firms and their organizational structures. Then the findings of this analysis were discussed with a group of architects in a feedback session to explore additional insights that may not have been captured in the online survey and get their reflections on the findings of the survey. The outcome of the online survey and the feedback sessions were used to propose business models/tools that can be adopted by small architectural firms to achieve their growth objectives.

3.2 Research Sample

There are 1661 architectural practices in Ontario. These practices include sole practitioners, small and medium-sized practices, and large corporations that provide professional architectural services. In order to restrict the research sample to the small architectural practices in Ontario that are interested in the outcome of this research study, the survey was circulated only to members of the Small Practice Information Forum (SPIF). At present, SPIF has about 130 members that are spread across Ontario.

3.3 Data Collection

Data from small practice owners was first collected through an online survey. The survey was anonymous and no information that can establish the identity of the firm was collected in the survey. Most of the questions on the survey were multiple choice questions that asked respondents to pick one or multiple options from a list or rate an option on a scale of 0-10. A few open-ended questions were included to capture additional information. All the participants answered the same set of questions.

Prior to the circulation of the survey link, the SPIF members were duly informed about the background and objectives of this research study through an OAA information email. The survey was kept active for a period of five weeks to allow sufficient time for the architects to respond to the survey. During this period three reminders were sent to the SPIF members at regular intervals to collect a minimum of 30 responses. OAA Council members also reached out to the SPIF members through various mediums – SPIF gatherings, OAA newsletters etc. The participation summary for the online survey is as below:

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1	Number of SPIF members	138
2	Less: Duplicate emails	10
3	Less: Emails Failed	5
4	Net Population for survey	123
5	Number of Responses	37
	Response Rate	30.08%

Table 1 - Participation summary in Online Survey

The survey questions are enclosed as Appendix 1 to this report.

3.4 Analysis and Results

This section describes the outcomes of the online survey and the feedback session.

3.4.1 Online Survey Findings

1. Organizational structure of small architectural firms

Nearly 2/3rd of the practices are one person architectural practices which mean that the firm is as good as the individual running it. This limits the possibility of improvements by making changes in organizational structure. Further, the figure below represents the number of part-time and contract employees in the small architectural firms. Over 78% firms do not employ any part-time employees and over 72% firms do not have any contract employees.

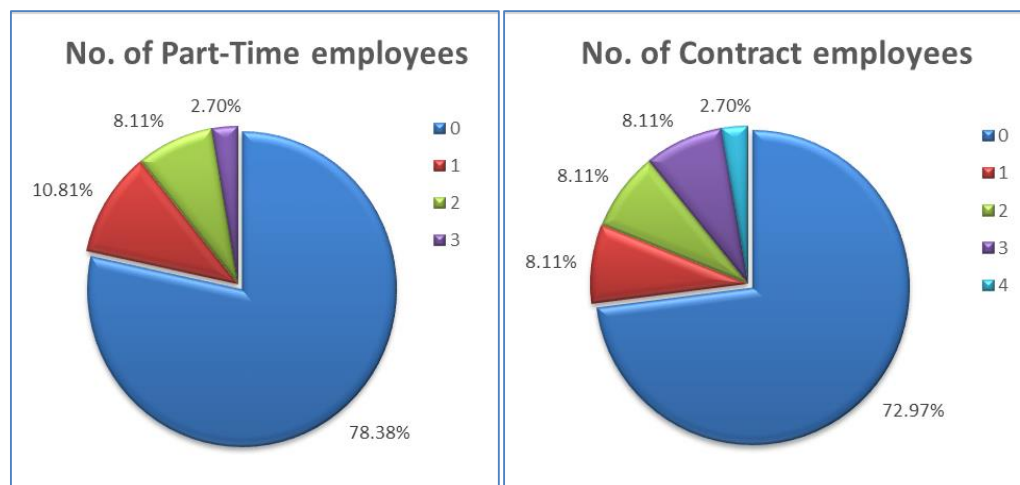


Figure 4 - Part-time and Contract employees in small architectural firms in Ontario

In an industry where the labor costs account for 47% of the operating expenses, optimization of the workforce is very critical to the growth of small firms. Part-time and contract employees

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allow small firms to minimize expenses and adapt to economic cycles without increasing the payroll. The work that can be completed independently with limited knowledge of the project can be assigned to such resources. The reasons for small architectural firms to engage contract employees include:

- more proficient with technology and better expertise on certain projects
- to save time and money
- saved time can be invested in other activities – networking, marketing etc.

2. Annual Revenues of small architectural firms

64% of small architectural practices in Ontario have annual revenue less than \$100k. To establish the impact of working in partnerships/business collaboration on the annual revenue of a small firm, the breakout of the annual revenues by partnership experience is done in the figure below:

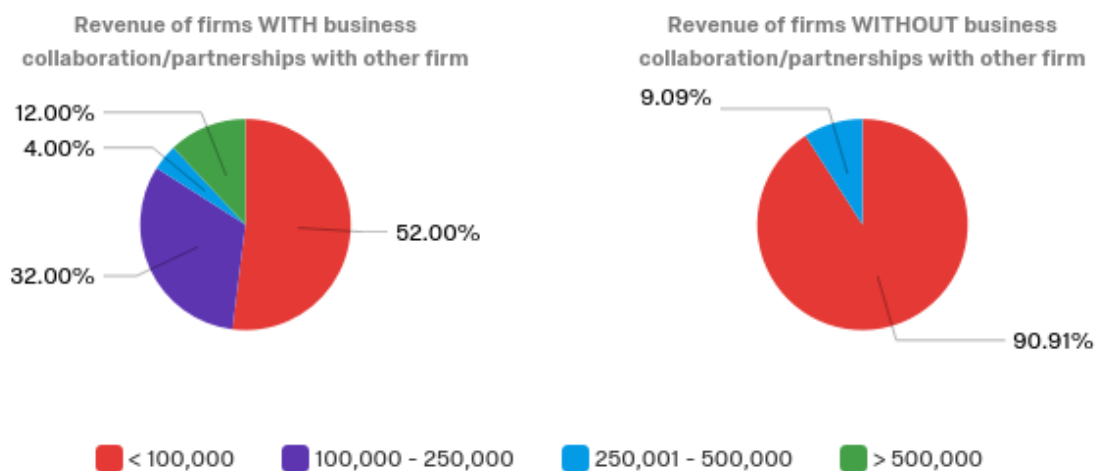


Figure 5 – Revenue of Firms: breakout by partnership/business collaboration experience

More than 90% of the firms **without** partnership experience have annual revenues less than \$100k as compared to 52% firms **with** partnership experience. Forming business partnerships allows firms to pool business resources and expertise to take up larger projects, resulting in an increase of their revenues. This suggests that working in business partnerships has a positive impact on the annual revenues of small firms.

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The annual revenues with respect to the age of the firm also provide good insights into the present situation of the small architectural firms.

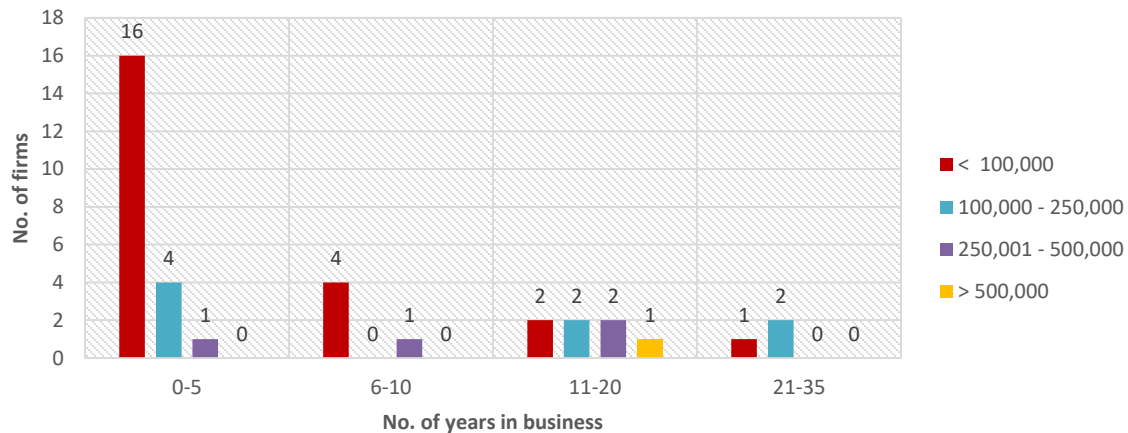


Figure 6 - Revenue of Firms: breakout by no. of years in business

21 of 37 (56%) firms that participated in the survey are less than 5 years old i.e. with relatively less project experience. It can be argued that less experience of the small architectural firms can be a reason for lower revenues as their opportunities in the public sector are very limited and they are still building their reputation in the private sector. With time, as the experience of the firms grow, they are expected to qualify for larger public-sector projects which may result in an increase in revenue of these firms.

3. Source of work for small architectural firms

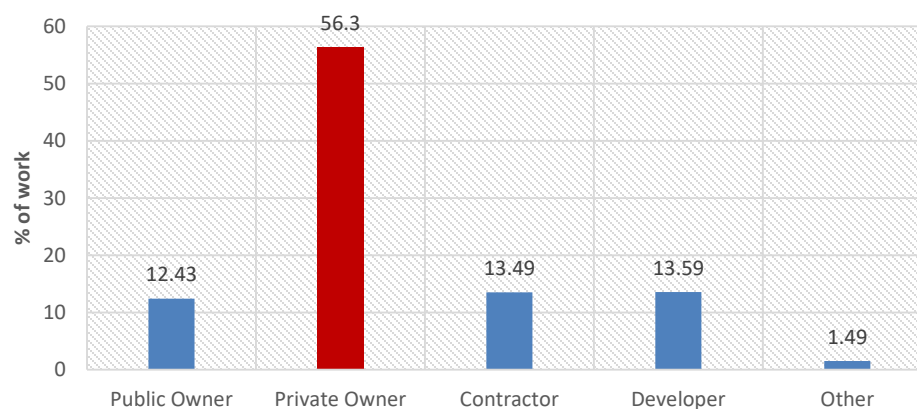


Figure 7 – Source of work for small practices (Mean Percentage)

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The majority (56.3%) of the work for small practices comes from the private owners who are generally cost sensitive, making it difficult for the small firms to justify the value of their professional services to this segment of the customers.

To determine if the source of work for firms in different revenue categories are different, the source of work based on the annual revenue of the firms is analyzed in the figure below:

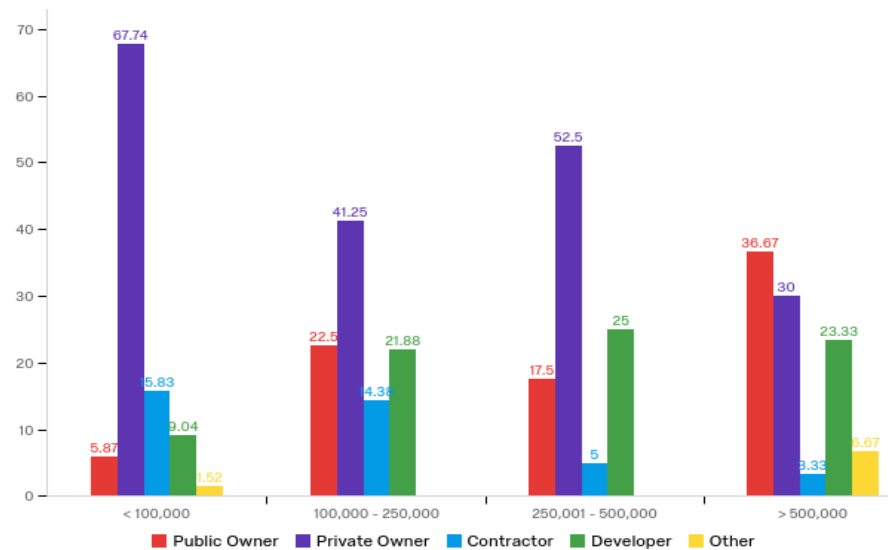


Figure 8 - Source of work: breakout by annual revenues of firms

It is interesting to note that firms with revenue less than \$100k get over 67% of their work from private owners whereas the firms with revenue greater than \$500k have the majority of their work coming from public owners. The reasons for this trend can be –

- Firms with revenue less than \$100k work mostly on small residential units and office buildings in the private sector where the competition for work (BCIN holders, designers etc.) is much higher.
- Relatively larger firms with revenues more than \$500k have project specific work experience to qualify for public projects.

4. Area of practice and growth objectives

Residential structures (32/37) and office buildings (23/37) are the two most common areas of practice for small architectural firms. Given that most of the firms are working in the residential

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sector and office buildings, there are limited possibilities for these firms to collaborate with each other as essentially, they are competitors in a broader sense. Factors that may result in partnerships between these firms can be different geographical presence or pre-qualifications for public projects. Most of these firms engage in multiple areas of practice and only 4 firms have a single area of practice i.e. residential sectors.

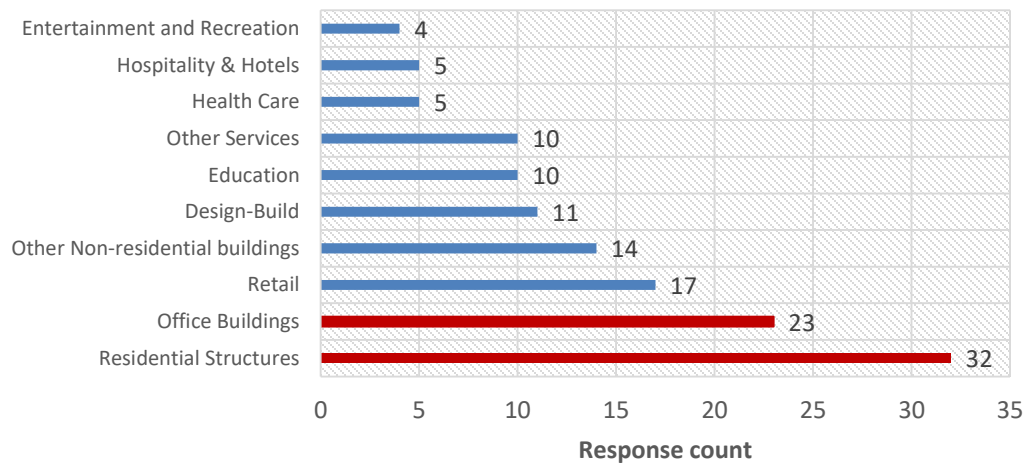


Figure 9 - Area of Practice for small architectural firms

Figure 10 below provides the objectives of the small architectural firms -

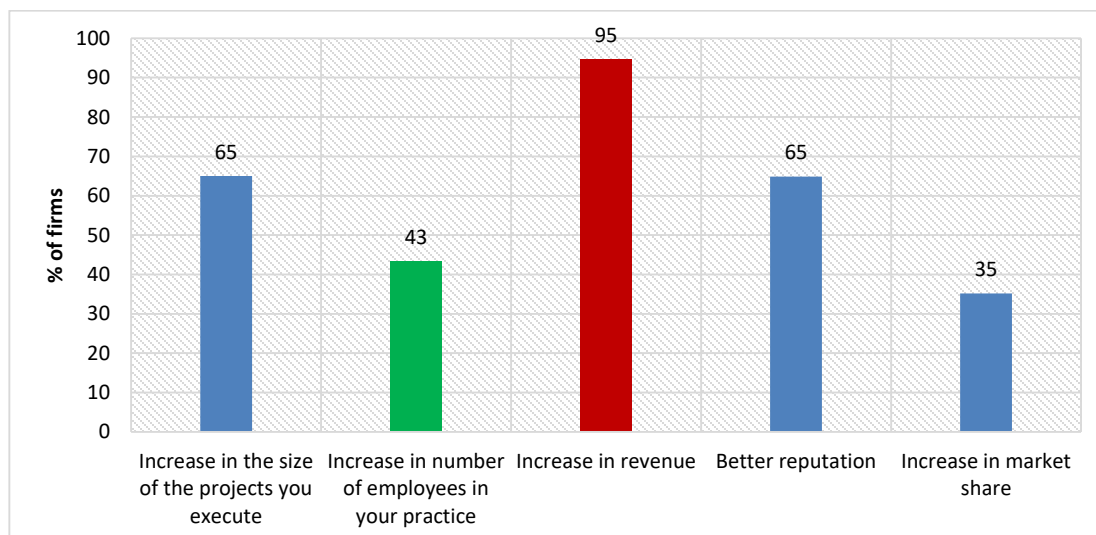


Figure 10 - Objectives of architectural firms

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When asked about their objectives of growth, 95% firms want to increase their revenue. However, only 43% firms want to increase the number of employees in the practice. Given that most of these firms are single person practices with no part-time/contractual resources and are less than 5 years old, they may not be best positioned to take up large projects to increase their revenue.

5. Key Impediments and growth strategy

The procurement process for public projects and competition from non-architects (designers, BCIN holders etc) are the highest rated impediments for the small architectural firms in Ontario (refer figure 11 below). Small architects feel that the pre-qualifications requirements of public projects make it extremely difficult for them to qualify as public projects require project specific experience in the last 3-5 years. Further, some small firms that manage to qualify are continuously outbid by the larger firms who need to take up more projects to maintain their cash flow. This situation coupled with high costs of bidding for public projects has resulted in many small firms giving up on bidding for public projects.

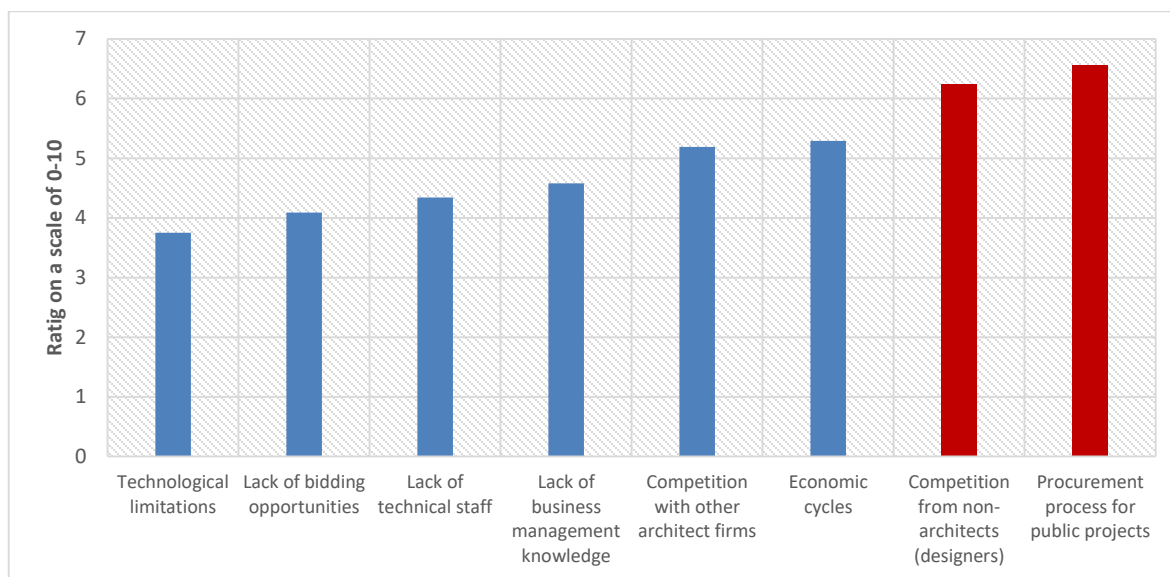


Figure 11 - Key Impediments to growth of small firms

Non-architects such as BCIN holders, designers etc. offer their services at much lower prices for small residential projects or office buildings, making it difficult for architects to justify the value

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of their services. In some instances, the BCIN holders bid as low as 1/3rd the price an architect would charge for the project. Thus, the architects face competition from non-architects for smaller projects on one side and stringent qualifications requirements of public projects on the other side.

Lack of business knowledge and availability of skilled labor are other key impediments to the growth of the small firms. Several firms reported difficulty in finding the right qualified staff with relevant experience and at the right salary. Location of some firms is also an impediment in attracting skilled workers to join their firms. Further, as most of the work comes from private owners, small firms are worried about any economic downturn and thus, limit the size of their firm.

Figure 12 below represents the ratings for key impediments to the growth of small firms based on their annual revenues. This provides some interesting insights into the barriers faced by firms with revenues less than \$100k and firms with revenues larger than \$500k.

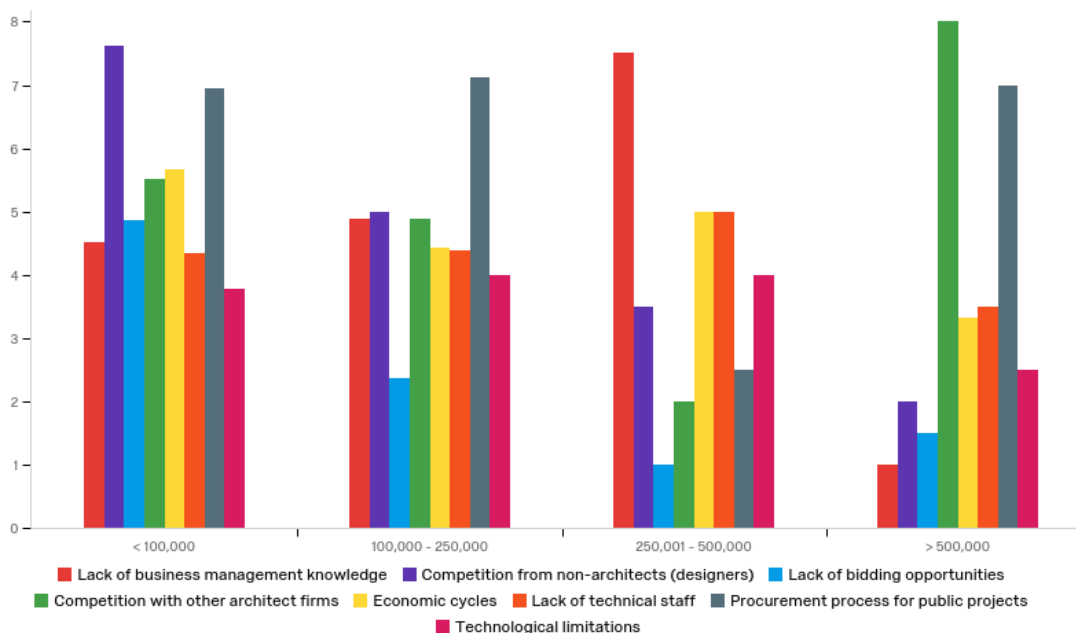


Figure 12 - Key Impediment rating: breakout by annual revenues

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Firms with revenue less than \$100k feel competition from non-architects and procurement process of public projects are the major impediments to their growth. On the contrary, firms with revenue greater than \$500k feel that competition from other architect firms and the procurement process of public projects are the major impediments to their growth.

When asked about their business plans in the coming years, only 18 /37 firms responded that they have a business plan but did not elaborate much on their plans. This reinforces the argument that small firms focus more on tactical operations than on business strategy. These firms said they want to do aggressive marketing, networking and shift focus to design build projects.

When asked about their growth strategies, the firms responded as below:

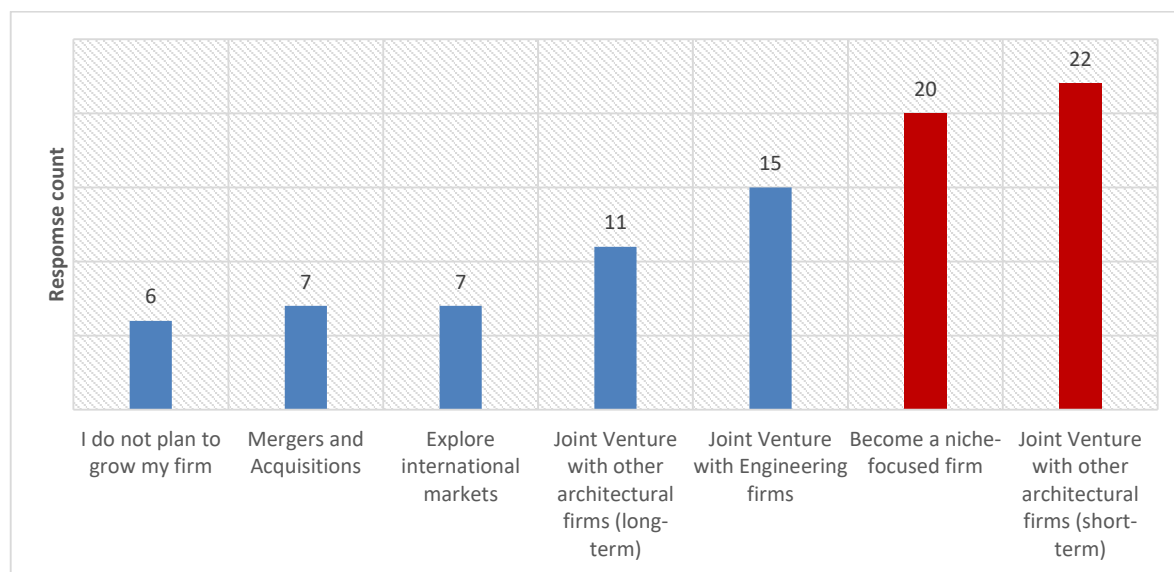


Figure 13 - Growth strategy of small architectural practices

Although a majority of the firms (22/37) firms want to partner with other architectural firms, there are limited opportunities for such partnerships as most of the firms are operating in similar areas of practice. Becoming a niche focussed firm could help the firm differentiate themselves from other and charge a premium for their services to deliver complex projects. But given the limited opportunities, small firms engage in work in multiple areas to survive – making it difficult for them to become a niche focussed firm.

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6. Partnerships/Business collaboration experience

70% (26/37) of the practices have had a partnership/business collaboration in some form in the past. Of these firms, over 60% (16/26) worked as a consulting architect as the consultant and 57% (15/26) worked on project specific joint-ventures. Figure 14 below shows various forms of business collaboration entered by small firms -

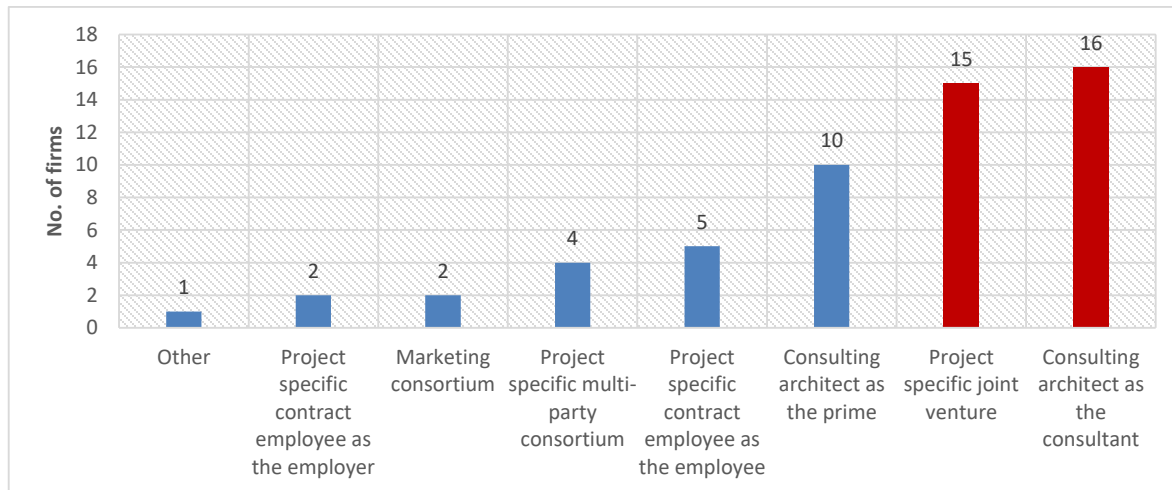


Figure 14 - Form of Business Collaborations done by small firms

There are several possible reasons for small firms to enter business collaborations. When asked to rate the pre-requisites for entering business partnerships, small architectural firms rated Expertise/Area of practice and Pre-qualification requirements as the most important factors in forming business collaborations.

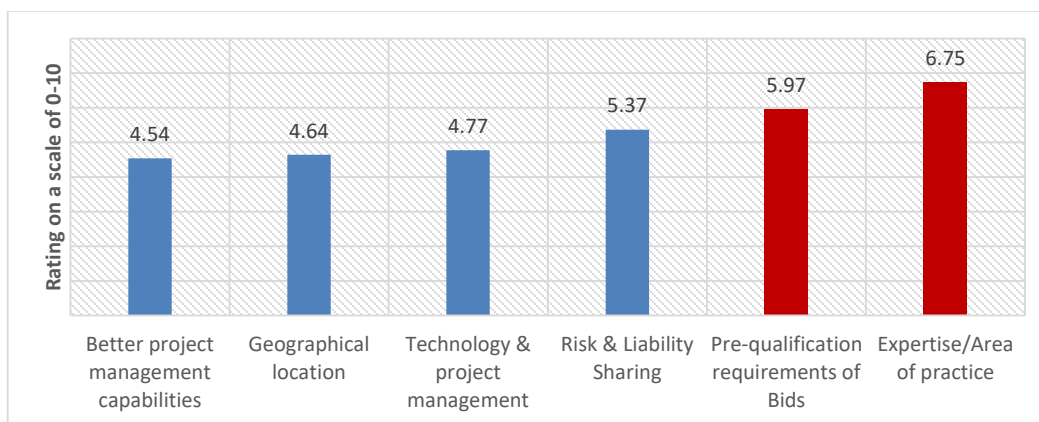


Figure 15 - Pre-requisites for business collaboration: breakout by annual revenue

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Figure 16 below provides information about the pre-requisite for business collaboration based on annual revenues of the architectural firms-

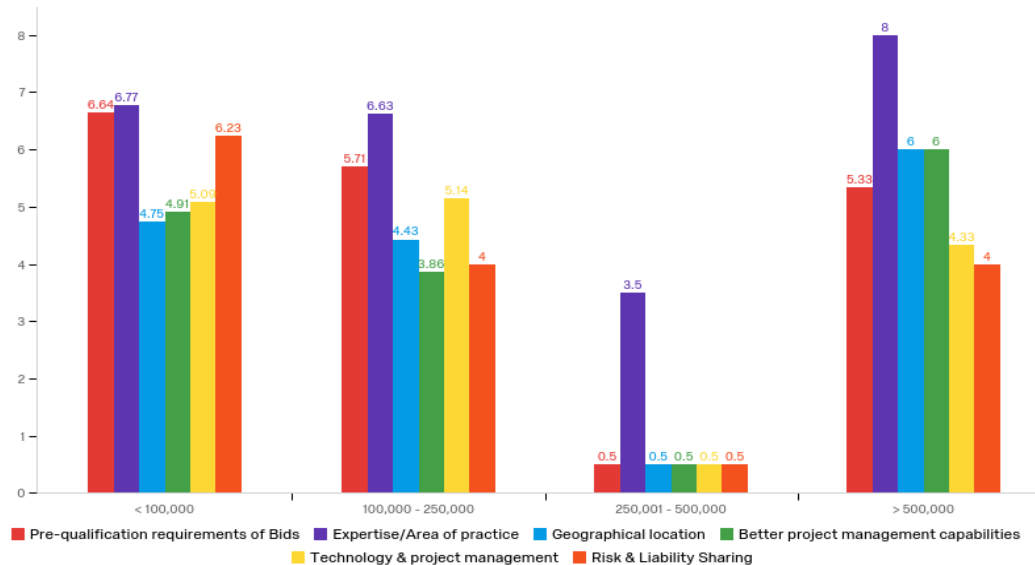


Figure 16 – Pre-requisite to enter business collaboration - breakout by annual revenues

Area of expertise is an important pre-requisite across all the architectural firms. However, firms with revenue less than \$100k give more importance to the pre-qualification requirements and risk & liability sharing whereas the firms with revenue larger than \$500k put emphasis on geographical location and project management capabilities of the partner firms. This suggests that firms with revenue larger than \$500k are looking for firms with a strong presence in their local/regional markets. This leads to an opportunity for small firms to gain valuable experience.

7. Other notable points

- 69% firms with revenue less than \$100k admit that they don't have the resources to take advantage of market opportunities.
- 47.22% firms have resources related to sustainable design.
- Small firms are using standard drafting and scheduling tools as small residential and office building projects do not require the use of advanced software such as BIM. Further, small firms find it very difficult in keeping up with the latest technology/software due to the associated cost and time investment.
- Only 13.5% firms are aware of the possible bidding opportunities.

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3.4.2 Outcomes from Feedback session

The feedback session was attended by 12 small practice owners. The objective was to share the finding of the online survey and get their reflection/feedback. Also, any points not captured in the survey can be determined through a group discussion setting. Several interesting themes came up during the feedback session and are summarized below:

1. Platform to bring together retiring and emerging practitioners

There are several architects in Ontario who do not have any succession plan for their practice and in some instances, have simply closed their practice once they retire. Small architects see potential value in engaging with such architectural firms. Senior architects who are about to retire can act as ‘mentors’ to emerging practitioners. Once the senior practitioners are about to close their practice, they can introduce their clients to the emerging practitioners, thereby ensuring that the value created by the senior architects is not simply lost due to the absence of a succession plan. Alternate arrangements may include the sale of the senior architects’ practice to the emerging practitioner. This will benefit the profession of architecture as they are able to retain the customers and avoid losing them to other professional service firms – designers, BCIN holders, engineers etc.

2. Architects lack sound business knowledge

Architects have not been educated/trained to run a business. Most of the participating architects agreed that architects pay little attention to the business aspect of running an independent practice and concentrate more on the technical aspects of design. Therefore, due to the lack of sound business knowledge, the architects fail to strike a balance in different aspects of running a business such as working on a project, networking activities, promoting their practices (marketing) etc.

The architects agreed that due to lack of marketing they have not been able to create a brand reputation in their local region which has contributed to their failure to communicate/justify the value of their services to their customers. Most of the customers do not understand the value related to acoustics, sustainable design, strategic thinking, design optimization and preparatory work that an architect brings to the table. Thus, in the present situation where the architects are facing tough competition from other

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professionals, it is important to ‘educate’ the customers about the value proposition and expertise that an architect brings to the project. Therefore, business management knowledge to identify different customer segments, marketing mediums and strategies for successfully running a small business are needed for small practice owners.

3. Some small practices want to remain ‘small’

The reasons why some of the architects start a business practice are – autonomy, lower risks, and a more comfortable experience. For these architects, growing a practice will increase risks, overheads and require them to implement an organizational structure where they need to manage other people- something they are not excited to do. Further research needs to be done to establish the proportion of small firms that do not want to grow larger.

4. Networking with large firms

Smaller firms agree on the need to network extensively with other professionals to enhance their business prospects. However, as they are more focused on running the day to day operations, they fail to engage in networking activities.

It is worth noting that many large firms are looking to partner with smaller firms with a strong regional presence to capitalize on their knowledge of the local factors that can impact their project and their ability to provide personalized services to the customers. Also, few large firms, at times, look to outsource some of their design work but are not aware of the small firms capable of performing such work – “small firms know the large firms but the large firms do not know small firms”. This is where networking with larger firms can prove effective for the smaller firms.

5. Other points

- A. Small practices wish to see more efforts from OAA in creating awareness about the profession of architecture. They feel that more support is needed from OAA in marketing efforts to educate customers of value that an architect can add as compared to other professional services. Further, some firms feel that OAA should lobby with government agencies for priority status for small firms in government contracts.
- B. Some large firms (employing 200-300 people) that provide architectural services get most of the projects in Ontario. But these large firms employ very few architects and

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most of the design work is performed by relatively less skilled labor which helps them save costs. Architects feel that regulations that require these firms to hire more architects should be implemented to support the profession of architecture.

3.4.3 Summary of the findings

Present situation of Small Practices: Small architectural practices in Ontario are under increased competition from actors of the Architecture, Engineering, and Construction (AEC) Industry. Most of the work for small practices come from the private owners (small residential units and office buildings) for whom the cost of professional service is a major factor. In this customer segment, non-architect firms are willing to provide professional design services at a much lower cost than the architects. Further, as the small architects haven't paid much attention to building their brand/reputation, it has become increasingly difficult for them to justify the value of their services to this price sensitive customer segment. In the public-sector projects, stringent pre-qualification requirements and constant outbidding by larger firms have resulted in little success for small firms. Most of the small firms have given up on bidding for the public projects.

Further, some small firms do not want to grow as it would require them to engage more staff, implement structure and ensure salaries and wages for them, something that gets them out of their comfort zone. Also, small firms use standard drafting and scheduling software and feel that adapting to constantly upgrading technologies is unsustainable for the small firms due to associated cost and learning curve. Lastly, lack of business management knowledge has significantly hampered the growth prospects of the small architectural firms.

Architect's role in future: The architectural services industry in Ontario has experienced a sharp decline in profit margins in the recent years owing to the increased cost of labor and increased competition from other actors in the AEC industry. In studies done in the UK (RIBA, n.d.) and the Netherlands (Bos-de Vos, et al, 2014) in recent past, it has been observed that the AEC industry is shifting towards integrated project delivery and risks are being transferred from the demand side (clients) to the supply side (contractors/engineers etc). Also, the building technology is becoming more and more complex as the design is being finalized based on inputs

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from several stakeholders in the project. The role of an architect is seen as an expert who can coordinate and bring these stakeholders together. Small practices will continue to face competition from different stakeholders. Their survival depends on their personalized and flexible services to their customers, establishing a strong reputation in their region and partnering with other stakeholders to redefine their value proposition to risk-averse customers. All these factors will help small firms in communicating their expertise to the customers and justifying the value of their services to their customers.

4. Proposed Direction

4.1 For small architectural firms

A. Business model – position as an integrated solution provider

A business model is a rationale by which a firm with a value proposition creates value for its customers and captures a part of that value to generate profits for itself. In the present competitive market, the small architectural firms are best positioned by redefining their value proposition to deliver a one-stop solution to their customers. For this, the small firms can partner with other actors of AEC industry such as the contractors, professional engineers etc. Forming partnerships with other entities will allow firms to pool their resources, share risks and leverage each others' networks to get more work opportunities. Further, this value proposition will be more attractive to the risk-averse customers. An example of one such model is below:

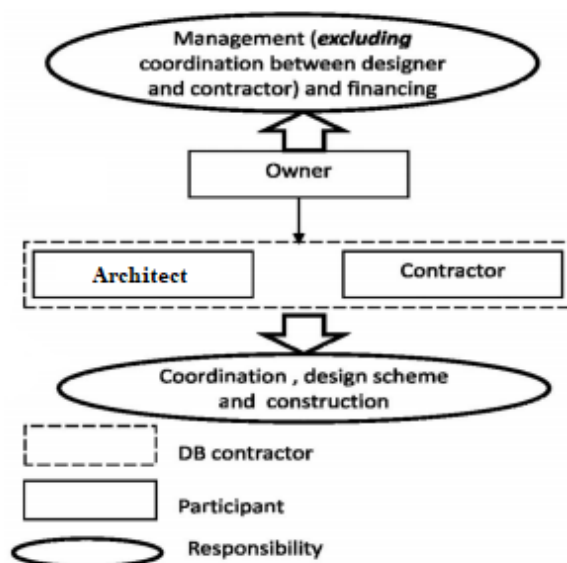


Figure 17 - Contract structure for a design-build firm (Source: Yu, Shen & Shi, 2017)

The above structure can be modified to include other participants (professional engineers etc) as well. Such partnerships can be short term project specific partnerships that require the partners to declare any possible conflict of interest to the client in advance. This does not require the partners to incorporate a new entity.

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For long-term partnerships, a new entity can be incorporated. For this entity to provide architectural services in Ontario, following conditions should be met (OAA, n.d.)—

- 51% of voting interest in partnership must be directly and indirectly controlled and owned by-
 - OAA architects; or
 - OAA architects and APEO engineers; or
 - APEO engineers.
- 51% financial interest must be directly or indirectly held by-
 - OAA architects; or
 - OAA architects and APEO engineers; or
 - APEO engineers.

The above defined Design Build structure can take different forms. If the architectural firm is willing to take more risk and has good project management capabilities then it can lead the resulting partnership else let the contractor take the lead in the partnership. Alternatively, each partner can define and be responsible for their respective scope of work in a generic form of Design-Build partnership. While selecting the partner, small firms should consider factors such as quality of work, expertise, professionalism, past references and financial stability of the partner firm.

Further, the small firms must develop part-time/contract resources to carry out parts of their projects. This is important in the long-term perspective. Architectural firms can consider possibilities of hiring student interns who are looking to gain relevant practical experience and cost much less than other resources. Also, the younger workforce is more technologically advanced as compared to some of the senior practitioners running architectural practices. This can help overcome the technology gap in small firms. To overcome the gap of legal resources, SPIF platform can be used to negotiate favorable prices with legal firms that can help in drawing legal contracts/partnership agreements for small firms.

A business model canvas for small architectural firms based on the above points is shown below:

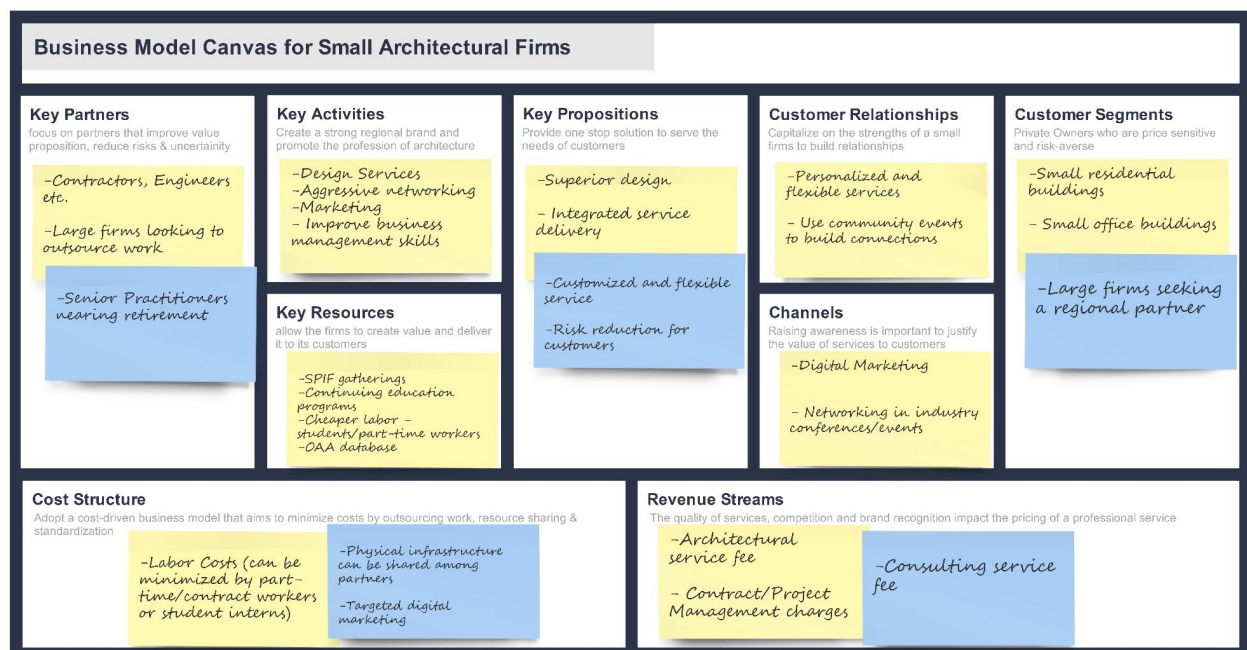


Figure 18 - Business Model Canvas for small architectural firms

B. Improve business management knowledge

Due to the lack of business management knowledge, the small practice owners focus on managing daily operations without any business strategy. Further, many architects do not consider that their practice is a business and as a result, the architects fail to strike a balance between design related activities, marketing, and promotional activities and networking with other professionals. In order to overcome the tough competition, the architects must develop skills required to run a business successfully. This can be done through continued education programs. A better understanding of the business aspect will help the architectural firms to differentiate between customer segments, and optimize their financial and technical resources, allowing them to capture maximum value in their business models.

C. Networking with large companies

Networking with large companies has immense potential for small architectural practices with a strong regional presence. Large companies are often looking to partner with local practices to capitalize on their knowledge of the regional factors. In a number of scenarios, large firms are looking to outsource some of their work to smaller firms or looking to partner with smaller firms to meet a specific qualifications requirement. Thus, networking with larger firms can open possibilities to get more work and gain valuable experience for a small practice.

D. Digital marketing

One of the biggest concerns for the small practices amid competition from cheaper alternatives (BCIN holders etc.) is that they are finding it difficult to justify the value of their professional services to their customers and have failed to build a brand/reputation in their region. Small firms can improve the same by improving their marketing efforts. A cost-effective way to do so is to engage in digital marketing – websites, FB page, Instagram etc. Basic search engine optimization can result in increased traffic to the website and increase brand awareness in the region. A case study that used similar efforts to drive more traffic to their website managed to increase the number of visits from about 100 a month to over 225 a month. Such optimization is fairly simple and can be carried out by student interns for fairly low prices.

4.2 For OAA

A. Mentorship program for emerging practitioners

OAA can foster an environment where the senior professionals who are about to retire can become mentors of the emerging practitioners. Several practices have no succession plan and the client base of such practices are usually lost once the practice is stopped by the retiring owner. The pairing of emerging practitioners with senior practitioners who are about to retire can create value for the both entities. If possible, the emerging practitioners can also buy the practice of the retiring practitioner and take over its client base. SPIF, a platform for the small practitioner to share their concerns and experience, can play an important role in making this mentorship program successful.

B. Facilitate partnerships and business collaborations

Business collaborations have had a positive impact on the revenue of the small firms and given the shift in the architectural industry, small firms need to partner with other actors of the AEC industry. The small firms, however, lack resources to draw out contracts and agreements to form these partnerships. OAA can facilitate these partnerships by providing the following to small architectural firms:

- standard partnership agreements for a partnership between an architectural practice and a contractor (different formats for architect-led partnership, contractor-led partnership or a generic partnership)
- guidelines for division of work and responsibilities
- checklist for entering a partnership agreement (liabilities, insurance, communications etc.)

Further, in the OAA events such as “Festival of Architecture” more events/continued education sessions related to the business aspects of running a practice/ forming partnership can be included for the benefit the small practices.

C. Promote the profession of Architecture

OAA can lobby more to get priority status for small firms in government contracts. In the 2017 budget, the federal government proposed a procurement plan – Innovative Solutions Canada to encourage procurement of goods and services from small innovative businesses and help them scale. This program is scalable and designed to encourage participation from all jurisdictions. Clearly, the government wants to promote procurement from small firms and with continued efforts, OAA may get favorable status for small architectural firms in the procurement done for public projects.

Also, for the benefit of small practices, it is important to educate the Canadian society in the value of architects and to recognize the difference between the value of architects and engineers. Small architects have failed to establish the difference in the value they bring to a project as compared to the other entities (engineers, interior designers etc). Therefore, through campaigns/events that can help promote the profession of architecture, OAA can contribute to the growth of the small firms.

D. Database to bring stakeholders of AEC industry together

OAA can work with other professional agencies in developing a common database that has information related to all the actors of the AEC industry. Such a database can be used to develop an online tool which will help small firms find other architect/engineering/construction management firms in their region. This online tool is an extension of the existing “Discover an architect” tool on the OAA website.

5. Limitations

The small architectural firms are divided into two different groups – one that wants to grow their practice and the other that does not want to grow for different reasons. However, both these groups want an increase in the revenue. It is very difficult to come up with a business model/resources that can meet the requirement of these two groups of architects. The proposed direction in this research is more towards the firms that have revenues less than \$100k and are willing to get out of their comfort zones to grow their practices.

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Further, the small practices do not seem to pay much attention to the business models of their firms. As there is a lack of understanding in the business aspects of running a practice, the perceptions of the small practice owners in responding to the survey questions in not clear.

The survey was restricted to the SPIF members who were expected to be interested in the outcomes of this study. Considering this sample, the response rate seems to be slightly on the lower side. The database of the SPIF members included a firm that is not practicing architecture and emails to 5 contacts bounced. Therefore, the member database needs to be updated regularly to ensure the intended information is reaching out the target audience.

References

- Bos-de Vos, M., Lietfink, B., Volker, L., & Wamelink, H. (2014). Business Model Design of Architectural Service Firms. In *Engineering Project Organisation Conference*. Colorado.
- CBN. *Sole proprietorship, partnership, corporation or co-operative? - Canada Business Network*. Canada Business Network. Retrieved 2 May 2017, from <http://canadabusiness.ca/starting/before-starting-your-business/corporation-partnership-or-sole-proprietorship/>
- Chesbrough, H. (2010). Business model innovation: Opportunities and barriers. *Long Range Planning*, 43(2-3), 354-363. <http://dx.doi.org/10.1016/j.lrp.2009.07.010>
- CHOP. (2009). *The Canadian Handbook of Practice for Architects* (2nd ed.). The Royal Architectural Institute of Canada.
- Chowdhury, M. (2013). *Making Canada's SMEs more productive*. Retrieved 25 February 2017, from <http://iveybusinessjournal.com/publication/making-canadas-smes-more-productive/>
- Conference Board of Canada. (2014). *Best Practices of Canadian Engineering and Architectural Firms*. Retrieved 16 November 2016, from [https://www.ic.gc.ca/eic/site/si-is.nsf/vwapj/IC_AE_en.pdf/\\$file/IC_AE_en.pdf](https://www.ic.gc.ca/eic/site/si-is.nsf/vwapj/IC_AE_en.pdf/$file/IC_AE_en.pdf)
- Crump, D., & Mavro, K. (2011). *Consortium Toolkit for User Led Organisations* (1st ed.). Fusion. Retrieved from <http://www.livingoptions.org/sites/default/files/u4/Consortium%20Toolkit%20for%20ULOs%20%28Fusion%29.1-73.pdf>
- Holmes, M. (2013). *Mike Holmes: The blueprint on hiring an architect*. *National Post*. Retrieved 7 June 2017, from <http://news.nationalpost.com/homes/mike-holmes-the-blueprint-on-hiring-an-architect>
- Investopedia. (2017). *Partnership*. *Investopedia*. Retrieved 2 June 2017, from <http://www.investopedia.com/terms/p/partnership.asp>

Resources for Architectural Practices in Ontario

Investopedia. Corporation. *Investopedia*. Retrieved 2 June 2017, from <http://www.investopedia.com/terms/c/corporation.asp>

Love, P., Lopez, R., & Edwards, D. (2013). Reviewing the past to learn in the future: making sense of design errors and failures in construction. *Structure And Infrastructure Engineering*, 9(7), 675-688. <http://dx.doi.org/10.1080/15732479.2011.605369>

Michel, S. (2014). *Capture More Value*. *Harvard Business Review*. Retrieved 5 April 2017, from <https://hbr.org/2014/10/capture-more-value>

Minchin, R., Li, X., Issa, R., & Vargas, G. (2013). Comparison of Cost and Time Performance of Design-Build and Design-Bid-Build Delivery Systems in Florida. *Journal Of Construction Engineering And Management*, 139(10), 04013007. [http://dx.doi.org/10.1061/\(asce\)co.1943-7862.0000746](http://dx.doi.org/10.1061/(asce)co.1943-7862.0000746)

OAA. (2011). *2011 Ontario Association of Architects Practice Survey*. Framework Partners Inc.

OAA Website. *What We Do | Ontario Association of Architects*. *Oaa.on.ca*. Retrieved 8 June 2017, from <http://www.oaa.on.ca/the%20oaa/about%20the%20oaa>

Ontario Association of Architects (OAA). (2015). *SPIF â€” Consortium Architecture Business Plan*. Ontario Association of Architects.

Osterwalder, A. (2010). *9 building blocks of a business model*. Retrieved from <https://glennas.files.wordpress.com/2010/07/business-model-canvas2.jpg>

Osterwalder, A., & Pigneur, Y. (2013). *Business Model Generation* (1st ed.). New York, NY: John Wiley & Sons.

PPP Canada. *PPP Canada*. *P3canada.ca*. Retrieved 7 June 2017, from <http://www.p3canada.ca/>

PSPC. (2017). *Procurement Management Manual*. Retrieved 7 June 2017, from <https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/conn-know/approv-procure/manuelga-pmmanual-6-eng.html>

Resources for Architectural Practices in Ontario

RIBA. *THE FUTURE FOR ARCHITECTS?*. Royal Institute of British Architects.

Siemiatycki, M. (2015). Public-Private Partnerships in Canada: Reflections on twenty years of practice. *Canadian Public Administration*, 58(3), 343-362.
<http://dx.doi.org/10.1111/capa.12119>

Statcan. (2017). *CANSIM - 360-0031 - Architectural services, summary statistics*.
 Www5.statcan.gc.ca. Retrieved 11 June 2017, from
<http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=3600031&p2=33>

Statcan. (2017). *CANSIM - 360-0032 - Architectural services, industry expenditures*.
 Www5.statcan.gc.ca. Retrieved 11 June 2017, from
<http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=3600032&p2=33>

Teece, D. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, 43(2-3), 172-194. <http://dx.doi.org/10.1016/j.lrp.2009.07.003>

Volker, L., & Klein, R. (2010). ARCHITECT PARTICIPATION IN INTEGRATED PROJECT DELIVERY: THE FUTURE MAINSPRING OF ARCHITECTURAL DESIGN FIRMS?. *Gestão & Tecnologia De Projetos*, 5(3). <http://dx.doi.org/10.4237/gtp.v5i3.181>

Volker, L., Wamelink, J., & Bos-de Vos, M. (2016). Trade-offs in the value capture of architectural firms: The significance of professional value. *Construction Management And Economics*, 34(1), 21-34. <http://dx.doi.org/10.1080/01446193.2016.1177192>

Yu, T., Shen, G., & Shi, Q. (2017). Comparing the Performance Quality of Design-Bid-Build and Design-Build Delivery Methods. *Journal Of Construction Engineering And Management*, 143(4), 04016111. [http://dx.doi.org/10.1061/\(asce\)co.1943-7862.0001262](http://dx.doi.org/10.1061/(asce)co.1943-7862.0001262)

Zhao, X., Zillante, G., Zuo, J., & Zhao, Z. (2012). Foreign architectural and engineering design firms' competitiveness and strategies in china: A diamond model study. *Habitat International*, 36(3), 362-370. <http://dx.doi.org/10.1016/j.habitatint.2011.11.002>

Zott, C., & Amit, R. (2010). Business Model Design: An Activity System Perspective. *Long Range*

Resources for Architectural Practices in Ontario

Planning, 43(2-3), 216-226. <http://dx.doi.org/10.1016/j.lrp.2009.07.004>

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Appendix 1 – Survey Questions

Survey: Consortium Business Models Project

Q1 You are a member of which regional chapter (Local Architectural Society) of the Ontario Association of Architects (OAA).

- ☐ Algoma (1)
- ☐ Grand Valley (2)
- ☐ Hamilton / Burlington (3)
- ☐ London (4)
- ☐ Niagara (5)
- ☐ North Bay (6)
- ☐ Northwestern Ontario (7)
- ☐ Northern Ontario (8)
- ☐ Northumberland Durham (9)
- ☐ Ottawa Regional (10)
- ☐ St. Lawrence Valley (11)
- ☐ Toronto (12)
- ☐ Trent (13)
- ☐ Windsor Region (14)
- ☐ Not a member (15)

Q2 What is the total number of full-time employees in your practice?

Q3 How many Licensed Technologists, OAA (full-time equivalent) are there in your practice?

Q4 How many Architects (full-time equivalent) are there in your practice?

Q5 What is the total number of part-time employees in your practice?

Q6 What is the total number of contract employees in your practice?

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Q7 What is the nature and duration of work done given to contract employees?

Q8 What are the reasons for allocating work to contract employees?

Q9 What is the annual revenue of your practice? (in CAD)

- ☐ < 100,000 (1)
- ☐ 100,000 - 250,000 (2)
- ☐ 250,001 - 500,000 (3)
- ☐ > 500,000 (4)

Q10 What percent of your practice's work came from the following clients: (Total should be 100)

- _____ Public Owner (1)
- _____ Private Owner (2)
- _____ Contractor (3)
- _____ Developer (4)
- _____ Other (5)

Q11 How many years has your firm been in the industry?

Q12 How many bids/responses to RFPs does your firm submit annually?

Q13 How many bids/request for proposals does your practice pass/decline in a year? (passing/declining a bid refers to a situation where a firm qualified to submit a bid doesn't participate in the bidding process)

Q14 Is your practice aware of all possible bidding opportunities?

- ☐ Yes (1)
- ☐ Maybe (2)
- ☐ No (3)

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Q15 What is the average time (number of days) spent on preparation of a bid?

Q16 What is the area of your practise? (you can select more than one option)

- ☐ Retail (1)
- ☐ Entertainment and Recreation (2)
- ☐ Office Buildings (3)
- ☐ Health Care (4)
- ☐ Education (5)
- ☐ Residential Structures (6)
- ☐ Hospitality & Hotels (7)
- ☐ Design-Build (8)
- ☐ Other Non-residential buildings (9)
- ☐ Other Services (10)

Q17 What is the objective of your architectural practice? (you can select multiple answers)

- ☐ Increase in the size of the projects you execute (1)
- ☐ Increase in number of employees in your practice (2)
- ☐ Increase in revenue (3)
- ☐ Better reputation (4)
- ☐ Increase in market share (5)

Q18 Rate each of the below key impediment to the growth of your architectural practice.

- _____ Lack of business management knowledge (1)
- _____ Competition from non-architects (designers) (2)
- _____ Lack of bidding opportunities (3)
- _____ Competition with other architect firms (4)
- _____ Economic cycles (5)
- _____ Lack of technical staff (6)
- _____ Procurement process for public projects (7)
- _____ Technological limitations (8)

Q19 Please explain the reasons for the impediments rated extremely important (scored 9-10) in the previous question.

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Q20 The extremely important impediments (scored 9-10) to growth in Question 18 are applicable to

- ☐ your practice only (1)
- ☐ practices of similar size across the industry (2)

Q21 What resources/tools do you need to overcome the impediments to your growth?

Q22 How do you expect to grow your practice? (you can select more than one option)

- ☐ Mergers and Acquisitions (1)
- ☐ Joint Venture with other architectural firms (short-term) (2)
- ☐ Joint Venture with other architectural firms (long-term) (3)
- ☐ Joint Venture with Engineering firms (4)
- ☐ Become a niche-focused firm (5)
- ☐ Explore international markets (6)
- ☐ I do not plan to grow my firm (7)

Q23 Do you have a plan covering your business operations over the next three years? Please elaborate.

Q24 Do you have the resources to take advantage of the market opportunities?

- ☐ Yes (1)
- ☐ No (2)

Q25 Are the gaps between your resources and market opportunities specific to your firm or do these gaps apply to firms of similar size?

- ☐ Yes (1)
- ☐ No (2)

Q26 Have you ever formed a business collaboration with another practice or architect to either pursue or complete a project?

- ☐ Yes (1)
- ☐ No (2)

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Q27 What form did the business collaboration referred in Q26 take? (you can select more than one option)

- ☐ Project specific joint venture (1)
- ☐ Project specific multi-party consortium (2)
- ☐ Consulting architect as the prime (3)
- ☐ Consulting architect as the consultant (4)
- ☐ Project specific contract employee as the employer (5)
- ☐ Project specific contract employee as the employee (6)
- ☐ Marketing consortium (7)
- ☐ Other (8)

Q28 Rate each of the below pre-requisites for entering into a business collaboration?

- _____ Pre-qualification requirements of Bids (1)
- _____ Expertise/Area of practice (2)
- _____ Geographical location (3)
- _____ Better project management capabilities (4)
- _____ Technology & project management (5)
- _____ Risk & Liability Sharing (6)

Q29 If you have executed a project in a business collaboration, what were the difficulties you experienced in the post-bidding (execution) stage of a project?

Q30 What changes in the present regulatory framework could help small and medium sized architectural practices to form business partnerships?

Q31 What proportion of your practice's projects comes from each of the following procurement methods? (Total should be 100)

- _____ Design-Bid-Build (1)
- _____ Design-Build (2)
- _____ Public Private Partnership (3)
- _____ Other (4)

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Q32 What technology/software does your practice use? (eg. Business Information Modeling)

Q33 What project management software/tools does your practice use?

Q34 Does your practice have technical resources to provide design or consulting services related to sustainable design?

- ☐ Yes (1)
- ☐ No (2)